

LOG NO: 0502	RD.
ACTION:	
FILE NO:	

FILMED

ASSESSMENT REPORT

GEOLOGICAL, GEOCHEMICAL REPORT

on the

SUE 1 & 2 CLAIMS

Located in the Cariboo Mining Division

at coordinates

53 degrees 14' N

122 degrees 24' W

by: ROBERT J. BAERG

NORANDA EXPLORATION COMPANY, LIMITED

(No Personal Liability)

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

17,329

Feb, 1988

N.T.S. 93 671, 8

TABLE OF CONTENTS

	<u>Page</u>
SUMMARY	1
INTRODUCTION.	2
HISTORY	2
LOCATION AND ACCESS	3
CLAIM DATA.	3
FIELD WORK.	3
REGIONAL GEOLOGY.	4
LOCAL GEOLOGY	4
MINERALIZATION.	5
DISCUSSION OF RESULTS:	
GEOLOGY.	5
SOIL GEOCHEMISTRY.	6
ROCK GEOCHEM	6
CONCLUSIONS	6
RECOMMENDATIONS	6
BIBLIOGRAPHY	7
Appendix I -- Cost Statement	8
Appendix II -- Statement of Qualifications	9
Appendix III -- Analytical Procedure	10/11

LIST OF FIGURES

Figure 1	Location Map	1:8,000,000	2a
Figure 2	Claim Map	1: 50,000	2b
Figure 3	Regional Geology	1: 250,000	3
Figure 4	Local Geology	1: 5,000	in pocket
Figure 5	Soil Geochem Cu/Zn	1: 5,000	"
Figure 6	Soil Geochem Pb/Ag	1: 5,000	"
Figure 7	Soil Geochem As/Au	1: 5,000	"

SUMMARY:

During 1987 a small soil sampling and geological mapping program was completed on the property. The purpose of this program was to evaluate a large area of hornfelsed sediments along the contact of a large granodiorite intrusive. Within the hornfelsed sediments minor calcareous skarn and trace pyrite-chalcopyrite were observed. Geological mapping and rock sampling did not reveal any precious metals within the hornfelsed and skarn areas. As well the soil sampling did not detect any new target areas which might warrant further work.

INTRODUCTION:

This report covers the work completed by Noranda Exploration Company, Ltd., during September and October, 1987, on the Sue 1 and 2 claims. The claims are located in the Cariboo Mining Division approximately 80 kilometers SSE of Prince George, B.C. The claims consist of thirty-two (32) modified grid units.

The property is located within the "Quesnel Trough", a NNW trending belt of marine volcanics and sediments which is locally intruded by Cretaceous-age stocks. Thus, there is potential for both exhalative-type and metasomatic-type massive sulphides.

Part of the property and areas immediately to the southeast have been worked on and off from 1968 to the present date. This work has been based on the occurrence of several stockwork and massive sulphide showings within the volcanic rocks. These showings consist of pyrite and/or pyrrhotite with chalcopyrite, sphalerite and galena with associated silver and gold values.

Field operations were supervised by R. Baerg, under the supervision of T. Lewis and R. MacArther, geologists with Noranda Exploration Co. Ltd.

HISTORY:

Part of the Sue claims and areas immediately to the southeast have been worked by various exploration companies since 1968 for lode mineralization. The area has been actively worked for placer gold since the early 1900's. The most recently active property in the area was the Thunder property of Cariboo Minelands Ltd., later Equatorial Resources Ltd. Mineralization there consisted of massive and semi-massive pyrite-pyrrhotite-chalcopyrite with some sphalerite and galena, and considerable associated magnetite. Work on these showings included mapping, trenching, geochemical sampling, geophysics and diamond drilling.

More recently, in 1980, prior to the staking of the Sue claims, Gabriel Resources Inc. staked a large area to the south and east of the present Sue claims and is currently evaluating that ground for mineral potential.

In January of 1984, Noranda Exploration contracted Questor Surveys Ltd. of Mississauga, Ontario, to fly a regional airborne EM-Mag survey in the area of the Sue property. The airborne survey detected an anomaly on the Sue property and as a result, during September-October 1984, Noranda conducted a geophysical, geological and geochemical evaluation program on the property.

LOCATION AND ACCESS:

The Sue property is located approximately 80 km south-southeast of Prince George, British Columbia (Figure 1).

Access to the property is obtained by a good logging road which branches off Highway #97, 1.7 km southeast of Cinema. This road, called the Ahbau Creek Forest Road, is followed northeast for 1.6 km to where the western boundary of the Sue property is located. From there the road angles up through the central portion of the Sue 1 claim and then heads east and exits the property in the northeast corner.

Access to the southwest portion of the Sue 2 claim is obtained by following the Ahbau Creek Forest Road northeast from Highway #97 for 1.1 km and then taking the sharp right hand fork.

CLAIM DATA:

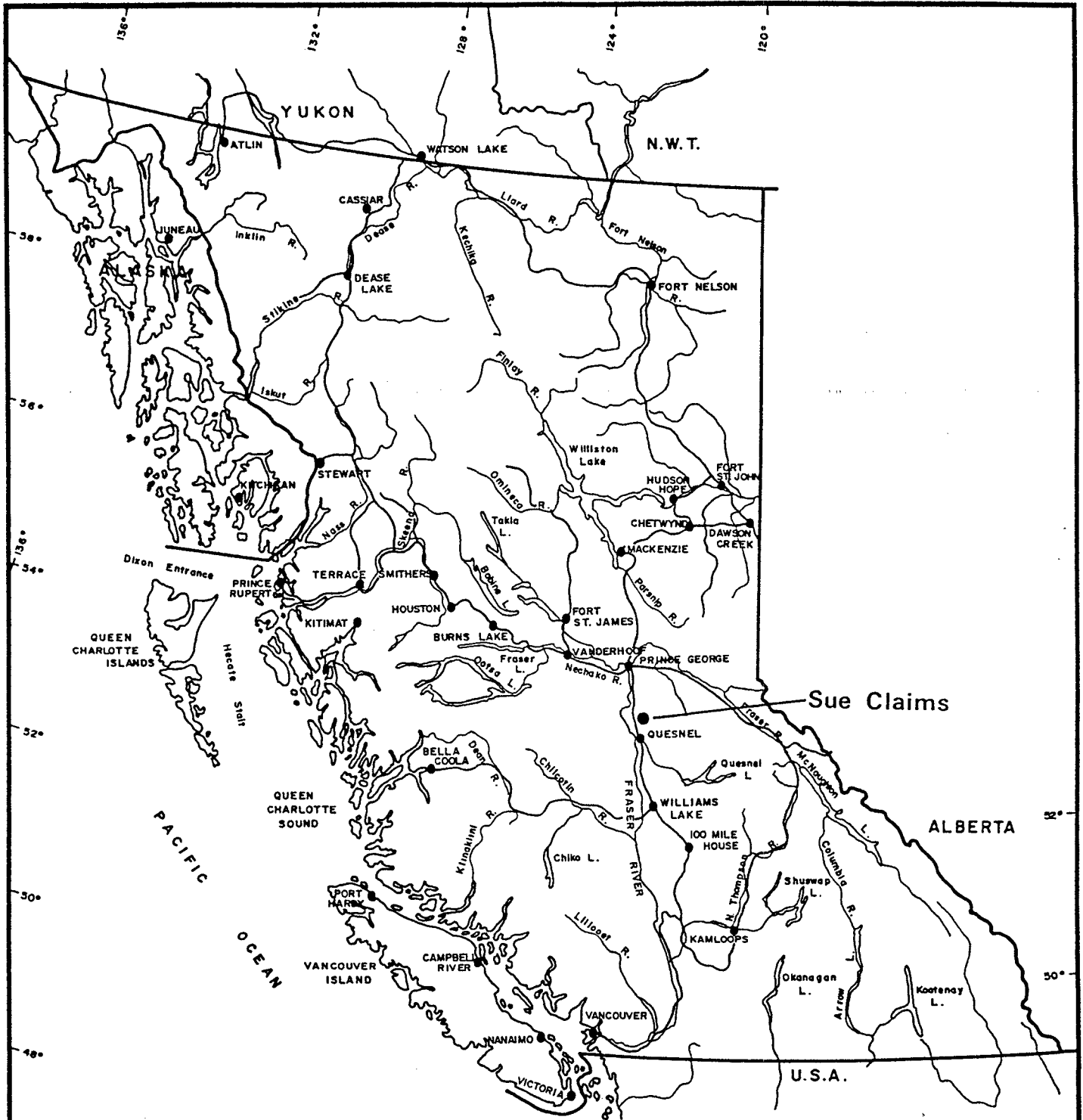
The Sue claims consist of two (2) claim blocks comprised of thirty-two (32) modified grid units (Figure 2).

Claim description follows:

<u>Claim Name</u>	<u># Units</u>	<u>Record No.</u>	<u>Expiry date</u>
Sue 1	20	8256	Feb. 3/89
Sue 2	12	8257	Feb. 3/89

FIELD WORK:

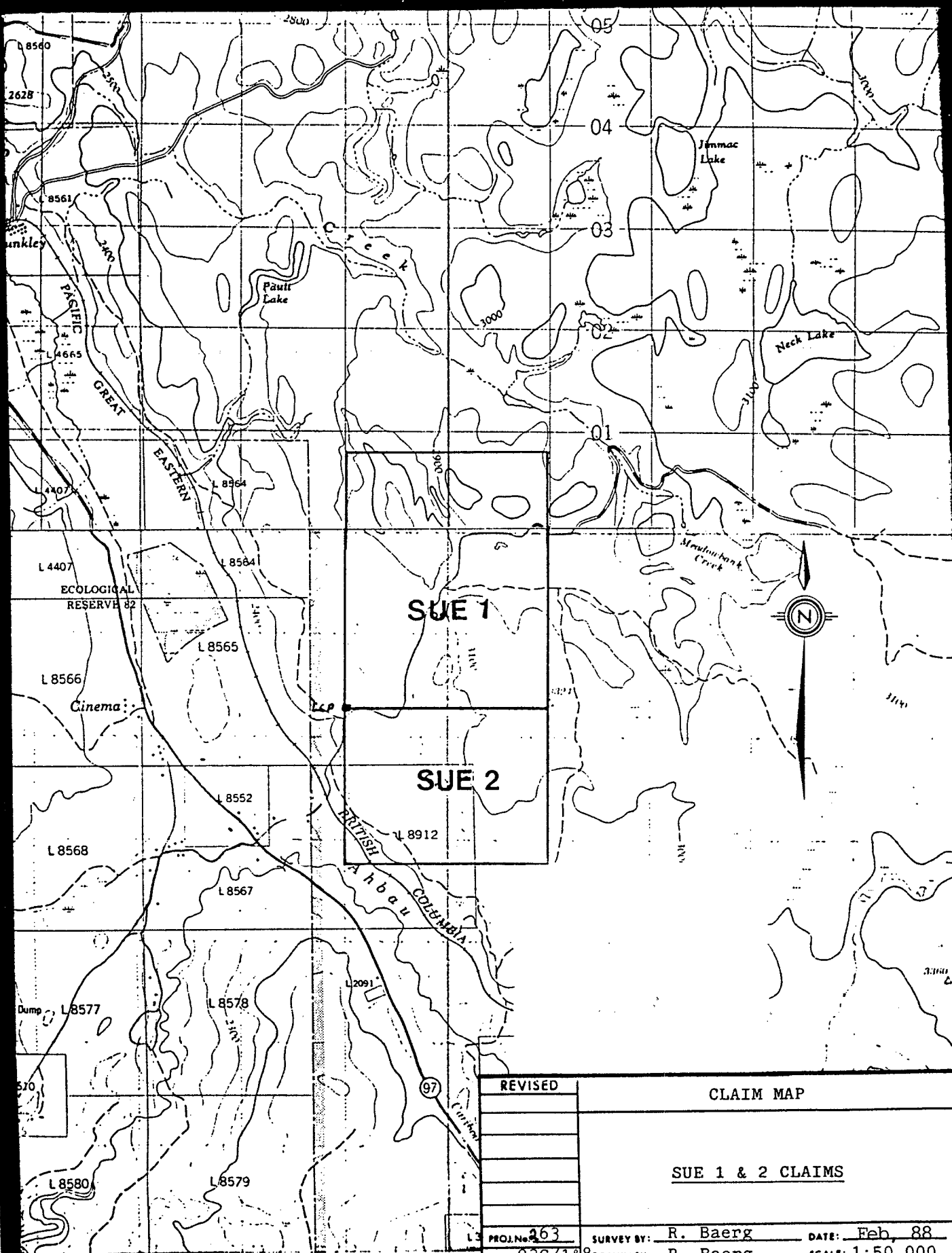
In 1984 a 4.4 x 1.0 km control grid was established on the property. Crosslines were located at 200m intervals and extend 500m on either side of the line. In 1987 the eastern crosslines, from line 39200N to 41200N, were extended, using a compass and hipchain, 500m to the east, to 41000E, and were soil sampled and mapped. A total of 194 soil samples and 3 rock samples were collected. Soil samples were collected from the "B" horizon at 25m intervals along the extensions with the use of a grub hoe. Samples were collected at depths of 25 to 40cm where possible. The samples were then placed in Kraft "wet strength" paper bags, dried and then shipped to Noranda Labs in Vancouver, B.C. for analysis (for analytical procedure, see Appendix III).



0 100 200 KILOMETRES
SCALE: 1:8,000,000

REVISED	LOCATION MAP	
	SUE CLAIMS	
PROJ. No. <u>263</u>	SURVEY BY: <u>R. Baerg</u>	DATE: <u>Feb, 88</u>
N.T.S. <u>93671</u>	DRAWN BY: <u>S.K.B.</u>	SCALE: <u>1:8,000,000</u>
DWG. No. <u>1</u>	NORANDA EXPLORATION	
	OFFICE: <u>PRINCE GEORGE, B.C.</u>	

VANCAL 11927



SUE 1

SUE 2



REVISED	CLAIM MAP	
	SUE 1 & 2 CLAIMS	
PROJ. No. 263	SURVEY BY: R. Baerg	DATE: Feb, 88
N.T.S. 93G/18	DRAWN BY: R. Baerg	SCALE: 1:50,000
DWG. No. 2	NORANDA EXPLORATION OFFICE: Prince George, B.C.	

REGIONAL GEOLOGY:

Figure 3 shows the regional geology in the area of the Sue claims. The claims are located within the Quesnel Trough, a broad NNW trending belt of marine volcanics, volcanoclastics and sediments which are locally intruded by calc-alkaline intrusive stocks. The geology of this area has been described by Tipper (1960) and Tipper et al (1975), (1979).

The rocks vary in age from Hadrynian to Quaternary and are generally increasingly metamorphosed and deformed with increasing age. The area is characterized by a strong northwesterly trend of fold axes and faults. Also, the Kaza Group rocks have been domed by large batholith north of Naver Creek.

The rocks within the area of the Sue claims are divided into two main units:

TJT : Takla Group - andesite, basalt, tuff, breccia, conglomerate, greywacke, shale, limestone

EKg : Naver Intrusions - quartz monzonite, syenite, monzonite, granodiorite, diorite

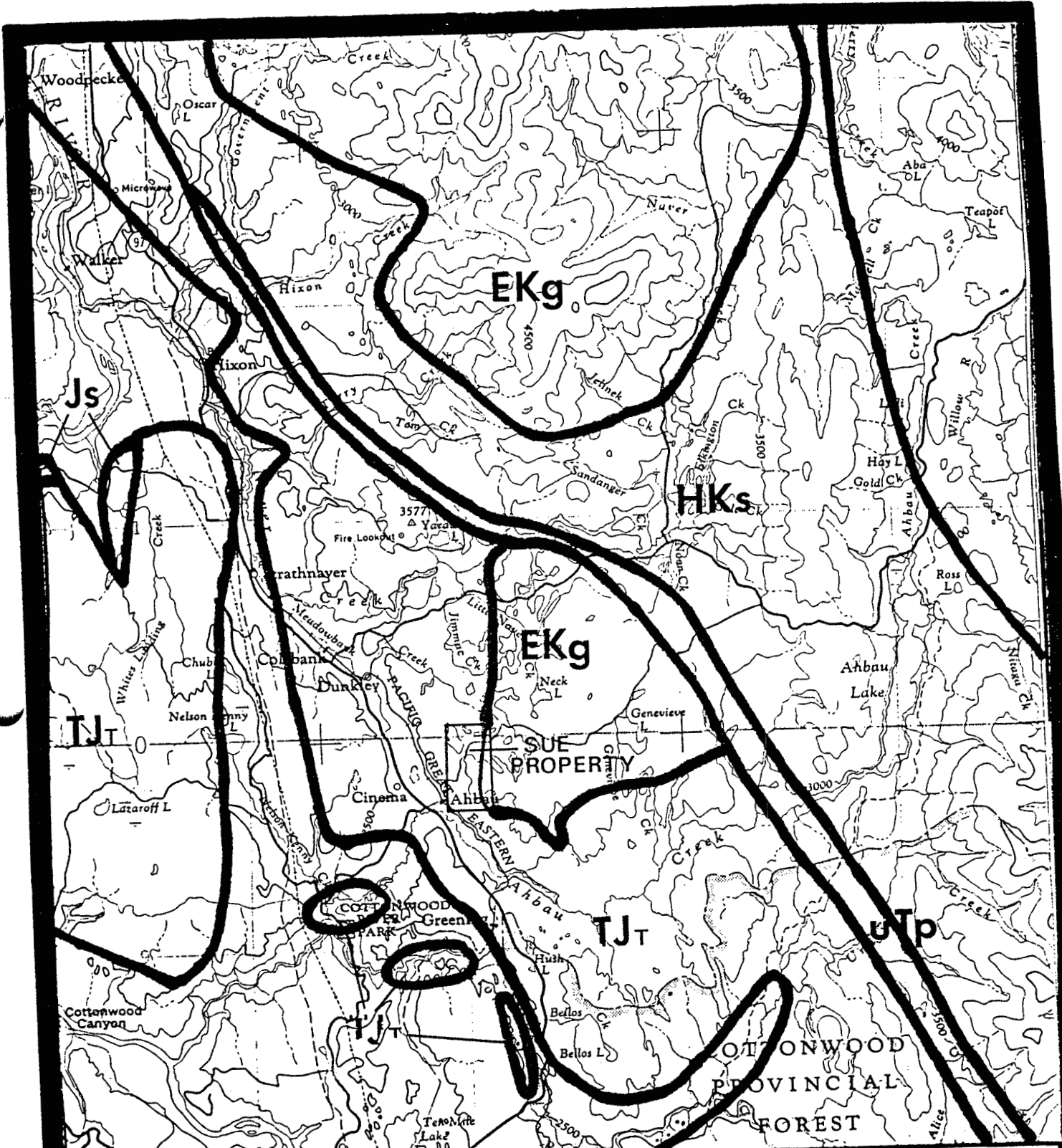
LOCAL GEOLOGY:

Figure 4 illustrates the geology of a portion of the Sue claims. Three main rock units were identified:

1. Black Argillite
2. Andesite-Basalt
3. Granodiorite

As well, there were minor amounts of feldspar porphyry volcanic, Hornblende Diorite dikes and Debris Flows.

The volcanic rocks mainly occur to the west of the baseline with the argillites and intrusive rocks mainly to the east of the baseline. The main contact, between the andesites and the argillites, has a consistent north northwesterly trend. Bedding attitudes within the argillites are generally parallel to subparallel to this contact with dips from 60 degrees west to 40 degrees east. It is possible that there is a north northwest trending fold centered roughly along the baseline but data at this point is inconclusive.



REVISED	REGIONAL GEOLOGY	
	SUE CLAIMS	
PROJ. No. 263	SURVEY BY: R. Baerg	DATE: Feb, 88
N.T.S. 936	DRAWN BY: R. Baerg	SCALE: 1:250,000
DWG. No. 3	NORANDA EXPLORATION	
	OFFICE: Prince George, B.C.	

REGIONAL GEOLOGY

TERTIARY

MPvb - olivine basalt, flows, breccia, tuff

MPs - sandstone, shale, conglomerate, diatomite, lignite

CRETACEOUS

EKg NAVER INTRUSIONS: quartz monzonite, syenite, monzonite, granodiorite, diorite

TRIASSIC-JURASSIC

LOWER-MIDDLE JURASSIC

Js - shale, greywacke, conglomerate

UPPER TRIASSIC-LOWER JURASSIC

TJT - Takla Group: andesite, basalt, tuff, breccia, conglomerate, greywacke shale, limestone

uTp - black phyllite, siltstone, limestone, quartzite

LTg - Takomkane Batholith: granodiorite, quartz diorite, quartz monzonite

PERMIAN AND/OR TRIASSIC

PTub TREMBLEUR INTRUSIONS: peridotite, dunite pyroxenite, serpentinite

MISSISSIPPIAN

Msm SLIDE MOUNTAIN GROUP: basalt, breccia, tuff, chert, argillite, sandstone, limestone, conglomerate

HADRYNIAN AND PALEOZOIC

HKs KAZA GROUP: sandstone, conglomerate, grit, phyllite, schist, amphibolite, marble, gneiss

The volcanic rocks are predominately andesitic in composition and locally porphyritic. They have been metamorphosed to a green schist facies with extensive chlorite and minor epidote commonly obliterating the primary mineral textures. Within the andesites, there are also minor grey-brown feldspar porphyry flows and minor rusty debris (?) flows.

The argillites and locally the volcanics are variably hornfelsed. The argillite hornfels are generally black and cherty with local zones of pale green to white mottling due to chlorite, epidote and silica alteration. Also, the argillite hornfels locally takes on a brown massive, fine-grained appearance (biotite alteration?). The volcanic hornfels have a massive dark green cherty appearance.

Both the argillites and the volcanics are locally intruded by small Hornblende diorite dikes.

A large granodiorite stock occurs in the southeastern portion of the survey area. It is fine to medium grained and is commonly strongly magnetic.

MINERALIZATION:

Mineralization consists of pyrite, pyrrhotite and trace chalcopryrite, Pyrrhotite +/- pyrite occurring as disseminated grains, small grain aggregates, replacements of mafic minerals and as fracture coatings, is common in the andesites and occurs locally in the argillites. They also occur in small stockwork zones, with associated chlorite-epidote-silica alteration, in both the andesites and the argillites. Chalcopryrite was most commonly observed within these alteration zones.

DISCUSSION OF RESULTS:

GEOLOGY:

Mapping of the extended lines indicates that much, if not all, of the eastern portion of the claims is underlain by a sequence of thinly bedded argillite. The argillite is weakly to moderately hornfelsed throughout. Areas of stronger hornfelsing locally show bleaching and silicification with trace sulphides. A large pit area on line 40600N exposed an area of intense hornfelsing with 2-3% pyrite-pyrrhotite and trace chalcopryrite. As well several narrow lenses, to 30cm, of calc-skarn were observed. Bedding attitudes are generally north-northwest with steep easterly dips.

SOIL GEOCHEMISTRY:

The soil survey failed to outline any new target areas. The zinc, silver and lead values, as in the 1984 survey, appear to reflect background levels within the argillites. Anomalous copper and locally arsenic values appear to reflect areas of intense hornfelsing which contain minor sulphides. These areas are quite limited in size and do not appear to have precious metal potential.

ROCK GEOCHEM:

Three rocks samples, 76041-43, were collected. All three samples returned uniformly low values.

CONCLUSIONS:

Geological mapping has outlined a large area of moderately to strongly hornfelsed argillaceous sediments, with trace sulphides, proximal to a large granodiorite intrusion. Soil and rock sampling over this area has failed to indicate the presence of economic concentrations of mineralization.

RECOMMENDATIONS:

No further work is recommended for this property at this time.

BIBLIOGRAPHY

B. C. D. M. ; MMAR	1968 - 151
B. C. D. M. ; GEM	1969 - 161
B. C. D. M. ; GEM	1971 - 161
B. C. D. M. ; GEM	1972 - 349
B. C. D. M. ; Ass. Rpt.	627
B. C. D. M. ; Ass. Rpt.	2212
B. C. D. M. ; Ass. Rpt.	3385

Questor Surveys Ltd. : Report on the Ahbau Area INPUT MK VI
Airborne Electromagnetic and Magnetic
Survey. A company report.

Tipper, H.W. : Geology, Prince George, British Columbia, Map 49-
1960, 1961.

APPENDIX I:

COST STATEMENT

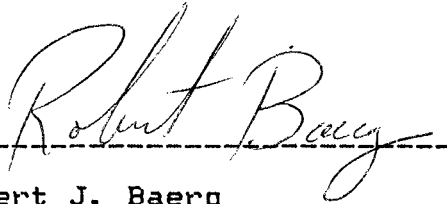
Labour:		
6 Mandays at \$ 150/MD	\$	900.00
Food & Accommodation:		
6 Mondays at \$ 50/MD	\$	300.00
Transportation:		
3 days at \$ 25/day	\$	75.00
Analyses:		
194 soil samples (Au + 30 element ICP)		
\$ 11.00/sample	\$	2,134.00
3 rock samples (Au + 30 element ICP)		
\$ 13.00/sample	\$	39.00
Report:		
Writing	\$	150.00
Drafting	\$	<u>150.00</u>
Total	\$	3,748.00

APPENDIX II

STATEMENT OF QUALIFICATIONS

I, Robert J. Baerg of the City of Prince George, Province of British Columbia, do certify that:

1. I have been employed as a geologist by Noranda Exploration Company, Limited since May, 1984.
2. I am a graduate of the University of British Columbia with a Bachelor of Science (Honors) in Geology (1984).
3. I supervised and assisted with the work described in this report.

A handwritten signature in cursive script that reads "Robert Baerg". The signature is written in dark ink and is positioned above a horizontal dashed line.

Robert J. Baerg
Geologist
Noranda Exploration Company, Limited
(No Personal Liability)

APPENDIX III

ANALYTICAL METHOD DESCRIPTIONS FOR GEOCHEMICAL ASSESSMENT REPORTS

The methods listed are presently applied to analyse geological materials by the Noranda Geochemical Laboratory at Vancouver.

Preparation of Samples

Sediments and soils are dried at approximately 80°C and sieved with a 80 mesh nylon screen. The -80 mesh (0.18 mm) fraction is used for geochemical analysis.

Rock specimens are pulverized to -120 mesh (0.13 mm). Heavy mineral fractions (panned samples * from constant volume), are analysed in its entirety, when it is to be determined for gold without further sample preparation.

Analysis of Samples

Decomposition of a 0.200 g sample is done with concentrated perchloric and nitric acid (3:1), digested for 5 hours at reflux temperature. Pulps of rock or core are weighed out at 0.4 g and chemical quantities are doubled relative to the above noted method for digestion.

The concentrations of Ag, Cd, Co, Cu, Fe, Mn, Mo, Ni, Pb, V and Zn can be determined directly from the digest (dissolution) with a conventional atomic absorption spectrometric procedure. A Varian-Techtron, Model AA-5 or Model AA-475 is used to measure elemental concentrations.

Elements Requiring Specific Decomposition Method:

Antimony - Sb: 0.2 g sample is attacked with 3.3 ml of 6% tartaric acid, 1.5 ml conc. hydrochloric acid and 0.5 ml of conc. nitric acid, then heated in a water bath for 3 hours at 95°C. Sb is determined directly from the dissolution with an AA-475 equipped with electrodeless discharge lamp (EDL).

Arsenic - As: 0.2 - 0.3 g sample is digested with 1.5 ml of perchloric 70% and 0.5 ml of conc. nitric acid. A Varian AA-475 equipped with an As-EDL is used to ~~measure~~ arsenic content in the digest.

Barium - Ba: 0.1 g sample digested overnight with conc. perchloric, nitric and hydrofluoric acid; Potassium chloride added to prevent ionization. Atomic absorption using a nitrous oxide-acetylene flame determines Ba from the aqueous solution.

Bismuth - Bi: 0.2 g - 0.3 g is digested with 2.0 ml of perchloric 70% and 1.0 ml of conc. nitric acid. Bismuth is determined directly from the digest with an AA-475 complete with EDL.

Gold - Au: 10.0 g sample is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with MIBK from the aqueous solution. AA is used to determine Au.

Magnesium - Mg: 0.05 - 0.10 g sample is digested with 4 ml perchloric/nitric acid (3:1). An aliquot is taken to reduce the concentration to within the

range of atomic absorption. The AA-475 with the use of a nitrous oxide flame determines Mg from the aqueous solution.

Tungsten - W: 1.0 g sample sintered with a carbonate flux and thereafter leached with water. The leachate is treated with potassium thiocyanate. The yellow tungsten thiocyanate is extracted into tri-n-butyl phosphate. This permits colourimetric comparison with standards to measure tungsten concentration.

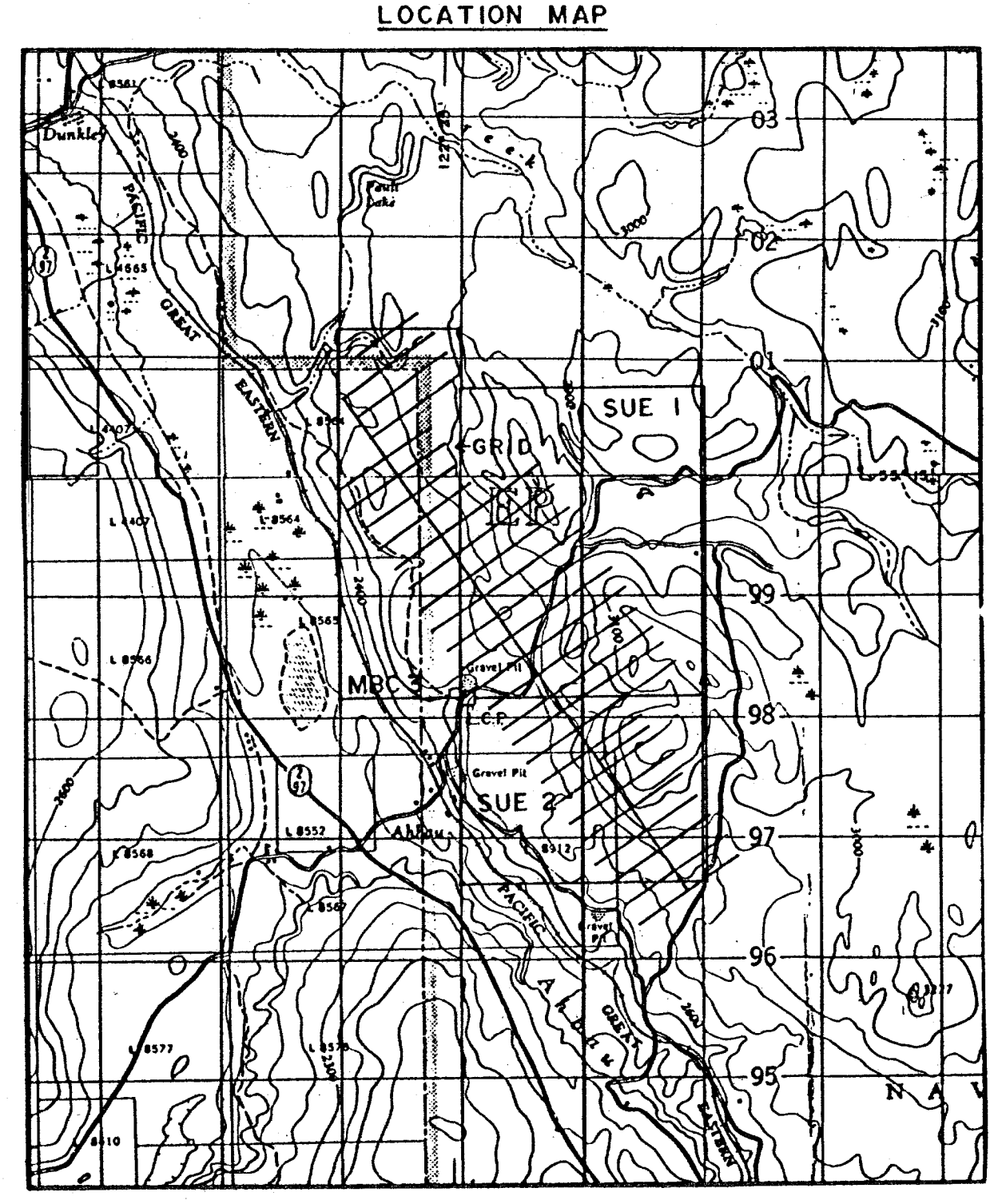
Uranium - U: An aliquot from a perchloric-nitric decomposition, usually from the multi-element digestion, is buffered. The aqueous solution is exposed to laser light, and the luminescence of the uranyl ion is quantitatively measured on the UA-3 (Scintrex).

* N.B. If additional elemental determinations are required on panned samples, state this at the time of sample submission. Requests after gold determinations would be futile.


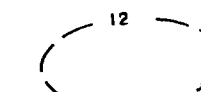
LOWEST VALUES REPORTED IN PPM

Ag - 0.2	Mn - 20	Zn - 1	Au - 0.01
Cd - 0.2	Mo - 1	Sb - 1	W - 2
Co - 1	Ni - 1	As - 1	U - 0.1
Cu - 1	Pb - 1	Ba - 10	
Fe - 100	V - 10	Bi - 1	

EJvL/ie
March 14, 1984



LEGEND

-  Ag Anomalies Contoured ≥ 11 ppm
-  Pb Anomalies Contoured ≥ 12 ppm



17,329

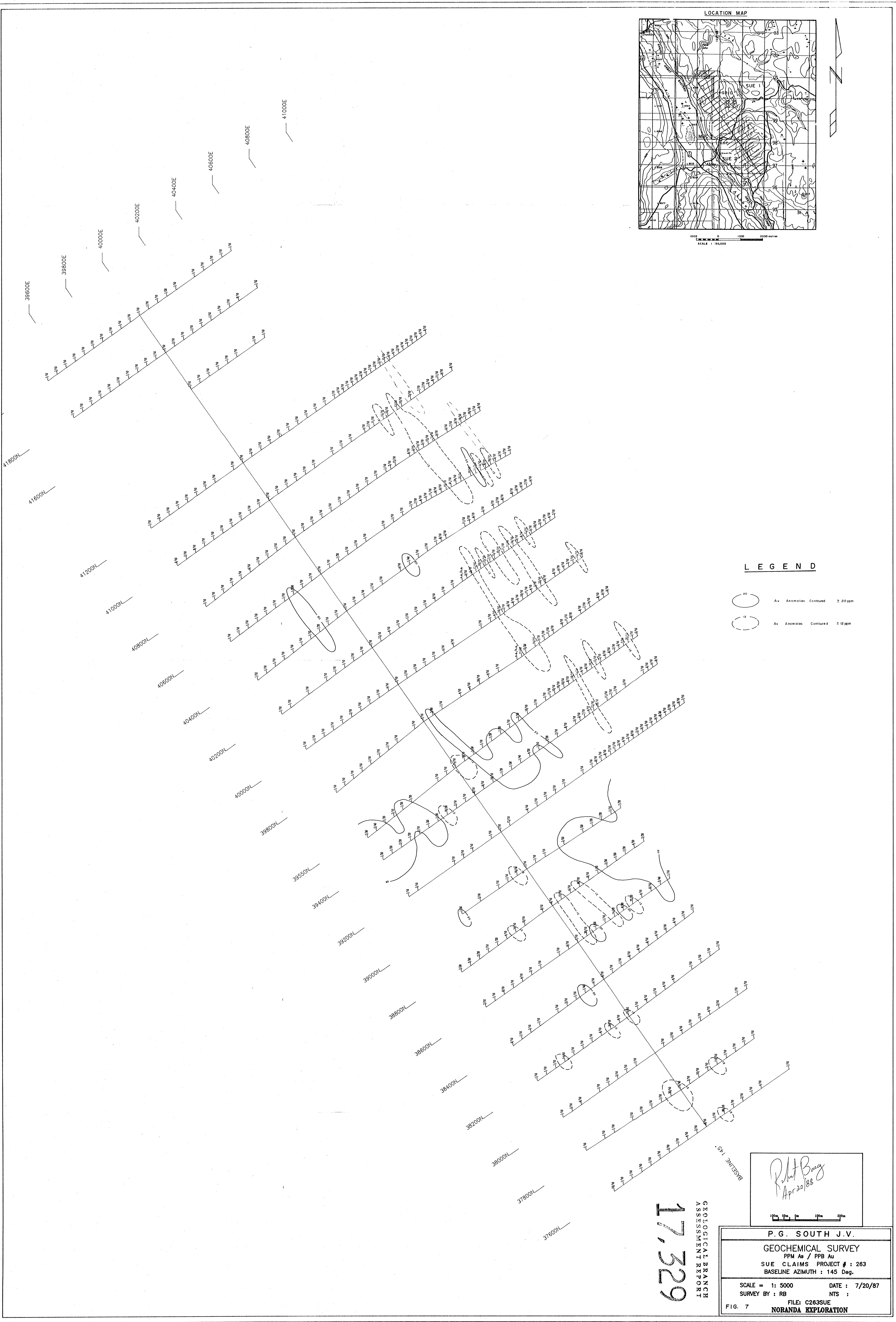
Robt Barry
Apr 29/88

P.G. SOUTH J.V.
GEOCHEMICAL SURVEY
 PPM Pb / PPM Ag
 SUE CLAIMS PROJECT # : 263
 BASELINE AZIMUTH : 145 Deg.

SCALE = 1: 5000 DATE : 7/20/87
 SURVEY BY : RB NTS :

FILE: C263SUE
 FIG. 6 **NORANDA EXPLORATION**

UNCLASSIFIED//FOR OFFICIAL USE ONLY



17,329
GEOLOGICAL RESEARCH
ASSESSMENT REPORT

Baseline 145

Robert Boyce
Apr 20/88

1:500 100m 200m

P.G. SOUTH J.V.	
GEOCHEMICAL SURVEY	
PPM As / PPB Au	
SUE CLAIMS PROJECT # : 263	
BASELINE AZIMUTH : 145 Deg.	
SCALE = 1 : 5000	DATE : 7/20/87
SURVEY BY : RB	NTS :
FILE: C263SUE	
FIG. 7	NORANDA EXPLORATION

SASHA 3

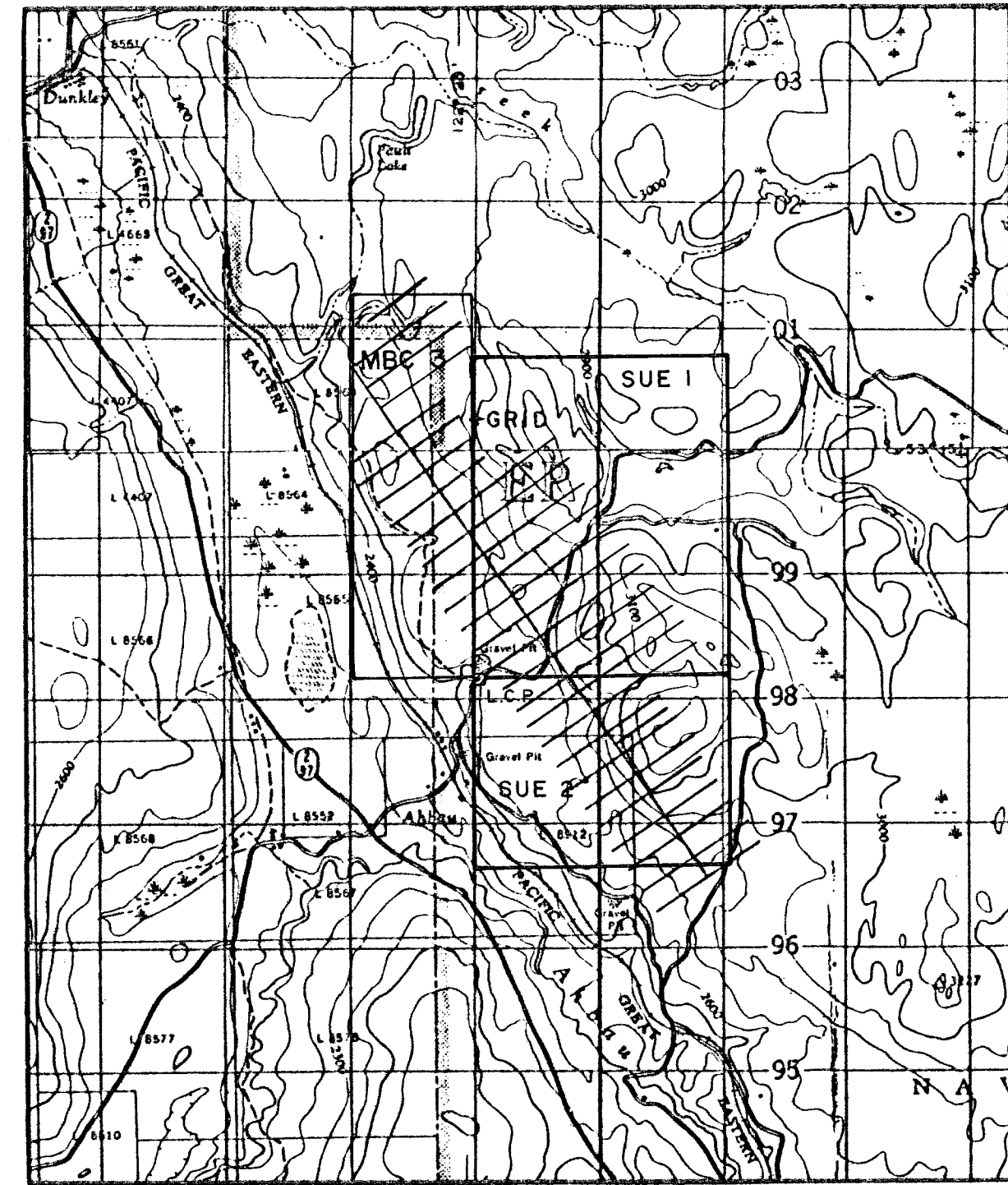
SASHA 2

SUE 1

SUE 2

MBC 3

LOCATION MAP



LEGEND

ROCK TYPES

INTRUSIVES

- 3 Granodiorite
- 3a Hornblende Feldspar Porphyry Dyke
- 4 Laprophyre Dyke
- 5 Diabase Dyke
- 6 Quartz Porphyry Dyke

TRAPIC-JURASSIC

- 1 Argillite - black, cherty, hornfelsed, locally biotite (??) and/or epidote and/or chlorite and/or silica altered.
- 2 Andesite - chloritic hornblende porphyry and agglomerate, local epidote and/or biotite and/or silica alteration, minor hornfels.
- 2b Debris Flow - rusty, pebble to cobble size; subround fragments of mainly volcanic rocks with minor intrusive and sedimentary rocks.

- Alteration
- bl - biotite
 - chl - chlorite
 - ep - epidote
 - qtz - quartz
 - hc - hornfels
 - m - mottled
 - s.s. - silicified zone
- Sulphides
- py - pyrite
 - pp - pyrrhotite

SYMBOLS

- Road
- Swamp
- Stream
- Claim post and claim boundary
- Rock/silt sample
- Outcrop
- Geologic contact (known/inferred)
- Fault
- Bedding (dip/strike)
- Flood
- D.O.H. location
- Trench

ROCK AND SILT SAMPLE GEOCHEM RESULTS

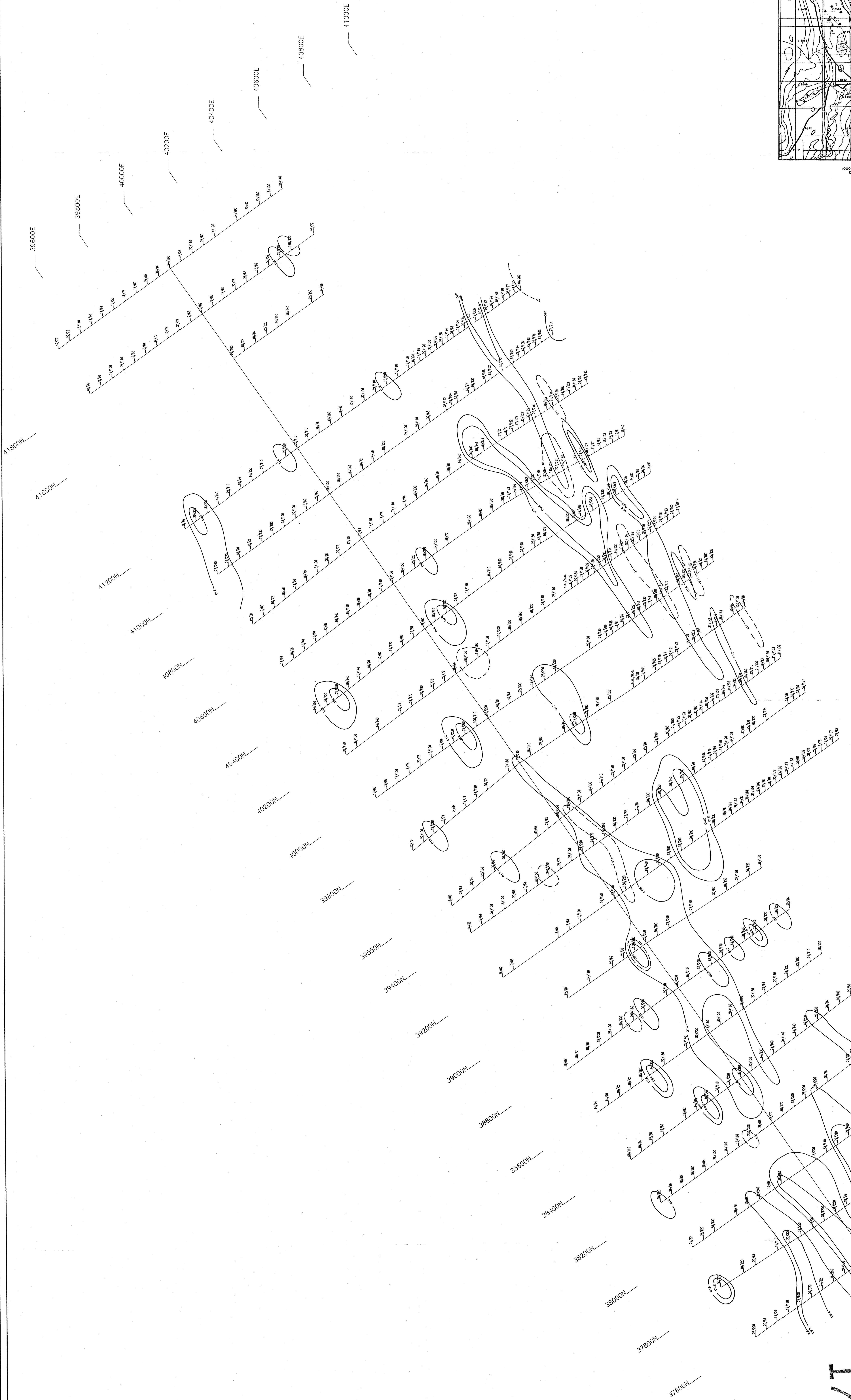
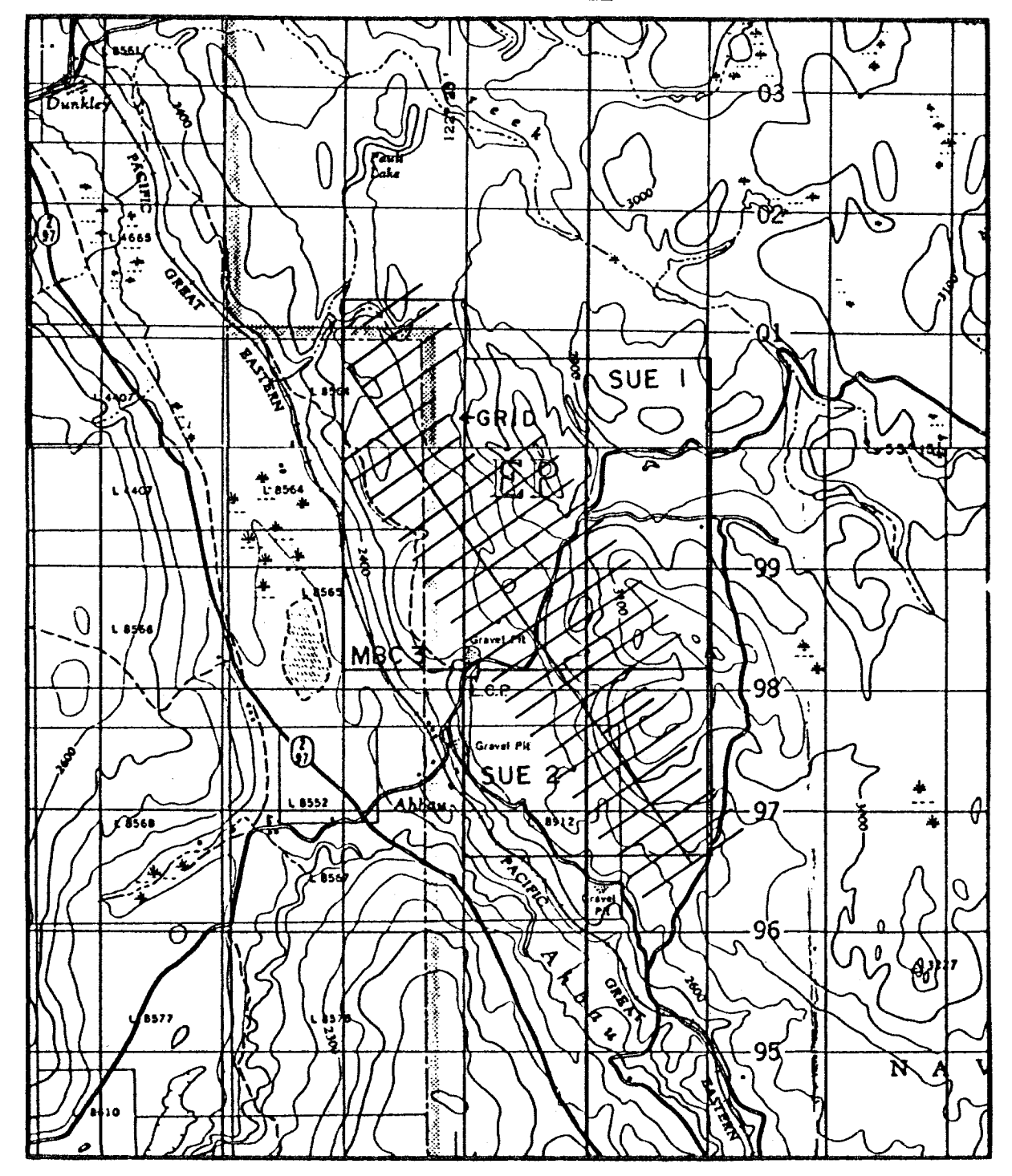
Sample No.	Cu (ppm)	Zn (ppm)	Pb (ppm)	Ag (ppm)	Au (ppm)	As (ppm)
14191	42	210	4	0.6	32	10
16388 (off map area)	82	430	200	1.4	4.4	10
16399	180	56	10	1.0	4.4	10
16350	90	38	6	0.6	4.4	10
14189	98	76	2	0.4	28	10
14190	100	44	2	0.4	4.4	10
14192	48	32	2	0.2	24	10
14193	30	38	2	0.2	32	10
14194	64	42	2	0.2	12	10
14195	28	44	8	0.4	35	10
14196	78	34	2	0.4	12	10
14197	60	46	2	0.2	16	10
14198	32	300	2	0.6	44	10
14199	150	70	6	0.4	4.2	10
14200	90	110	20	0.4	4.2	10
16489	200	96	50	1.2	4.2	20
16488	68	60	24	1.2	4.2	10
76041	198	68	7	0.2	6	10
76042	137	48	7	0.4	2	10
76043	164	30	6	0.4	9	10

GEOLOGICAL BRANCH ASSESSMENT REPORT

17,329

Robert Baerg
April 1988

REVISED	P. G. SOUTH J.V.
R.B. MAY, 1986	
R.B. DEC., 1986	
R.B. DEC., 1987	MBC 3, SUE 1 & 2 CLAIMS
R.B. APRIL, 1988	GEOLOGY MAP
PROJ. No. 63	SURVEY BY: R. BAERG DATE: SEPT., 1984
N.T.S. 235/1,9	DRAWN BY: S.K.B. SCALE: 1:5000
DWG. No.	NORANDA EXPLORATION
FIG. 4	OFFICE: PRINCE GEORGE, B.C.



LEGEND

- Zn Anomalies Contoured ≥ 210 ppm
- Zn Anomalies Contoured ≥ 280 ppm
- Cu Anomalies Contoured ≥ 115 ppm

Robert Brey
Apr 20/88

17,329

ASSESSMENT REPORT
GEOLOGICAL BRANCH

P.G. SOUTH J.V.
GEOCHEMICAL SURVEY
PPM Cu / PPM Zn
SUE CLAIMS PROJECT # : 263
BASELINE AZIMUTH : 145 Deg.

SCALE = 1: 5000 DATE : 7/20/87
SURVEY BY : RB NTS :

FILE: C263SUE
FIG. 5 NORANDA EXPLORATION