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

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ASSESSMENT REPORT

describing an

INDUCED POLARIZATION SURVEY

at the

RED LINE PROPERTY

Red Line 1-12 YB60825-YB60836
13-28 YB70624-YB70639

Latitude 61°25' N; Longitude 130°22' W

NTS 105G/8

in the

WATSON LAKE MINING DISTRICT

YUKON TERRITORY

Prepared by

Archer, Cathro & Associates (1981) Limited

for

EXPATRIATE RESOURCES LTD.

W.A. Wengzynowski, P.Eng.
November, 2000

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

This report has been examined by
the Geological Evaluation Unit
under Section 53 (4) Yukon Quartz
Mining Act and is allowed as
representation work in the amount
of $ 42,075.00 .

M.B[illegible]
for Regional Manager, Exploration and
Geological Services for Commissioner
of Yukon Territory.

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INTRODUCTION

The Red Line property is owned by Expatriate Resources Ltd. and covers an excellent volcanogenic massive sulphide target. From June 17 to July 4, 2000, 8.7 line km of induced polarization and resistivity surveys were conducted by Amerok Geosciences Ltd. with field supervision and assistance provided by geologist Bryan Gay of Archer, Cathro & Associates (1981) Limited. The surveys were done from a tent camp on the property. They covered an area where previous diamond drilling was conducted to test a strong copper-in-soil geochemical anomaly. The drill holes cut several narrow semi-massive sulphide intersections and strong chlorite altered horizons containing disseminated copper and zinc mineralization. Sulphide intervals assayed up to 76.60 g/t silver, 5.60% copper and 0.05% zinc across 0.11 m (Wengzynowski, 1998 and 1999). This mineralization is situated within a package of moderately to strongly pyritic felsic volcanic stratigraphy which is believed to be part of Unit 3 which hosts the Kudz Ze Kayah and GP4F volcanogenic massive sulphide deposits about 12 km northwest of the geophysical survey area (Murphy and Piercey, 1998).

The geophysical program was supervised by the author and his Statement of Qualifications appears in Appendix I. Amerok Geosciences' written report describing the surveys is in Appendix II accompanied by a CD Disc containing the figures to accompany their report.

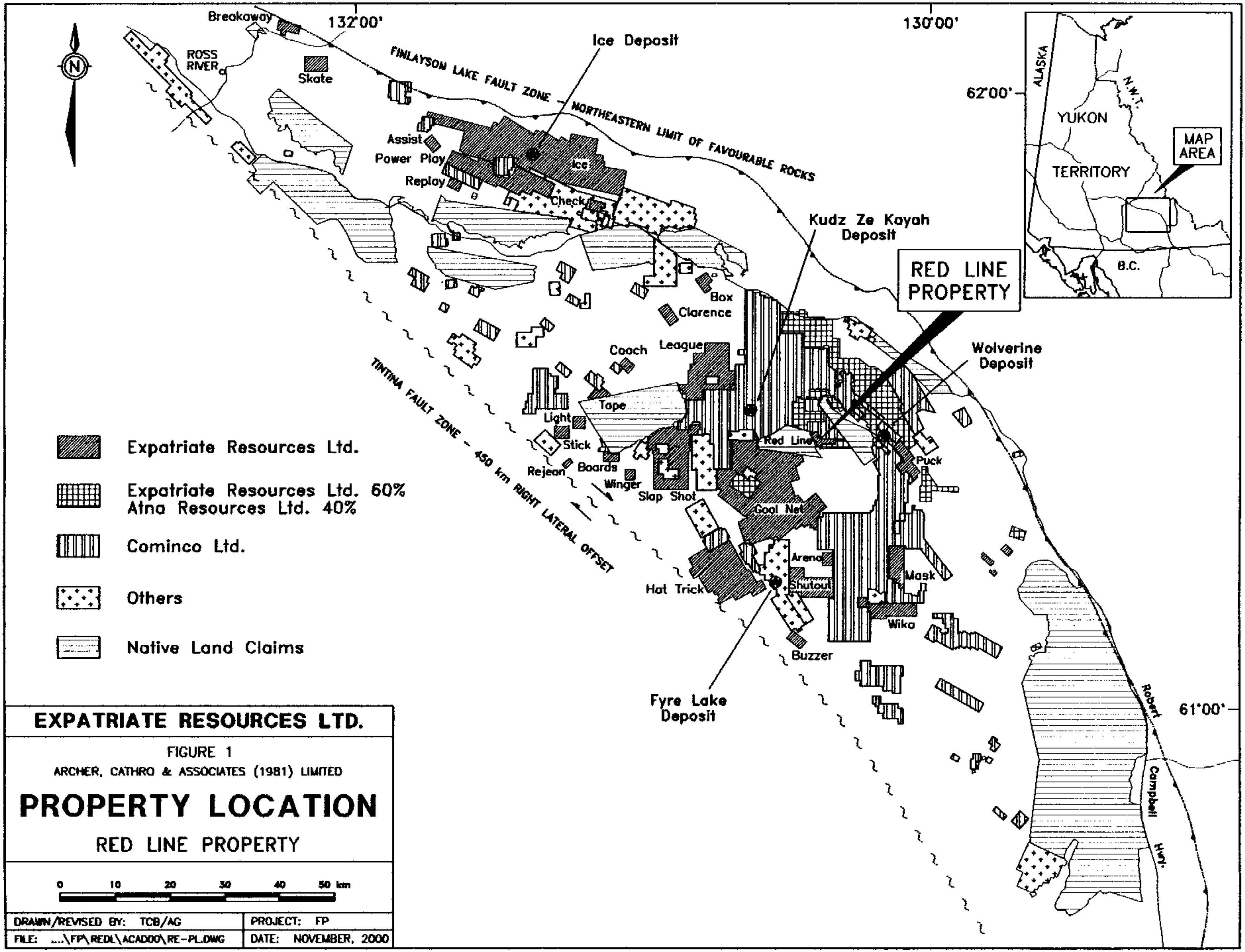
PROPERTY, LOCATION AND ACCESS

The property is located in southeastern Yukon at latitude 61°25'N and longitude 130°22'W on NTS map sheets 105G/8 (Figure 1). It comprises twenty-eight 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 geophysical surveys conducted in 2000 relative to nearby claims. Claim registration data are listed below.

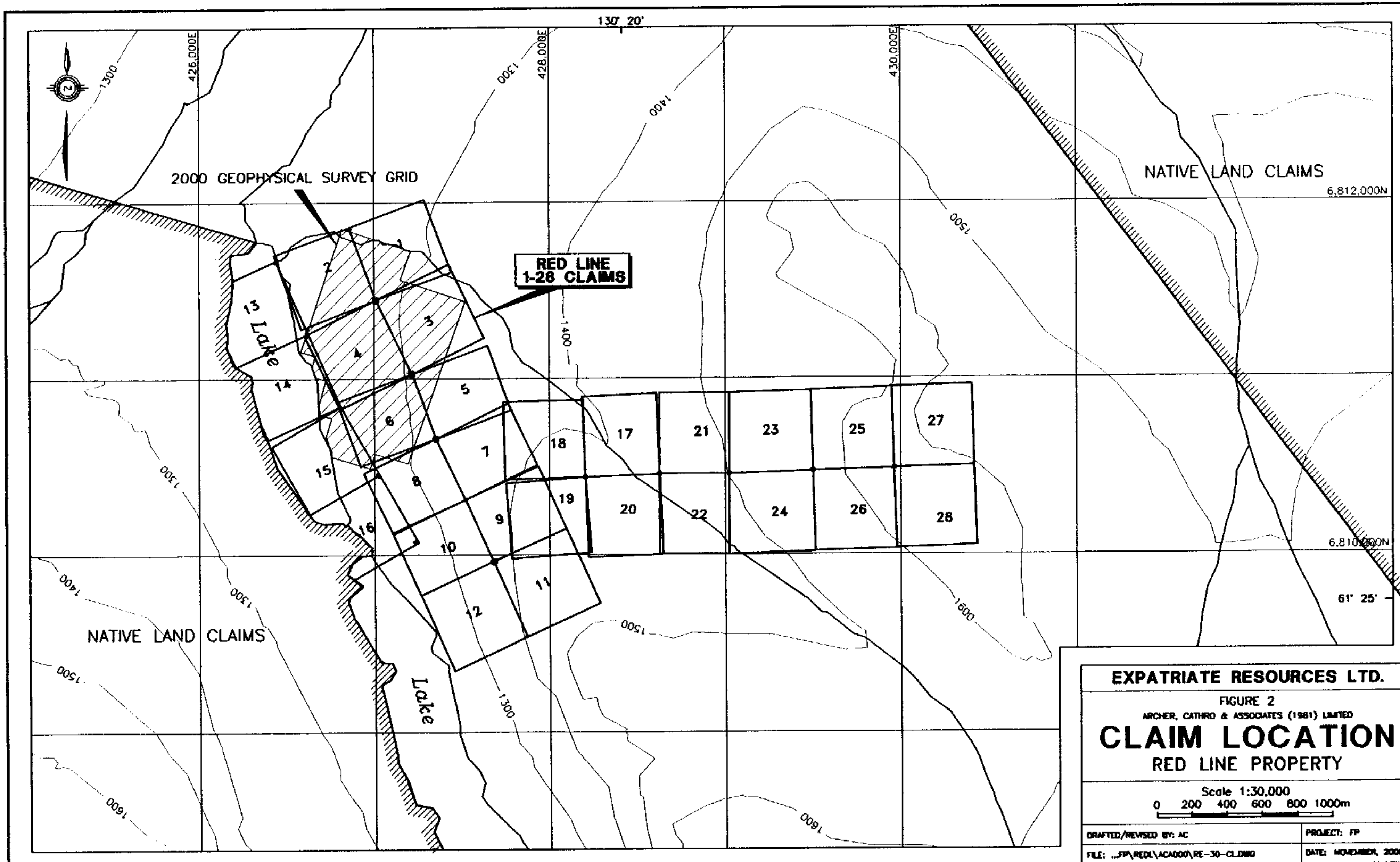
Claim Name	Grant Number	Expiry Date*
Red Line 1-12	YB60825-YB60836	March 17, 2006
13-28	YB70624-YB70639	March 17, 2006

*Expiry dates include 2000 work filed for assessment credit but not yet accepted.

The property lies 25 km south of the Robert Campbell Highway and 230 km northeast of Whitehorse. In 2000 access was provided by a Bell 206B Jet Ranger helicopter which Trans North Helicopters operated from a permanent base in Ross River, 130 km to the west-northwest. Personnel and supplies were transported from a staging area at Kudz Ze Kayah about twelve kilometres east of the property.



132°00'
130°00'
62°00'
61°00'
Breakaway
ROSS RIVER
Skate
Ice Deposit
FINLAYSON LAKE FAULT ZONE - NORTHEASTERN LIMIT OF FAVOURABLE ROCKS
Assist
Power Play
Replay
Ice
Check
Kudz Ze Kayah Deposit
RED LINE PROPERTY
Box
Clarence
Coach
League
Wolverine Deposit
Tape
Light
Stick
Rejean
Boards
Winger
Slap Shot
Red Line
Puck
Gool Net
Arena
Mask
Hot Trick
Shutout
Wika
Buzzer
Fyre Lake Deposit
TINTINA FAULT ZONE - 450 km RIGHT LATERAL OFFSET
Robert Campbell Hwy.
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
RED LINE PROPERTY
0 10 20 30 40 50 km
DRAWN/REVISED BY: TCB/AG
PROJECT: FP
FILE: ...\FP\REDL\ACAD00\RE-PL.DWG
DATE: NOVEMBER, 2000


130° 20'
426,000E
428,000E
430,000E
6,812,000N
6,810,000N
61° 25'
2000 GEOPHYSICAL SURVEY GRID
RED LINE
1-28 CLAIMS
NATIVE LAND CLAIMS
NATIVE LAND CLAIMS
Lake
Lake
1300
1400
1500
1600
EXPATRIATE RESOURCES LTD.
FIGURE 2
ARCHER, CATHRO & ASSOCIATES (1981) LIMITED
CLAIM LOCATION
RED LINE PROPERTY
Scale 1:30,000
0 200 400 600 800 1000m
DRAFTED/REVISED BY: AC
PROJECT: FP
FILE: ...FP\REDL\ACA000\RE-30-CL.DWG
DATE: NOVEMBER, 2000

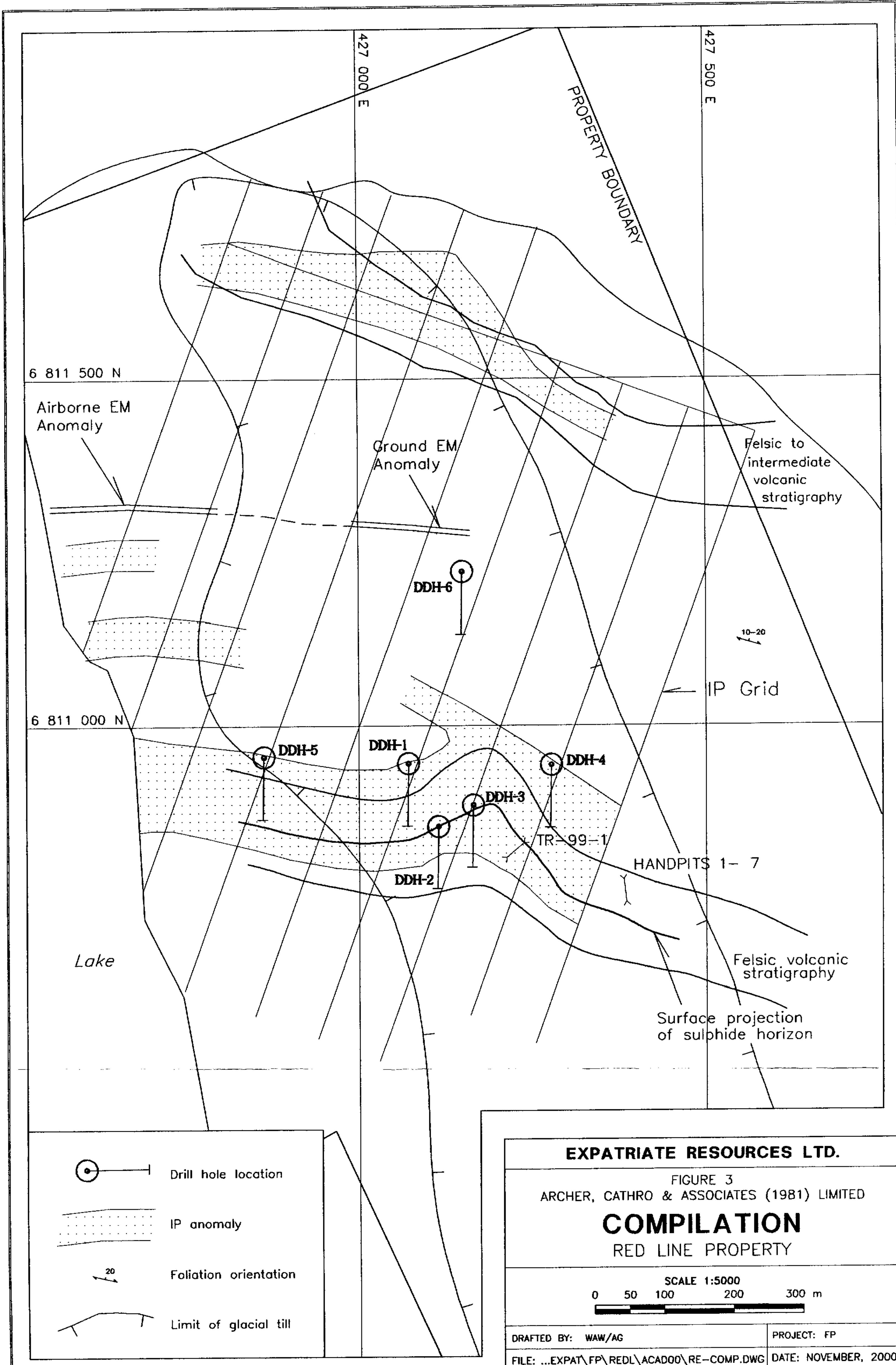
CONCLUSIONS AND RECOMMENDATIONS

The surveys identified two east trending chargeability highs in the southern and northern parts of the grid (Figure 3). The southern anomaly is approximately 500 m long and roughly coincides with the area drill tested in 1996 near the up-ice boundary of a strong copper soil geochemical anomaly. Most of the drill holes cut moderately to strongly pyritic felsic volcanic stratigraphy containing narrow massive and semi-massive sulphide lenses within the surface trace of the IP anomaly. However, the easternmost hole may not have been drilled deep enough to fully test the anomaly.

The chargeability high in the northern part of the survey grid is also about 500 m long and trends acutely across a less intense copper-zinc-lead soil geochemical anomaly that is at least partially attributed to glacial dispersion. Stratigraphy mapped in the area identified felsic volcanics and orthogneiss. No drilling has been performed on this target.

The surveys also outlined resistivity lows that may coincide with steeply dipping shears, faults and fracture zones containing clay, and resistivity highs that may be caused by silicification.

Integration of the geophysical and geological data from the Red Line property indicates the IP surveys successfully detected the thick section of pyritic felsic volcanic stratigraphy in the southern portion of the grid but did not specifically identify semi-massive sulphide zones previously intersected in drill holes. The northern anomaly, although not as intense as its counterpart, most likely represents a similar package of felsic volcanic rocks or possibly a fold repeat of the stratigraphy observed in the southern part of the grid. A deep penetration geophysical survey



EXPATRIATE RESOURCES LTD.

FIGURE 3

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

COMPILATION

RED LINE PROPERTY

SCALE 1:5000

0 50 100 200 300 m

DRAFTED BY: WAW/AG | PROJECT: FP

FILE: ...EXPAT\FP\REDL\ACAD00\RE-COMP.DWG | DATE: NOVEMBER, 2000 with better detection potential for thin, flat lying conductive bodies is required before further drill testing can be done on these targets.

Respectfully submitted,

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

B. Wengzynowski

W.A. Wengzynowski. P.Eng.

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1999 Assessment Report describing 1999 Geological Mapping, Prospecting and Hand Trenching on the Red Line Property, 105G/8, Watson Lake Mining District.

APPENDIX I

AUTHOR'S STATEMENT OF QUALIFICATIONS

STATEMENT OF QUALIFICATIONS

I, William A. Wengzynowski, geological engineer, with business addresses in Whitehorse, Yukon Territory and Vancouver, British Columbia and residential address in North Vancouver, British Columbia, do hereby certify that:

1. I graduated from the University of British Columbia in 1993 with a B.A.Sc. in geological engineering, option 1, mineral and fuel exploration.
2. I became a Professional Engineer on December 12, 1998 registered in the Province of British Columbia.
3. From 1983 to present, I have been actively engaged in mineral exploration in the Yukon Territory and am presently a partner of Archer, Cathro & Associates (1981) Limited.
4. I have personally participated in and supervised the field work reported herein.

W.A. Wengzynowski, P.Eng.

APPENDIX II

INDUCED POLARIZATION SURVEY AT THE RED LINE PROPERTY, FINLAYSON AREA, YUKON TERRITORY BY M.A. POWER, P.GEOPH., SEPTEMBER 6, 2000

EXPATRIATE RESOURCES LTD.

INDUCED POLARIZATION SURVEY
AT THE RED LINE PROPERTY,
FINLAYSON LAKE AREA, YT.

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

Location: 61° 26' N 130° 23' W
NTS: 105 G/8
Mining District: Watson Lake, YT
Date: September 6, 2000

SUMMARY

An induced polarization (IP) and resistivity survey was conducted on the Red Line Property, Watson Lake Mining District, during July 2000. The purpose of the survey was to locate volcanogenic massive sulphide mineralization. A total of 8.9 line-km was surveyed at a 30 m dipole spacing using a dipole-dipole array and measuring from the 1st to the 6th separation in the time domain. The grid covered an area of approximately 800 m (E-W) by 1000 m (N-S) at a 100 m line spacing. The data is plotted in conventional pseudosection format and was interpreted using the UBC GIF automated 2D IP / resistivity inversion software package. Plan maps of the modeled chargeability and resistivity at depths of 55 and 110 m below ground level are also included in the report together with line-by-line output from the inversion program.

The survey identified 2 complex east-west trending chargeability highs. The southern IP anomaly system is coincident with a drilled horizon hosting thin massive sulphide and stringer mineralization and characterized by a coincident soil geochemical and weak electromagnetic response. The northern IP anomaly system is coincident with a soil geochemical response previously attributed to glacial dispersion and has not been drill tested. Inversion results suggest that the source of both IP anomalies is a single folded horizon truncated by erosion in the centre of the grid. Indicated intrinsic chargeabilities are higher in the southern portion of the horizon, particularly where it overlies a discordant zone of low resistivity interpreted to be a steeply dipping clay alteration zone.

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1.0 INTRODUCTION

Amerok Geosciences Ltd. was retained by Expatriate Resources Ltd. to conduct an induced polarization (IP) and resistivity survey at the Red Line Property in the Finlayson Lake area of the central Yukon. The purpose of the survey was to locate volcanogenic massive sulphide mineralization. This report describes the survey, results and an interpretation.

2.0 GRID

The survey was conducted over the 1996 grid used for electromagnetic and magnetic field surveys. Lines were turned from an east-west baseline at 100 m intervals and were cut and straight chained. Stations were picketed at 30 m intervals. A total of 8.90 line-km were covered during the IP survey.

3.0 PERSONNEL AND EQUIPMENT

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

Person	Position
Gary Smith, B.Sc.	Crew Chief
Christine Purves	Technician
Brian Gay, B.Sc.	Helper
Mike Daniska	Helper

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.
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 1Ton truck.

The crew spent a total of 8 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: 30 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.

Slopes: station-to-station terrain slopes were measured with a clinometer in percent slope.

5.0 DATA AND PRODUCTS

The survey data was downloaded in binary form and converted into Geosoft format IP data files (.gsf files) which summarize the data in ASCII format by station reading. This data together with the results of inversions and drawing plot files are appended to this report on CD-ROM.

In general the data quality was quite good with very low errors. Readings with standard deviations significantly greater than 5.0 mV/V and which did not repeat during subsequent measurements were nulled out in the final data set.

Appendix C contains pseudosections of the IP / resistivity data plotted at 1:2,000. The locations of anomalies of significance described in the text are indicated by lines above the corresponding pseudosections. Solid lines indicate the apparent location of the target apex (ie. top of the source body) and dashed lines indicate possible extensions.

Additional plots displaying the results of inversions are described in following sections of this report.

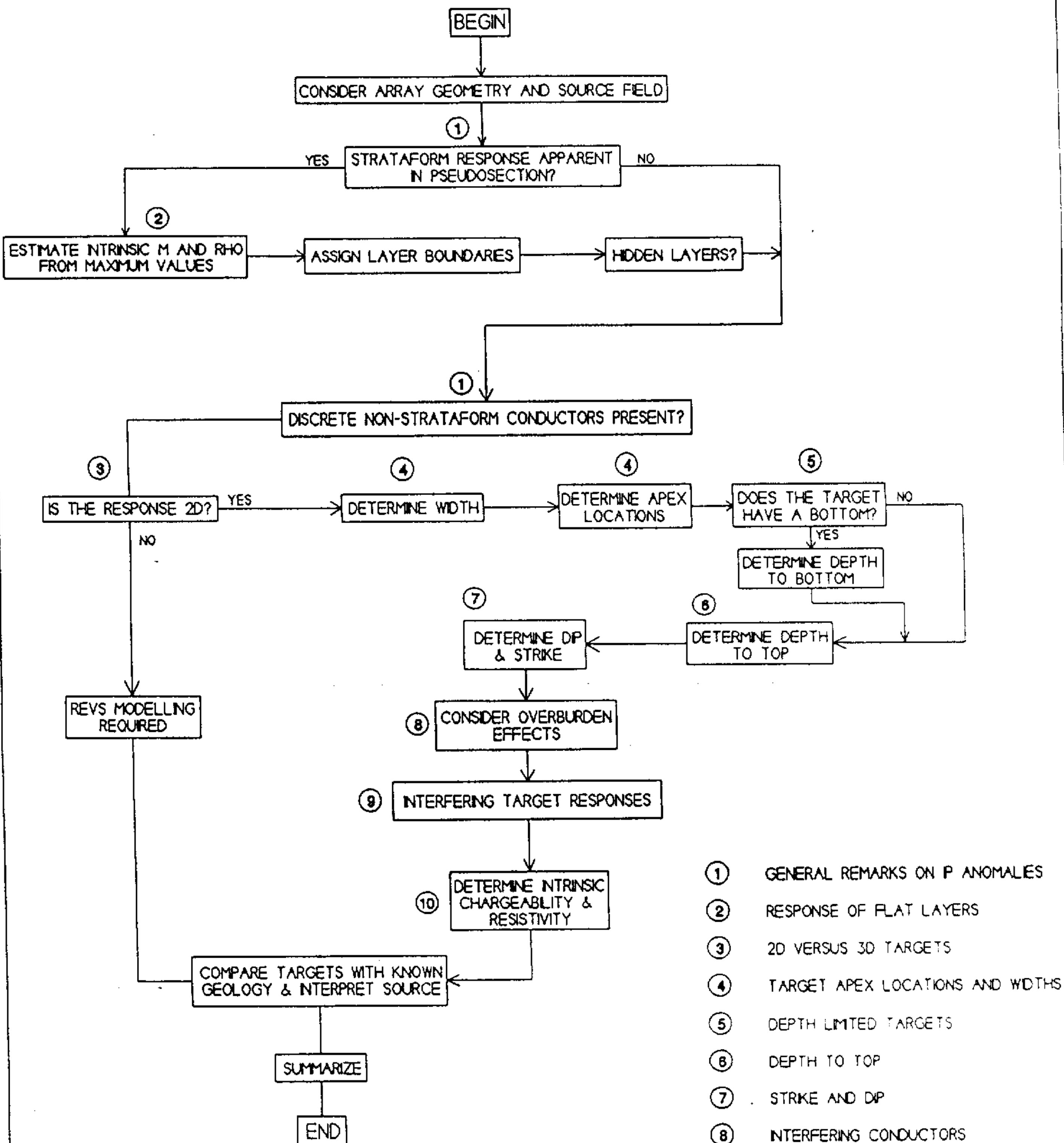
6.0 IP THEORY

Conventional IP interpretation procedures are summarized in the flow chart shown in Figure IP-1. 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 30 m near a reading array of 30 m dipoles. The receiving dipoles were separated from the current dipole by a variable spacing of 1 to 6 times the 30 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.

6.1 Overburden responses

Overburden responses in a dipole-dipole survey show up as a flat-lying layer in the pseudosection. The depth to the boundary between layers of different resistivity or chargeability can be estimated as 1.5 to 2.0 times separation at which the gradient between the two layers is the greatest. This inevitably leads to an overestimation if the



IP interpretation flow-chart.

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. 15 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 15 m if a single slash anomaly was encountered and to be at least 15 m if a symmetric response were encountered. It is difficult to discriminate between a 15 and 30 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 (30 m).

6.4 Depth to top

The depth to the top of a dipping source body is generally indicated by the shortest separation at which the response if visible. Thus a target at a depth of 30 m would be expected to produce some response at n=1 but a target with a top at 60 m would generally not be visible at n=1.

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 (e.g. 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:

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

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 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 IP / RESISTIVITY INVERSION

The data was interpreted using the DCIP2D package developed by the University of British Columbia Geophysical Inversion Facility. The inversion algorithm is described in detail by Oldenburg and Li (1994). A brief description of key features of the algorithm follows.

Siegel (1959) described the IP effect in macroscopic terms. If a time domain signal is put into the ground, as soon as the current is turned on, the voltage immediately rises to a level (ϕ_σ) and thereafter continues to rise to a higher level (ϕ_η). At current shutoff, the voltage immediately falls to a level (ϕ_s) and then slowly decays to zero along a curve similar to that between ϕ_σ and ϕ_η . Apparent chargeability is defined as the "extra" voltage observed:

$$\eta_a = \frac{\phi_\eta - \phi_\sigma}{\phi_\eta} = \frac{\phi_s}{\phi_\eta}$$

The observed DC potentials ϕ_σ are defined by the vector form of Ohms Law:

$$\nabla \cdot (\sigma \nabla \phi_s) = -I\delta(r - r_s)$$

where **r-r**$_s$ is the vector to the measurement point, I is the current and σ is the conductivity structure of the earth - the unknown quantity in the geophysical problem. The chargeability can be modeled by replacing the conductivity by an equivalent apparent conductivity controlled by the chargeability:

$$\sigma_\eta = \sigma(1 - \eta)$$

Modeling the IP effect then involves running two conductivity models - one with σ and one with σ_η .

The unknown quantity is the distribution of conductivities in the earth. The software models the earth conductivity structure as a series of rectangular cells of varying size and aspect ratio. The grid is finest (most detailed) near the measurement points and much coarser at locations beside or at depth beneath the measurement points. The latter points are necessary to avoid having edge effects appear in the model. The size and dimensions of the models in no way compensates for the basic limitations on depth penetration and resolution inherent in the IP/resistivity survey. Thus the effective depth of penetration (0.5 to 1.0 times the maximum dipole separation) is the limit to which the models should be relied upon to accurately reflect true earth conductivities and chargeabilities.

The program calculates the potential across the finite element network using a starting model. Appropriate boundary conditions are applied when calculating the potentials across the network. These include the condition that all current flow is normal to the cell boundaries and voltages are continuous across the boundaries. The sensitivity of the model to changing the parameters in any cell is calculated as is the misfit between the model results and the actual observed potentials / chargeabilities. The model is then adjusted using the calculated sensitivities of the response to changes in the individual cells.

There is no unique solution or model which fits any set of IP/resistivity data. A best-fit model is one which minimizes error and invokes the minimum required degree of complexity to fit the data. For a set of **N** measurements, the global error can be expressed as:

$$\Psi_d = \sum_{i=1}^{N}\left(W_i\left(r_i - r_i^{obs}\right)\right)^2$$

where W_i is the weighting factor for the i^{th} measurement (r^{obs}) and r_i is the model response for this measurement. The weighting factor is usually in the order of the inverse of the expected error so that a measurement with high error has a low weighting and vice versa. In a system with no noise and perfectly determined errors, the global error would be **N** because the weighting would compensate for large spreads between model and observed results at points with large errors. The program minimizes Ψ_d by repeatedly adjusting the conductivities to improve the fit. A threshold Ψ_d based on the number of measurements and a factor described below is set and the program will terminate once the global error is below the threshold.

The program determines a background model based on average apparent conductivities with a complexity determined by the station spacing, the elevation differences and number of separations read. The actual readings do have significant noise and the complexity of the background conductivity response may be such that it is impossible to reduce Ψ_d to N. Instead, Ψ_d will be scaled proportionately by a "chi-factor" ranging up from 1.0. Setting a large chi-factor directs the program to use very simple models which tend to smooth out the conductivities and fails to accurately model the fine details in resistivity or chargeability known to exist in the ground. Setting a chi-factor which is too low may prevent convergence to an acceptable solution. In this study, default (floating) chi-factors were used in the inversion and the program derived a model of average complexity suitable to the amount of data available.

Models were run with topography calculated from terrain slope measurements made by the IP receiver operator during the course of the survey. The observed standard deviation in the chargeability measurements was taken as the error in chargeability; default errors were used in the apparent resistivity calculations in the absence of any measured error in primary voltages. DC resistivity inversions were run first and the IP inversions were made using the DC resistivity mesh as an input.

The inversion creates a grid mesh extending a great distance beyond the section covered by the grid lines. This is necessary to isolate boundary effects from actual resistivity features. Any features generated at depths or distances beyond the effective depth of penetration of the array - approximately 90 to 150 m - are spurious. In addition, features at depth may be merged in the modeling process to produce crescent shaped features ("smiles"). These features, while indicating the presence of anomalous material at depth do not accurately define the shape of these features. It is more probable that the anomalous material extends to greater depth than being cut off as shown.

The output from the inversion program is contained in Appendices D through F. Models of the resistivity and chargeability source distributions are in Appendix D. Appendices E and F contain the results of the resistivity and IP inversions. Each plot in these latter two appendices shows, in pseudosection format, the measured data and the model data. Differences between the two pseudosections indicate regions where the inversion program was unable to generate a model which closely matched the field data. Modeled resistivity or chargeability in these areas is thus suspect and may be discounted in evaluating the geological significance of the model results.

8.0 RESULTS

The geology of the Red Line Property is summarized in Power (1999). The area covered by the grid is till covered with sparse outcrop. The area is underlain by massive and augen gneiss interbanded with an assemblage of quartz-feldspar-muscovite±biotite schist. The rocks are interpreted to be a succession of subvolcanic metaporphyry and tuff with lesser phyric and aphyric rhyolite and thin bands of mafic and felsic schist. Sulphide mineralization consisting of pyrite, pyrrhotite, chalcopyrite and sphalerite occurs in thin layers and in discordant stringer zones. Available data indicate that the dominant foliation strikes east-west, dips gently north and is parallel to bands of compositional variation within the rocks. The main sulphide showing trends east-west across the grid with a probable subcrop at approximately 9400N. Anomalous geochemical responses are coincident with this horizon.

In general terms, the IP / resistivity survey delineated two east-west trending anomaly systems. The southern anomaly system is a coincident resistivity low and chargeability high extending from approximately L10300E 9200N to L10800E 9400N. It is characterized by apparent chargeabilities in the range of 30 to 50 mV/V and apparent resistivities in the range of less than 100 to 200 ohm-m. The southern anomaly system is generally coincident with the mineralized horizon tested by drilling in 1996. The northern anomaly system extends from L10100E 9940N to L10600E 9850N and may continue to east and plunge beneath the array detection limit on L10700E and L10800E. The northern anomaly system is characterized by apparent chargeabilities in the range of 20 to 40 mV/V and apparent resistivities in the range of 1000 to 1500 ohm-m. The apices of IP and resistivity anomalies forming these trend is indicated on the pseudosections in Appendix C and line by line descriptions of the results follow.

Line 10000E

The data for this line contain a suspect but repeatable dipolar response at the northern end of the survey line. This is probably due to a shallow surficial source and is not of

significance. The apparent resistivity and chargeability data show no significant features at short separations indicating the influence of overburden on either response.
Chargeability anomaly **A** has an apex between 9550N and 9610N and consists of an asymmetric high within a region of elevated resistivity. Although the response is truncated the asymmetry suggests a shallow dip to the north. The inversion program achieved a good fit to the data (110 mV/V) and suggests the presence of a flat to shallow south dipping chargeable source to the north and a north dipping source in the southern portion of the grid.

Line 10100E

The apparent resistivity and chargeability data show no significant features at short separations indicating the influence of overburden on either response. The only significant chargeability anomaly on the line is Anomaly **B** with apex between 9940 and 9970N. The source of this anomaly appears to be a shallow north dipping body up to 30 m wide. A resistivity low with no associated chargeability response (Anomaly **A**) separates two regions of elevated chargeability at the north and south ends of the line. The inversion program achieved an excellent fit to the IP data (56 mV/V).

Line 10200E

The apparent resistivity and chargeability data show no significant features at short separations indicating the influence of overburden on either response. The resistivity response on this line is characterized by a series of single slash and interference pattern highs suggesting the presence of a number of thin (<15 m) shallow (< 10 m) resistive sources. The chargeability response shows complex anomalies associated with the south and north anomaly systems (**A** and **B** respectively). The inversion program achieved a poor fit to the IP data (1000 mV/V), probably as a result of the complex resistivity signature. The resistivity data suggest the presence of a folded highly resistive horizon with culmination at 9600N. A highly chargeable horizon is draped over this feature on the south.

Line 10300E

The apparent resistivity and chargeability data show no significant features at short separations indicating the influence of overburden on either response. The most striking anomaly on the line is a coincident resistivity low and chargeability high in the interval 9160N to 9300N. The highest chargeabilities are associated with the region of lowest apparent resistivity suggesting that the source may be heavy disseminated sulphides or graphite. A smaller nearly coincident resistivity low / chargeability high occurs on the north end of the line as well. The intervening region is characterized by a resistivity response consisting of a classic interference pattern from several proximal, thin resistive sources. The inversion program achieved a poor rms fit of 4000 mV/V, principally in the centre of the section where the program could not model the very thin sources likely creating the observed anomalies. The overall chargeability model suggests the presence of an undulating chargeable horizon truncated, perhaps by erosion, in the centre of the section in the region of complex resistivity. The chargeable horizon appears to drape over a deep seated resistive feature.

Line 10400E

The apparent resistivity and chargeability data show no significant features at short separations indicating the influence of overburden on either response. The most striking anomaly on the line is a coincident resistivity low and chargeability high in the interval 9250N to 9310N. The highest chargeabilities are associated with the region of lowest apparent resistivity suggesting that the source is heavily disseminated sulphides. In contrast with the preceding lines, chargeability anomalies occur across the section and the resistivity response is more uniform in the central portion of the line. The inversion program achieved a poor rms fit of 3000 mV/V, principally near 9860N where the program could not model the high chargeability recorded at a single station located there. The overall chargeability model suggests the presence of a folded chargeable horizon draped over a relatively resistive core. The flanking chargeable sources are coincident with resistivity lows suggesting that the source of these features is heavily disseminated sulphide mineralization.

Line 10500E

The apparent resistivity and chargeability data show no significant features at short separations indicating the influence of overburden on either response. The most striking anomaly on the line is a coincident resistivity low and chargeability high in the interval 9250N to 9340N. The highest chargeabilities and lowest resistivities are on opposite side of their anomalies - a feature normally associated with chargeable conductive features dipping in the direction of the resistivity anomaly (ie. grid south). The inversion program achieved a good rms fit of 169 mV/V. The overall chargeability model suggests the presence of a folded chargeable horizon but the resistivity model does not strongly correlate with the chargeability model. It suggests the presence of a steeply dipping conductive body centred at 9340N. The northern and southern anomaly systems are separated by a resistivity high centred near 9700N.

Line 10600E

The apparent resistivity and chargeability data show no significant features at short separations indicating the influence of overburden on either response. The principal anomaly on the line is a coincident resistivity low and chargeability high in the interval

9250N to 9400N. The highest chargeabilities occur at shorter separations in an interval where the lowest resistivities occur at larger separations. It is possible that chargeability suppression may be occurring in this interval and that the anomaly indicates the presence of heavily disseminated to massive sulphides. The low apparent resistivity in the core of resistivity low **A** (80 ohm-m) may indicate the presence of either heavy disseminated sulphides or graphite. The chargeability anomaly in the northern anomaly system differs once again from that in the southern anomaly system in that it is associated with rocks of moderate (>1000 ohm-m) resistivity. The inversion program achieved a good rms fit of 276 mV/V. The models suggest the presence of an asymmetrically folded chargeable horizon which, in the southern portion of the grid, is draped over a low resistivity feature centred at 9340N. The same feature may be truncated by erosion in the area of 9550N.

<u>Line 10700E</u>

The apparent resistivity and chargeability data show no significant features at short separations indicating the influence of overburden on either response. The response on this line is characterized by a complex chargeability high probably created by several proximal sources and coincident with a broad resistivity low (Anomalies **A** on the resistivity / chargeability pseudosections). North of this is a region consisting of a series of resistivity highs within a region of moderate resistivity. The inversion program achieved a good rms fit of 153 mV/V. The models once again suggest the presence of a folded chargeable horizon truncated in the interval from 9600N to 9750N. The portions of this horizon on either side of this truncated interval are the sources of the south and north anomaly systems. A deep seated low resistivity source centred at 9400N is coincident with the source of the peak chargeabilities on this line. The chargeability source north of the truncation (north anomaly system) appears to be diminished on this line.

<u>Line 10800E</u>

The apparent resistivity and chargeability data show no significant features at short separations indicating the influence of overburden on either response. The response on this line consists of a strong chargeability high at short separations coincident with a narrow resistivity low, most intensely expressed at larger separations. A north dipping resistivity high appears to occur at the boundary between the southern region of high chargeability and a region of suppressed chargeability to the north. In the interval 9700N to 9800N, a chargeability high at large separations is present, suggesting the presence of a deep seated chargeable feature. The inversion program achieved a good rms fit of 139 mV/V. The models indicate that a shallow chargeable source overlies a deep seated low resistivity body centred at 9350N. A subdued chargeable source at depth is centred beneath a zone of relatively elevated resistivity centred at 9720N.

The general pattern of the IP and resistivity anomalies suggests that there are a number of steeply dipping resistivity features and that some of the chargeability features have dips both to the north and south. This is at variance with the available, albeit limited, geological information. The deepest drill hole to date has extended to 130 m and correlation of horizons between holes is difficult. Consequently, the available geological information does not preclude a more complex geological model for the grid area.

The inversion results suggest that a single, folded chargeable horizon may host mineralization in the grid area. This horizon overlies and is partially within a relatively resistive rock unit and the chargeable horizon may be truncated by erosion in the north-central portion of the grid, forming two separate IP anomaly systems in plan view. The southern IP anomaly system is coincident with a weak electromagnetic and strong soil geochemical anomaly. The IP northern anomaly system is also coincident with a geochemical anomaly, originally attributed to glacial dispersion (Wengzynowski, 2000, *pers. comm.*).

In addition to the model cross sections in Appendix D, it is useful to examine the data in plan view. The model-indicated intrinsic resistivities and chargeabilities are plotted as maps at 1:2,000 for depths of 55 m and 110 m in Figures 1 through 4 respectively (back pockets). The greater depth (110 m) is the likely detection limit of a dipole-dipole array for steeply dipping targets at an a-spacing of 30 m. The maps show the apparent distribution of rocks with varying electrical resistivity and chargeability at these two depths below ground level. The sinuous nature of the anomaly trends suggest that, in addition to folding about E-W axes, there may be low amplitude open folding about N-S axes as well. This could also account for the apparent eastward plunge of the northern IP anomaly trend east of L10600E, although topography may also be a factor.

An integrated assessment of the available geochemical, geological and geophysical data is required to locate the most favourable areas on the horizon for future drill testing. It appears that the horizon is truncated in the southern section of the grid by erosion. In this area, the horizon has a higher indicated intrinsic chargeability and it is associated with a large, apparently steeply dipping block of low resistivity rock in the southeastern corner of the grid. This discordant feature may be a clay alteration zone or clay altered feeder system. There are also several discordant very high resistivity features on L10400E which may be vertical zones of silicification. These geophysical features may be useful vectors to a possible source of the mineralization apparently hosted by the chargeable horizon.

9.0 CONCLUSIONS

The results of this survey indicate the following conclusions:

a. Two east-west trending chargeability highs were detected by the survey. The southern IP anomaly system extends from approximately L10300E 9200N to L10800E 9400N. The northern IP anomaly system extends from L10100E 9940N to L10600E 9850N. Each is characterized by apparent chargeabilities from 20 mV/V to in excess of 40 mV/V and each is associated with elevated geochemical responses.

b. The resistivity data contains numerous anomalies apparently caused by steeply dipping features.

c. The chargeability data contains anomalies with apparent dips both to the north and south.

d. The apparent source of the IP anomalies appears to be a single gently folded horizon, possibly truncated by erosion in the area of 9700N. The apparent intrinsic chargeability of this horizon is higher to the south than to the north.

e. In the southeastern portion of the grid, the chargeable horizon is associated with a large discordant low resistivity feature. This feature may be a steeply dipping zone of clay alteration.

10.0 RECOMMENDATIONS

The conclusions of this report support the following recommendations:

a. The IP / resistivity surveys should be extended to the east to close off the coincident resistivity low / chargeability high.

b. The available geological and geochemical data should be examined to verify the interpretation described in this report.

c. If the geochemical and geological data support the conclusions of this report, the mineralized horizon intersected in previous drilling and mapped by the IP survey should be drill tested to the north along the northern anomaly system and in the southeast portion of the grid near L10800E 9370N.

Respectfully submitted,
AMEROK GEOSCIENCES LTD.

6 Sep 00

M.A. Power, M.Sc., Geoph.
Geophysicist

References Cited

Coggon, J.H. (1973). A comparison of IP electrode arrays. Geophysics Vol. 38, No 4. pp 737-761.

Hanneson, J.E. (1990) A model for interpreting IP/resistivity data from areas of steep dip and thin overburden. in: Fink, J.B. *et. al.* (ed.) Induced polarization: applications and case histories. Tulsa: Society of Exploration Geophysicists.

Hohmann, G.W. (1990) Three-dimensional IP models. in: Fink, J.B. *et. al.* (ed.) Induced polarization: applications and case histories. Tulsa: Society of Exploration Geophysicists.

Johnson, I.M. (1990) Spectral IP parameters derived from time domain measurements. in: Fink, J.B. *et. al.* (ed.) Induced polarization: applications and case histories. Tulsa: Society of Exploration Geophysicists.

Oldenburg, D.W. and Y. Li (1994) Inversion of induced polarization data. Geophysics Vol. 59. No. 9. pp. 1327-1341.

Power, M.A. (1999) Summary report on the League, Goal Net, Red Line and Puck Properties, Finlayson Lake Area, southeastern Yukon Territory. Report submitted to B.C. Securities Commission.

Siegel, H.O. (1959) Mathematical formulation and type curves for induced polarization. Geophysics Vol. 24 p547-565.

Sumner, J.S. (1976) Principles of Induced Polarization for Geophysical Exploration. New York: Elsevier.

Telford, W.M., L.P. Geldart and R.E. Sheriff (1990) Applied Geophysics (2nd Edition) New York: Cambridge University Press.

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 in the Northern Canada and Alaska 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.

Dated this 6th day of September, 2000 in Whitehorse, Yukon.

Respectfully Submitted,

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

APPENDIX B. SURVEY LOG

AMEROK GEOSCIENCES LTD.

SURVEY LOG
JOB 00-011
IP SURVEY
RED LINE PROPERTY

Period:	27/June/00 - 03/July/00	
Personnel:	Gary Smith-	Crew Chief
	Christine Purves-	Technician
	Bryan Gay-	Geologist
	Mike Daniska-	Helper

Tue 27 Jun 00

GS and CP drive to Finlayson Lake, helicopter mobe to Red Line Property.
(Mobe)

Wed 28 Jun 00

IP survey.
GS, CP, BG and MD run IP survey on line 10000E and 10100E.
Weather: sunny, clear and windy
(Survey)
Production: 1.5 line-km

Thur 29 Jun 00

IP survey.
Continue survey on line 10200E and 10400E. Finish for day at 16:00 due to poor weather conditions.
Weather: rain, hail, lightning and thunder.
(Survey)
Production: 1.3 line-km

Fri 30 Jun 00	IP survey. Survey line 10400E and set up current lines to be used for rest of grid. Weather: Rain, rain and more rain. (Survey) *Production:* 1.0 line-km
Sat 1 Jul 00	IP survey. Survey line 10300E. Weather: mix of sun and cloud/rain (Survey) *Production:* 1.0 line-km
Sun 2 Jul 00	IP survey. Survey lines 10600E and 10800E. Weather: mix of sun and cloud. (Survey) *Production:* 1.8 line-km
Mon 3 Jul 00	IP survey. Survey lines 10700E and 10500E. Weather: Sunny and warm. (Survey) *Production:* 1.9 line-km
Tue 4 Jul 00	CP and GS pack up camp and demobe to Whitehorse. (demobe)

Summary:

Time	**Days**
Mobe / Demobe	2.0 days
Survey	6.0 days

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

AFFIDAVIT

094181

I, Joan Mariacher, of WHITEHORSE, YUKON make oath and say:

That to the best of my knowledge the attached Statement of Expenditures for exploration work on the RED LINE 1-28 mineral claims on Claim Sheet 105 G/8 is accurate.

Joan Mariacher

Sworn before me at WHITEHORSE, YUKON

this 14TH day of

JULY, 2000

Notary, Yukon Territory

RECEIVED JUL 17 2000 MINING RECORDERS OFFICE WATSON LAKE YT

1016 – 510 West Hastings Street, Vancouver, B.C. V6B 1L8 Tel: (604) 688-2568 Fax: (604) 688-2578

Statement of Expenditures
Red Line 1-28 Mineral Claims
July 2, 2000

Labour

D. Eaton – geologist –May-June - 17 hours at $60/hr	$ 1,091.40
B. Wengzynowski – geologist – May – 44 hours at $60/hr	2,824.80
B. Gay – geologist – June 16 – July 2 – 16 ½ days at $272/day	4,802.16
R. Moar – field assistant – June 16 – 21 – 5 ½ days at $256/day	1,506.56
M. Daniska – field assistant – June 15 – July 2 – 18 days at $208/day	4006.08
	14,231.00

Expenses

Field room and board – 54 5/8 days at $115/day	6,721.61
Amerok Geosciences – IP survey	10,807.00
Trans North Bell 206B – 7.1 hours at $700/hr plus fuel	5,444.00
	22,972.61
	$37,203.61

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

In Account With

Project FINLAYSON PROJECT
Date MAY 31, 2000

LABOUR		
Field A. ARCHER – 1 HR AT 66/HR	66.00	
D. EATON – 47 HRS AT 60/HR	2820.00	
B. WENGZYNOWSKI – 131 HRS AT 60/HR	7860.00	
M. PAPAGEORGE – 3 DAYS AT 280/DAY	840.00	
Office M. Cooke– 24 hrs at $39.15/hr	939.60	
Accounting and Expediting J. Mariacher– 11 hrs at $44.45/hr	488.95	13014.55
OTHER SERVICES		
Room & Board in Whitehorse days at $80/day		
Field equipment from AC stock CR	15.00	
Printing 177.45 Photocopies 121 @ .25 = 30.25	207.70	
Rentals from AC		
Drafting 43 1/2 hrs at $38.40/hr	1670.40	
LOOMIS COURIER – 1 AT 13.50/EA	13.50	1903.60
EXPENSES		
Petty Cash 25.99 CR + 4.65 CR + 21.15 D3	51.79	
Telephone		
B. WENG XPENSES D1	213.99	
MARLIN TRAVEL – 246.15 + 379.43 (CORRECT APRIL) + 1494.50	2119.75	
FALCON RESEARCH	261.98	
CORPORATE COURIERS	8.67	
LOOMIS COURIER	14.44	2670.62
MANAGEMENT 6% on Expenses	160.24	
on Field A/C	3.59	163.83
		17752.60
GST (R100247667) 7% on 17752.60		1242.68
		18995.28

E=GST exempt

Acct-Van.dwg

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: 00-011

Invoice 00038
July 13, 2000

In account with: **Expatriate Resources Ltd.**
1016 - 510 West Hastings
Vancouver, B.C. V6B 1L8

Re: Redline IP
June 27 - July 4, 2000

Professional Services:

Mobilization / Demobilization fixed cost, as per contract	$2,500.00
IP Survey 6.0 days @ $1,140.00/day	$6,840.00
Report Preparation	$1,900.00
Subtotal	$11,240.00
Federal GST	$786.80
TOTAL	**$12,026.80**

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

REMIT PAYMENT TO:

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TRANS NORTH TURBO AIR LTD.

20 NORSEMAN ROAD • WHITEHORSE • YUKON • Y1A 6E6
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ACCOUNT NUMBER: ARCHEXP

INVOICE NUMBER: 24517

INVOICE DATE: 30 06 00

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

CHARTERER: Expatriate Resources

BILLING ADDRESS: P.O. Box 4127, Whitehorse, Y.T. Y1A 3S9

A/C TYPE: 206

AIRCRAFT REGISTRATION C: GFKD

FLIGHT DATE: DAY 17 MONTH 06 YEAR 00

PURCHASE ORDER NO.

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

FROM / TO	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
FROM KZK			
TO BILLS CAMP			
ROSS		4.3	
REDLINE 2.3	1610.		
	112.70		
	1722.70		
GOAL NET 2.0	1400.		
	98.		
	1498.		

SUB	G.L.	AMOUNT
1607	502	3010 -
0000	323	210 70

4.3	@ 700.00		3010 -
	@		
HOLDING TIME:	@	/ HR.	
FUEL	@	/ LITRE	
FUEL	@	/ LITRE	
MEALS & LODGINGS			
OTHER			
OTHER			
SUB TOTAL			3010 -
GOODS & SERVICES TAX REGISTRATION NO. R121483135			210 70
TOTAL			$ 3220 70

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PILOT'S SIGNATURE

ENGINEER'S NAME

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ACCOUNT NUMBER: ARCHEXP

INVOICE NUMBER: 24522

INVOICE DATE: 30 06 00

AREA: B.C. ☐ YUKON ☐ NWT ☐ ALTA ☐

A/C TYPE: 206B

AIRCRAFT REGISTRATION C: GFKD

FLIGHT DATE: DAY 21 MONTH 06 YEAR 00

PURCHASE ORDER NO.

CHARTERER: EXPATRIATE

BILLING ADDRESS

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

FROM / TO	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
FROM 4DM			
TO KZK		0.6	HOOK INSURANCE :
KZK (DRILL)		9.2	~~MOTOR 2% $10,000~~ =
4DM		0.6	~~PACK 2% $10,000~~ =
RED LINE 1.0	700.		~~MAST 2% $10,000~~ =
	49		FLOST 2% $10,000 = $200
	749.		HEAD 2% $10,000 $200
			$400
GOAL NET 9.4	6980		
	460.60		
	7440	60	

SUB	G.L.	AMOUNT
1607	502	7280 -
1060	531	400 -
0000	323	509 60

10.4	@ 700.00	7280 00
	@	
HOLDING TIME:	@ / HR.	
FUEL	@ / LITRE	
FUEL	@ / LITRE	
MEALS & LODGINGS		
OTHER Hook Insurance		400 -
OTHER		
SUB TOTAL		7680 -
GOODS & SERVICES TAX REGISTRATION NO. R121483135		509 60
TOTAL		$ 8189 60

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CHARTERER'S NAME (PRINTED)

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BMB BERNARD

BGD BILL DEAN

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INVOICE NUMBER	24523
INVOICE DATE	30 06 00
AREA	B.C. / YUKON / NWT / ALTA
A/C TYPE	206B
AIRCRAFT REGISTRATION	GFKD
FLIGHT DATE (DAY / MONTH / YEAR)	21 / 06 / 00
PURCHASE ORDER NO.	

CHARTERER: EXPATRIATE

BILLING ADDRESS:

FUEL & OIL-X TNTA	CUST.	TNTA FUEL USED	HRS./LITRES	FROM
	√			

FROM / TO	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
FROM KZK			
TO WOLVERINE			
KZK		0.3	
WOLVERINE		0.7	
		*	REDLINE - 280.
			19.60
			299.60
0.6 Broad Net		*	GRANNET - 420.
0.4 Redline			29.40
			449.40

SUB	G.L.	AMOUNT
1607	502	700 -
16		
0000	323	49 -

1.0	@ 700.00	700	-
	@		
HOLDING TIME:	@ / HR.		
FUEL	@ / LITRE		
FUEL	@ / LITRE		
MEALS & LODGINGS			
OTHER			
OTHER			
SUB TOTAL		700	-
GOODS & SERVICES TAX REGISTRATION NO. R121483135		49	-
TOTAL	$	749	-

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X [signature]
CHARTERER'S SIGNATURE

TERRY TUCKER
CHARTERER'S NAME (PRINTED)

INITIALS	
GMS	[signature] PILOTS SIGNATURE
BMS	ENGINEER'S NAME: BERNARD
BGD	BILL DEAN

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ACCOUNT NUMBER	ARCHEXP
INVOICE NUMBER	24530
INVOICE DATE	30 06 00
AREA	B.C. / YUKON / NWT / ALTA
A/C TYPE	206
AIRCRAFT REGISTRATION C	GFKD
FLIGHT DATE (DAY / MONTH / YEAR)	27 06 00
PURCHASE ORDER NO.	

CHARTERER: EXPATRIATE Resources

BILLING ADDRESS: P.O. Box 4127, Whitehorse, Y.T Y1A 3S9

FUEL & OIL-X: TNTA ✓ CUST. ✓ — TNTA FUEL USED: YDM 1.5 (HRS/LITRES) FROM

FROM / TO	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
FROM YDM			
TO BRYANS CAMP		1.8	GEOS MOB IN
BILLS CAMP	0.3	~~2~~	FOOD
BILLS CAMP		1.6	
REDLINE 3.4	2497	85	
	174.	85	
	2672.	70	
~~GOAW~~ NET 0.3	220.	00	
	15.	83	
	235.	83	

SUB	G.L.	AMOUNT
1607	502	2590 –
1600	131	128 25
0000	323	190 28

3.7	@ 700.00	2590	–
	@		
HOLDING TIME:	@ / HR.		
FUEL 171 l	@ .75 / LITRE	128	25
FUEL	@ / LITRE		
MEALS & LODGINGS			
OTHER			
OTHER			
SUB TOTAL		2718	25
GOODS & SERVICES TAX REGISTRATION NO. R121483135		190	28
TOTAL		$2908	53

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X B. Wong
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CHARTERER'S NAME (PRINTED)

INITIALS GMS BMS BGD

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Telephone: (867) 667-4415 Fax: (867) 667-4622

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 RED LINE 1-28 mineral claims on Claim Sheet 105G/8 is accurate.

Joan Mariacher

Sworn before me at VANCOUVER, B.C.

this 11TH day of

DECEMBER, 2000

RECEIVED
DEC 14 2000
MINING RECORDERS OFFICE
WATSON LAKE YT

Notary, Yukon Territory

RED LINE 3-7 MINERAL CLAIMS
Statement of Expenditures
November 10, 2000

Labour

D. Eaton - geologist - Sept.-Nov. - 2 hrs @ $60/hr	$ 128.40
B. Wengzynowski - geologist - Sept.-Nov. - 23 hrs @ $60/hr	1,476.60
B. Gay - geologist - July 3-4 - 2 days @ $272/day	582.08
M. Daniska - field assistant - July 3-4 - 2 days @ $208/day	445.12
J. Mariacher - July - 1 hr @ $49.45	52.91
- Nov. - 2 hrs @ $44.45	95.12
	$2,780.23

Expenses

Field room and board - 6 days @ $115/day	$ 738.30
TNA Bell 206B - 3.3 hrs @ $700/hr plus fuel	2,555.95
Amerok Geosciences	1,219.80
Drafting, printing, etc.	227.99
	$4,742.04
TOTAL	$7,522.27

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

In Account With

Project FINLAYSON PROJECT
Date JULY 31, 2000

LABOUR		
Field A. ARCHER - 8 HRS AT 66/HR	528.00	
R. CARNE - 2 HRS AT 60/HR	120.00	
D. EATON - 21 HRS AT 60/HR	1260.00	
B. WENGZYNOWSKI - 195 HRS AT 60/HR	11700.00	
F. GISH - 18 HRS AT 43/HR	774.00	
T. BELL - 1 DAY AT 325/DAY	325.00	
R. DUNCAN - 4 1/2 DAYS AT 315/DAY	1417.50	
B. GAY - 31 DAYS AT 272/DAY	8432.00	
R MOAR - 5 DAYS AT 256/DAY	1280.00	
M. DANISKA - 31 DAYS AT 208/DAY	6448.00	
A. BORDELEAU - 4 DAYS AT 288/DAY	1152.00	
Office M. Cooke— 3 1/2 hrs at $39.15/hr	137.03	
Accounting and Expediting J. Mariacher— 75 1/4 hrs at $49.45/hr	3721.11	
A. Gelling— 16 1/2 hrs at $48.40/hr	798.60	38082.24
OTHER SERVICES		
Room & Board in Whitehorse 8 days at $80/day	640.00	
Field equipment from AC stock 7.20 C2 + 796.85 + 1067.25	1871.30	
Printing Photocopies 133 @ .25	33.25	
Rentals from AC JULY 1-31 - SBX 11 AT 300/MO + 3 GPS AT 230/MO EA + 3 KOM AT 100/MO EA + CORE SPLITTER AT 70/MO + HYD PUMP AT 75/MO + 2 UV LAMPS AT 30/MO EA - WENG	1495.00	
JULY 1-4 - SBX AT 10/DAY + GPS AT 7.67/DAY + 1 COM AT 3.33/DAY - BRYAN	21.00	
Drafting 9 1/2 hrs at $38.40/hr	364.80	
ROOM & BOARD AT WOLVERINE JULY 18	110.00	4535.35
EXPENSES		
Petty Cash 27.42 D1 + 10.45 D3	37.87	
Telephone 39.75 + 172.32	212.07	
SUNRISE SERVICE	112.74	
SUNSPUN SHOPPING SERVICE D1	69.64	
SHOPPERS DRUG	6.49	
CAIL	112.75	
SUNSPUN SHOPPING	29.28	
BEAVER LUMBER	75.56	
EILEEN'S PLACE	34.60	
INTEGRAPHICS	76.10	
MAC'S FIREWEED	158.42	
HORWOOD'S OFFICE	17.19	942.71
MANAGEMENT 6% on Expenses	56.56	
on Field A/C	301.48	358.04
		43919.34
GST (R100247667) 7% on 43919.34		3074.35
		46,993.69

E=GST exempt

Acct-XY.dwg

ARCHER, CATHRO & ASSOCIATES (1981) LIMITED

In Account With

Project FINLAYSON PROJECT (FEX)
Date SEPTEMBER 30, 2000

LABOUR			
Field	D. EATON - 4 HRS AT 60/HR	240.00	
	B. WENGZYNOWSKI - 80 1/2 HRS AT 60/HR	4830.00	
	B. GAY - 1 DAY AT 275/DAY	275.00	
	CORRECT JULY & AUGUST HOURLY RATE ON F. GKH - 36 HRS AT 43/HR - S/B 45/HR	72.00	
Office	M. Cooke— 11 1/2 hrs at $39.15/hr	450.23	
Accounting and Expediting	J. Mariacher— 24 1/4 hrs at $49.45/hr	1199.16	
	A. Gelling— hrs at $48.40/hr		7063.39
OTHER SERVICES			
Room & Board in Whitehorse	2 days at $80/day	160.00	
Field equipment from AC stock			
Printing	Photocopies 282 @ .25	70.50	
Rentals from AC			
Drafting	3 hrs at $38.40/hr	115.20	345.70
EXPENSES			
Petty Cash	15.2082	15.20	
Telephone	0.11	0.11	
YUKON HONDA		68.85	
HIGH COUNTRY INN		79.00	
NORCAN LEASING		274.18	
CAIL		79.09	
AON REED STENHOUSE - TRUCK INS		179.98	
BYERS TRANSPORTATION		265.47	
HOUGEN'S PHOTO		15.08	
HORWOOD'S OFFICE		10.53	991.49
MANAGEMENT	6% on Expenses	59.49	
	on Field A/C (161.78 + 3191.17)	201.18	260.67
			8661.25
GST (R100247667) 7% on 8661.25			606.29
			9267.54

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: 24538

INVOICE DATE: 06 07 00

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

CHARTERER: Expatriate Resources

BILLING ADDRESS:

A/C TYPE: 206B

AIRCRAFT REGISTRATION C: GFKD

FLIGHT DATE: DAY 04 MONTH 07 YEAR 00

PURCHASE ORDER NO.

FUEL & OIL-X TNTA	CUST.	TNTA FUEL USED	HRS/LITRES	FROM
✓		YDM	1.2	

FROM / TO	UP/DOWN TIME	HOURS	REMARKS - NO. OF PASS - FREIGHT Kg
FROM YDM			
TO Breans Camp		2.0	Geo's out / Move 6 ...
Bells Camp		1.0	2 Px out Move 3 ...
YDM		1.3	
↑			
Red Line 3.3	2388.74		
	167.41		
	2555.95		
↑ ~~Gomm~~ Net 1.0	723.86		
	50.62		
	774.53		

NEW ADDRESS
TNTA
P.O. BOX 8
WHITEHORSE, YUKON
Y1A 5X9

4.3	@ 700.00		3010 –
	@		
HOLDING TIME:	@	/ HR.	
FUEL	@	/ LITRE	
FUEL 136.8	@ .75	/ LITRE	102 60
MEALS & LODGINGS			
OTHER			
OTHER			
SUB TOTAL			3112 60
GOODS & SERVICES TAX REGISTRATION NO. R121483135			217 88
TOTAL			$3330 48

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 [signature] CHARTERER'S SIGNATURE

CHARTERER'S NAME (PRINTED)

INITIALS: GMS, BMS, BGD

[signature] PILOTS SIGNATURE

ENGINEER'S NAME

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: 00-011

Invoice 00038
July 13, 2000

In account with: **Expatriate Resources Ltd.**
1016 - 510 West Hastings
Vancouver, B.C. V6B 1L8

Re: Redline IP
June 27 - July 4, 2000

Professional Services:

Mobilization / Demobilization fixed cost, as per contract	$2,500.00
IP Survey 6.0 days @ $1,140.00/day	$6,840.00
Report Preparation	$1,900.00
Subtotal	$11,240.00
Federal GST	$786.80
TOTAL	$12,026.80

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