NOBELEX N.L.

COMPLETION EXPLORATION REPORT

EXPLORATION LICENCE 676 - RED BLUFF

TENNANT CREEK, NORTHERN TERRITORY

for the three years ending

6th November, 1975

CONTENTS

Prepared for NOBELEX N.L.
By AUSTRALIAN DEVELOPMENT LIMITED
Managing Agents for NOBELEX N.L.

COMPLETION EXPLORATION REPORT

1. INTRODUCTION

Exploration Licence 676 covered an area of 220 square kilometres and is located in the Red Bluff area some 20 kilometres west of Tennant Creek (see Fig. 1). This report should be read in conjunction with the Annual Exploration Reports for the years ending the 6th November, 1973 and 1974.

Exploration work during the period consisted of anomaly location, surveying and gridding and magnetometry on the following prospects, RB6, RB7, RB8, RB14, RB17 and RB18.

2. EXPLORATION

The permanent base lines laid out during 1974 and completed during 1975 is a true north/south and east/west grid with its origin at the Red Bluff trig. All the gridding carried out was off these baselines.

2.1 Magnetic Anomaly RB6

Location - Access

Latitude: 19° 33'11" S
Longitude: 133° 55'13" W

Access is by graded track west from the Ivanhoe Mine for 10 km to the Red Bluff Trig, thence 2 km past the trig a track heads south west for 3.5 km to the grid area. The anomaly lies about 400 m north of the track.

Gridding and Magnetometry

This prospect is located on an aeromagnetic anomaly. The area was gridded at 100 m x 100 m spacing and ground magnetometry was completed at 100 m x 50 m spacing with a total force magnetometer. The data was reduced and presented as contour plans.

This anomaly had previously been investigated by Australian Development N.L. in 1961 and the results show little change in the basic shape or position of this broad elongate anomaly.

2.2 Magnetic Anomaly RB7

Location - Access

Latitude: 19° 33'30" S
Longitude: 133° 54'40" W

Access is by graded track west from the Ivanhoe Mine for 10 km to the Red Bluff Trig; 2 km past the trig a track heads south west for 4.6 km along the track to the anomaly area and an old diamond drill site.

Gridding and Magnetometry

The prospect is located on an aeromagnetic anomaly. The area was gridded at 100 m x 100 m spacing and ground magnetometry was completed at 100 m x 50 m spacing with a total force magnetometer. The data was reduced and presented as contour plans.

This complex anomaly had previously been investigated by Australian Development N.L. in 1961 and 1966. The single airborne magnetic anomaly breaks up into three (3) distinct ground anomalies designated RB7A, RB7B and RB7C. The anomaly RB7C was diamond drilled in 1966 and intersected a complex series of porphyries, diorite and metamorphics with accessory magnetite.

2.3 Magnetic Anomaly RB8

Location - Access

Latitude: 19° 34'19" S
Longitude: 134° 54'00" W

Access is by graded track west from the Ivanhoe Mine for 10 km to the Red Bluff Trig; 2 km past the trig a track heads south west for 4.6 km to the old diamond drill site, then a further 1.4 km to a faint track heading west for 0.7 km to the centre of the grid and the anomaly area.

Gridding and Magnetometry

The prospect is located on an aeromagnetic anomaly. The area was gridded at 100 m x 100 m spacing and ground magnetometry completed at 100 m x 50 m spacing with a total force magnetometer. The data was reduced and presented as contour plans.

This anomaly had also previously been investigated by Australian Development N.L. in 1961 and the results show little change in the basic shape or position of the broad, slightly elongate anomaly except for the tail to the southwest.

2.4 Magnetic Anomaly RB14

Location - Access

Latitude: 19° 33'52" S
Longitude: 133° 55'48" W

Access is by graded track west from the Ivanhoe Mine for 10 km to the Red Bluff Trig. 2 km past the trig a track heads southwest; 3.5 km along the track head east for 0.5 km along the baseline then 1 km south along the north south base line, then head about 0.5 km east to the centre of the anomaly area.

Gridding and Magnetometry

The prospect is located on an aeromagnetic anomaly. The area was gridded at 100 m x 100 m spacing and ground magnetometry was completed at 100 m x 50 m spacing with a total force magnetometer. The data was reduced and presented as a contour plan.

The ground magnetometry defined a broad slightly elongate anomaly with an amplitude of about 450 gammas.

2.5 Magnetic Anomaly RB17

Location - Access

Latitude: 19° 33'33" S
Longitude: 133° 55'12" W

Access is by graded track west from the Ivanhoe Mine for 10 km to the Red Bluff Trig. 2 km past the trig a track heads south west; 3.5 km along the track head south 0.2 km on a faint track to the anomaly centre.

Gridding and Magnetometry

The area was gridded at 100 m x 100 m spacing and ground magnet-

ometry was completed at 100 m x 50 m spacing with a total force magnetometer. The data was reduced and presented as a contour plan.

RB17 occurs as a flexure on the side of the aeromagnetic anomaly RB6 as defined in the 1973 Airborne Geophysical Survey (see Annual Report for 1973). A single well defined closure was located by the ground magnetics.

2.6 Magnetic Anomaly RB18

Location - Access

Latitude: 19° 35'50" S
Longitude: 133° 54'50" W

Access is by graded track west from the Ivanhoe Mine for 10 km to the Red Bluff Trig; 2 km past the trig, a track heads south west for 4.6 km to an old diamond drill site. A further 2.2 km along the track, head southeast on a faint track for about 1.3 km to the anomaly centre.

Gridding and Magnetometry

The area was gridded at 100 x 100 m spacing and ground magnetometry completed at 100 m x 50 m spacing with a total force magnetometer. The data was reduced and presented as contour plans.

RB18 anomaly occurs as a flexure on a large regional gradient as defined by the 1973 Airborne Geophysical Survey (see Annual Report for 1973). RB18 was defined on the ground as a single elongate closure on a gradient.

3. SUMMARY AND EXPENDITURE

A summary of exploration work on EL 676 - Red Bluff during the three years of tenure is given below.

Airborne Geophysics	220 sq. km.
New anomalies located	6
Anomalies gridded	6
Gridding	2,417 stations established
Magnetometry	2,199 stations read
Dust drilling	220 feet
Assays	35

Total expenditure on EL 676 - Red Bluff for the three years of tenure is $38,265.

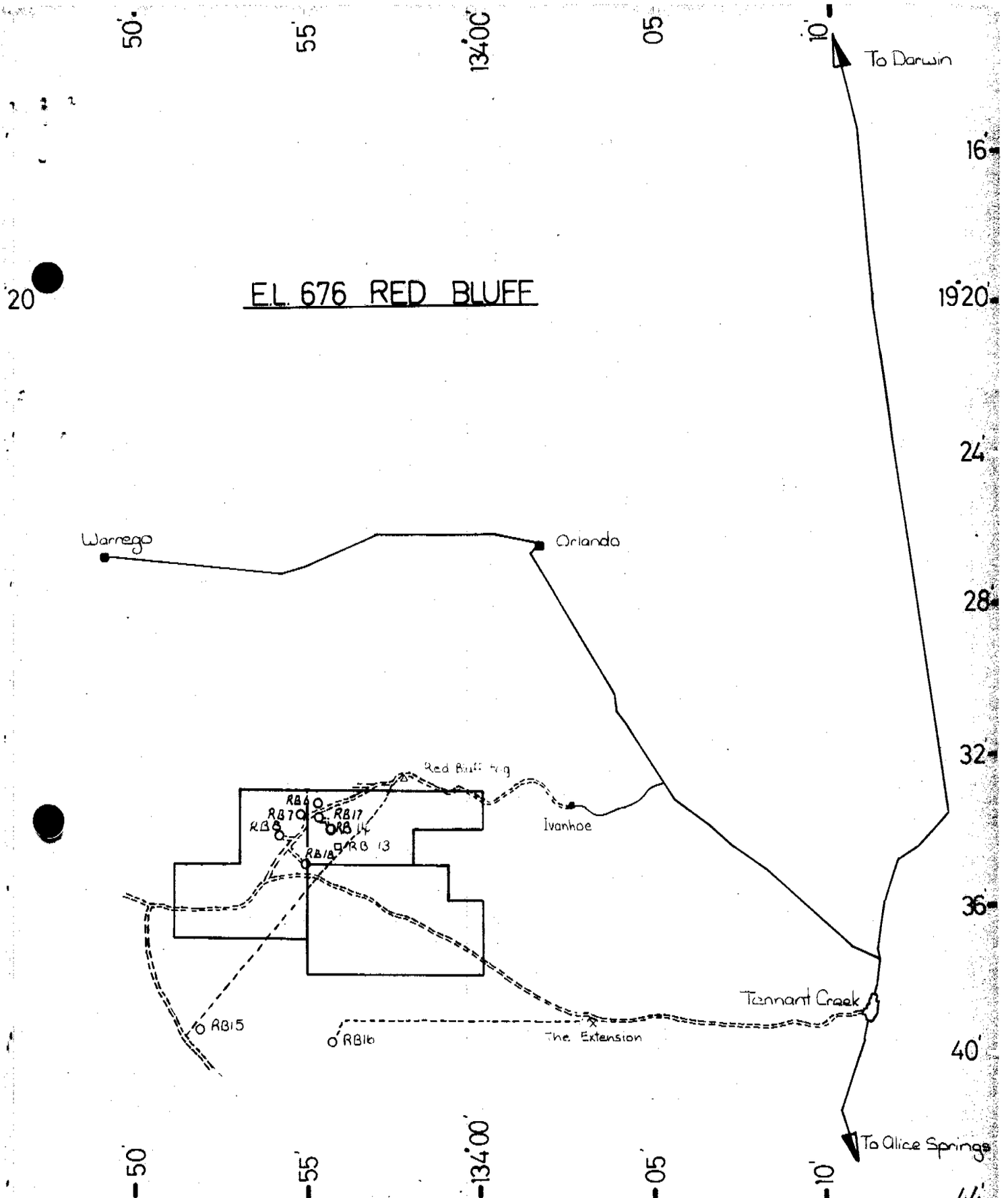


FIG 1 LOCALITY MAP E.L. 676 RED BLUFF

Prepared for Nobelex NL. By Australian Development Ltd.
Managing Agents for Nobelex N.L.

SCALE 1:250,000

SECTION 2. TECHNICAL DATA.

1. Magnetic Anomalies RB6, RB7, RB8, RB14, RB17 and RB18.

Fig. 2 Location Plan - EL 676 Red Bluff (see attached)

Total Magnetic Intensity Contour Plans. (See Pocket)

Drawing Nos. 1323, 1324, 1325, 1326, 1327, 1328, 1446, 1447, 1448 and 1449.

Prepared for NOBELEX N.L.
By AUSTRALIAN DEVELOPMENT LIMITED
Managing Agents for NOBELEX N.L.

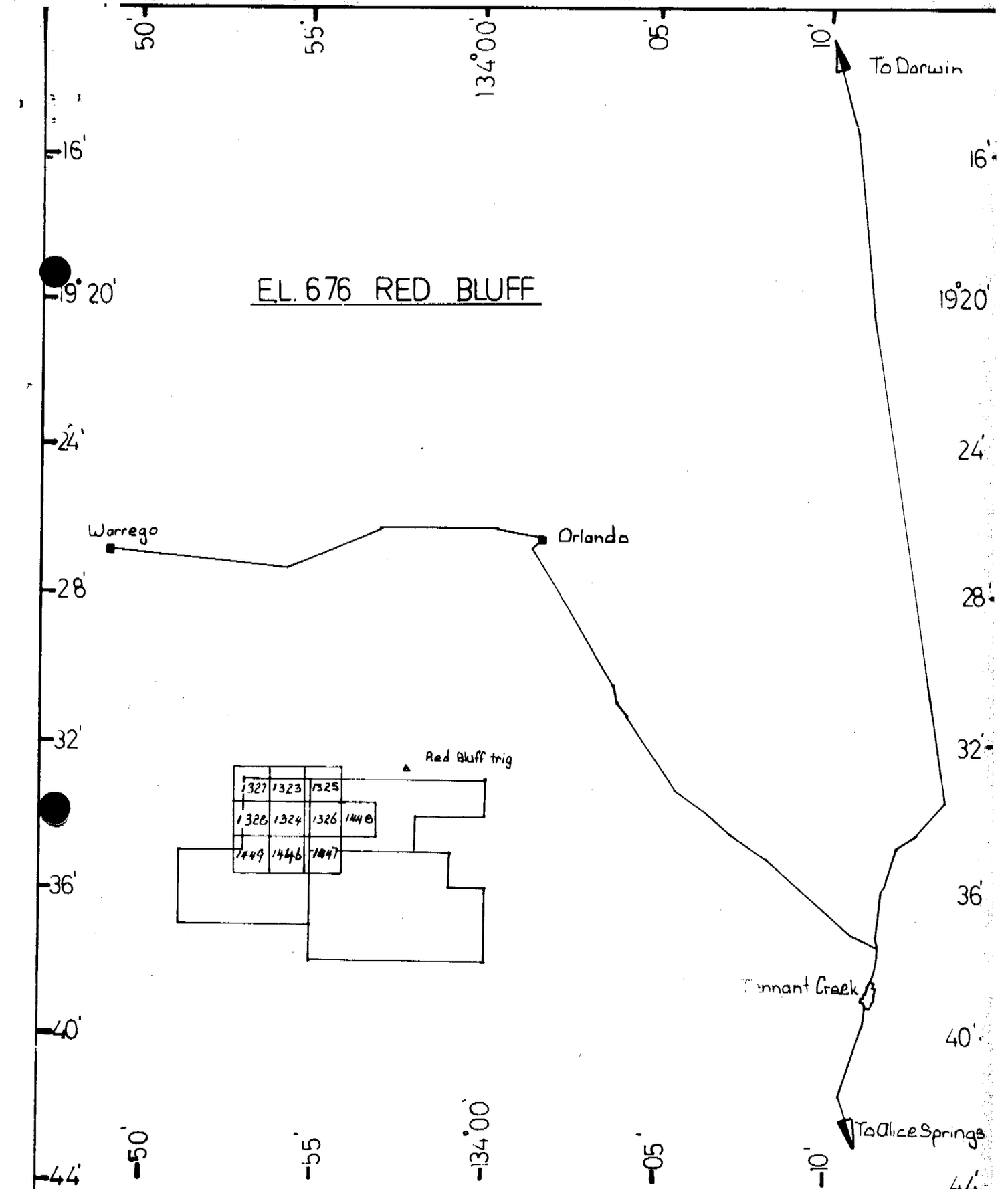


FIG 2 LOCATION PLAN E.L. 676 RED BLUFF

Prepared for Nobelex N.L. By Australian Development Ltd.
Managing Agents for Nobelex N.L.

SCALE 1.250,000
DATE 4.12.75

00 N/S

7000 W | 6750 W | 6500 W | 6250 W | 6000 W | 5750 W | 5500 W | 5250 W

250 S

500 S

750 S

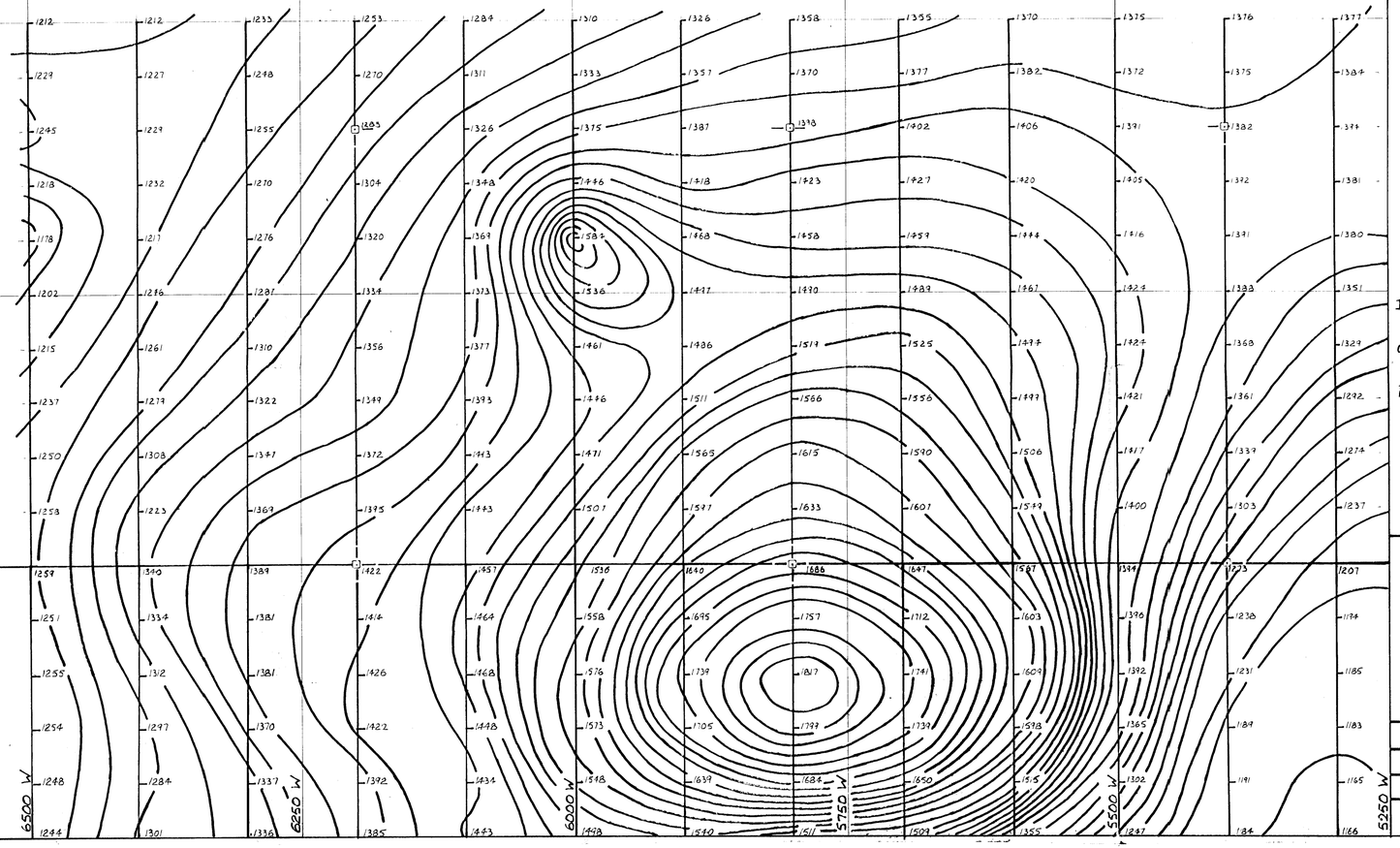
1000 S

1250 S

1500 S

BASE LINE

7000 W 1750 S



INSTRUMENT USED: GEOMETRICS PROTON MAGNETOMETER No. 1090.

CONTOUR INTERVAL: 208 (nT)

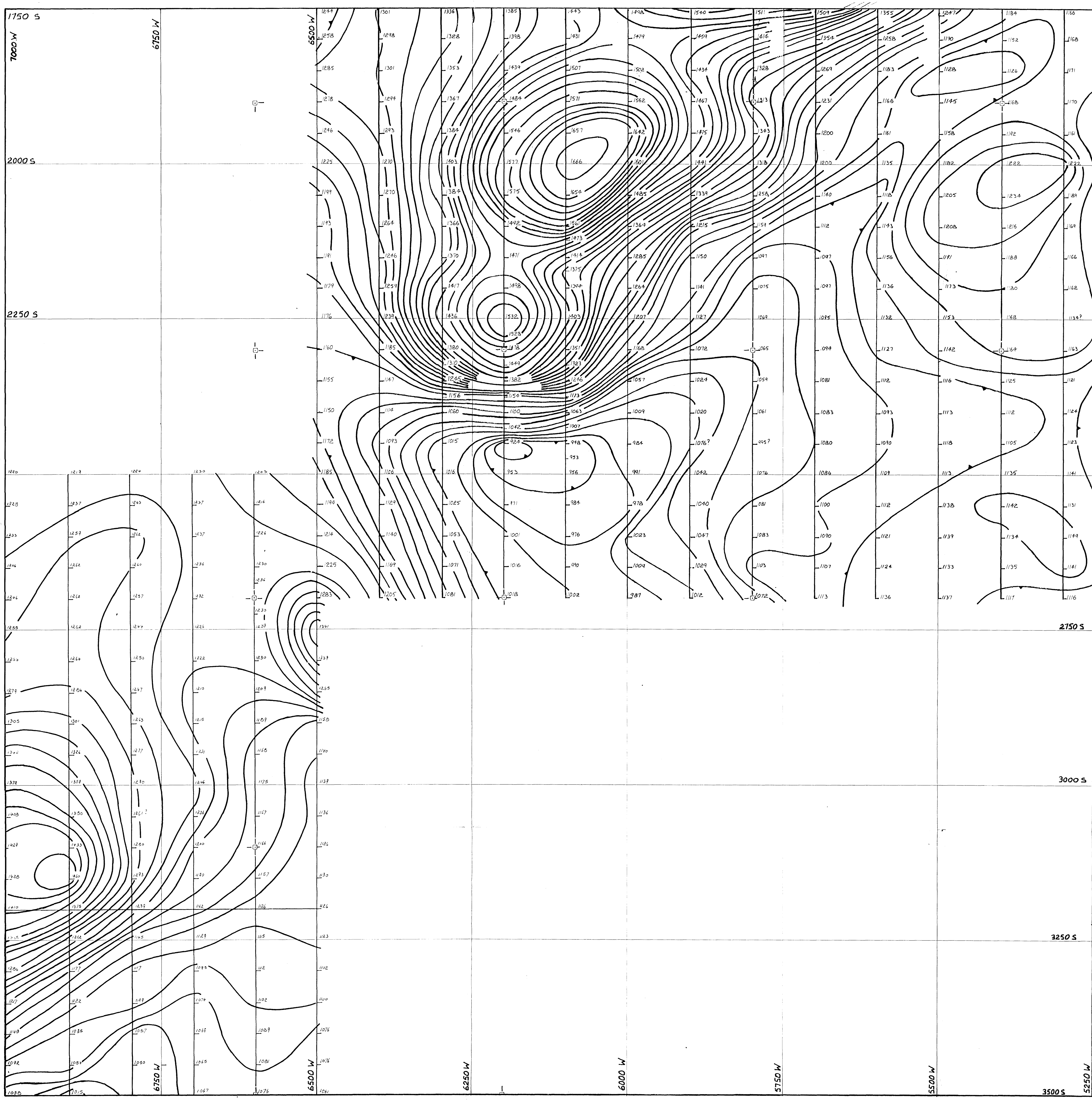
BASE LINE AZIMUTH: 00° T.

NOT TO SCALE

AUSTRALIAN DEVELOPMENT LTD.
TOTAL MAGNETIC INTENSITY CONTOURS PLAN
RB 7C
(7000W 1750S)

SCALE	1cm = 25M
DATE	5.12.74
GEOPHYSICS	P.Blanchard
DRAWN	

1323



NOTE: DDH RB7C is located at 1819S 5796W

INSTRUMENT USED: GEOMETRICS PROTON MAGNETOMETER No. 1090.
CONTOUR INTERVAL: 20 γ (nT)
BASE LINE AZIMUTH: 00° T.

NOBELEX N.L.

AUSTRALIAN DEVELOPMENT LTD.

TOTAL MAGNETIC INTENSITY CONTOURS PLAN

RB 7A & B

(7000W 3500S)

SCALE	1cm = 25 m.
DATE	5.12.74
GEOPHYSICS	[signature]
DRAWN	[signature]

1324

00 N/S

5250 W | 5000 W | 4750 W | 4500 W | 4250 W | 4000 W | 3750 W | 00 N/S 3500 W

250 S

500 S

750 S

1000 S

1250 S

1500 S

BASE LINE

1750 S

INSTRUMENT USED : GEOMETRICS PROTON MAGNETOMETER No. 1090.

CONTOUR INTERVAL : 20B (nT)

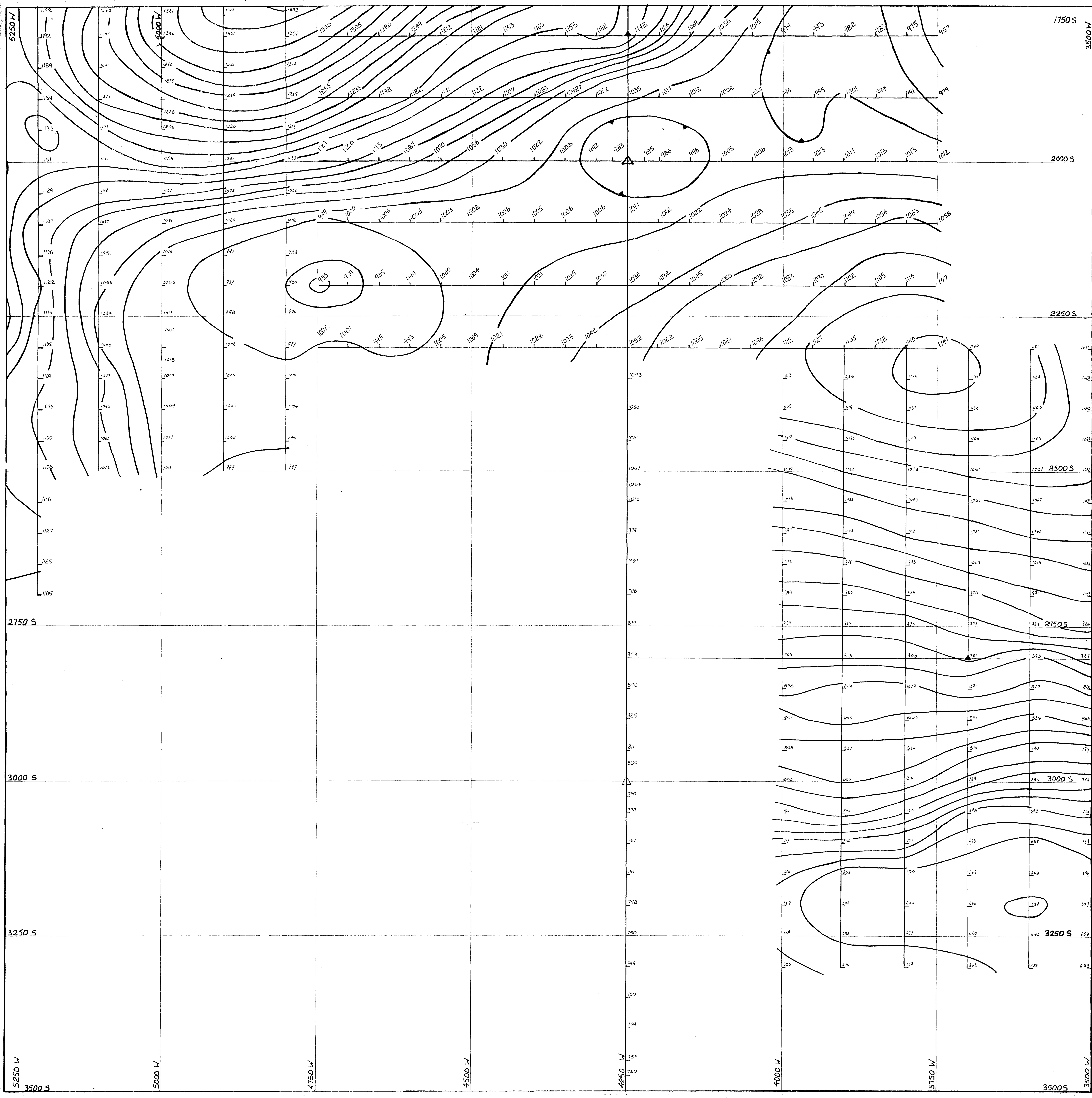
BASE LINE AZIMUTH : 00° T.

NOBILEX N.L.

AUSTRALIAN DEVELOPMENT LTD.
TOTAL MAGNETIC INTENSITY CONTOURS PLAN
RB 6
(5250W 1750S)

SCALE	1cm = 25 M.
DATE	5.12.74
GEOPHYSICS	P.C. Bowerman
DRAWN	

1325



INSTRUMENT USED: GEOMETRICS PROTON MAGNETOMETER No. 1090.

CONTOUR INTERVAL: 20 γ (nT)

BASE LINE AZIMUTH: 00° T.

AUSTRALIAN DEVELOPMENT LTD.

TOTAL MAGNETIC INTENSITY

CONTOURS PLAN

RB 17

(5250W 3500S)

SCALE	1cm = 25 m.
DATE	5.12.74
GEOPHYSICS	[signature]
DRAWN	[signature]

1326

00 S

8750 W | 8500 W | 8250 W | 8000 W | 7750 W | 7500 W | 7250 W | 7000 W

250 S

500 S

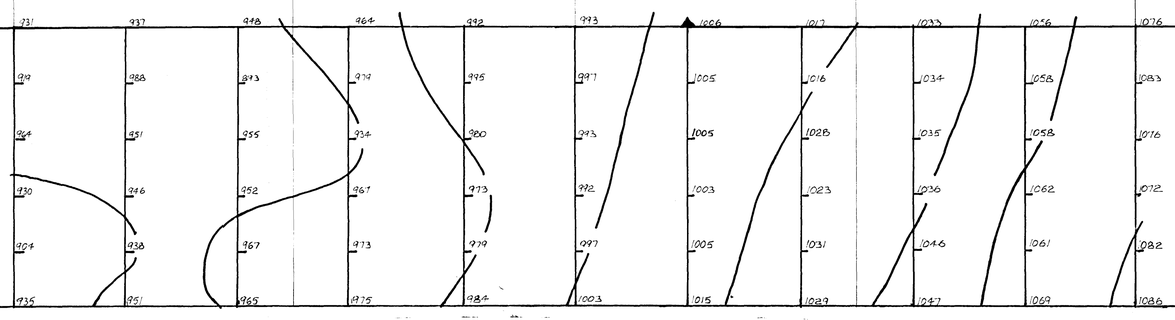
750 S

1000 S

1250 S

1500 S

1750 S



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CONTOUR INTERVAL: 208 (nT)

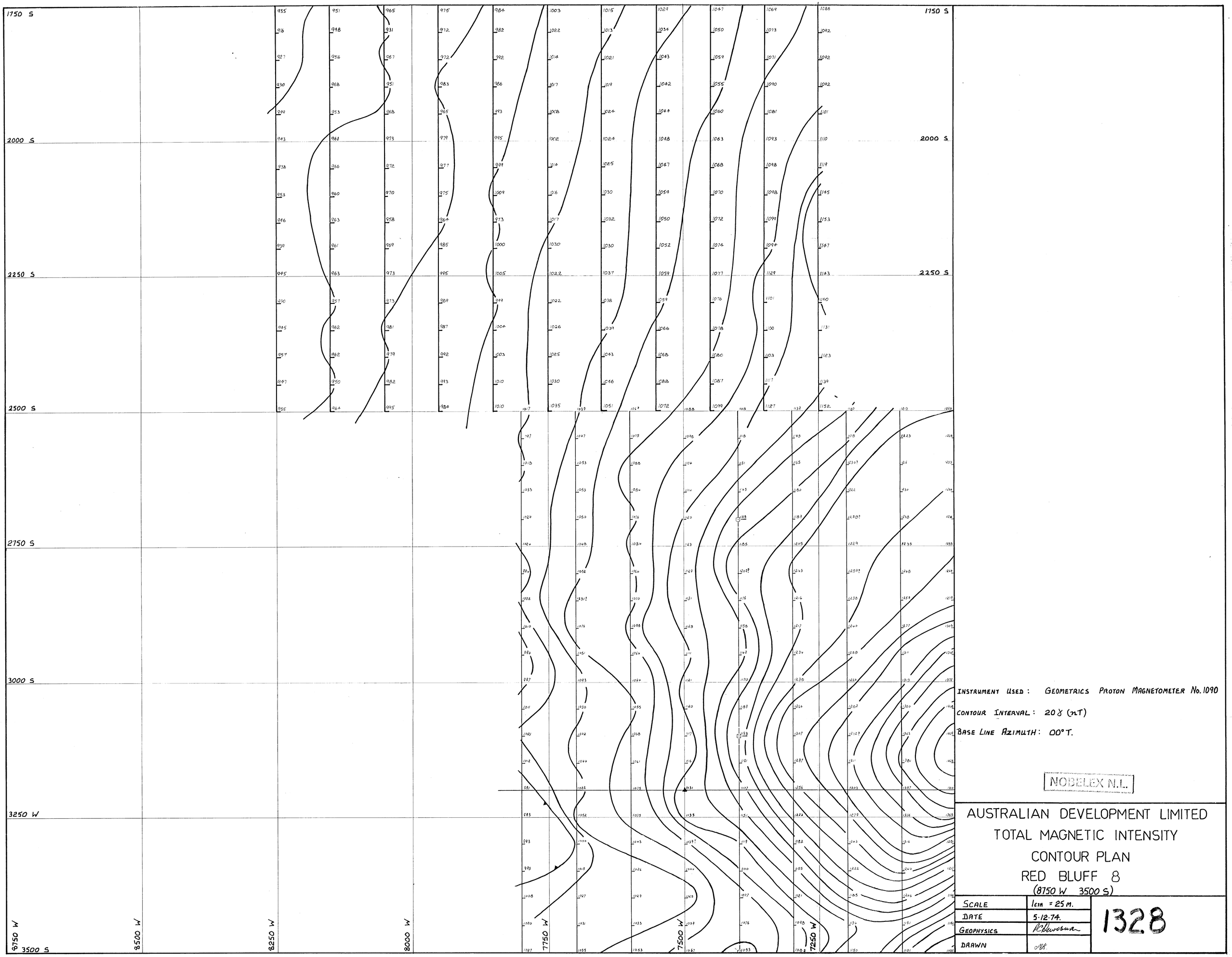
BASE LINE AZIMUTH: 00°T.

NOBEL [illegible]

AUSTRALIAN DEVELOPMENT LIMITED
TOTAL MAGNETIC INTENSITY CONTOURS PLAN
RED BLUFF 7 NORTH WEST
(8750 W 1750 S)

SCALE	1cm = 25 m.
DATE	5.12.74.
GEOPHYSICS	P.C. Bowman
DRAWN	[illegible]

1327



INSTRUMENT USED : GEOMETRICS PROTON MAGNETOMETER No. 1090

CONTOUR INTERVAL : 20 γ (nT)

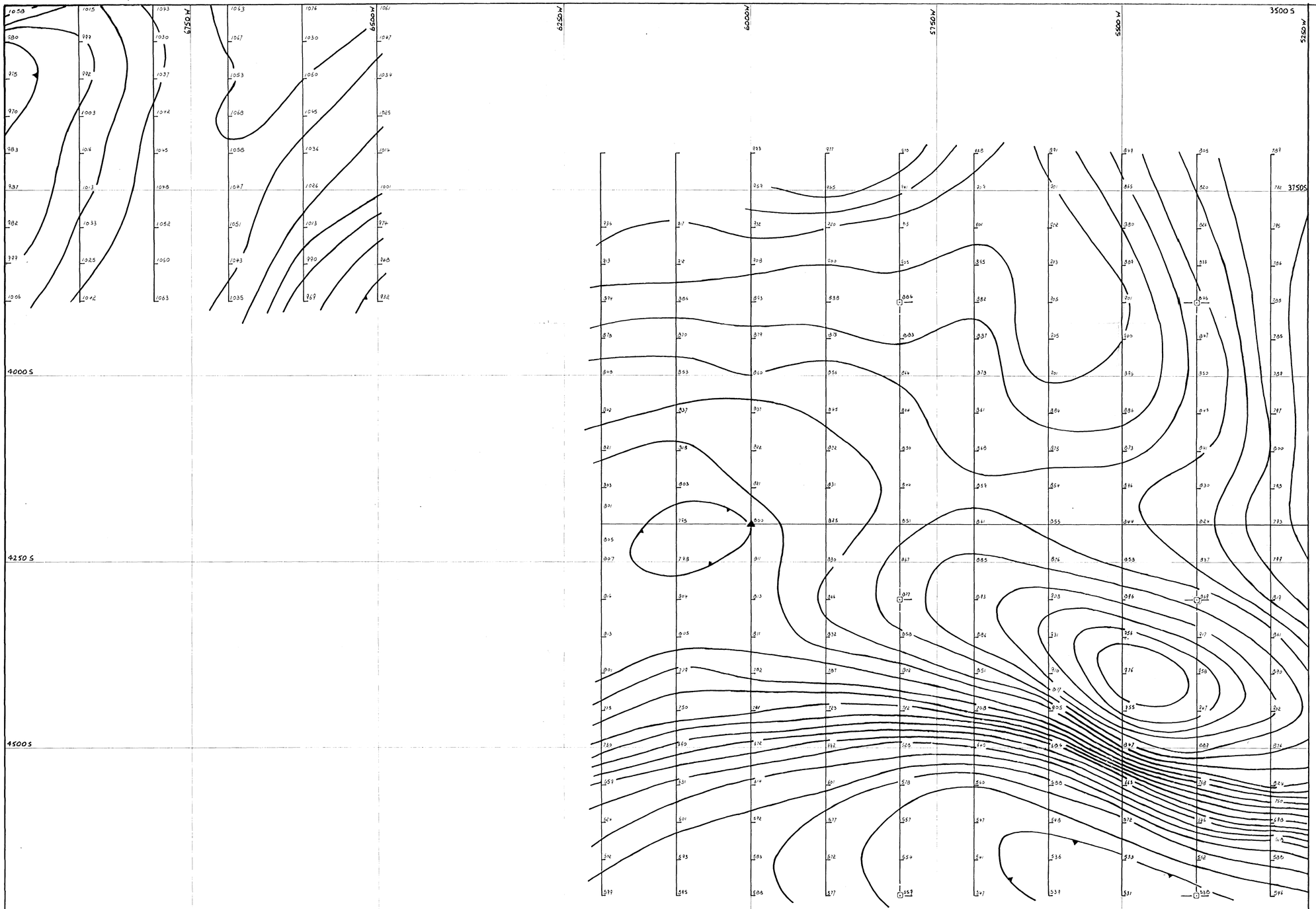
BASE LINE AZIMUTH : 00° T.

NOBELEX N.L.

AUSTRALIAN DEVELOPMENT LIMITED
TOTAL MAGNETIC INTENSITY
CONTOUR PLAN
RED BLUFF 8
(8750 W 3500 S)

SCALE	1cm = 25 m.
DATE	5·12·74.
GEOPHYSICS	R Edwards
DRAWN	MH

1328



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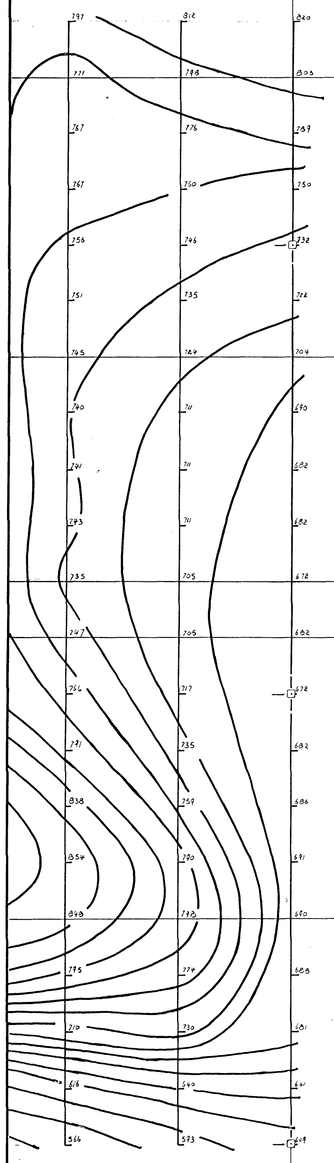
CONTOUR INTERVAL : 20 γ(nT)

BASE LINE AZIMUTH : 00° T.

AUSTRALIAN DEVELOPMENT LIMITED
TOTAL MAGNETIC INTENSITY CONTOURS PLAN
R B 18
(7000W - 5250S)

SCALE	1cm = 25m.		REVISED			DRAWING NUMBER
GEOPHYSICS	R.Robertson	3·12·75	REVISED			1446
DRAWN	M.H.	29·10·75	REVISED			
REVISED			REVISED			
REVISED			APPROVED			



5250W 5000W 4750W 4500W 4250W 4000W 3750W 3500W

3500S

3750S

4000S

4250S

4500S

4750S

5000S

5250S

INSTRUMENT USED : GEOMETRICS PROTON MAGNETOMETER No. 1090

CONTOUR INTERVAL : 20 γ (nT)

BASE LINE AZIMUTH : 00° T.

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AUSTRALIAN DEVELOPMENT LIMITED

TOTAL MAGNETIC INTENSITY CONTOURS PLAN

R B 18 WEST

(5250W — 5250 S)

SCALE	1cm = 25m		REVISED			DRAWING NUMBER
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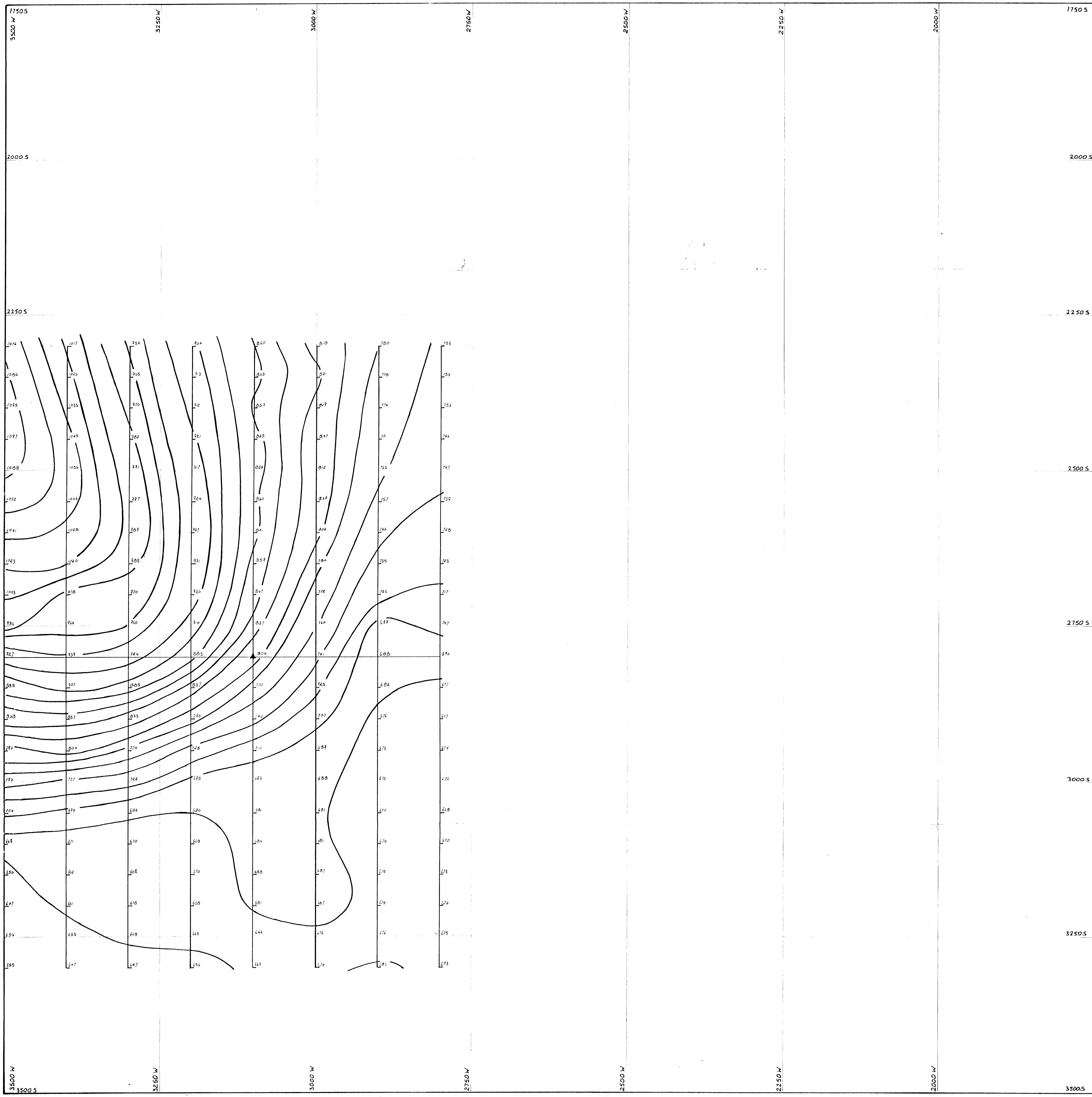
DRAWN	M.H.	23.10.75	REVISED			
REVISED			REVISED			
REVISED			APPROVED			



INSTRUMENT USED : GEOMETRICS PROTON MAGNETOMETER No. 1090

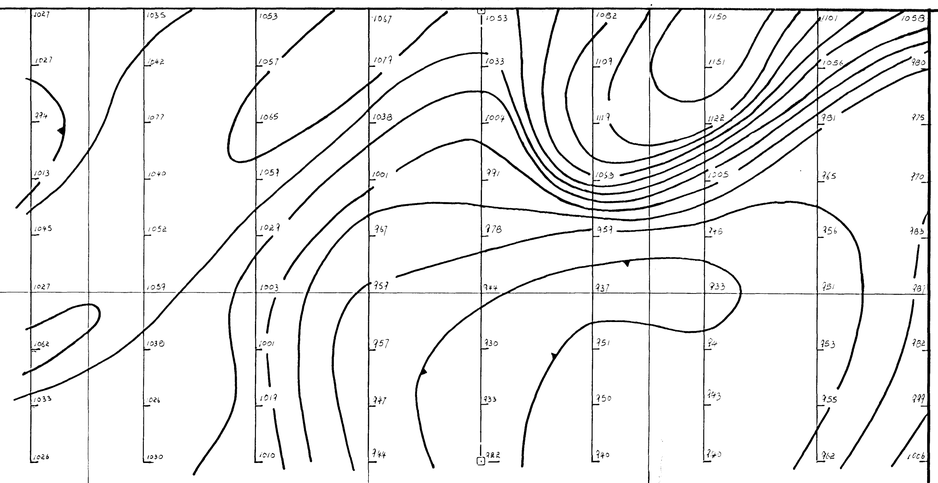
CONTOUR INTERVAL : 20 γ(nT)

BASE LINE AZIMUTH : 00° T.

NOBELEX N.L.

AUSTRALIAN DEVELOPMENT LIMITED
TOTAL MAGNETIC INTENSITY CONTOURS PLAN
R B 14
(3500 W – 3500 S)

SCALE	1cm = 25m.		REVISED			DRAWING NUMBER
GEOPHYSICS	[signature]	3·12·75	REVISED			1448
DRAWN	M.H.	29·10·75	REVISED			
REVISED			REVISED			
REVISED			APPROVED			



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CONTOUR INTERVAL: 20 gammas (nT)
BASE LINE AZIMUTH: 00° T.

NOBELEX N.L.

AUSTRALIAN DEVELOPMENT LIMITED
TOTAL MAGNETIC INTENSITY CONTOURS PLAN
R B 8 SOUTH
(8750 W – 5250S)

SCALE	1cm = 25m.		REVISED			DRAWING NUMBER
GEOPHYSICS		3-12-75	REVISED			1449
DRAWN			REVISED			
REVISED			REVISED			
REVISED			APPROVED			