

2964

MAGNETOMETER AND GEOCHEMICAL REPORT

FOR

NORTHWEST VENTURES LTD.
CONSOLIDATED PRUDENTIAL MINES LTD.
MIDLAND PETROLEUMS LTD. (N.P.L.)
KAMLOOPS COPPER CONSOLIDATED LTD.

JOINT PROJECT ON THE

SUN AND MIKE CLAIM GROUPS

BAMBRICK CREEK AREA

CLINTON MINING DIVISION

BRITISH COLUMBIA

by

TRI-CON EXPLORATION SURVEYS LTD.

September 1970

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT

NO. 2964

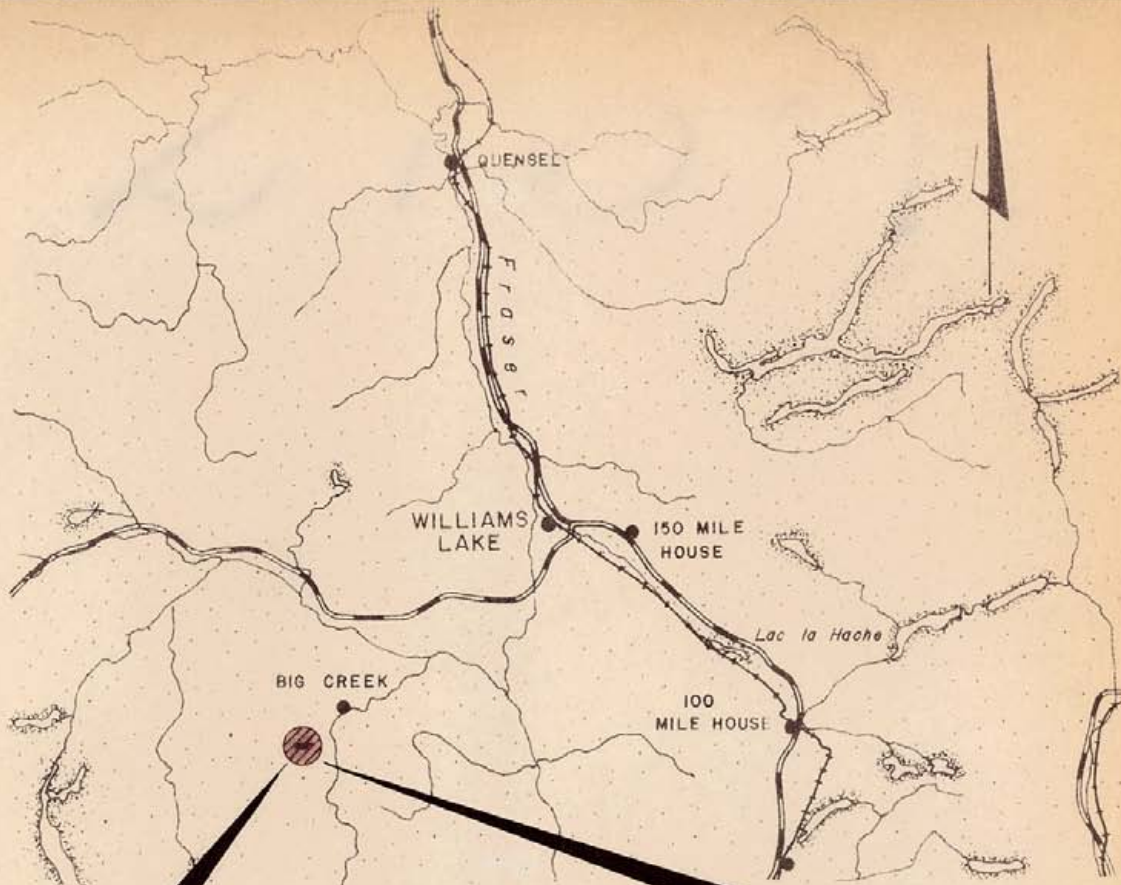
MAP

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M46	M45	M4	M3	M25	M34	M2	M5	M43	M46	M4	M3	S3	S4	S30	S29	S35	S36	S31	S32	S78	S77	S83	S84
M44	M43	M6	M5	M31	M92	M54	M53	M43	M44	M6	M5	S5	S6	S28	S27	S37	S38	S33	S34	S76	S75	S85	S86
M42	M41	M8	M7	M89	M30	M56	M55	M41	M42	M8	M7	S7	S8	S26	S25	S39	S40	S35	S36	S74	S73	S87	S88
M40	M39	M10	M9	M87	M88	M58	M57	M39	M40	M10	M9	S9	S10	S24	S23	S41	S42	S37	S38	S72	S71	S89	S90
M38	M37	M12	M11	M85	M66	M63	M59	M37	M38	M12	M11	S11	S12	S22	S21	S43	S44	S39	S40	S70	S69	S91	S92
M36	M35	M14	M13	M83	M84	M62	M61	M35	M36	M14	M13	S13	S14	S20	S19	S45	S46	S41	S42	S68	S67	S93	S94
M34	M33	M16	M15	M81	M82	M64	M63	M33	M34	M16	M15	S15	S16	S18	S17	S47	S48	S43	S44	S66	S65	S95	S96
M32	M31	M18	M17	M79	M80	M65	M64	M31	M32	M18	M17	S17	S18	S16	S15	S49	S50	S45	S46	S64	S63	S97	S98
M30	M29	M20	M19	M77	M78	M68	M67	M29	M30	M20	M19	S19	S20	S14	S13	S51	S52	S47	S48	S62	S61	S99	S100
M28	M27	M22	M21	M75	M76	M70	M69	M27	M28	M22	M21	S21	S22	S12	S11	S53	S54	S49	S50	S60	S59	S101	S102
M26	M25	M24	M23	M73	M74	M72	M71	M25	M26	M24	M23	S23	S24	S10	S9	S55	S56	S51	S52	S58	S57	S103	S104

NORTHWEST VENTURES LTD.
 JOINT PROJECT
 MIKE AND SUN CLAIMS
LOCATION AND CLAIMS MAP

SCALE: LOCATION MAP: 1" = 32 MILE - CLAIMS MAP: NTS



Department of
 Mines and Petroleum Resources
ASSESSMENT REPORT
 NO. 2164 MAP #1

INTRODUCTION

During the period July 20, 1970 to August 13, 1970 Tri-Con Exploration Surveys Ltd. of North Vancouver, British Columbia, conducted a program of geochemical soil sampling and ground magnetometer surveying over the Mike and Sun claim groups, Clinton Mining Division, Province of British Columbia.

The project was a joint venture for Northwest Ventures Ltd., Consolidated Prudential Mines Ltd., Midland Petroleum Ltd. (N.P.L.) and Kamloops Copper Consolidated Ltd. The surveys were conducted on their behalf.

The purpose of the soil sampling program was to try and detect any geochemical trends indicative of economic sulphide mineralization. The ground magnetometer survey was conducted to try and locate any magnetic patterns which would aid in determining the significance of any reconnaissance geochemical anomalies.

LOCATION AND ACCESS

The group of claims covered by this report are centered at latitude $51^{\circ} 37'$ North and longitude $123^{\circ} 14'$ West some 80 miles southwest of the village of Williams Lake, B.C. N.T.S. 92 0

Access to the property is along Highway 20 westward for some 29 miles from Williams Lake to Riske Creek, and then southwest for some 50 miles on all weather road to the Night Hawk Lodge road near Willan Lake. This road is due south of Willan Lake and is the access road to the Night Hawk Ranch and the property.

THE PROPERTY

The Sun and Mike claim groups consist of some 240 contiguous mining claims listed as follows:

Sun 1-96

Mike 1-96

Mike 1-48

SURVEY SPECIFICATIONS

Survey Grid

The survey grid was established previous to the geochemical and magnetometer surveys. North-south traverse lines were turned off every 500 feet on the west side of the property, and every 700 feet on the east side of the property, from three east-west directed base lines. These three base lines were in turn controlled by a north-south base line located in the center of the property.

The Magnetometer Survey

The magnetometer survey was conducted using a Sharpe MF-1 Fluxgate magnetometer. This instrument measures the vertical component of the earth's magnetic field to an accuracy of 10 gammas. Corrections for diurnal variation were made by tying into previously established base stations at intervals not exceeding one and one half hours. Readings were taken at 100 foot intervals along the traverse lines.

The Geochemical Survey

(1) Geochemical Profile

There were 24 soil profiles taken at various locations over the property. These locations are shown in Figures 2 & 3.

The profile pits were dug to a general depth of two feet, and the different horizons were sampled.

In all profiles the different horizons were found to be uniform and well developed. In swampy areas, the samples were taken below the organic material and into the "B" horizon. All soils at a depth of 2" and deeper contained round rock. The "A_o" horizon was a distinct layer of pine needles and organic matting approximately 1" in thickness. It was gray brown to black.

There was no "A₁" horizon encountered, however, the "A₂" horizon was a well defined layer of light grey ashy, clay material which was approximately 1" - 2" in thickness.

The "B" horizon was composed of a fine clay to sandy clay. It was gray brown to brown carried from 3" to a general depth of 8".

The "C" horizon was gray brown to brown and was composed mainly of clays with some sand. There was a definite intermixing of the "B" and "C" horizons. It carried from 8" down below the pit bottoms.

Two hundred foot sample spacings were applied to the grid mentioned under the "Survey Grid" section. Some 3059 soil samples were taken on this grid by experienced field assistants. All samples locations were flagged and coded.

The sample holes were dug with a mattock, and the samples were taken by hand and placed in a water resistant bag where they remained until analysis.

The samples were packaged and delivered to Chemex Laboratories Ltd. of North Vancouver, B.C., where drying, sieving, and analysis by atomic absorption was carried out under the supervision of professional chemists.

All samples were run for copper and zinc. The soil profiles were tested for copper, zinc, molybdenum, gold, silver, nickel and cobalt; however, molybdenum, gold, silver, nickel and cobalt were not present in any appreciable amounts. Areas of interest in copper were tested for molybdenum, gold and silver, however, these areas also were found to be deficient in these metals. Intensities ranged from 3 ppm to 94 ppm copper; and from 7 ppm to 257 ppm zinc.

DATA PRESENTATION

Some 176 line miles of ground magnetometer surveying were conducted. 3059 geochemical soil samples were collected and analysed for copper and zinc. The survey results are plotted and contoured at a horizontal scale of 1"=800 feet as follows:

Figure 2 - Geochemical - copper map contoured at 12, 15 and 18 ppm levels.

Figure 3 - Geochemical - zinc map contoured at 50, 90 and 110 ppm levels.

Figure 4 - Magnetic intensity - contoured at 1000, 1500, 2000, 2500, 3000, 3500 4000, 5000, and 6000 gamma levels.

Figure 5 - Interpretation map.

DISCUSSION OF RESULTS

The Magnetometer Survey

The ground magnetometer survey indicated considerable variations in magnetic intensity across the property from a maximum of some 15,500 gammas to a minimum of some -8,700 gammas; a change of some 24,200 gammas.

The most diagnostic features delineated by the magnetometer survey are two areas of low magnetic intensity which are surrounded by steep magnetic gradients. These two areas have been designated "areas A and B" and are illustrated on the Interpretation Map. (figure 5) Areas A and B contain only moderate changes in magnetic intensity, while the surrounding magnetic data shows considerable variations in magnetic intensity indicative of high magnetic susceptibility material. Correlation of the magnetometer data with the geology of the area by H. W. Tupper G.S.C., Geology of Taseko Lakes, Map 29, 1963 indicates that areas A and B likely represent acid intrusive stocks or sills of felsite or feldspar porphyry which have intruded the areas of high mag-

netic intensity which may reflect a sequence of basic volcanic rocks. The high magnetic trend data appears to be biased in a west southwest-east northeast direction which may reflect the bedding trends of the volcanic sequence. The magnetic data also shows pronounced northeast-southwest and northwest-southeast magnetic linears which are shown on the interpretation map as inferred faults.

The high magnetic intensity areas surrounding magnetic low areas A and B are also disrupted by generally northwest-southeast and north-south trending magnetic lows. These magnetic lows may possibly be caused by acid rocks of areas A & B which are exposed or possibly thinly covered by volcanic rocks or which form intrusive dikes into the volcanic sequence.

GEOCHEMISTRY

Lateral migration of copper and zinc ions will be minimal on the property due to low relief and arid climate. Vertical ion migration from the ion source will also be minimal due to excessive amounts of clays encountered in the soils along with the round rock indicating glacial debris and therefore a thick covering of overburden. The copper and zinc ions have a definite minimal migration medium when confronted with the thick clays and overburden such as those encountered on the property.

Areas of intensity in copper and zinc shown in Figures 2 and 3 are anomalous and in consideration of the aforementioned poor soil conditions for ion migration are definitely of greater interest than their values indicate.

CONCLUSIONS

The geochemical soil sampling program and ground magnetometer survey were conducted with the aim of trying to delineate any areas which may possibly contain economic sulphide mineralization.

The geochemical program located some coherent copper zinc trends which are definitely anomalous with respect to the local background values. Experience elsewhere in the central interior B.C. region and the Yukon has shown that low geochemical values can be of significance if the overburden is of the clay variety and is of such a depth to seriously limit ion migration. The magnetometer data is definitely interesting in that it located what may be two areas (A&B) of acid rocks which have intruded a sequence of basic volcanic rocks.

The Interpretation Map Figure 5 shows the magnetic trends and areas of copper values above 18 ppm and zinc values above 110 ppm. Six areas which would appear to have the most potential for delineating sulphide mineralization have been blocked out and numbered 1 - 6 in order of interest.

RECOMMENDATIONS

- (1) An induced polarization survey to test the six areas of interest.
- (2) Reconnaissance diamond drilling of any induced polarization anomalies.

Respectfully submitted,
TRI-CON EXPLORATION SURVEYS LTD.



G. L. Anselmo
President



Glen E. White, BSc.
Chief Geophysicist

C E R T I F I C A T I O N

TO WHOM IT MAY CONCERN:

I, GLEN ELMO WHITE, of the City of Richmond in the Province of British Columbia, hereby certify:

1. That I am a Geophysicist and reside at 112 - 641 Gilbert Road, Richmond, B.C.
2. That I studied Geophysics and Geology and graduated from the Univeristy of British Columbia with the degree of Bachelor of Science.
3. That I have been engaged in Mining Exploration for eight years.
4. That I do not have, nor do I expect to receive, either directly or indirectly, any interest in the property, or in the securities of Northwest Ventures Ltd., Consolidated Prudential Mines Ltd., Midland Petroleums Ltd. (N.P.L.), Kamloops Copper Consolidated Ltd.
5. That this report is based on information derived from ground magnetometer and geochemical soil sampling surveys carried out by Tri-Con Exploration Surveys Ltd.

Dated this 16th day of September 19 70.



G. E. White, B.Sc.
Geophysicist

STATEMENT OF QUALIFICATIONS

Name: WHITE, Glen E.

Profession: Geophysicist

Education: B.Sc. Geophysics - Geology
University of British Columbia.

Professional Associations: Associate member of Society of Exploration Geophysicists.
Active member B.C. Society of Mining Geophysicists

Experience: Pre-Graduate experience in Geology-Geochemistry-Geophysics with Anaconda American Brass.

Two years Mining Geophysicist with Sulmac Explorations Ltd. and Airborne Geophysics with Spartan Air Services Ltd.

One year Mining Geophysicist and technical Sales Manager in the Pacific north-west for W.P. McGill and Associates.

Two years Mining Geophysicist and supervisor Airborne and Ground Geophysical Divisions, with Geo - X Surveys Ltd.

Presently Chief Geophysicist Tri-Con Exploration Surveys Ltd.

Active experience in all Geologic provinces of Canada.

CERTIFICATE

I, Garry L. Anselmo, DO HEREBY CERTIFY:

- That I am President of Tri-Con Exploration Surveys Ltd. with offices at Suite 200 - 1405 Hunter Street, North Vancouver, British Columbia, and a Consultant in Geochemical Exploration.
- That I studied Geology and Geochemistry at the University of British Columbia for three years and am a graduate of Simon Fraser University with the Degree of Bachelor of Arts.
- That I have been engaged in Mining Exploration for six years.
- That I have no direct, indirect or contingent interest in the Sun and Mike claim groups or in Northwest Ventures Ltd., Consolidated Prudential Mines Ltd., Midland Petroleums Ltd. (N.P.L.), Kamloops Copper Consolidated Ltd., nor do I intend to receive any such interest.
- That this report dated September 16, 1970 is based on information derived from a geochemical soil sampling program and a ground magnetometer survey carried out by Tri-Con Exploration Surveys Ltd.

Dated at Vancouver, British Columbia, this 16th Day of September, 1970.

TRI-CON EXPLORATION SURVEYS LTD.



G. L. Anselmo, B.A.
President

A P P E N D I X

Instrument Specification

MAGNETOMETER

A Instrument

- (a) Type - Fluxgate
- (b) Make - Sharpe MF-1

B Specifications

- (a) Measurement - Vertical Magnetic Field
- (b) Range - ± 100 K gammas in 5 ranges
- (c) Sensitivity - Maximum 20 gammas per scale division
- (d) Accuracy - ± 10 gammas

C Survey Prodecures

- (a) Method - One and one half hour loops
- (b) Corrections - (i) Base
(ii) Diurnal
- (c) Station relationship - each station read for intensity of vertical magnetic field.

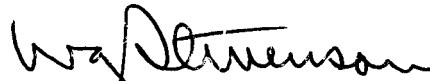
CERTIFICATE

I, William G. Stevenson, DO HEREBY CERTIFY:

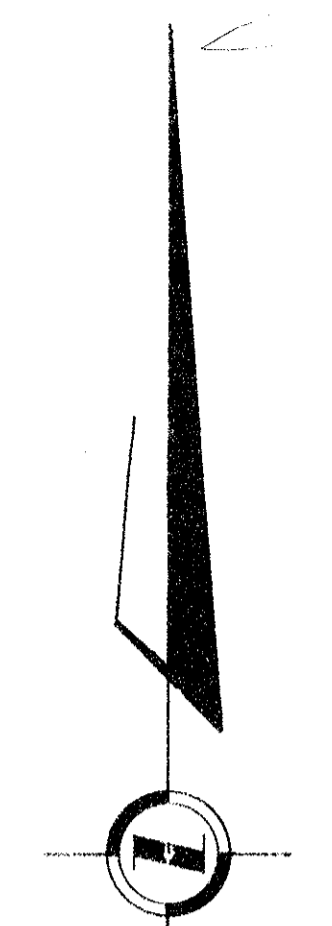
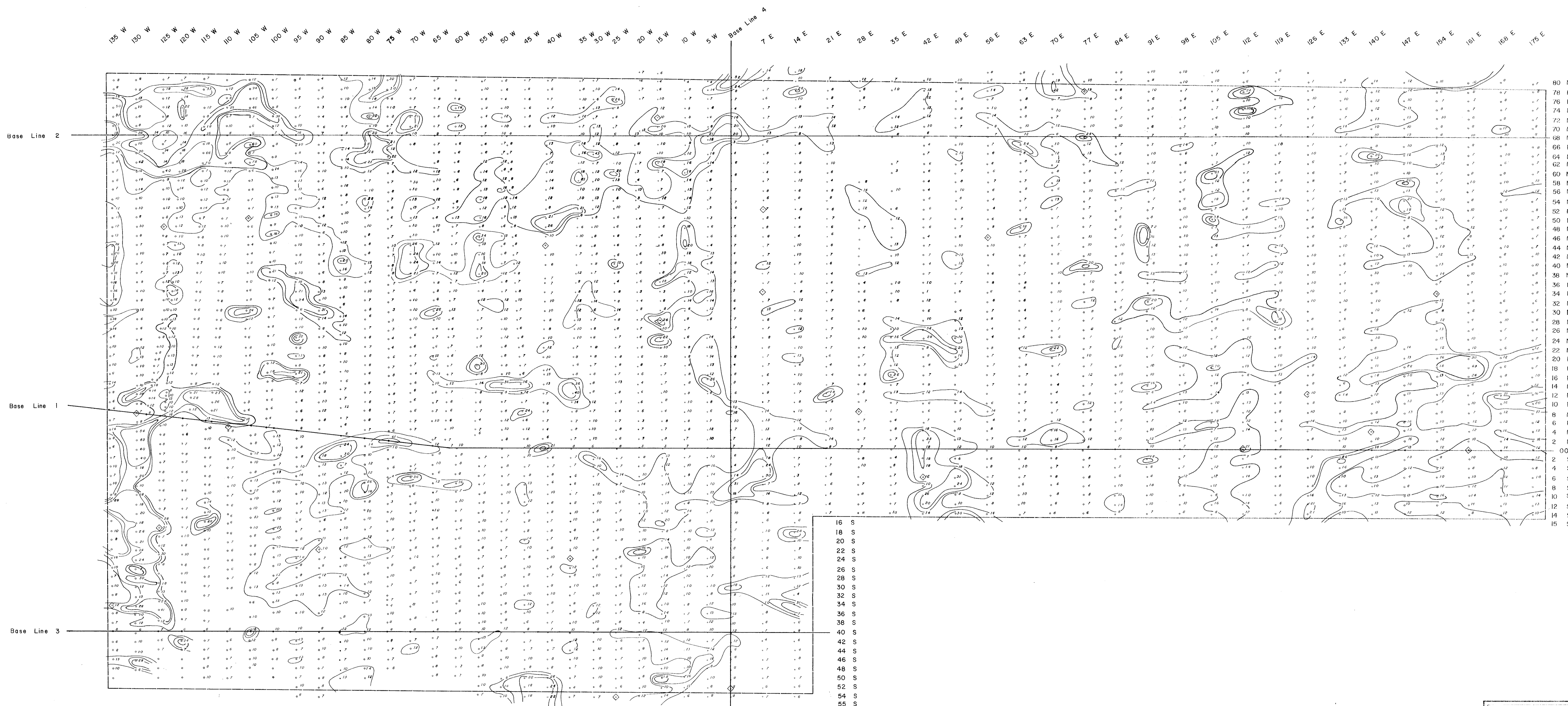
- That I am a Consulting Geological Engineer with offices at Suite 209 Stock Exchange Building, 475 Howe Street, Vancouver 1, B.C.
- That I am a graduate of the University of Utah 1946, with a B.Sc. Degree.
- That I am a registered Professional Engineer in the Association in British Columbia.
- That I have practised my profession for 22 years.
- That I have no direct, indirect or contingent interest in the Sun or Mike Mineral Claims or in the securities of Northwest Ventures Ltd., Consolidated Prudential Mines Ltd., Midland Petroleum Ltd. (N.P.L.), Kamloops Copper Consolidated Ltd., nor do I intend to receive any such interest.
- That I have reviewed a report dated September 16, 1970 based on work conducted by Tri-Con Exploration Surveys Ltd. under the supervision of G. L. Anselmo, President and Glen E. White, B.Sc. Chief Geophysicist.

DATED at Vancouver, British Columbia, this 18 th day of September
1970

W. G. STEVENSON & ASSOCIATES LIMITED
Consulting Geologists



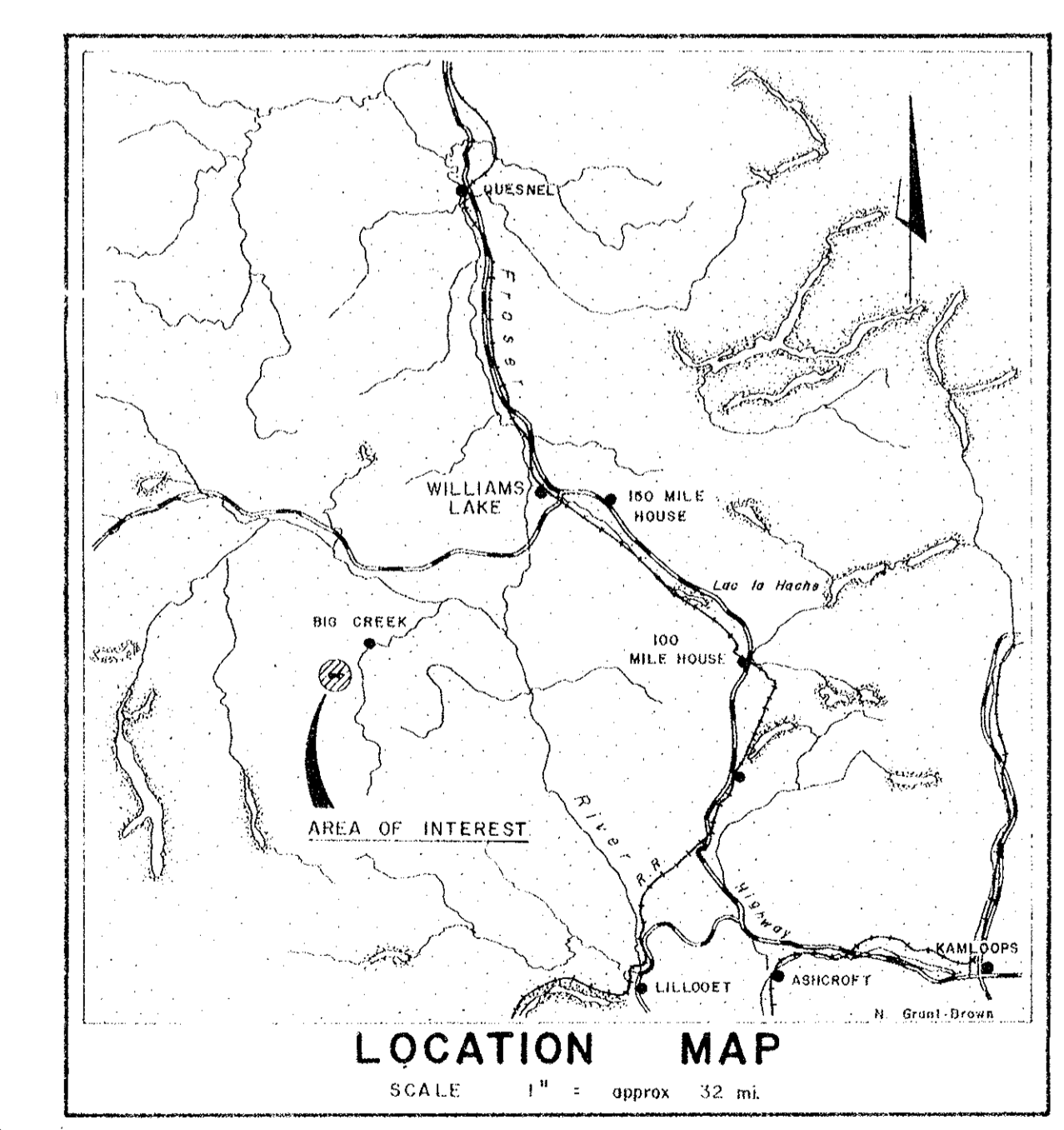
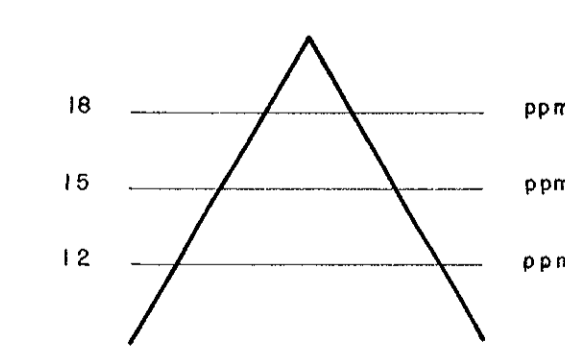
W. G. Stevenson, P. Eng.



L E G E N D

- Outline of Mike and Sun Claims
- Base Lines
- Stations Surveyed and Reading
- Contour Lines - Contour Interval 3ppm
- Soil Profile Locations

GEOCHEMICAL KEY



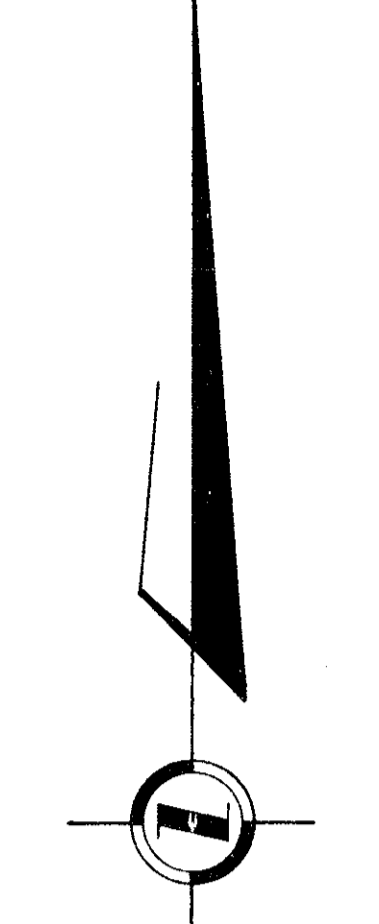
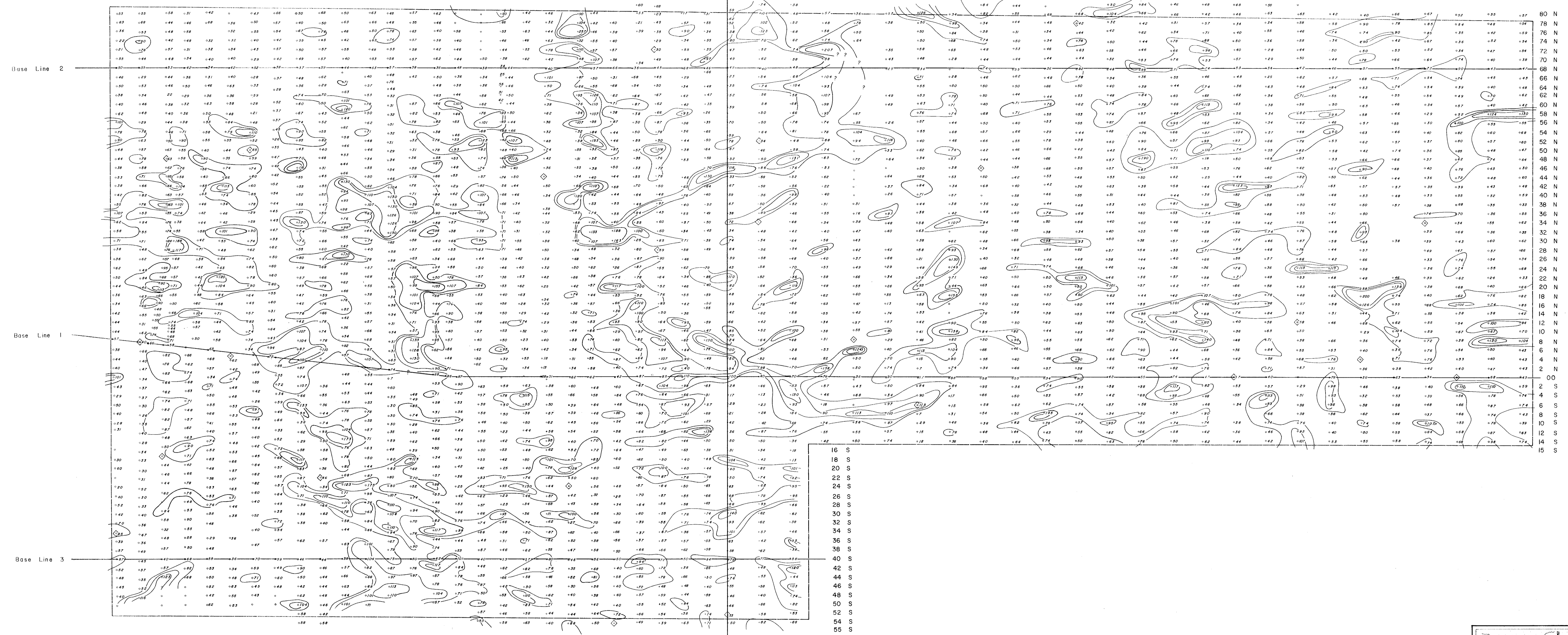
M-2
2964

NOTE: To Accompany Magnetometer and Geochemical Report dated September 16, 1970 On The MIKE AND SUN Claim Group By: G.L. Anselmi, President Geo E. White, Chief Geophysicist

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CONSOLIDATED PRESIDENTIAL MINES LTD. MIDLAND PETROLEUMS LTD. (P.L.C.) KAMLOOPS COPPER CONSOLIDATED LTD.		
Joint Project On The MIKE AND SUN CLAIM GROUPS - BAMBRICK CREEK AREA CLINTON MINING DIVISION - BRITISH COLUMBIA CANADA		
GEOCHEMICAL MAP COPPER		
SCALE 1 inch = 800 Feet		
EXPLORATION SURVEYS LTD.	INTERPRETED by: G.E. White TECH. DATA by: RES, ANS, GLA SNGS. DRAFTED by: N. Grant-Brown	Fig. 2
Sept. 16, 1970 REVISED	PROJECT No. 110	FILE 6.11

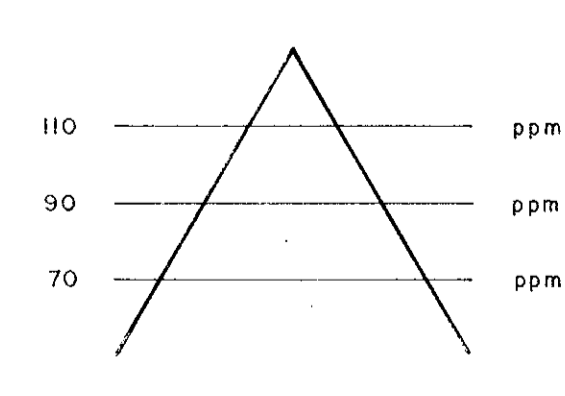
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LEGEND

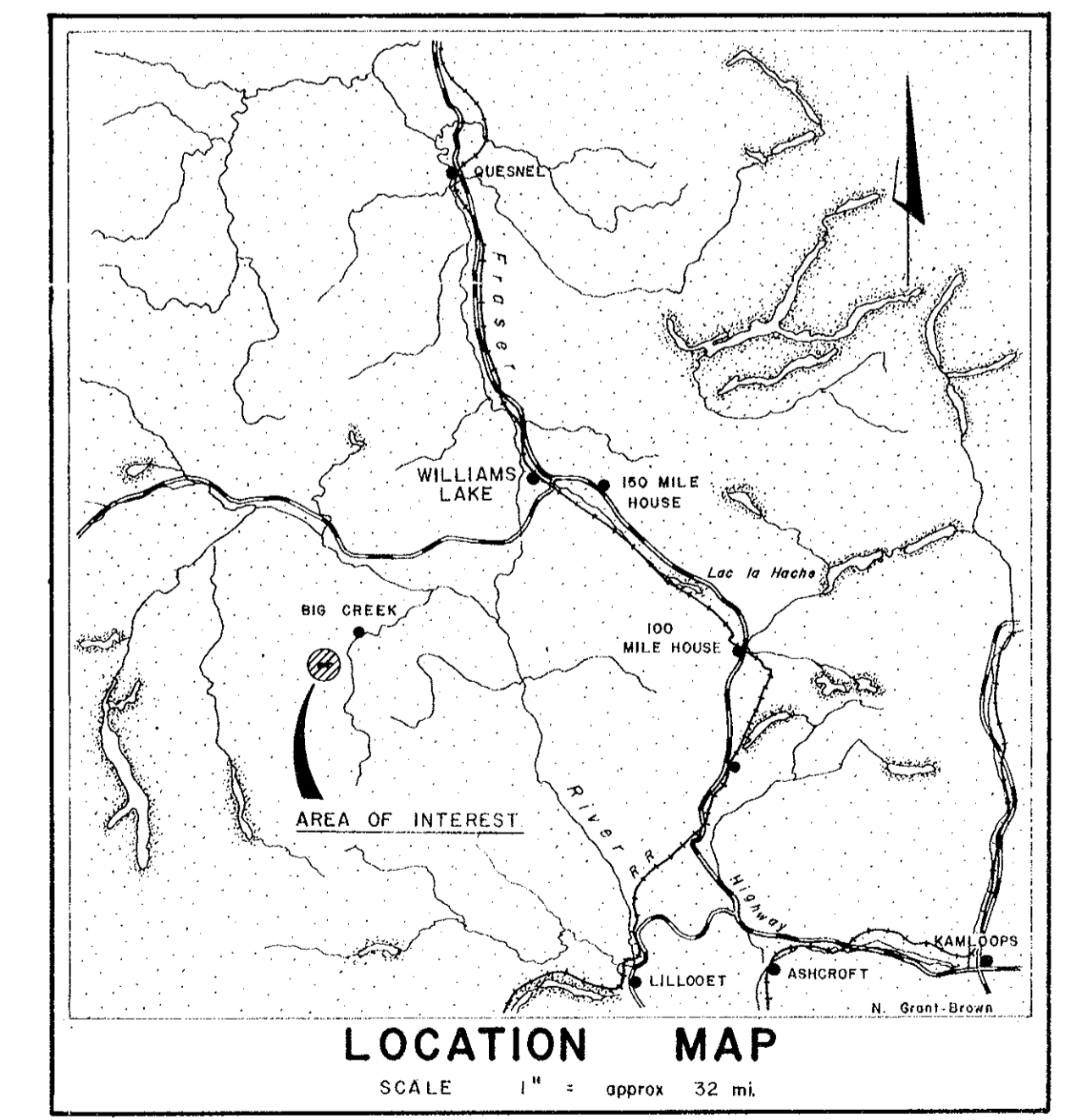
- Outline of Mike & Sun Claims
- Base Lines
- Stations Surveyed & Reading
- Contour Line - Contour Interval 20 ppm
- ◇ Soil Profile Locations

GEOCHEMICAL KEY



2964 M-3

Department of
Mines and Petroleum Resources
ASSESSMENT REPORT
NO. 2964 Map #3



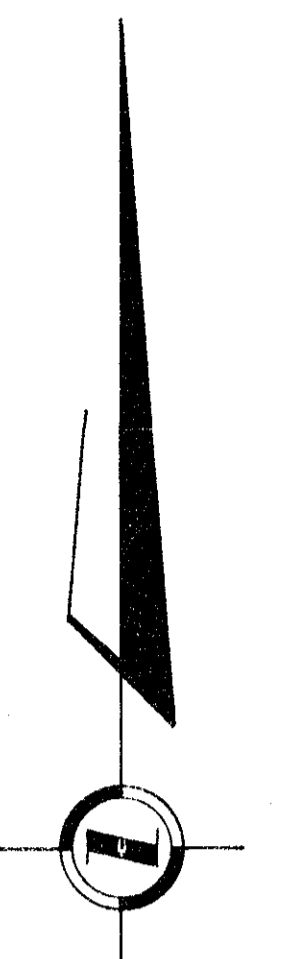
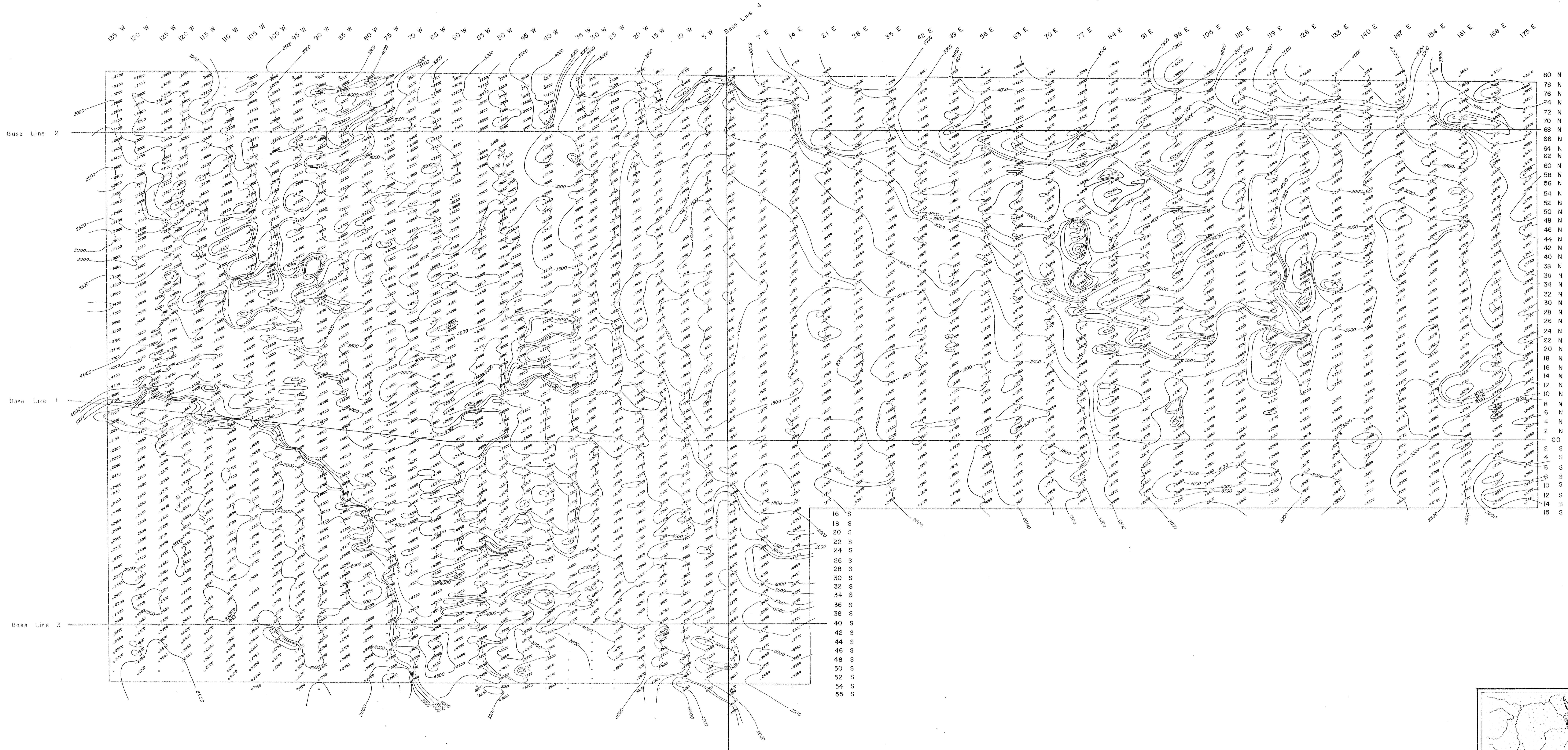
NOTE:
To Accompany Magnetometer and Geochemical Report
Dated September 16, 1970 on the MIKE and SUN
Claim Groups by: G.L. Asselin, President
Glen E. White, Geophysicist

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MOULAND PETROLEUMS LTD. (N.P.L.)
KAMLOOPS COPPER CONSOLIDATED LTD.
Joint Project On The
MIKE AND SUN CLAIM GROUPS - BAMBRICK CREEK AREA
CLINTON MINING DIVISION - BRITISH COLUMBIA CANADA

GEOCHEMICAL MAP
ZINC
SCALE 1 inch = 800 Feet

INTERPRETED by: G.E. White
Base, N. Grant - Brown
DRAFTED by: Tech. Data, A.N. Schampier

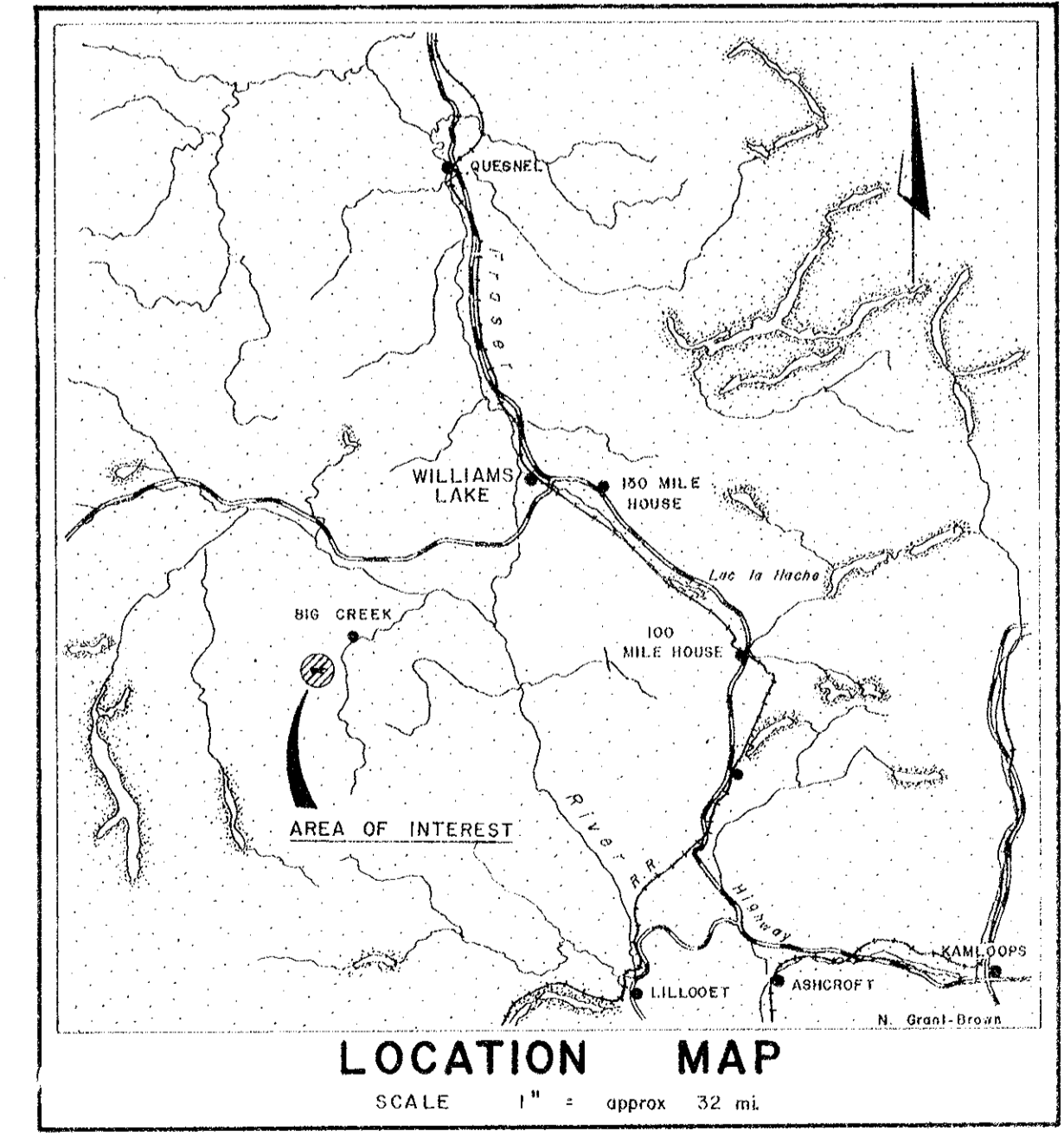
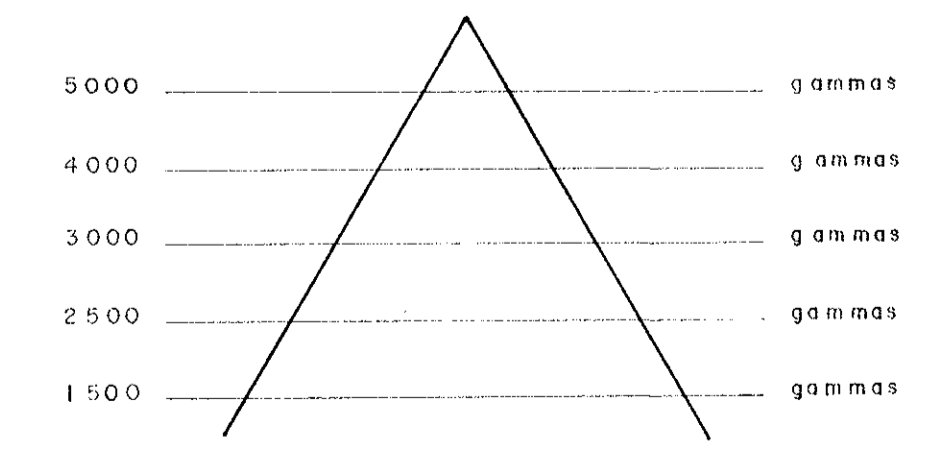
Sept. 16, 1970 REVISED PROJECT No. 110 FILE B11



L E G E N D

- Outline of Mike and Sun Claims
- Base Lines
- Stations Surveyed and Readings
- Magnetometer Contour Lines

MAGNETIC INTENSITY

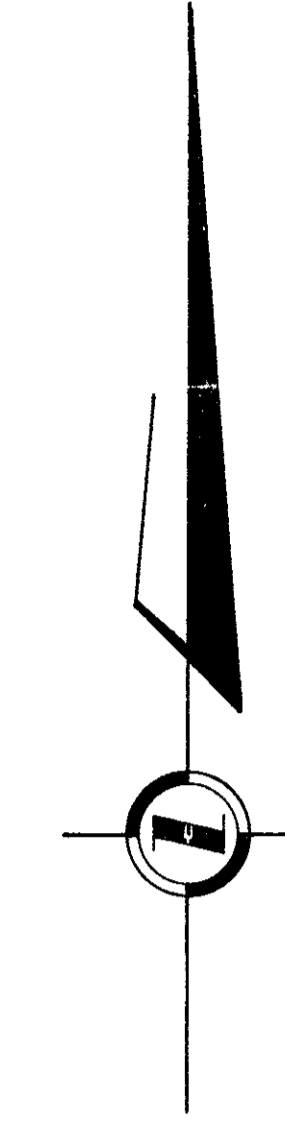
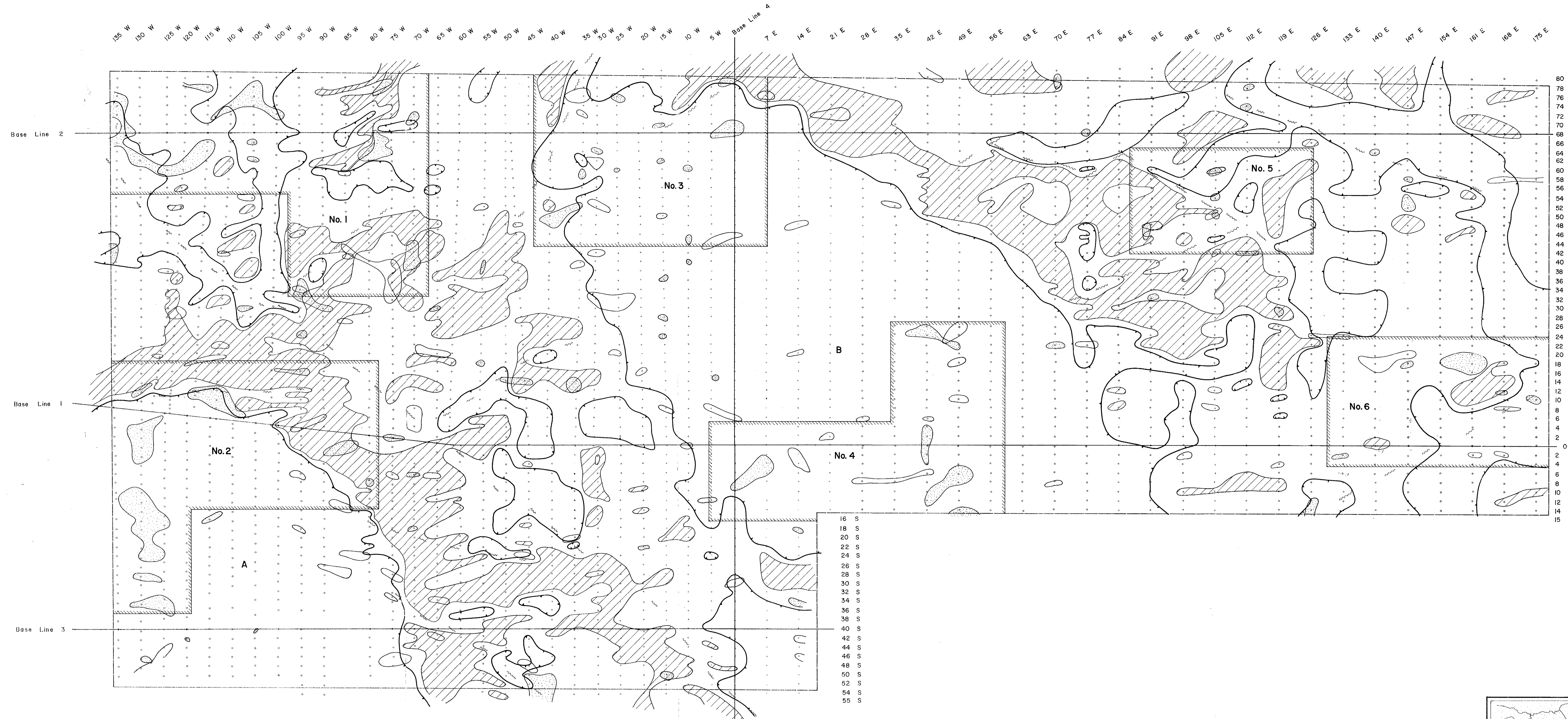


2964 M.4

NOTE: To accompany Magnetometer and Geotechnical Report
dated September 16, 1970 on the Mike and Sun
Claims Group by G.I. Anselmo, President
Glen E. White, Chief Geophysicist

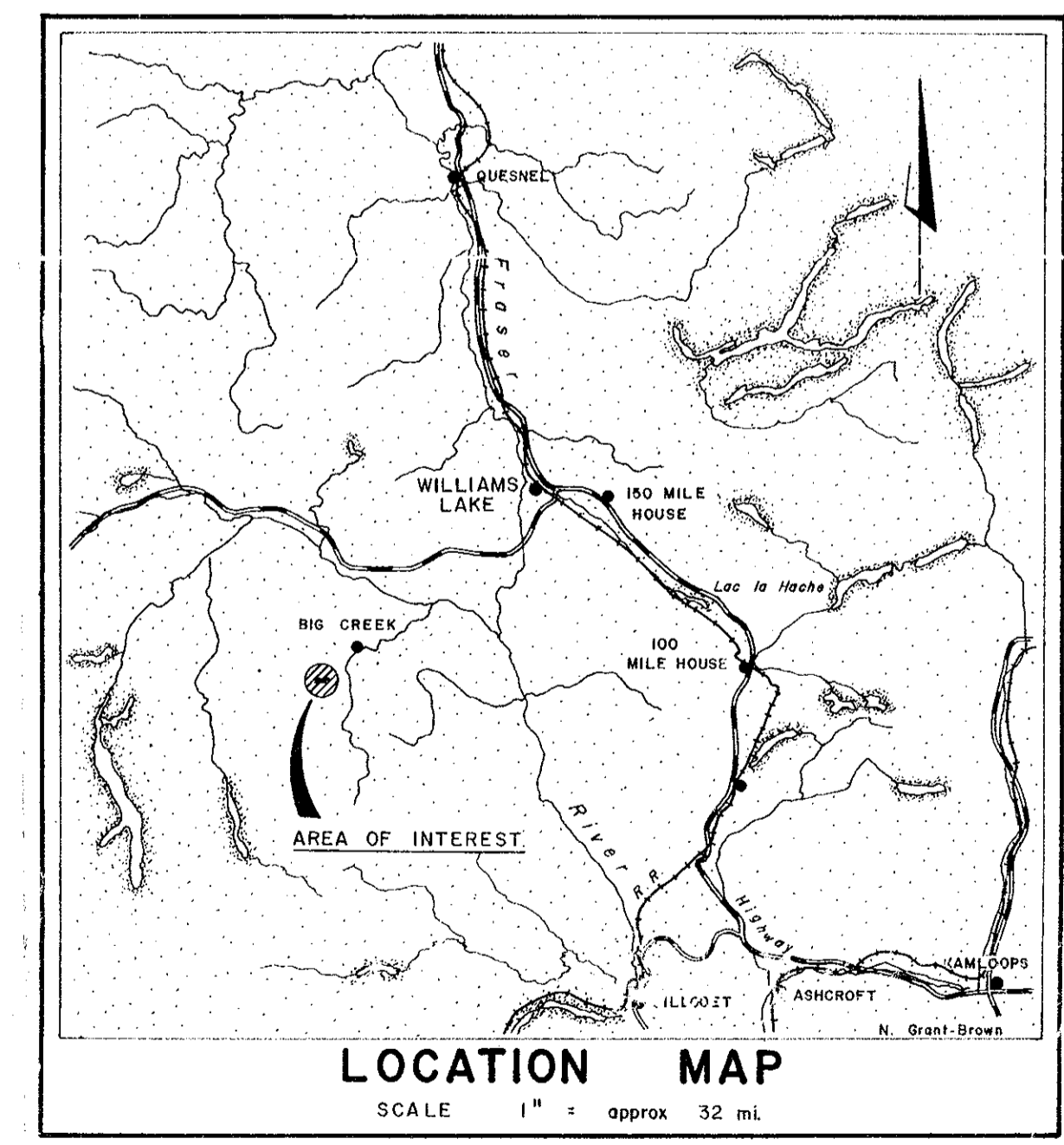
G.I. Anselmo
Glen E. White

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CONSOLIDATED PRINCIPAL MINES LTD. MILLIKEN PETROLEUMS LTD. (I.P.C.) KAMLOOPS COPPER CONSOLIDATED LTD. Joint Project On The MIKE AND SUN CLAIM GROUPS - BAMBRICK CREEK AREA CLINTON MINING DIVISION - BRITISH COLUMBIA CANADA		
GEOPHYSICAL MAP MAGNETOMETER SURVEY		
SCALE: 1 inch = 800 Feet		
C.G.D. EXPLORATION SURVEYS LTD.	INTERPRETED by: G.E. White GRADED by: N. Grant-Drone	FIG. 4
Fig. 16, 1970 REVISED	PROJECT No. 110	FILE 29



L E G E N D

- Outline of Mike & Sun Claims
- Base Lines
- Magnetic High Trend
- Magnetic Trend
- Copper Greater Than 18 ppm
- Zinc Greater Than 110 ppm
- Areas of Interest
- Inferred Faults



SCALE 0 800 1600 2400 FEET

2964 M-5

NOTE: To Accompany Magnetometer And Geoschematic Report
Dated September 16, 1970 On The MIKE And SUN
Claim Groups By: G.L. Anselmo, President
Glen E. White, Chief Geophysicist

G.L. Anselmo
Glen E. White

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CONSOLIDATED PRINCIPAL MINES LTD. MIDLAND PETROLEUMS LTD. (I.P.L.) KAMLOOPS COPPER CONSOLIDATED LTD. Joint Project On The MIKE AND SUN CLAIM GROUPS - BAMBRICK CREEK AREA <small>CLINTON MINING DIVISION - BRITISH COLUMBIA CANADA</small>	
INTERPRETATION MAP	
SCALE 1 Inch = 800 Feet	
 EXPLORATION SURVEYS LTD. <small>SEP 16, 1970 REVISED</small>	INTERPRETED by: G.E. White Base, N. Grant-Brown DRAFTED by: Interp., A.N. Schampier PROJECT No. 110
FIG. 5	FILE 511