

Aberfoyle Resources Limited

EXPLORATION DIVISION
ACN 004 664 108

95-3788

MICROFILMED
FICHE No. 013755-56

EXPLORATION LICENCE 14/91

MOUNT TOR

TASMANIA

Partial Relinquishment Report

on Exploration to October 1995

VOLUME 1 OF 1

FILE NO	EL 14/91
DATE	30 OCT 1995
	SEE FOLIO
	69,70

OPEN FILE

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Internal Report No: Mount Tor 3

STANDARD INFORMATION

95-3788

EL 14/91 MT TOR PARTIAL RELINQUISHMENT REPORT TO OCTOBER 1995 RICHARDSON, S ABERFOYLE

ION

- Burnie (1/3)
- Melbourne (2/3)
- sources Tas (3/3)

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LIST OF FIGURES

1. EL 14/91 Mount Tor Locality Plan

1.0 SUMMARY

Work on EL 14/91 has focussed on an attempt to locate synvolcanic structures. Areas of prospective stratigraphy, such as potential correlates of the Rosebery host sequence at depth, adjacent to synvolcanic faults, are seen as conceptual targets for Volcanic Hosted Massive Sulphides.

Delineation of structures was attempted from interpretation of a close spaced aeromagnetic survey flown in March, 1994.

No major structures were interpreted and no further work proposed within the area to be relinquished.

2.0 INTRODUCTION

Prior to reduction Exploration Licence 14/91, Mount Tor, covered an area of 62 sq km and is located 15km northeast of Hellyer mine, Figure 1. The licence was granted to Aberfoyle Resources Ltd. on 18th October, 1991.

The area was considered prospective for Volcanic Hosted Massive Sulphide (VHMS) mineralisation in outcropping felsic volcanoclastic sequences of the Southwell Subgroup and in possible Que-Hellyer Volcanic correlates that may underlie these rocks.

No targets worthy of follow up were indicated within the area shown on Figure 1. Consequently 38 sq km of the original licence area are to be relinquished.

This report describes exploration completed by Aberfoyle on the area to be relinquished.

3.0 PREVIOUS EXPLORATION

Modern exploration has been conducted over the area covered by EL 14/91 as part of previous licences 10/74 (Geopeko), EL 36/79 (Billiton and CRA) and EL 39/83 (Billiton).

The most recent work by Billiton and CRA focussed on surface EM with sporadic coverage by soil geochemistry. Detailed mapping was carried out in areas of geophysical or geochemical interest.

4.0 WORK COMPLETED

4.1 Introduction

As most Southwell Subgroup rocks on EL 14/91 have been surveyed with surface EM, future exploration must be directed toward deeper geologically based targets.

The strategy proposed involved delineation of the synvolcanic fault network within the licence. Such structures and in particular their intersections, are seen as potential foci for venting hydrothermal fluids and localisation of massive sulphide deposition.

4.2 Aeromagnetics

4.2.1. Introduction

Given the potential for aeromagnetics to delineate structure a close spaced survey was proposed over EL 14/91.

In March, 1994 a 600 line kilometre survey was flown by Geoterrex Pty Ltd. Flight line spacing was 100 metres with lines oriented at 110° AMG.

Flight lines and contours of magnetic intensity are shown on Plates TOR 24 and TOR 23 respectively.

4.2.2. Interpretation

Interpretation of the Mount Tor aeromagnetic survey was based on generation of ER Mapper algorithms and production of images at 1:25,000 and 1:10,000 scale. Detailed interpretation was carried out on 1:10,000 scale images. Several filters were used but most detail was extracted from real time shades at the three different sun angles (N, SW and SE).

Magnetic discontinuities and sources from each image were recorded on a single overlay to build up a geometric skeleton. This skeleton is presented on Plate TOR 22.

4.2.3. Results

Most sources and breaks are shallow features reflected in the high frequency part of the data. Therefore, spatially persistent breaks that are inferred to reflect faults are shallow and probably Devonian or younger in age.

However, it is inferred that many nests of young shallow aeromagnetic breaks may reflect structures that have been active during the Cambrian. This effect is inferred to be due to reactivation of basement structures during later compressional or extensional events e.g. during the Devonian or Tertiary.

A network of faults have been interpreted from the geometric skeleton and are presented on Plate TOR 21. Unfortunately at Mount Tor, strong geological control (i.e. drill hole information) is not available to distinguish true Cambrian structures.

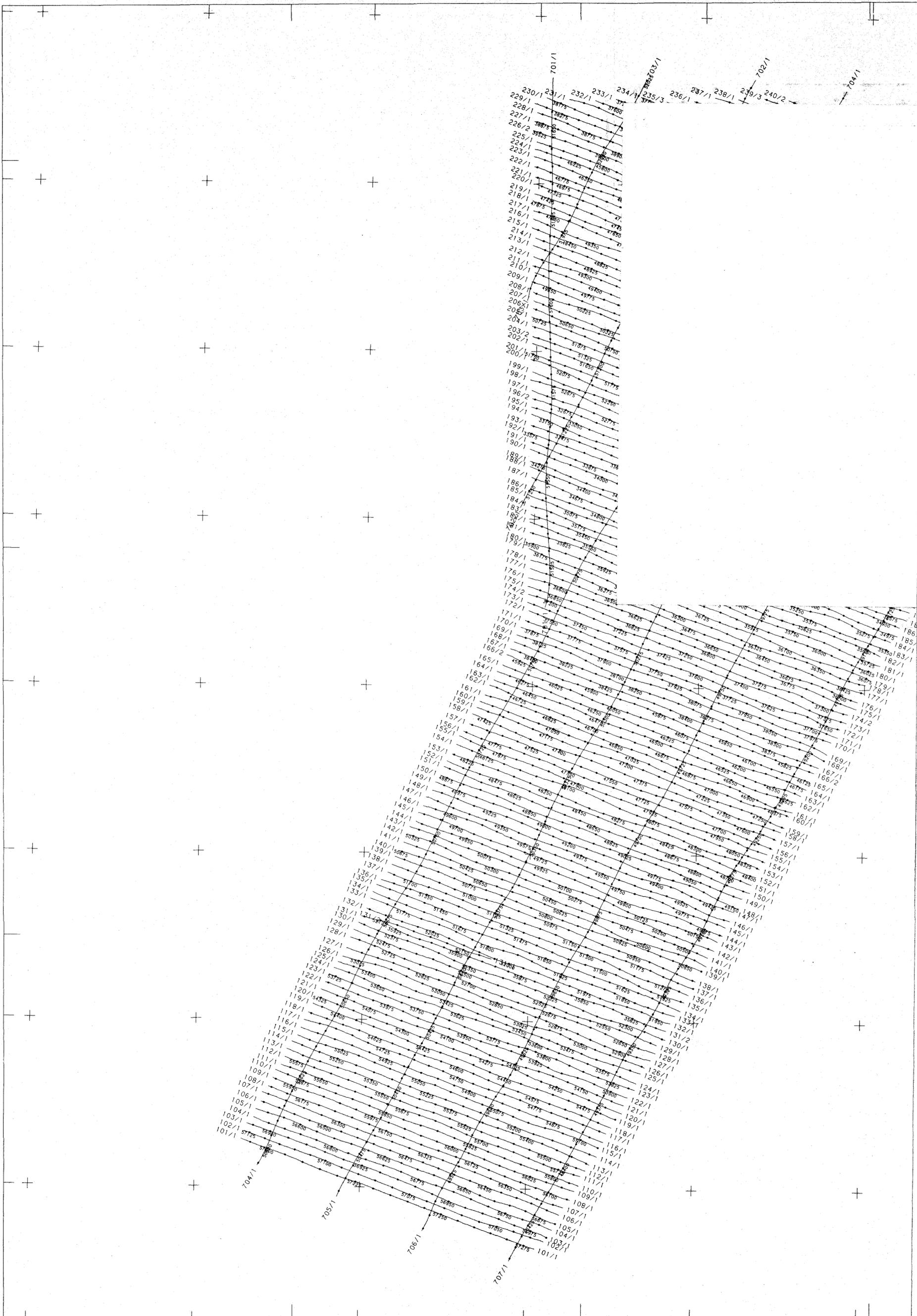
No major structures were identified within the area to be relinquished. Therefore, no targets were recommended for drilling and no further work is proposed.

41°25'00"S

41°27'30"S

41°30'00"S

41°32'30"S



AIRBORNE SURVEY SPECIFICATIONS

5416000N

AIRCRAFT : Aerospetrol AS350B Squirrel helicopter VH-HM
MAGNETOMETER : Cesium Vapour optical absorption
Sensitivity : 0.05 nT
RECORDING INTERVAL : 0.1 sec (approx 4.5 m sampling)
DATA RECORDING : at mean ground speed of 160 km/hour
Geotrex MADACS acquisition system
Digital to magnetic tape
NOMINAL TERRAIN CLEARANCE : Aircraft at 110m, detector in towed bird
at 80m
NOMINAL LINE SPACING : Traverse lines 100 m
Tie lines 1.0 km
NOMINAL LINE DIRECTION : 110/290 degrees
FLIGHT PATH NAVIGATION : Sercel NDS 100 Real Time UHF Differential
GPS System
XY Coordinates computed from WGS84 lat/long
coordinates computed by SERCEL NDS100
Real Time Differential GPS System

FLIGHT PATH

5414000N

Grid notation refers to Australian Map Grid Zone 55
Navigation fix 32768

5412000N

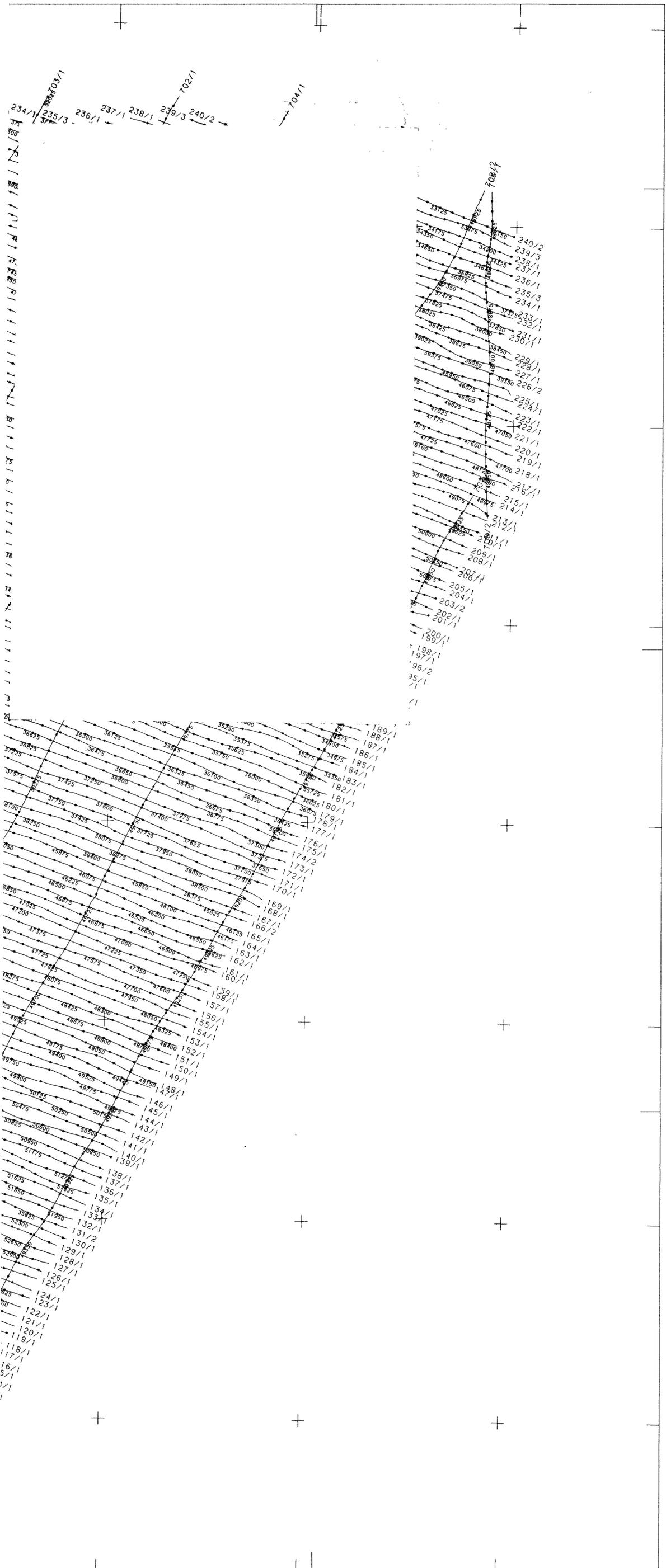
5410000N

5408000N

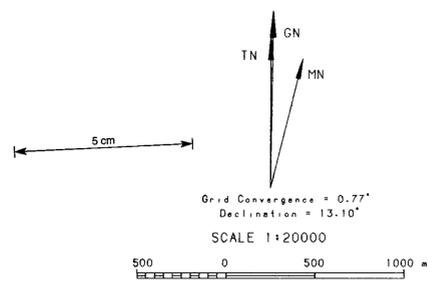
5406000N

5404000N

5402000N



95-3788



751011

JOB NO : 3-458
Surveyed by GEOTERREX PTY LTD • Apr 1994
Compiled by GEOTERREX PTY LTD, SYDNEY
Processed by GEOTERREX PTY LTD, SYDNEY

ABERFOYLE RESOURCES LIMITED

MT TOR
FLIGHT PATH
BURNIE SK55-3
RELINQUISHED AREA OCTOBER 1995

41°25'00"S

41°27'30"S

41°30'00"S

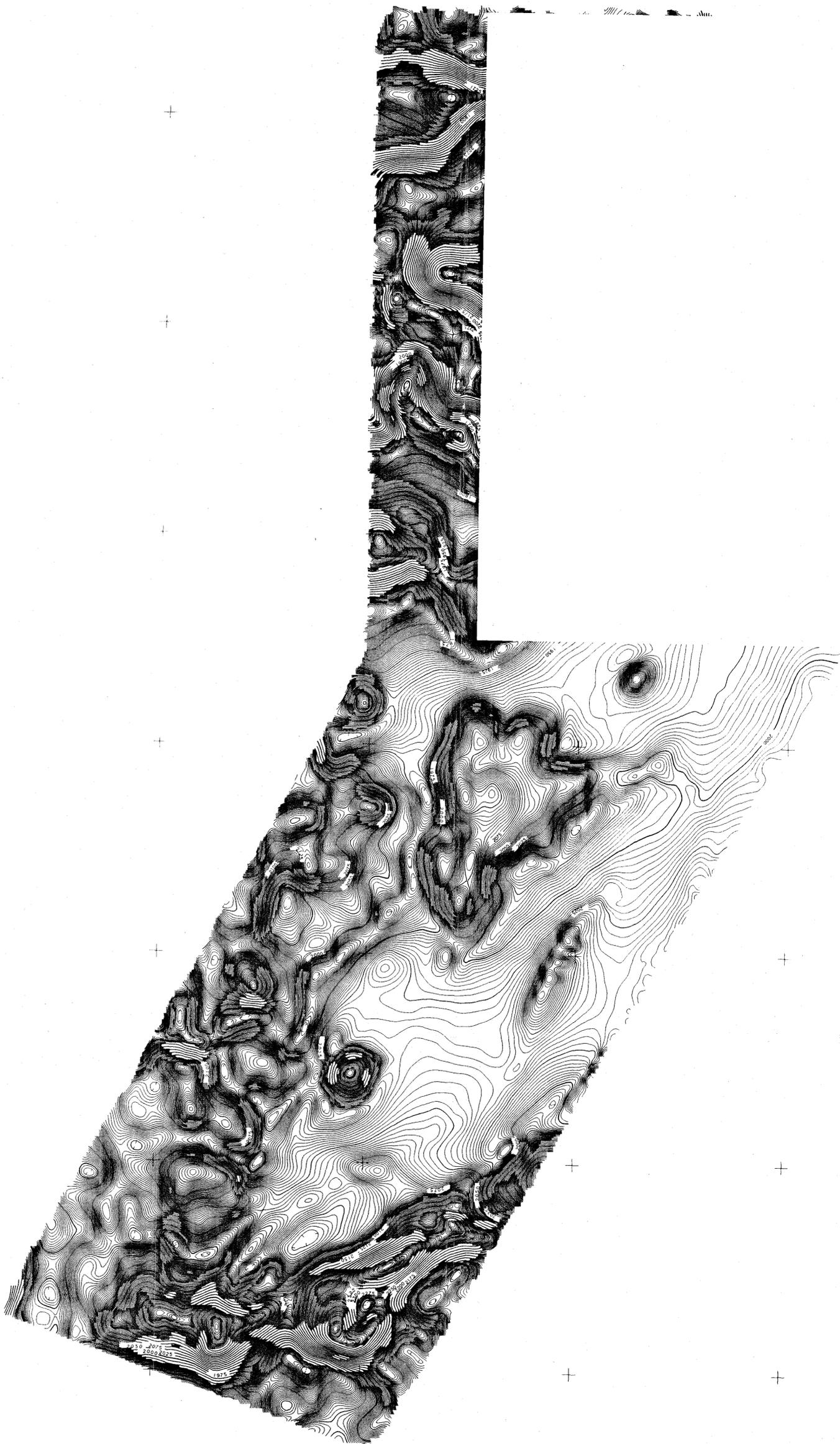
41°32'30"S

145°45'00"E

145°47'30"E

145°50'00"E

145°52'30"E



AIRBORNE SURVEY SPECIFICATIONS

5416000N
 AIRCRAFT : Aerospatiale AS350B Squirrel helicopter VH-HRX
 MAGNETOMETER : Cesium Vapour optical absorption
 SENSITIVITY : 0.05 nT
 RECORDING INTERVAL : 0.1 sec (approx 4.5 m sampling)
 DATA RECORDING : at mean ground speed of 160 km/hour
 Geotrex MADACS acquisition system
 Digital to magnetic tape
 NOMINAL TERRAIN CLEARANCE : Aircraft at 110m, detector in towed bird
 at 80m
 NOMINAL LINE SPACING : Traverse lines 100 m
 Tie lines 1.0 km
 NOMINAL LINE DIRECTION : 110/290 degrees
 FLIGHT PATH NAVIGATION : Sercol NDS 100 Real Time UHF Differential
 GPS System
 FLIGHT PATH RECORD : XY Coordinates computed from WGS84 lat/long
 coordinates computed by SERCEL NDS100
 Real Time Differential GPS System

ALTITUDE CORRECTED RESIDUAL MAGNETIC CONTOURS

5414000N
 Grid notation refers to Australian Map Grid Zone 55
 Magnetics : Diurnal removed, the line levelled
 1990 model updated for secular
 variation to April 1994 removed,
 IGRF : datum 2000 nT added
 Altitude Correction : Magnetics corrected to 120m detector height
 Total Field : 62022 nT (at 41°27'30S, 145°52'30E)
 Inclination : 75 degrees S
 Declination : 13.1 degrees E
 Grid mesh size : 20 x 20 metres
 Grid filter : None
 Contour interval : 2.5, 25 and 250 nT

5412000N

5410000N

5408000N

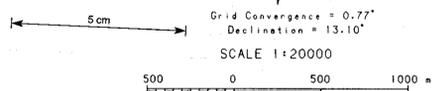
5406000N

5404000N

5402000N

95-3788

751012

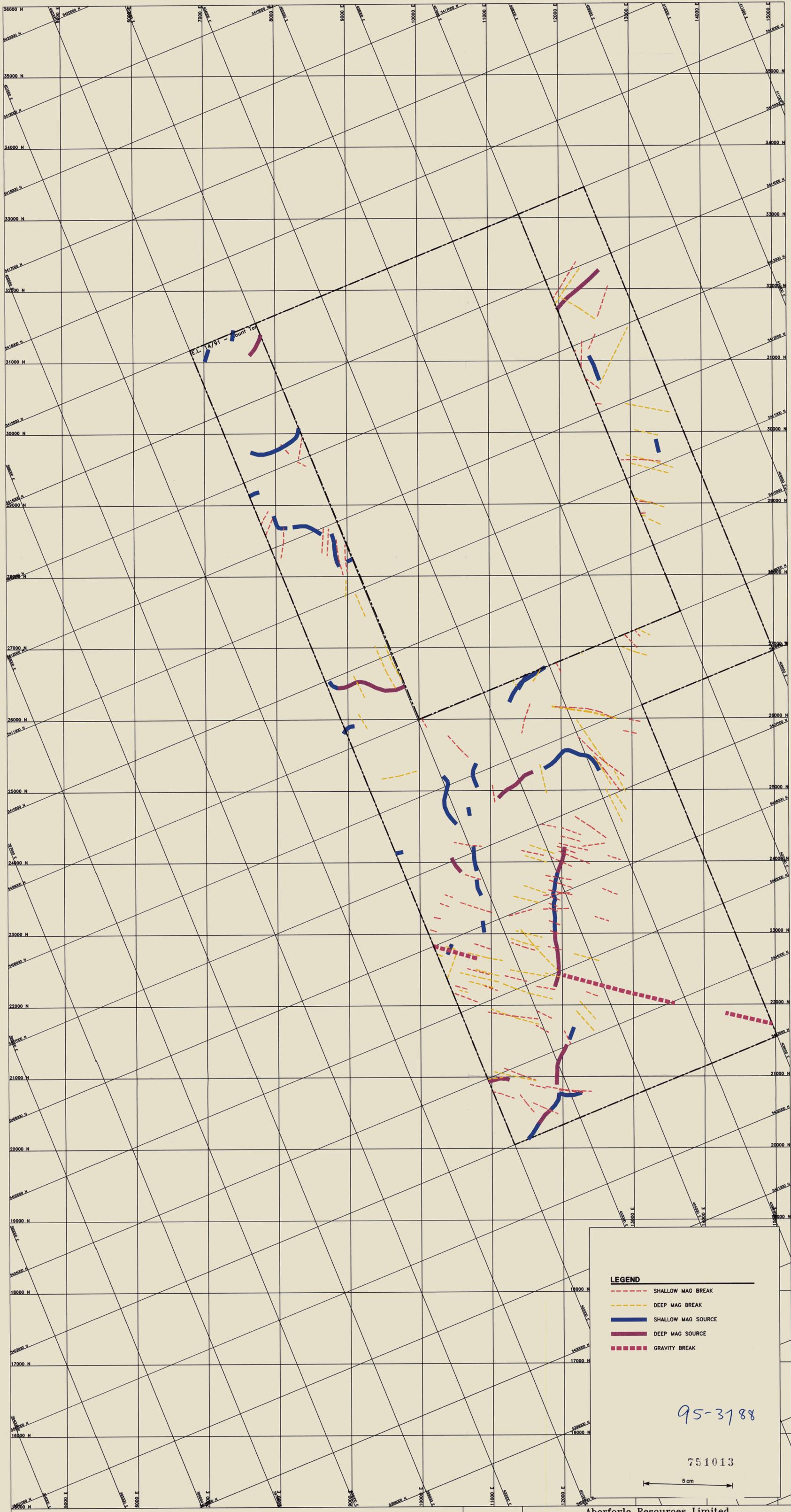


JOB NO : 6-558
 Surveyed by GEOTERREX PTY LTD - Apr 1994
 Compiled by GEOTERREX PTY LTD, SYDNEY
 Processed by GEOTERREX PTY LTD, SYDNEY

ABERFOYLE RESOURCES LIMITED

ALTITUDE CORRECTED
 RESIDUAL MAGNETIC CONTOURS
 MT TOR, TASMANIA
 RELINQUISHED AREA OCTOBER 1995

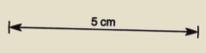
CREATED : RC
 CHECKED : RC
 DRAWING NO : TOR23
 DATE : 2-SEP-1994



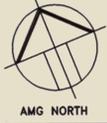
- LEGEND**
- SHALLOW MAG BREAK
 - DEEP MAG BREAK
 - SHALLOW MAG SOURCE
 - DEEP MAG SOURCE
 - GRAVITY BREAK

95-3788

751013



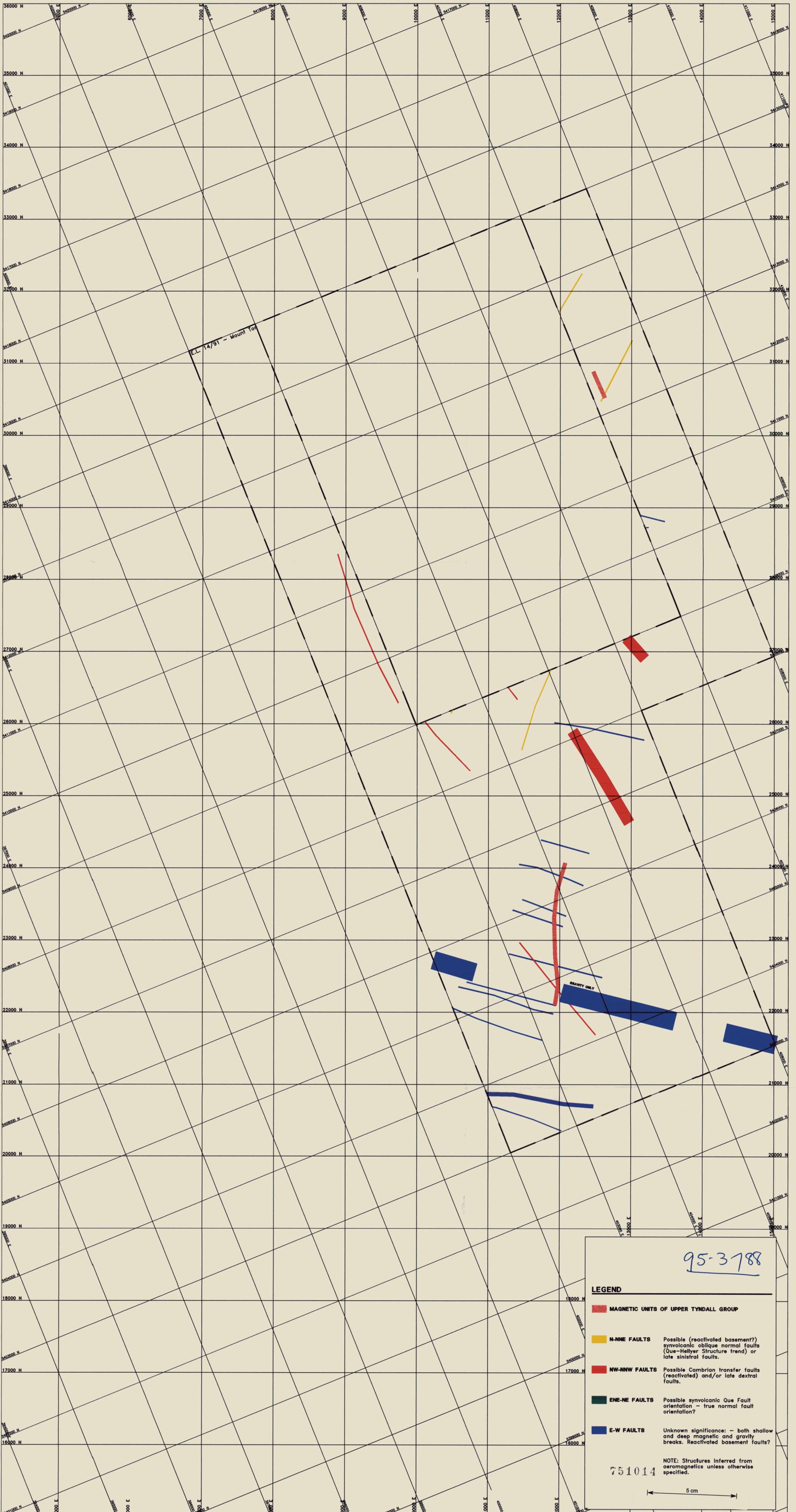
Aberfoyle Resources Limited
EXPLORATION DIVISION
A.C.N. 004 884 108



REVISIONS			
NO.	DATE	BY	DATE

**MOUNT TOR E.L.14/91
AEROMAGNETIC INTERPRETATION
GEOMETRIC SKELETON
RELINQUISHED AREA OCT. 1995**

Completed:	SMR
Drawn:	NWR
Plotted:	
Checked:	SMR



95-3788

LEGEND

- MAGNETIC UNITS OF UPPER TYNDALL GROUP**
- N-NNE FAULTS** Possible (reactivated basement?) synvolcanic oblique normal faults (Que-Hellyer Structure trend) or late sinistral faults.
- NW-NNW FAULTS** Possible Cambrian transfer faults (reactivated) and/or late dextral faults.
- ENE-NE FAULTS** Possible synvolcanic Que Fault orientation - true normal fault orientation?
- E-W FAULTS** Unknown significance: - both shallow and deep magnetic and gravity breaks. Reactivated basement faults?

NOTE: Structures inferred from aeromagnetics unless otherwise specified.

751014

5 cm

Aberfoyle Resources Limited
EXPLORATION DIVISION
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**MOUNT TOR E.L.14/91
INTERPRETED
STRUCTURAL FRAMEWORK
RELINQUISHED AREA OCT.1995**

Completed: SMR
Drawn: NWR
Plotted: .
Checked: SMR
Plate No: TOR 21



REVISIONS			
INT.	DATE	INT.	DATE
	10/95		

Location Code: Scale: 1:25000 Date: 16/10/95