

TECTONIC SUB-UNIT:

STRATIGRAPHY: McArthur Group; Batten Subgroup.

MAJOR TERMS:
(Underlined)

METALLIFEROUS MINERALS

NON METALLIFEROUS MINERALS

TARGET GROUPS:
(Underlined)

TIN/TANTALUM/TUNGSTEN

BASE METAL

INDUSTRIAL MINERALS

HEAVY MINERALS

DIAMONDS

PLATINUM GROUP METALS

GOLD

SILVER

DIMENSION STONE

EVAPORATES

URANIUM

GEMSTONES

ANALYSIS:

MINERALISATION: Nil

AMF MINOR TERMS:
(Underlined)

DRILLING	GEOPHYSICAL	GEOCHEMISTRY	GENERAL
	AERIAL SURVEYS	SAMPLING	
DIAMOND	<u>ELECTROMAGNETIC</u>	STREAM SEDIMENT	GEOLOGICAL MAPPING
PERCUSSION	MAGNETIC	SOIL	PHOTOGEOLOGY
AUGER	RADIOACTIVITY	ROCK CHIP	METHODS
ROTARY GROUND		TRENCHING	REGIONAL GEOLOGY
VACUUM	<u>EM SURVEY METHOD</u>	BULK	<u>STRATIGRAPHY</u>
	IP SURVEY METHOD	GEOCHEM ANOMALY	RECONNAISSANCE
	RESISTIVITY SURVEY		STRUCTURE
	MAGNETIC SURVEY		METAMORPHISM
	GRAVITY SURVEY		PETROLOGY
	<u>GEOPHYSICAL ANOMALY</u>		LITHOLOGY

GENERAL TERMS:

NOTES:

ABSTRACT: Airborne QUESTEM was flown in 1992 but no anomalies were interpreted on the relinquished areas

M.I.M. EXPLORATION PTY.LTD.

TECHNICAL REPORT

No. 1976

TITLE: EXPLORATION LICENCE No. 6236 "Yalco
North"
PARTIAL RELINQUISHMENT : YEAR ENDED
17TH NOVEMBER 1993

ISSUING DEPARTMENT: EXPLORATION

AUTHOR: I.N. Bruce
M.McGeough

INVESTIGATIONS
CONDUCTED BY: M.I.M. Exploration Staff

SUBMITTED BY: R.D.M. Wilson

DATE: February 1994

MAP SHEETS: 1:250 000 Bauhinia Downs (SE3-3)
Mount Young (SD53-19)

1:100 000 Batten
Tawallah Range

**This material contains information of a
commercial and/or confidential nature and
exemption from disclosure under the Freedom of
Information Act 1992 - Queensland is claimed.**

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33948	EL 6236 Questem Flight Paths	1-SE	"
33949	EL 6236 Questem Flight Paths	1-SW	1:50 000
33950	EL 6236 Questem Flight Paths	11-SE	"
33953	EL 6236 TMI Contours	1-NE	"
33954	EL 5605 & EL 6236 TMI Contours	1-SW	"
33955	EL 6236 TMI Contours	1-SE	"
33957	EL 6236 TMI Contours	11-SE	"
41038	EL 5605, EL 6236 QUESTEM Channel 5 Pseudocolour Image		1:100 000
41039	EL 5605, EL 6236 QUESTEM Anomaly Interpretation Overlay		1:50 000

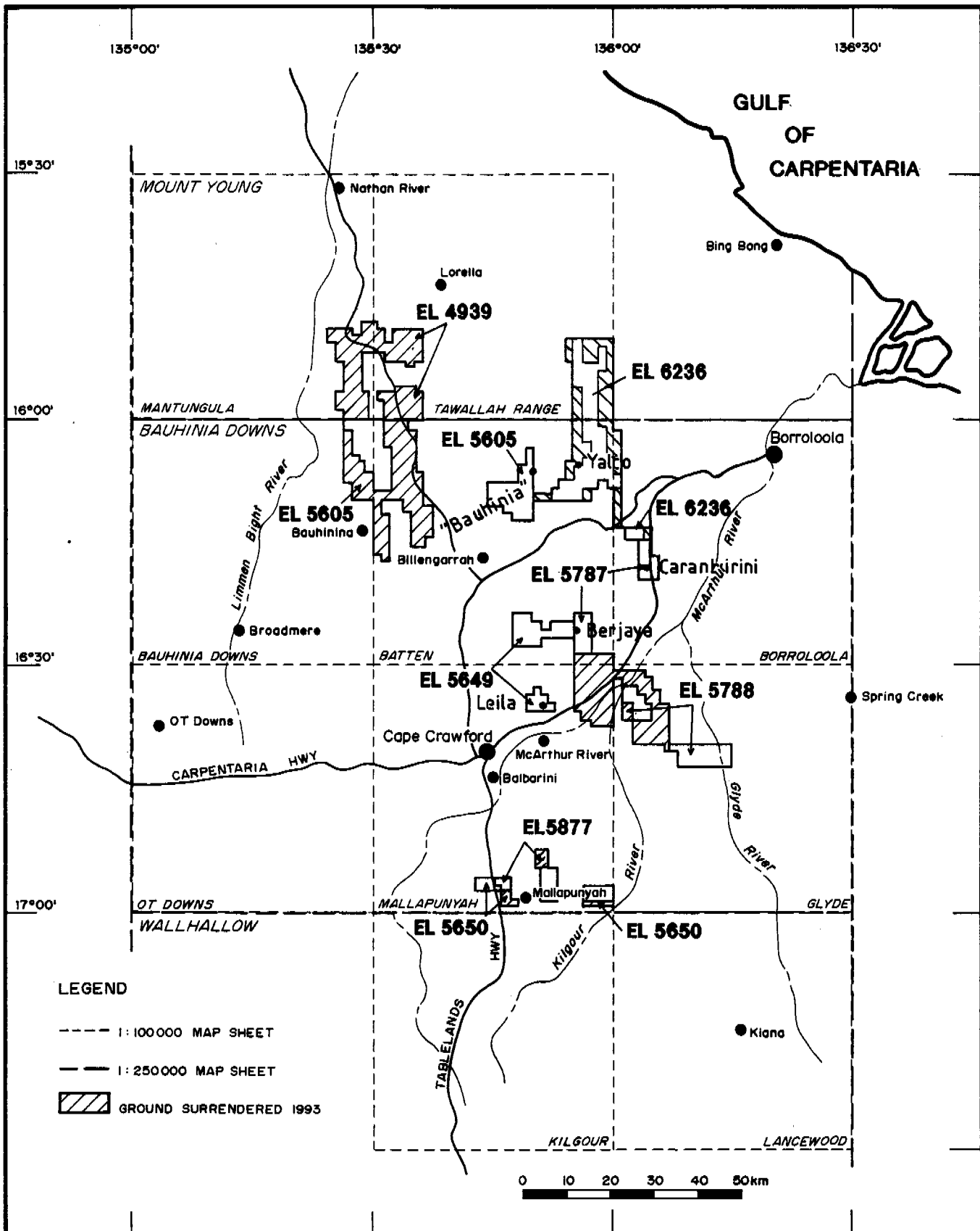
1. INTRODUCTION AND SUMMARY

Exploration Licences Number 6236 in the McArthur River region was granted to Quilpie Pty. Ltd. on the 17th November 1988. On the 17th November 1993 a total of sixty five blocks were relinquished and sixty five retained for the sixth year.

This Licence, together with Exploration Licence Numbers 4939 and 5606, respectively, were the subject of a joint venture agreement dated 4/6/88 between the Licencee and Noranda Pty. Ltd., Perilya Mines N.L., Topend Resources N.L. and T. P. Lindner.

Mount Isa Mines Limited ("MIM") commenced earning in as operator to the joint venture, in 1992.

This report details the exploration on the relinquished blocks of EL 6236.



LEGEND

- 1:100000 MAP SHEET
- 1:250000 MAP SHEET
- GROUND SURRENDERED 1993

REVISION	SCALE: 1:1250000	M.I.M. EXPLORATION PTY. LTD.	
	GEO I. B.	McARTHUR JOINT VENTURE, N.T.	
	DRAFT: E.I.K.	LOCATION MAP	
	CHECKED:	SHOWING CURRENT EXPLORATION LICENCES AND GROUND SURRENDERED DURING 1993	
	DATE: July '93	Fig.1	
	1:250 000		
	1:100 000		
	MINING FIELD OR DISTRICT:	DRG No.: 41042	

2. TENURE

EL 6236 was granted to Quilpie on 17 November, 1988.

A consortium involving Noranda Pty. Ltd., Perilya Mines N.L., Topend, Quilpie and T.P. Lindner formed the "McArthur River Joint Venture" in June, 1988 to explore for base metals on a group of Licences some of which were surrendered or have expired.

Mount Isa Mines Limited commenced negotiations to farm in to the McArthur River Joint Venture in April, 1992 and this new joint venture agreement (the "McArthur River Regional Joint Venture" was executed on 14th December, 1992.

Deferral of the Partial Relinquishment due for EL 6236 on 17 November, 1992 was sought on the grounds of the high prospectivity of the area. The Minister for Mines and Energy granted the deferral, allowing retention of the 130 blocks until 16 November, 1993.

A statutory relinquishment of 50% of the blocks was made on the 17th November 1993 with sixty five block retained.

Applications were made to the Aboriginal Areas Protection Authority in September, 1992 for Authority Certificates to cover selected parts of EL 6236 where detailed exploration was then considered likely to occur.

3. LOCATION AND ACCESS

The Bauhinia Downs (SE 53-3) 1:250 000 sheet covers most of the Licence, although the northern part extends into the Mt. Young (SD 53-15) sheet.

The relinquished areas are shown on Figure 1.

Access to the area is via station tracks, north from the Roper Bar - Borrroloola road.

4. REGIONAL GEOLOGY

The Licence covers a broad area (60 kilometres east-west by 120 kilometres north-south) of the "Batten Trough" in the middle Proterozoic McArthur Basin. The regional geology of the Bauhinia Downs sheet is described in detail by Pietsch et al (1991).

The Licence is largely underlain by the dolomitic sedimentary sequence of the McArthur Group. Locally, inliers of the older volcanic and siliciclastic Tawallah Group and outliers of the younger, dolomitic Nathan Group and siliciclastic Roper Group are present.

Platform cover of the Cambrian Bukalara Sandstone masks the Proterozoic geology in the east and southeast and thin (<20m) Cretaceous, terrestrial to shallow marine sediments are locally present. Soil cover is generally thin and skeletal, although laterally extensive alluvial cover is present around major drainages. Coastal sands are present on the Mount Young sheet.

Folding of the Tawallah and McArthur Group sequences is gentle to moderate, with steep dips locally developed in proximity to major faults. The Nathan and Roper Group strata are only gently folded with shallow dips.

Structure is dominated by the interaction of the north-northwest trending fault systems (the Emu and Tawallah/Abner Faults) and the west-northwest trending faults (the Calvert and Mallapunyah Faults).

5. PREVIOUS EXPLORATION

The areas relinquished have been at least partly covered by reconnaissance level stream and or soil geochemical sampling from the mid 1970's.

Perilya Mines N.L. has conducted reconnaissance sampling, geophysics and drilling on many of the prospects for the McArthur River Joint Venture since 1988 (Thornett, 1989; 1990; 1991; Thornett and Kwiecien, 1992). However no exploration was carried out on the areas relinquished due to the remote and difficult access of the area

6. EXPLORATION BY M.I.M.EXPLORATION PTY.LTD.

6.1 1992 'Yalco North' Airborne QUESTEM and Magnetic Survey

Airborne electromagnetics has proven to be effective in the McArthur Basin for mapping and for detection of sub-surface conductive material. MIMEX staff reviewed the results of the Perilya Mines NL 1990 QUESTEM survey and concluded that further QUESTEM surveys were warranted to infill and extend the previous database.

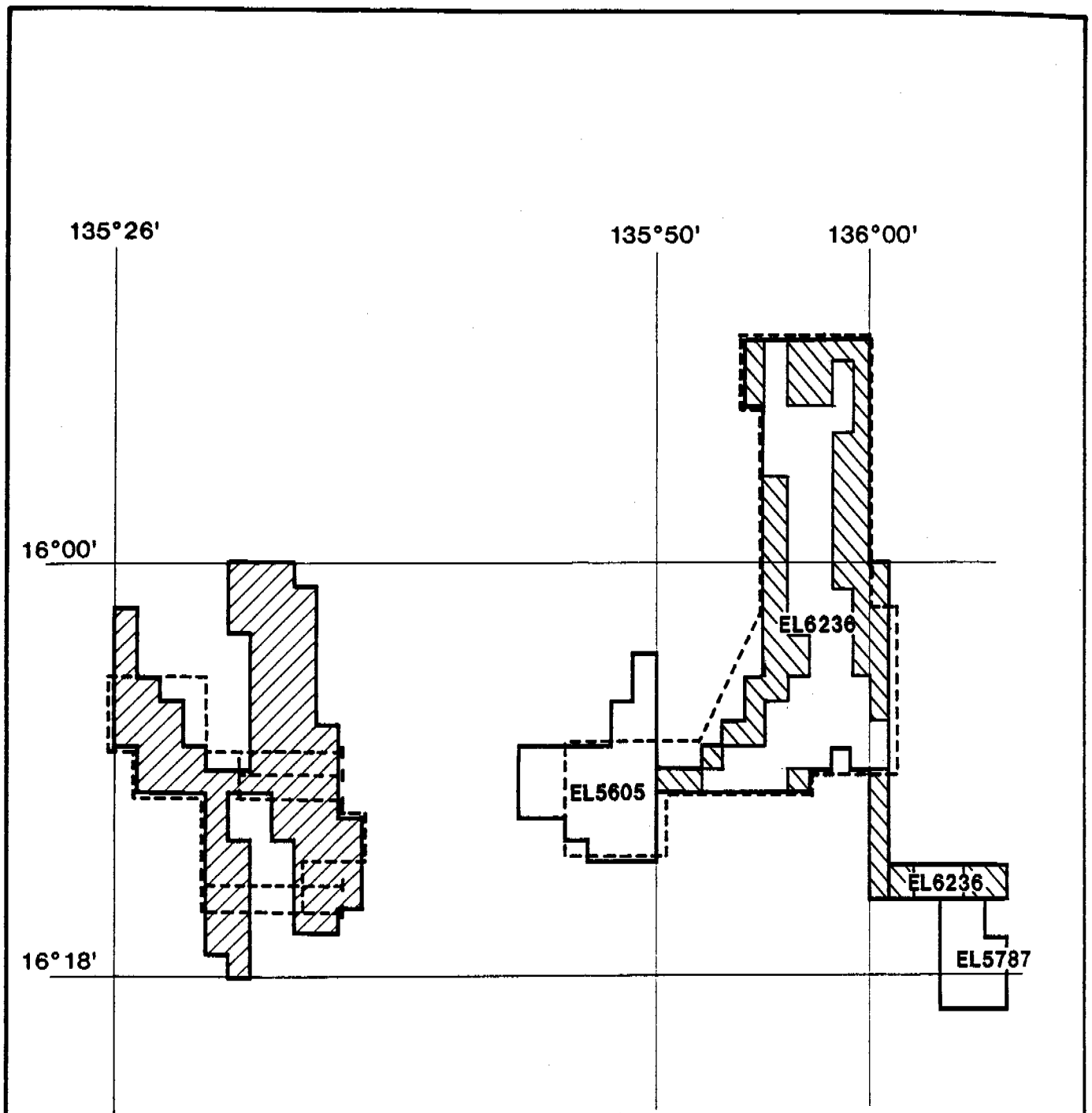
Aerodata were commissioned to undertake a 1943 line kilometre QUESTEM survey, which was flown in October, 1992. The boundary of the survey is shown on Figure 2.




The 1992 'Yalco North' airborne geophysical survey comprised a detailed QUESTEM electromagnetic and magnetic survey covering "Yalco North" EL 6236 Area. Field work was carried out by Aerodata on 14th, 15th and 16th October, 1992. The survey details and specifications are given in Table 1 and flight paths are shown on Drawings Nos. 33946,33948 and 33950.

The aim of this survey was to obtain systematic information on the structure and electrical properties of rock types and to search for sulphide mineralisation.

The results of the 1992 Aerodata 'Yalco North' QUESTEM survey show a response pattern comprising irregular conductive zones within a generally resistive environment (the Channel 5 pseudocolour image, Drawing No. 41038).

The magnetic results show a pattern of anomalies outlining a broad arch, transected by subtle magnetic lineaments oriented northwest, northeast and north-



-  EL Boundary
-  Area relinquished 1993
-  1992 Questem Survey

REVISION		SCALE: 1:500 000	M.I.M. EXPLORATION PTY. LTD.	
		GEO LB.	McARTHUR JOINT VENTURE, N.T. EL 5605, 6236 1992 AERODATA QUESTEM SURVEY BOUNDARIES <i>Fig. 2</i>	
		DRAFT: E.I.K.		
		CHECKED:		
		DATE: July '93		
		1:250 000 SE53-3		
		1:100 000 6065		
MINING FIELD OR DISTRICT:			DRG No.: 41043	

Table I.

AERODATA 1992 'YALCO NORTH' AIRBORNE QUESTEM AND MAGNETIC SURVEY DETAILS

Survey Specifications.

Total lines flown	30010-30840=84 : 1577 kilometres
Flight line direction	east-west
Flight line spacing	500 metres
Tie line direction	north-south
Tie line spacing	6.5, 7 and 9 kilometres
Dates flown	14, 15 & 16 October 1992
Nominal aircraft terrain clearance	120 metres
Nominal aircraft speed	52 metres per second

QUESTEM Instrument Specifications.

Nominal Geometry:

Transmitter (aircraft) terrain clearance	120 metres
Receiver (towed bird) terrain clearance	45 metres
Transmitter-receiver separation	not stated

Transmitter:

Configuration	6 turn, vertical axis loop of 186 square metres area
Output	200 amperes peak current
	223000 ampere square metres dipole moment
Waveform	half sine wave pulses of alternate polarity
Pulse Length	0.002 seconds
Off Time	0.00467 seconds
Cycling Rate	75 hertz

Receiver:

Configuration multi-turn coil with horizontal axis in flight direction
Sampling rate 128 digital samples per transmitter on + off time
Sample size 0.00005208 seconds
Reading rate 4 readings per sec.; ie reading every 13 metres approx.
Channel times expressed as elapsed time after transmitter switch off:

Channel number	Channel start	Channel centre	Channel end
Tx switch off	0.000000 seconds		
1	0.000168 seconds	0.000247 seconds	0.000324 seconds
2	0.000273 seconds	0.000351 seconds	0.000429 seconds
3	0.000377 seconds	0.000455 seconds	0.000533 seconds
4	0.000481 seconds	0.000559 seconds	0.000637 seconds
5	0.000584 seconds	0.000715 seconds	0.000845 seconds
6	0.000793 seconds	0.000924 seconds	0.001054 seconds
7	0.001001 seconds	0.001131 seconds	0.001262 seconds
8	0.001210 seconds	0.001393 seconds	0.001574 seconds
9	0.001418 seconds	0.001601 seconds	0.001782 seconds
10	0.001626 seconds	0.001861 seconds	0.002095 seconds
11	0.001939 seconds	0.002174 seconds	0.002408 seconds
12	0.002355 seconds	0.002643 seconds	0.002929 seconds
13	0.002876 seconds	0.003163 seconds	0.003450 seconds
14	0.003398 seconds	0.003684 seconds	0.003971 seconds
15	0.003918 seconds	0.004205 seconds	0.004490 seconds
Tx switch on	0.004670 seconds		

Magnetometer Specifications.

Instrument Cs vapour optical absorption
Configuration mounted in stinger
Resolution 0.1 nanoteslas
Sample time 0.001 seconds
Sampling rate 2 per second; ie reading every 26 metres approx.

transected by subtle magnetic lineaments oriented northwest, northeast and north-south (corrected TMI Contour Plans, Drawing No's. 33953 to 33955 and 33957).

Interpretation of the 1992 QUESTEM data was carried out using both flight profiles and images, with data grouped on an anomaly basis. Locations for the anomalies identified are included on Drawing No. 41039.

The total Magnetic Intensity contour plans show anomaly patterns apparently outlining a broad arch transgressed by subtle magnetic lineaments in the north of the survey area.

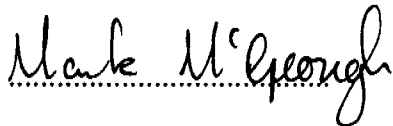
6.2 EL 6236 "Yalco North" Gridding.

Interpretation of the airborne QUESTEM indicated a number of anomalies within the retained area of EL 6236.

An earthmoving contractor was employed in October, 1992 to upgrade access tracks and the existing Perilya Mines grid and to extend the gridding to the north and southwest (Figure 4). The ends of some of these gridded lines may continue for short distances into the relinquished portion however these will be now overgrown by vegetation.

7. CONCLUSION

The 1992 QUESTEM survey identified no significant anomalies in the area covered by this report.



M.McGeough
I.N.Bruce

REFERENCES

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5649, 5650, 5787, 5788 and 5877, McArthur River Project area,
N.T.

Perilya Mines N.L.

Thornett, S.E., 1991:

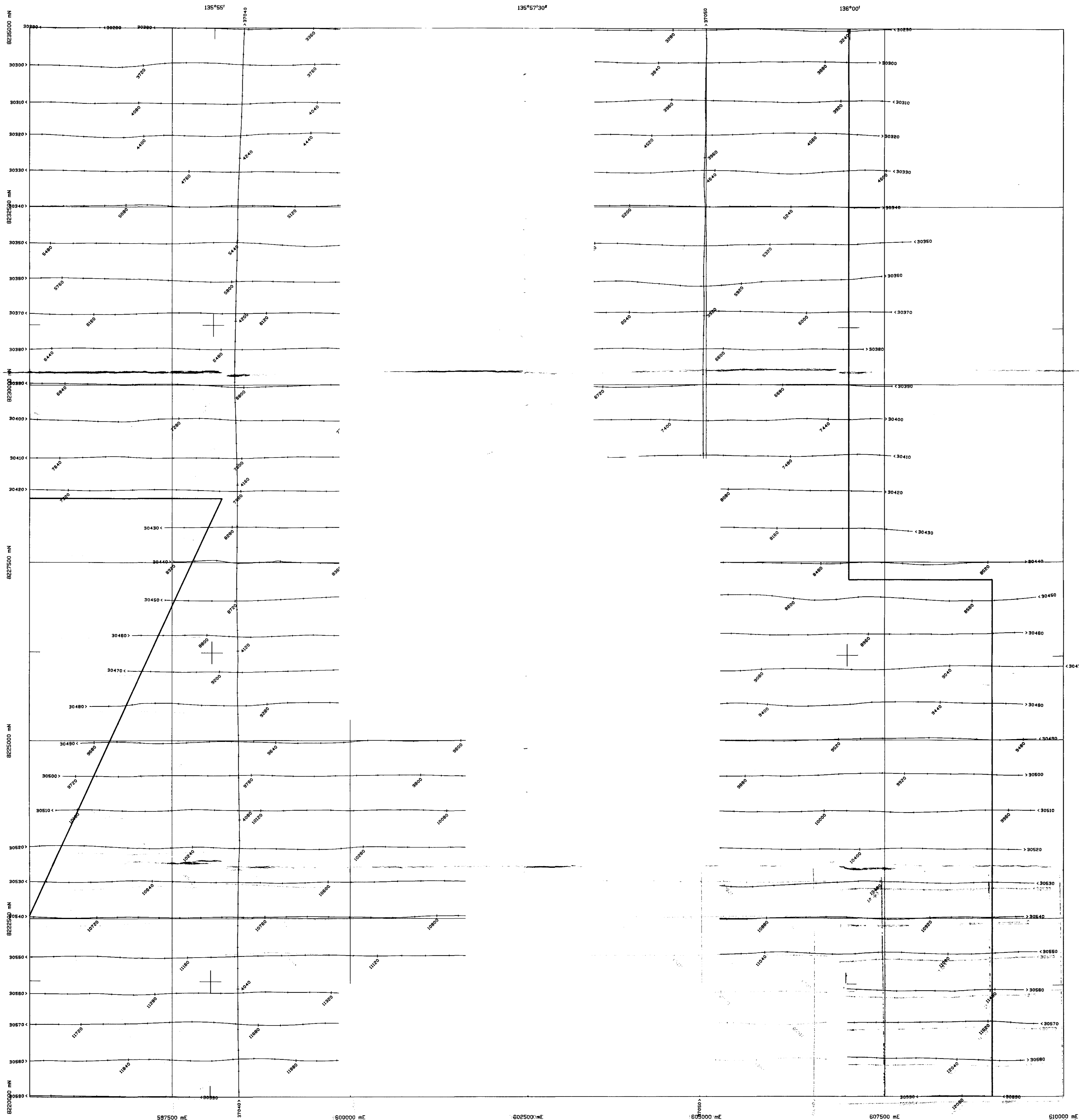
Report to the Department of Mines and Energy of the McArthur
River Project Area, N.T., for the period 13/7/90 to
12/7/91

Perilya Mines N.L.

Kwiecien, B.S., 1992:

Report to the Department of Mines and Energy on the
Relinquished Portions of Exploration Licences 5605, 5606,
5649, 5650, 5787, 5788 and 5877.

Perilya Mines N.L.



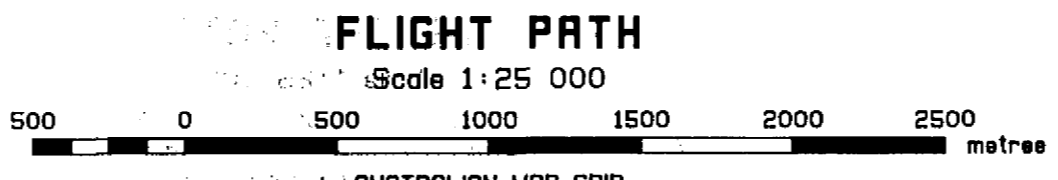
AIRBORNE SURVEY SPECIFICATIONS

AIRCRAFT BRITEN NORMAN ISLANDER.
 MAGNETOMETER SPLIT BEAM CESUM SCINTREX V201.
 RESOLUTION 0.01 nanotesla.
 CYCLE RATE 0.5 seconds.
 SAMPLE INTERVAL 30 metres.
 ELECTROMAGNETIC SYSTEM DUESTEM time domain EM.
 TRANSMITTER BRSE FREQUENCY 75.0 Hz.
 CYCLE RATE 0.25 seconds.
 SAMPLE INTERVAL 15 metres.
 RECEIVER horizontal axis coil in towed bird.
 MEAN WINDOH DELAY TIMES (msec)
 0.2487 0.3608 0.4550 0.5652 0.7154
 0.9238 1.1912 1.3925 1.6009 1.8613
 2.1738 2.8425 3.1834 3.8842 4.1010
 DATA ACQUISITION 11 CHANNEL RMS CR33R CHART RECORDER.
 PICODS PDRS 1000 ACQUISITION SYSTEM.
 FLIGHT LINE SPACING TRVERSE LINES 500 metres.
 FLIGHT LINE DIRECTION TIE LINES 8000 metres.
 SURVEY HEIGHT TRVERSE LINES 0301 = 270 degrees.
 NAVIGATION TIE LINES 000 = 180 degrees.
 MEAN TERRAIN CLEARANCE = 120 metres.
 TRIMBLE TRANS GPS satellite positioning.

DATA PROCESSING

— 5 fiducial interval
 — 40 fiducial interval

M.I.M. EXPLORATION Pty. Ltd.
YALCO NORTH - NORTHERN TERRITORY
AIRBORNE GEOPHYSICAL SURVEY

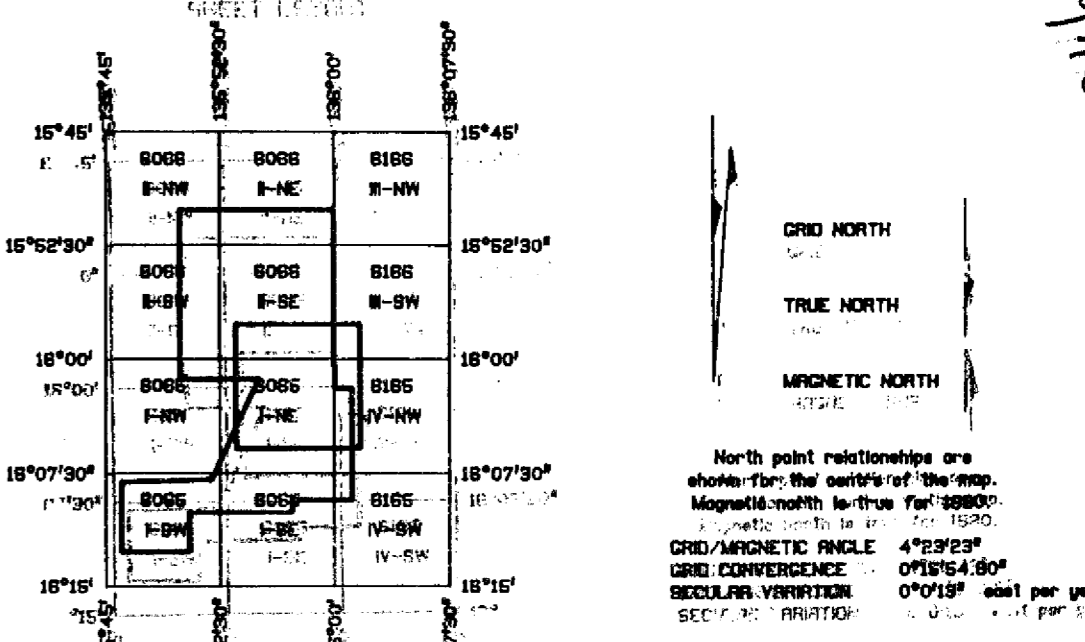


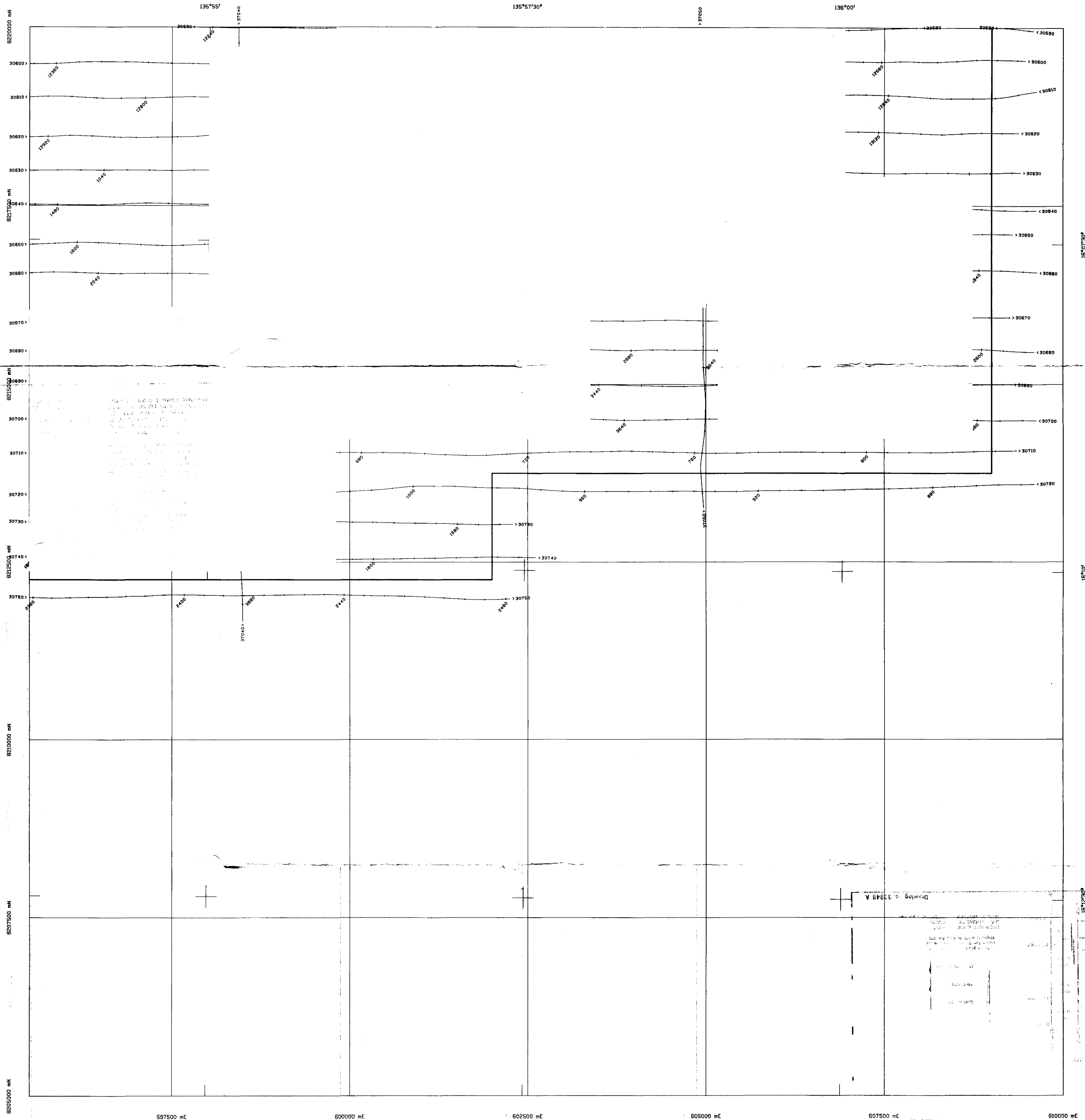
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 Flown and compiled by AERODATA HOLDINGS LIMITED
 October 1992
 Job No. 1920

AERODATA

CR94/155

SHEET LAYOUT





AIRBORNE SURVEY SPECIFICATIONS

AIRCRAFT
MAGNETOMETER

ELECTROMAGNETIC SYSTEM

DATA ACQUISITION

FLIGHT LINE SPACING

FLIGHT LINE DIRECTION

SURVEY HEIGHT

NAVIGATION

DATA PROCESSING

— 5 Fiducial Interval
— 40 Fiducial Interval

ALCO EXPLORATION Pty. Ltd.
COPIYALCO NORTH - NORTHERN TERRITORY
AIRBORNE GEOPHYSICAL SURVEY
FLIGHT PATH
Scale 1:25 000
AUSTRIAN MAP GRID
Flown and compiled by AERODATA HOLDINGS LIMITED
October 1992
Job No. 1320
AERODATA

SHEET LAYOUT

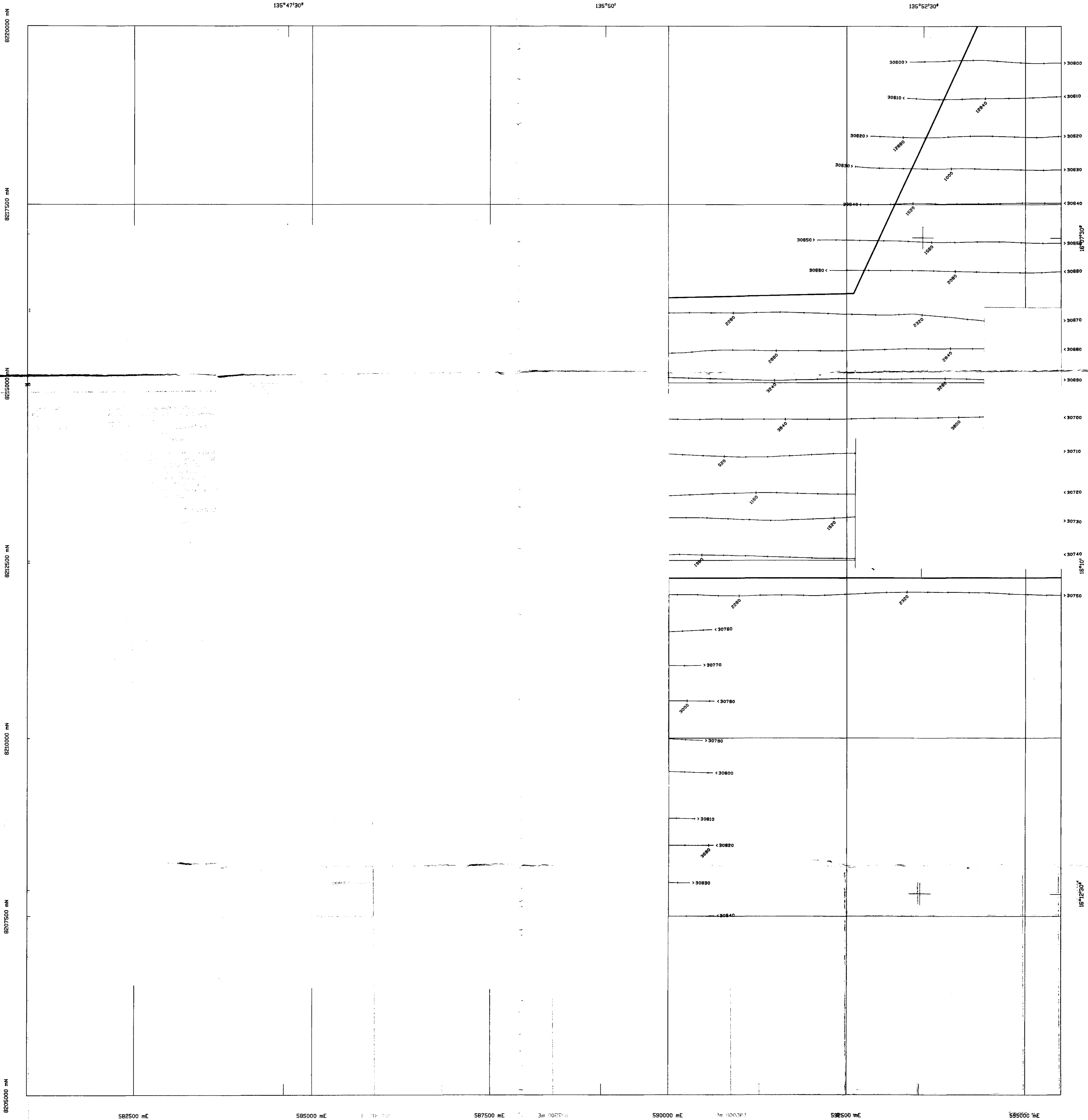
GRID NORTH
TRUE NORTH
MAGNETIC NORTH

North point relationships are shown for the centre of the map. Magnetic north is true for 1980.

GRID/MAGNETIC ANGLE 4°24'4"
GRID CONVERGENCE 0°18'48"
SECULAR VARIATION 0°01'44" east per year

CR04/155

Drawing Jo. 33948 A



AIRBORNE SURVEY SPECIFICATIONS

AIRCRAFT
BRITTEN NORRMAN TRISLANDER

MAGNETOMETER
SPLIT BEAM CESUM SCINTREX V201
RESOLUTION 0.01 nanoTesla
CYCLE RATE 0.5 seconds
SAMPLE INTERVAL 30 metres
QUESTEM time domain EM

ELECTROMAGNETIC SYSTEM
TRANSMITTER BASE FREQUENCY 75.0 Hz
CYCLE RATE 0.25 seconds
SAMPLE INTERVAL 15 metres
RECEIVER horizontal axis coil in towed bird
MEAN WINDOW DELAY TIME (msec)
0.2467 0.3509 0.4550 0.5592 0.7154
0.9239 1.1312 1.3925 1.6009 1.9813
2.1739 2.6425 3.1634 3.8842 4.1010
11 CHANNEL RMS CROSS CHECK RECORDER
PICODAS PDAS 1000 ACQUISITION SYSTEM

DATA ACQUISITION

FLIGHT LINE SPACING
TRAVERSE LINES 500 metres
TRaverse LINES 090 - 270 degrees
TIE LINES 000 - 180 degrees
MEAN TERRAIN CLEARANCE - 120 metres
TRIMBLE TRNS GPS satellite positioning

DATA PROCESSING

5 fiducial interval
40 fiducial interval

M.I.M. EXPLORATION Pty. Ltd.
YALCO NORTH - NORTHERN TERRITORY
AIRBORNE GEOPHYSICAL SURVEY
FLIGHT PATH
Scale 1:25 000

0 500 1000 1500 2000 2500 metres

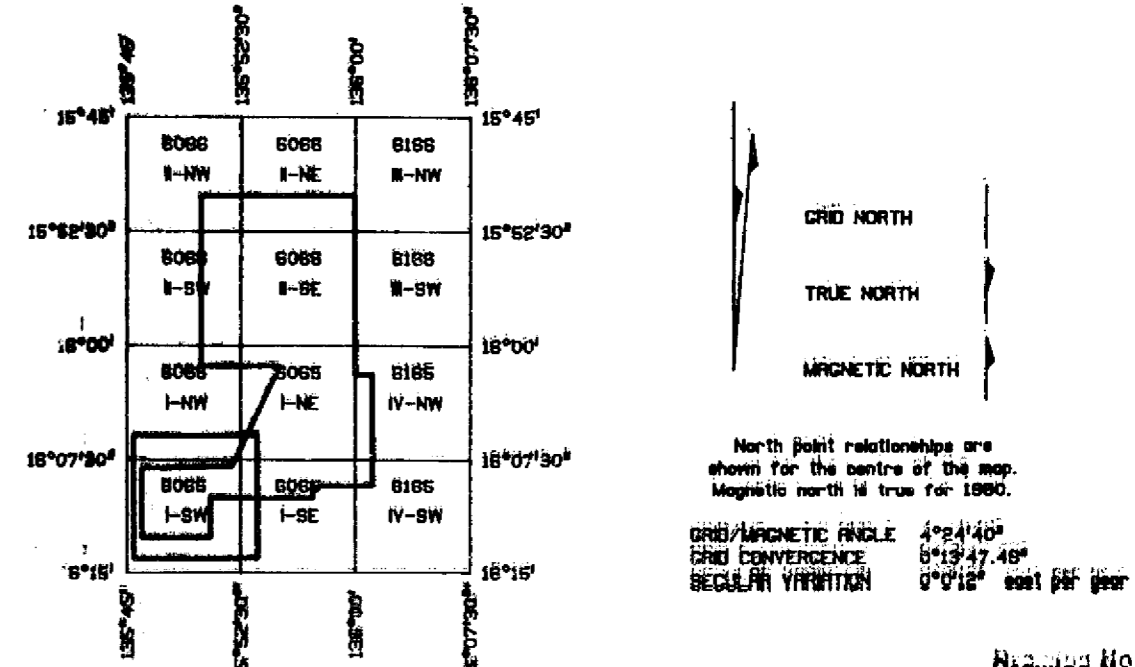
AUSTRALIAN MAP GRID

Flown and compiled by AERODATA HOLDINGS LIMITED
October 1992
Job No. 1320

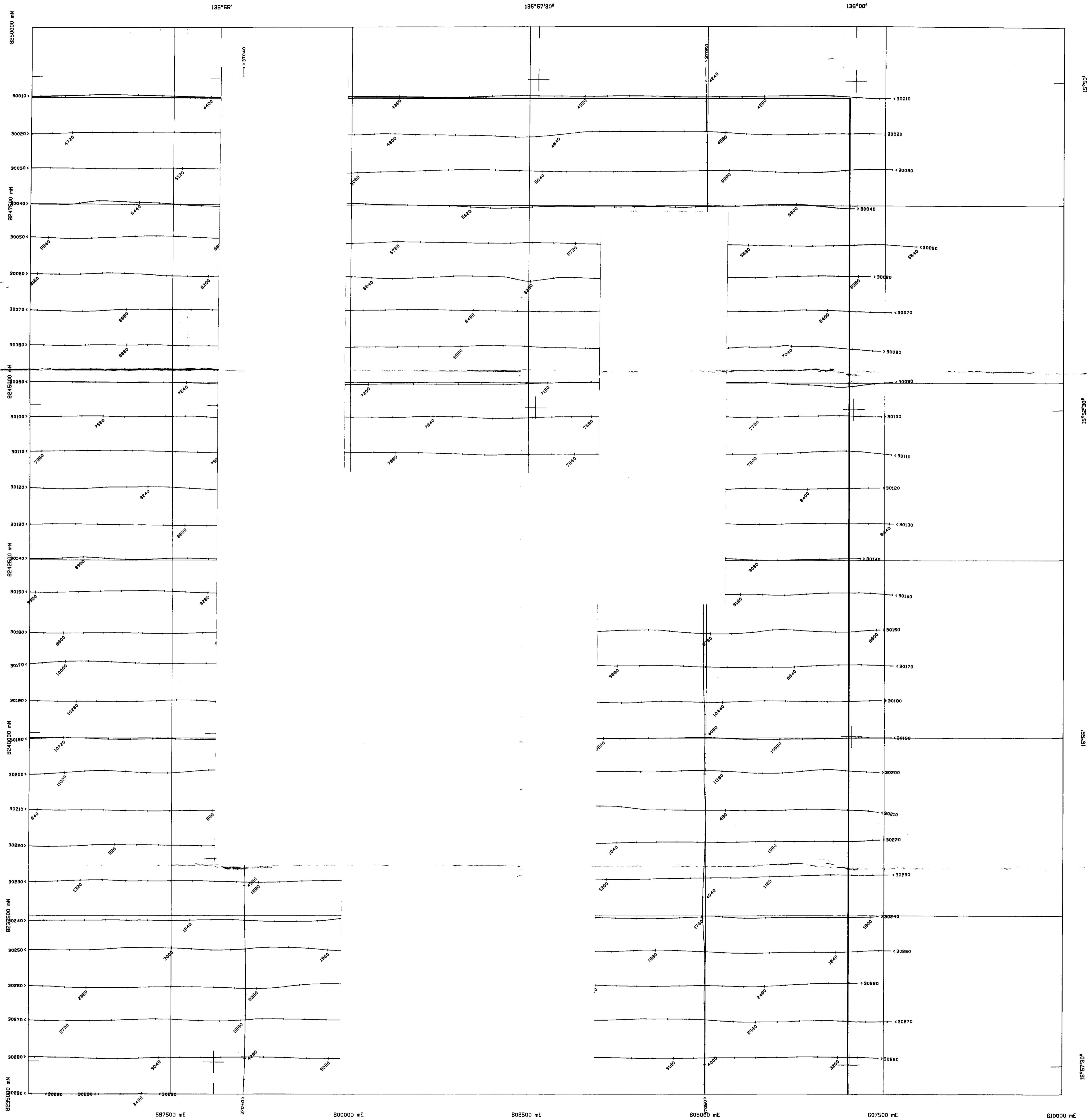
AERODATA

ORIGINATOR
M.I.M. EXPLORATION PTY. LTD.

SHEET LAYOUT



CR94/155



AIRBORNE SURVEY SPECIFICATIONS

AIRCRAFT
MAGNETOMETER

ELECTROMAGNETIC SYSTEM

DATA ACQUISITION

FLIGHT LINE SPACING

FLIGHT LINE DIRECTION

SURVEY HEIGHT

NAVIGATION

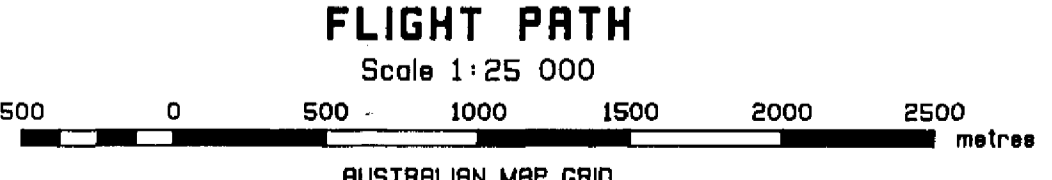
BRITTEN NORMAN TRIANGLE
SPLIT BEAM CESUM SCINTREX V201
RESOLUTION 0.01 nanoTesla
CYCLE RATE 0.5 seconds
SIMPLE INTERVAL 30 metres
QUESTEM time domain EM
TRANSMITTER BASE FREQUENCY 75.0 Hz
CYCLE RATE 0.25 seconds
SIMPLE INTERVAL 15 metres
RECEIVER horizontal coil in towed bird
MEAN WINDOW DELAY TIMES (msec)
0.2467 0.3509 0.4550 0.5592 0.7154
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2.1738 2.5425 3.1534 3.5842 4.1010
11 CHANNEL RMS CR33R CHART RECORDER
PICODAS PORS 1000 ACQUISITION SYSTEM

TRAVERSE LINES 500 metres
TIE LINES 8000 metres
TRAVERSE LINES 090 - 270 degrees
TIE LINES 000 - 180 degrees
MEAN TERRAIN CLEARANCE - 120 metres
TRIMBLE TRANS GPS satellite positioning

DATA PROCESSING

— 5 fiducial interval
- - - 40 fiducial interval

M.I.M. EXPLORATION Pty. Ltd.
YALCO NORTH - NORTHERN TERRITORY
AIRBORNE GEOPHYSICAL SURVEY

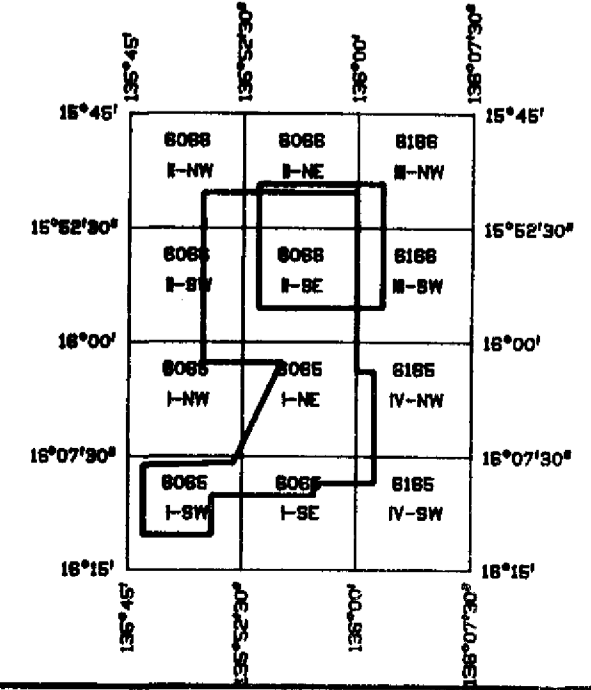


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October 1992
Job No. 1320

AERODATA

CR94/155

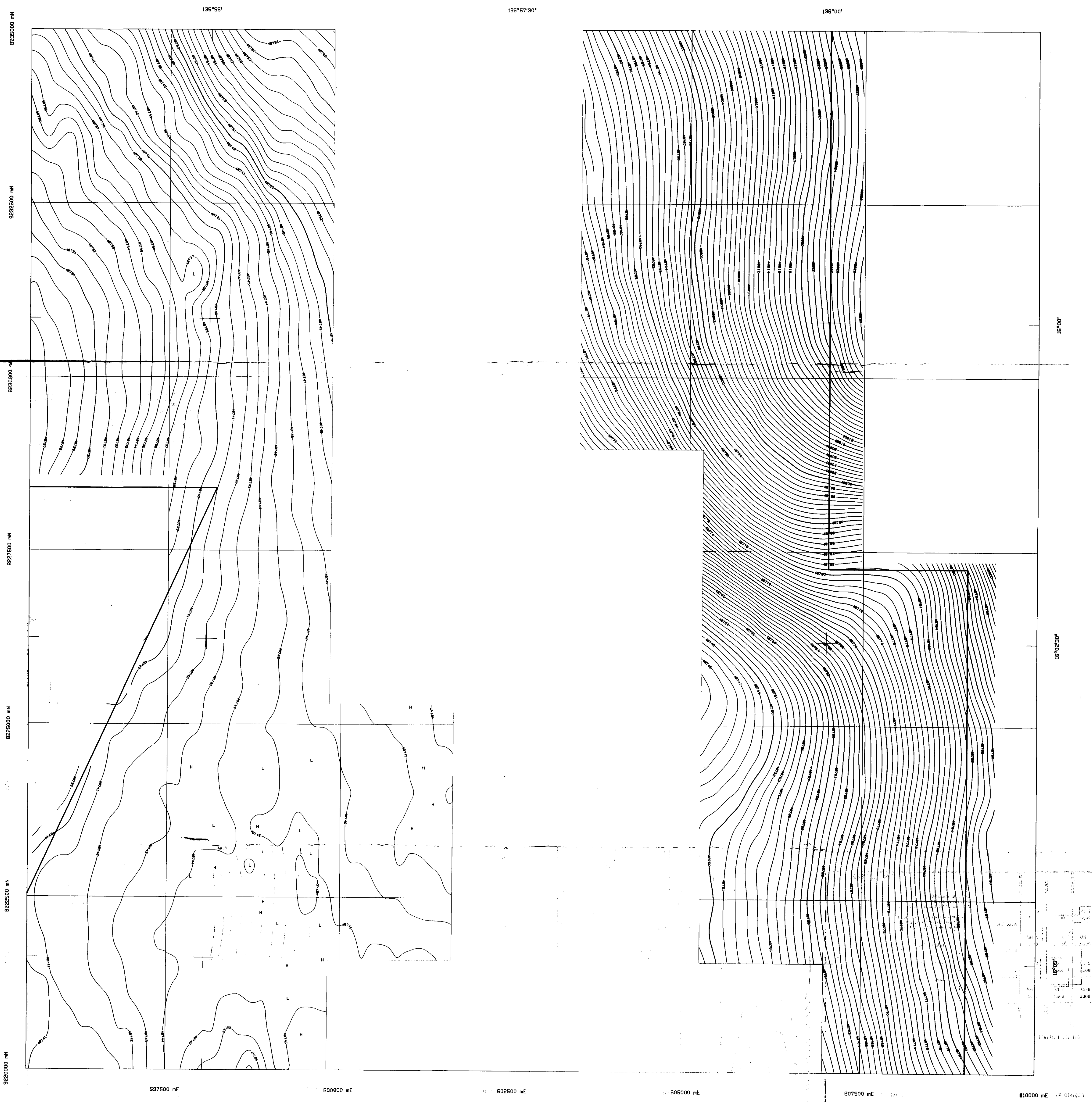
SHEET LAYOUT



GRID NORTH
TRUE NORTH
MAGNETIC NORTH

North point relationships are shown for the centre of the map
Magnetic north is true for 1980.

GRID/MAGNETIC ANGLE 4°22'43"
GRID CONVERGENCE 0°18'48.40"
SECULAR VARIATION 0°0'13" east per year



AIRBORNE SURVEY SPECIFICATIONS

AIRCRAFT
MAGNETOMETER

ELECTROMAGNETIC SYSTEM

DATA ACQUISITION

FLIGHT LINE SPACING

FLIGHT LINE DIRECTION

SURVEY HEIGHT

NAVIGATION

BRITEN NORMAN TRISLANDER
SPLIT BEAM CESIUM SCINTREX V201
RESOLUTION 0.01 nanoTeslas
CYCLE RATE 0.5 seconds
SAMPLE INTERVAL 30 metres
QUESTEM time domain EM
TRANSMITTER BASE FREQUENCY 75.0 Hz
CYCLE RATE 0.25 seconds
SAMPLE INTERVAL 15 metres
RECEIVER horizontal axis coil in towed bird
MEAN WINDOW DELAY TIMES (msec)
0.2487 0.3509 0.4550 0.5582 0.7154
0.9238 1.1312 1.3225 1.5009 1.8613
2.1738 2.6425 3.1834 3.6842 4.1010
11 CHANNEL RMS GR33A CHART RECORDER
PICODAS PDRS 1000 ACQUISITION SYSTEM

DATA PROCESSING

CONTOUR INTERVAL 1 nanoTesla
GRID CELL SIZE 175 metres

The magnetic data have been corrected for regional gradient by subtraction of I.G.R.F. model 1990 and secular variation model 1995-1990. Diurnal magnetic variations have been removed. System parallax has been removed. Microlevelling has been applied.

CR94/155

M.I.M. EXPLORATION Pty. Ltd.
YALCO NORTH - NORTHERN TERRITORY
AIRBORNE GEOPHYSICAL SURVEY
TOTAL MAGNETIC INTENSITY CONTOURS
Scale 1:25 000

500 0 500 1000 1500 2000 2500 metres

AUSTRALIAN MAP GRID

Flown and compiled by AERODATA HOLDINGS LIMITED
October 1992
Job No. 1320

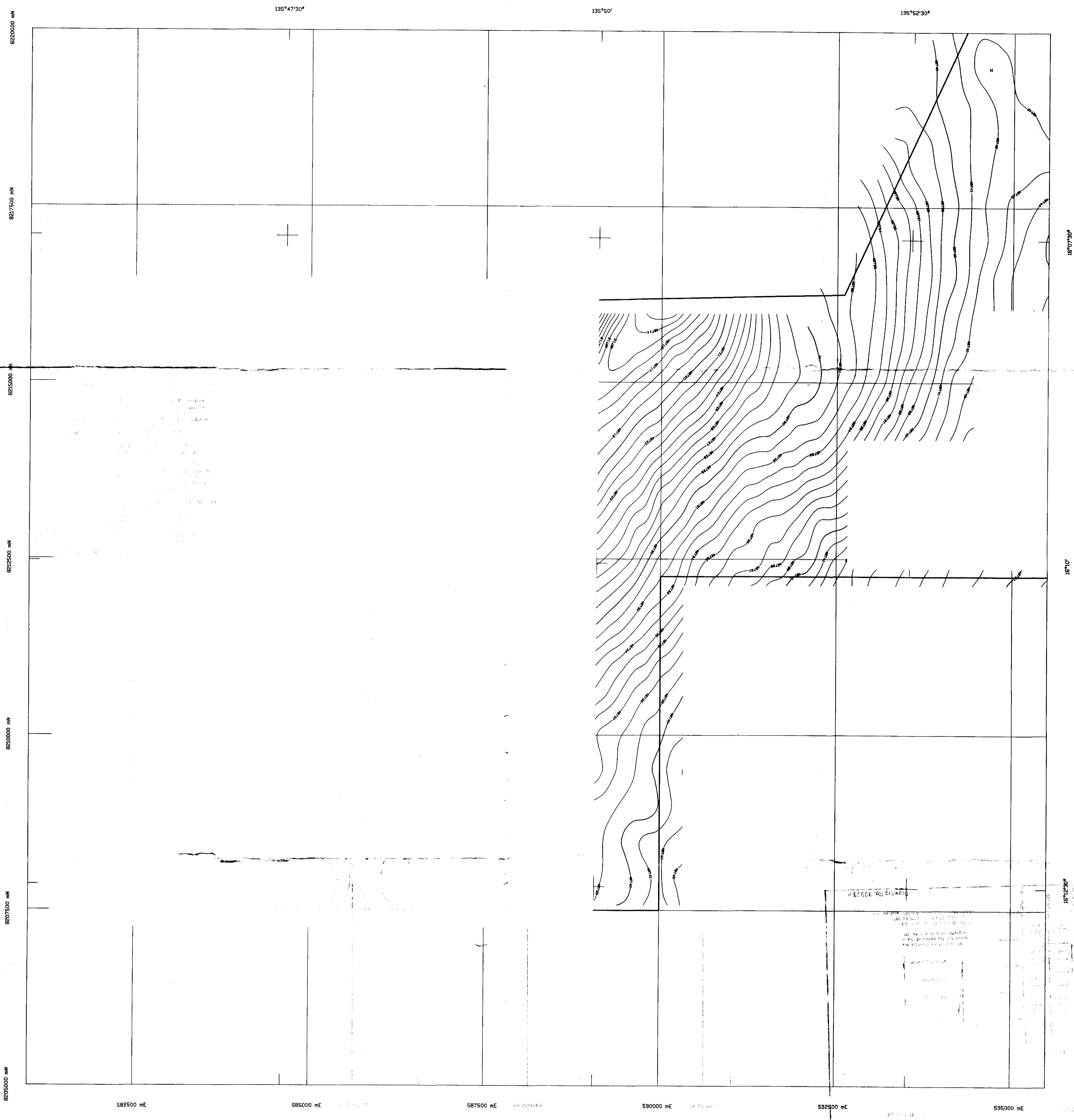
AERODATA

SHEET LAYOUT

GRID NORTH
TRUE NORTH
MAGNETIC NORTH

North point relationships are shown for the centre of the map. Magnetic north is true for 1990.
GRID/MAGNETIC ANGLE 4°29'29"
GRID CONVERGENCE 0°19'43"
SECULAR VARIATION 0°0'13" east per year

Drawing No. 33953 A



AIRBORNE SURVEY SPECIFICATIONS

AIRCRAFT
MAGNETOMETER
BRITTON NORMAN TRISLANDER
SPLIT BEAM CESIUM SCINTREX V201
RESOLUTION 0.01 nanoTeslas
CYCLE RATE 0.5 seconds
SAMPLE INTERVAL 30 metres

ELECTROMAGNETIC SYSTEM
QUESTEM time domain EM
TRANSMITTER BASE FREQUENCY 75.0 Hz
CYCLE RATE 0.25 seconds
SAMPLE INTERVAL 15 metres
RECEIVER horizontal axis coil in towed bird
MEAN WINDOW DELAY TIMES (msec)
0.2467 0.2509 0.4550 0.5582 0.7154
0.9236 1.1312 1.3385 1.5009 1.8813
2.1739 2.6425 3.1634 3.8842 4.1010
11 CHANNEL RMS CR33R CHART RECORDER
PICODAS PDAS 1000 ACQUISITION SYSTEM

DATA ACQUISITION

FLIGHT LINE SPACING
FLIGHT LINE DIRECTION
SURVEY HEIGHT
NAVIGATION
TRAVERSE LINES 500 metres
TIE LINES 8000 metres
TRAVERSE LINES 090 - 270 degrees
TIE LINES 000 - 180 degrees
MEAN TERRAIN CLEARANCE - 120 metres
TRIMBLE TRANS GPS satellite positioning

DATA PROCESSING
CONTOUR INTERVAL 1 nanoTesla
GRID CELL SIZE 175 metres
The magnetic data have been corrected for regional gradient by subtraction of I.G.R.F. model 1990 and secular variation model 1985-1990. Diurnal magnetic variations have been removed. System parallel has been removed. Microlevelling has been applied.

M.I.M. EXPLORATION Pty. Ltd.
YALCO NORTH - NORTHERN TERRITORY
AIRBORNE GEOPHYSICAL SURVEY
TOTAL MAGNETIC INTENSITY CONTOURS
Scale 1:25 000
500 0 500 1000 1500 2000 2500 metres
AUSTRALIAN MAP GRID
Flown and compiled by AERODATA HOLDINGS LIMITED
October 1992
Job No. 1390
AERODATA

SHEET LAYOUT

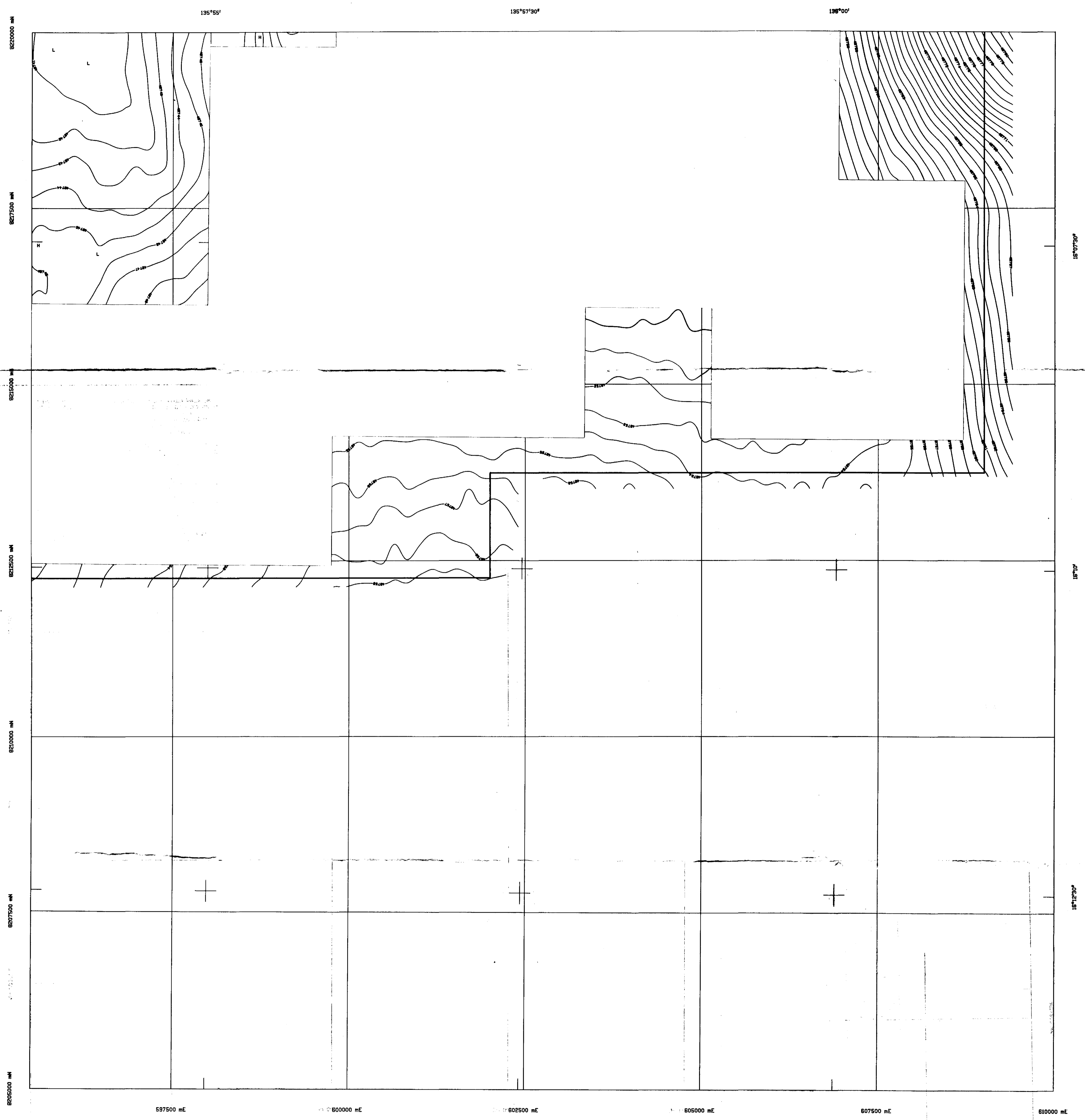
8088 I-NW	8088 I-NE	8188 I-NW
8088 I-SW	8088 I-SE	8188 I-SW
8088 II-NW	8088 II-NE	8188 II-NW
8088 II-SW	8088 II-SE	8188 II-SW

Grid North
True North
Magnetic North

North point relationships are shown for the centre of the map.
Magnetic north is true for 1990.
GRID/MAGNETIC ANGLE 4°24'40"
GRID CONVERGENCE 0°33'47.48"
SECULAR VARIATION 0°01'12" east per year

CR94/155

Drawing No. 33954 A



AIRBORNE SURVEY SPECIFICATIONS

AIRCRAFT BRITEN NORMAN TRISLANDER.
MAGNETOMETER SPLIT BEAM CESLMI SCINTREX V201.
RESOLUTION 0.01 nanoTesla.
CYCLE RATE 0.5 seconds.
SAMPLE INTERVAL 30 metres.
ELECTROMAGNETIC SYSTEM DUESTEM time domain EM.
TRANSMITTER 75.0 Hz.
CYCLE RATE 0.25 seconds.
SAMPLE INTERVAL 15 metres.
RECEIVER horizontal coil in towed bird.
MEAN WINDOW DELAY TIMES (msec)
 0.2467 0.3509 0.4550 0.5592 0.7154
 0.9238 1.1312 1.3925 1.8008 1.8613
DATA ACQUISITION 2.1738 2.6425 3.1834 3.8842 4.1010
 11 CHANNEL RMS GRAB CHART RECORDER.
 PICODS PORS 1000 ACQUISITION SYSTEM.

FLIGHT LINE SPACING TRAVERSE LINES: 500 metres.
FLIGHT LINE DIRECTION TIE LINES: 9000 metres.
 TRAVERSE LINES: 090 - 270 degrees.
 TIE LINES: 000 - 180 degrees.
SURVEY HEIGHT MEAN TERRAIN CLEARANCE - 120 metres.
NAVIGATION TRIMBLE TRANS GPS satellite positioning.

DATA PROCESSING

CONTOUR INTERVAL: 1 nanoTesla
GRID CELL SIZE: 175 metres
 The magnetic data have been corrected for regional gradient by subtraction of I.G.R.F. model 1990 and secular variation model 1985-1990. Diurnal magnetic variations have been removed. System polarity has been removed. Microlevelling has been applied.

CR94/155

M.I.M. EXPLORATION Pty. Ltd.
YALCO NORTH - NORTHERN TERRITORY
AIRBORNE GEOPHYSICAL SURVEY
TOTAL MAGNETIC INTENSITY CONTOURS
 Scale 1:25 000

Flown and compiled by **AERODATA HOLDINGS LIMITED**
 October 1992
 Job No. 1320

AERODATA

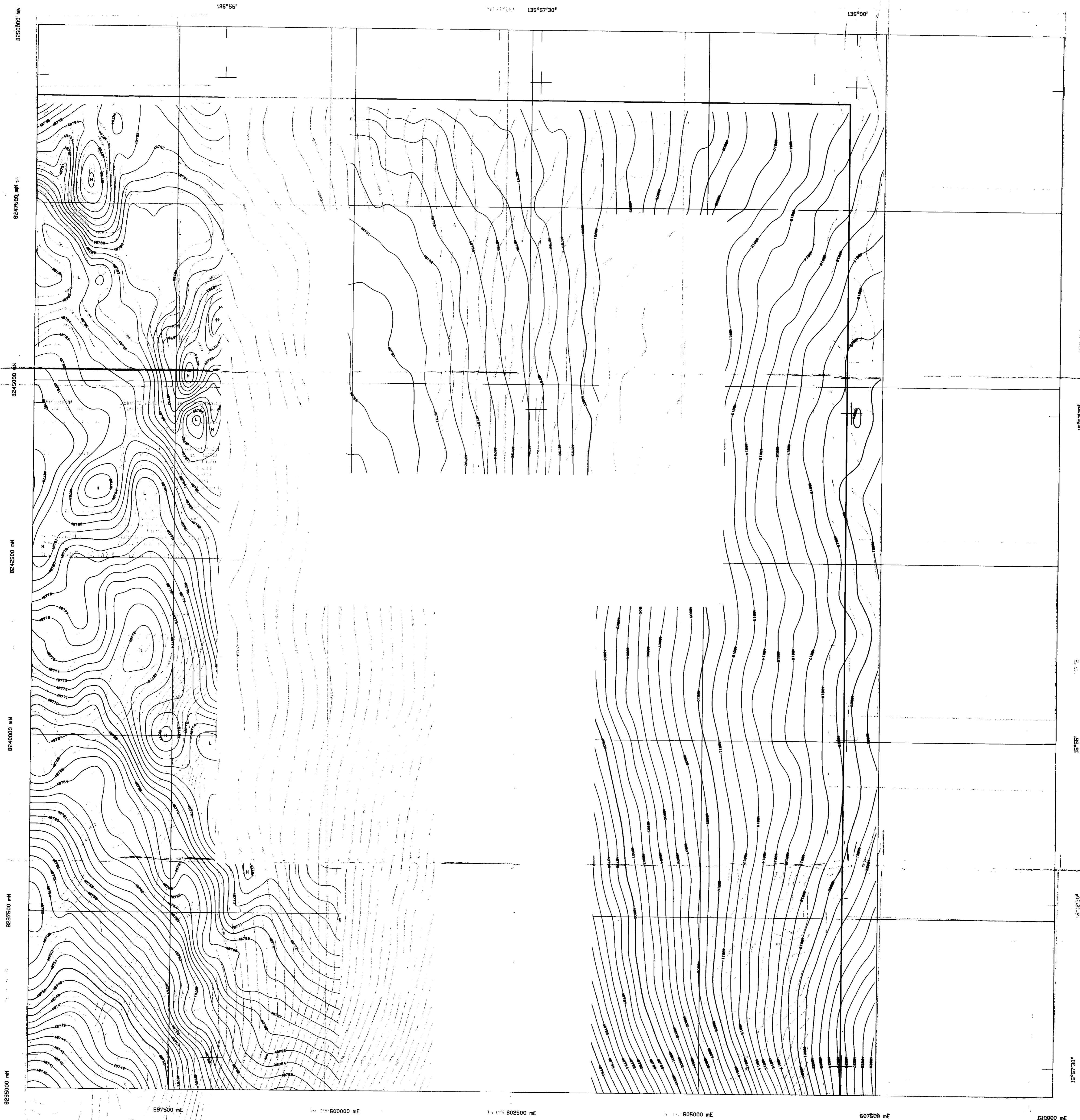
SHEET LAYOUT

GRID NORTH
TRUE NORTH
MAGNETIC NORTH

North point relationships are shown for the centre of the map.
 Magnetic north is true for 1980.

GRID CONVERGENCE 42'44"
GRID CONVERGENCE 0'0'0.45"
REGULAR VERTICAL 0'0'14" east per 100m

Drawing No. 33955 A



AIRBORNE SURVEY SPECIFICATIONS

AIRCRAFT
MAGNETOMETER
ELECTROMAGNETIC SYSTEM
DATA ACQUISITION
FLIGHT LINE SPACING
FLIGHT LINE DIRECTION
SURVEY HEIGHT
NAVIGATION

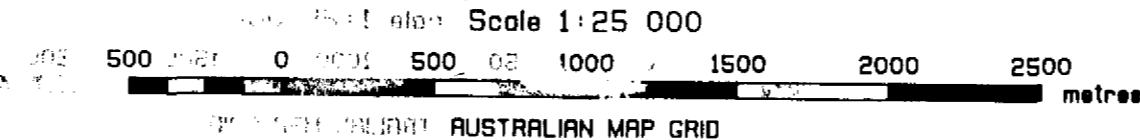
BRITEN NORMAN TRISLANDER
SPLIT BEAM CESIUM SCINTREX V201
RESOLUTION 0.01 nanoTesla
CYCLE RATE 0.5 seconds
SAMPLE INTERVAL 30 metres
RECEIVER horizontal coil in towed bird
MEAN WINDOW DELAY TIMES (secs)
0.2467 0.3509 0.4550 0.5582 0.7154
0.9238 1.1312 1.3925 1.6009 1.8613
2.4739 2.6425 3.1834 3.6942 4.1010
11 CHANNEL RMS GR304 CHART RECORDER
PICODAS PDAS 1000 ACQUISITION SYSTEM

TRaverse Lines 500 metres
Tie Lines 6000 metres
TRaverse Lines 090 + 270 degrees
Tie Lines 000 - 180 degrees
MEAN TERRAIN CLEARANCE 120 metres
TRIMBLE TRANS GPS satellite positioning

DATA PROCESSING

CONTOUR INTERVAL 1 nanoTesla
GRID CELL SIZE 175 metres
The magnetic data have been corrected for regional gradient by subtraction of I.G.R.F. model 1990 and secular variation model 1985-1990.
Diurnal magnetic variations have been removed.
System parallax has been removed.
Microlevelling has been applied.

YALCO EXPLORATION Pty. Ltd.
YALCO AIRBORNE GEOPHYSICAL SURVEY
TOTAL MAGNETIC INTENSITY CONTOURS
Scale 1:25 000

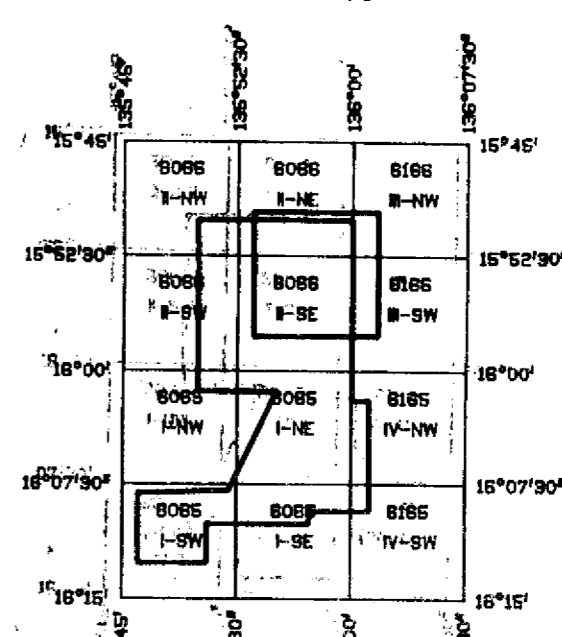


Flown and compiled by **PERODATA HOLDINGS LIMITED**
October 1992
Job No. 1392

PERODATA

CR94/155

SHEET LAYOUT



GRID NORTH
TRUE NORTH
MAGNETIC NORTH

North point relationships are shown for the centre of the map.
Magnetic north is true for 1980.
GRID/MAGNETIC ANGLE 4°22'49"
GRID CONVERGENCE 0°15'48.40"
SECULAR VARIATION 0°0'19" east per year

8245⁰⁰⁰

+

8240⁰⁰⁰

+

8235⁰⁰⁰

+

8230⁰⁰⁰

+

8225⁰⁰⁰

+

8220⁰⁰⁰

585

590

595⁰⁰⁰

600⁰⁰⁰

605⁰⁰⁰

MIM EXPLORATION PTY LTD
EL 6236
QUESTEM CHANNEL 5 & CHANNEL 6
PSEUDOCLOUR IMAGE

CR94 / 155

1:100 000

DRG. No. 41038 A

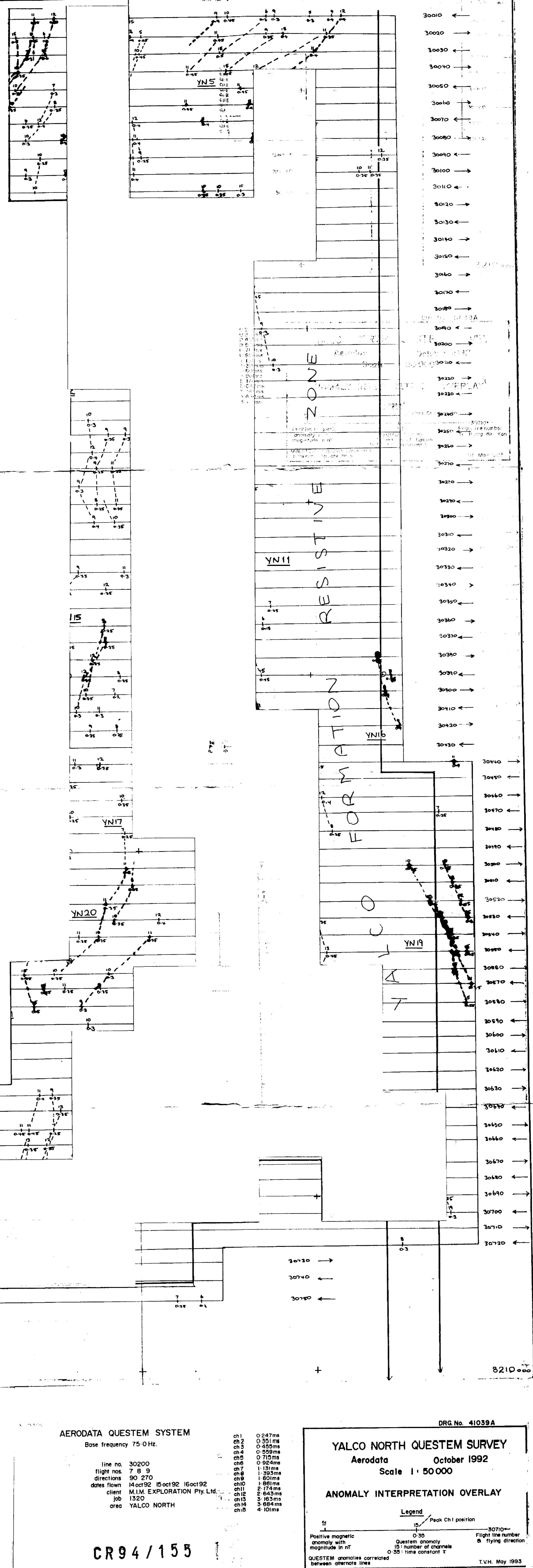
8210000 +

8135000 +

8130000 +

8115000 +

8100000 +



AERODATA QUESTEM SYSTEM

Base frequency 75.0 Hz.

line no. 30200
 flight nos. 7 8 9
 directions 90 270
 dates flown 14oct92 15oct92 16oct92
 client M.L.M. EXPLORATION Pty. Ltd.
 job 1320
 area YALCO NORTH

ch1 0.247ms
 ch2 0.351ms
 ch3 0.455ms
 ch4 0.559ms
 ch5 0.713ms
 ch6 0.924ms
 ch7 1.131ms
 ch8 1.393ms
 ch9 1.601ms
 ch10 1.861ms
 ch11 2.174ms
 ch12 2.643ms
 ch13 3.63ms
 ch14 3.684ms
 ch15 4.101ms

DRG. No. 41039A

YALCO NORTH QUESTEM SURVEY
 Aerodata October 1992
 Scale 1:50000

ANOMALY INTERPRETATION OVERLAY

Legend
 15 Peak Ch 1 position
 Positive magnetic anomaly with magnitude in nT
 Questem anomaly magnitude in nT
 0.35 Questem anomaly magnitude in nT
 15 number of channels
 0.35 time constant τ
 Flight line number
 8 flying direction
 QUESTEM anomalies correlated between alternate lines
 T.V.H. May 1993

CR94/155