REPORT

ON

THE GEOCHEMICAL AND GEOPHYSICAL EXPLORATION

OF

THE TOPPERGOLD PROPERTY

EUREKA PEAK

Lat. 52 17'N; Long. 120 44'W

N.T.S. 93 A/7 E & W

CARIBOO M. D.

British Columbia

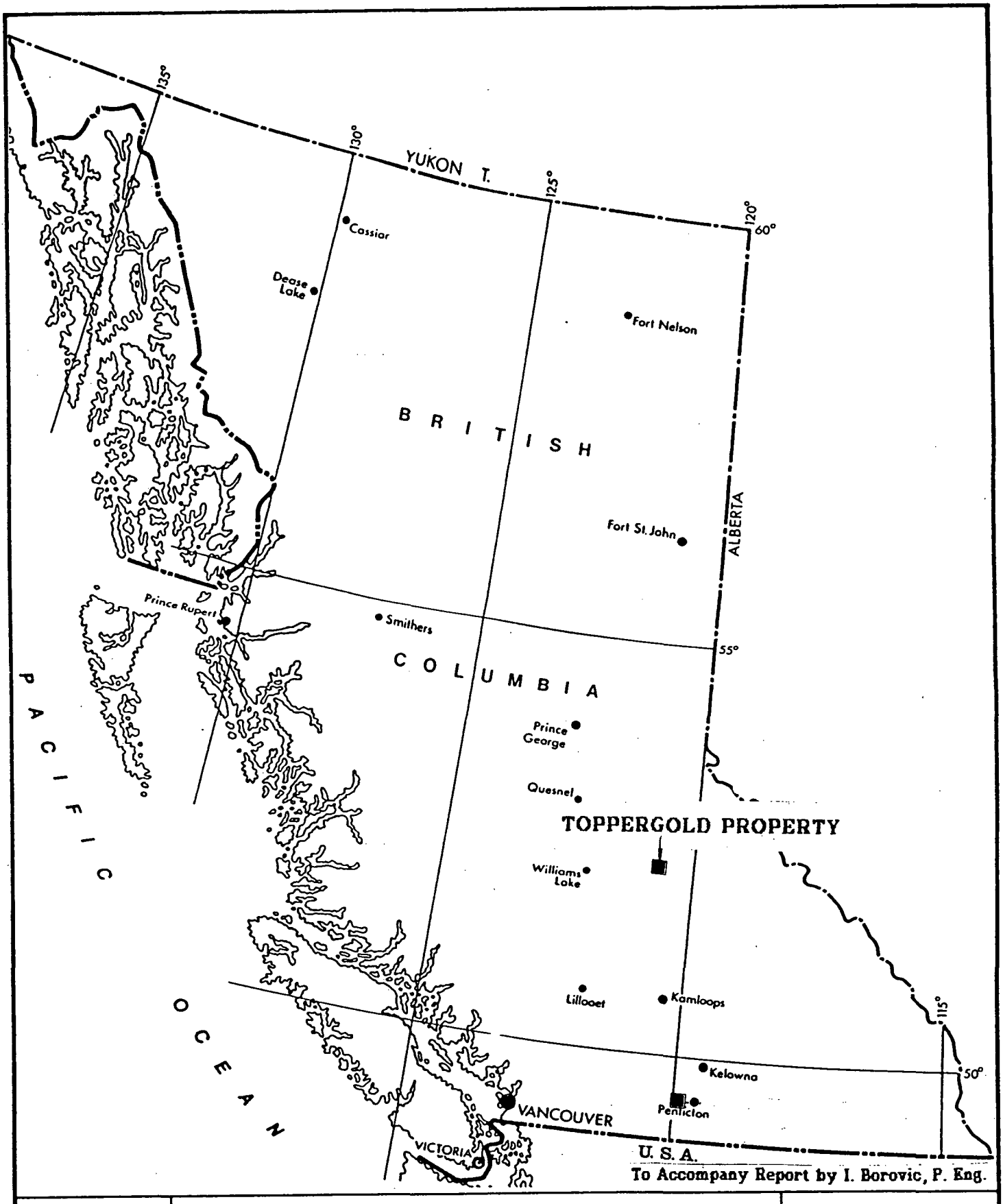
for

GRAND NATIONAL RESOURCES INC.

by

I. BOROVIC, P. Eng.
geologist

VANCOUVER, B. C.
Oct 12 1990.



To Accompany Report by I. Borovic, P. Eng.

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GRAND NATIONAL RESOURCES Inc.
TOPPERGOLD PROPERTY
Location Map

Scale: 0 100 km
NTS 93 A7.
Date: April 1990
Figure: 1

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SUMMARY, CONCLUSIONS AND RECOMMENDATION

The Toopergold property is underlain by interbedded sediments and volcanics of the Upper Triassic Quesnel River Group. Structually, the property sits on the southwestern limb of a syncline and covers most of the potentially gold bearing formations. Gold was discovered in a phyllite unit on the eastern limb of the same syncline by Eureka Resources (Fraser gold property). 'Knotted' (or knobby) phyllites, similar in appearance to those hosting the Eureka discovery, outcrop at several localities on the property.

Extensive zones of highly anomalous levels of silver, copper, zinc and gold were found in soils on the Toppergold Property. They are as follows:
The West zone covers an area 1500 by 400 m: The Central zone is covering an area 2100 by 900 m and the South zone covers 1100 by 550 m area. "The geochemical signature of the elements suggests a particular stratigraphic horizon within the underlying black phyllites. Based on the potential for a bulk tonnage, low grade deposit, the apparent regional extent of the geochemical anomaly is inferred to be greater than 3000 m."(Kregosky, 1985).

Several of these sites are underlain by "Knotted Phyllites" similar to those found hosting mineralization on the Fraser gold property. The West Zone was outlined by R. Kregosky in 1985 and J. Freeze in 1986.

The west Zone trends 140° to 150° and does not appear to follow any drainage systems. Bedding ranges from 110° to 140° on the property, so the anomalous silver zone may be outlining a particular horizon or bed. Anomalous gold values of up to 30 ppb occur along the eastern edge of the zone.

On the Eureka Resources' Frasergold property, visible gold occurs in quartz sweats across a 39-metre wide zone within the 'Knotted Phyliite' unit. In April 1987, Eureka announced potential open pittable reserves of 20 million tons grading 0.07/0.08 ounces gold per ton.

Heavy mineral concentrate samples were collected at five localities along creeks draining the property. Visible gold was observed at two sites on Spin Creek which drains the 'West Zone" within the Topper 5 claim. The gold increases in both abudndance and size upstream, towards the north. Laboratory analysis has shown that gold is present in all five samples collected.

In 1990 a soil and VLF-EM surveys were conducted over the Topper claim grid. Soil anomalies show definite northwesterly trend but are restricted by the size of the survey and survey should be extended in the northwest-southeast direction.
VLF-EM survey mapped relatively uniform bedrock.

A two-phased exploration program has been recommended to investigate portions of the property not explored as yet and to investigate areas of interest outlined by previous surveys. Locating the source of the visible gold in Spin Creek is a high priority.

Phase I to consists of: geochemical (soil, heavy mineral concentrate and rock chip sampling), geological mapping on the central and eastern half of the property and trenching on the west side of the property.

A Phase II program is dependant on results of Phase I and should comprise trenching of the east area, and large diameter drilling of the east and west areas.

EXPLORATION BUDGET 1991

Exploration work should start by surveying and tying together all existing grids and extending Topper claim grid. Geological detail mapping, detail soil, VLF-EM and ground magnetic surveys, at an estimated cost of $ 60 600.00 in the Phase I should be done in order to evaluate mineral potential of the property.

PHASE 1

Geology,engineering,supervision,mapping.....	$	12 000.00
Room&Board.....	$	4 000.00
Line cutting(50 km @ $ 100.00/km).....	$	5 000.00
Geochemical soil survey.....	$	10 000.00
VLF-EM (50 km @ $150.00/km).....	$	7 500.00
Ground magnetic survey (50 km @ $150.00/km)..	$	7 500.00
Transportation(vehicle rental,fuel).....	$	4 500.00
Total	$	50 500.00
Admin.office and misc.(20% of total).....	$	10 100.00
Total Phase 1.....	$	60 600.00

PHASE 2

Geology,engineering,supervision,evaluation....	$	14 000.00
Room & Board.....	$	5 000.00
Trenching.....	$	15 000.00
Diamond drilling.....	$	80 000.00
Assaying.....	$	10 000.00
Total	$	124 000.00
Admin.office and misc.(20% of total).....	$	24 800.00
Total Phase 2.....	$	148 800.00

INTRODUCTION

Grand National Resources Inc, a Vancouver, B.C. based mineral exploration company, intends to participate in the exploration of the gold. silver, bearing mineral area known as the Toopergold property located on the southwestern slopes of the Eureka Peak northeast from the Crooked Lake some 100 km north of 100 Mile House B. C.

The following report is a summary of information obtained from the various published and private reports which are listed in the Bibliography on page 13; from the writer's personal knowledge and experience gained through research and personal examination of the property area:

PROPERTY
(Fig. 2)

Location: Lat 52° 17'N; Long 120° 44' W, N. T. S. 93 A/7

The Toopergold property is situated in the Cariboo Mining Division approximately 95 kilometres northeast of 100 Mile House, B.C. The property covers 30 square kilometres (3000 hectares) north of Crooked Lake.

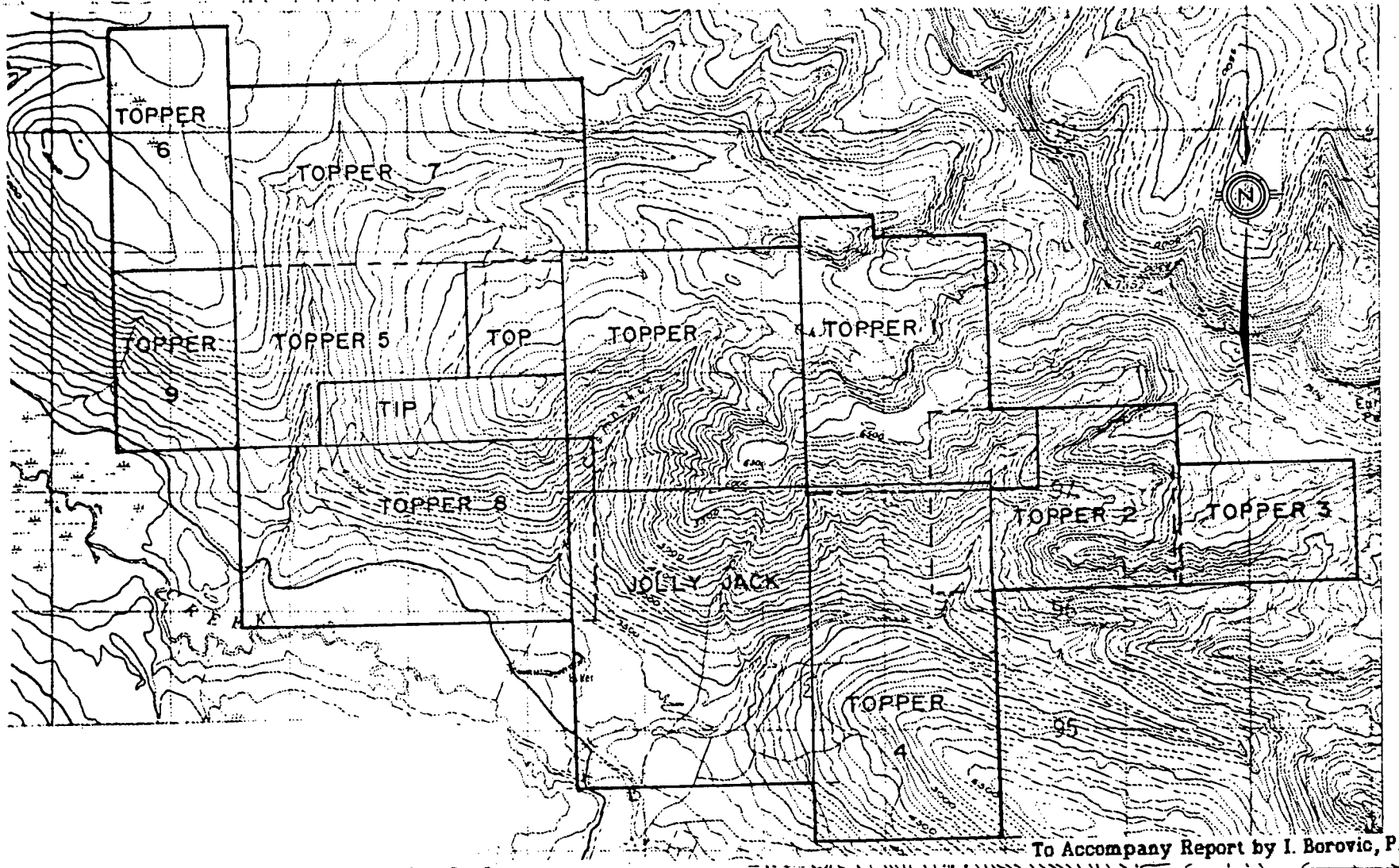
OWNER--OPERATOR:

GRAND NATIONAL RESOURCES Inc.
#905-626 W. PENDER ST, VANCOUVER, B.C. V6B 1V9
Under join venture agreement 51/49 % with Topper Gold Corporation.

CLAIMS:

The Toopergold property is comprised of 13 modified grid claims and one two-post claim totalling 170 units. The original claims were staked in 1984 and 1985. The Topper 5 legal corner post and northwest corner post were located during the 1986 program.

CLAIM NAME	UNITS	RECORD NO.	RECORD DATE	EXPIRY DATE
JOLLY JACK	20	4803	May 03/83	May 03/92
TIP	8	6001	Apr 19/84	Apr 19/91
TOP	4	6774	Mar 18/85	Mar 18/92
TOPPER	16	5096	Aug 22/83	Aug 22/90
TOPPER #1	20	5097	Aug 22/83	Aug 22/90
TOPPER #2	12	5098	Aug 22/83	Aug 22/90
TOPPER #3	6	5099	Aug 22/83	Aug 22/91
TOPPER #4	18	7095	Aug 15/85	Aug 22/90
TOPPER #5	16	7229	Nov 28/85	Nov 28/91
TOPPER #6	8	9291	Aug 18/88	Aug 18/92
TOPPER #7	18	9314	Aug 22/88	Aug 22/92
TOPPER #8	18	9935	Aug 07/89	Aug 07/93
TOPPER #9	6	9936	Aug 09/89	Aug 09/93



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GRAND NATIONAL RESOURCES Inc.
TOPPERGOLD PROPERTY
Claim Map

Scale: 0 1km
NTS 93 A 7
Date: April 1990
Figure: 2

Grand National Resources is the registered owner of all claims except the Tip and Jolly Jack which are owned by Topper Gold Corporation.

ACCESS:

Road access from 100 Mile House is provided by Highway 97 to the Canim Lake/hendrix Lade Road and the McKusky Creek Road to Crooked Lake. Access is also available from Williams Lake via the town of Horsefly by the Horsefly River Forestry Road and the McKusky Creek Road to Crooked Lake.

Access on to the western end of the property is provided by logging road K which leaves the McKusky Creek Forest Road approximately seven kilometres northwest of Crooked Lake. An old fire access road provides seasonal access to the Tip and northern end of the Topper 1 to 4 claims.

The nearest railway is the B.C. Railway which parallels Highway 97 and has sidings both at Williams Lake and 100 Mile House. This leads to the nearest port at Vancouver, B.C. The total distance to Vancouver is approximately 500 kilometres.

PROPERTY RESOURCES:

Several creeks drain the property in a south to southwesterly direction from Eureka Ridge. These creeks drain into McKusky Creek which flows southeasterly into Crooked Lake. There is sufficient timber and water resources available for exploration and development purposes.

PHYSIOGRAPHY

The Toppergold property is situated on southeasterly trending ridges extending from Eureka Ridge in the Quesnel Highland. This highland lies near the eastern edge of the Intermontane Belt close to the Omineca Crystalline Belt. Elevations reach a high of 7100 feet near the top of Eureka Ridge and a low of 3100 feet at Crooked Lake. South facing slopes are quite steep while north facing slopes are gentle.
The Mean Annual precipitation is 75 to 100 cm. Mean daily temperatures range from -10°C to -15°C in January and less than 14° in July.
The Toppergold property lies within the Southern Interior Climatic Region. Treeline is at approximately 6500 feet , below which the area is covered by moderate to densely grown trees. Spruce, fir, pine, larch, cedar and cottonwood trees all grow in this region. Dense secondary growth covers and old forest fire burn over a large portion of the central claims. Logging is currently being conducted east of Spin Creek on the Topper 5 claim. The western portion of this claim was logged previously and is now covered by grassy slopes.

G E O L O G Y

REGIONAL GEOLOGY
(Fig. 3 & 4)

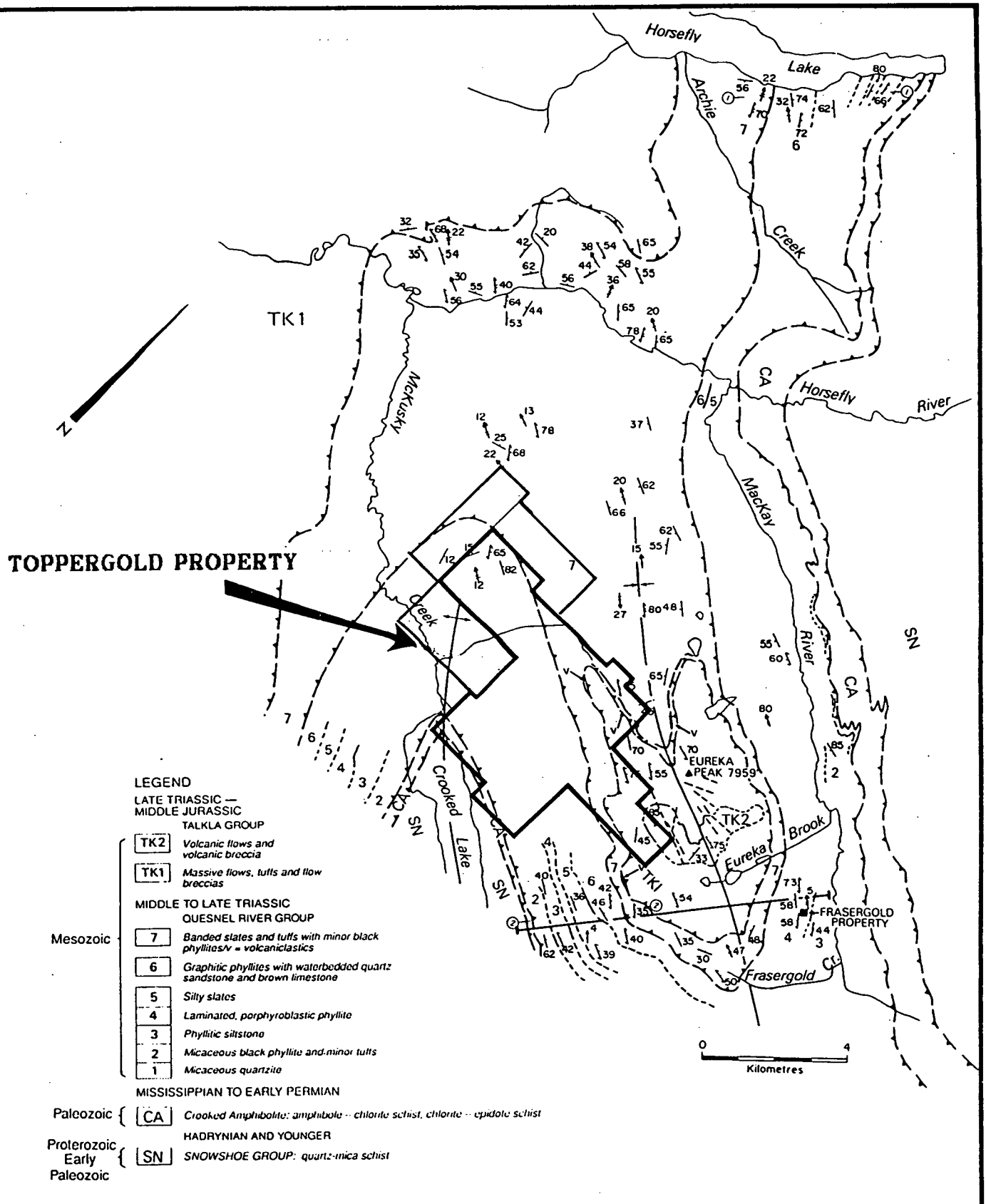
A large syncline sits between Mckusky Creek and the MacKay River. Thrust faults to the east and south bring the Upper Paleozoic Slide Mountain Group into contact with the Upper Triassic Phyllite, argillite, quartzite, schist, greenstone formation of the Quesnel River Group.
The Toppergold Property sits on the southwestern limb of the syncline and is underlain by Upper Triassic formations of the Quesnel River Group. The most predominant formation is made up of interbedded phyllites, argillites, slaty argillites, quartzite, schist and minor greenstone. These interbedded units have undergone sub-greenschist to amphibolite (kyanite) facies of metamorphism. A second Upper Triassic formation consisting of greenstone, augite-porphyry breccia, tuff breccia, tuff, dykes and sills outcrops in a few patches on Spin Creek and Cosmoskey Creek and underlies the southeastern portion of Eureka Ridge.

CORRELATION OF POTENTIAL MINERAL PRODUCERS IN THE QUESNEL HIGHLANDS AREA

The Toppergold property is located on the southwestern limb of the Eureka Syncline favorably covering most of potentially gold and silver bearing metasediments. It is located some 2 km from Fraser gold Property (see Fig. 3 & 4).
The Frasergold Property is on the northeastern limb of the Eureka Peak Syncline." Gold mineralization is associated with pyrite, pyrrhotite and chalcopyrite, and occurs as disseminations in the black phyllite and in quartz veins. The mineralized zone is apparently localized in a porphyroblastic phyllite equivalent to Unit 4.(Unit 4 is composed of grey laminated phyllite and porphyroblastic phyllite)Bloodgood, M.A. 1987.

Eureka Resources announced reserves in 1985 of 15 million tons grading 0.045 ounces per ton gold that can be mined by an open pit.
In 1986, an average grade of 0.061 oz per ton gold over 33 metres was obtained in a trench and 0.058 ounces per ton over 39 metres was obtained in a rotary drill hole 50 metres south of the trench.

At Boss Mountain Mine, 25 kilometres southwest of the Topper Property at Hendrix Lake, a molybdenum porphyry and stockwork deposit was mined by Noranda Inc. From 1965 to 1971 3,298,601 tons of ore yielded 16,867,640 pounds of molybdenum. In 1973, another 1623 tons of concentrate were produced from 493,904 tons of ore. At the time of the 1974 closure reserves of 2,700,000 tons grading 0.25% molybdenum were known.



LEGEND

LATE TRIASSIC — MIDDLE JURASSIC

TALKLA GROUP

- TK2 — *Volcanic flows and volcanic breccia*
- TK1 — *Massive flows, tuffs and flow breccias*

MIDDLE TO LATE TRIASSIC

QUESNEL RIVER GROUP

Mesozoic

- 7 — *Banded slates and tuffs with minor black phyllites/v = volcaniclastics*
- 6 — *Graphitic phyllites with waterbedded quartz sandstone and brown limestone*
- 5 — *Silty slates*
- 4 — *Laminated, porphyroblastic phyllite*
- 3 — *Phyllitic siltstone*
- 2 — *Micaceous black phyllite and minor tuffs*
- 1 — *Micaceous quartzite*

MISSISSIPPIAN TO EARLY PERMIAN

Paleozoic

- CA — *Crooked Amphibolite: amphibole ± chlorite schist, chlorite ± epidote schist*

HADRYNIAN AND YOUNGER

Proterozoic Early Paleozoic

- SN — *SNOWSHOE GROUP: quartz-mica schist*

After M.A. Bloodgood, 1987

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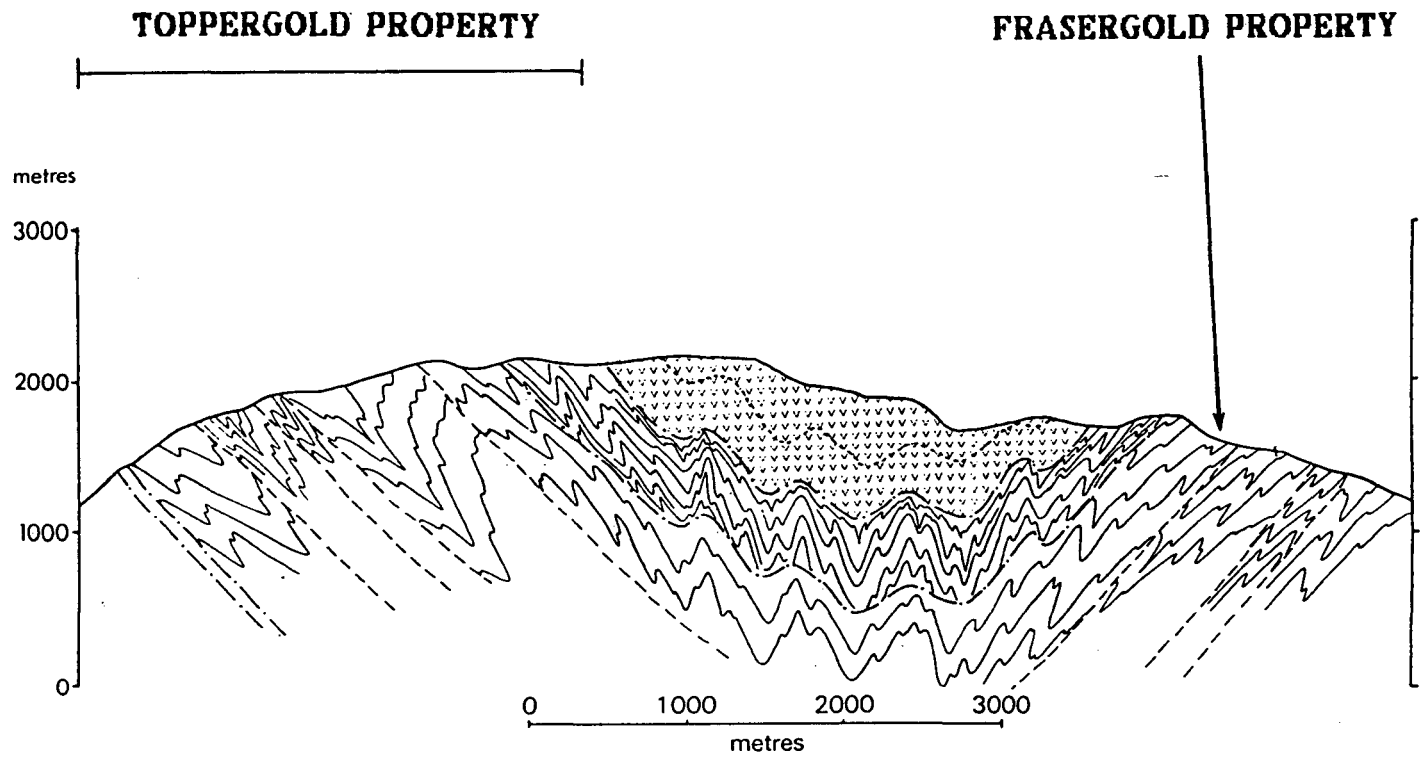
TOPPERGOLD PROPERTY
Generalized Geology
Eureka Peak Area

Scale: As shown
NTS 93 A 7
Date: April 1990
Figure: 3



After M.A. Bloodgood, 1987

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TOPPERGOLD PROPERTY
Schematic Cross-section Through Eureka Peak

Scale: As shown
NTS 93 A 7
Date: April 1990
Figure: 4

On Eureka Peak (Ridge) Umex Inc. holds a porphyry copper showing in a syenodiorite. Disseminated chalcopyrite, pyrite and minor pyrrhotite occurs in a zone 4000 feet by 800 feet. Copper values range from 0.13% to 0.44% in chip samples. At Hen Lake--Suey Bay there is another copper--silver stockwork and porphyry showing. To the north, along the Quesnel River, Dome Mines has outlined nearly one million tons grading 0.2 ounces per ton gold in the QR deposit.

PROPERTY GEOLOGY

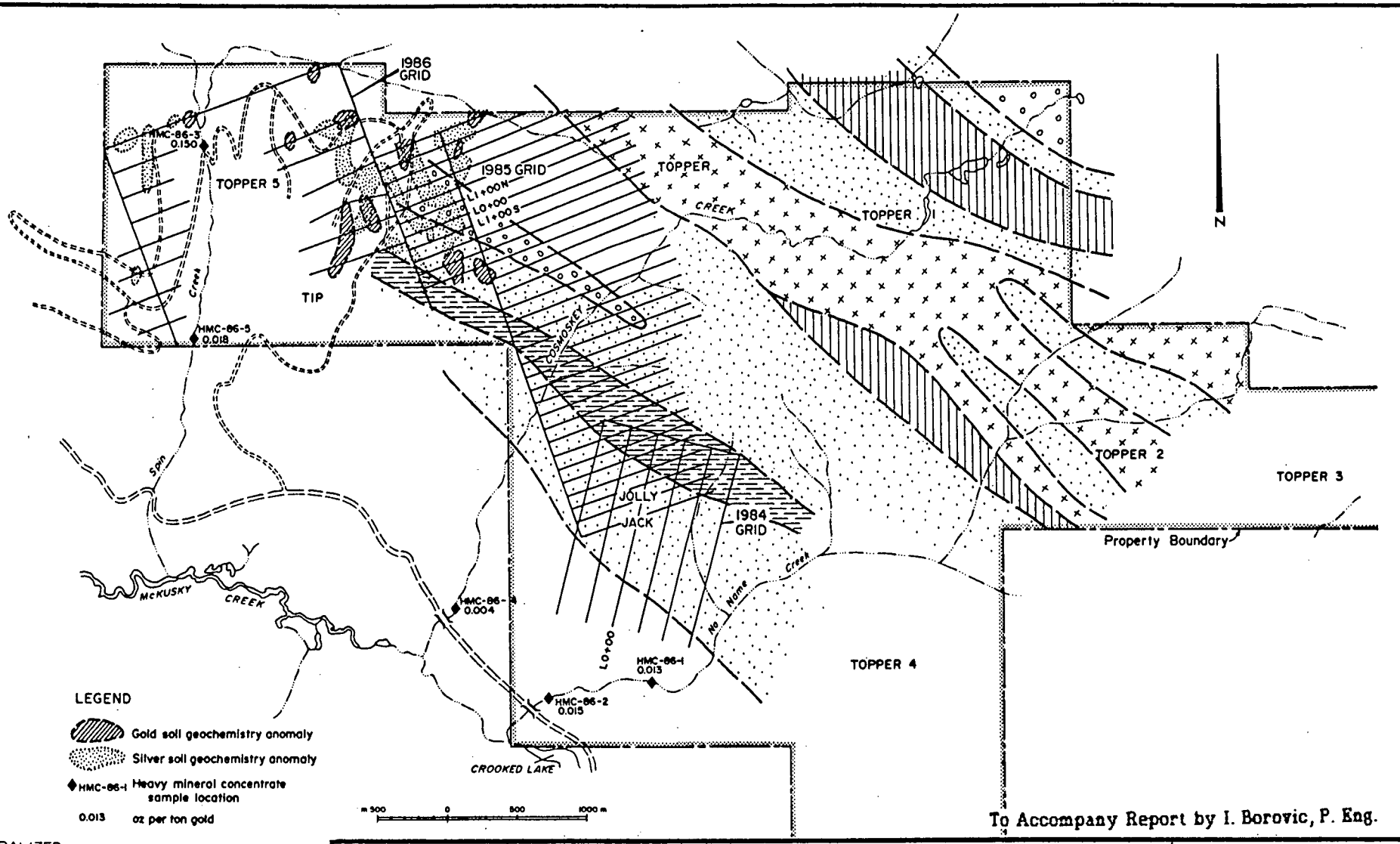
(Fig. 5)

In 1984 and 1985 R. Kregosky mapped the Topper Group at a scale of 1:25,000. He divided the Upper Triassic formation of the Quesnel River Group into four units: 1) Phyllites; 2) Calcareous argillites and argillites; 3) Phyllites, slaty argillites and schist and 4) Chlorite sericite schist. He also mapped a dioritic intrusive which is likely of Triassic--Jurassic age. This is of interest because these intrusives are associated with gold mineralization further north within the Quesnel Trough. The QR deposit of Dome Mines Ltd. contains over a million tons grading 0.2 oz per ton gold. The ore occurs at the contact of an intensely propylitized calcareous basaltic fragmental and overlying sedimentary package. A quartz poor diorite stock outcrops nearby and is interpreted to be the source of heat for fluids responsible for remobilizing the gold.

Mapping on the Topper 5 claim in 1986 by J.Freese (Fig.7), was carried out along logging roads, trails and prominent ridges at a scale of 1:2500. A carbonaceous and often graphitic argillite is the most predominant unit. This occurs as massive beds and thin beds interbedded with siltstones, sandstones and quartzites. A phyllitic shean is usually observed along foliation planes which usually parallel bedding. In places the phyllitic texture is so strong that it obscures the original rock type.

A 'knotty' or 'knobby' phyllitic unit was also observed in several locations. The 'knotty' texture is caused by iron carbonate and iron oxide stained blebs or porphyroblasts. The beds often show crenulations as they are folded around the porphyroblasts. This unit is similar in appearance to the host of the gold bearing quartz on Eureka's Frasergold property. The 'knotty' phyllite is interpreted to be a chemically unique stratigraphic horizon that formed the blebs or porphyroblasts during metamorphism. The phyllites underlying and overlying this unit underwent the same metamorphism but did not form these porphyroblasts. Freeze, J.C. (1986).

Volcanic units were observed both as thin beds interbedded with the sediments and as massive beds. In both cases extreme alteration makes original rock identification difficult. The thin beds appear to be tuffs and the massive units appear to be porphyritic flows. Both units are altering to sericite $\pm$ chlorite schists.



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TOPPERGOLD PROPERTY
Loc. of Workings and Geology

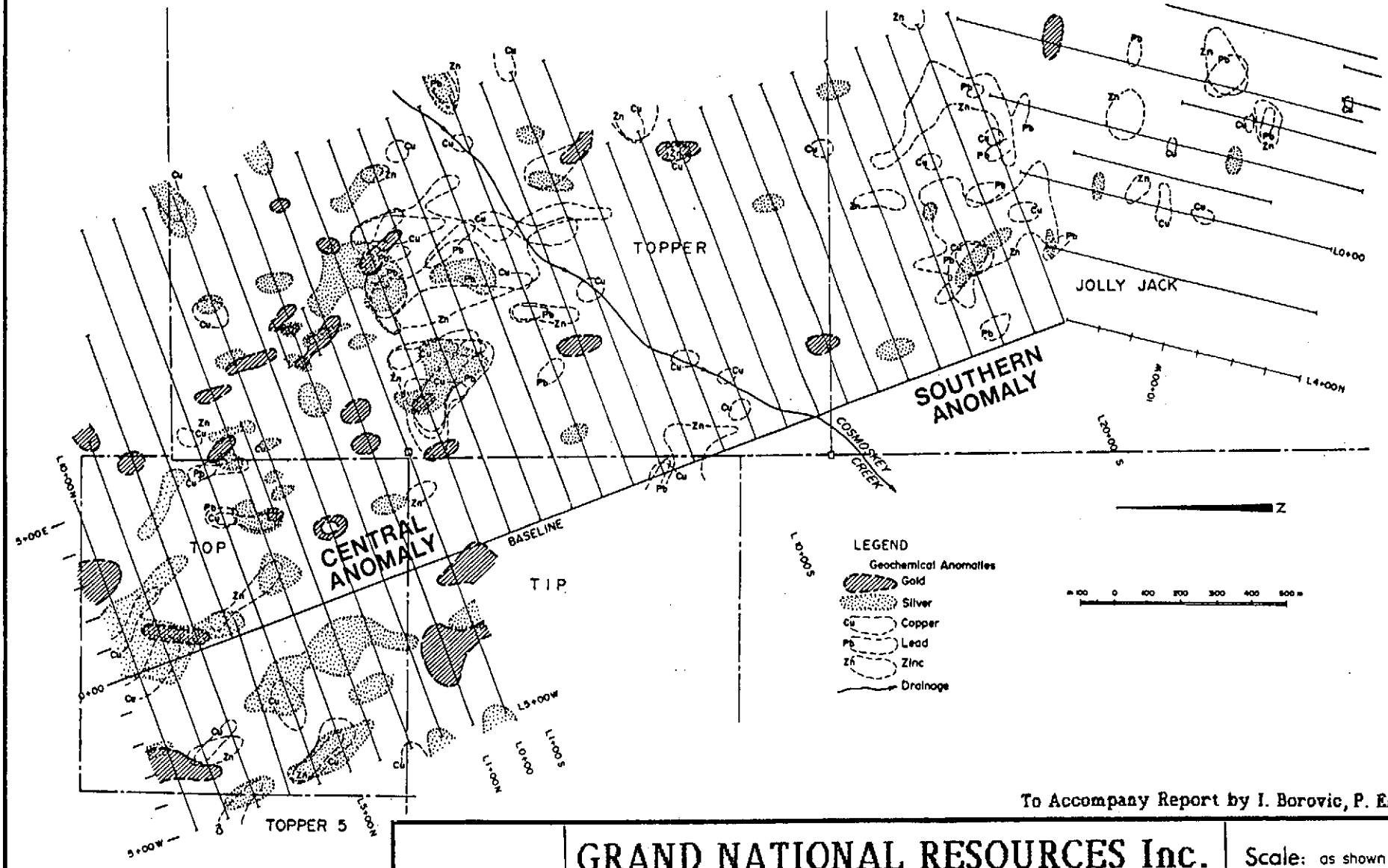
Scale: as shown
NTS 93 A 7
Date: April 1990
Figure: 5

MINERALIZATION

Several quartz sweats and veins occur within the phyllites and other sediments on the property. Most of the quartz contains boxwork, rusty-limonite and goethite staining and sericite occurs on fractures within the quartz. Large pyrite cubes and fine grained disseminated pyrite are found in some of the quartz sweats. Most of these sweats were sampled but did not contain precious metal values above 0.07 oz per ton silver and 0.002 oz per ton gold.
Logging operations recently uncovered a large quartz stockwork zone within the argillite and siltstone. Several lenticular quartz veins pinch and swell crosscutting each other. Pyrite, galena and sphalerite mineralization occurs within the quartz. Silver values do not exceed 0.05 oz per ton and gold does not exceed 0.002 oz per ton. Lead values reach a high of 104 ppm and zinc reaches 150 ppm.

HISTORY OF EXPLORATION & WORK DONE

The Quesnel Highlands have been explored previously for both lode gold and porphyry copper-molybdenum prospects. A molybdenum porphyry and stockwork deposit which was mined in the 70's is located approximately 25 kilometres to the southwest of Crooked Lake at Hendrix Lake. On Eureka Peak (Ridge) a porphyry copper showing is held by Umex Inc. Approximately 24 kilometres north of the Toppergold property a copper-silver stockwork and porphyry deposit is known at Hen Lake-Suey Bay. On the eastern slopes about 1.5 km NE of the end of the Toppergold property, Eureka Resources is exploring gold bearing quartz sweats occurring within a 'knotty' phyllitic unit on the Fraserqold property.
1984/85
Prior to exploration by Grand National Resources Inc. and Toppergold Corporation the Topper claims do not appear to have been formally explored. In 1984 and 1985 geochemical surveys: 'B' horizon soil sampling and rock chip sampling, and geological mapping was carried out. Three zones of anomalous copper, zinc, silver and accessory lead and gold values were outlined. R. Kregosky (1984/85) concluded that "the geochemical signature suggests a particular mineralized stratigraphic horizon within the underlying black phyllites". He also stated that "Based on the potential of a bulk tonnage, low grade deposit, (as has been outlined in similar stratigraphy by Eureka Resources) the apparent regional extent of the geochemical anomaly is inferred to be greater than 3 kilometres".



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TOPPERGOLD PROPERTY
Composite of Geochem Anomalies Survey 1985

Scale: as shown
NTS 93A7
Date: April 1990
Figure: 6

1984 GEOCHEMICAL AND LITHOGEOCHEMICAL SURVEY

RESULTS:

(Fig. 5, 6,)

The geochemical and lithogeochemical surveys conducted were successful in locating a northerly trending anomaly. This anomaly which has similar trends on both Grid 1 and Grid 2 is coincident in the base metals copper, lead, zinc and the precious metal silver. Anomalous gold values in the soil are located on Grid 1 but are next to nonexistant on Grid 2. A number of anomalous lithogeochemical samples correspond with the geochemical anomalies. This northerly trending soil and rock anomaly is aproximately 1500 meters long and 400 meters wide on Grid 2 and aproximately 400 meters long and 400 meters wide on Grid 1. Projections of this anomaly suggest a continuation between the two grids.

The geological and lithogeochemical surveys indicated the general extent of the favorable black phyllites as well as pinpointing potential areas for additional exploration.

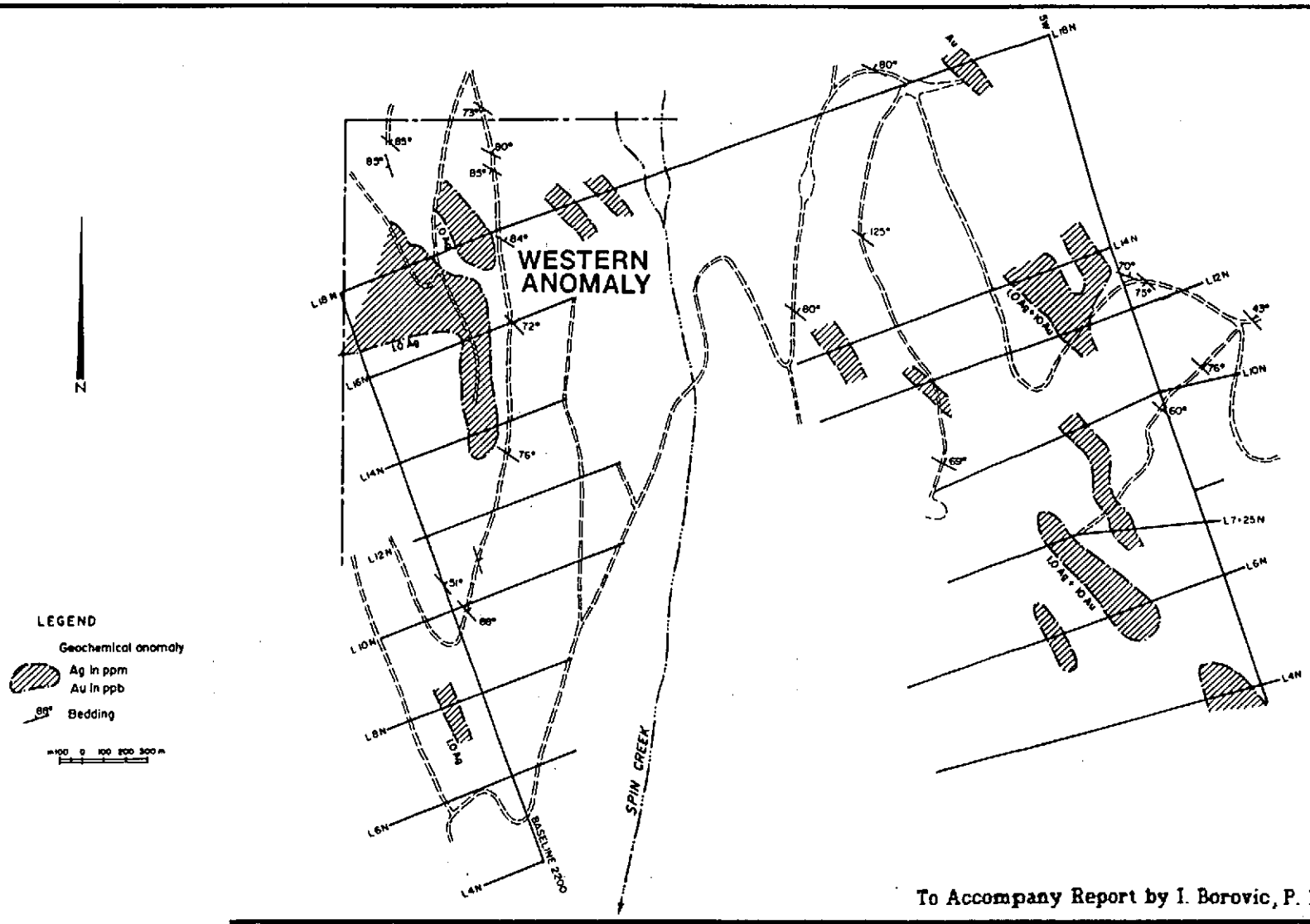
1984 GEOPHYSICAL SURVEY

(Fig. 8, 9)

The VLF-EM survey conducted on the Jolly Jack claim was successful in locating a number of strong geophysical anomalies. These anomalies are probably related to the graphitic nature of the phyllites and provide an important source of information towards the interpretation of the geological setting and therefore the mode of mineralization of the Jolly Jack claim. The chip samples also indicate a significant amount of gold mineralization associated with the black phyllite unit.

1985 GEOCHEMICAL SOIL SURVEY

The 1985 program on the Topper Group was successful in extending and outlining a number of anomalous geochemical zones. Three broad zones have been located which have been called the West, Central and South anomalies (The west zone is about 1500 by 400 m ; the Central is 2100 by 900 m and the South zone is 1100 by 550 m.in surface area. These zones are defined by strongly anomalous geochemical silver, zinc and copper values with an accessory gold and lead association. The geochemical signature suggests a particular mineralized stratigraphic horizon within the underlying black phyllites. This would give the Toppergold property the potential for a low grade, bulk tonnage silver/base metal/gold deposit.



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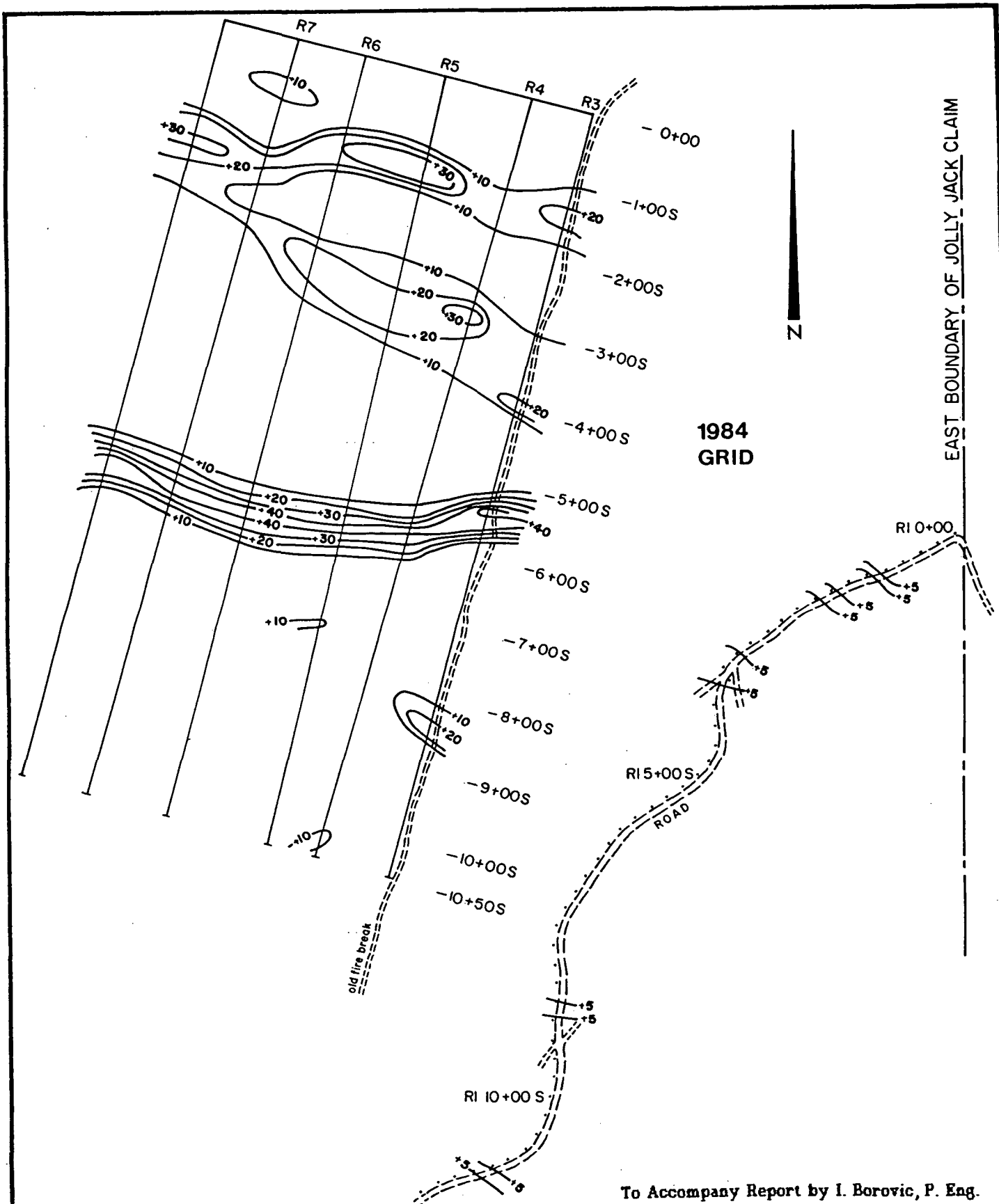
TOPPERGOLD PROPERTY
Geology and Soil Geochemistry
1986

Scale: as shown
NTS 93 A 7
Date: April 1990
Figure: 7



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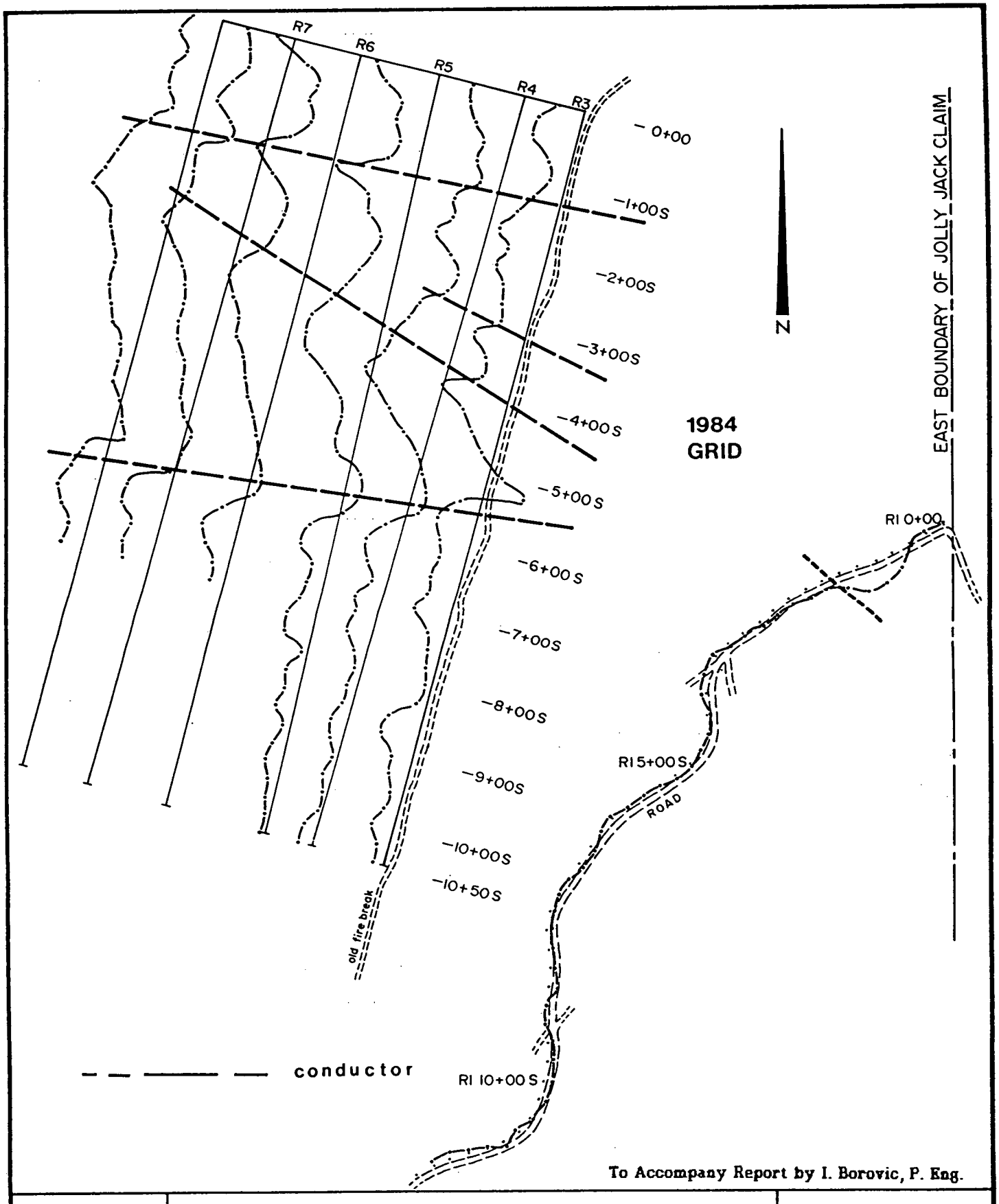
TOPPERGOLD PROPERTY
VLF-EM Survey
Fraser Filter Contours
Jolly Jack Claim

Scale: 0 50 100m
NTS 93 A 7
Date: April 1990.
Figure: 8



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TOPPERGOLD PROPERTY
VLF-EM Survey
Dip Angle Profiles
Jolly Jack Claim

Scale: 0 50 100m
NTS 93 A 7
Date: April 1990
Figure: 9

1986 GEOLOGYCAL, GEOCHEMICAL SURVEY
(Fig. 5. 7)

1) Geological mapping was carried out along road cuts and prominent ridges at a scale of 1:2500.
2) Rock chip sampling of quartz sweats, veins and stockwork and all pyritic rocks.
3) Geochemical soil survey was done, and a total of 193 samples were collected and assayed.
4) Heavy mineral concentrate sampling was done at five localities on three creeks draining the property.

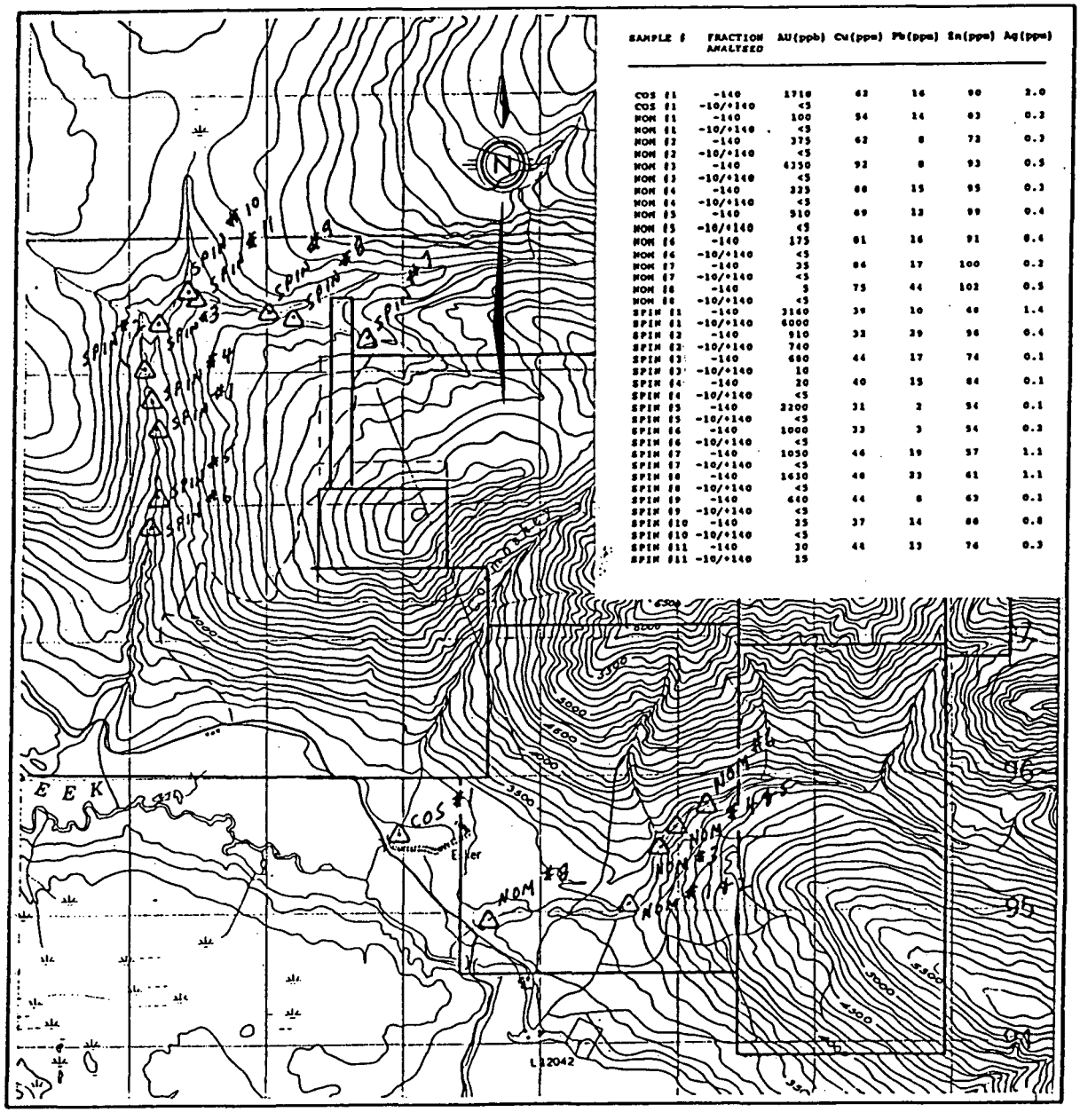
RESULTS:

SOIL SURVEY

Anomalous levels of silver and gold were found in soils at several locations on the Topper 5 claim. Several of these sites are underlain by the 'Knotty Phyllites'.
The 'west zone', outlined by R. Kregosky in 1985, has been confirmed and extended for 500 metres to the northwest. This gives a total length of 1500 metres to the zone.
Although absolute values were higher (16ppm) in 1985 the same highly anomalous zones were detected (4ppm) in 1986. Few out crops have been located directly underlying this zone but the 'Knotty Phyllites' have been mapped in the vicinity.
The 'west zone' trends 140° to 150° and does not appear to follow any drainage systems. Bedding ranges from 110° to 140° on the property so the anomalous silver zone may be outlining a particular horizon or bed. Anomalous gold values of up to 30 ppb occur along the eastern edge of the zone.
A second anomalous silver zone containing up to 3.2 ppm silver and 10 ppb gold was outlined west of the 'west zone'. This zone was detected at several stations along the 600N line. No outcrop has been mapped in this area.
West of Spin Creek anomalous silver values, up to 4.1 ppm, occur from 1550 to 1650 west and from 1850 to 2200 west on line 1800N. Anomalous silver levels were also detected at a few stations along line 1600N. "Knotted Phyllites" striking 120° have been mapped at 1800 west on line 1800N (see Map 2.2).

HEAVY MINERAL CONCENTRATE SURVEY

Visible gold was observed at two of the five sample sites. Analytical results showed that all five samples contain concentrations of gold. Each sample was subsampled and analyzed several times resulting in several different sets of results.



SAMPLE #	FRACTION ANALYSED	AU(ppb)	Cu(ppm)	Pb(ppm)	Zn(ppm)	Ag(ppm)
COS #1	-140	1710	62	16	90	2.0
COS #1	-10/+140	<5				
NOM #1	-140	100	54	14	83	0.2
NOM #1	-10/+140	<5				
NOM #2	-140	375	62	8	72	0.3
NOM #2	-10/+140	<5				
NOM #3	-140	4350	92	8	93	0.5
NOM #3	-10/+140	<5				
NOM #4	-140	325	66	15	95	0.3
NOM #4	-10/+140	<5				
NOM #5	-140	510	69	12	99	0.4
NOM #5	-10/+140	<5				
NOM #6	-140	175	61	16	91	0.4
NOM #6	-10/+140	<5				
NOM #7	-140	35	66	17	100	0.2
NOM #7	-10/+140	<5				
NOM #8	-140	5	75	44	102	0.5
NOM #8	-10/+140	<5				
SPIN #1	-140	3160	36	10	46	1.4
SPIN #1	-10/+140	6000				
SPIN #2	-140	910	33	29	96	0.4
SPIN #2	-10/+140	740				
SPIN #3	-140	680	44	17	76	0.1
SPIN #3	-10/+140	10				
SPIN #4	-140	20	40	15	84	0.1
SPIN #4	-10/+140	<5				
SPIN #5	-140	2200	31	2	56	0.1
SPIN #5	-10/+140	<5				
SPIN #6	-140	1000	33	3	54	0.2
SPIN #6	-10/+140	<5				
SPIN #7	-140	1050	46	19	57	1.1
SPIN #7	-10/+140	<5				
SPIN #8	-140	1630	48	23	61	1.1
SPIN #8	-10/+140	<5				
SPIN #9	-140	640	44	8	63	0.2
SPIN #9	-10/+140	<5				
SPIN #10	-140	25	37	14	86	0.8
SPIN #10	-10/+140	<5				
SPIN #11	-140	30	46	13	76	0.3
SPIN #11	-10/+140	15				

0 1000 2000 3000 Mètres

Scale 1:50,000

To Accompany Report by I. Borovic, P. Eng.

IGNA
engineering & consulting ltd.

GRAND NATIONAL RESOURCES Inc.
TOPPERGOLD PROPERTY
Heavy Mineral Sample Loc.
Nov. 1988

Scale:
N.T.S. 93 A 7
Date: April 1990
Figure: 10.

The free gold was causing innomogeneity in the subsamples. Eventually the total amount of each sample was analyzed and an average gold value was determined. Values from subsamples range from <0.002 to 0.416 ounces per ton gold, however, average values range from 0.009 ounces per ton to 0.150 ounces per ton gold. The highest values were obtained from Spin Creek, the highest (0.150 opt) from a site just above the bridge. The two samples from No Name Creek contain nearly as high values (0.013 opt and 0.015 opt) as that from lower Spin Creek (0.018 opt) even though no gold was observed.
Two samples also contain anomalous levels of silver, 14.0 and 5.2 ppm. No other elements appear to occur in anomalous concentrations.
Heavy mineral dispersion trains are generally 1 to 3 km in length. It is strongly suggested that the gold found in the creek is coming from the Topper claims.

1988 SOIL AND HEAVY MINERAL'S STUDIES
(Fig.s 10, 11, 12)

Five sites were selected and soil samples collected and analysed. One part of the sample was ground to -150 mesh and the other to -80 mesh. Both were analysed for gold. Results indicated that the bulk of the gold found in the soil in this area is in the coarser fraction.

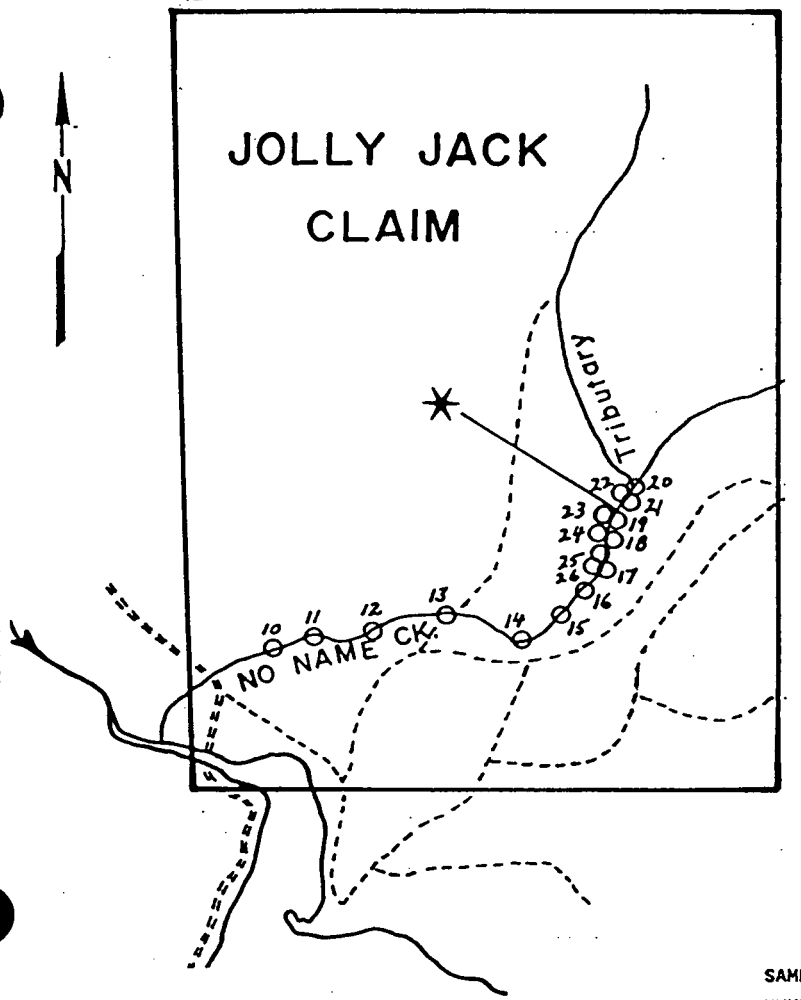
A total of 20 heavy mineral samples were taken from the creeks draining the area which was established to be anomalous in gold in the past exploration. Separation included fine and coarse fraction. The find showed highly anomalous gold values.

1989 SOIL AND HEAVY MINERAL'S STUDY
(Fig.s 10, 11, 12)

A total of 409 soil samples was taken from five areas within the property. Anomalies "worthy of follow-up were detected on four of five grids."(Symonds, D. F. Sept 1989.)

The samples were taken from "No Name" Creek draining the Jolly Jack claim area. One sample (NUM 89-20) had 1140 ppb of gold in its fine fraction. Sample was taken short distance up the creek from 1988 sample assaying 4350 ppb in gold content.

"Petrographic studies on rocks from the Frasergold gold deposit and on the rocks from Toppergold property show that the two rocks are similar and strongly suggest that they are part of the same stratigraphic unit."(Harris, J. F. Ph. D. Vancouver Petrographics Ltd. Report for Doug Symonds, Burton Consulting Inc.)in: Symonds, D. F. Sept. 1989.



✶ – 1988 SAMPLE (4350ppb Au)

HEAVY MINERAL SAMPLING RESULTS

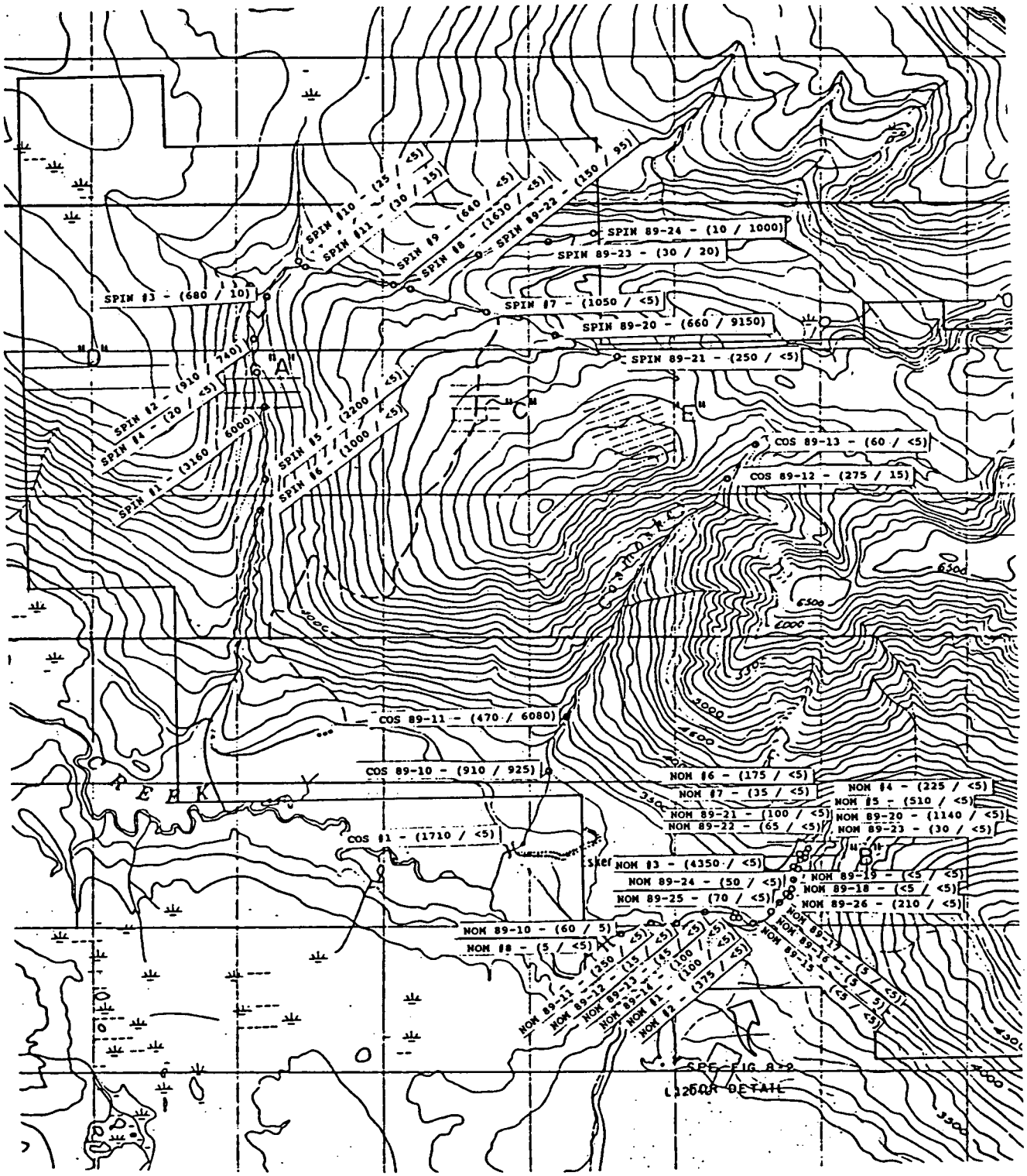
SAMPLE NUMBER	AU(ppb) +140 mesh	AU(ppb) -140 mesh	CU(ppm)	PB(ppm)	ZN(ppm)	AG(ppm)
				(all -140 mesh)		
NOM 89-10	5	60	62	19	115	0.3
NOM 89-11	<5	250	68	12	125	0.3
NOM 89-12	<5	15	63	15	122	0.2
NOM 89-13	<5	45	70	15	124	0.2
NOM 89-14	<5	100	68	14	112	1.8
NOM 89-15	<5	<5	68	15	140	0.4
NOM 89-16	5	5	70	14	124	0.3
NOM 89-17	<5	5	67	16	130	0.3
NOM 89-18	<5	<5	70	14	132	0.3
NOM 89-19	<5	<5	76	14	120	0.2
NOM 89-20	<5	1140	80	29	122	0.5
NOM 89-21	<5	100	78	19	115	0.4
NOM 89-22	<5	65	78	16	124	0.4
NOM 89-23	<5	30	86	18	134	0.4
NOM 89-24	<5	50	70	20	114	0.3
NOM 89-25	<5	70	86	22	132	0.3
NOM 89-26	<5	210	70	13	120	0.4

To Accompany Report by I. Borovic, P. Eng.

IGNA
engineering & consulting ltd.

GRAND NATIONAL RESOURCES Inc.
TOPPERGOLD PROPERTY
Heavy Mineral Sampling
May 1989

Scale:
N.T.S. 93 A 7
Date: April 1990
Figure: 11



To Accompany Report by I. Borovic, P. Eng.

IGNA
engineering & consulting ltd.

GRAND NATIONAL RESOURCES Inc.
TOPPERGOLD PROPERTY
Heavy Mineral and Soil Sampling Grids
Sept 1989

Scale: 0 0.5 1km

N.T.S. 93A7

Date: April 1990

Figure: 12

W O R K D O N E 1990

Geochemical soil survey
(Fig.s 13 to 18)

Survey control
(Fig. 13)
The soil survey was done in the northern part of the Toopergold project in the northwestern part of the Topper claim.

The grid is composed of 4.7 km/lines.

Lines 50S, 150S, 250S, 350S and 450S are spaced at 100 m intervals and stations were marked at 25 m on the line.
Line 550N is located 550 m north of the baseline.

Sampling method

Samples were taken from the "B" horizon which is about 15 to 20 cm below surface. The soil material was collected with a spoon; cleaned of larger size particles and put in the standard soil sample envelope which was marked with coordinate location.
Samples were collected at regular 50 m intervals along the lines.
Total of 194 samples was collected and assayed.

Analytical methods

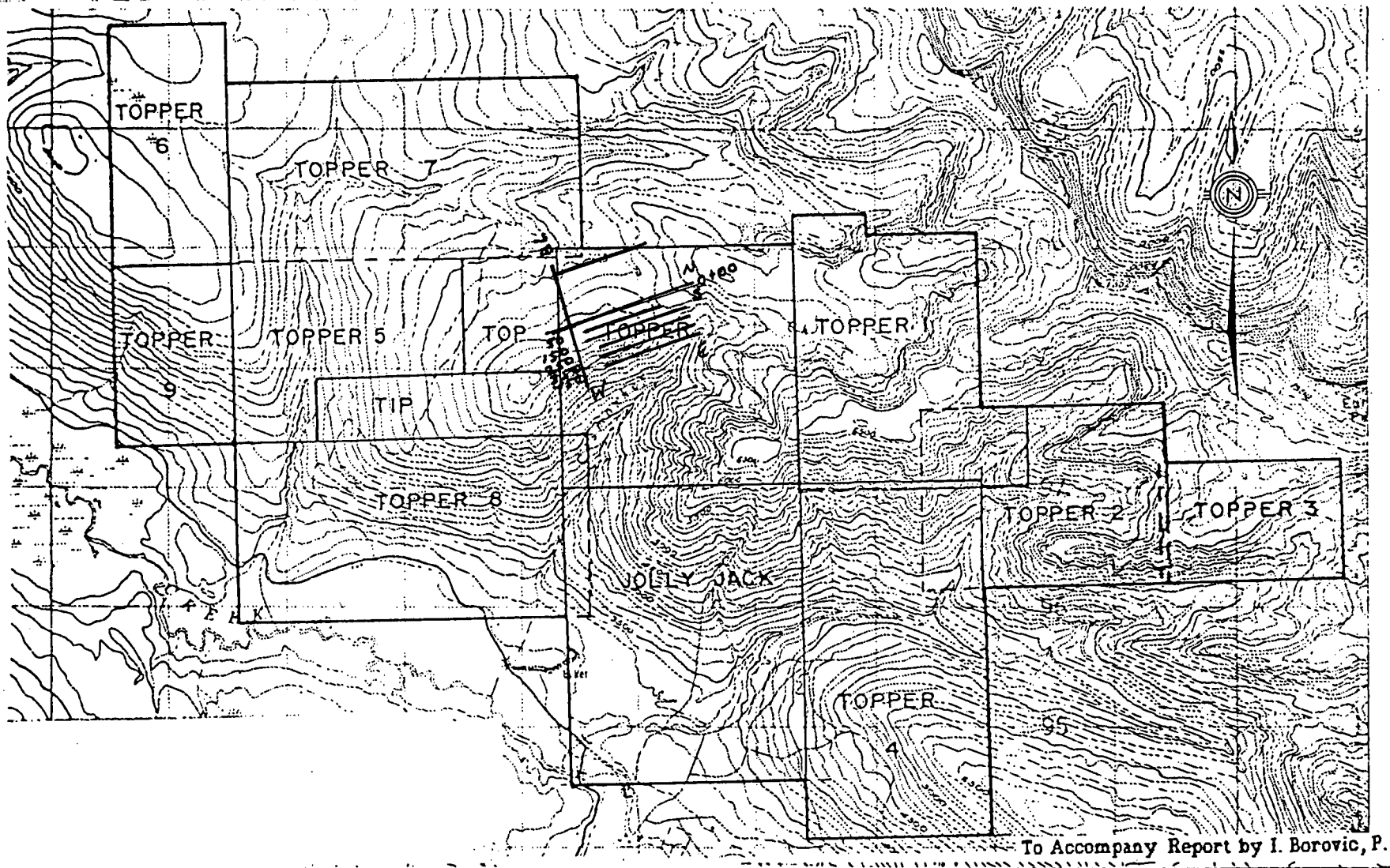
Soil samples were dried, pulverized, screened to -80 mesh and subsequent AA analyses were done by Acme Analytical Laboratories Ltd. of Vancouver,B.C.
Samples were assayed for copper,silver, gold, zinc and lead.

R e s u l t s:

The results of the geochemical survey are presented in Figures No.13 to 18 of this report. These are contour maps, scale 1:5 000 showing copper, silver, gold, zinc and lead contents in parts per million.

Discussion of Results

Copper
(Fig. 14)
Copper dispersion with background of less than 100 ppm is high for the area. Anomalous values start at 100 ppm and values of 200 ppm and up are considered significantly anomalous.
Two areas representing values better than 100 ppm Cu are located within the grid. One is in the middle and one is in the eastern part of the grid.
The middle anomaly is open to the north . The eastern anomalous area is open to the north and south . The highest anomalous copper values are assayed on the line 250S at 325E, 550E and 800E. Two anomalies are separated from each other by an area of low copper content.

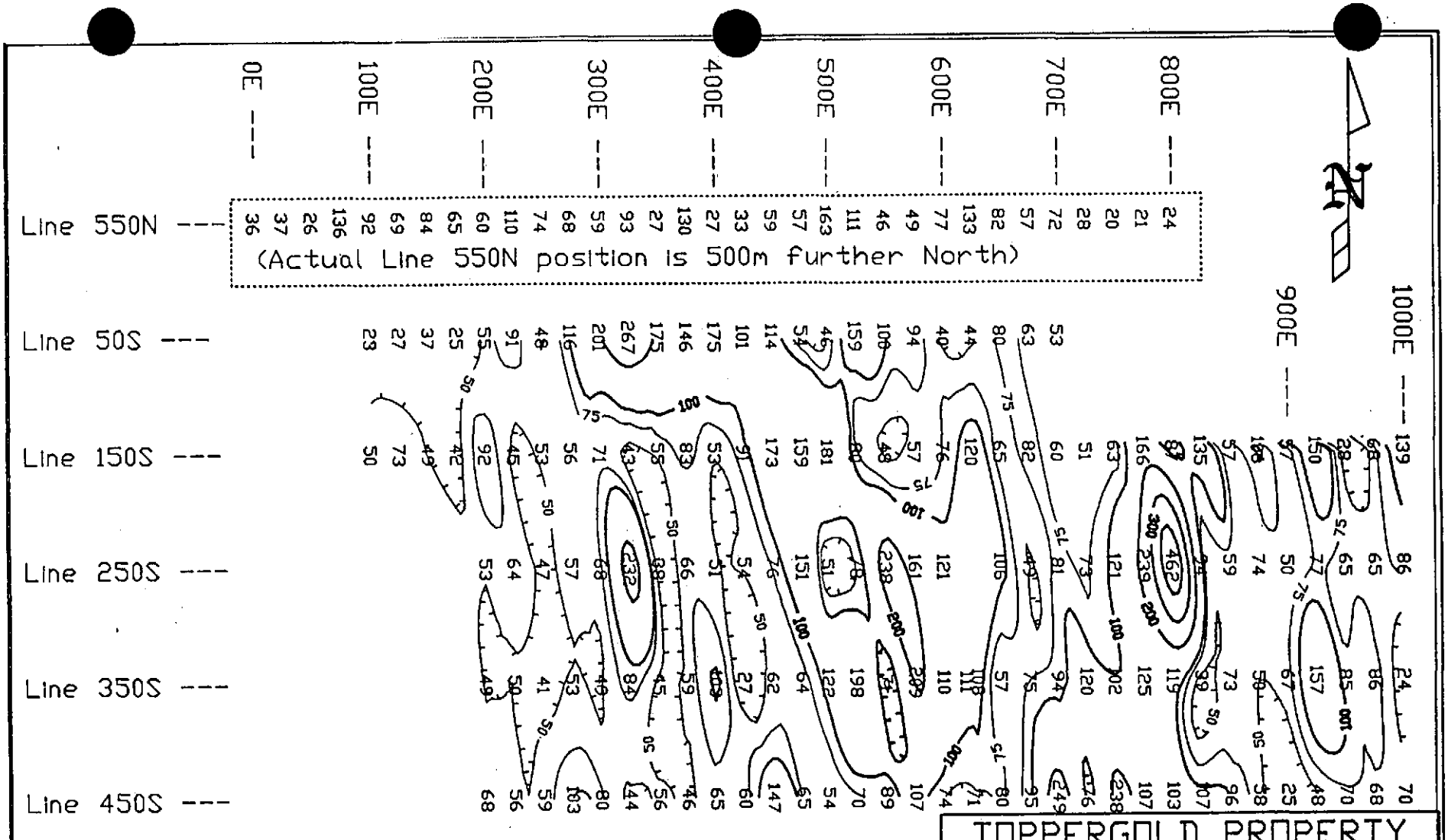


To Accompany Report by I. Borovic, P. Eng.

IGNA
engineering & consulting ltd.

GRAND NATIONAL RESOURCES Inc.
TOPPERGOLD PROPERTY
Location of Workings
1990

Scale: 0 1km
NTS 93 A 7
Date: Sept 1990
Figure: 13



To Accompany Report
By I. Borovic, P.Eng.

SCALE 1:5000

100 0 100 200 300

METERS

CONTOURS
Below 100 ppm CU: 25 ppm
Above 100 ppm CU: 100 ppm

TOPPERGOLD PROPERTY

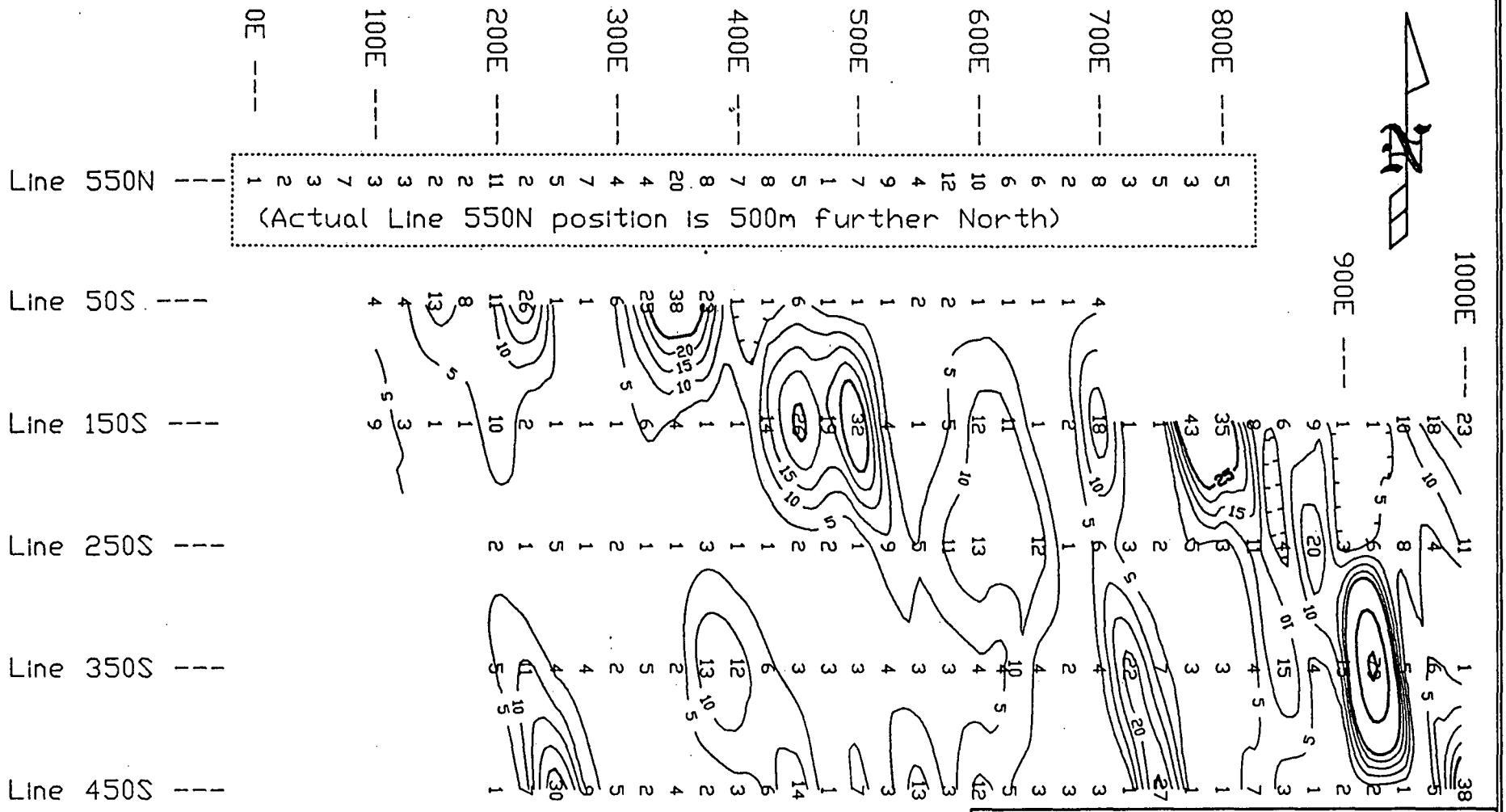
FOR: GRAND NATIONAL RESOURCES INC.

BY: IGNA ENGINEERING AND CONSULTING LTD.

SOIL GEOCHEMISTRY
COPPER
(Values in ppm)

CARIBOO M.D., B.C.

N.T.S. 93A-7	DATE: 12/09/90
PLOTTED BY RPM MAPPING	FIGURE NO. 14



To Accompany Report
By I. Borovic, P.Eng.

SCALE 1:5000

100 0 100 200 300

METERS

CONTOURS
Below 25 ppb AU: 5 ppb
Above 25 ppb AU: 25 ppb

TOPPERGOLD PROPERTY

FOR: GRAND NATIONAL RESOURCES INC.

BY: IGNA ENGINEERING AND CONSULTING LTD.

SOIL GEOCHEMISTRY
GOLD
(Values in ppb)

CARIBOO M.D., B.C.

N.T.S.: 93A-7	DATE: 12/09/90
PLOTTED BY RPM MAPPING	FIGURE NO. 15

Gold
(Fig. 15)
Gold shows background of less than 5 ppb. Anomalous values start at 10 ppb with the highest values going to 79 ppb (L350S St925E). Dispersion is spotty. Anomalous areas are located on L50S St 350E; L150S St 450 to 500E, 775 to 800E; L350S St 925E.

Silver
(Fig. 16)

Silver values are relatively high. Anomalous values start at 2 ppm and values of 2.5 ppm and higher are considered significantly anomalous. Significant anomalies strike northwest southeast and are located on L50S St 400E extending toward L350S St 500E. Anomalies on L 50S are open to the north.

Zinc
(Fig. 17)

Anomalous values start at 400 ppm and values of 500 ppm and over are considered highly anomalous.
Dispersion of anomalous zinc values are fairly spotty over the middle of the surveyed area. The highest anomalous values are located in the southeast part of the grid.

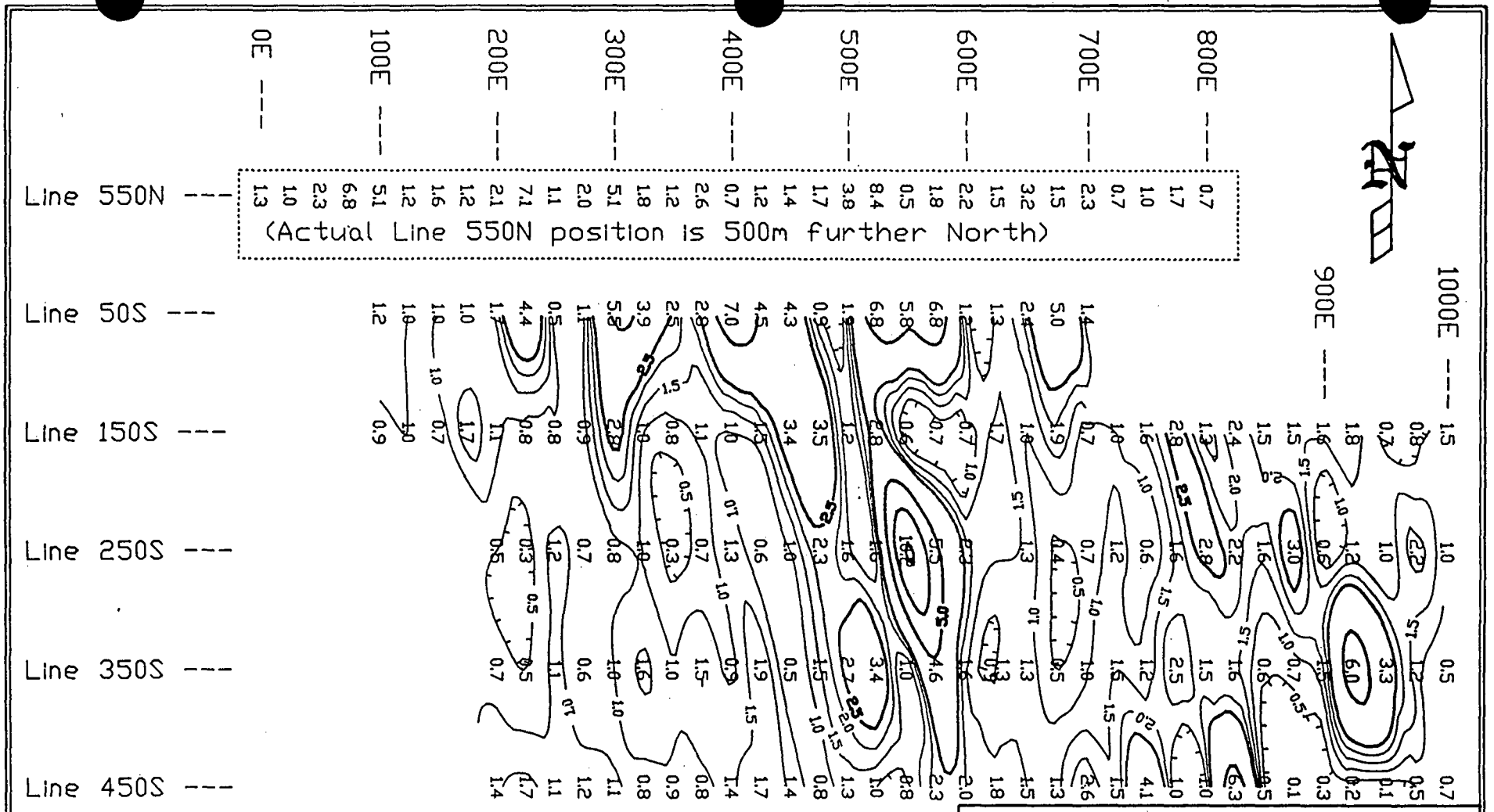
Lead
(Fig. 18)

Dispersion of lead is very spotty. Values above 25 ppm are considered anomalous. No significant anomaly greater than 39 ppm was found.

Geophysical VLF-EM survey
(Fig. 19)
The instrument used was a SABRE VLF-EM model 27 receiver. It was tuned to the Seattle, Washington transmitter station which operates at a frequency of 24.8 kHz.
Just over 4.7 km/lines was surveyed. The map (Fig. 12) shows the grid in relation to the property.

Results

The VLF-EM survey mapped an area of relative high field strength showing possible uniformity of underlying bedrock.



To Accompany Report
By I. Borovic, P.Eng.

SCALE 1:5000

100 0 100 200 300

METERS

CONTOURS
Below 2.5 ppm AG: 0.5 ppm
Above 2.5 ppm AG: 2.5 ppm

TOPPERGOLD PROPERTY

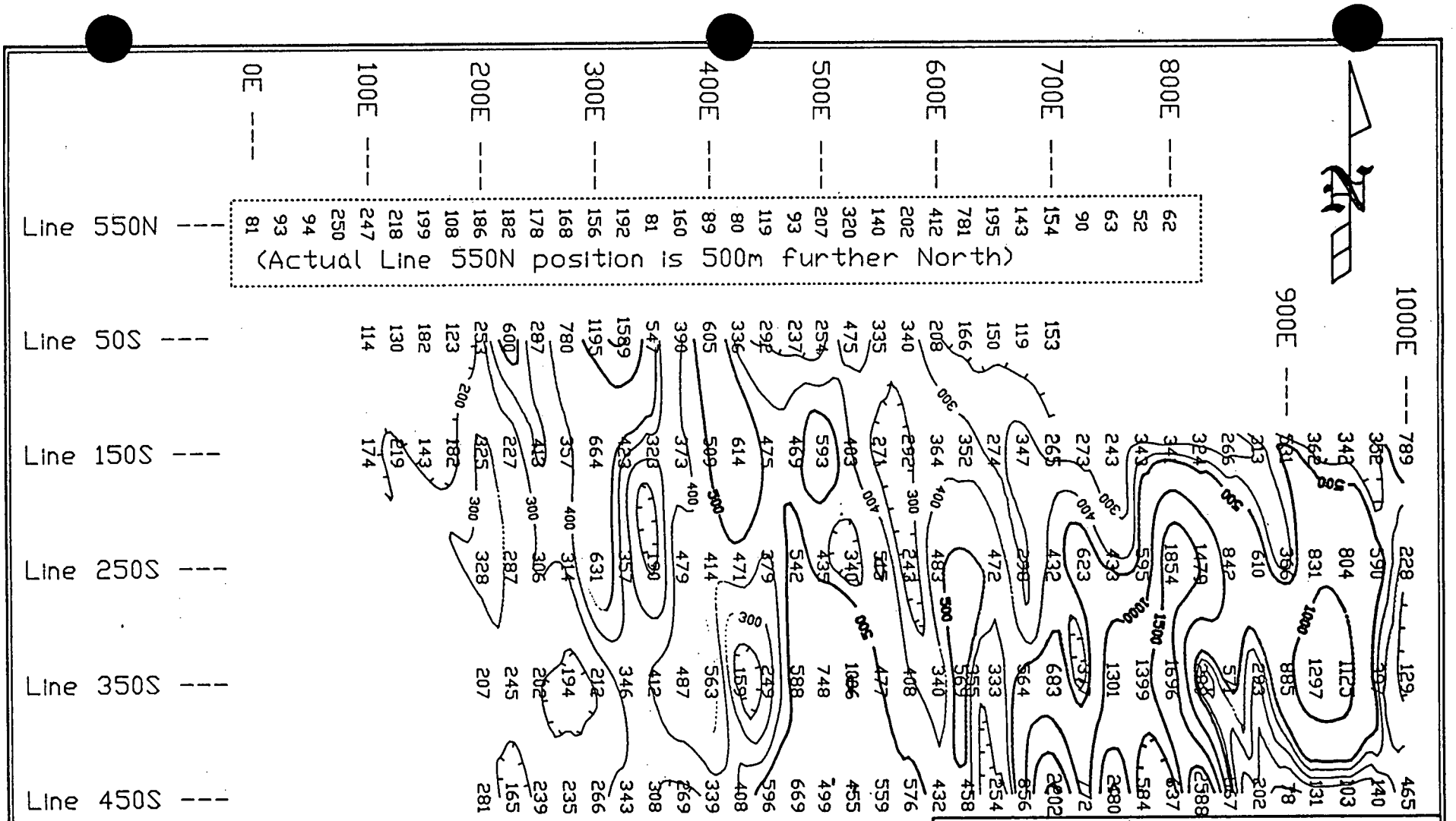
FOR: GRAND NATIONAL RESOURCES INC.

BY: IGNA ENGINEERING AND CONSULTING LTD.

SOIL GEOCHEMISTRY
SILVER
(Values in ppm)

CARIBOO M.D., B.C.

N.T.S.: 93A-7	DATE: 12/09/90
PLOTTED BY RPM MAPPING	FIGURE NO. 16



To Accompany Report
By I. Borovic, P.Eng.

SCALE 1:5000

100 0 100 200 300

METERS

CONTOURS
Below 500 ppm ZN: 100 ppm
Above 500 ppm ZN: 500 ppm

TOPPERGOLD PROPERTY

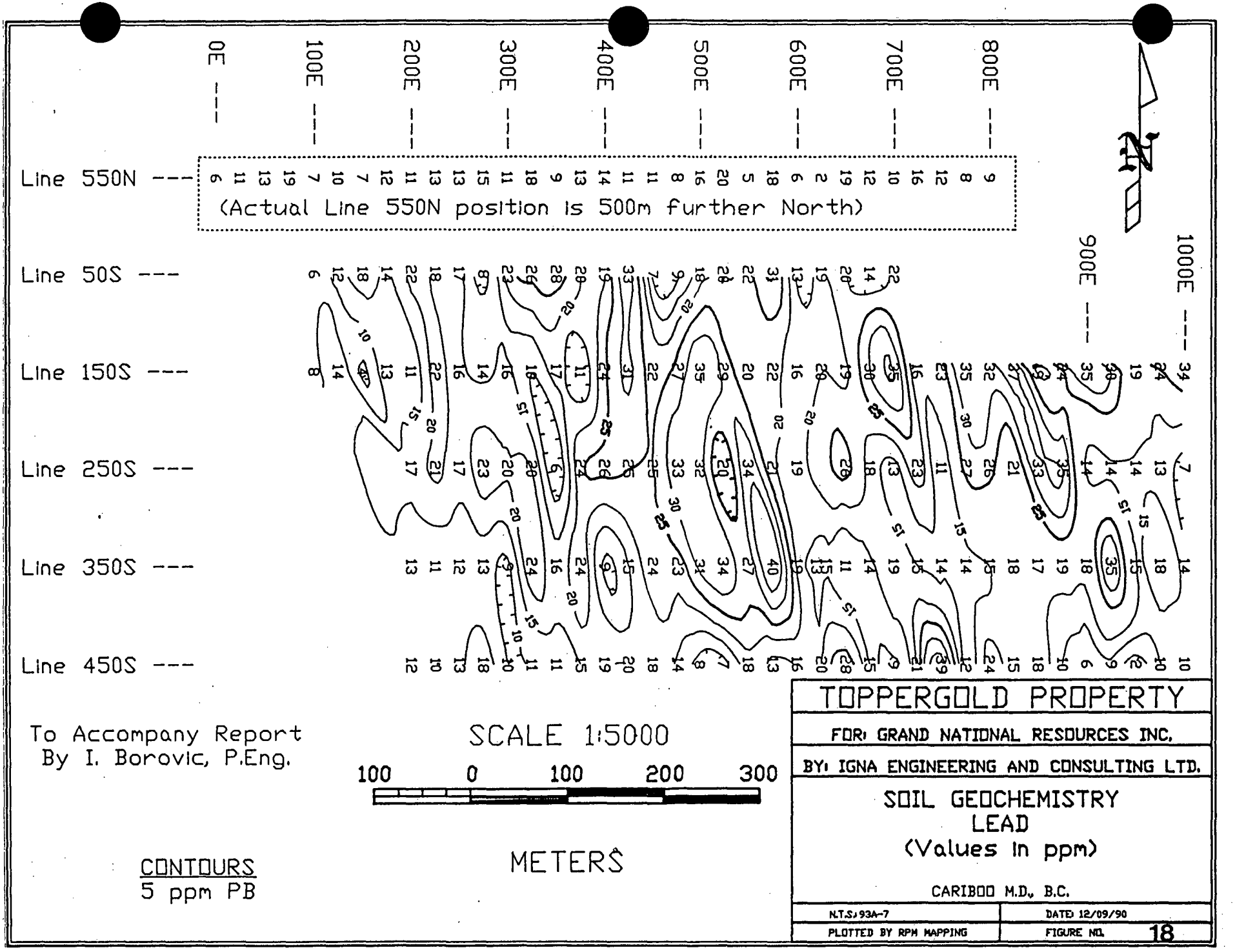
FOR: GRAND NATIONAL RESOURCES INC.

BY: IGNA ENGINEERING AND CONSULTING LTD.

SOIL GEOCHEMISTRY
ZINC
(Values in ppm)

CARIBOO M.D., B.C.

N.T.S.: 93A-7	DATE: 12/09/90
PLOTTED BY RPM MAPPING	FIGURE NO. 17



To Accompany Report
By I. Borovic, P.Eng.

SCALE 1:5000

100 0 100 200 300

METERS

CONTOURS
5 ppm PB

TOPPERGOLD PROPERTY

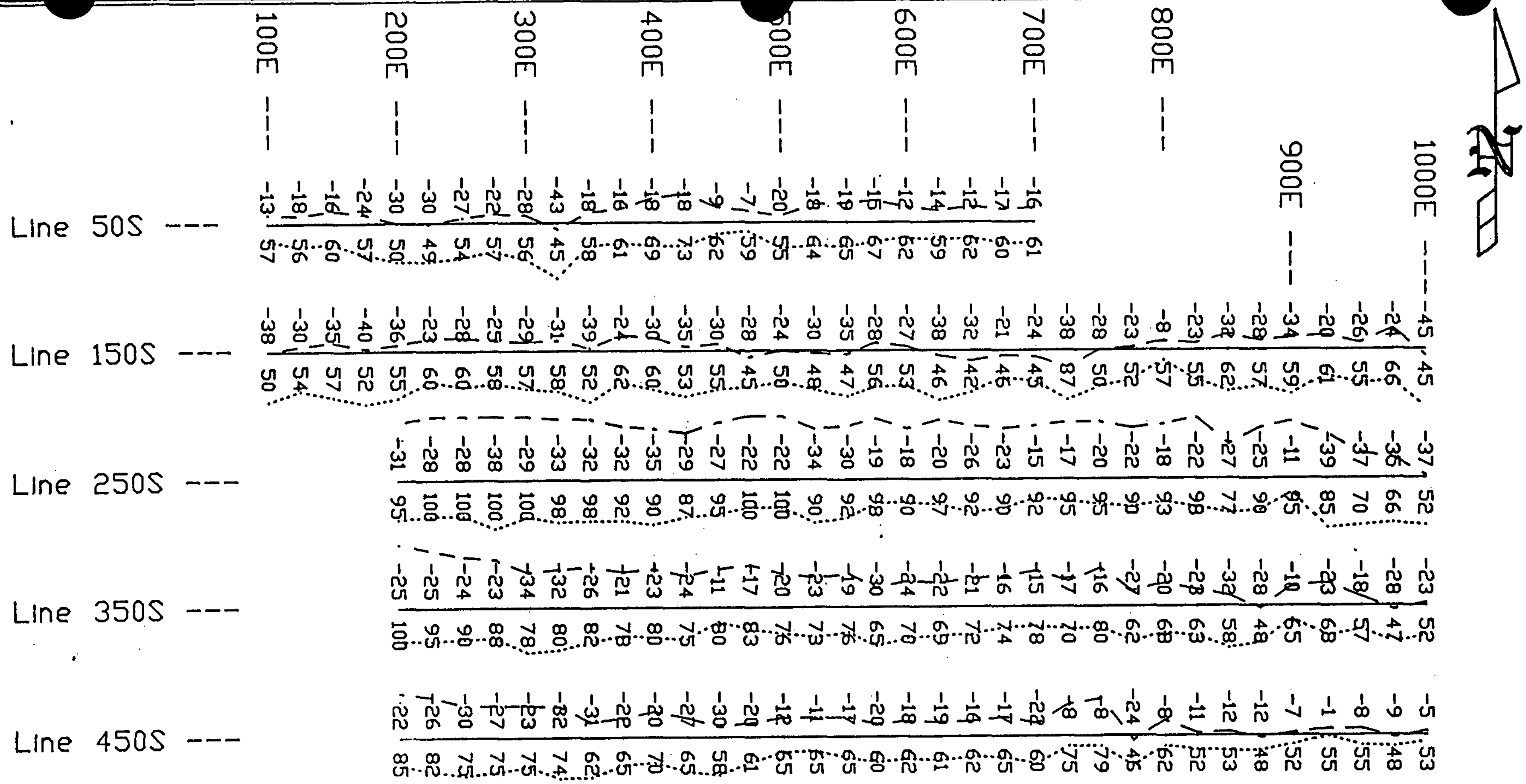
FOR: GRAND NATIONAL RESOURCES INC.

BY: IGNA ENGINEERING AND CONSULTING LTD.

SOIL GEOCHEMISTRY
LEAD
(Values in ppm)

CARIBOO M.D., B.C.

N.T.S. 93A-7	DATE 12/09/90
PLOTTED BY RPH MAPPING	FIGURE NO. 18



To Accompany Report
By I. Borovic, P.Eng.

SCALE 1:5000

100 0 100 200 300

METERS

PROFILE AMPLITUDE

DIP ANGLE		FIELD STRENGTH
+50°	——	100%
0°	——	50%
-50°	——	0%

-22 -26 -30 Dip Angle (In Degrees): Number Above Line & Dotted Profile

Field Strength (In Percent): Number Below Line & Dashed Profile 85 82 75

TOPPERGOLD PROPERTY

FOR: GRAND NATIONAL RESOURCES INC.

BY: IGNA ENGINEERING AND CONSULTING LTD.

VLF-EM (Seattle) Profiles of Dip Angle & Field Strength

CARIBOO M.D., B.C.

N.T.S.: 93A-7	DATE: 12/09/90
PLOTTED BY RPM MAPPING	FIGURE NO. 19

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STATEMENT OF EXPENSES

The following is a breakdown of expenses incurred in carrying out the exploration work in the area of the Toppergold Property during the summer of 1990.

PERSONNEL:

Igna Engineering & Consulting Ltd

I. Borovic, P.Eng.,	$450.00 per day
L.M. Schram,(Field supervisor and VLF-EM Operator)	200.00per day
Larry Carleton (Field assistant)	150.00 per day
I.R. Schram (Field assistant)	150.00 per day

I. Borovic, P.Eng.,	Consultant	3 days	$ 1,350.00
L.M. Schram		12 days	2,400.00
Larry Carleton		11 days	1,650.00
I.R.Schram		11 days	1,650.00
Truck rental (4X4) $100.00 per day		12 days	1,200.00
Lodging (Board & Room) ($70.00 per day)			
33 mandays @ $70.00 per day			2,310.00
Assaying			3,000.00
VLF-EM Instrument rental at $75.00 per day			
11 days at $75.00 per day			825.00
Report,geochem,VLF-EM analysis,drafting & word processing and photo coping			900.00
Freight and field supplies			210.00
Total expenses			$15,495.00

C E R T I F I C A T E

I, I.Borovic, of the city of Vancouver, B.C., do hereby certify that:

1. I have supervised the exploration program carried out in the area of Topper gold Property of Grand National Resources Inc. located on the B.C.

2 The expenditures claimed for the performance of the work are correct.

Respectfully submitted

I.Borovic P.Eng.

Vancouver, Oct 12 1990.

APPENDIX 1

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
PHONE(604)253-3158 FAX(604)253-1716

DATE RECEIVED: AUG 7 1990

DATE REPORT MAILED: Aug. 10/90.

GEOCHEMICAL ANALYSIS CERTIFICATE

Grand National Resources Inc. FILE # 90-3217 Page 1

905 - 626 W. Pender St., Vancouver BC V6B 1V9

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au* ppb
L550N BL	36	6	81	1.3	1
L550N 25E	37	11	93	1.0	2
L550N 50E	26	13	94	2.3	3
L550N 75E	136	19	250	6.8	7
L550N 100E	92	7	247	5.1	3
L550N 125E	69	10	218	1.2	3
L550N 150E	84	7	199	1.6	2
L550N 175E	65	12	108	1.2	2
L550N 200E	60	11	186	2.1	11
L550N 225E	110	13	182	7.1	2
L550N 250E	74	13	178	1.1	5
L550N 275E	68	15	168	2.0	7
L550N 300E	59	11	156	5.1	4
L550N 325E	93	18	192	1.8	4
L550N 350E	27	9	81	1.2	20
L550N 375E	130	13	160	2.6	8
L550N 400E	27	14	89	.7	7
L550N 425E	33	11	80	1.2	8
L550N 450E	59	11	119	1.4	5
L550N 475E	57	8	93	1.7	1
L550N 500E	163	16	207	3.8	7
L550N 525E	111	20	320	8.4	9
L550N 550E	46	5	140	.5	4
L550N 575E	49	18	202	1.8	12
L550N 600E	77	6	412	2.2	10
L550N 625E	133	2	781	1.5	6
L550N 650E	82	19	195	3.2	6
L550N 675E	57	12	143	1.5	2
L550N 700E	72	10	154	2.3	8
L550N 725E	28	16	90	.7	3
L550N 750E	20	12	63	1.0	5
L550N 775E	21	8	52	1.7	3
L550N 800E	24	9	62	.7	5
L-50S 100E	23	6	114	1.2	4
L-50S 125E	27	12	130	1.0	4
L-50S 150E	37	18	182	1.0	13
STANDARD C/AU-S	62	37	131	7.1	47

- .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER. THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: Soil -80 Mesh AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

SIGNED BY..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au* ppb
L-50S 175E	25	14	123	1.0	8
L-50S 200E	55	22	253	1.7	11
L-50S 225E	91	18	600	4.4	26
L-50S 250E	48	17	287	.5	1
L-50S 275E	116	8	780	1.1	1
L-50S 300E	201	23	1195	5.5	6
L-50S 325E	267	26	1589	3.9	25
L-50S 350E	175	28	547	2.5	38
L-50S 375E	146	20	390	2.8	23
L-50S 400E	175	19	605	7.0	1
L-50S 425E	101	33	336	4.5	1
L-50S 450E	114	7	292	4.3	6
L-50S 475E	54	9	237	.9	1
L-50S 500E	46	18	254	1.9	1
L-50S 525E	159	20	475	6.8	1
L-50S 550E	100	22	335	5.8	2
L-50S 575E	94	31	340	6.8	2
L-50S 600E	40	13	208	1.2	1
L-50S 625E	44	19	166	1.3	1
L-50S 650E	80	20	150	2.4	1
L-50S 675E	63	14	119	5.0	1
L-50S 700E	53	22	153	1.4	4
L150S 100E	50	8	174	.9	9
L150S 125E	73	14	219	1.0	3
L150S 150E	49	4	143	.7	1
L150S 175E	42	13	182	1.7	1
L150S 200E	92	11	325	1.1	10
L150S 225E	45	22	227	.8	2
L150S 250E	53	16	413	.8	1
L150S 275E	56	14	357	.9	1
L150S 300E	71	16	664	2.8	1
L150S 325E	43	10	423	1.0	6
L150S 350E	55	17	323	.8	4
L150S 375E	83	11	373	1.1	1
L150S 400E	53	24	509	1.0	1
L150S 425E	91	31	614	1.5	14
STANDARD C/AU-S	62	44	132	7.4	48

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au* ppb
L150S 450E	173	22	475	3.4	26
L150S 475E	159	27	469	3.5	19
L150S 500E	181	35	593	1.2	32
L150S 525E	80	29	403	2.8	4
L150S 550E	48	20	271	.6	1
L150S 575E	57	22	292	.7	5
L150S 600E	76	16	364	.7	12
L150S 625E	120	20	352	1.7	11
L150S 650E	65	19	274	1.0	1
L150S 675E	82	30	347	1.9	2
L150S 700E	60	35	265	.7	18
L150S 725E	51	16	273	1.0	1
L150S 750E	63	23	243	1.6	1
L150S 775E	166	35	343	2.8	43
L150S 800E	87	32	341	1.3	35
L150S 825E	135	37	324	2.4	8
L150S 850E	57	19	266	1.5	6
L150S 875E	106	24	313	1.5	9
L150S 900E	57	35	531	1.6	1
L150S 925E	150	30	362	1.8	1
L150S 950E	28	19	342	.7	10
L150S 975E	68	24	352	.8	18
L150S 1000E	139	34	789	1.5	23
L250S 200E	53	17	328	.5	2
L250S 225E	64	21	287	.3	1
L250S 250E	47	17	306	1.2	5
L250S 275E	57	23	314	.7	1
L250S 300E	68	20	631	.8	2
L250S 325E	232	20	357	1.0	1
L250S 350E	38	6	190	.3	1
L250S 375E	66	24	479	.7	3
L250S 400E	51	26	414	1.3	1
L250S 425E	54	25	471	.6	1
L250S 450E	76	25	379	1.0	2
L250S 475E	151	33	542	2.3	2
L250S 500E	51	32	435	1.6	1
STANDARD C/AU-S	61	42	132	7.0	47

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au* ppb
L250S 525E	78	20	340	1.6	9
L250S 550E	238	34	515	10.2	5
L250S 575E	161	21	243	5.5	11
L250S 600E	121	19	483	2.3	13
L250S 650E	106	26	472	1.3	12
L250S 675E	49	18	298	.4	1
L250S 700E	81	13	432	.7	6
L250S 725E	73	23	623	1.2	3
L250S 750E	121	11	433	.6	2
L250S 775E	239	27	595	1.6	5
L250S 800E	462	26	1854	2.8	3
L250S 825E	94	21	1479	2.2	11
L250S 850E	59	33	842	1.6	4
L250S 875E	74	35	610	3.0	20
L250S 900E	50	14	366	.6	3
L250S 925E	77	14	831	1.2	6
L250S 950E	65	14	804	1.0	8
L250S 975E	65	13	590	2.2	4
L250S 1000E	86	7	228	1.0	11
L350S 200E	49	13	207	.7	5
L350S 225E	50	11	245	.5	11
L350S 250E	41	12	202	1.1	4
L350S 275E	53	13	194	.6	4
L350S 300E	49	9	212	1.0	2
L350S 325E	84	24	346	1.6	5
L350S 350E	45	16	412	1.0	2
L350S 375E	59	24	487	1.5	13
L350S 400E	103	9	563	.9	12
L350S 425E	27	15	159	1.9	6
L350S 450E	62	24	249	.5	3
L350S 475E	64	23	588	1.5	3
L350S 500E	122	31	748	2.7	3
L350S 525E	198	34	1006	3.4	4
L350S 550E	71	27	477	1.0	3
L350S 575E	209	40	408	4.6	3
L350S 600E	110	19	340	1.6	4
STANDARD C/AU-S	63	41	133	7.1	52

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au* ppb
L350S 625E	111	13	569	.9	4
L350S 625E (A)	108	15	355	1.3	10
L350S 650E	57	11	333	1.3	4
L350S 675E	75	14	564	.5	2
L350S 700E	94	19	683	1.0	4
L350S 725E	120	15	377	1.5	22
L350S 750E	102	14	1301	1.2	7
L350S 775E	125	14	1399	2.5	3
L350S 800E	119	15	1696	1.5	3
L350S 825E	39	18	289	1.6	4
L350S 850E	73	17	571	.6	15
L350S 875E	50	19	293	.7	4
L350S 900E	67	18	885	1.5	15
L350S 925E	157	35	1297	6.0	79
L350S 950E	85	15	1125	3.3	5
L350S 975E	86	18	397	1.2	6
L350S 1000E	24	14	129	.5	1
L450S 200E	68	12	281	1.4	1
L450S 225E	56	10	165	1.7	7
L450S 250E	59	13	239	1.1	30
L450S 275E	103	18	235	1.2	9
L450S 300E	80	10	266	1.1	5
L450S 325E	44	11	343	.8	2
L450S 350E	56	11	308	.9	4
L450S 375E	46	15	269	.8	2
L450S 400E	65	19	339	1.4	3
L450S 425E	60	20	408	1.7	6
L450S 450E	147	18	596	1.4	14
L450S 475E	65	14	669	.8	1
L450S 500E	54	8	499	1.3	7
L450S 525E	70	7	455	1.0	3
L450S 550E	89	18	559	.8	13
L450S 575E	107	13	576	2.3	3
L450S 600E	74	16	432	2.0	12
L450S 625E	71	20	458	1.8	5
L450S 650E	80	28	254	1.5	3
STANDARD C/AU-S	61	42	131	7.2	55

SAMPLE#	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au* ppb
L450S 675E	95	15	856	1.3	3
L450S 700E	249	9	2202	2.6	3
L450S 725E	76	21	772	1.5	1
L450S 750E	238	39	2180	4.1	27
L450S 775E	107	12	584	1.0	1
L450S 800E	103	24	637	1.0	1
L450S 825E	107	15	2588	6.3	7
L450S 850E	96	18	567	.5	3
L450S 875E	58	10	202	.1	1
L450S 900E	25	6	78	.3	2
L450S 925E	48	9	131	.2	2
L450S 950E	70	2	103	.1	1
L450S 975E	68	10	140	.5	5
L450S 1000E	70	10	465	.7	38
STANDARD C/AU-S	58	36	131	6.7	51

TOPPER SEATLE JULY/90

L. 50-S. GAIN 06

STA	X	F.S.	Q
100 E.	-13	57	2
125 E.	-18	66	3
150 E.	-16	60	2
175	-24	57	2
200	-30	50	—
225	-30	49	1
250	-27	54	—
275	-22	57	—
300	-28	56	2
325	-43	45	—
350	-18	58	—
375	-16	61	—
400	-18	69	3
425	-18	73	2
450	-9	62	2
475	-7	59	2
500	-20	55	2
525	-18	64	2
550	-19	65	1
575	-15	67	1
600	-12	62	—
625	-14	59	—
650	-12	62	* 1
675	-17	60	—
700	-16	61	—

TOPPER SEATLE JULY/90

L. 150-S. GAIN 09

STA	X	F.S.	Q
100 E.	-38	50	1
125 E.	-30	54	—
150 E.	-35	57	—
175	-40	52	—
200	-36	55	1
225	-23	60	2
250	-28	60	3
275	-25	58	—
300	-29	57	—
325	-31	58	—
350	-39	52	2
375	-24	62	2
400	-30	60	1
425	-35	53	—
450	-30	55	—
475	-28	45	—
500	-24	56	—
525	-30	48	—
550	-35	47	2
575	-28	56	—
600	-27	53	—
625	-38	46	—
650	-32	42	—
675	-21	46	—
700	-24	45	—
725	-38	37	2
750	-28	50	—
775	-23	52	—
800	-8	57	2
825	-23	55	4
850	-32	62	1
875	-28	57	1
900	-34	59	1
925	-20	61	2
950	-26	55	4
975	-24	66	—
1000	-45	46	1

POSSIBLE ↑ TOPOGRAPHIC RESPONSE

TOPPER SEATLE JULY/90

L. 250-S. GAIN 12

STA.	X	F.S.	Q
200 E.	- 31	95	3
225 E.	- 28	100 +	5
250 E.	- 28	100 +	4
275	- 38	100	2
300	- 29	100	5
325	- 33	98	2
350	- 32	98	2
375	- 32	92	6
400	- 35	90	1
425	- 29	87	—
450	- 27	95	1
475	- 22	100	—
500	- 22	100	4
525	- 34	90	15
550	- 30	92	2
575	- 19	98	2
600	- 18	90	1
625	- 20	97	2
650	- 26	92	1
675	- 23	90	1
700	- 15	92	1
725	- 17	95	2
750	- 20	95	2
775	- 22	90	2
800	- 18	93	3
825	- 22	98	2
850	- 27	77	4
875	- 25	90	1
900	- 11	95	1
925	- 39	85	1
950	- 37	70	2
975	- 35	66	1
1000	- 37	52	1

TOPPER SEATLE JULY/90

L. 350-S GAIN 12

STA	X	F.S.	Q
200 E.	- 25	100	2
225 E	- 25	95	2
250 E.	- 24	90	1
275	- 23	88	2
300	- 34	78	3
325	- 32	80	3
350	- 26	82	2
375	- 21	78	6
400	- 23	80	—
425	- 24	75	2
450	- 11	80	2
475	- 17	88	2
500	- 20	76	—
525	- 23	73	—
550	- 19	76	—
575	- 30	65	1
600	- 24	70	2
625	- 22	69	3
650	- 21	72	—
675	- 16	74	1
700	- 15	78	2
725	- 17	70	2
750	- 16	80	1
775	- 27	62	1
800	- 20	68	2
825	- 23	63	2
850	- 32	58	3
875	- 28	48	—
900	- 10	65	—
925	- 23	68	—
950	- 18	57	—
975	- 28	47	—
1000	- 23	52	—

TOPPER SEATLE JULY/90

L. 450-S. GAIN 12

STA	X	F.S.	Q
200 E.	- 22	85	4
225 E.	- 26	82	2
250 E.	- 30	75	1
275	- 27	75	1
300	- 23	75	2
325	- 32	74	2
350	- 31	62	2
375	- 22	65	2
400	- 20	70	4
425	- 27	65	1
450	- 30	58	1
475	- 20	61	—
500	- 12	65	2
525	- 11	65	2
550	- 17	65	2
575	- 20	60	2
600	- 18	62	1
625	- 19	61	—
650	- 16	62	—
675	- 17	65	—
700	- 22	60	2
725	- 8	75	—
750	- 8	79	—
775	- 24	46	—
800	- 8	62	—
825	- 11	52	—
850	- 12	53	—
875	- 12	48	—
900	- 7	52	—
925	- 1	55	—
950	- 8	55	—
975	- 9	48	—
1000	- 5	53	2