

GEOLOGICAL, GEOPHYSICAL AND GEOCHEMICAL  
ASSESSMENT REPORT

on

VIC MINERAL CLAIM

NICOLA MINING DIVISION, B.C.

92 I 2

Latitude 50° 07' N

Longitude 120° 32' W

South of Nicola Lake, B.C.

for

KUM RESOURCES LTD.  
Registered Office  
940 King Edward Avenue  
Vancouver, B.C. V5Z 2E2

Field Work by  
Wilson Gewargis, Geologist

Supervised by  
Alex Burton, P. Eng.  
Burton Consulting Inc.,  
5-924 West Hastings Street,  
Vancouver, B.C. V6C 1E4

JULY, 1980

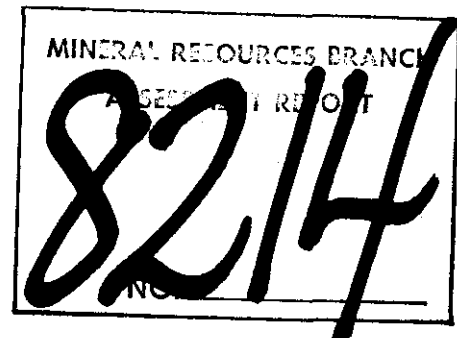


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## INTRODUCTION

Under instructions from the Directors of KUM Resources Ltd., Burton Consulting Inc. sent a crew on to the VIC Claim in mid April, 1980.

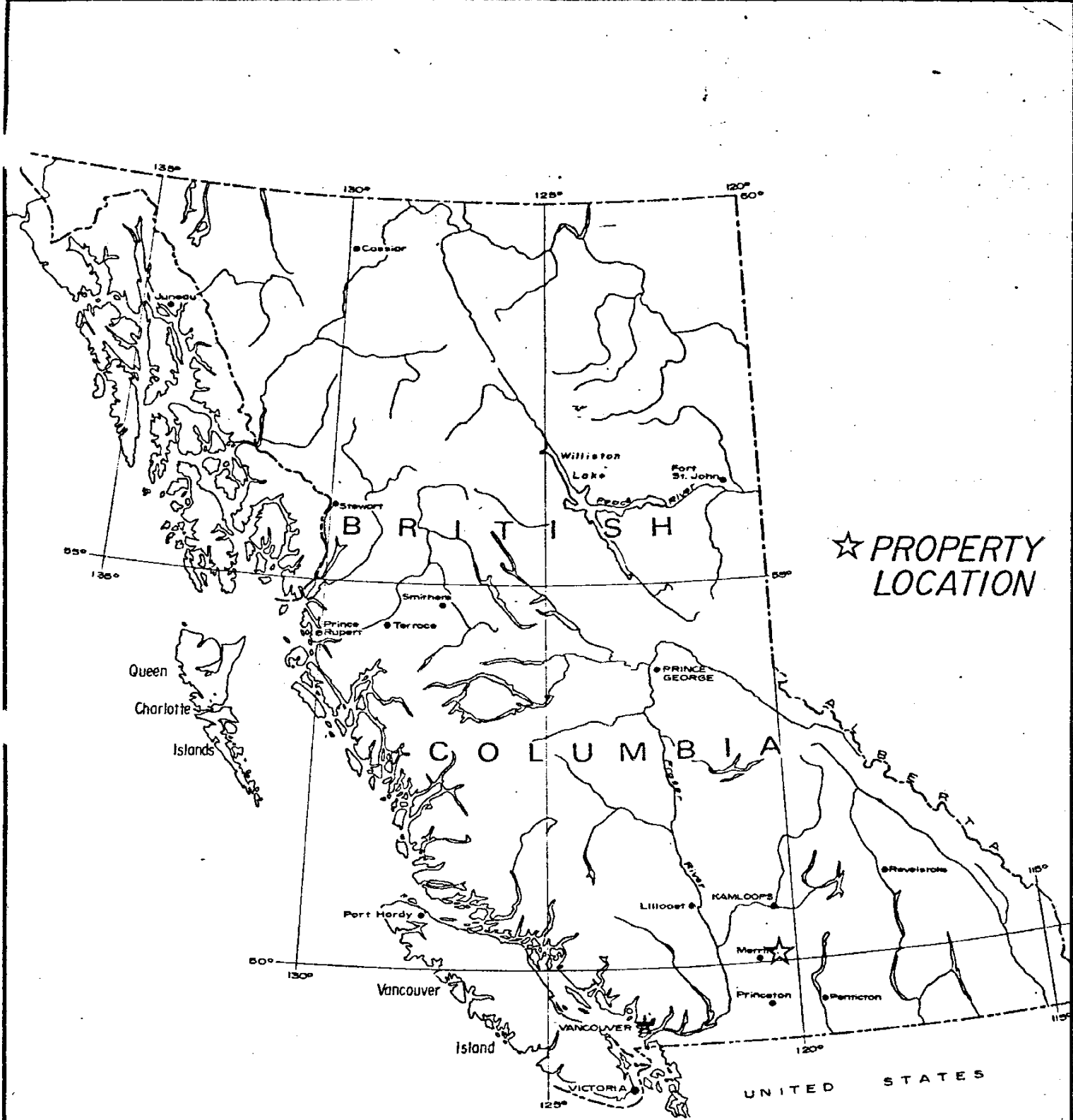
The purpose of their work was to start the exploration program recommended in the senior authors report of March, 1980, and to do enough assessment to keep the Claim in good standing.

The whole of the VIC Claim was covered by geological, geophysical and geochemical surveys in a reconnaissance fashion.

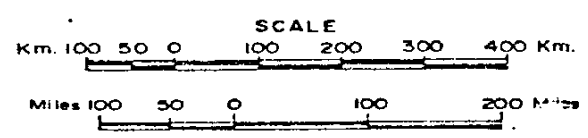
Areas of non interest and areas for further exploration were successfully outlined. Assessment work was filed to maintain and hold the claim. A program of further exploration is recommended.

## LOCATION AND ACCESS

The Legal Corner Post is close to the northwest corner of crown grant Lot 5203, and is about 1.5 kilometres south of Nicola Lake. Access is off Highway 5 from Merritt either from the Merritt-Kamloops road or the Merritt-Princeton road by means of unpaved side roads. From just west of Quilchena dirt roads lead south and west to the Claim. Similarly, dirt roads from the Princeton Highway lead easterly past Hamilton or Lundbom Lakes to the Claim.



★ PROPERTY LOCATION



The Legal Corner Post of the VIC Claim is 21.7 km. from Merritt on the Kamloops road, and then 2.1 km. south by 4 x 4 roads.

From the Merritt-Princeton road the LCP is 11.7 km. south of Merritt thence easterly 14.1 km. by dirt and 4 x 4 roads. The LCP is close to the NE corner of the Boy 3 No. 608(5) and is about 1.2 km. south of Nicola Lake at an elevation of 854 metres. Air photos BC 79052, 186, 187 and 188 cover the Claim.

#### PHYSIOGRAPHY

The VIC Claim is in the Thompson Plateau with relatively gentle wooded upper slopes and steep sided valleys. The Southern half of the Claim is on the gentle upper slope with elevations from 4,300 feet to 4,500 feet while the northern half of the Claim falls off steeply to 3,000 feet elevation on the steep valley slope leading down to the south shore of Nicola Lake at elevation 2,056 feet.

Outcrop pattern is sporadic and mainly related to the pattern of surficial deposits left by waning Pleistocene glaciation.

As is typical in the B.C. interior the upper elevations are timbered and the lower slopes

10000	20000 (80)	
10000	20000	10000
BC 2	GC 1	BC 3
253(8)	75 (8)	220(8)

00000	BONA VISTA 430(3)	
00000	LAKE L 533(1)	

Quilchena

PROPERTY

VIC	
658(7)	

PADY I  
663(7)

PADY II  
664(7)

RESERVED MM LACEM  
1/2 MILE EITHER SIDE  
S. 1226 15. APR 1980  
RELEASE REQUIRED

Teenamiltis Creek



Lundben L.

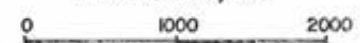
KUM RESOURCES LTD.

CLAIM MAP

VIC CLAIM

658(7)

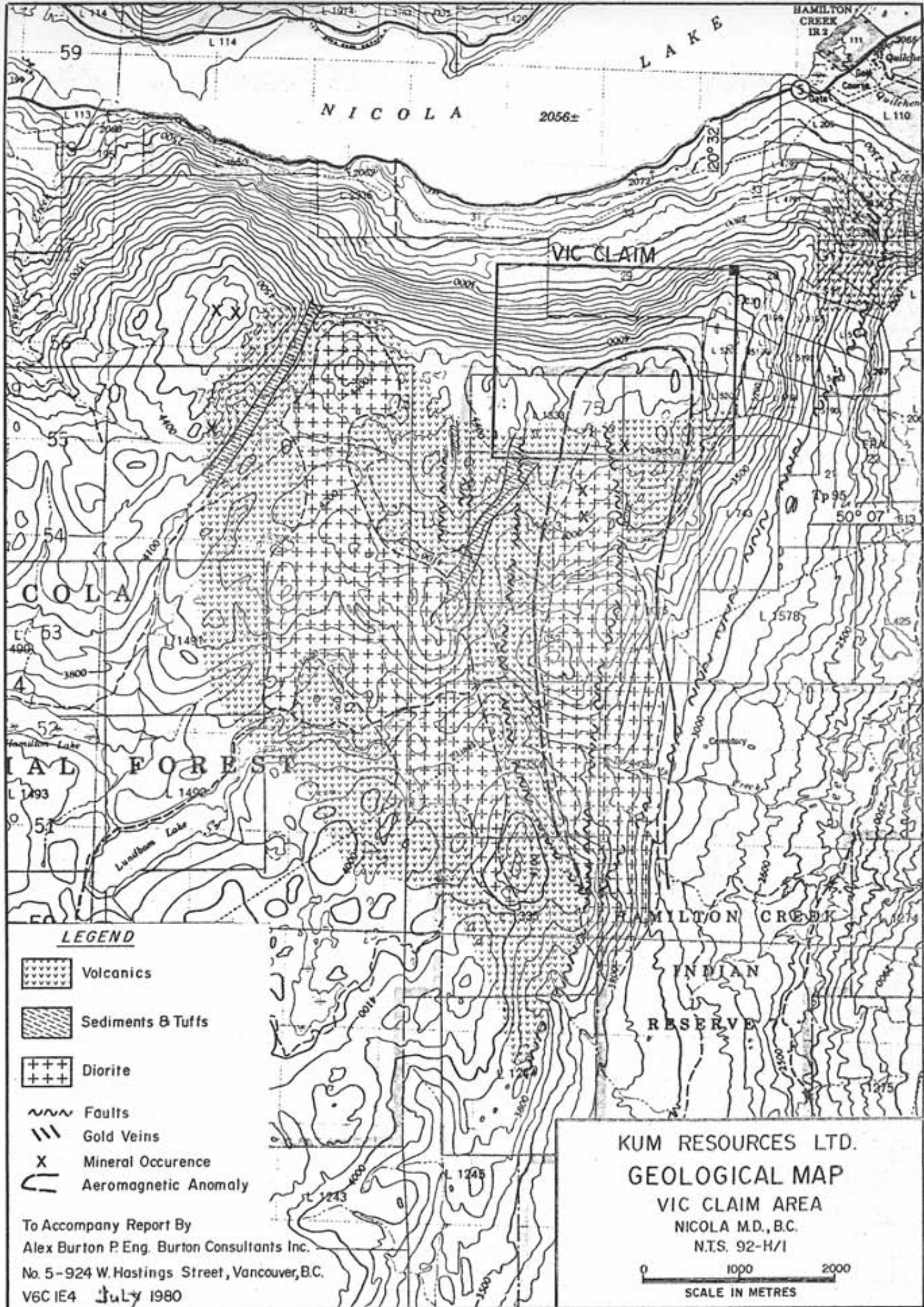
NICOLA MD., B.C.



SCALE IN METRES

To Accompany Report By  
Alex Burton P. Eng. Burton Consultants Inc.  
No. 5-924 W. Hastings Street, Vancouver, B.C.  
V6C 1E4 July 1980


MOTO 100



NICOLA 2056±

VIC CLAIM








COLA

AD FOREST

HAMILTON CREEK

INDIAN RESERVE

**LEGEND**

-  Volcanics
-  Sediments & Tuffs
-  Diorite
-  Faults
-  Gold Veins
-  Mineral Occurrence
-  Aeromagnetic Anomaly

To Accompany Report By  
 Alex Burton P. Eng. Burton Consultants Inc.  
 No. 5-924 W. Hastings Street, Vancouver, B.C.  
 V6C 1E4 July 1980

KUM RESOURCES LTD.  
 GEOLOGICAL MAP  
 VIC CLAIM AREA  
 NICOLA M.D., B.C.  
 N.T.S. 92-H/1  
 0 1000 2000  
 SCALE IN METRES

grassed, reflecting the arid nature of the lower elevations. Soils may be absent, immature, glacial, transported, but seldom are residual. Depth of weathering of outcrop varies from nil in freshly glaciated areas to locally significant.

### GEOLOGY

Geological work in the vicinity of the VIC Claim has gone through four phases. First was G.M. Dawson's work in the late 1870's on the Nicola Group Rocks. This was followed by Cockfield's Memoir 249 published in 1948. During the 1960's several mining companies explored in the area and M.P. Schau completed his PhD. thesis on the Nicola Group.

In 1979 the B.C.D.M. published Bulletin 69 on the "Geology of Nicola Group between Merritt and Princeton."

As a general rule these works do not reach or just barely overlap on to the VIC Claim.

The VIC Claim is underlain by Nicola Group Rocks and cut by at least one dioritic intrusive. Most of the Nicola rocks are andesitic to basaltic flows, but there is one well defined band of bedded tuffs with occasional beds of limestone running northeasterly across the Claim. Occasional beds of



limestone are seen in the well defined tuffs in the southwest part of the Claim where they strike northeasterly and dip westerly.

The dioritic intrusive may extend northerly up into the VIC Claim but does not outcrop and may be present only at depth.

Earlier surveys (assessment reports 748 and 763) using a Sharpe Model A-3 magnetometer failed to pick up the outline of the intrusive where there is some 500 gammas contrast on the aeromagnetic map. As was mentioned in these reports the instrument may not have been suitable for the job.

The aeromagnetic anomaly at the north end retains its character, but with diminished readings which could represent greater thickness of overburden, a plunge to the north of the top of the intrusive body, or a change in the magnetic susceptibility of the intrusive resulting from a compositional change or from increasing hydrothermal alteration.

The magnetic gradient at the contact of the tuffs and the volcanics is probably accentuated by the postulated underlying intrusive.

On Map 1 of Bulletin 69 Mineral occurrence No. 7 is noted near the middle close to the southern

boundary of the VIC Mineral Claim in the Nicola volcanics near the eastern boundary of the diorite intrusive. A branch of the Quilchena fault runs north through the diorite and then along the diorite-Nicola contact and presumably continues north through the middle of the VIC Mineral Claim.

The northeastern corner of the VIC Mineral Claim overlaps onto Crown Grants and Mineral Lease 13-R which were extensively explored by early workers for gold veins and in the 1960's by Quilchena Mining and Development Ltd. for gold and for molybdenite mineralization. Northwest striking gold veins occur along the west side of the Quilchena fault in the Nicola volcanics.

It is in this northeast corner of the VIC Mineral Claim where a possible breccia pipe and the intersection of a number of fault traces including a northeast striking structure along the flank of which "better assays" were noted in Point 9 on page 10 of a private report dated February 22, 1968 by J.A. Mitchell.

Study of the stereoscopic air photos of the Claim show a series of NW trending lineaments which are similar to the lineaments on adjacent claims to the east which have been explored for their gold veins. A secondary NE trending lineament set can

also be seen in the airphotos which tie in with the earlier reported NE structure.

Under the heading of Other Possibilities in the same report J.A. Mitchell said the following.

"An intrusive stock or belt of dikes underlies the westerly claims of the group at the highest elevation on the property. There is a deep geological embayment on the north side of this outcrop of intrusives, which should be a favourable place to look for a mineral deposit. Here we have a peak in the intrusives with a roof pendant condition on its north boundary, a possible major structural intersection just north of it and then the main body of intrusives on the north side of that. The map indicates also that older intrusives exist in this area. This all adds up to a favourable environment for a mineral deposit. The fact that a large, completely leached out gossan has been found on the adjoining property just to the west adds weight to this argument. It may be found that the area mapped as intrusives may be merely a concentration of intrusive dikes. This would not materially affect the concept.

This area should be thoroughly investigated by a magnetometer and geochemical survey."

A number of altered porphyritic dykes with scattered mineralization show traces of copper minerals and the presence of molybdenite in several places. The dykes have the same north-south trend as the volcanics.

## GEOCHEMISTRY

### Introduction

Preliminary investigation of the soil profiles showed two main types of soil. The most common soil was developed over glacial till and outwash glacial lake sediments, but there was a significant amount of residual soil developed from insitu bedrock. It was decided that a wide spaced soil grid over the whole of the VIC Claim would be adequate to outline specific areas where detailed soil surveys could be run later. Interpretation of these areas would be aided by the associated geological and geophysical surveys.

### Method

Soil samples were taken at 100 metre intervals on lines 500 metres apart. Samples were taken from the "B" horizon where possible. The standard geochemical paper bags were shipped to Min En Laboratories Ltd. in North Vancouver. There the samples were dried, sieved to -80 mesh and then analyzed for copper and molybdenum. Analysis was by nitric, perchloric digestion followed by A.A. analysis.

# MIN-EN Laboratories Ltd.

705 WEST 15th STREET,  
NORTH VANCOUVER, B.C., CANADA V7M 1T2  
TELEPHONE (604) 980-5814

## ANALYTICAL REPORT

Project ..... Date of report May 13/80.  
File No. 0-174 ..... Date samples received May 12/80.  
Samples submitted by: Alex Burton  
Company: Burton Consultants  
Report on: 142 soils ..... *Geochem samples*

..... *Assay samples*

### Copies sent to:

- Burton Consultants, Richmond, B.C.
- .....
- .....

Samples: Sieved to mesh - 80 ..... Ground to mesh .....

Prepared samples stored  discarded

rejects stored  discarded

Methods of analysis: nitric, perchloric digestion, A, A Analysis.

Remarks: .....

SPECIALISTS IN MINERAL ENVIRONMENTS

GEOCHEMICAL ANALYSIS DATA SHEET

PROJECT No.: \_\_\_\_\_

MIN - EN Laboratories Ltd.

DATE: May 13

ATTENTION: Alec Burton

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2  
PHONE (604) 980-5814

1980.

Sample. Number	6 Mo ppm	10 Cu ppm	15 Pb ppm	20 Zn ppm	25	30 Ni ppm	35 Co ppm	40 Ag ppm	45 Fe ppm	50 Hg ppb	55 As ppm	60 Mn ppm	65 Au ppb	70	75	80	
	81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
KUM 65		2	7.4						•								
	6.6	2	4.4						•								
	6.7	2	3.8						•								
	6.8	1	6.8						•								
	6.9	2	4.8						•								
	7.0	2	2.9						•								
	7.1	1	1.7						•								
	7.2	1	3.9						•								
	7.3	1	4.8						•								
	7.4	2	8.9						•								
	7.5	3	6.7						•								
	7.6	1	2.2						•								
	7.7	3	3.0						•								
	7.8	2	4.5						•								
	7.9	2	9.9						•								
	8.0	2	6.7						•								
	8.1	2	2.9						•								
	8.2	2	3.4						•								
	8.3	3	10.1						•								
	8.4	3	11.6						•								
KUM 85		2	11.7						•								
KUM28B		4	6.6						•								
KUM32B		2	12.1						•								
									•								
									•								
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COMPAL

Burton Consultants

**GEOCHEMICAL ANALYSIS DATA SHEET**

No. 0-174

PROJECT No.: \_\_\_\_\_

MIN - EN Laboratories Ltd.

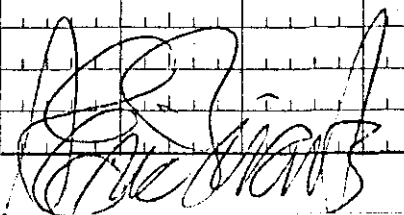
DATE: May 13,

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2  
PHONE (604) 980-5814

1980.

ATTENTION: Alec Burton

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb				
6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
KUM 31	2	53														
32	1	173														
KUM 33	2	75														
KUM 35	2	40														
36	2	38														
37	1	51														
38	2	49														
39	1	82														
40	2	137														
41	1	101														
42	2	37														
43	2	86														
44	1	96														
45	1	60														
KUM 46	2	54														
KUM 50	3	83														
51	2	102														
52	2	98														
53	2	84														
54	3	127														
55	2	54														
56	2	92														
57	2	64														
58	2	25														
59	2	53														
60	2	42														
61	2	22														
62	1	33														
63	1	27														
KUM 64	1	21														



CERTIFIED BY

COMPAL

Burton Consultants

**GEOCHEMICAL ANALYSIS DATA SHEET**

No. 0-17

PROJECT No.: \_\_\_\_\_

MIN - EN Laboratories Ltd.

DATE: May 13,

ATTENTION: Alec Burton

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2  
PHONE (604) 980-5814

1980.

Sample Number	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ni ppm	Co ppm	Ag ppm	Fe ppm	Hg ppb	As ppm	Mn ppm	Au ppb	70	75	80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
KUM 01	2	67						•								
02	1	74						•								
03	3	61						•								
04	2	77						•								
05	3	95						•								
06	2	72						•								
07	2	70						•								
08	2	75						•								
09	3	88						•								
10	2	85						•								
11	2	60						•								
12	3	106.0						•								
13	1	78						•								
14	2	71						•								
15	3	63						•								
16	2	107						•								
17	2	83						•								
18	1	73						•								
19	2	46						•								
20	1	34						•								
21	1	50						•								
22	1	42						•								
23	2	33						•								
24	1	36						•								
25	1	81						•								
26	1	15						•								
27	7	66						•								
28A	3	54						•								
29	3	76						•								
KUM 30	2	54						•								

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PROJECT No.: \_\_\_\_\_

MIN - EN Laboratories Ltd.

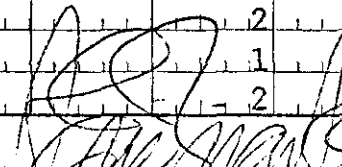
DATE: May 13,

ATTENTION: Alec Burton

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2  
PHONE (604) 980-5814

✓  
✓  
1980.

Sample Number	6	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80	
	K	Ca	CK	K	Zn	Ni	Co	Ag	Fe	Hg	As	Mn	Au	Mo	Cu		
	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppb	ppm	ppm		
	81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
✓ KUM116N-125+4.00W															2	67	
✓ 116N-125+5.00W															3	68	
✓ 116+1.00N-125+5.00W															2	58	
✓ 116+2.00N-125+5.00W															3	29	
✓ 116+3.00N-125+5.00W															3	42	
✓ 116+4.00N-125+5.00W															2	26	
✓ 117+2.00N-122+0.00W															2	24	
✓ 117N-122+2.00W															1	16	
✓ 117N-123+1.00W															1	50	
✓ 117+1.00-123+3.00W															4	26	
✓ 117+2.00N-123+3.00W															3	36	
✓ 117+3.00N-123+3.00W															2	37	
✓ 117+4.00N-123+3.00W															2	20	
✓ 117N-123+4.00W															2	18	
✓ 117N-124W															2	39	
✓ 117N-124+1.00W															3	9	
✓ 117N-124+2.00W															3	44	
✓ 117N-124+3.00W															3	66	
✓ 117N-124+4.00W															2	55	
✓ 117N-125+0.00W															1	62	
✓ 117N-125+1.00W															2	89	
✓ 117N-125+2.00W															1	70	
✓ 117N-125+3.00W															2	58	
✓ 117N-125+4.00W															2	39	
✓ 117N-125+5.00W															1	25	
✓ 117+1.00N-125+1.00W															2	19	
✓ 117+2.00N-125+1.00W															1	22	
✓ 117+3.00N-125+1.00W															2	23	
✓ 117+4.00N-125+1.00W															1	23	
✓ KUM118N-122+1.00W															2	41	

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COMPAT

Burton Consultants

## GEOCHEMICAL ANALYSIS DATA SHEET

No. 0-174

PROJECT No.: \_\_\_\_\_

MIN - EN Laboratories Ltd.

DATE: May 13,

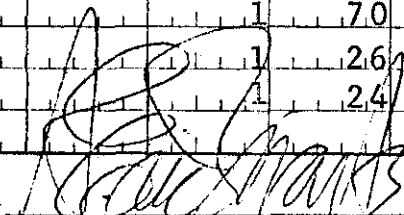
ATTENTION: Alex Burton

705 WEST 15th ST., NORTH VANCOUVER, B.C. V7M 1T2  
PHONE (604) 980-5814

1980.

Sample Number	6 MX ppm	10 OX ppm	15 Pb ppm	20 Zn ppm	25 Ni ppm	30 Co ppm	35 Ag ppm	40 Fe ppm	45 Hg ppb	50 As ppm	55 Mn ppm	60 Au ppb	65 Mo ppm	70 Cu ppm	75 80	
81	86	90	95	100	105	110	115	120	125	130	135	140	145	150	155	160
✓ KUM118+100N-122W								•						1	42	
✓ 118+200N-122W								•						1	25	
✓ 118+300N-122WA								•						2	31	
✓ 118+300N-122WB								•						2	18	
✓ 118+400N-122W								•						2	30	
✓ 118N+500N-122W								•						2	51	
✓ 118+100N-123+300								•						1	24	
✓ 118+200N-123+300W								•						1	26	
✓ 118+300N-123+300								•						2	54	
✓ 118+400N-123+300								•						2	82	
✓ 118N-123W								•						3	62	
✓ 118N-123+300WA								•						2	37	
✓ 118N-123+300WB								•						1	65	
✓ 118N-124W								•						1	29	
✓ 118N-124+100W								•						2	13	
✓ 118+00N-124+200W								•						1	32	
✓ 118N-124+300W								•						2	32	
✓ 118N-124+400W								•						2	17	
✓ 118N-125+100W								•						2	20	
✓ 118+100N-125+100W								•						1	24	
✓ 118+200N-125+100W								•						2	39	
✓ 118+300N-125+100W								•						1	16	
✓ 118+400N-125+100W								•						1	33	
✓ 118N-122+300W								•						1	75	
✓ 118N-122+400								•						2	51	
✓ KUM122W-117+100N								•						3	27	
✓ 118N-123+200W								•						1	70	
✓ 118N-123+400W								•						1	26	
✓ KUM118N-125W								•						1	24	

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## Discussion of Results

Over most of the Claim the soil sample values for copper and molybdenum were background and typical for soils derived from glacial materials. Contouring was not attempted, but some generalized conclusions can be drawn.

Soils over the area of tuffs and limestones are somewhat higher in copper and molybdenum than the soils over the volcanics, although they are still in the same range of values.

Soils along the north grid line are somewhat higher in copper and molybdenum than the soils over the remainder of the area covered by the volcanics. A single erratic sample with values of 1060 Cu and 3 Mo (in P.P. M.) is on this north grid line.

## GEOPHYSICS

### Introduction

Interpretation of the airborne government magnetometer map of the area showed well defined zones which related well to the known geology. A ground magnetic survey was added to the geological and geochemical survey to add information in areas where overburden cover would reduce the effectiveness

**McPHAR**

## M700 Flux Gate Magnetometer

Rugged, reliable instrument for hand-held field operation

**Self Levelling sensing head**

**Five scale ranges: 1,000 to 100,000 gammas**

**Low temperature drift**

**Latitude adjustment up to  $\pm 100,000$  gammas**

**Reverse measurement polarity by turn of switch**

**Long battery life**



M700 Flux Gate Magnetometer is a simple and efficient instrument for measuring changes in the earth's magnetic field. The two operating controls are mounted on the face of the instrument with the latitude adjustment and accessory socket concealed behind a panel on the side.

For measuring the vertical component of the earth's magnetic field, the instrument is set to zero at a chosen base station.

At each station on the survey the M700 is held roughly level, and a measurement of the increase or decrease in the magnetic field is read off the meter directly in gammas.

Measurement Ranges	Sensitivity
1,000 gammas	20 gammas/div.
3,000 gammas	50 gammas/div.
10,000 gammas	200 gammas/div.
30,000 gammas	500 gammas/div.
100,000 gammas	2,000 gammas/div.

**Operating temperatures**  $-35^{\circ}\text{C.}$  to  $55^{\circ}\text{C.}$   
Temperature drift less than 50 gammas over entire operating range

**Dimensions** 4 x 7 x 10½ in. (10 x 18 x 27 cm.)

**Weight**  
6½ pounds (3 kg.), less batteries and carrying case  
8 pounds (3.8 kg.) with batteries

**Batteries**  
Two internally mounted 9V batteries provide up to two months operation under normal conditions.

of these survey.

### Method

A McPhar fluxgate magnetometer Model M700 was used for this survey. The instrument was operated according to the instructions in the operation manual attached to this report. The instrument was set on the most sensitive available scale at a convenient base station after study of the airborne survey results. Survey loops were tied in to the base station and minor corrections made for diurnal variation. Readings were taken at 100 metre intervals on lines 500 metres apart. Where steep changes of magnetic gradient occurred readings were taken at spacings as close as 25 metres.

Diurnally adjusted readings were plotted in gammas on the base map at a scale of 1:5000.

Values were plotted at 100 gamma intervals with contour spacing increasing to 500 gammas in areas of sharp change.

### Discussion of Results

The ground magnetics show a good correlation with the government airborne survey.

In detail on line 119 N there is a good match on the NE topographic spur of the mountain where there are known NW mineralized fault zones. A detailed survey in this area would be helpful to outline these zones.

At the south end of base line 123 + 300 W the airborne magnetic high is reflected by the ground survey where there are the highest readings on the property. These high readings probably represent the influence of the buried north end of the dioritic intrusive mass to the south. The high readings in the southeast part of the property also reflect in part the more basic composition of the Nicola volcanics in this area.

CONCLUSIONS

The combined magnetic, soil geochemical and geological surveys were successful in covering the whole of the VIC Claim in a preliminary manner to outline areas of interest where any further work should be concentrated. They have served to show which combination of techniques are effective exploration tools to use in this difficult region.

RECOMMENDATIONS

A program of further work is justified to trace the band of sediments northeast into the zone of NW trending mineralized fault zones. This can be done with a more detailed magnetometer survey using the present east west grid system. Detailed lines will later be required running normal to the NW mineralized fault zones. These lines should be geochemically sampled at close spaced intervals and be run magnetically at the same close spacing in conjunction with detailed geological mapping.

After this stage is completed the test pitting can be started. The target in these zones is the known gold plus silver and copper veins.



## REFERENCES

- COCKFIELD, W.E. (1948): Geology and Mineral Deposits of Nicola Map - Area, B.C. Geological Survey, Canada, Memoir 249
- DAWSON, G.M. (1879): Preliminary Report on the Physical and Geological Features of the Southern Portion of the Interior of British Columbia, 1877, Geological Survey, Canada, Report of Progress, 1877-78
- HEMSWORTH, F.J. (1966): Magnetometer Report on the Ruth-Esther Claims  
Assessment Report No. 748  
(1966): Magnetometer Report on the Rick Claims  
Assessment Report No. 763
- MITCHELL, J.A. (1967): Geochemical Survey Report on the Mouse Group V Claims  
Assessment Report No. 1053  
(1968): Amended Report on Claims of Quilchena Mining and Development Co. Lt., Private Report, February 22, 1968.  
(1969): Geophysical, Geological Survey Report on the Mouse Group 1 and 11 Claims, Assessment Report No. 1798
- PRETO, V.A. (1974): Preliminary Map No. 15 (Sheets 1,2,3,4,5) June 1974,  
Department of Mines and Petroleum Resources  
(1975): Preliminary Map No. 18, May 1975  
Department of Mines and Petroleum Resources  
(1979): Geology of the Nicola Group between Merritt and Princeton  
Ministry of Energy, Mines and Petroleum Resources, Bulletin 69

REFERENCES - Con't.

- RENSHAW, R.E. (1966): Geochemical Report on the  
Eve Group of Claims  
Assessment Report No. 795
- SCHAU, M.P. (1968): Geology of the Upper Triassic  
Nicola Group in South Central  
B.C. Unpublished Ph.D. Thesis,  
U.B.C.
- WHITE, W.H.(1949): Guichon  
Report of Ministry of Mines, 1949  
Pages A120 - A124
- MAP 5209G (1968): Aeromagnetic Series, Sheet 92I2  
Geophysics Paper 5209  
B.C.D.M. and G.S.C.

STATEMENT OF QUALIFICATION

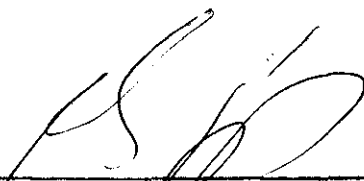
I, Wilson A. Gewargis as a geologist carried out field work on the VIC Mineral Claims. This involved geologic mapping, geochemical and geophysical survey.

This work was carried out and applied as assessment on the VIC Mineral Claim.

I hereby certify:

- 1) That I am a 1970 graduate of University of Mosul, Iraq with a Bachelor of Science degree in geology and 2 years post graduate studies at the University of Stuttgart, West Germany.
- 2) That I have practised my profession in geology in both mining and exploration for 7 years (4 years in British Columbia, 2 years in Yukon Terr.)
- 3) That I am registered as an engineering pupil of the Association of Professional Engineers of B.C.
- 4) That I am a member of the Geological Association of Canada and the Canadian Institute of Mining and Metallurgy.
- 5) That I have no direct or indirect interest whatsoever in either the property or securities of Kum Resources Ltd., or its affiliates, nor do I expect to receive any such interest.

Dated at Vancouver, British Columbia, this 9th day of May, 1980.

  
\_\_\_\_\_  
Wilson A. Gewargis

STATEMENT OF QUALIFICATION

I, Alex Burton do hereby certify that  
I am an independent consulting geologist with offices  
at 5-924 West Hastings Street, Vancouver, B.C.  
V6C 1E4.

- 1) I certify that I am a geology graduate of the University of British Columbia and am a Registered Professional Engineer in B.C. with Certificate No. 6262.
- 2) I have practised my profession for 25 years both as an independent consultant and in senior managerial capacity for major mining companies in Canada and other countries.
- 3) I have no interest or holdings of any sort in Kum Resources Ltd.
- 4) I consent to the use of this report by Kum Resources Ltd. in any prospectus or statement of material facts, or for assessment purposes.

Dated in Vancouver, B.C. July, 1980.



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Alex Burton, P. Eng.  
Consulting Geologist

COST STATEMENT

The following is the Cost Statement for assessment work done on the VIC Mineral Claim for KUM Resources Ltd., Nicola Mining Division, B.C.

April 15-29/80	W. Gewargis (15 days @ \$200/day)	\$3,000.00
April 15-29/80	F. Gewargis (15 days @ \$80/day)	1,200.00
April 14/80- July 2/80	A. Burton, P.Eng. (6 days @ \$300/day) (7 hrs. @ \$50/hr.)	1,800.00 350.00
Vehicle (16 days @ \$30/day)		480.00
Expenses		272.58
Draughting		474.88
Analyses		440.20
Magnetometer Rental		154.00
Field expenses		801.13
Office disbursements		<u>393.42</u>
	TOTAL	<u>\$9,366.21</u>

\$6,000.00 to apply on Geological, Geochemical and Geophysical Assessment Report on the VIC 658(7) Mineral Claim, Nicola Mining Division, B.C.



*Alex Burton*  
Alex Burton, P. Eng.  
Burton Consulting Inc.,  
5-924 West Hastings Street,  
Vancouver, B.C.  
V6C 1E4

NICOLA LAKE  
HIGHWAY No. 5  
POWER LINE

120 N.  
119 N.  
118 N.  
117 N.  
116 N.

126 W.

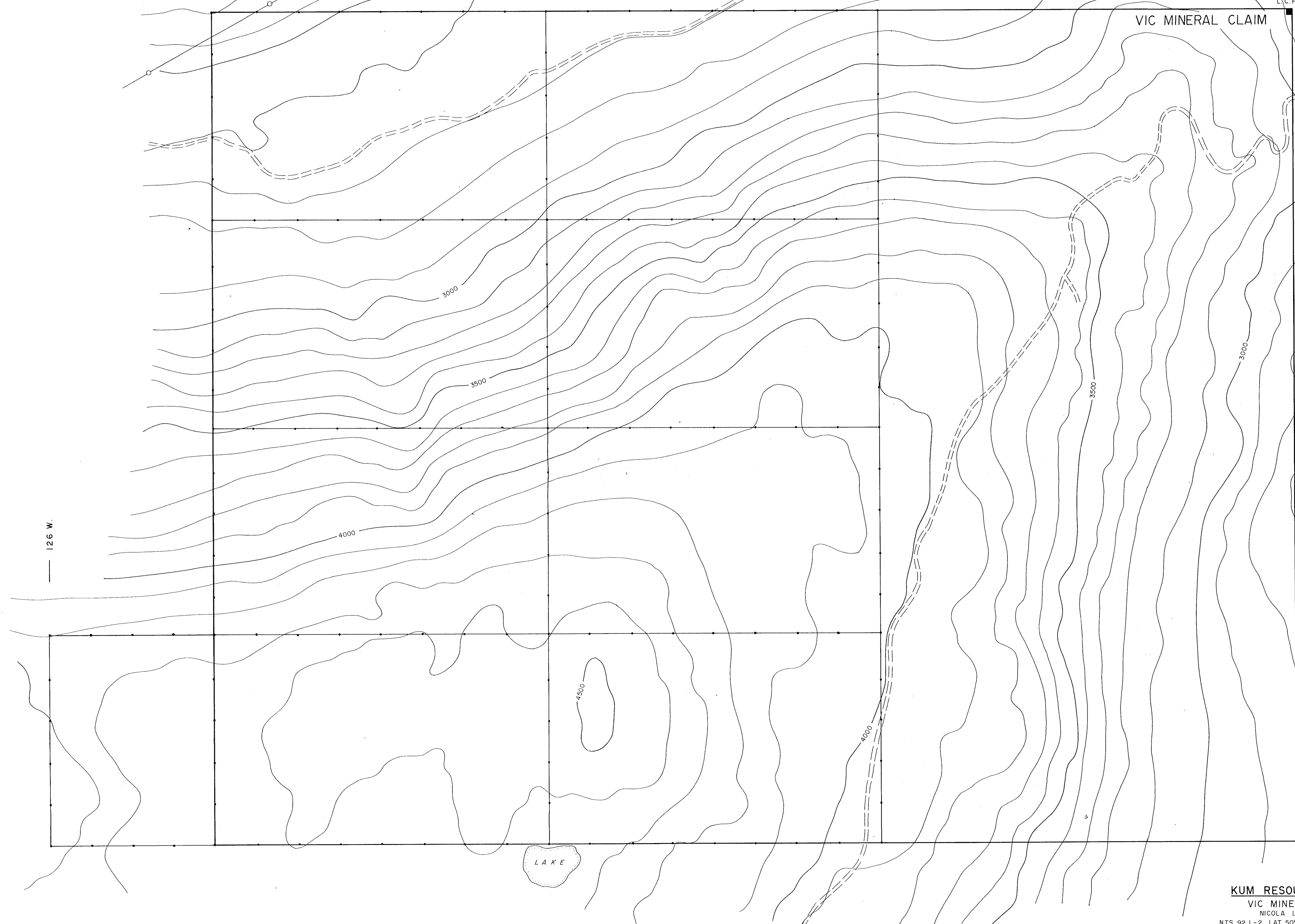
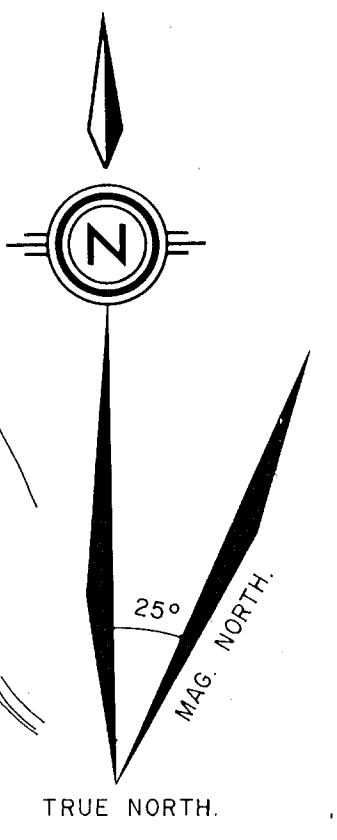
125 + 100 W.

123 + 300 W.

122 W.

VIC MINERAL CLAIM

L.C.P.

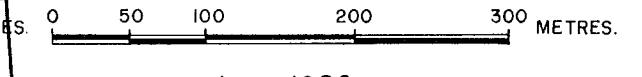


LAKE

KUM RESOURCES LTD.  
VIC. MINERAL CLAIM  
NICOLA LAKE, B.C.  
NTS 92 1-2, LAT. 50°07' N, LONG. 120°32' W.

TOPOGRAPHY

Scale 1:5000



June, 1980.

FIELD WORK BY W. GEWARGIS, GEOLOGIST,  
SUPERVISED BY A. BURTON, P. ENG.

BURTON CONSULTING INC.  
No. 5 - 924 W. HASTINGS ST.  
VANCOUVER, B.C. V6C 1E4.

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**8214**  
NO.

Topography

NICOLA LAKE

125 + 100 W

HIGHWAY No. 5

POWER LINE

123 + 300 W

122 W

120 N

119 N

118 N

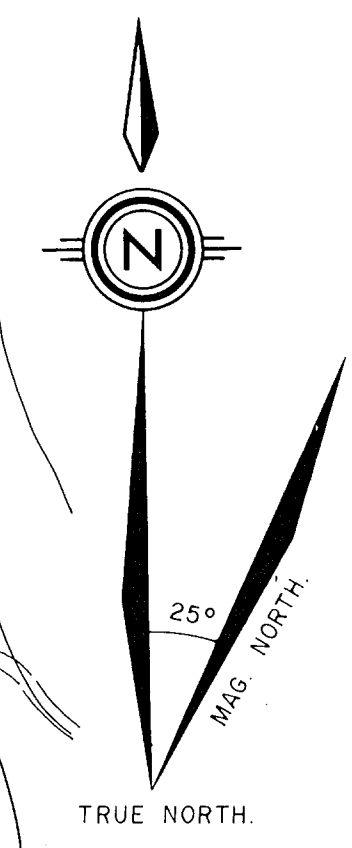
117 N

116 N

126 W

VIC MINERAL CLAIM

L.C.P.



INTEREST AREA ADJACENT TO QUARTZ VEIN SYSTEM

QUARTZ VEINING SYSTEM

LEGEND

- VOLCANICS, GREEN AUGITE, PLAGIOCLASE, ANDESITE & BASALT FLOWS.
- SEDIMENTS, TUFF (CRYSTAL IN WELL BEDDED TUFF)
- LIMESTONE
- FAULT
- MINERAL OCCURENCE
- QUARTZ VEIN

KUM RESOURCES LTD.  
 VIC MINERAL CLAIM  
 NICOLA LAKE, B.C.  
 NTS: 92 I - 2, LAT. 50°07' N, LONG. 120°32' W

PRELIMINARY GEOLOGICAL MAP

Scale 1:5000

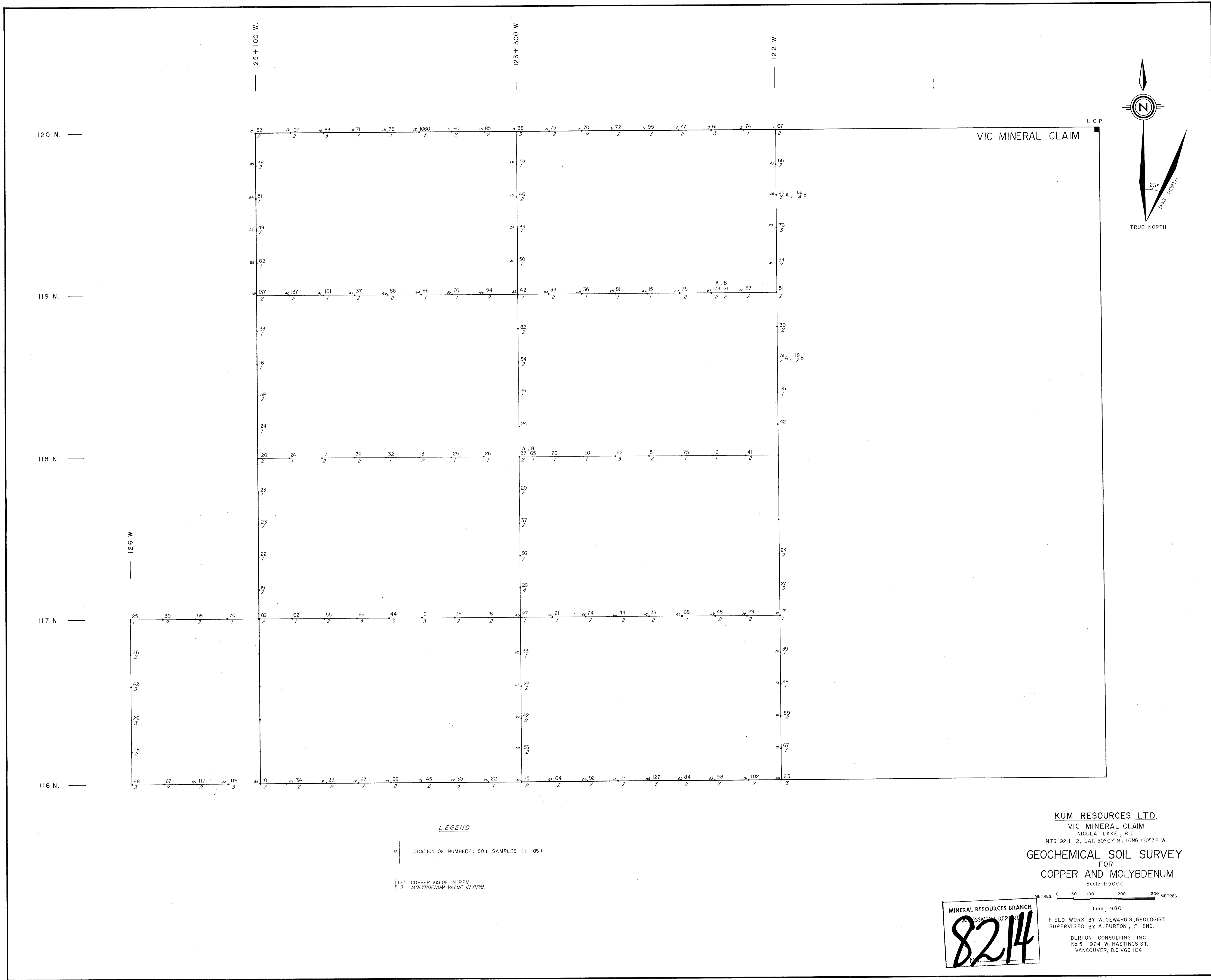


June, 1980.

FIELD WORK BY W. GEWARGIS, GEOLOGIST, SUPERVISED BY A. BURTON, P. ENG.

BURTON CONSULTING INC. No. 5 - 924 W. HASTINGS ST. VANCOUVER, B.C. V6C 1E4.

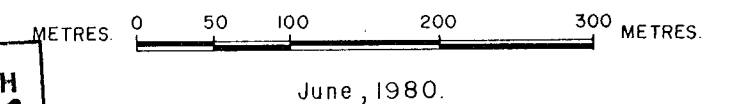
MINERAL RESOURCES DIVISION  
 ASSESSMENT PROJECT  
**8214**



**LEGEND**

- LOCATION OF NUMBERED SOIL SAMPLES (1-85)
- 127 COPPER VALUE IN PPM
- 3 MOLYBDENUM VALUE IN PPM

**KUM RESOURCES LTD.**  
 VIC MINERAL CLAIM  
 NICOLA LAKE, B.C.  
 NTS. 92 I-2, LAT. 50°07' N, LONG. 120°32' W.  
**GEOCHEMICAL SOIL SURVEY**  
 FOR  
**COPPER AND MOLYBDENUM**  
 Scale 1:5000

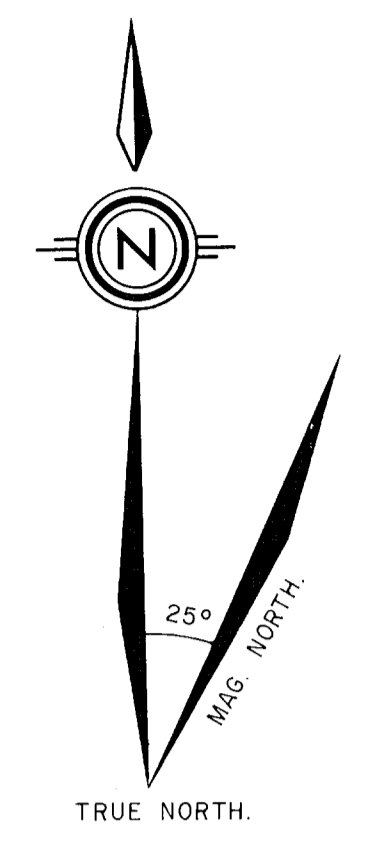
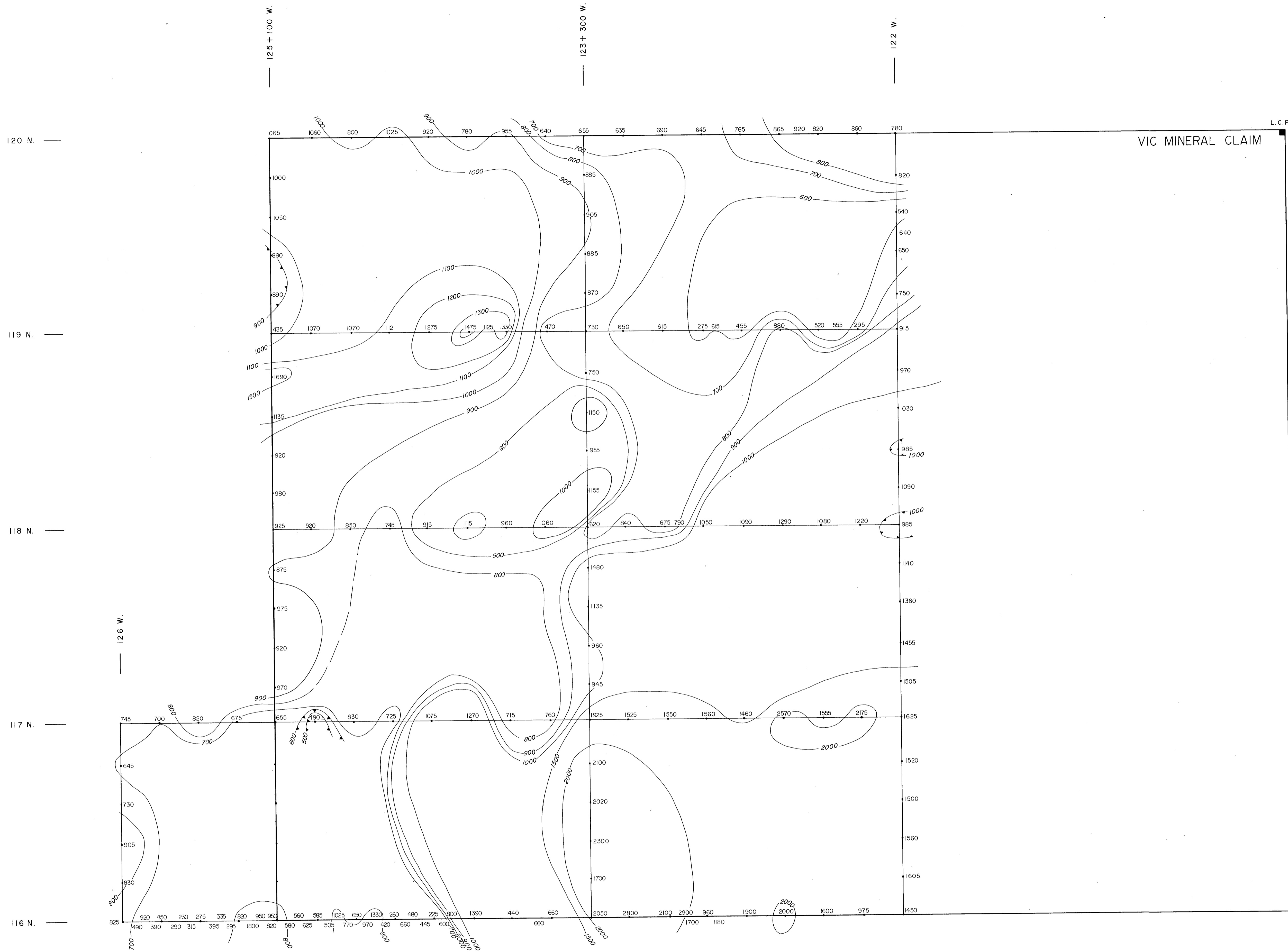


MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**8214**

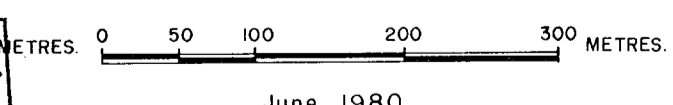
June, 1980.  
 FIELD WORK BY W. GEWARGIS, GEOLOGIST,  
 SUPERVISED BY A. BURTON, P. ENG.  
 BURTON CONSULTING INC.  
 No. 5 - 924 W. HASTINGS ST.  
 VANCOUVER, B.C. V6C 1E4.

*Green*





KUM RESOURCES LTD.  
 VIC MINERAL CLAIM  
 NICOLA LAKE, B.C.  
 NTS. 92 I - 2, LAT. 50°07' N, LONG. 120°32' W.  
**MAGNETOMETER SURVEY**  
 (McPHAR FLUXGATE MODEL M700)  
 CONTOUR INTERVAL 100 & 500 GAMMAS  
 Scale 1:5000



MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**8214**  
 NO.

June, 1980.  
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 SUPERVISED BY A. BURTON, P. ENG.  
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