

**Expatriate Resources Ltd.**  
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**Vancouver, British Columbia, Canada**  
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094461

**Box Property Assessment Report**

UTEM-3, Large Loop, Time Domain EM Survey and Prospecting Report for the Box Claims

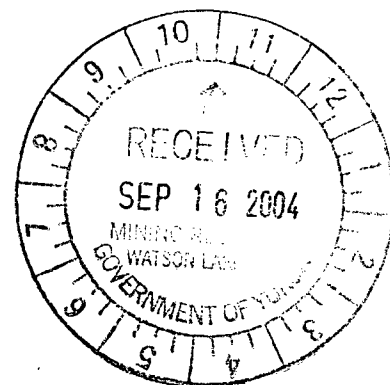
Box 1-24, 39-105, and 107-120

Location: Finlayson Lake area, Yukon  
NTS 105G/10, NAD 27, Zone 9  
407,459.45E 6,839,028.08N

Dates of Work: July 20<sup>th</sup>, 2003 to July 3<sup>rd</sup>, 2003

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Costs associated with this report have been approved in the amount of \$ 10,400.00 for assessment credit under Certificate of Work No. GL25671 + GL25672.

*[Handwritten Signature]*

Mining Recorder  
Watson Lake Mining District

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## **INTRODUCTION**

SJ Geophysics Ltd. was retained by Expatriate Resource Ltd., in the summer of 2003 to perform a small UTEM-3 survey on the Box claims in the Finlayson Lake area of the Watson lake mining district, Yukon Territories. The location of the Box Property is shown in Figure 1 with a complete Quartz Mining Claims listing in Table 1.

Access to the property is from Whitehorse by truck to Carmacks then to Ross River and over to Finlayson Lake. A camp was placed along the road near the northern end of the grid (N: 61deg 41' 29.9" E:130deg 46' 04.3) to provide accommodations for the geophysical crew and line cutting crew. The line cutting, which was performed by Aurora Geosciences crew, and the geophysical survey was completed between June 20 and July 3, 2003.

The exploration target is a massive sulphide target with similarities to the Kudze Kayah in the Yukon (Cominco). These targets tend to be generally good shallow dipping conductors, therefore an inside loop UTEM (a large loop time domain EM system) survey was recommended and completed over the survey area.

This report is also meant to discuss prospecting activities on the Box Property with a very general description of geology and its favourability to host VMS-style mineralization are not discussed at all or only briefly.

## **DESCRIPTION OF WORK**

Aurora Geosciences Ltd. crew, under the supervision of Mike Power, commenced the construction of the camp, which was located near the road on the northern part of the survey grid, on June 20, 2003. Line cutting commence shortly after. Part of the line cutting crew demobed on June 29 with two people staying to aid the UTEM survey (Visser, 2003).

The UTEM-3 survey was commenced a few days after the line cutting by Neil Visser, SJ Geophysics Ltd., and a coil man provided by Aurora. The UTEM-3 survey was completed between June 24 to July 3, 2003, which included 2 mobilization days and 8 production days (Visser, 2003).

The horizontal component of the EM field was collected on 12 lines inside a large loop as shown on the accompanied grid location map. The grid was surveyed at 25 m intervals along the lines where permitted for a total of approximately 17.2 km. line km (Visser, 2003).

Having poor location information does not prevent us from getting good quality data but it does prevent us from having good quality channel 1 data. The data can be reduced to channel 1, which gives very reliable earlier time data. However with a channel 1 response, as was noticeable in this data set, reducing to channel 1 impedes proper enhanced interpretation or the big advantage of the UTEM system over a pulse system. The GPS data was generally very good for most of the data, especially a few hundred metres away from the loop edges, therefore not effecting the interpretation of the data collected (Visser, 2003).

The loop location lines were cut and the survey lines were located with compass, chain and GPS. Differential GPS locations were taken where the thick bush permitted therefore channel 1 results are questionable in some areas especially close to the loop edges. Slopes were collected, by the UTEM operator, to aid in estimating the missing GPS stations. The GPS co-ordinated and slopes were entered into location manager, a in-house SJ Geophysics program, to estimate the proper locations. The GPS datum used was Nad 27 zone 9 (Visser, 2003).

Figure 1: Location of Box Property

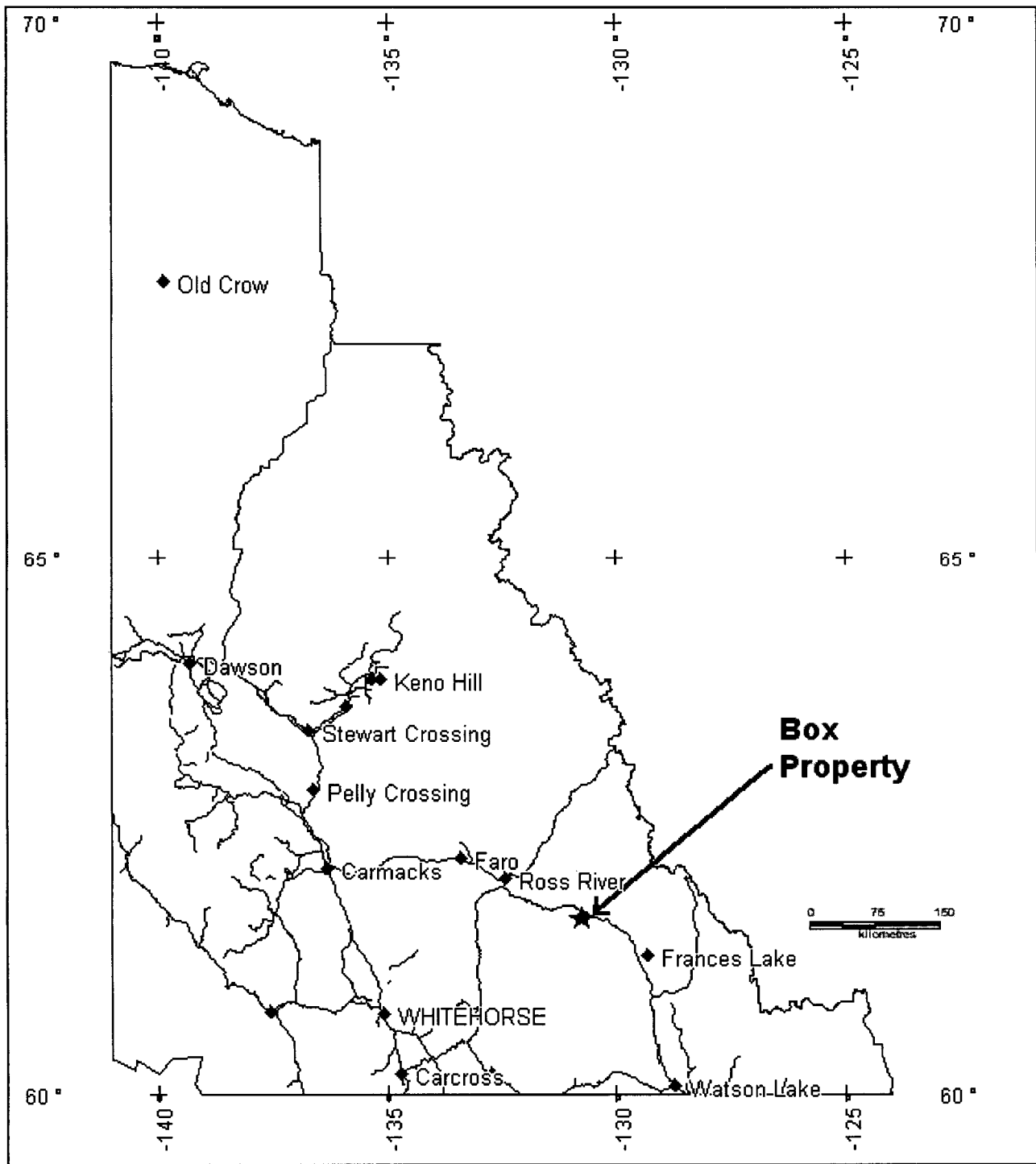


Table 1: Box Property Claim List

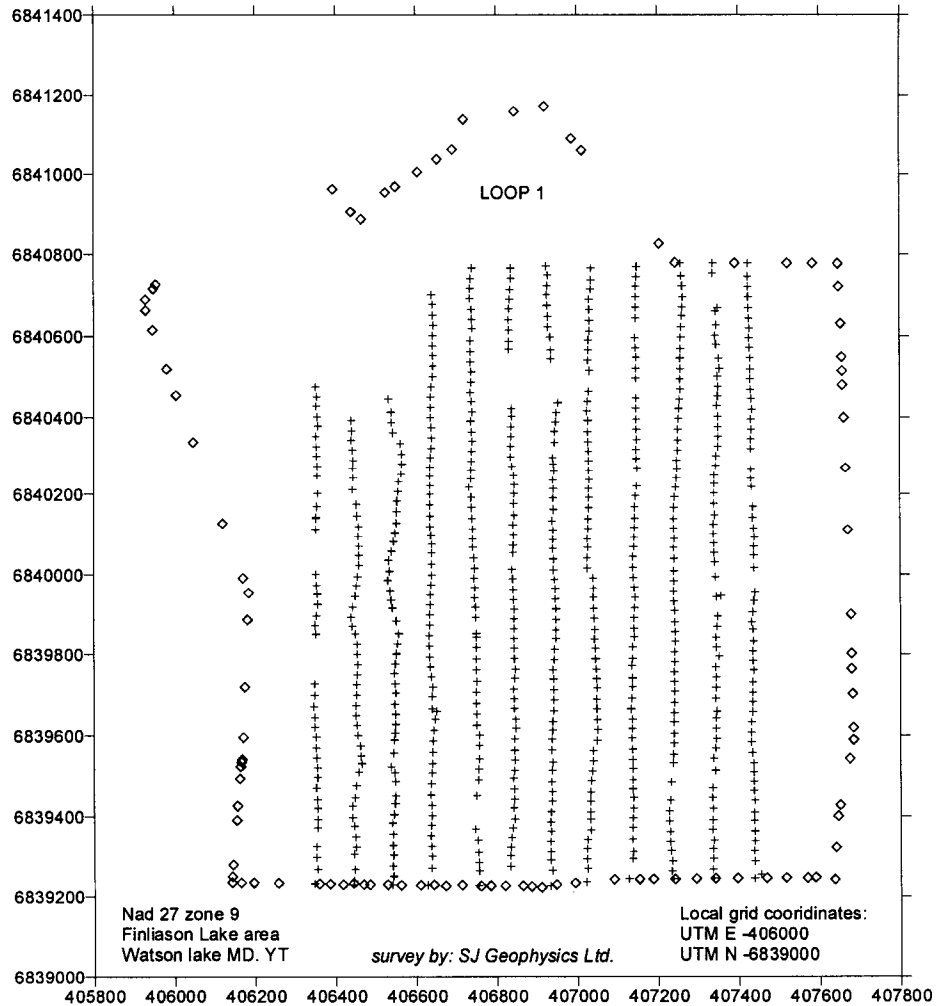
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YB59172	Quartz Claim	Box 10		03/17/2005	105-G-10
YB94233	Quartz Claim	Box 100		09/10/2003	105-G-10
YB94234	Quartz Claim	Box 101		09/10/2003	105-G-10
YB94235	Quartz Claim	Box 102		09/10/2003	105-G-10
YB94236	Quartz Claim	Box 103		09/10/2003	105-G-10
YB94237	Quartz Claim	Box 104		09/10/2003	105-G-10
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YB59173	Quartz Claim	Box 11		03/17/2005	105-G-10
YB94242	Quartz Claim	Box 110		09/10/2003	105-G-10
YB94243	Quartz Claim	Box 111		09/10/2003	105-G-10
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YB94251	Quartz Claim	Box 119		09/10/2003	105-G-10
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YB59175	Quartz Claim	Box 13		03/17/2005	105-G-10
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YB59180	Quartz Claim	Box 18		03/17/2005	105-G-10
YB59181	Quartz Claim	Box 19		03/17/2005	105-G-10
YB59164	Quartz Claim	Box 2		03/17/2005	105-G-10
YB59182	Quartz Claim	Box 20		03/17/2005	105-G-10
YB60837	Quartz Claim	Box 21		03/17/2003	105-G-10
YB60838	Quartz Claim	Box 22		03/17/2003	105-G-10
YB60839	Quartz Claim	Box 23		03/17/2003	105-G-10
YB60840	Quartz Claim	Box 24		03/17/2003	105-G-10
YB59165	Quartz Claim	Box 3		03/17/2005	105-G-10
YB93657	Quartz Claim	Box 39		06/10/2003	105-G-10
YB59166	Quartz Claim	Box 4		03/17/2005	105-G-10

Grant Number	Claim Type	Claim Name	Fraction	Expiry Date	NTS Map
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YB94196	Quartz Claim	Box 63		09/10/2003	105-G-13
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YB94200	Quartz Claim	Box 67		09/10/2003	105-G-10
YB94201	Quartz Claim	Box 68		09/10/2003	105-G-10
YB94202	Quartz Claim	Box 69		09/10/2003	105-G-10
YB59169	Quartz Claim	Box 7		03/17/2005	105-G-10
YB94203	Quartz Claim	Box 70		09/10/2003	105-G-10
YB94204	Quartz Claim	Box 71		09/10/2003	105-G-10
YB94205	Quartz Claim	Box 72		09/10/2003	105-G-10
YB94206	Quartz Claim	Box 73		09/10/2003	105-G-10
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YB94211	Quartz Claim	Box 78		09/10/2003	105-G-10

<b>Grant Number</b>	<b>Claim Type</b>	<b>Claim Name</b>	<b>Fraction</b>	<b>Expiry Date</b>	<b>NTS Map</b>
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YB94214	Quartz Claim	Box 81		09/10/2003	105-G-10
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YB94216	Quartz Claim	Box 83		09/10/2003	105-G-10
YB94217	Quartz Claim	Box 84		09/10/2003	105-G-10
YB94218	Quartz Claim	Box 85		09/10/2003	105-G-10
YB94219	Quartz Claim	Box 86		09/10/2003	105-G-10
YB94220	Quartz Claim	Box 87		09/10/2003	105-G-10
YB94221	Quartz Claim	Box 88		09/10/2003	105-G-10
YB94222	Quartz Claim	Box 89		09/10/2003	105-G-10
YB59171	Quartz Claim	Box 9		03/17/2005	105-G-10
YB94223	Quartz Claim	Box 90		09/10/2003	105-G-10
YB94224	Quartz Claim	Box 91		09/10/2003	105-G-10
YB94225	Quartz Claim	Box 92		09/10/2003	105-G-10
YB94226	Quartz Claim	Box 93		09/10/2003	105-G-10
YB94227	Quartz Claim	Box 94		09/10/2003	105-G-10
YB94228	Quartz Claim	Box 95		09/10/2003	105-G-10
YB94229	Quartz Claim	Box 96		09/10/2003	105-G-10
YB94230	Quartz Claim	Box 97		09/10/2003	105-G-10
YB94231	Quartz Claim	Box 98		09/10/2003	105-G-10
YB94232	Quartz Claim	Box 99		09/10/2003	105-G-10



Figure 2: Location of the UTEM-3 Geophysical Grid and Survey



Expatriate Resources Ltd.  
Box Claims  
UTEM-3 Survey  
Grid Location map

## METHODS AND ANALYSIS

Large loop UTEM-3 survey was carried out over the property. Instruments specifications for the equipment used for this techniques is presented in Appendix 1. For completeness, a brief discussion of the UTEM-3 methodology is included below in Figure 3. A more comprehensive discussion can be found in the literature (Visser, 2003).

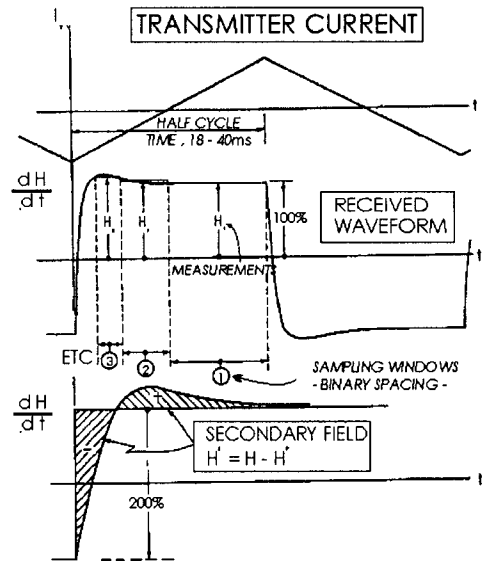


Figure 3: UTEM-3 Methodology

The UTEM-3 uses a large fixed horizontal transmitter loop (a varnished single wire) as its signal source. For typical surveys the total field (primary and secondary) is then measured in the near field zone (exterior and interior to the TX loop) with the receiver system. The vertical component (Hz) of the magnetic field is always measured, and provisionally the horizontal components (Hx and Hy) of the magnetic field. Since the measurements are made in the on-time the electric field components (Ex and Ey) can also be measured. For this survey Hz measurements were taken from every loop (Visser, 2003).

The UTEM-3 transmitter passes a low-frequency current of precise triangular wave form through the transmitter loop. The accompanying diagram shows the transmitted waveform and the secondary field due to a conductor. The magnetic field sensed at the receiver coil is the time derivative of the transmitted magnetic field, so that in "free-space" a precise square wave voltage would be induced in the receiver. In the presence of subsurface conductors the received waveform is substantially distorted from a square wave. This distortion is principally a measure of the conductance of the materials in the region beneath the receiver coil. The UTEM-3 measures this distortion by determining the amplitudes at 10 decay times (averaging over windows) which are spaced along the decay curve in a binary geometric progression (Visser, 2003).

The UTEM-3 system has been instrumental in the discovery of the Hellyer Massive Sulphide Deposit in Tasmania, the Victor Deep in Sudbury (INCO), the Heringa Deposit in the NWT (St. Joe Minerals), McCreedy East Footwall in Sudbury (INCO), the Kudze Kayah in the Yukon (Cominco), the Pipe Deep in Thompson, Manitoba, and several others not yet announced (Visser, 2003).

## DATA PROCESSING

A wide variety of co-ordinate systems have been used for mapping purposes over the life of this project, including local grids, and several UTM datum's. This is a significant problem as previous and current work was being compiled. It was decided that all data should be transcribed to a common geographical system. The NAD27 spheroid and Zone 9N UTM projection was selected. All maps included in this report are referenced to this co-ordinate system.

A plan map has been produced to illustrate the location of the geophysical survey area. The grid was located using differential GPS where permitted. This data was combined with slope information collected along the lines.

## UTEM-3 REDUCTION AND NORMALIZATION

The UTEM-3 is similar to the frequency domain horizontal loop systems, such as the coplanar coil systems in airborne and the Max-Min system, in that the measurements are made in the on-time. Therefore the collected data is a combination of the primary and the secondary fields. To produce the secondary field the calculated or measured primary field is subtracted from the total field. The data is thus reduced to the secondary field (Visser, 2003).

The error in the calculated primary field may be significant if there are errors in the location of the receiver station or loop location therefore the data from channel 1 can be used as the measured primary field if there is no a significant late time response. The data is then normalized (divided by) to the absolute value of the total primary field and multiplied times 100 to get a value, which is expressed as a percent of the total primary field. Two normalization techniques are generally used, and are indicated on each profile (Visser, 2003).

In continuously normalized form, the normalizing factor is the magnitude of the computed primary field at the station the data is collected. Although this type of normalization considerably distorts the response shape, it permits the background conductivity and conductive anomalies to be easily identified at a wide range of distances from the loop and is therefore most commonly used for outside loop data (Visser, 2003).

In point normalized form the normalizing factor is the magnitude of the computed primary field vector at a single point in space, usually in the central part of a loop or along a survey line. When data is presented in this form, the point of normalization is displayed in the title block of the plot. Point normalized profiles show the non-distorted shape of the field profiles (usually the secondary field). Unfortunately, the very large range in magnitude of anomalies both near and far from the loop means that small anomalies, particularly those far from the loop, will be suppressed and therefore may be overlooked on this type of plot in favour of presenting larger amplitude anomalies. Therefore this type of plot is generally used for interpretation of individual conductors and for plotting profiles and images for the Hz inside loop data and the Hx outside loop data. The electric field data is generally not reduced to the secondary field and is plotted as total field (Visser, 2003).

## MATHEMATICAL FORMULATIONS

In the following expressions:

- R<sub>nj</sub> is the result plotted for the nth UTEM-3 channel,
- R<sub>1j</sub> is the result plotted for the latest-time UTEM-3 channel, channel 1,
- Ch<sub>nj</sub> is the raw component sensor value for the nth channel at station j,

Ch1j is the raw component sensor value for channel 1 at station j,  
 HPj is the computed primary field component in the sensor direction  
 |H<sup>P</sup>| is the magnitude of the computed primary field at:  
 - a fixed station for the entire line (point normalized data)  
 - the local station of observation (continuously normalized data)  
 - a fixed depth below the station (continuously normalized at a depth).

Channel 1 Reduced Secondary Fields : Here, the latest time channel, Channel 1 is used as an 'estimate' of the primary signal and channels 2-10 are expressed as:

$$R_{nj} = (Ch_{nj} - Ch_{1j}) / |H^P| \times 100\%$$

Channel 1 itself is reduced by subtracting a calculation of the primary field observed in the direction of the coil, HP as follows:

$$R_{1j} = (Ch_{1j} - H^P_j) / |H^P| \times 100\%$$

Primary Field Reduced Secondary Fields : In this form all channels are reduced according to the equation used for channel 1 above:

$$R_{nj} = (Ch_{nj} - H^P_j) / |H^P| \times 100\%$$

This type of reduction is most often used in cases where very good geometric control is available (leading to low error in the calculated primary field, HPj) and where very slowly decaying responses result in significant secondary field effects remaining in channel 1 observations (Visser, 2003).

UTEM-3 Results as a Total Field: In certain cases results are presented as a % of the Total Field. This display is particularly useful in borehole surveys where the probe may actually pass through a very good conductor. In these cases the shielding effect of the conductor will cause the observed (total) field to become very small below the intersection point. This nullification due to shielding effects on the total field is much easier to see on a separate Total Field plot. In cases where the amplitude of the anomalies relative to the primary field is small, suggesting the presence of poorly conductive bodies, the Total Field plot is less useful (Visser, 2003).

The Total Field plots are also commonly used in presenting the Electric field data since the amplitude of the total field of the late time channel is more representative of the resistivity. The data contained in the UTEM-3 reduced data files is in Total Field, continuously normalized form if:

$$R_{nj} = Ch_{nj} / |H^P| \times 100\%$$

## EM MODELLING

The EM modelling program MultiLoop II developed by Lamontagne Geophysics Ltd. can be used to analyze the UTEM field data. MultiLoop II is a multiple plate EM forward modelling program capable of handling multiple conductors by approximating each conductor by a rectangular plate within free-space. This free-space approximation is valid for the modelling of most UTEM data especially in the Canadian Shield due to the high resistivity of the host lithology. The program allows the user to specify various model components, namely:

**Transmitter-Receiver Information:** Allow the user to specify the type of transmitter and receiver as a loop or dipole as well as whether they are fixed or moving. In the case of the UTEM modelling, we select a fixed transmitter loop and a moving receiver dipole.

**Lines:** Allows the adjusted line and station locations (XYZ coordinates) to be imported and the orientation of the receiver to be specified. For the present modelling, we have imported corrected local coordinates and the orientation of the receiver is set to the vertical component (Hz).

**Field Data:** The GPS corrected field data was imported to the modelling program in ASCII format. The field data can be displayed conjunctively with the model data for comparison purposes. MultiLoop allows the user to modify the specific channels to plot and the scales at which they are plotted.

**Waveform:** The UTEM 3, 10 channel waveform was chosen as the transmitting waveform and corresponding sampling scheme was implemented.

**Conductors:** Conductors were specified in 3-dimensions using the following parameters:

- 1 - Position of the user specified reference point (usually taken to be the top of the conductor) as an X, Y, Z coordinate.
- 2 - Strike and dip of the conductor
- 3 - Plunge of the conductor
- 4 - Lateral and Depth extent of the conductor
- 5 - Conductance = conductivity-thickness product for the conductor
- 6 - Ribbon aspect. Allows for the adjustment of the conductor ribbons to simulate current channelling within the conductor.

The interactive modelling environment allows the user to add or modify rectangular plates while displaying both the observed and model responses simultaneously to the screen. The MultiLoop program simulates a quasi-3 dimensional model space by allowing variation in the vertical and horizontal directions although conductors are confined as plates (Visser, 2003).

## DISCUSSION

The objective of this survey was to detect anomalous UTEM responses caused by flat lying or shallow dipping massive sulphide type conductors at depth. UTEM data was therefore only collected using the in-loop mode. Twelve north-south oriented lines 100m apart and up to 1500m long each were traversed. The UTEM survey used a base frequency of 30.974Hz, the receiver collected data for 10 binary spaced channels. Station interval was 25m. It should be emphasized that no massive sulphide type EM responses were measured during a standard helicopter EM/Mag survey executed over this area in 1996. This suggests that any conductive massive sulphide deposit of merit has to be at a depth of 70m or deeper. The detection of a deposit with the UTEM technique depends on various parameters. Its cross dimensions have to increase with increasing depths and it has to display a conductivity contrast with respect to its hostrock (Klein, 2003).

It was decided, after a first review of the results to point normalize the data at a single point on the grid. This point is Line 850 station 1000 (this is roughly in the center of the grid). It permits contouring the data in a meaningful way. The results were also reviewed using the contractor's profile plots for all data should be interpreted using line data (=profiles). A few lines were studied using the classical presentation of continuous normalization (Klein, 2003).

The following plots are presented in addition to the contractor's profiles: Plans of the GPS-elevation and of the point normalized UTEM data in contour form for channels 9, 7, 5, 4, 3 and 2 at a scale of 1:10,000. The color bar and contour interval varies from plot to plot. The contours for the channel 5 UTEM results superimposed on the Interpretation plan of the 1996 helicopter EM/Mag survey (Klein, 2003). The plots are presented in Appendix 2.

It should be recognized that these contour plots display amplitudes not conductances. The latter can only be derived from the former studying the rate of fall-off of the UTEM signal from channel to channel (Klein, 2003).

Comparing the plots gives however an understanding how currents migrate with time (= from channel 10 down to 1). Early decay times (channels 10, 9, 8) can be compared with high frequencies their responses are normally associated with shallow poor conductors. Late time (channels 3, 2 and 1) responses are associated with deeper sources and/or higher conductivities (Klein, 2003).

The channel 9 plot shows relatively high amplitudes in the SW part of the grid this may be associated with airborne anomaly B. There is a suggestion that it continues weaker to the east. There is also a band of higher values along the north side of the grid these could be related to conductor C. This picture is not much different for channel 7 but the southern band appears to be swinging more to the NE coincident with a weak topographic trend. This association should not be a surprise assuming that strata in this area may have flat dips and various horizons may display different conductivities (Klein, 2003).

The NE trend for the southern band of higher amplitudes is further enhanced in channel 5 data. This trend appears now more the continuation of zone B. It may indicate that some less conductive material covers the weak conductors causing this continuation of zone B, in other words this continuation of zone B is too deep to be detected with a standard helicopter EM survey. The focal point of the northern band starts shifting to the east. The amplitudes of the SW band weaken for channel 4 but those of the northern band reduce less suggesting that the latter relates to better conductivities (Klein, 2003).

Not much is left of the SW band in channel 3; the secondary UTEM currents are fully concentrating towards the NE in close proximity to moderate airborne conductivities further to the north (zone C). This is further enhanced in the channel 2 results. The primary field generated in the earth in close vicinity to the loop wire is directed horizontally, this means that it does not couple well with horizontal conductors. This in turn causes the secondary fields to be near zero at these locations. This is visible on the profile plots where the anomalous values ~150m away from the wire (e.g. NE corner of the grid) rapidly reduce to zero at the loop. The type of data reduction used will dictate how visual this effect is. It is the reason of the apparent closure of the anomaly in the NE. An additional contour plot for the channel 2 results is attached; UTEM values close to the loop wire have been removed to emphasize that this conductive feature is not closed off but is most likely open to the north (Klein, 2003).

No isolated conductors (like those from massive sulphide deposits) are visible in this data set (Klein, 2003).

In summary, the in-loop UTEM results over an area of the BOX claims confirm the airborne EM conductors detected along its edges: poor zone B in the SW and moderately conductive zone C along its northern edge. The zones may continue to some degree at depth below the present grid. These, possibly, formational zones display from poor (zone B) to moderate (zone C) conductivities. No isolated, or more defined, conductivities as would be associated with massive sulphide zones were detected (or they must display the same conductivity as that of zone B). The UTEM expression of zone C (or a zone related to it) is too close to the loop edge to be certain about its position (Klein, 2003).

## PROSPECTING

Work on the Box property for 6 days (June 20-25) in the early part of the 2003 field season consisted of: (1) supervision of line-cutters and geophysical crews performing the UTEM survey; and (2) further prospecting and interpretation of the property geology, especially parts of the claims within the area of the geophysical survey.

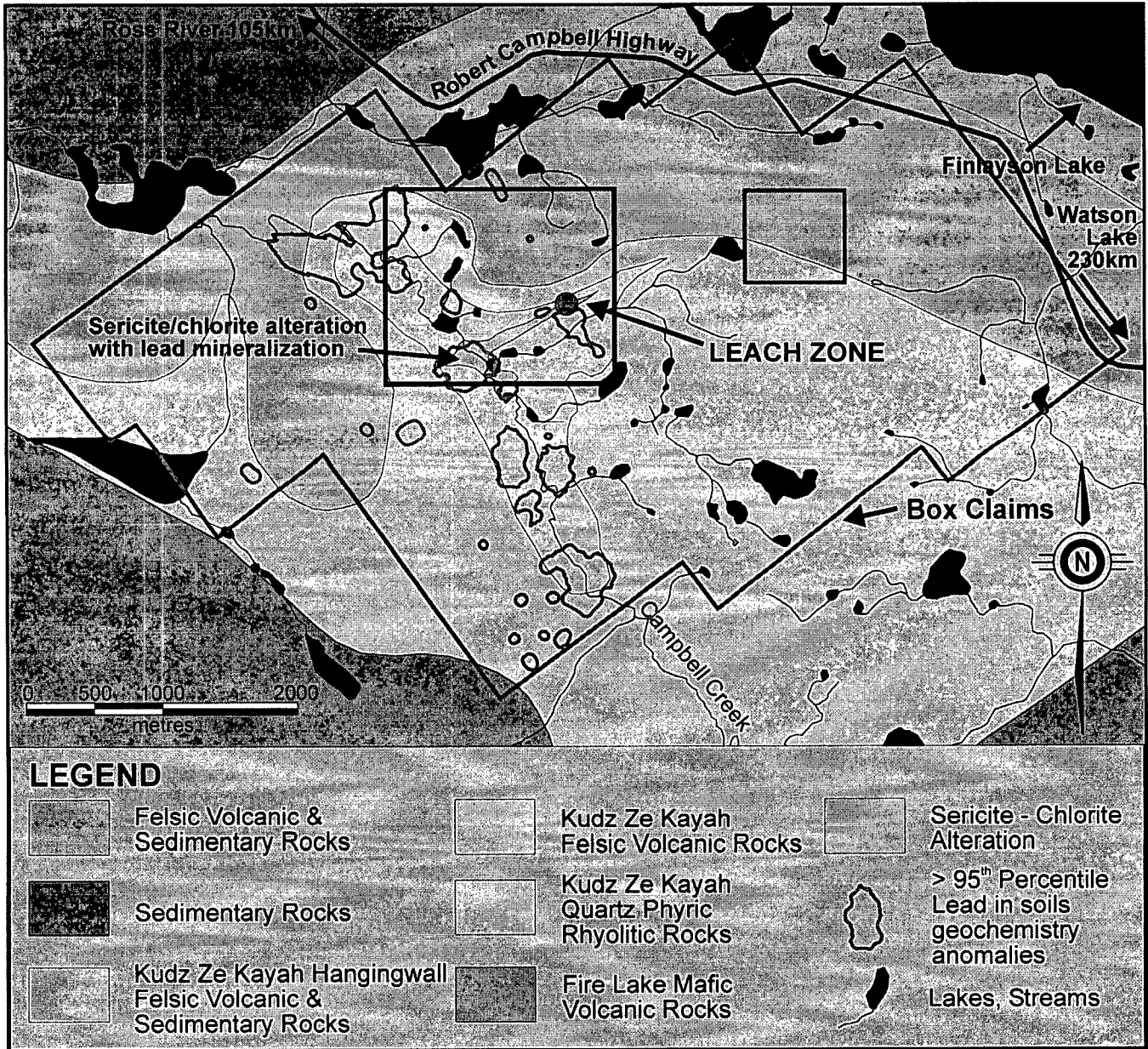
By the evening of June 25, the UTEM survey loop was cut and correctly located. North-south oriented survey lines within the loop were partly finished. Wire had been laid out along the loop and a small amount (a few hours) of data collection was completed. This work was carried out over the period of June 21-25. A further eight days will be required to complete geophysical data collection. Note that no geochemical or lithochemical samples were collected during this program.

Geological mapping and prospecting was done over a large part of the property; noting a summary map is presented in Figure 4. The results of this data collection are summarized below:

- 1) Rocks on the property are dominantly meta-sedimentary and not meta-volcanic. Textural evidence suggests that the unit previously interpreted as rhyolite is more likely to be quartzite.
- 2) The most recent work by D.C. Murphy of the Yukon Geological Survey places this package of meta-sedimentary rocks at the base of the Wolverine Succession. These rocks, however, do not resemble the rocks that host the Wolverine deposit.
- 3) Units, from lowest to highest in the stratigraphy, consist of: grey to white, rusty weathering, quartzite (meta-sandstone or grit); grey chert pebble conglomerate; and green siliceous phyllite (meta-siltstone). Limestone is present in the westernmost part of the property (Box 119 claim), outside the mapped area.
- 4) Grains in the uppermost siliceous phyllite vary from silt to sand sized. This unit is weakly calcareous and contains centimetre to metre scale carbonaceous horizons. These horizons are likely weak to moderate conductors and will therefore be detected by the UTEM geophysical survey.
- 5) The orientation of the dominant foliation, which is parallel to bedding, varies from gently north dipping to gently south dipping and suggests the presence of several broad east-west trending antiforms and synforms. Consequently, it may not be possible to follow any particular horizon "down-dip" any significant distance.
- 6) The Pb-Zn soil anomalies that occur near the main creek drainage are likely caused by disseminated and stringer sulphide minerals within the lowermost quartzite unit. Copper anomalies (one on the northern part of the cut loop, the other along the main creek to the south of the cut loop) are unexplained.
- 7) The kill zone appears to lie at the very top of the exposed stratigraphy. If this zone does represent distal alteration underlying a massive sulphide deposit, this deposit is likely eroded. This type of alteration is not normally found overlying mineralization. There is no outcrop exposure north of the kill zone, however, and there is some potential in this area.

- 8) Two outcrops of dark green, unfoliated, massive, mafic intrusive rock (dyke?) are mapped in the southwest corner of the cut loop. This unit contains 1-2% pyrrhotite and could explain the weak conductor defined by the airborne geophysics in this area.

Figure 4: General Geology Map of the Box Property

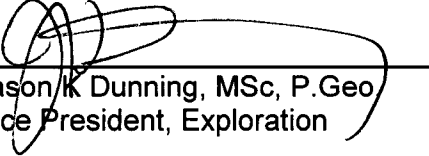




**RECOMMENDATIONS**

It is recommended that the BOX Claims described within this Assessment Report undergo further geological and geophysical review for new targets.

Respectfully submitted,  
**EXPATRIATE RESOURCES LTD.**



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Jason K Dunning, MSc, P.Geo  
Vice President, Exploration

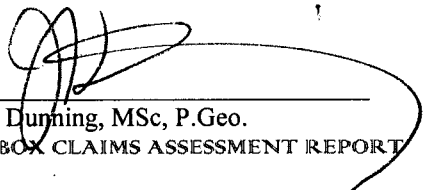
## STATEMENT OF EXPENDITURES

I, Jason Dunning, as agent for Expatriate Resources Ltd., #701-475 Howe Street, Vancouver, B.C. do solemnly declare that geological investigations of the deposit model, geophysical survey and subsequent interpretation was carried out on the Box quartz mining claims between June 20<sup>th</sup>, 2003 and July 3<sup>rd</sup>, 2003.

Assays/Geochemical Analysis	\$0.00
Meals & Accommodation	\$0.00
Camp Materials	\$0.00
Fixed Wing	\$0.00
Helicopter	\$0.00
Communications	\$0.00
Heavy Equipment Contractors	\$0.00
Direct Drilling Costs	\$0.00
Drill Mobilization/De-Mobilization	\$0.00
Drill Supplies	\$0.00
Equipment Rentals	\$0.00
Environmental Baseline Study	\$0.00
Expediting	\$0.00
Field Office	\$0.00
Fuel	\$0.00
Geophysical – Contractor	\$39,082.51
Geophysical – Consultant	\$750.00
Propane	\$0.00
Wages – Professional	\$5,325.89
Wages – Non professional	\$1,098.40
Material and Supplies	\$0.00
Truck Rental	\$0.00
Data Entry	\$0.00
Printing & Reproduction	\$300.00
Report Writing	\$1,250.00
Ore Reserves & Pit Optimization Engineering	\$0.00
Consultant – Project Engineer	\$0.00
Freight & Shipping	\$0.00
Car Rental & Parking	\$0.00
Safety Supplies	\$0.00
Travel Costs	\$0.00
<b>Total</b>	<b>\$48,503.92</b>

I make this solemn declaration conscientiously believing it to be true and knowing that it is of the same force and effect as if made under oath and by virtue of the Canada Evidence Act.

Declared before me at Vancouver in the Province of British Columbia this 10<sup>th</sup> of September, 2004.

  
 Jason Dunning, MSc, P.Ge.  
 2004 BOX CLAIMS ASSESSMENT REPORT

## CERTIFICATE OF QUALIFICATIONS

1. I, **Jason K Dunning**, of 12041 234<sup>th</sup> Street, Maple Ridge, British Columbia, V2X 9K7, Canada, hereby state – that I am the Vice President of Exploration for Expatriate Resources Ltd. with offices at Suite 701, 475 Howe Street, Vancouver, British Columbia, V6C 2B3, Canada:
2. I hold a B.Sc. (Honours Geology) from Carleton University, Ontario (1994) and a M.Sc. (Geology) from the Mineral Exploration Research Centre at Laurentian University, Ontario (1997).
3. I have 8 years experience with various research institutions and mining companies in Canada and the United States, not including my summer field season work during my undergraduate degree. My primary employment since 1994 has been in the field of mineral exploration.

2003-Present	Vice President	Expatriate Resources Ltd.
2002-2003	Project Geologist	Anglo American Exploration (Canada) Ltd.*
1999-2002	Project Geologist	Hudson Bay Exploration & Development Co. Ltd*
1996-1999	Geologist	Pamicon Developments Ltd.
1994-1996	Geologist	Teck Exploration Ltd./Laurentian University

\* denotes same organization

4. I am a Professional Geoscientist in good standing with the Association of Professional Geoscientists of Ontario (0725).
5. I am also a member in good standing with the Society of Economic Geologists (222555), as well as a Fellow of the Geological Association of Canada (F6819).
6. I hold a valid Manitoba Prospector Licence (4077) and Free Miner Certificate in British Columbia.
7. I have specialized training in the areas of volcanology, ore deposit geology and hydrothermal alteration through academic training, numerous short-courses, and exploration project experience. My experience has allowed me to become familiar with the evaluation of both regional and property geology, prospecting, geophysical surveys, geochemical analysis, diamond core drilling, and the various facets of the permitting process in British Columbia, Manitoba, Nunavut Territory, Ontario, Saskatchewan, and Yukon Territory, as well as Idaho and Alaska, USA and Portugal.
8. This report is based upon data collected from data collected during June and July 2003 UTEM-3 geophysical program in the Finlayson Lake area, Yukon Territory, Canada.

DATED at Vancouver, British Columbia; Friday, September 10<sup>th</sup>, 2004

Respectfully submitted,




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Jason K Dunning, M.Sc., P.Geo.  
Vice President, Exploration

**REFERNCES**

**Klein, J. (2003):** Box Claims UTEM Survey (Confidential Internal Expatriate Resources Ltd. report)

**Visser, S. (2003):** Logistics Report for UTEM-3 (large loop time domain EM) Survey, Box Claims, Finlayson Lake area, Watson Lake Mining District, Yukon Territory (Confidential Internal Expatriate Resources Ltd. report)

**APPENDIX 1:****UTEM-3 SPECIFICATIONS****TRANSMITTER**

Output voltage	+/- 250V Max.
Output current	+/- 6A in 32 ohms (500m x 500m loop) +/- 3.5A in 64 ohms (1000m x 1000m loop) +/- 2.5A in 100 ohms (1500m x 1500m loop) +/- 1.25A in 200 ohms (3000m x 3000m loop)
Base frequency	3.9Hz – 45Hz
Load Resistance	0 – 300 ohms
Power source	120V /50-60Hz at 1750W
Operating temperature	-45 to +50 deg. C.
Time base	High precision ovenized crystal oscillator. < 10 microseconds drift per working day

**RECEIVER**

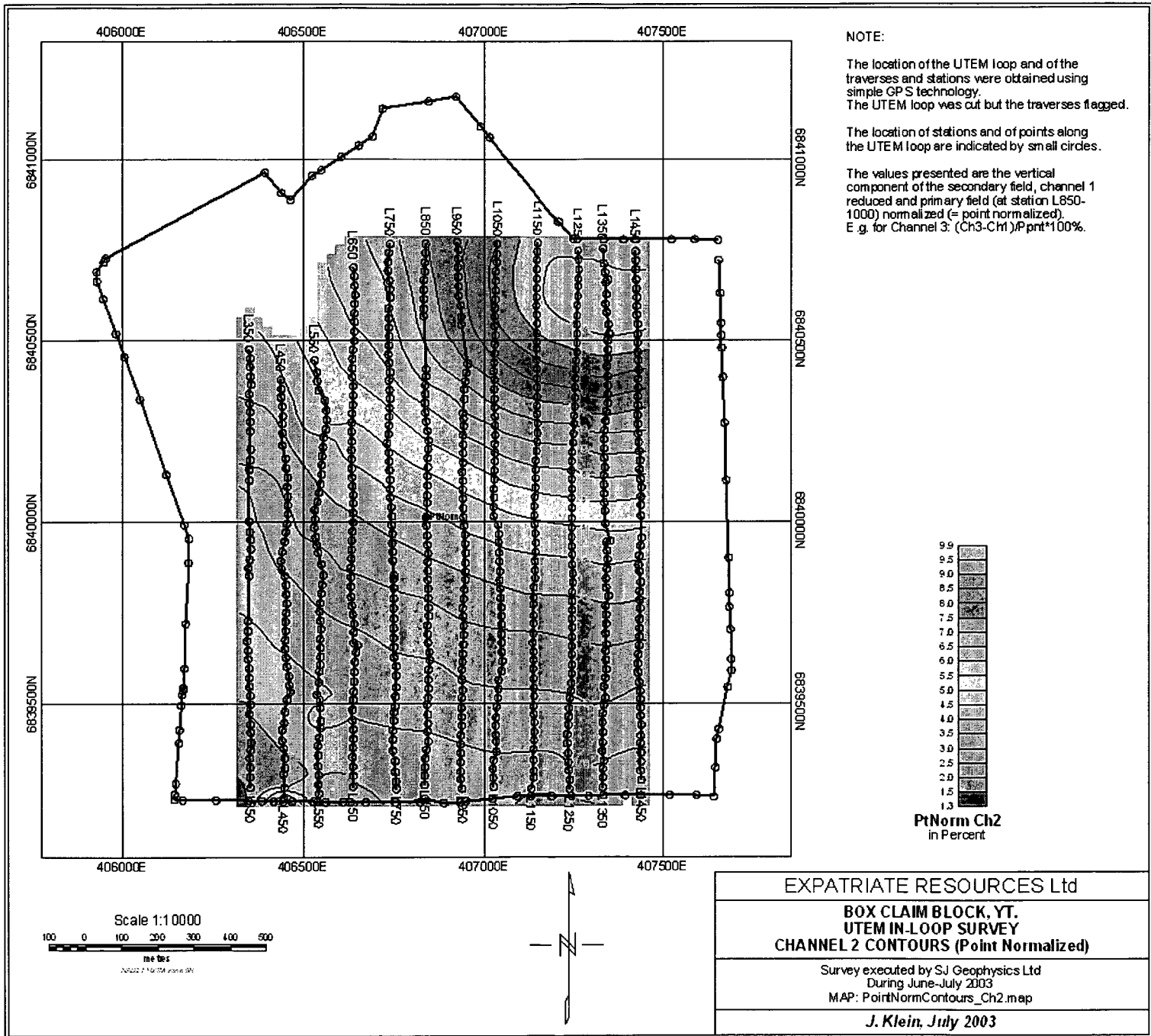
Number of channels	up to 32
Signal Gain	Adjustable from 1 to 256 Selectable 8x accumulator gain
Input selection	Hx, Hy, Hz, Ex, Ey, Calibration
Stacking	Selectable from 256 to 128k
Time base	High stability crystal oscillator
Operating temperature	-45 to +50 deg. C.

**COIL**

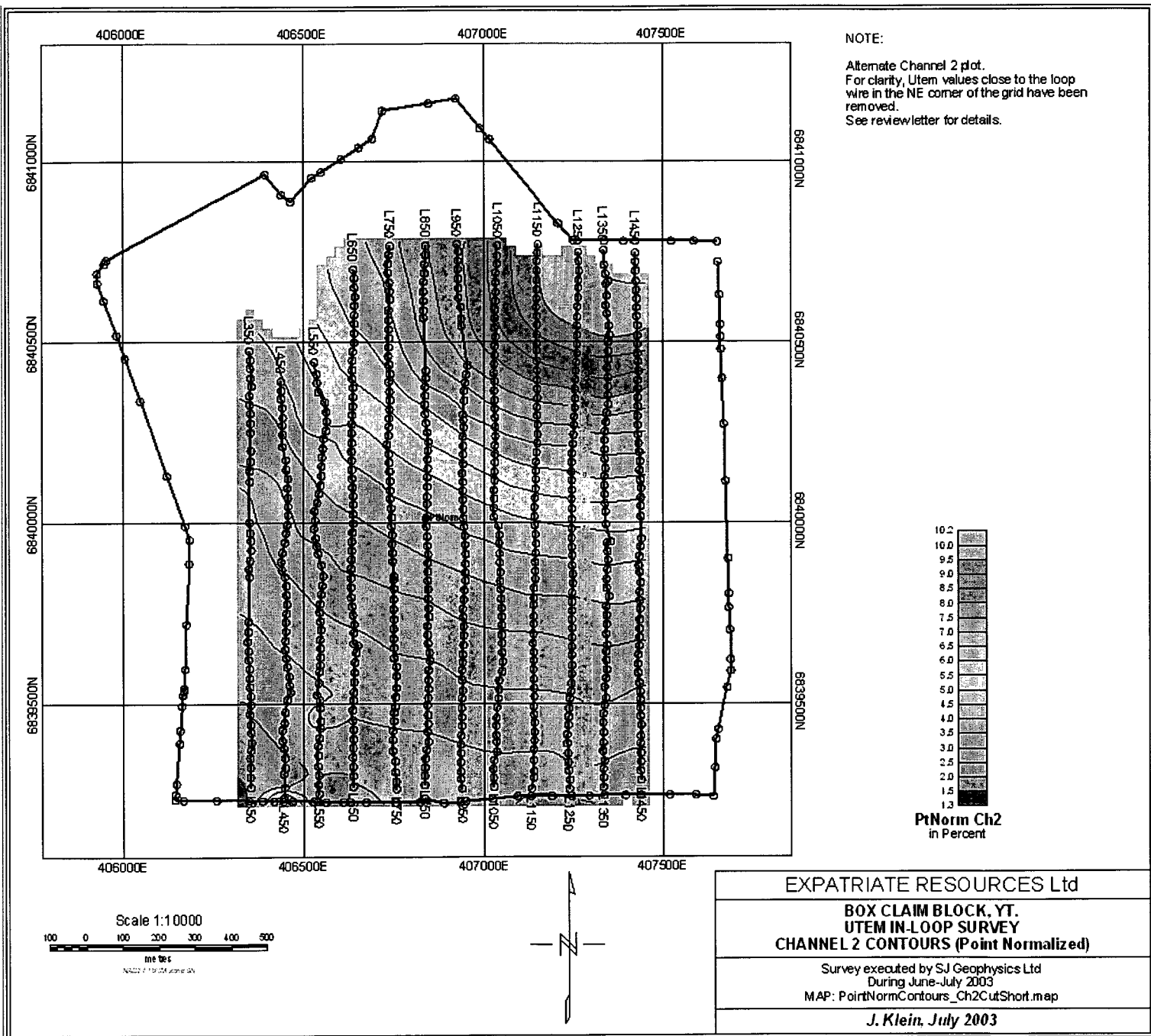
Effective area without amplifier	600m <sup>2</sup>
Output effective area	62,700m <sup>2</sup>
Stability of sensitivity	+/- 0.3%
Bandwith	0.03Hz – 45kHz
Operatating temperature	-45 to +50 deg. C.
Operating modes	Total field, base, tie-line
Operating temperature	-45 to +50 deg. C.
Sensor	Proton precession

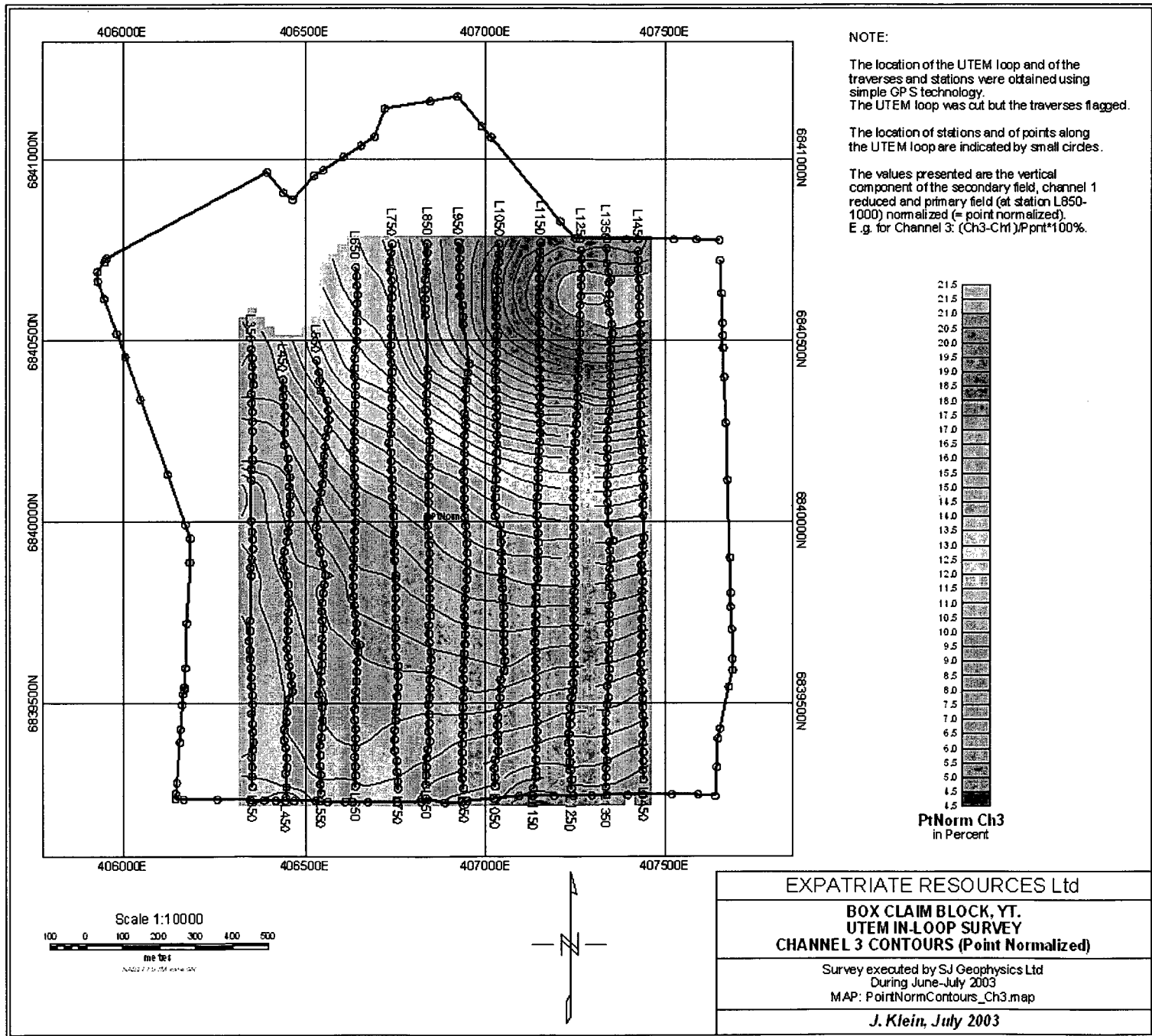
Dynamic range	18,000 – 110,000 gammas
Tuning	Automatic over entire range
	+/- 15% relative to ambient field of last stored total field
Polarizing cycle	Microprocessor controlled
Processing sensitivity	+/- 0.02 gammas
Resolution	0.1 gammas
Absolute accuracy	+/- 1 gamma at 50,000 gammas at 23 deg. C
	+/- 2 gammas over total temperature range
Statistical error reject threshold	0.2 gammas
Statistical error resolution	0.01 gammas
Memory	
Field	1300 readings
Tie-line points	100 readings
Base station	5500 readings

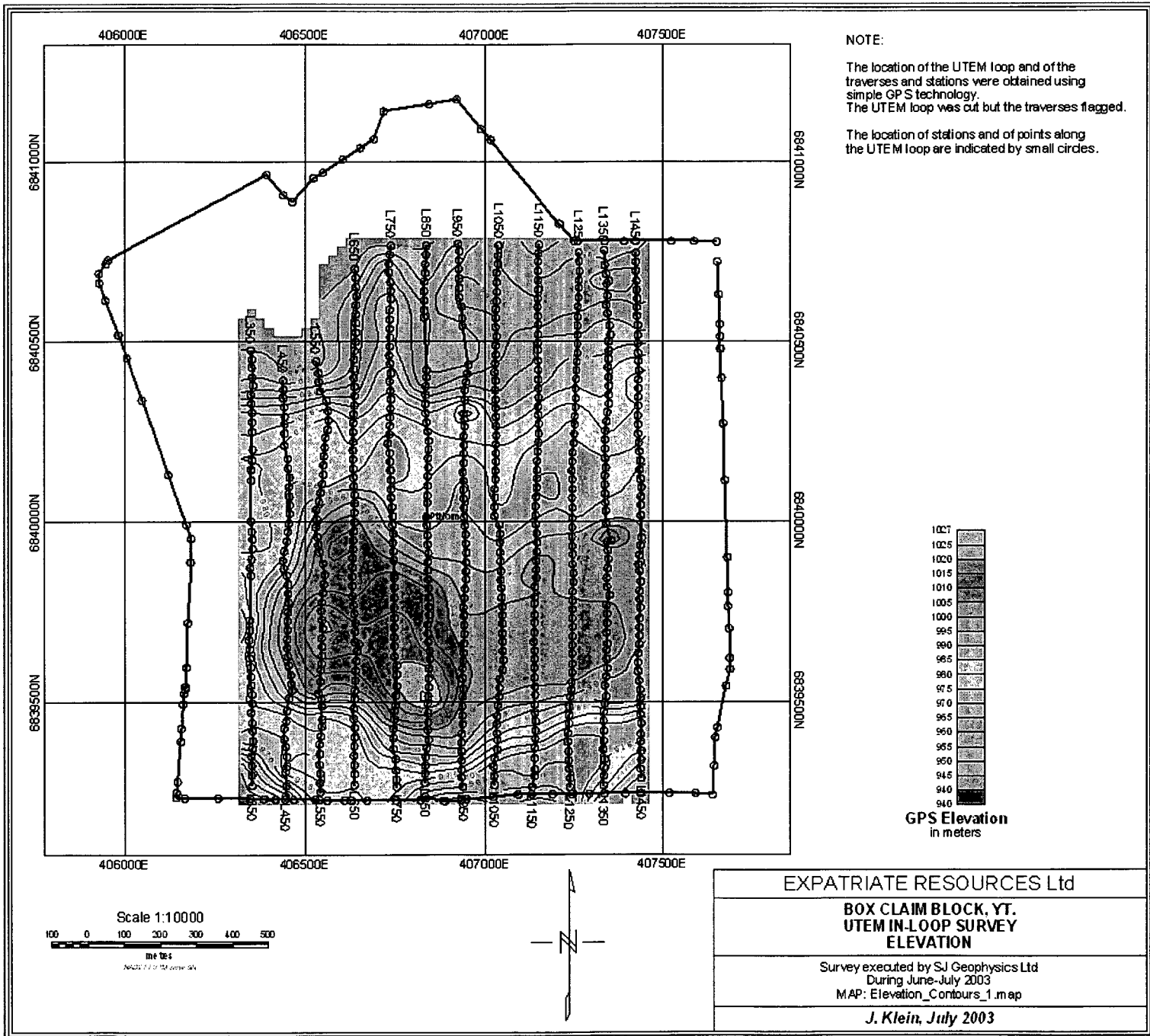
**APPENDIX 2:**

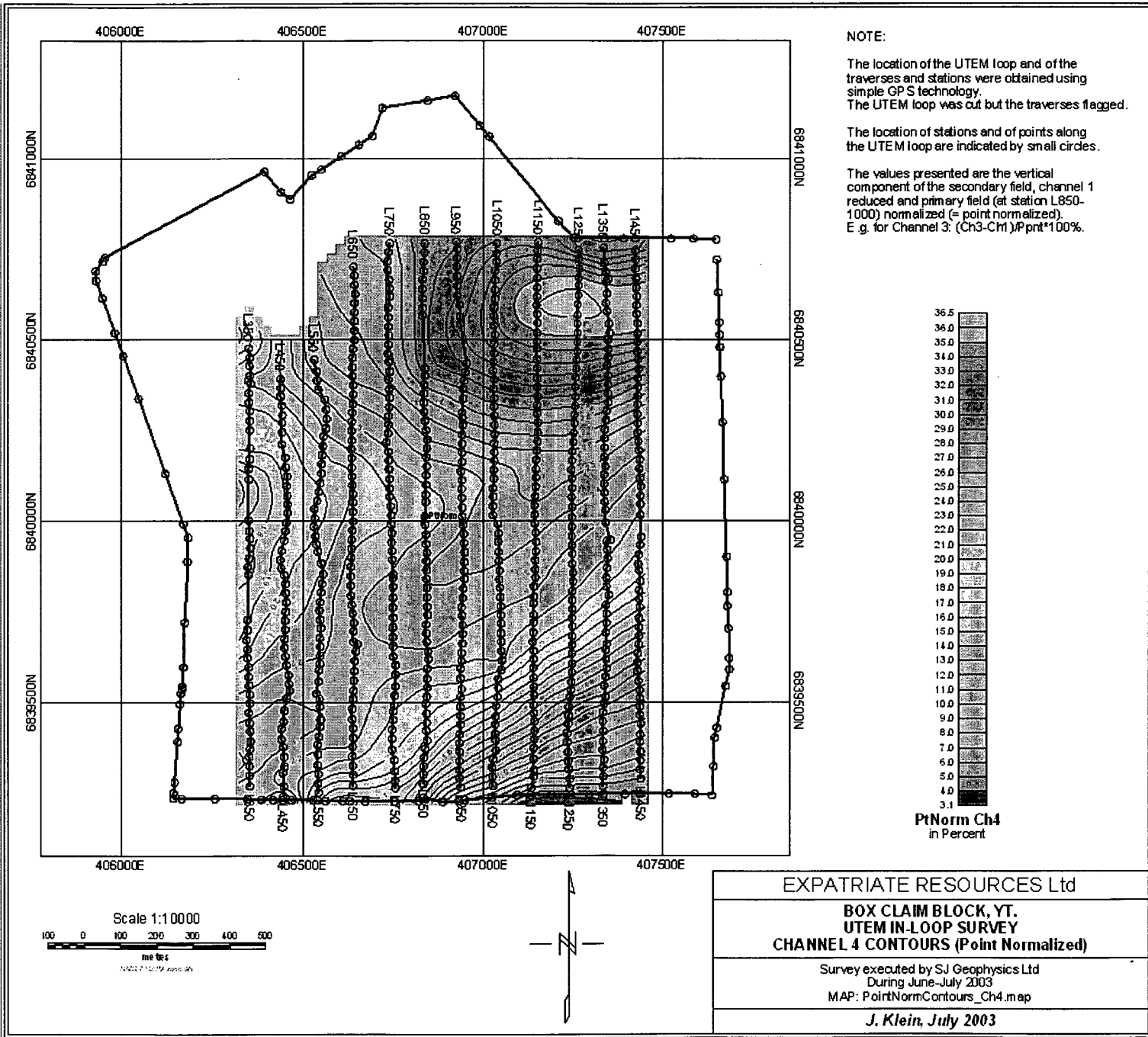










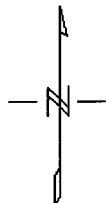
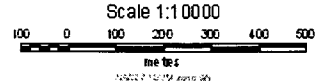
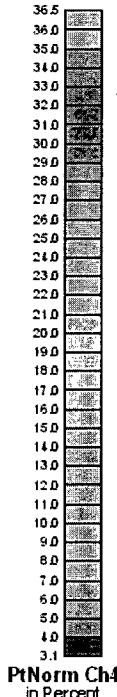


**NOTE:**

The location of the UTEM loop and of the traverses and stations were obtained using simple GPS technology. The UTEM loop was out but the traverses flagged.

The location of stations and of points along the UTEM loop are indicated by small circles.

The values presented are the vertical component of the secondary field, channel 1 reduced and primary field (at station L850-1000) normalized (= point normalized).  
E.g. for Channel 3: (Ch3-Ch1)/Pprt\*100%.



EXPATRIATE RESOURCES Ltd

**BOX CLAIM BLOCK, YT.**  
**UTEM IN-LOOP SURVEY**  
**CHANNEL 4 CONTOURS (Point Normalized)**

Survey executed by SJ Geophysics Ltd  
During June-July 2003  
MAP: PointNormContours\_Ch4.map

*J. Klein, July 2003*

