AL RUDIS

TOTAL MAGNETIC FIELD SURVEY OF THE CHERYL CREEK PROPERTY, FIFTY MILE RIVER AREA, YUKON TERRITORY

M.A. Power
AMEROK GEOSCIENCES LTD.

CLAIMS
BER 1 - 30P44335 - P44364

Location: 63° 51'N, 140° 30'W
NTS: 105 N 16
Mining District: Dawson, YT.
Date: October 24, 2000

SUMMARY

A total magnetic field survey was conducted on the Cheryl Creek Property in the Fifty Mile River area, western Yukon to locate auriferous gravels in the creek bed. The survey was conducted by a one man crew between August 20 to25, 2000. The crew covered 10.5 line km on 84 lines, surveying at a 5 m station spacing over a flagged grid centred on the creek centre line. The survey was conducted with a pair of proton precession magnetometers using one instrument as a base station and the second as the field unit. All field data was corrected for temporal geomagnetic variation using the base station. The survey identified several anomalies which could be caused by bedrock or placer magnetite sources.

TABLE OF CONTENTS

LIST OF FIGURES

1.0 INTRODUCTION

Amerok Geosciences Ltd. was retained by Al Rudis to conduct ground total magnetic field surveys on the Cheryl Creek Property. A total of 10.52 line-km of grid were surveyed between August 20 and 25, 2000. The surveys were conducted to locate auriferous placer deposits associated with magnetite along the creek. This report describes the survey specifications and operations, data and contains an interpretation of the results.

2.0 LOCATION AND ACCESS

The Cheryl Creek Property is centred at 63° 51'N, 140° 30'W, on Cheryl Creek, in the Fifty Mile River area of the western Yukon Territory. The property is located approximately 55 km southwest of Dawson City, Yukon (Figure 1). The property is accessible by helicopter from Dawson City.

3.0 PROPERTY

The Cheryl Creek Property consists of 30 un-surveyed placer claims staked under the Yukon Placer Mining Act in the Dawson Mining District, Yukon Territory. Claim information[1] is summarized below:

Claim	Grant No.	Owner	Expiry date
BER 1-30	P44335 - P44364	Ralph Nordling (100%)	August 23, 2001

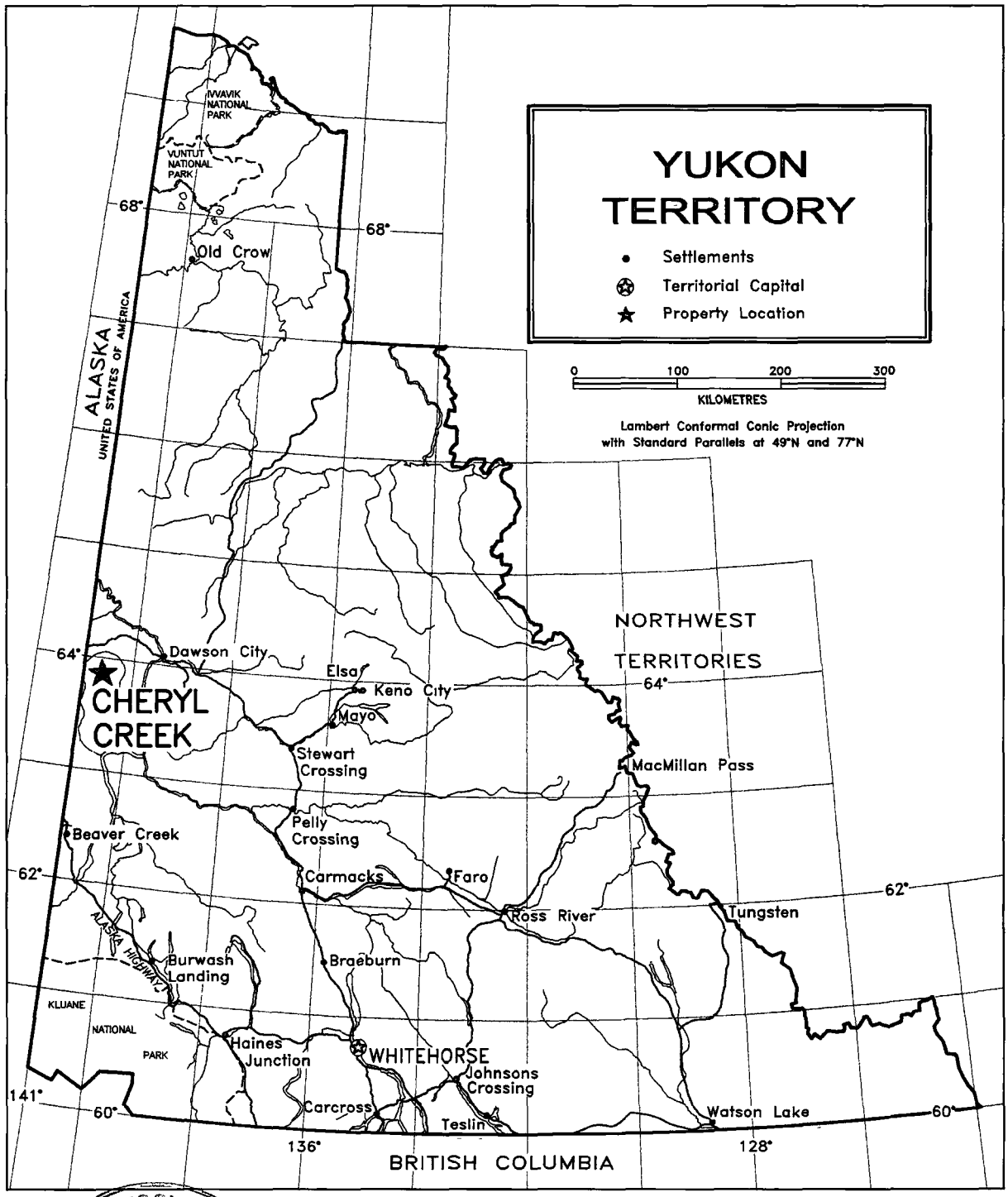
Claim locations as shown on government claim maps and the location of the survey grid are shown in Figure 2.

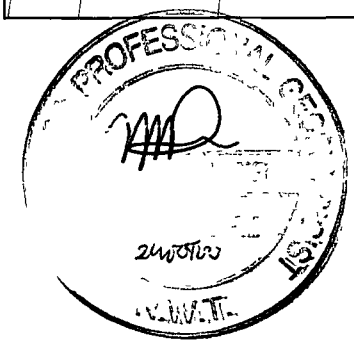
4.0 PHYSIOLOGY AND PLACER GEOLOGY

The geology and physiology of the area containing the Property has been described by Cockfield (1921) and Gordey and Makepiece (1999). The property is located in the Yukon Plateau, south of the Tintina Trench at elevations ranging from 600 to 1000 m. The area is subject to continental climatic conditions with short, warm summers and cold winters. Temperatures range from 15 to 25° C during the summer period and down to -50° C during the coldest months of winter.

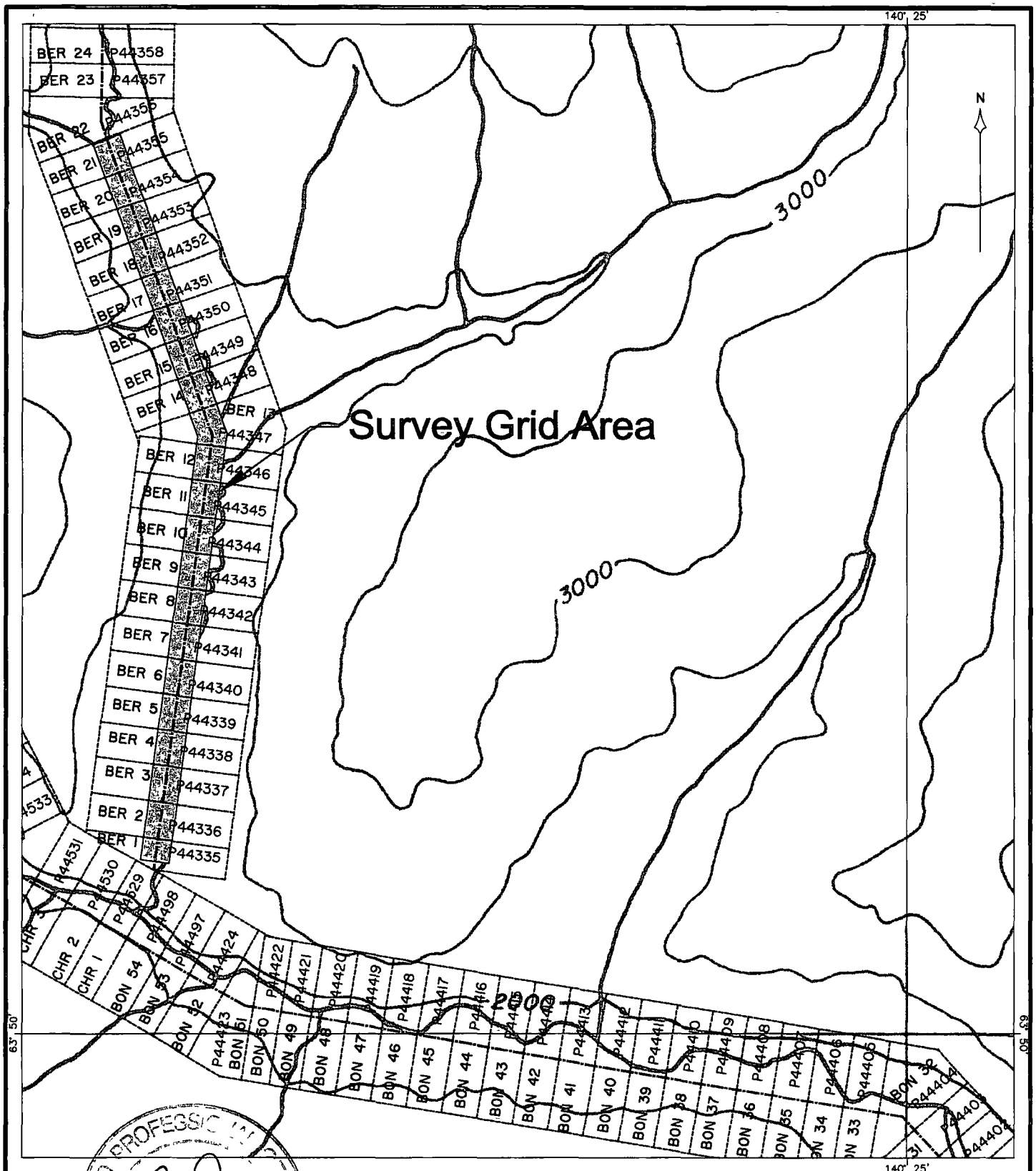
The Cheryl Creek property is underlain by two rock units. To the north of L1190N,

[1] Claim information per Claim Status Report by the Dawson Mining Recorder on October 24, 2000





AL RUDIS	CHERYL CREEK PROPERTY
PROPERTY LOCATION	MINING DISTRICT: DAWSON
	NTS 115 N\16 / SCALE 1: 6 000 000
	DRAWN BY: HDS
Amerok Geosciences Ltd.	DATE: 2000.10.16 / FIGURE 1



REGISTERED PROFESSIONAL GEOLOGIST
N.W.T.

AL RUDIS	CHERYL CREEK PROPERTY	
CLAIM LOCATION	MINING DISTRICT: DAWSON	
	NTS: 115 N/16	SCALE 1: 7 500
	DRAWN BY: HDS	
Amerok Geosciences Ltd.	DATE: 2000.10.17	FIGURE: 2

the property is underlain by metamorphosed mafic rocks including amphibolite and ultramafic rocks belonging to the Nisling, Nasina, and Slide Mountain assemblages. These rocks appear to strike east-west based on their aeromagnetic signature. South of L1190N, the property is underlain by orthogneiss of the Fifty Mile Batholith. The intrusive rocks have a very subdued aeromagnetic signature. Residual magnetite in placer deposits on Cheryl Creek is likely derived from the northern rock unit.

There are no hard rock showings on Cheryl Creek indicated by the Yukon Minfile. Several significant showings occur elsewhere in the area. The Butler Showing (115N42) is 7 km NW of the Cheryl Creek Property and contains vein hosted Pb-Ag-Au mineralization in metasediments. The Connaught Showing (115N40) consists of galena and sphalerite with minor sphalerite, tetrahedrite and boulangerite in a series of northeast striking quartz veins along the contact between the Fifty Mile Batholith and the intruded mafic metamorphic rocks. Shipments of hand cobbed ore were made from both showings during the 1966 and 1976 which averaged approximately 2200 g/t Ag and 1.0 g/t Au.

Cockfield (1921) describes the regional placer geology. The property occurs in a large area of the western Yukon which escaped Quaternary glaciation. Placer gold occurs in pre-glacial valley-bottom gravels and in benches or terraces along the streams. Gravels are described as poorly sorted and consisting of cobbles and pebbles (to 10 cm) of metamorphic rocks overlain by loess and lesser sand and gravel. The bench deposits occur at a higher elevation and have a lower average gradient indicating that the present stream channel gravels formed through reworking of older deposits and down-cutting associated with regional uplift.

5.0 SURVEY GRID

The geophysical surveys were conducted on a flagged grid centred on Cheryl Creek. The base line (BL 0E) runs along the main channel of Cheryl Creek for 3.2 line-km at an azimuth of 190^0 south of L1190N and at an azimuth of 158^0 north of this location. The grid consists of 10.50 line-km along 84 survey lines. Lines were hip chained, not slope corrected and flagged at intervals suitable for the survey.

6.0 PERSONNEL AND EQUIPMENT

The surveys were conducted by the following personnel:

Sean Ryan	c/o Box 887 Dawson City, YT Y0B 1G0

He was equipped with the following instruments and equipment:

Instruments:	1 - GEM Overhauser magnetometer
	1 - GEM Proton precession magnetometer

The geophysical crew spent a total of 6 days on the property. Instrument specification are attached in Appendix B.

7.0 SURVEY SPECIFICATIONS

The magnetometer survey was conducted according to the following specifications:

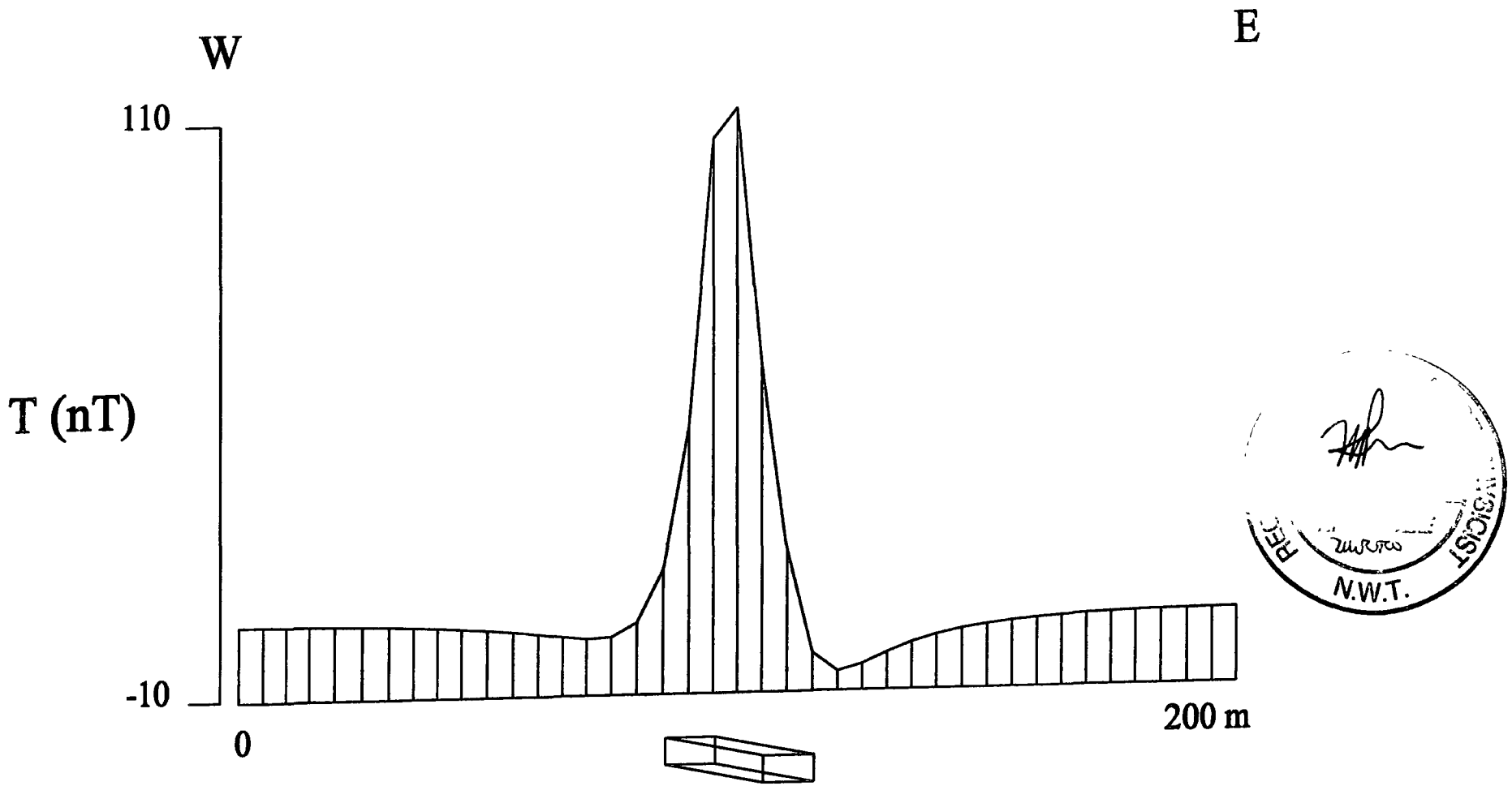
Station spacing:	5 m
Base station:	Installed on the survey grid and cycled at 5 s throughout the survey.

8.0 MAGNETIC FIELD THEORY

Magnetic field theory is well described in standard texts (eg. Telford *et. al.* 1990). In a placer setting, magnetite derived from bedrock weathering is concentrated in the main channel of a creek or river (thalweg) where the water flow has the highest velocity and greatest turbulence. As a result, minerals with high specific gravity (magnetite, ilmenite, gold, etc.) are preferentially concentrated in this region of the stream bed as material with lower specific gravity is winnowed from the sediment. High concentrations of "black sand" (magnetite, ilmenite, chromite) are often recorded in auriferous pay streaks where the stream bed has remained relatively immobile for some period, permitting hydraulic concentration to build up a significant volume of these minerals.

The materials comprising black sand are magnetically susceptible. Magnetite has a very high magnetic susceptibility of 1200-19200x10^{-3} SI units and ilmenite ranges from 300-3500x10^{-3} SI units. Average magnetic susceptibilities for sedimentary, igneous (excluding ultramafic) and metamorphic rocks are 0-18, 3-160 and 0-70 x10^{-3} SI units and the magnetic susceptibility of fluvial sediments is in the range 0-2x10^{-3} SI units. There is consequently a susceptibility contrast between gravels with elevated concentrations of black sand, and both bedrock and average gravels. In the author's experience, most placer magnetic field anomalies are of low amplitude, in the range of 50 to 200 nT.

A knowledge of expected magnetic responses on the property is useful in interpreting the data. Forward models of typical magnetic responses for a placer deposit at Cheryl Creek were generated using Geopak REVS software to determine



Placer deposit model
Dimensions: 50 m (NS) x 10 m (EW) x 5 m (thick)
Strike: N (0°)
Susceptibility contrast: 0.003 SI units

Figure 3. Magnetic model for a placer channel on Cheryl Creek, YT.

the signature of a prospective target on the property. The models incorporate the local earth field described by the International Geomagnetic Reference Field (IGRF) for the time and location of the survey. Field parameters were calculated using the United States Geological Survey program IGRFPT and are summarized below:

Total field strength:	57,332 nT
Inclination:	77.80^0
Declination:	28.86^0 E

As an approximation of a placer deposit, a rectangular slab with dimensions of 50m (N-S) by 10 m (E-W) by 5 m thick oriented with a long axis pointing north was used in the modeling. A magnetic susceptibility contrast of $3x10^{-3}$ SI units has been inferred. The orientation of the slab and of an E-W survey line across it are shown in Figure 3.

The response of a placer deposit in this setting would likely consist of a central peak with asymmetric flanking trough responses. The central peak is located over the centre of the deposit or slightly (2 to 4 m) magnetically east of the centre of the source body. The half amplitude point on the east side of the anomaly occurs over the east side of the source body. The break in slope of the flat top of the anomaly on the west side occurs is coincident with the west edge of the source body. If the source body is at a depth greater than its thickness (eg. 5 m thick at 15 m depth), the flanking troughs will be absent and the response will be much smoother. The amplitude of the response is proportional to the magnetite content but does not influence the shape of the anomaly. Neither the thickness nor depth to top can be determined accurately without complementary geophysical techniques. The total magnetic field data is best used for indicating the surface projection of magnetic sources which may be of potential economic interest and is of comparatively little use in deriving information on the geometric parameters of the source body.

9.0 RESULTS

Digital data is appended to this report on disk. The magnetic field data is in the following format:

Line Station UTM_E UTM_N Corr_field

where Corr_field is the corrected magnetic field.

The following plots at 1:5,000 are appended to this report in the back pockets:

Figure 4.	Total magnetic field stacked profiles
Figure 5.	Total magnetic field contour map

Each plot shows the survey grid in nominal (ie. uncorrected) coordinates with the small ticks indicating the reading station location and the larger ticks at 50 m intervals coincident with the station labels. The stacked profiles display the total magnetic field (in red) with an increasing field trending above the survey line. The total field contour map displays the total field amplitude according to a blue to red colour scheme illuminated from a shallow easterly sun angle to highlight total magnetic field trends parallel to the stream drainage.

The total magnetic field survey identified a series of anomalies in the creek bed which could be caused by concentrations of placer magnetite. Many of these lack flanking troughs suggesting that the deposits are deeper than they are thick. The possible locations of placer magnetite sources are identified in blue in Figure 4. The shaded total field map in Figure 5 shows additional features, including a change in total field amplitude roughly coincident with both the bend in the base line and the location of the inferred contact between the metamorphic rocks and the Fiftymile Batholith.

11.0 CONCLUSIONS AND RECOMMENDATIONS

The results of the total magnetic field survey conducted on the Cheryl Creek property indicate the location of several anomalies which could be arise from placer magnetite concentrations. These anomalies should be investigated on the ground and tested by excavation if resources permit. Those anomalies with higher amplitudes and flanking negative anomalies should be investigated first.

Respectfully submitted,
AMEROK GEOSCIENCES LTD.

Michael A. Power, M.Sc. P.Geo.
Geophysicist

References Cited

Cockfield, W.E. (1921) Sixtymile and Ladue Rivers Area, Yukon. Ottawa: Geological Survey of Canada Memoir 123.

Gordey, S.P and Makepeace, A.J. (1999) Yukon Digital Geology. Geological Survey of Canada Open File D3826.

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, with residence and business address in Whitehorse, Yukon Territory do hereby certify that:

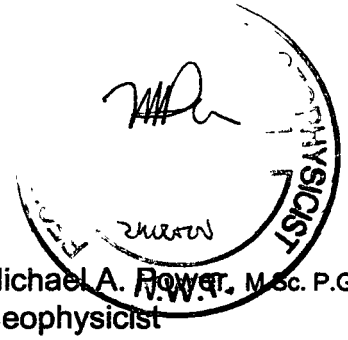
1. I hold a B.Sc. (Honours) in Geology granted in 1986 and M.Sc. in Geophysics granted in 1988, both from the University of Alberta.

2. I have been actively involved in mineral exploration in the northern Cordillera and in the Northwest Territories since 1988. I am a professional geoscientist registered with the Association of Professional Engineers and Geoscientists of British Columbia (Registration number 21131) and a Professional Geophysicist registered with the Northwest Territories Association of Engineers, Geologists and Geophysicists.

3. I supervised the geophysical surveys described in this report, interpreted the data collected and prepared this report.

4. I have no interest, direct or indirect, nor do I hope to receive any interest, direct or indirect, in the Cheryl Creek property.

Dated this 24th day of October 2000 in Whitehorse, Yukon Territory.



Michael A. Power, M.Sc. P.Geo.
Geophysicist

APPENDIX B. INSTRUMENT SPECIFICATIONS

INSTRUMENT SPECIFICATIONS

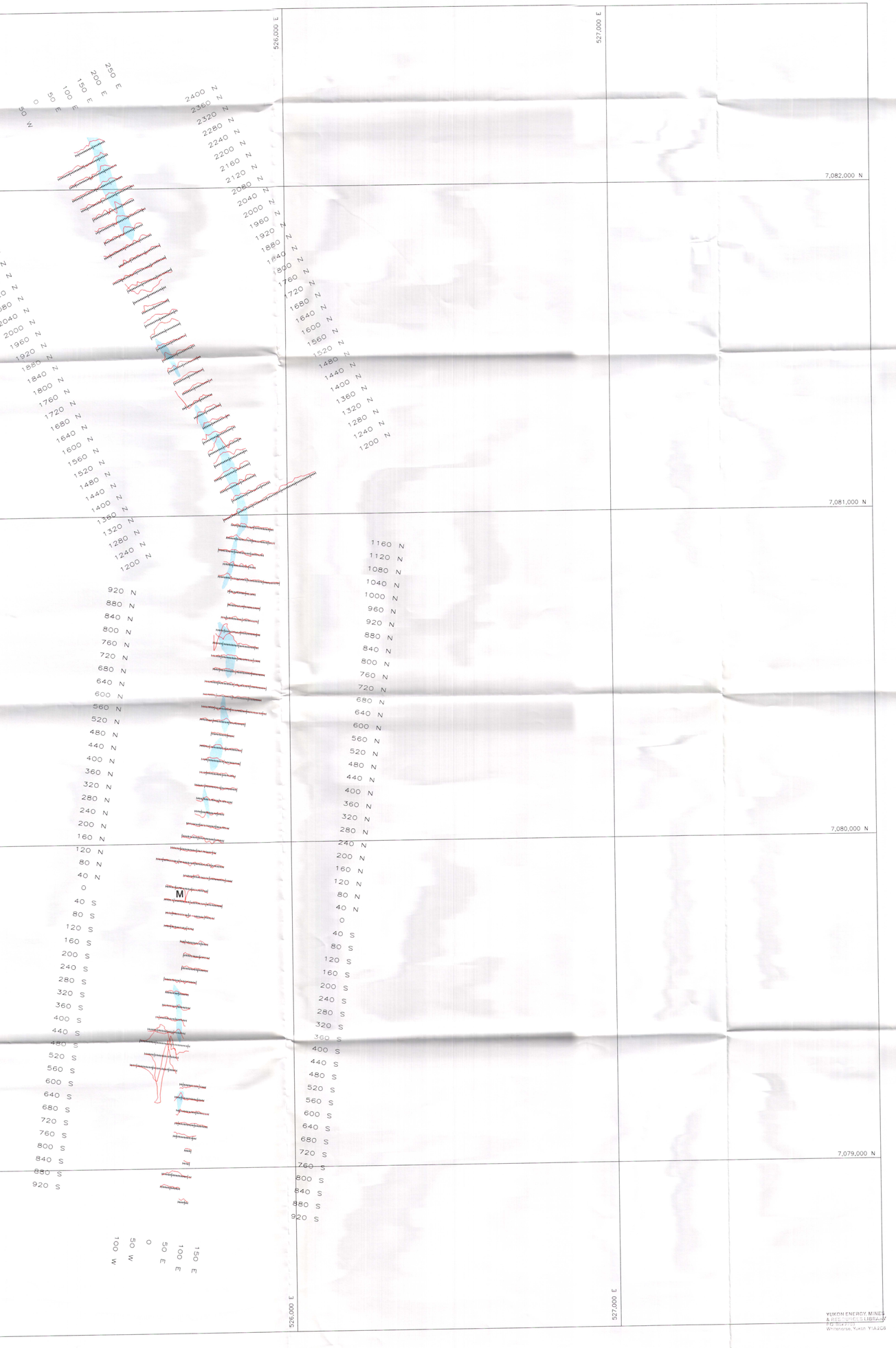
MAGNETOMETER / GRADIOMETER

Resolution:	0.01nT (gamma), magnetic field and gradient.
Accuracy.	0.2nT over operating range.
Range:	20,000 to 120,000nT.
Gradient Tolerance:	Over 10, 000nT/m
Operating Interval:	3 seconds minimum, faster optional Readings initiated from keyboard, external trigger, or carriage return via RS-232C.
Input / Output:	6 pin weatherproof connector, RS-232C, and (optional) analog output
Power Requirements:	12V, 200mA peak (during polarization), 30mA standby 300mA peak in gradiometer mode.
Power Source	Internal 12V, 2.6Ah sealed lead-acid battery standard, others optional An External 12V power source can also be used
Battery Charger:	**Input:** 110 VAC, 60Hz. Optional 110 / 220 VAC, 50 / 60Hz **Output:** dual level charging.
Operating Ranges:	Temperature: - 40°C to +60°C. Battery Voltage: **10.0V minimum to 15V maximum.** Humidity: **up to 90% relative, non condensing.**
Storage Temperature:	-50°C to +65°C.
Display:	LCD: 240 X 64 pixels, OR 8 X 30 characters. Built in heater for operation below -20°C.
Dimensions:	**Console:** 223 x 69 x 240mm. **Sensor Staff:** 4 x 450mm sections. **Sensor:** 170 x 71mm dia **Weight:** console 2 1kg, Staff 0 9kg, Sensors 1 1kg each
VLF	
Frequency Range.	15 - 30.0 kHz plus 57.9 kHz (Alaskan station)
Parameters Measured:	Vertical in-phase and out-of-phase components as percentage of total field 2 relative components of horizontal field Absolute amplitude of total field
Resolution:	0.1%
Number of Stations:	Up to 3 at a time
Storage:	Automatic with: time, coordinates, magnetic field / gradient, slope, EM field, frequency, in- and out-of-phase vertical, and both horizontal components for each selected station.
Terrain Slope Range:	0° - 90° (entered manually).
Sensor Dimensions:	140 x 150 x 90 mm. (5.5 x 6 x 3 inches).
Sensor Weight:	1.0 kg (2.2 lb).

9 V 1997

APPENDIX C. STATEMENT OF EXPENDITURES

524,000 E
525,000 E
526,000 E
527,000 E
7,082,000 N
7,081,000 N
7,080,000 N
7,079,000 N



29°
N

Total Magnetic Field
57,400
T(nT)
56,600

MAGNETIC ANOMALY SOURCE

0 400
metres
Scale: 1: 5,000

AL RUDIS

CHERYL CREEK PROPERTY

TOTAL MAGNETIC FIELD SURVEY
STACKED PROFILE
FIGURE 4.

NTS: 116 N/16	Datum: NAD 27
Mining District: Dawson	
Job: 2000-016	Date:24 October 2000

AMEROK GEOSCIENCES LTD.

524,000 E

525,000 E

526,000 E

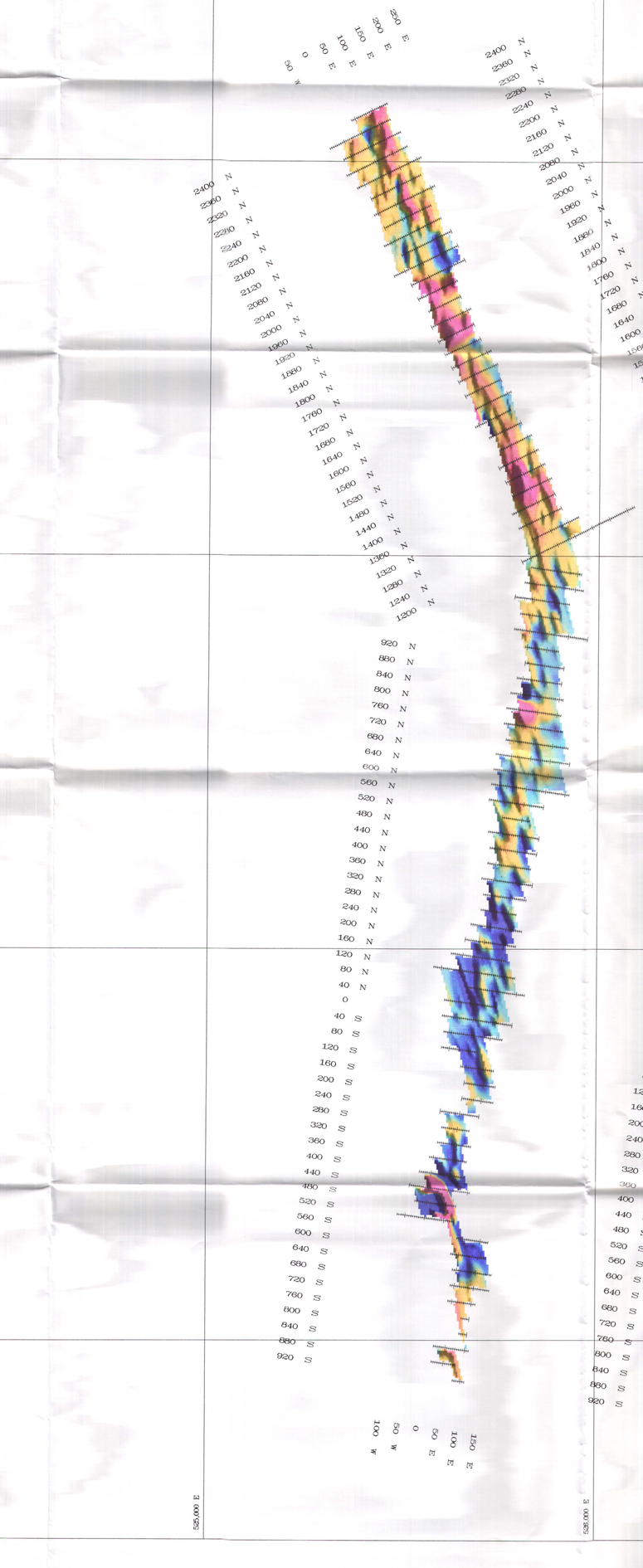
527,000 E

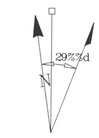
7,082,000 N

7,081,000 N

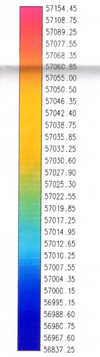
7,080,000 N

7,079,000 N





INCL : 53.98
DECL : 82.96



Total magnetic field (nT)

GRID CELL SIZE: 5 m

FILTERS: 3-point

0 400

metres

Scale: 1: 5,000

AL RUDIS

CHERYL CREEK PROPERTY

TOTAL MAGNETIC FIELD SURVEY
CONTOUR MAP
FIGURE 5.

NTS: 116 N/16	Datum: NAD 27
Mining District: Dawson, YT	
Job: 2000-016	Date:24 Oct 2000

AMEROK GEOSCIENCES LTD.

YUKON ENERGY, MINES & RESOURCES (LIBRARY)
P.O. Box 2703
WHITEHORSE, Yukon Y1A 2C6