ARCHER, CATHRO
& ASSOCIATES (1981) LIMITED
CONSULTING GEOLOGICAL ENGINEERS

1016 - 510 WEST HASTINGS STREET, VANCOUVER, B.C. V6B 1L8 TEL (604) 688-2568 • FAX (604) 688-2578

ASSESSMENT REPORT

Describing an

INDUCED POLARIZATON SURVEY

at the

GOAL NET PROPERTY

Blade 1-106
Goal 1-335
Goon 1-136
Net 1-214
NHL 1-176
Overtime 1-86

NTS 105G/7 and 8
Latitude 61°20'N and Longitude 131°32'W

in the

Watson Lake Mining District
Yukon Territory

Prepared by

Archer, Cathro & Associates (1981) Limited

for

EXPATRIATE RESOURCES LTD.

by

W.D. Eaton, B.A., B.Sc.
November, 1999

BOX 4127, 2054 SECOND AVENUE, WHITEHORSE, Y.T. Y1A 3S9 TEL (867) 667-4415

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FIGURES

APPENDICES

INTRODUCTION

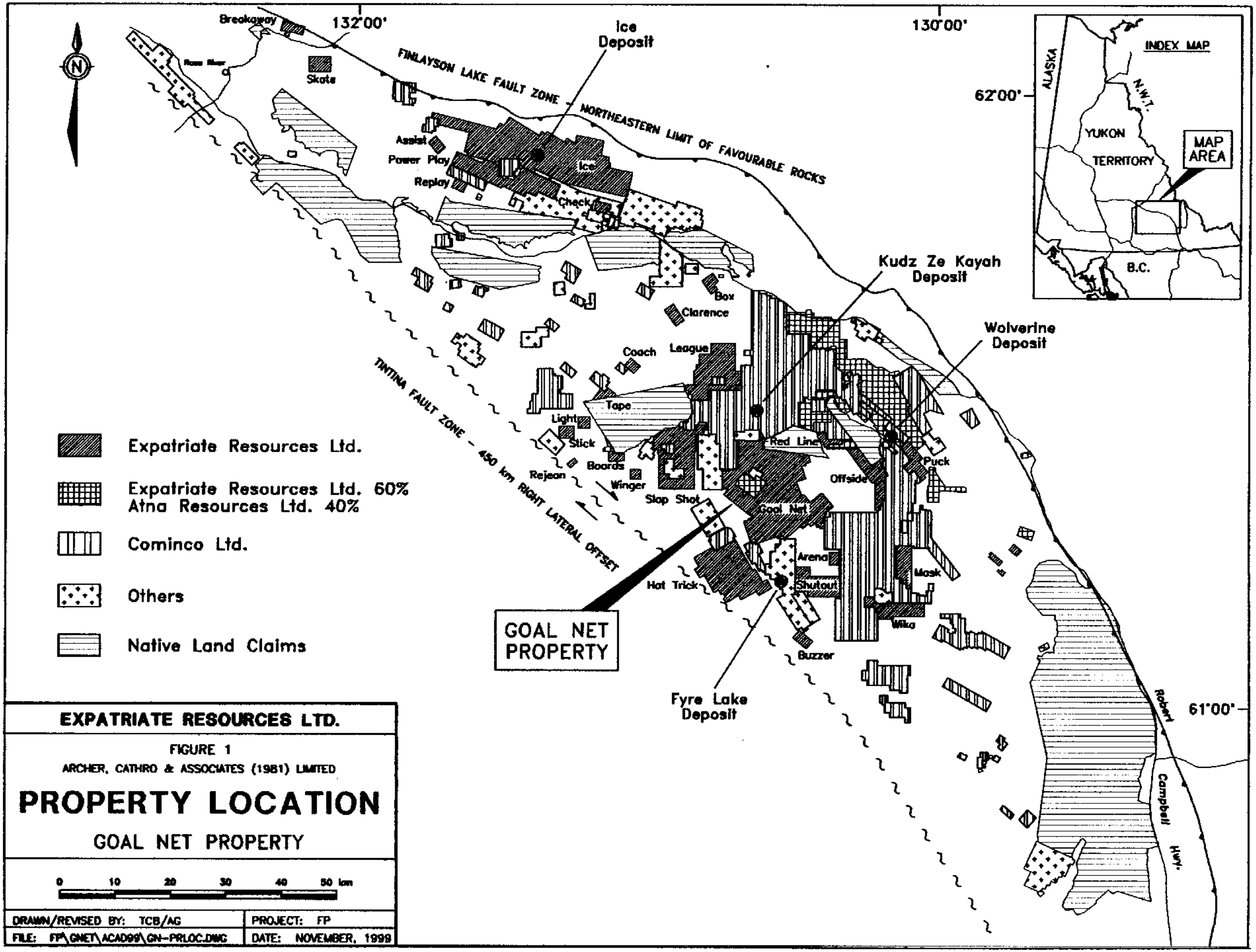
The Goal Net property is owned by Expatriate Resources Ltd. and covers a number of volcanogenic massive sulphide targets. From August 7 to 11, 1999, 3.7 line km of induced polarization and resistivity surveys were conducted by Amerok Geosciences Ltd. with field supervision and assistance provided by Brian Gay of Archer, Cathro & Associates (1981) Limited. The surveys were done from a tent camp on the property. They covered an area where previous work had discovered a strong soil geochemical anomaly associated with oxidized quartz-muscovite schist float that assayed up to 4.55% lead and 32 g/t silver (Wengzynowski, 1998 and 1999). Regional scale mapping has interpreted this schist to be part of Unit 3 which hosts the Kudz Ze Kayah volcanogenic massive sulphide deposit about 10 km northwest of the geophysical survey area (Murphy and Piercey, 1998).

The geophysical program was managed by the author and his Statement of Qualifications appears in Appendix I. Amerok Geosciences' report describing the surveys is in Appendix II.

PROPERTY, LOCATION AND ACCESS

The property is located in southeastern Yukon at latitude 61°20'N and longitude 131°32'W on NTS map sheets 105G/7 and 8 (Figure 1). It comprises 1053 mineral claims registered with the Watson Lake Mining Recorder in the name of Archer, Cathro & Associates (1981) Limited which holds them in trust for Expatriate Resources Ltd. Figure 2 illustrates the location of the survey relative to nearby claims. Claim registration data are listed below.

Claim Name	Grant Number	Expiry Date*
Blade 1-30	YB61558-YB61587	March 17, 2001
31-106	YB76605-YB76680	March 17, 2001
Goal 1-24	YB56129-YB56152	March 17, 2011
25-94	YB60584-YB60653	March 17, 2011
95-96	YB63999-YB64000	March 17, 2011
97-98	YB68801-YB68802	March 17, 2011
99-121	YB60654-YB60676	March 17, 2011
122-129	YB68823-YB68830	March 17, 2011
130-165	YB70481-YB70516	March 17, 2011
166-168	YB70518-YB70520	March 17, 2011
169	YB70556	March 17, 2011
170-181	YB70521-YB70532	March 17, 2011
182	YB70517	March 17, 2011
183	YB70533	March 17, 2011
184-203	YB68803-YB68822	March 17, 2011
204-210	YB70474-YB70480	March 17, 2011
211-282	YB76787-YB76858	March 17, 2011
283-303	YB77164-YB77184	March 17, 2011
304-319	YB76860-YB76875	March 17, 2011
320-335	YB87595-YB87610	March 17, 2002
Goon 1-78	YB76681-YB76758	March 17, 2004
79FR	YB76759	March 17, 2004
80-82	YB76760-YB76762	March 17, 2004
83-84FR	YB76763-YB76764	March 17, 2004
85-106	YB76765-YB76786	March 17, 2004
107-136	YB76876-YB76905	March 17, 2004
Net 1-34	YB56095-YB56128	March 17, 2010
35-58	YB59119-YB59142	March 17, 2008
59-72	YB60984-YB60997	March 17, 2004


132°00'
130°00'
62°00'
61°00'
Ice Deposit
Breakaway
Ross River
Skate
FINLAYSON LAKE FAULT ZONE - NORTHEASTERN LIMIT OF FAVOURABLE ROCKS
Assist
Power Play
Replay
Ice
Check
Box
Clarence
Coach
League
Tape
Light
Stick
Boards
Rejean
Winger
Slap Shot
Red Line
Offside
Goal Net
Arena
Shutout
Hat Trick
Mask
Wika
Buzzer
Puck
Kudz Ze Kayah Deposit
Wolverine Deposit
Fyre Lake Deposit
TINTINA FAULT ZONE - 450 km RIGHT LATERAL OFFSET
GOAL NET PROPERTY
Robert
Campbell
Hwy.
INDEX MAP
ALASKA
N.W.T.
YUKON
TERRITORY
MAP AREA
B.C.
Expatriate Resources Ltd.
Expatriate Resources Ltd. 60%
Atna Resources Ltd. 40%
Cominco Ltd.
Others
Native Land Claims
EXPATRIATE RESOURCES LTD.
FIGURE 1
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
PROPERTY LOCATION
GOAL NET PROPERTY
0 10 20 30 40 50 km
DRAWN/REVISED BY: TCB/AG
PROJECT: FP
FILE: FP\GNET\ACAD99\GN-PRLOC.DWG
DATE: NOVEMBER, 1999

Claim Name	Grant Number	Expiry Date*
Net 73-124	YB63472-YB63523	March 17, 2004
125-140	YB63930-YB63945	March 17, 2004
141-156	YB63524-YB63539	March 17, 2004
157-164	YB70431-YB70438	March 17, 2004
165FR	YB70439	March 17, 2004
166-169	YB70440-YB70443	March 17, 2004
170FR	YB70444	March 17, 2004
171-195	YB70445-YB70469	March 17, 2004
196	YB70557	March 17, 2004
197-200	YB70470-YB70473	March 17, 2004
201-204	YB78690-YB78693	March 17, 2004
205-206FR	YB78694-YB78695	March 17, 2004
207-214	YB78696-YB78703	March 17, 2004
NHL 1-148	YB60677-YB60824	March 17, 2002
149-152	YB68845-YB68848	March 17, 2002
153-166	YB68831-YB68844	March 17, 2002
167-176	YB89561-YB89570	March 17, 2001
Overtime 1-50	YB60534-YB60583	March 17, 2004
51-86	YB61522-YB61557	March 17, 2004

*Expiry dates do not include 1999 assessment work not yet filed for credit.

The property lies 25 km south of the Robert Campbell Highway and 230 km northeast of Whitehorse. In 1999 access was provided by Bell 206B Jet Ranger helicopters which Trans North Helicopters operated from a permanent base in Ross River, 130 km to the west-northwest.

CONCLUSIONS AND RECOMMENDATIONS

The geophysical survey suggests that a zone of surface weathering and permafrost extends to a depth of 13 to 25 m across the grid and overlies a relatively flat lying conductive horizon that could contain up to 20% sulphide minerals. Geological mapping in the area did not note any graphitic units and showed that foliation and bedding are sub-horizontal. The projected surface trace of the conductive horizon approximately coincides with the uphill edge of the soil geochemical anomaly and probable source area for the mineralized float, as illustrated on Figure 1 in Appendix II. The surveys also outlined a series of steeply dipping, weak chargeability highs that are likely caused by shears, minor faults or fracture zones containing clay or low concentrations of disseminated sulphide.

Based on the presence of favourable shallowly dipping felsic volcanic stratigraphy, mineralized float, strong soil geochemical anomalies and well defined geophysical response which is consistent with the other data, a series of vertical diamond drill holes are definitely warranted to test this target.

Respectfully submitted

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

W. Douglas Eaton, B.A.,B.Sc.

APPENDIX I

AUTHOR'S STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

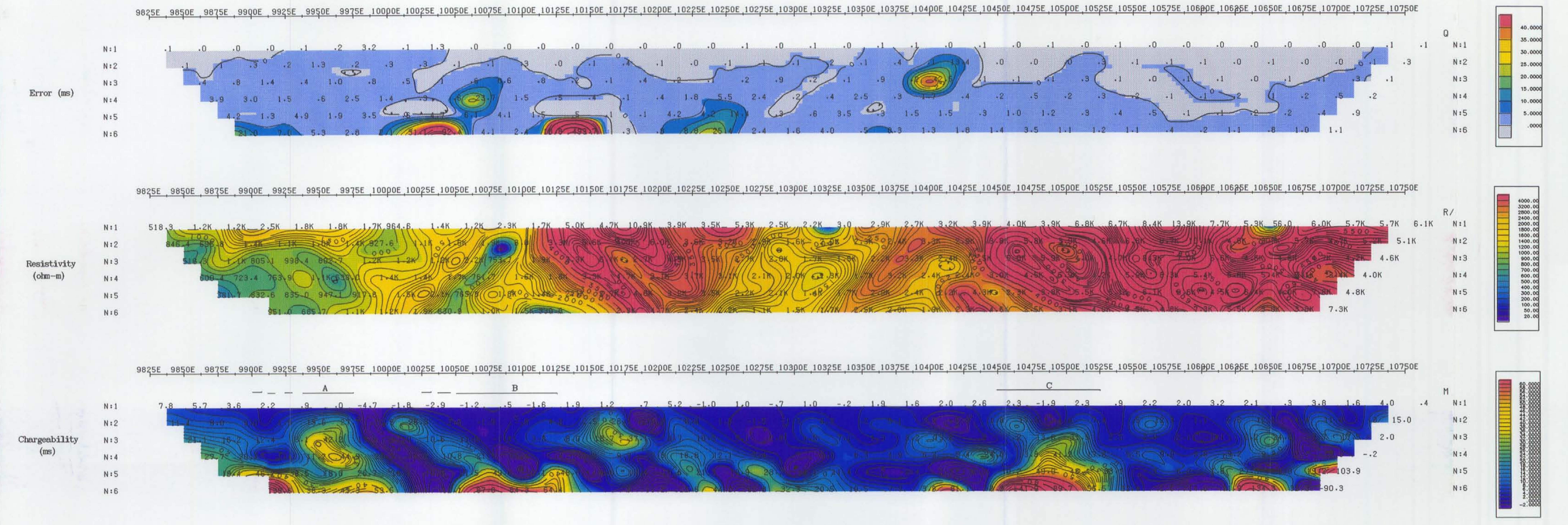
I, W. Douglas Eaton, geologist, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in North Vancouver, British Columbia, do hereby declare that:

1. I graduated from the University of British Columbia in 1980 with a B.Sc. majoring in Geological Sciences.
2. From 1971 to present, I have been actively engaged in mineral exploration in British Columbia and Yukon Territory and on June 1, 1981, I became a partner in Archer, Cathro & Associates (1981) Limited.
3. I have personally participated in or supervised the field work reported herein and have interpreted all data resulting from this work.

W. Douglas Eaton, B.A., B.Sc.

APPENDIX II

INDUCED POLARIZATION SURVEY AT THE GOAL NET PROPERTY, FINLAYSON AREA, YUKON TERRITORY BY M.A. POWER, P.GEOPH., August 18, 1999



LINE : 9800 N

INDUCED POLARIZATION SURVEY

DIPOLE-DIPOLE ARRAY

A NA A

DEPTH POINT

N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

REGISTERED PROFESSIONAL GEOPHYSICIST
M.K. POWER
LICENSEE
19AUG99
N.W.T.

EXPATRIATE RESOURCES LTD.

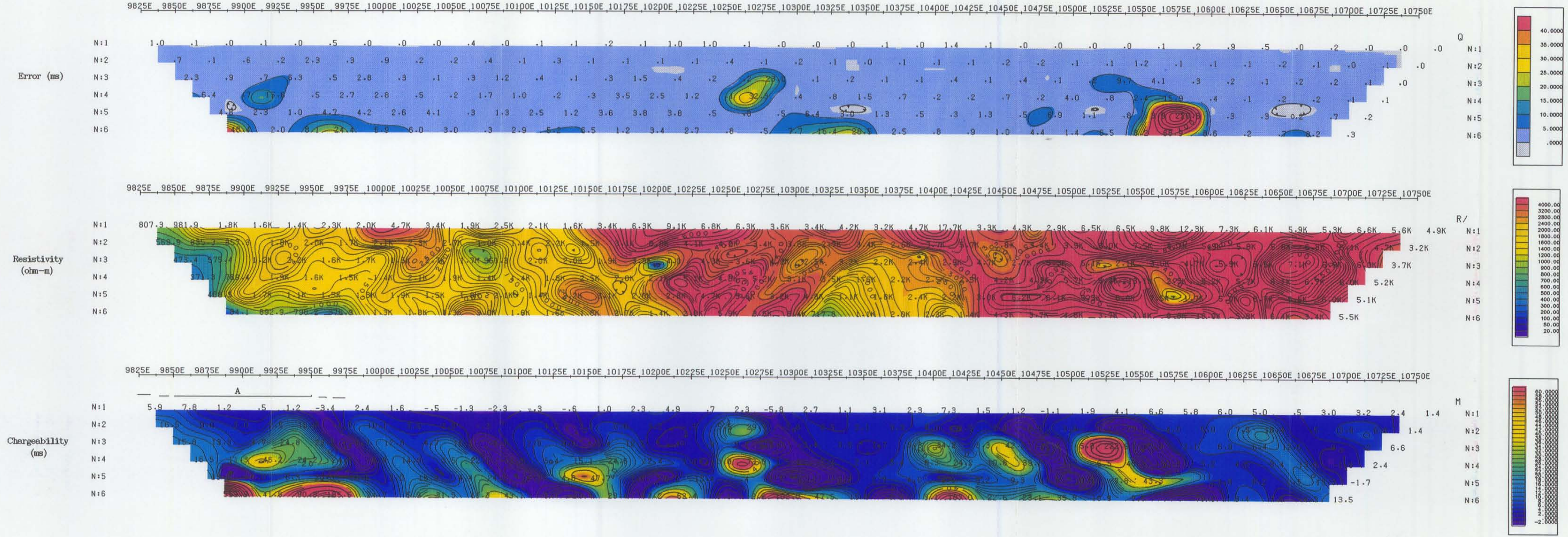
GOAL PROPERTY

NTS 105G10

DATE : 14 AUG 99	REF : 99-21

SCALE = 1: 2000

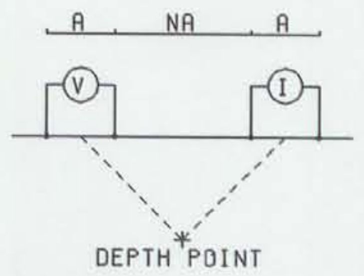
AMEROK GEOSCIENCES LTD



LINE : 9900 N

INDUCED POLARIZATION SURVEY

DIPOLE-DIPOLE ARRAY



N = 1, 2, 3, 4, ...

"A" SPACING = 25.0 METRES

REGISTERED PROFESSIONAL GEOPHYSICIST
M. A. POWER
LICENSEE
19 Aug 99
N.W.T.

EXPATRIATE RESOURCES LTD.

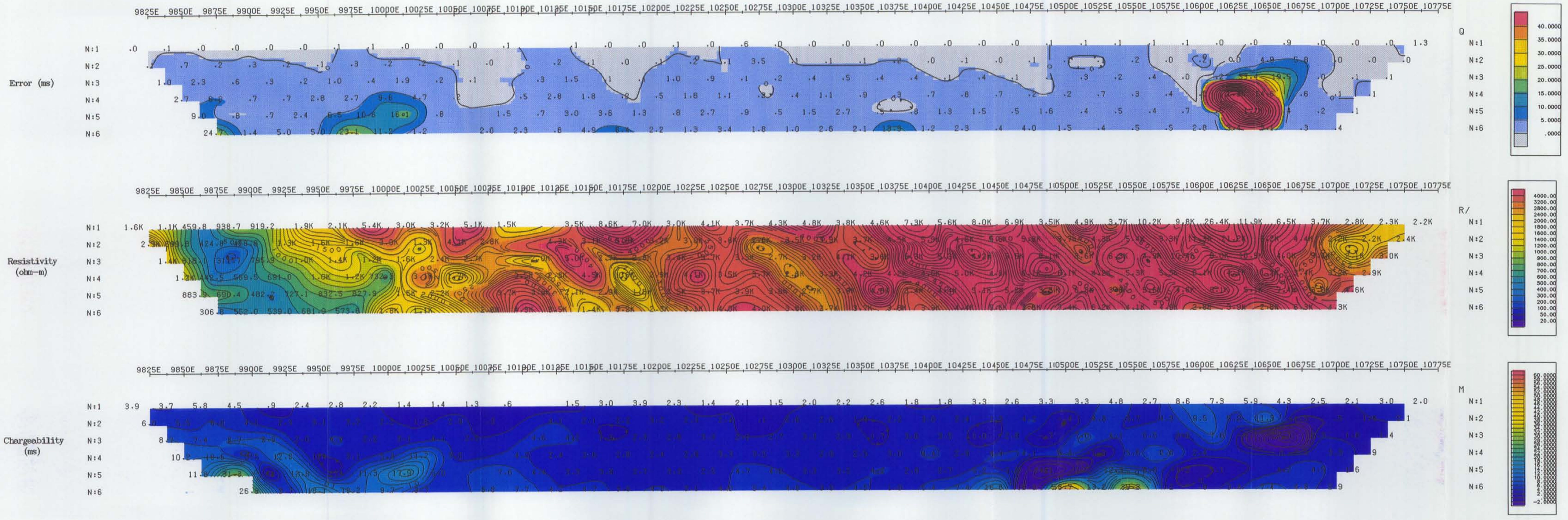
GOAL PROPERTY

NTS 105G10

DATE : 14 AUG 99	REF : 99-21

SCALE = 1: 2000

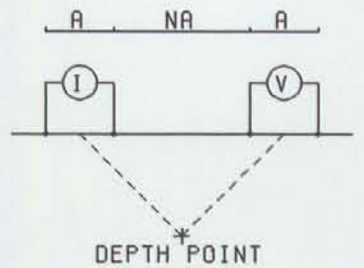
AMEROK GEOSCIENCES LTD



LINE : 10000 N

INDUCED POLARIZATION SURVEY

DIPOLE-DIPOLE ARRAY



N = 1, 2, 3, 4, ...
"A" SPACING = 25.0 METRES

REGISTERED PROFESSIONAL GEOPHYSICIST
M.A. POWER
LICENSEE
N.W.T.

EXPATRIATE RESOURCES LTD.

GOAL PROPERTY

NTS 105G10

DATE : 14 AUG 99 | REF : 99-21

SCALE = 1: 2000

AMEROK GEOSCIENCES LTD

094180

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
Box 4127, Whitehorse, Yukon Y1A 3S9
Telephone: (867) 667-4415 Fax: (867) 667-4622

RECEIVED
FEB 2 ? 2000
MINING RECORDERS OFFICE
WATSON LAKE
YT

AFFIDAVIT

I, Joan Mariacher, of VANCOUVER, B.C. make oath and say:

That to the best of my knowledge the attached Statement of Expenditures for exploration work on the NAL 111 mineral claims on Claim Sheet 105G/8 is accurate.

Joan Mariacher

Sworn before me at VANCOUVER, B.C.
this 14TH day of
FEBRUARY, 2000

Notary, Yukon Territory

Statement of Expenditures
NHL 111 mineral claim - IP Survey
December 6, 1999

Labour

D. Eaton – geologist – August to November – 22 hours at $56/hr	$ 1,318.24
B. Gay – geologist – August 5-11 – 7 days at $247.50/day	1,853.78
M. Cooke – November – 3 ½ hours at $36.70/hr	137.44
	3,309.46

Expenses

Field room and board – 20 mandays at $115/day	2,461.00
Trans North Bell 206 helicopter – 7 hours at $700/hr plus fuel	5,903.27
Amerok Geosciences Ltd.	8,388.80
Drafting and printing	292.11
	17,045.18
	$20,354.64

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

In Account With

Project FINLAYSON PROJECT

Date AUGUST 31, 1999

LABOUR			
Field	A. ARCHER - 40 HRS AT 66/HR (GOALNET)	2640.00	
	R. CARNE - 10 HRS AT 56/HR	560.00	
	D. EATON - 31 HRS AT 56/HR	1736.00	
	F. GISH - 1 HR AT 43/HR	43.00	
	B. WENGZYNOWSKI - 244 HRS AT 43/HR	10492.00	
	B. GAY - 26 DAYS AT 247.50/DAY	6435.00	
	G. DOWNS - 30 DAYS AT 210/DAY	6300.00	
	K. BLASCO - 7 DAYS AT 187.50/DAY	1312.50	
	K. DUNFIELD - 11 DAYS AT 165/DAY	1815.00	
Office	M. COOKE - 2½ HRS AT 36.70/HR	91.75	
Accounting and Expediting	A. GELLING - 68 HRS AT 46/HR	3128.00	
	J. MARIACHER - 82 HRS AT 46.67/HR	3826.94	38380.19
OTHER SERVICES			
Room & Board in Whitehorse	8 DAYS AT 60/DAY	480.00	
Field equipment from AC stock		95.00	
Printing	Photocopies 83 AT .25	20.75	
Rentals from AC	AUGUST 1-31 - SBX11 AT 300/MO + 2 ICOM'S AT 100/MO EACH, 1 GPS AT 230/MO + BINOC SCOPE AT 60/MO + HONDA 1000 GENSET AT 150/MO	940.00	
LOOMIS COURIER	2 AT 13.50 EA	27.00	
Drafting	22 hrs at $ 36 /hr.	792.00	2354.75
EXPENSES			
Petty Cash	23.79 D1 + 13.70 D2	37.49	
Telephone	36.73	36.73	
JOAN M XPENSES	D1	103.47	
ATLAS TRAVEL		349.50	
CARMACKS HOTEL		10.35	
YUKON PRO HARDWARE		73.26	
HOUGEN'S PHOTO		32.09	
SHOPPERS DRUG		9.99	
HORWOOD'S OFFICE		1.94	
CAIL		317.44	
NORCAN LEASING		1130.73	
SECOND AVENUE SHELL	7.48 D1 + 209.56	217.04	
DOREY DEVELOPMENTS		124.75	
WELCOME INN		395.83	
SUNSPUN SHOPPING		28.23	2868.84
MANAGEMENT	6% - ON EXPENSES	172.13	
	- ON FIELD A/C	1379.14	1551.27
			45155.05
GST (R100247667)	7% ON 45155.05		3160.85
			48315.90

E=GST exempt

REMIT PAYMENT TO:

TRANS NORTH HELICOPTERS

TRANS NORTH TURBO AIR LTD.

20 NORSEMAN ROAD • WHITEHORSE • YUKON • Y1A 6E6
TELEPHONE (867) 668-2177 FAX (867) 668-3420

ACCOUNT NUMBER: ARCHEXP

INVOICE NUMBER: 24127

INVOICE DATE: 01 09 08 99

AREA: B.C. / YUKON / NWT / ALTA

CHARTERER: Archer Cathro

BILLING ADDRESS: Expatriate Resources
Box 4127 Whse YT Y1A-3S9

A/C TYPE: 206 B

AIRCRAFT REGISTRATION C: GFKD

FLIGHT DATE: DAY 07 MONTH 08 YEAR 99

PURCHASE ORDER NO.

FUEL & OIL-X: TNTA ✓ CUST. ✓ — TNTA FUEL USED: YDM — HRS/LITRES: 2.0 — FROM

FROM / TO	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
FROM YDM			
TO Frawrs			
KZK Turn off.		1.8	
Bells Camp.		.8	
Bryans Camp.		1.7	
~~YDM~~ Bryans Camp		1.1	
YDM		.8	

4.4 FP 3193.76
227.53
3416.79

SUB	G.L.	AMOUNT
1607	502	4410 00
1600	131	159 60
0000	323	319 87

6.2	@ 700 -	4340 00
	@	
HOLDING TIME:	@ / HR.	
FUEL 228	@ .70 / LITRE	159 60
FUEL	@ / LITRE	
MEALS & LODGINGS		
OTHER		
OTHER		
SUB TOTAL		4499 60
GOODS & SERVICES TAX REGISTRATION NO. R121483135		314 97
TOTAL	$	4814 57

TERMS: PAYABLE UPON RECEIPT OF INVOICE.
2% INTEREST PER MONTH (24% PER ANNUM) WILL BE CHARGED ON ALL OUTSTANDING AMOUNTS OVER 30 DAYS. IF INTEREST IS NOT PAID, FUTURE FLIGHTS WILL BE ON A CASH BASIS.

X Bryans Sey — CHARTERER'S SIGNATURE

CHARTERER'S NAME (PRINTED)

INITIALS: GMS — PILOTS SIGNATURE

ENGINEER'S NAME: MEC Mark

CARRIAGE SUBJECT TO TERMS OF PUBLISHED TARIFF.
TARIFF AVAILABLE TO PUBLIC VIEW AT TRANS NORTH OFFICE.

THIS IS YOUR ONLY INVOICE - PAY UPON RECEIPT

REMIT PAYMENT TO:

TRANS NORTH HELICOPTERS

TRANS NORTH TURBO AIR LTD.
20 NORSEMAN ROAD • WHITEHORSE • YUKON • Y1A 6E6
TELEPHONE (867) 668-2177 FAX (867) 668-3420

ACCOUNT NUMBER: ARCHEXP

INVOICE NUMBER: 24141

INVOICE DATE: 18 08 99

AREA: B.C. / YUKON / NWT / ALTA

% EXPATRIATE RESOURCES LTD
ARCHER CATHRO

CHARTERER

BOX 4127

BILLING ADDRESS

Whitehorse YT Y1A 3S9

A/C TYPE: 206 B

AIRCRAFT REGISTRATION C: GFKD

FLIGHT DATE: DAY 11 MONTH 08 YEAR 99

PURCHASE ORDER NO.

FUEL & OIL-X TNTA	CUST.	TNTA FUEL USED	HRS/LITRES	FROM
✓	✓	YDM	2.0	

FROM / TO	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
FROM YDM			
TO FIRE LAKE			DEMOB BRYANS
YDM			CAMP
	x	3.4	

SUB	G.L.	AMOUNT
1607	502	2380.00
1600	131	159.60
0000	323	177.77

3.4	@ 700.00	2380	00
	@		
HOLDING TIME:	@ / HR.		
FUEL 228.0	@ .70 / LITRE	159	60
FUEL	@ / LITRE		
MEALS & LODGINGS			
OTHER			
OTHER			
SUB TOTAL		2539	60
GOODS & SERVICES TAX REGISTRATION NO. R121483135		177	77
TOTAL	$	2717	37

TERMS: PAYABLE UPON RECEIPT OF INVOICE.
2% INTEREST PER MONTH (24% PER ANNUM) WILL BE CHARGED ON ALL OUTSTANDING AMOUNTS OVER 30 DAYS. IF INTEREST IS NOT PAID, FUTURE FLIGHTS WILL BE ON A CASH BASIS.

X FP
CHARTERER'S SIGNATURE

CHARTERER'S NAME (PRINTED)

INITIALS: GMS
PILOTS SIGNATURE

MEC
ENGINEER'S NAME: MARK

CARRIAGE SUBJECT TO TERMS OF PUBLISHED TARIFF.
TARIFF AVAILABLE TO PUBLIC VIEW AT TRANS NORTH OFFICE.

THIS IS YOUR ONLY INVOICE - PAY UPON RECEIPT

Amerok Geosciences Ltd.

Box 5808
Whitehorse, Yukon Y1A 5L6
Phone: (867) 668-7672
Fax: (867) 393-3577
E-mail: amerok@yknet.yk.ca

INVOICE

GST No.: RT89493 8588
File: 99-21

Invoice 99067
August 19, 1999

In account with: **Expatriate Resources Ltd.**
Suite 1016 - 510 West Hastings St.
Vancouver, BC V6B 1L8

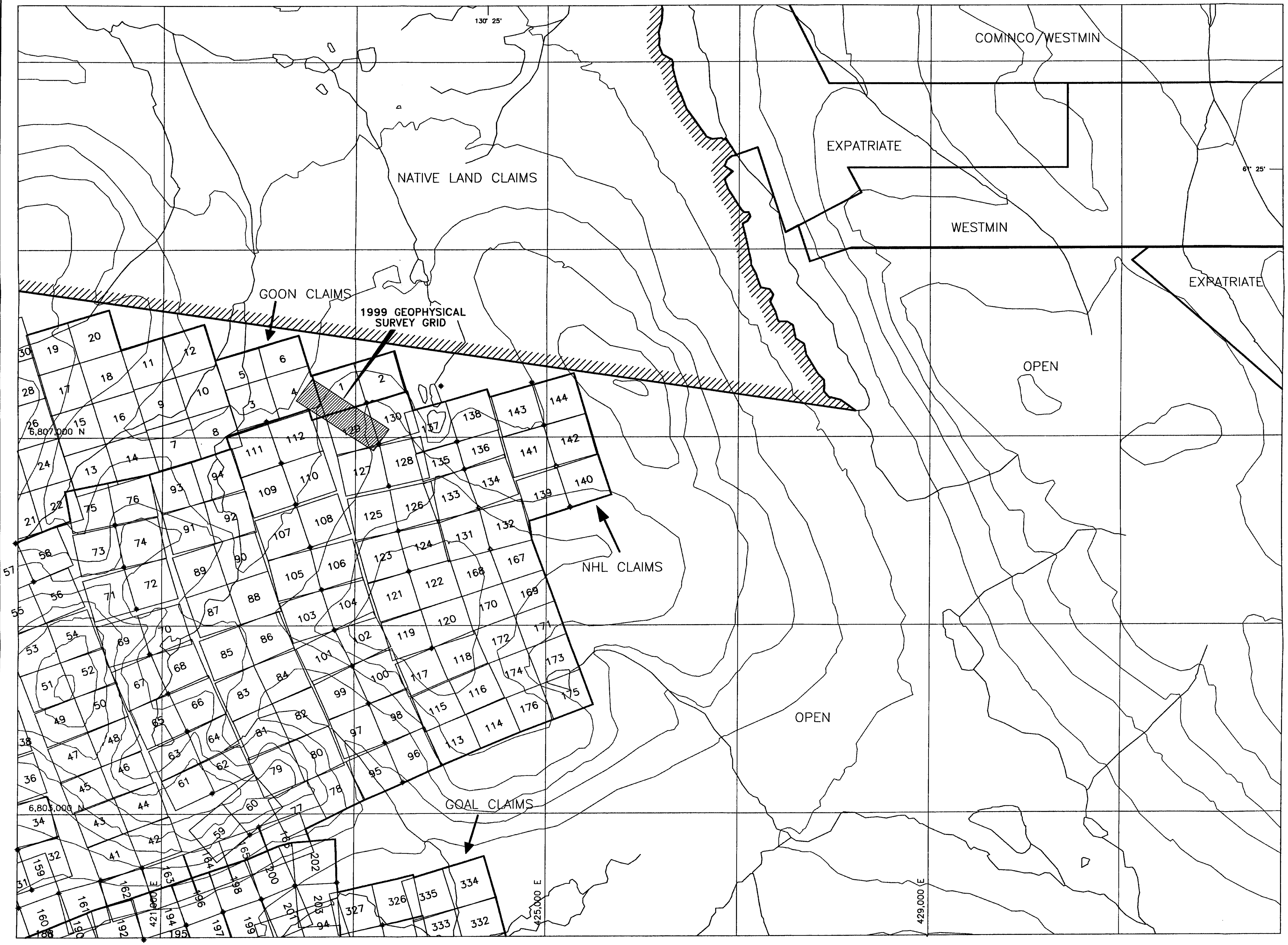
Re: **Goal Net IP Survey**
(August 7 - 11, 1999 inclusive)

Survey Services:

Mobilization / demobilization (split with HBED)	$1,300.00
IP survey crew: 4.0 days @ $1,410	$5,640.00
Short form survey report	$900.00
Subtotal	$7,840.00
Federal GST	$548.00
TOTAL	**$8,388.80**

pd Aug 19/99 #341

Terms: Net 15 days. Interest charged at 2% per month on overdue accounts



◆ Post location with standard GPS fix
◆ Post location with poor GPS fix
◇ Post location with no GPS fix

094180

EXPATRIATE RESOURCES LTD.

FIGURE 2
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

CLAIM LOCATION

NE QUADRANT
GOAL NET PROPERTY

Scale 1:20,000
0 200 400 800 1200 1600 2000 m

DRAWN/REVISED BY: AC	PROJECT: FP
FILE: EXPAT\FP\GNET\ACAD99\GN-NE-CL.DWG	DATE: NOVEMBER, 1999

EXPATRIATE RESOURCES LTD.

INDUCED POLARIZATION SURVEY AT THE GOAL NET PROPERTY, FINLAYSON AREA, YUKON TERRITORY

M.A. Power P.Geoph.

Location: 61° 28' N 103° 25' W
NTS: 105 G 8
Mining District: Watson Lake, YT
Date: 18 Aug 99

SUMMARY

Induced polarization and resistivity surveys were conducted on the Goal Net Property for Expatriate Resources Ltd. to investigate the source of Pb-Zn geochemical anomalies. A total of 3.7 line-km covering 4 lines were surveyed on the property using a dipole-dipole array, 25 m dipole spacing and reading from n=1 to n=6. The survey was conducted in the time domain at 0.125 Hz, 50% duty cycle and reversing polarity. Measurements of the primary voltage, calculated apparent resistivity, apparent chargeability, 10 logarithmically spaced time samples, self potential and calculated spectral IP parameters were recorded. The location of the apparent source of IP and resistivity anomalies of interest are shown together with mapped geology and geochemistry.

The geophysical grid was centred on strong lead and zinc soil geochemical anomalies in an area underlain by flat lying metasediments and metavolcanics. Chargeabilities are suppressed at n=1 to n=2 and flat lying to keel shaped highly resistive features at the same separation are present in the pseudosections. These indicate deep weathering and possibly frozen ground to a depth of 13 to 25 m. The IP survey detected anomalies arising from both steeply dipping and flat lying sources. Weak single-slash anomalies create an interference pattern across the chargeability pseudosections. The appear to originate in steeply dipping, weakly chargeable sources - perhaps weakly mineralized shears, faults or joints. Several of the steeply dipping anomalies (L9800N - **A**, L10100N - **A**) occur at significant changes in apparent resistivity separating rocks of moderate to high resistivity (500 - 2000 Ω-m) from rocks with high to very high resistivity (2000 - 10K Ω-m). Flat chargeability highs, generally associated with coincident resistivity lows trend across the grid at large separations (n=5 and n=6). The source of these anomalies appears to be one or more flat lying chargeable bodies at depths of 50 to 80 m. These anomalies may represent the undulating upper edge of a deep flat lying single source which is only locally detected by the array.

TABLE OF CONTENTS

1.0 INTRODUCTION

This report describes induced polarization (IP) and resistivity surveys conducted on the Goal Net Property held by Expatriate Resources Ltd. in the Watson Lake Mining District, Yukon Territory. The surveys were conducted to investigate the source of Pb-Zn geochemical anomalies associated with flat lying metamorphic rocks.

2.0 GRID

The IP surveys were conducted over a grid installed by the crew as work progressed. The grid base line (BL10000E) passes through the hand pits immediately uphill from the soil geochemical anomaly and is oriented at 30^0. A total of 3.7 line-km was picketed by the crew using a station spacing of 25 m. Stations were slope chained (not slope corrected) using the receiver cables cut to 25 m lengths.

3.0 PERSONNEL AND EQUIPMENT

The surveys were conducted by an IP crew consisting the following personnel:

Person	Position	Address
Gary Smith	Crew chief	#201 - 5600 52nd Ave Yellowknife NT X1A 2R7
Chris Gooliaff	Technician	Apt. 209 - 410 Strickland Whitehorse YT Y1A 2K2
Graeme Gibson	Technician	Box 5808 Whitehorse YT Y1A 5L6

The crew were equipped with the following instruments and equipment:

Transmitter:	Phoenix IPT-1 mated with 2.5 KW motor generator. Maximum output voltage: 1500 V / maximum output power approximately 2.2 KW. Spare Phoenix IPT-1 provided.
Receiver:	IRIS IP-10 digital 10-channel IP time domain receiver
Data processing:	P-100 laptop and HP-680C colour printer. Data processing with Geopak IPSECT software and proprietary data

conversion software.

Other equipment: 6-conductor 50 m IP cables, stainless steel electrodes, 4 km wire, winders, VHF radios, F350 truck.

The crew spent a total of 5 days on the Property. The survey log is attached as Appendix B.

4.0 SURVEY SPECIFICATIONS

The IP surveys were conducted according to the following specifications:

Array: Dipole-dipole

Dipole spacing: 25 m

Separations read: n=1 to 6

Signal: 0.125 Hz / 50% duty cycle / reversing polarity

Receiver synch: synchronization using n=1 dipole signal in most cases.

Signal sampling: 20 windows, Cole-Cole logarithmic sampling over 2 s.

Measurements: Vp - primary voltage prior to shutoff
M_n - nth time slice chargeability (n=1 to 20)
Mt - total chargeability
Ro - apparent resistivity
Sp - self potential
Rs - electrode resistance
C - spectral IP amplitude parameter
Tau - spectral IP time constant parameter

Noise threshold: Standard deviation in Mt kept to $\leq$ 5 ms where possible. In the event that this was not possible, readings were repeated several times to ensure repeatability.

Stacking: minimum 15 times, maximum 30 times for a single reading.

5.0 DATA

Copies of the corrected Geosoft IP format (.gsf) files are appended to this report on 3.5" diskettes. Data in this report is displayed in conventional pseudosection format on the plots attached to this report in Appendix C. The pseudosections display, from bottom to top, the total chargeability (M - ms), the apparent resistivity (R - Ω-m) and the standard deviation in total chargeability (Q- ms).

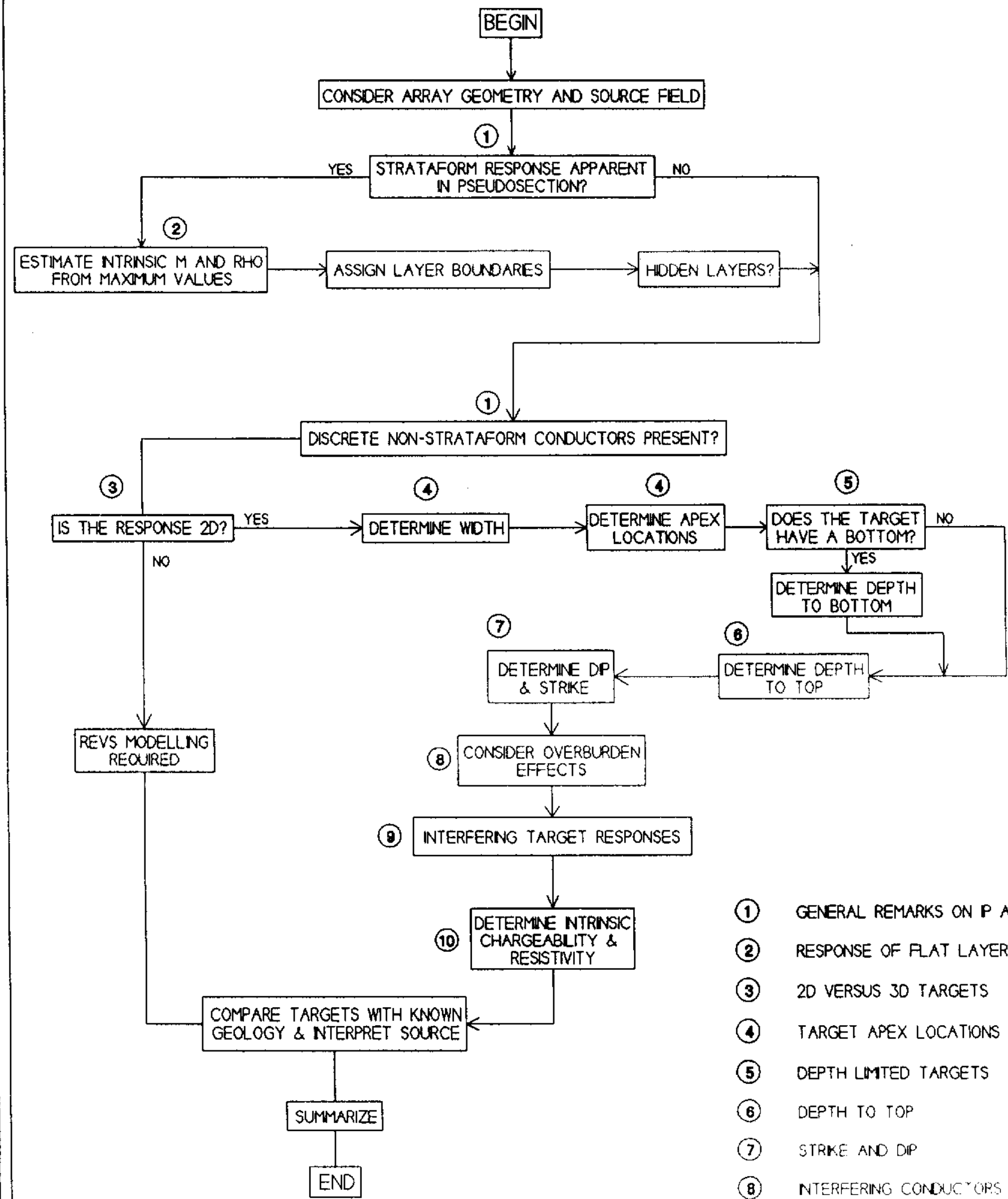
A small number of readings were deleted from the data set because they contained high apparent errors and readings were not repeatable in the field. These occurred in talus, resulting from poor ground contact or in very conductive ground where very low primary voltages (< 1 mV) were recorded. Default (no data) values were inserted for these points and the software contoured around them. The Q pseudosection is also useful in evaluating the significance of chargeability anomalies. It should be noted however the high Q's do not necessarily indicate bad data. As chargeability increases, so will Q as both are self-scaling. In addition, readings with high Q were repeated and only consistently repeatable readings were kept in the data files.

Significant chargeability and resistivity anomalies are indicated by horizontal lines above the respective pseudosections, indicating the horizontal location of the tops of the source bodies. The anomalies are assigned a letter designator, from left to right across the pseudosections. Chargeability and resistivity anomaly location are shown in plan view together with the soil geochemical anomaly and hand trenches in Figure 1 (back pocket).

6.0 INTERPRETATION PROCEDURES

The data was interpreted using a procedure sketched schematically in Figure 2. The numbers in the flow chart refer to information sheets in the company interpretation manual. Key features of the responses mentioned in these sheets are summarized below and are drawn from summaries and investigations by Telford *et. al.* (1990), Sumner (1985), Hanneson (1990), Hohmann (1990), and Coggon (1973).

The source field for the surveys was a grounded current dipole with a spacing of 25 m near a reading array of 25 m dipoles. The receiving dipoles were separated from the current dipole by a variable spacing of 1 to 6 times the 25 m dipole spacing. The source field from a grounded current dipole is symmetric about the midpoint of the pair and drops off dramatically with distance. There are no effects in the pseudosections which are primarily due to the source field.



IP interpretation flow-chart.

6.1 Overburden responses

Overburden responses in a dipole-dipole survey appear as a flat-lying layer in the pseudosection. The depth to the boundary between layers of different resistivity or chargeability can be estimated as 0.50 to 0.67 times separation at which the gradient between the two layers is the greatest. This inevitably leads to an overestimation if the dipole spacing is large relative to the thickness of the layer. In some cases, the overburden response is not visible as a separate resistivity anomaly but is apparent as a flat lying layer of lower chargeability - usually only down to n=1. This is attributed to oxidation or leaching of chargeable minerals or graphite from bedrock near the surface or to the absence of chargeable minerals in overburden.

6.2 Two dimensional versus three dimensional responses

Responses were interpreted as two dimensional (ie. extending along strike to some extent) unless otherwise stated. If a target is in fact three dimensional and is interpreted as being two dimensional, the contrast between the host and target properties will be underestimated.

6.3 Apex location and width

Targets which are less than one half a dipole spacing (ie. 13 m) will produce single slash responses. The apparent dip of the single slash response *does not* indicate the dip of the feature but merely indicates which electrode was closer to the source. A thin target may also produce a symmetric two-slash response if it is centred at an electrode site. The width of the source body was considered to be definitely less than 25 m if a single slash anomaly was encountered and to be at least 25 m if a symmetric response were encountered. It is difficult to discriminate between a 13 and 25 m wide target response if the response is symmetric and the author has chosen to err on the wide side. If the response at the shortest separation is wider than one dipole, this is an indication that the source body is also wider than one dipole. The width of the response at the shortest separation was used to determine the width of the source body in most case; in certain circumstances, however, the response was compared with model responses to determine the source width. The solid lines in the pseudosections and on the anomaly maps show the horizontal location of the top of the source bodies and the apparent width of the target. The error in apex location is conservatively estimated $\pm$ 1 dipole (25 m).

6.4 Depth to top

The depth to the top of a steeply dipping source body is generally indicated by the shortest separation at which the response if visible. Thus a target at a depth of 25 m would be expected to produce some response at n=1 but a target with a top at 50 m would generally not be visible at n=1. The depth to the top of a flat lying source body is also roughly equal to the separation. More correctly, the highest gradient in the resistivity or chargeability between the source and background occurs at separations equal to 1.5 to 2.0 times the depth to the source body.

6.5 Dip direction

The dip direction and dip of a source body are difficult to estimate with dipole-dipole data. Dip must be estimated using both the resistivity and chargeability data because the dip direction will be different depending upon whether the chargeable target is more or less resistive than the host. If the target is more resistive than the host, the dip in the chargeability pseudosection will be in the same direction as the target. If the target is less resistive than the host, the apparent dip will be opposite the true dip. At a dipping contact, the steepest gradient in a resistivity section dips in the opposite direction to the true dip of the contact. Estimates of dip direction are difficult or impossible to make where targets of alternating resistivity are adjacent to each other.

6.6 Target resistivity and chargeability

Estimates of true or intrinsic target chargeability and resistivity can be made once the interpreter has some idea of the target dimensions. In general, for a given resistivity and chargeability contrast, the target response will decrease as the target dimensions decrease. In addition, the amplitude of the chargeability contrast will be affected by the resistivity contrast. Targets which are very resistive or very conductive will show much lower apparent chargeabilities relative to true chargeability.

A three dimensional target (eg. a sphere) will produce an anomaly with a maximum apparent chargeability which is at best 30% of the true chargeabililty response. If the target is two dimensional, the maximum apparent chargeability is 50% of the true chargeability unless the target is thin in which case the maximum apparent chargeability will be up to 40% of the true intrinsic chargeability.

Estimates of the true chargeability and, to a lesser extent, resistivity can be used to estimate the probable source of an anomaly. Chargeabilities are largely determined by the bulk concentration of chargeable minerals such as sulphides or graphite. It is difficult to discriminate between the two although spectral IP analysis shows a lot of promise in this direction. Rules of thumb cited by Sumner (1976) and Hohman (1990) relate chargeable mineral content to recorded IP parameters:

$$1\%sulphides \cong 3\%PFE \cong 20ms \cong 10mrad$$

There are wide variances between the sulphide content predicted by these relations and the actual sulphide content. These arise from the effect of electrical resistivity on measured chargeability. Rocks which are highly resistive (few current current paths) or very conductive (too many current paths) will exhibit lower than predicted apparent chargeability and estimates of chargeable mineral content will err on the low side. In addition, estimates of sulphide content based on chargeability must account for background chargeability due to clay minerals.

6.7 Spectral IP response.

Conventional IP surveys record the total chargeability which is an integration of the decay voltage over an arbitrary time interval. This measure ignores the shape of the decay curve which has been found to contain valuable information on the source parameters. The decay curve can be fitted to an exponential decay model expressed as a complex impedance (Cole-Cole impedance) described by Johnson (1990) as:

$$Z(\omega) = R_o\left[1 - m\left(1 - \frac{1}{1+(i\omega\tau)^{C}}\right)\right]$$

where Z is the complex impedance at angular frequency ω, R_o is the apparent resistivity, m is the chargeability, C is an amplitude constant, $i=(-1)^{0.5}$, and τ (tau) is the time constant. This equation can be used to generate decay curves in the time domain for different tau and C. The time constant governs the shape of the curve whereas the amplitude constant C controls the amplitude of the curve. Graphite has a very large (long) time constant and sulphides show a large time constant relative to clay sources which show a small time constant. Thus the decay curve for clays is quite steep whereas the decay curve for chargeable sources such as graphite or sulphides are much flatter. Extraction of spectral IP parameters is performed by matching the decay curves with a table of standard curves to determine which combination of C and Tau most closely matches that of the observed decay curve. The extracted spectral IP parameters are commonly plotted in pseudosections and used to discriminate between possible sources based on differences in spectral IP response. The confidence that can be placed in spectral IP response is in some degree determined by the apparent error in chargeability and this should be examined with the spectral IP data.

7.0 RESULTS

The area of the grid is underlain by flat lying quartzite and quartz-sericite-schist. Bedrock in the area is covered by thin till. A widespread soil Pb geochemical anomaly defines the primary target area and hand trenching identified mineralized quartz sericite schist slightly uphill from the geochemical anomaly.

The broad resistivity pattern consists of blocks of highly resistive rock (>2000 Ω-m) flanked by rocks of more moderate resistivity (500-2000 Ω-m). The apparent resistivities recorded in these rocks are unusually high, approaching 10 KΩ-m in places. This may be caused by electrical anisotropy within the schistose bedrock. Current flow perpendicular to the bedrock foliation may be preferentially impeded, creating an unusually high apparent resistivity.

None of the chargeability anomalies are strong at n=1 and each of the resistivity pseudsections contains relatively resistive flat layers or keel shaped bodies at n=1 to n-2. These are likely caused by surface weathering of chargeable minerals and by permafrost. The resistivity data indicates that this weathered layer varies from at least 13 to 25 m thick across the property.

In general, the pattern of chargeability on all sections is a complex interference pattern resulting from highs and lows dipping at 45^0 both grid west and east. This is probably caused by a number of thin (<< 10 m), steeply dipping to vertical fractures, faults or shears containing chargeable minerals (sulphides, clay or graphite). The generally low chargeability of these background anomalies (<10 ms) suggests most may be caused by clay.

The chargeability data is also characterized by zones of negative chargeability from -2 to as much as -60 ms. These unusual features are repeatable and generally have low errors associated with them; they are not artifacts. Two types of anomaly are present; single slash lows dipping at 45^0 and flat lying lows at various separations. The single slash lows are probably caused by steeply dipping to vertical chargeable sources of limited depth extent which are straddled by the current electrodes. These may be thin shears or faults containing graphite or disseminated sulphides.

The flat lying negative anomalies appear to originate at the base or top of chargeable horizons, often at a change in resistivity. The clearest example of this on L10100N from 10175E-10275E where a flat chargeability low follows the horizontal break in apparent resistivity. The foliation may also be influencing the chargeability, creating negative chargeabilities by diverting current flow.

Line 9800N

Two resistivity domains are defined by ground less than 2000 Ω-m and by rocks with resistivities greater than this value. The resistive ground (2000-7000 Ω-m) occurs from 10100E to 10275E and from 10450E to 10750E. Significant deep chargeability anomalies centred at 10100E and 10500E occur at the western boundaries of both highly resistive blocks. The remainder of the chargeability anomalies are due to thin (<10 m) sources, which produce the slashes across the pseudosection in either directions. There are significant negative chargeability anomalies on the margins of the chargeability highs.

Chargeability anomaly **A** extends from 9900E to 9975E and consists of a chargeability high (M_{MAX} ~ 50 - 100 ms) at n=2 to 6. The response is asymmetric suggesting a dip to grid west. There is a pronounced and unusual low at n=5 across the pseudosection. The horizontal low may indicate the presence of a shallow dipping chargeable sheet within the overall source of the chargeability anomaly. Estimated depth to the top of the source varies from 25 m on the east to 50 m on the western end of the anomaly. The source may extend to L9900N where a similar anomaly is recorded in this interval. Estimated intrinsic chargeability may be in the order of 150 -200 ms and consequently estimated chargeable minerals content may be approximately 5 to 10%.

Chargeability anomaly **B** extends from 10025E to 10125E and consists of a chargeability high (M_{MAX} ~ 80 ms) at n=5 to 6. The response is symmetric and resembles that expected from a flat to moderately-dipping source at depth. Estimated depth to top is in the order of 60 to 80 m. The anomaly does not extend to L9900N but there are two single slash anomalies in this interval on L9900N. Estimated intrinsic chargeability may be in the order of 240 ms and consequently estimated chargeable mineral content may be up to 12%. The source appears to be a faulted segment of the source for anomaly **A**. The anomaly occurs at the contact between the moderate and highly resistive rock units.

Chargeability anomaly **C** occurs in the interval from 110450E to 10525E and consists of a symmetric chargeability high (M_{MAX} ~ 140 ms) at n=3 to 6. The response is symmetric and resembles that expected from a moderate to steeply dipping source at depth. Estimated depth to top is in the order of 75 m. The anomaly weakens and apparently deepens on L9900N and L10000N. The isolated high at 10413E is curiously present on both L9800N and L9900N, suggesting that it is part of the overall anomaly. The estimated intrinsic chargeability (assuming a 3D source) is approximately 300 ms suggesting chargeable mineral content of up to 15%. The anomaly occurs at the contact between the moderate and highly resistive rock units.

Line 9900N

The contact between the highly and moderately resistive rocks is at 10125E and 10400E. There is one possibly significant chargeability anomaly on the line and a second which appears to be a weak continuation of anomaly **B** on L9800N.

Chargeability anomaly **A** extends from 9825E to 9975N and consists of a flat chargeability high (M_{MAX} ~ 200 ms) at n=6 with an overlying negative anomaly. The chargeability anomaly is coincident with a similarly shaped resistivity low. The source appears to be a flat to very shallow dipping chargeable body at a depth of approximately 80 m. The anomaly is a continuation of chargeability anomaly **A** on L9800N and the source has an estimated intrinsic chargeability (assuming a 2D source) of approximately 400 ms suggesting chargeable mineral content of up to 20%.

The remainder of the anomalies on L9900N are weak single slash anomalies ascribed to thin steeply dipping shears, faults or fracture and a number of isolated highs attributed to sources of limited lateral extent.

L10000N

There are no significant chargeability anomalies on this line although a weak anomaly appears at depth from 9825E to 10125E in a zone of low resistivity.

L10100N

The break in apparent resistivity is at 10100E, coincident with a deep chargeability high. There are four deep chargeability anomalies on the line.

Chargeability anomaly **A** occurs in the interval from 9938-9963E and consists of an asymmetric high (M_{MAX} ~ 100 ms) at n=3 to 6 with a flanking low on the western side. The chargeability anomaly is coincident with a thin resistivity low. The source appears to be steeply dipping, particularly in the resistivity signature. Dip direction is impossible to estimate because the target appears to be quite thin. Estimated depth to top is in the order of 50 m.

Chargeability anomaly **B** extends from 10075E to 10175E and consists of a flat chargeability high (M_{MAX} ~ 80 ms) at n=6 capped by a chargeability low. The anomaly occurs at the contact between moderately and highly resistive rocks and appears to extend to grid east beneath them together with chargeability anomaly **C**. It is interesting that the overlying negative chargeability anomalies for both **B** and **C** follow the break in resistivity at the base of the highly resistive unit. The source is interpreted to be a flat lying body at a depth of approximately 80 m with an intrinsic chargeability of 240 ms. This suggests a chargeable mineral content in the order of 12%.

Chargeability anomaly **C** occurs in the interval 10200E to 10325E and consists of a flat chargeability high (M_{MAX} ~ 200 ms) at n=5 and n=6. The anomaly is very similar to chargeability anomaly **B** and it is possible that they have a common source which dips below the depth of investigation in the interval 10175-10200E. The intrinsic chargeability is a bit higher than anomaly **B**, suggesting a higher chargeable mineral content of 15 to 20% in a flat lying source body.

Chargeability anomaly **D** is an end of line anomaly from 10400E to 10475E, consisting of a chargeability high (M_{MAX} ~ 100 ms) at n=2 to 6. The full response is truncated, precluding an estimate of target geometry. This anomaly appears to be the continuation of a trend of chargeability highs from 10400E to 10550E, extending across the grid and best developed on L9800N and on this line.

8.0 CONCLUSIONS

The results of the induced polarization / resistivity survey suggest the following conclusions:

a. In all pseudosections, chargeabilities are suppressed at n=1 to n=2 and flat lying zones and keels of high resistivity at n=1 to n=2 are present. These features are probably caused by weathering and permafrost extending to a depth of 13 to 25 m across the grid.

b. The apparent resistivity data indicate that the area is underlain by blocks of rock with contrasting electrical resistivity separated by vertical to steeply dipping boundaries. Two domains are apparent; one of moderate to high resistivity (500-2000 Ω-m) and a second with high to very high resistivity (2000 - 7000 Ω-m). Significant chargeability anomalies occur at or near the boundaries between these two blocks. The sources of the contact chargeability anomalies appear to be steeply dipping on L9800E and L9900E. These anomalies may be mineralized or clay altered shears or faults bounding the rocks of contrasting resistivities.

c. An interference pattern of subtle chargeability highs (<15 ms) dipping at 45^0 is probably caused by steeply dipping shears, minor faults or fractures containing clay or very low concentrations of disseminated sulphides. These features are spaced 50 to 75 m apart and are most evident on L9800N and L9900N.

d. Horizontal chargeability highs are present on L9800N, 9900N and 10100N at n=5 to n=6. These appear to be caused by flat lying chargeable sources of relatively low resistivity at depths in the order of 60 to 80 m. Estimated intrinsic chargeabilities of these sources vary from 100 to 400 ms suggesting chargeable mineral content of up to 20%.

9.0 RECOMMENDATIONS

The following recommendations are made based on the conclusions of this work:

a. The horizontal chargeable highs on L9800N, L9900N and L10100N should be tested by vertical drill holes positioned over chargeability anomalies with coincident rock geochemical response.

Respectfully submitted,
AMEROK GEOSCIENCES LTD.

M.A. Power M.Sc. P.Geoph.
Geophysicist

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APPENDIX A. CERTIFICATE

I, Michael Allan Power, M.Sc. P.Geo., P.Geoph., with business and residence addresses in Whitehorse, Yukon Territory do hereby certify that:

1. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (registration number 21131) and a professional geophysicist registered by the Northwest Territories Association of Professional Engineers, Geologists and Geophysicists (licensee L942).

2. I am a graduate of the University of Alberta with a B.Sc. (Honours) degree in Geology obtained in 1986 and a M.Sc. in Geophysics obtained in 1988.

3. I have been actively involved in mineral exploration the Northern Cordillera since 1988.

4. I have no interest, direct or indirect, nor do I hope to receive any interest, direct or indirect, in Expatriate Resources Ltd. or any of its properties.

5. I permit Expatriate Resources Ltd. to use this report in support of any submission to a securities regulatory authority.

Dated this 19th day of August, 1999 in Whitehorse, Yukon Territory.

Respectfully submitted,

REGISTERED PROFESSIONAL GEOPHYSICIST
M. A. POWER
LICENSEE
N.W.T.

Michael A. Power M.Sc. P. Geoph.

APPENDIX B. SURVEY LOG

AMEROK GEOSCIENCES LTD.

SURVEY LOG
JOB 99-21 GOAL NET IP SURVEY
AUGUST 7 - 11, 1999

Crew: Gary Smith - Crew chief (GS)
Chris Gooliaff - Technician (CG)
Graeme Gibson - Helper (GG)
Brian Gay - Archer, Cathro supervising geologist (BG)

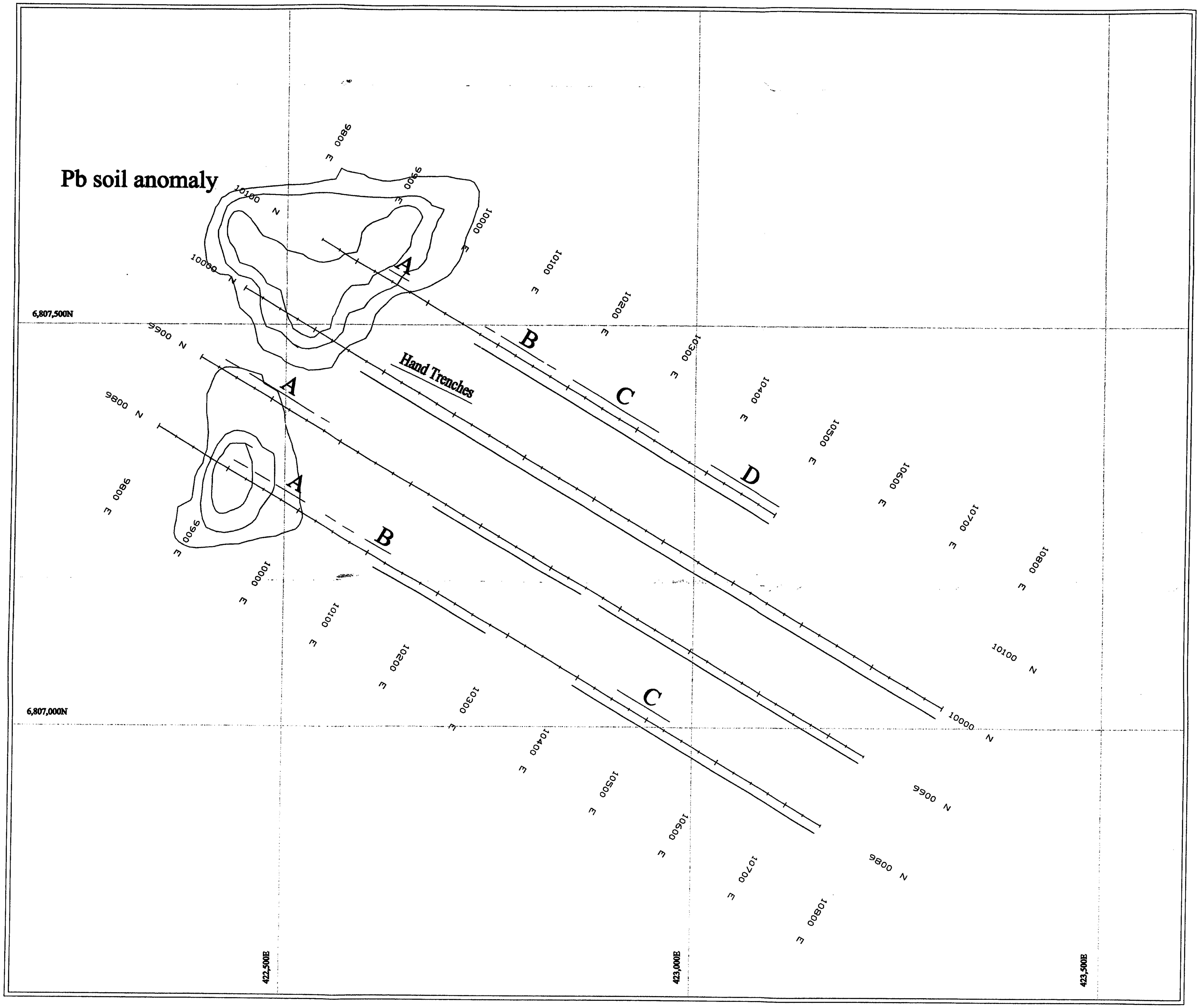
Sat 07 Aug 99	Mobe-day. Arrived at Kudz de Kayah turn-off at approx. 14H00. Spent the rest of the afternoon and early evening setting up camp. Weather: Partly cloudy and warm.
Sun 08 Aug 99	IP survey - GG and BG put in Base Line and L10000N before noon. CG and GS set up transmitting station and worked on IP cables until noon. Afternoon surveyed 9800E to 10400E on L10000N. (CG) Tx, (GS) Rx, (GG) current, (BG) cables. Weather: Sunny and warm. Total Production: 0.6 line-km
Mon 09 Aug 99	IP survey - BG put in L9900N. Survey completed of L10000N (up to 10800E). Also completed survey of L9900N, from 10800E to 9800E. (GG) Rx, (GS) Tx, (CG) current, (BG) cables. Weather: Rainy all the day long. Total Production: 1.4 line-km

Tue 10 Aug 99	IP survey - BG put in L9800N and part of 10100N. Completed IP survey of L9800N from 10800E to 9800E. (GS) Rx, (GG) Tx, (CG) current, (BG) cables. Weather: Cloudy with heavy rain in late afternoon that abruptly ended the survey. Total Production: 1.0 line-km
Wed 11 Aug 99	IP survey - completed survey of L10100N from 9800E to 10500E. (GS) current, (CG) Tx, (GG) Rx and (BG) cables. Weather: intermittant rain and sunny periods. Finished survey at approx. 13H00 and began packing up camp for de-mobe. Chopper finally arrived 17:40. Left airstrip for next job at 19H00. Total production: 0.7 line-km

Production Totals: **3.7 line-km IP / gridding**
26.6 line-km mag

Summary: **1.0 days mobe/demobe**
4.0 days survey

APPENDIX C. PSEUDOSECTIONS



N
29.5

A Chargeability anomaly

Resistivity high (>2000 ohm-m)

REGISTERED PROFESSIONAL GEOPHYSICIST
M.A. POWER
LICENSEE
N.W.T.

0 200
metres
Scale: 1:2,500

094180

EXPATRIATE RESOURCES LTD.

GOAL NET PROPERTY

IP / RESISTIVITY SURVEY
ANOMALY MAP
FIGURE 1.

NTS: 105G/10	Datum: NAD27
Mining District: Watson Lake,YT	
Job: 99-21	Date: 18 AUG 99

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