DIAMOND INVESTIGATIONS

E.L. 1408

Submitted to: A.O.G. Minerals Limited

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ASHTON MINING LIMITED,
85 Eagle Street,
Brisbane.

January, 1983.

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1.00 INTRODUCTION

Exploration Licence 1408 was explored for diamonds by the A.D.E. Joint Venture under an agreement with the Litchfield Joint Venture partners.

Investigations took the form of an airborne magnetic survey, with follow-up magnetics using a helicopter borne system.

Results were not sufficiently encouraging to warrant further investigations and the agreement to explore the licence for diamonds was terminated.

2.00 AIRBORNE MAGNETIC SURVEY

2.10 General

A fixed wing airborne magnetic survey was flown by Geometrics International Corporation over the area outlined in Figure 1. Flight line spacing was contracted at 300 metres with lines oriented in a north-south direction. Additional survey specifications are listed in the legend to Plan 1. Results are presented as stacked profiles (refer to Plans 1 to 3).

2.20 Interpretation and Follow-up

The data collected from the survey was interpreted by R.K. Jones and Associates and four possible anomalies outlined (refer to Table 1).

However only anomaly 2/1 was considered a priority target and this was followed up in the field using a helicopter borne magnetometer system.

The results of the helimag work indicated that the anomaly was probably due to a surficial source.

3.00 CONCLUSIONS

The implementation of an airborne magnetic survey was considered a sufficient test of the kimberlite potential of the survey area.

The subsequent negative results do not warrant further diamond investigations in the area.

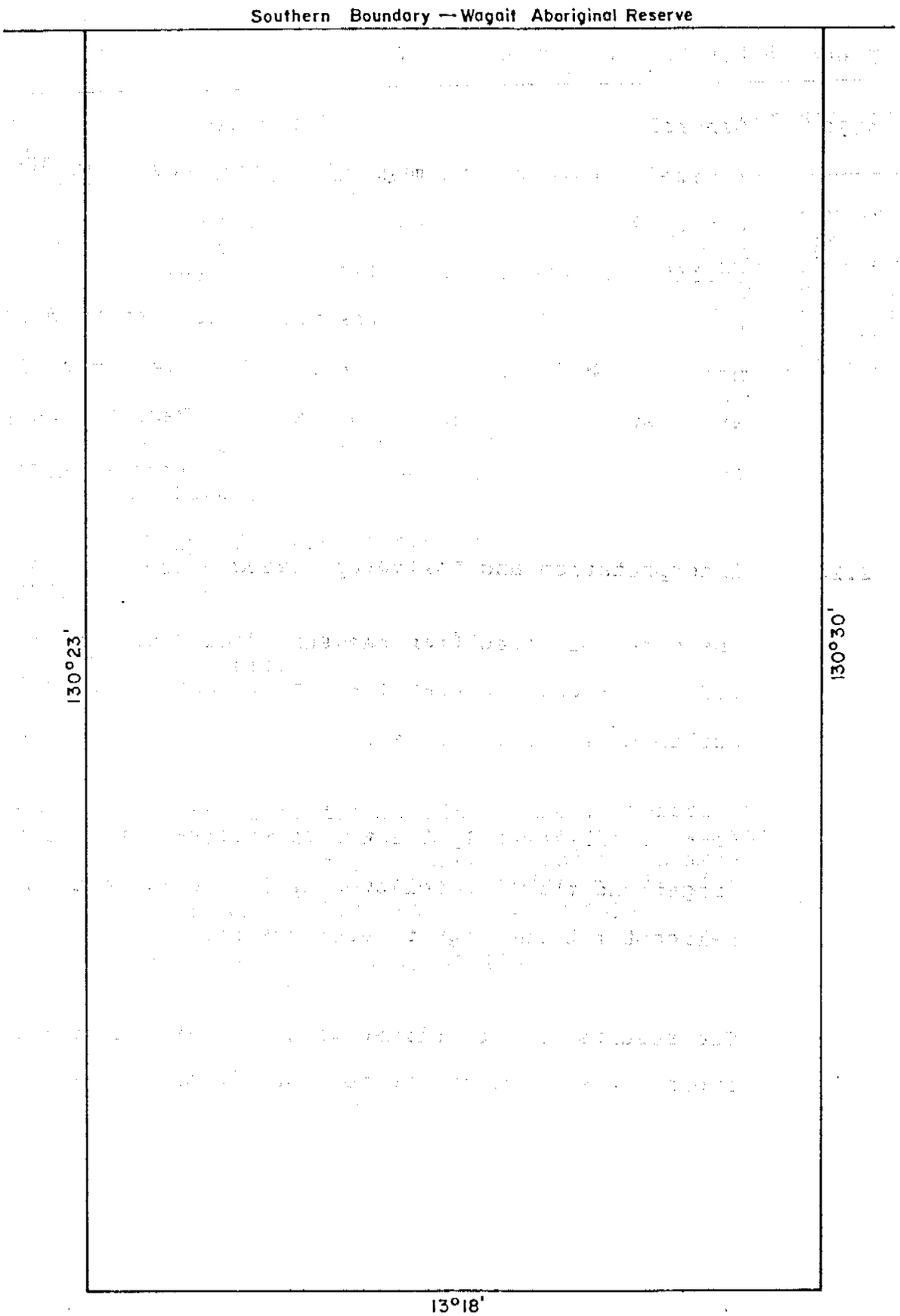


FIGURE 1

OUTLINE OF MAGNETIC SURVEY AREA

Scale 1: 100 000

JANUARY, 1983

TABLE 1: MAGNETIC ANOMALIES AND RESULTS OF FIELD FOLLOW-UP

Anomaly Reference	Description	Follow-Up Results
2/1* FL45(53022)	6nT one line dipole. Close to drainage.	A "noisy" dipole anomaly of 20nT at 30 metres, possibly related to surficial source. Sheared and deformed quartzite outcrops to the east of the magnetic anomaly.Pisolitic laterite occurs in the area of the anomaly.
2/2A FL17(47293)	8nT dipole close to roads - possibly cultural.	
2/2B FL14-15 15(45616)	"lazy" 5nT high close to road - possible cultural source.	
2/3 FL50(36998)	10nT peak in magnetically active area.	

NOTE: FL refers to flight line number. Number in brackets refers to the fiducial value of the anomaly: where the anomaly occurs on more than one line a fiducial reference is given for a single line within the group.

* indicates a priority target.

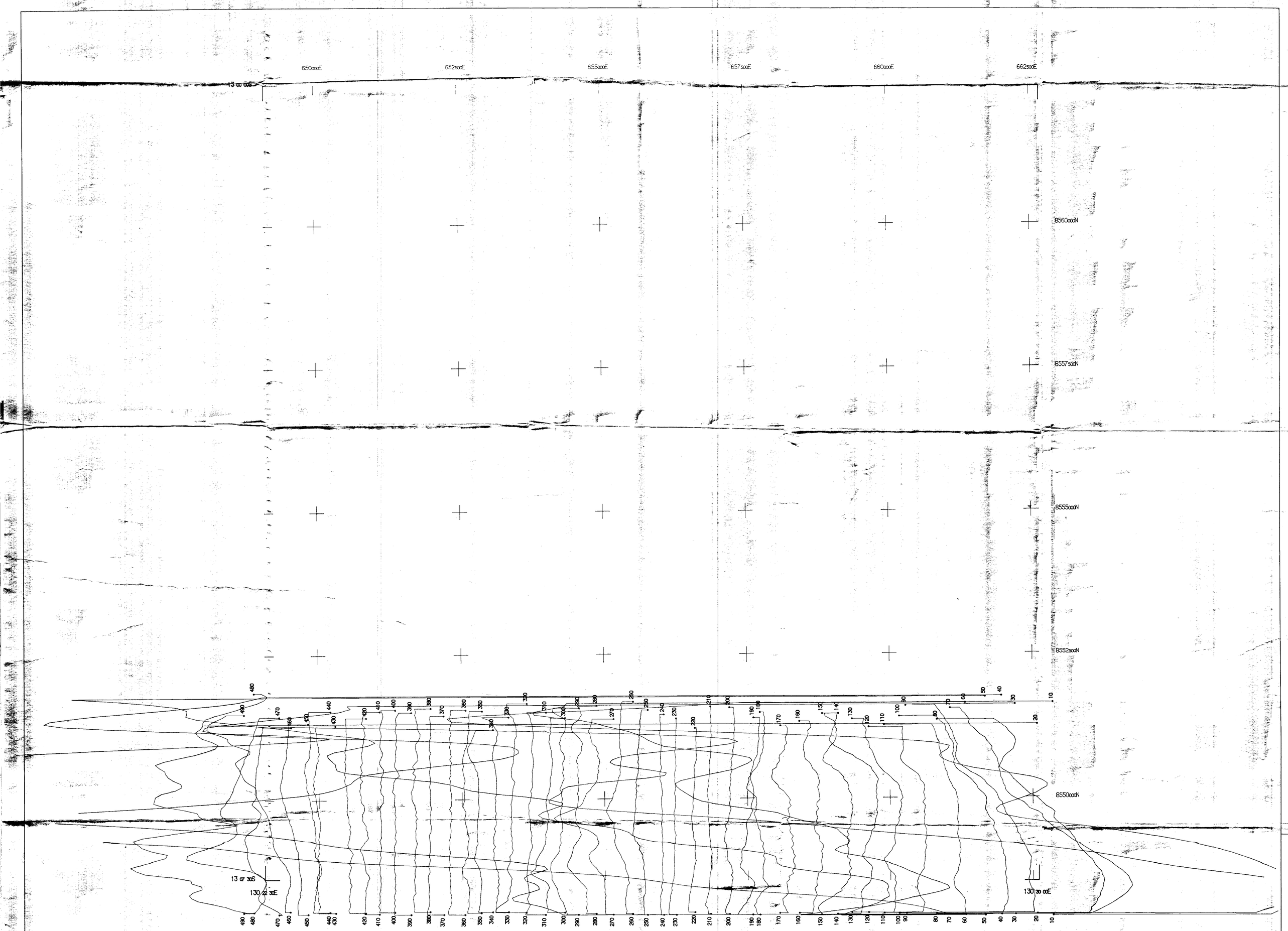
APPPENDIX 1.

EXPLORATION LICENCE NO. 1408

EXPENDITURE BY ASHTON MINING LIMITED.

	$
Salaries	544
Field & Laboratory Expenses	11,212
Miscellaneous	753
TOTAL:	$12,509

JPC: 30.3.83



AIRBORNE SURVEY SPECIFICATIONS

MAGNETOMETER :	GEOMETRICS G803 RECORDING TO 0.5nT
SPECTROMETER :	GEOMETRICS GR800 DETECTOR VOLUME 2048CU. IN. DIFFERENTIAL RECORDING Th.U.K.TOTAL COUNT
DATA RECORDING :	GEOMETRICS G-714
RECORDING INTERVAL :	1.0 SEC.,AIRSPEED 50 metres per SEC
FLIGHT PATH RECORD :	GEOCAM 35mm CONTINUOUS TRACKING CAMERA
DETECTOR AV. CLEARANCE :	BOTH DETECTORS IN AIRCRAFT AT 80m
NOMINAL LINE SPACING :	TRAVERSE LINES 250m , TIE LINES 5.0 km
FLIGHT LINE RECOVERY :	VISUALLY TO 1:25000 PHOTO ENLARGEMENTS

STACKED MAGNETIC PROFILE PLOT
GRID NOTATION REFERS TO AUSTRALIAN MAP GRID

MAGNETICS	: LEVELLED AND DIURNALLY CORRECTED
IGRF	: REMOVED , DATUM 2000 nT REMOVED
BASE VALUE	: 2100 nT
VERTICAL SCALE	: 10 nT

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PLAN 1
E.L.1408 — SHEET 1
STACKED MAGNETIC PROFILES

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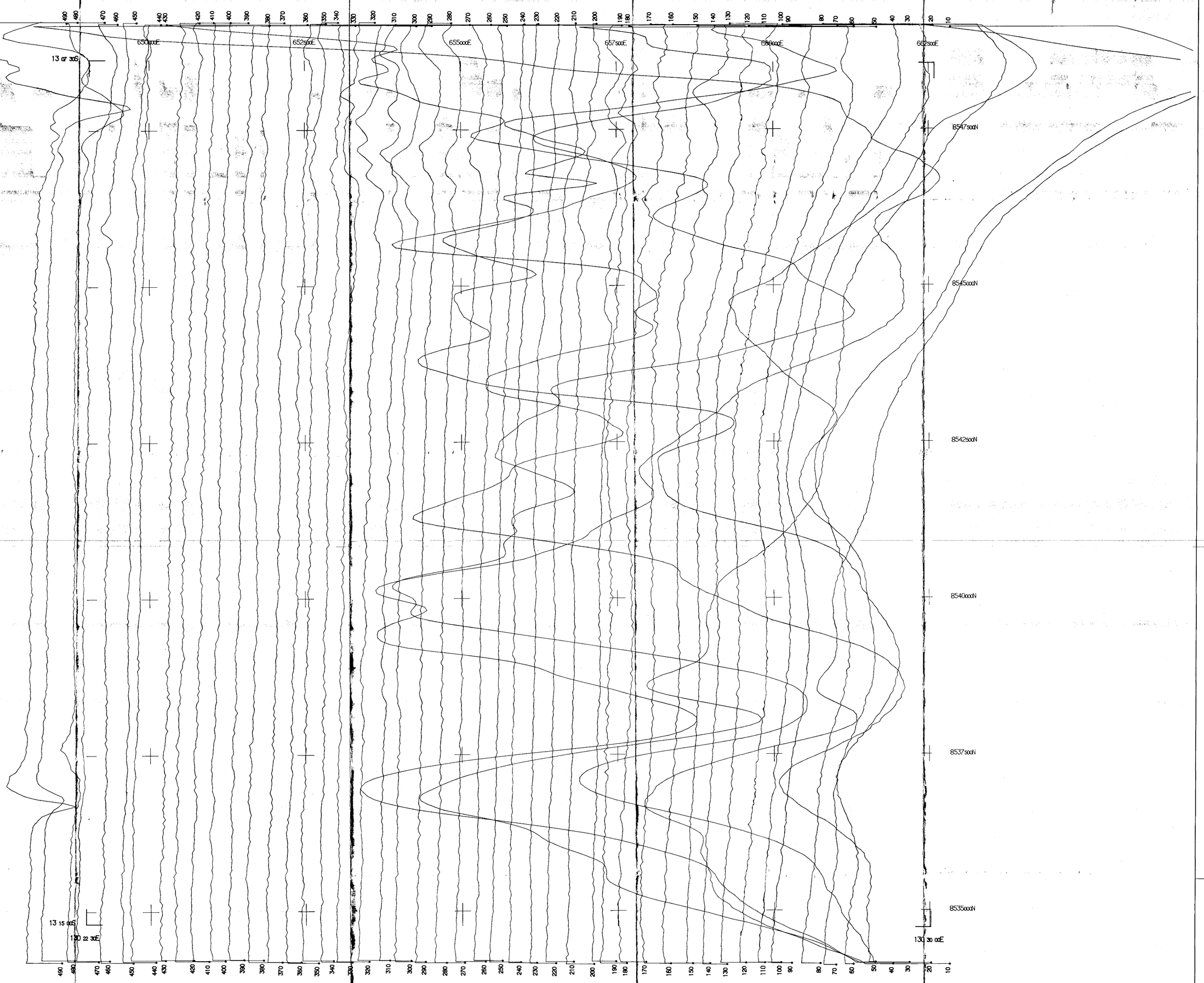

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IGRF	: REMOVED . DATUM 2000 nT REMOVED
BASE VALUE	: 2100 nT
VERTICAL SCALE	: 10 nT

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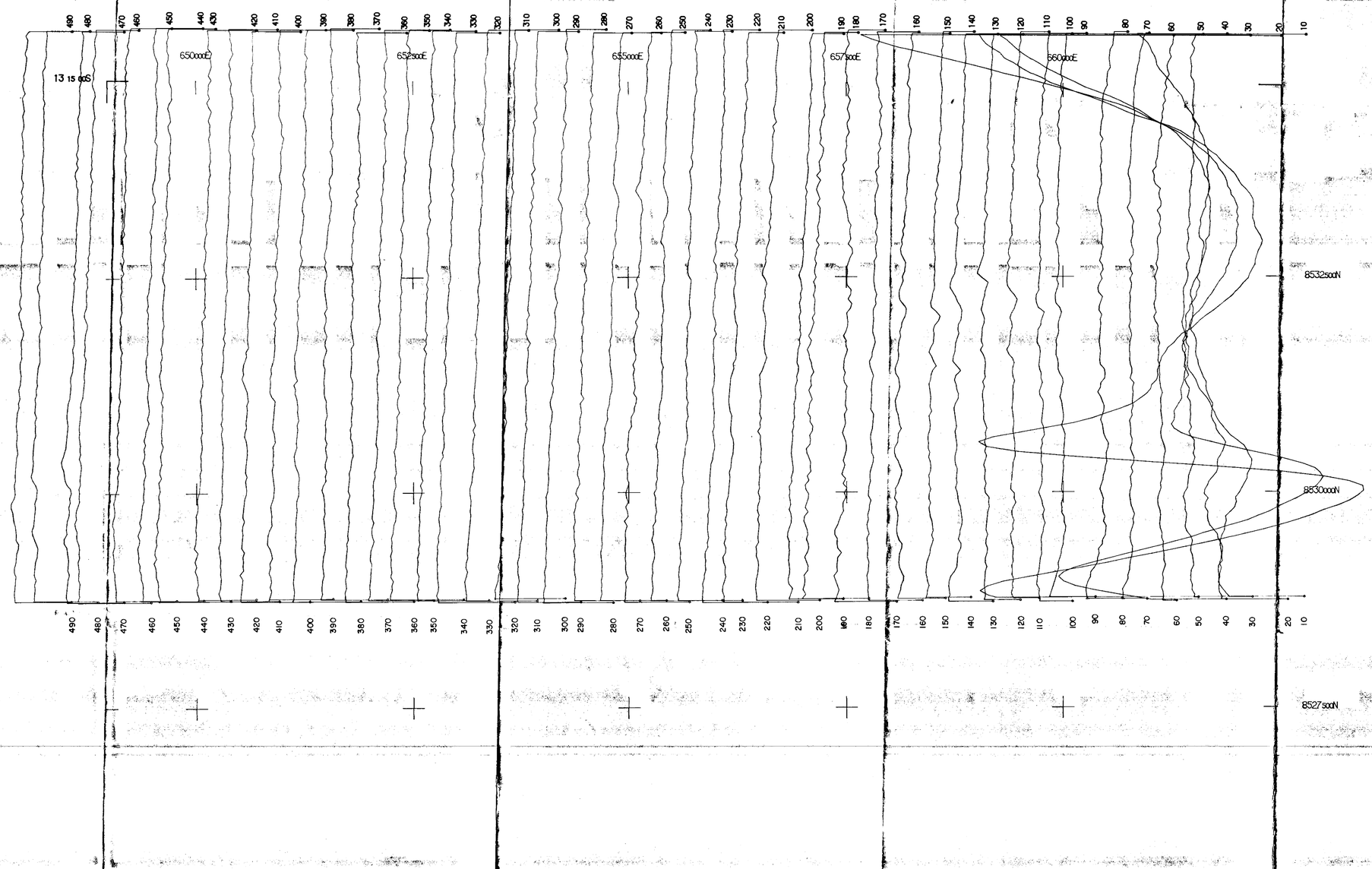
PLAN 2
E.L.1408 — SHEET 2
STACKED MAGNETIC PROFILES

DATE: JANUARY, 1983



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STACKED MAGNETIC PROFILE PLOT
GRID NOTATION REFERS TO AUSTRALIAN MAP GRID

MAGNETICS	: LEVELLED AND DIURNALLY CORRECTED
IGRF	: REMOVED , DATUM 2000 nT REMOVED
BASE VALUE	: 2100 nT
VERTICAL SCALE	: 10 nT

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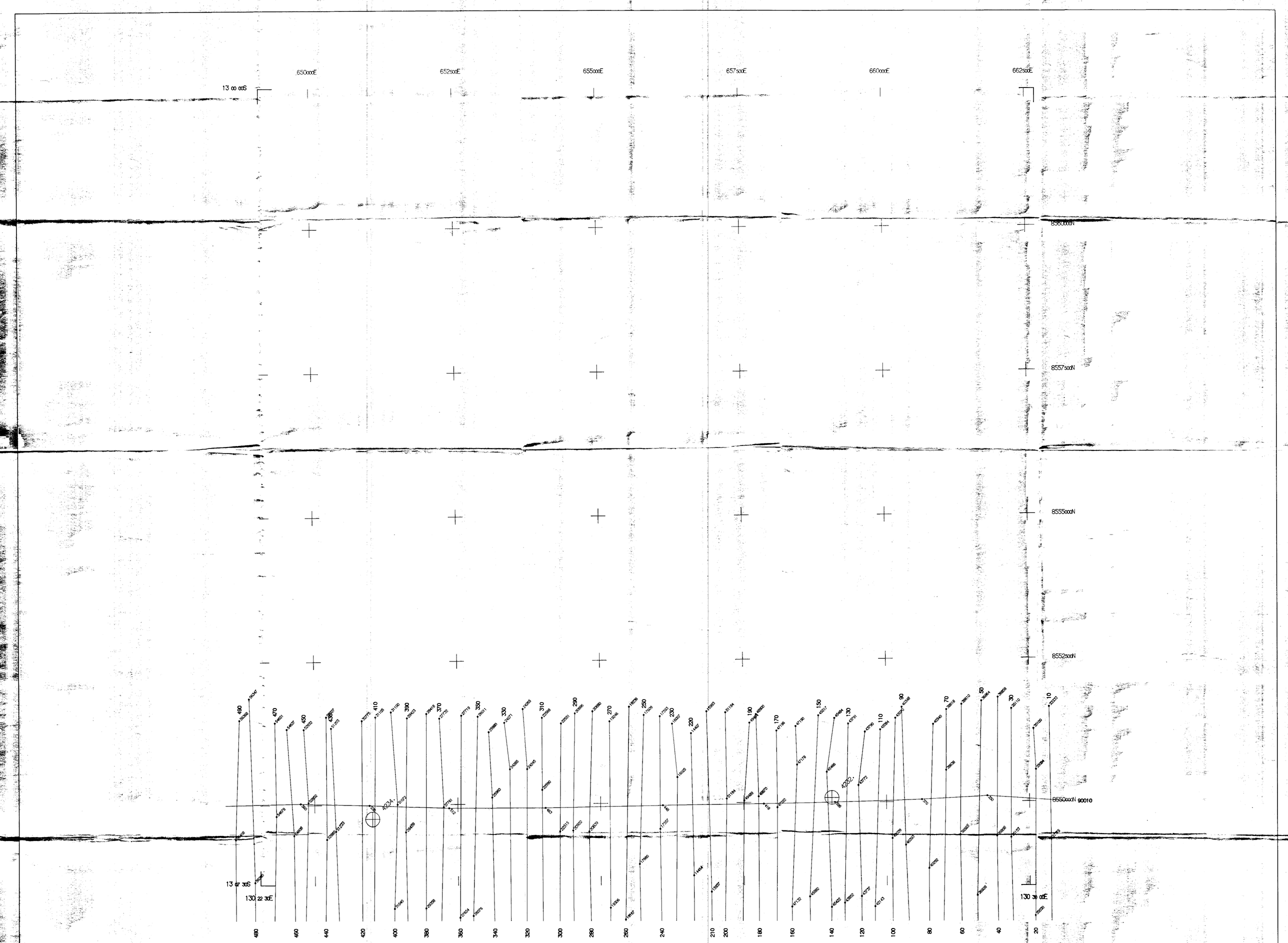
PLAN 3
EL.1408 — SHEET 3
STACKED MAGNETIC PROFILES

DATE: JANUARY, 1983



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FLIGHT PATH RECOVERY PLOT
GRID NOTATION REFERS TO AUSTRALIAN MAP GRID

MAGNETICS	: LEVELLED AND DIURNALLY CORRECTED
IGRF	: REMOVED , DATUM 2000 nT REMOVED

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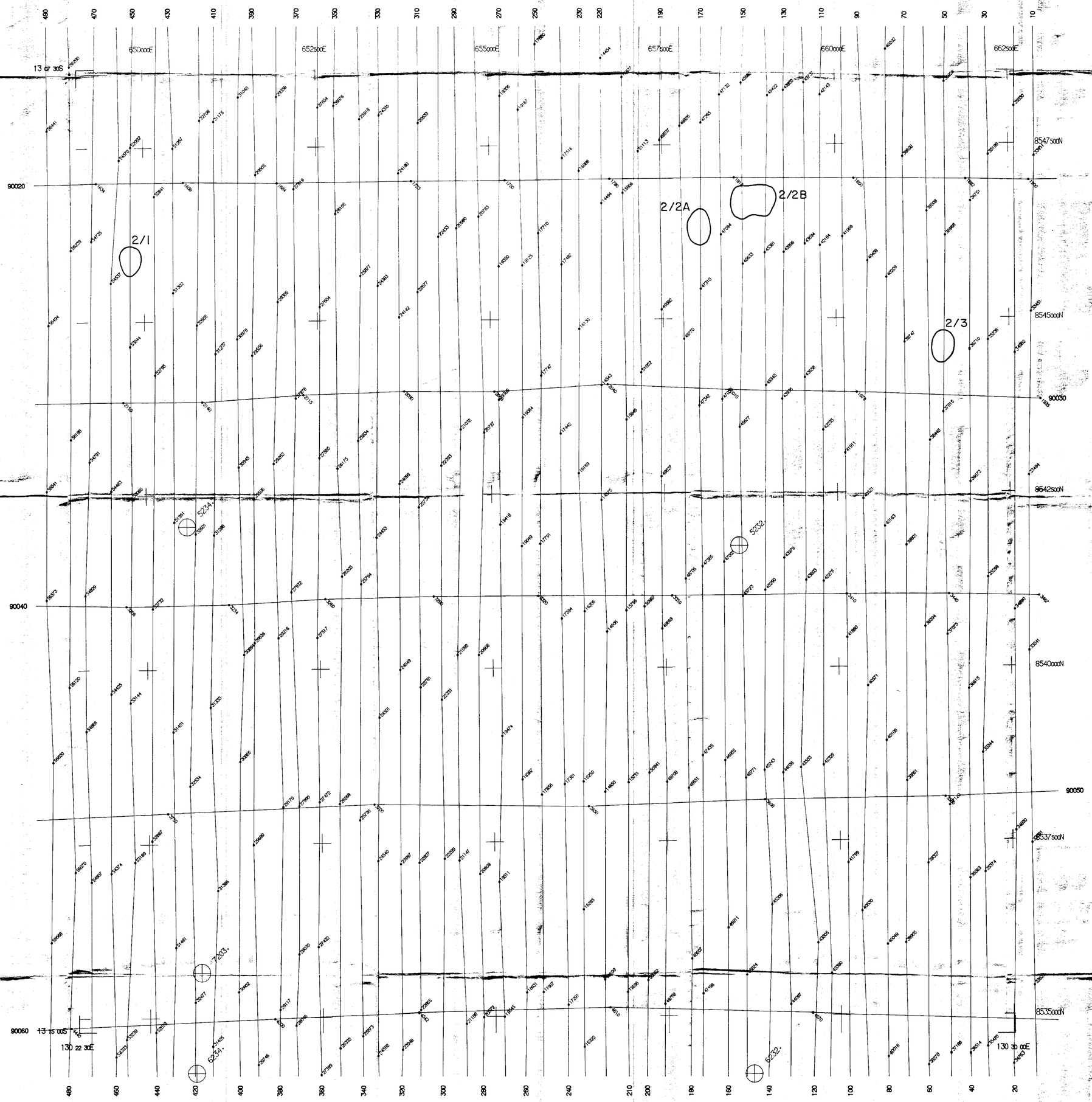
PLAN 4
E.L.1408 — SHEET 1
PATH RECOVERY PLOT

DATE: JANUARY, 1983



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FLIGHT PATH RECOVERY PLOT
GRID NOTATION REFERS TO AUSTRALIAN MAP GRID

MAGNETICS	: LEVELLED AND DIURNALLY CORRECTED
IGRF	: REMOVED , DATUM 2000 nT REMOVED

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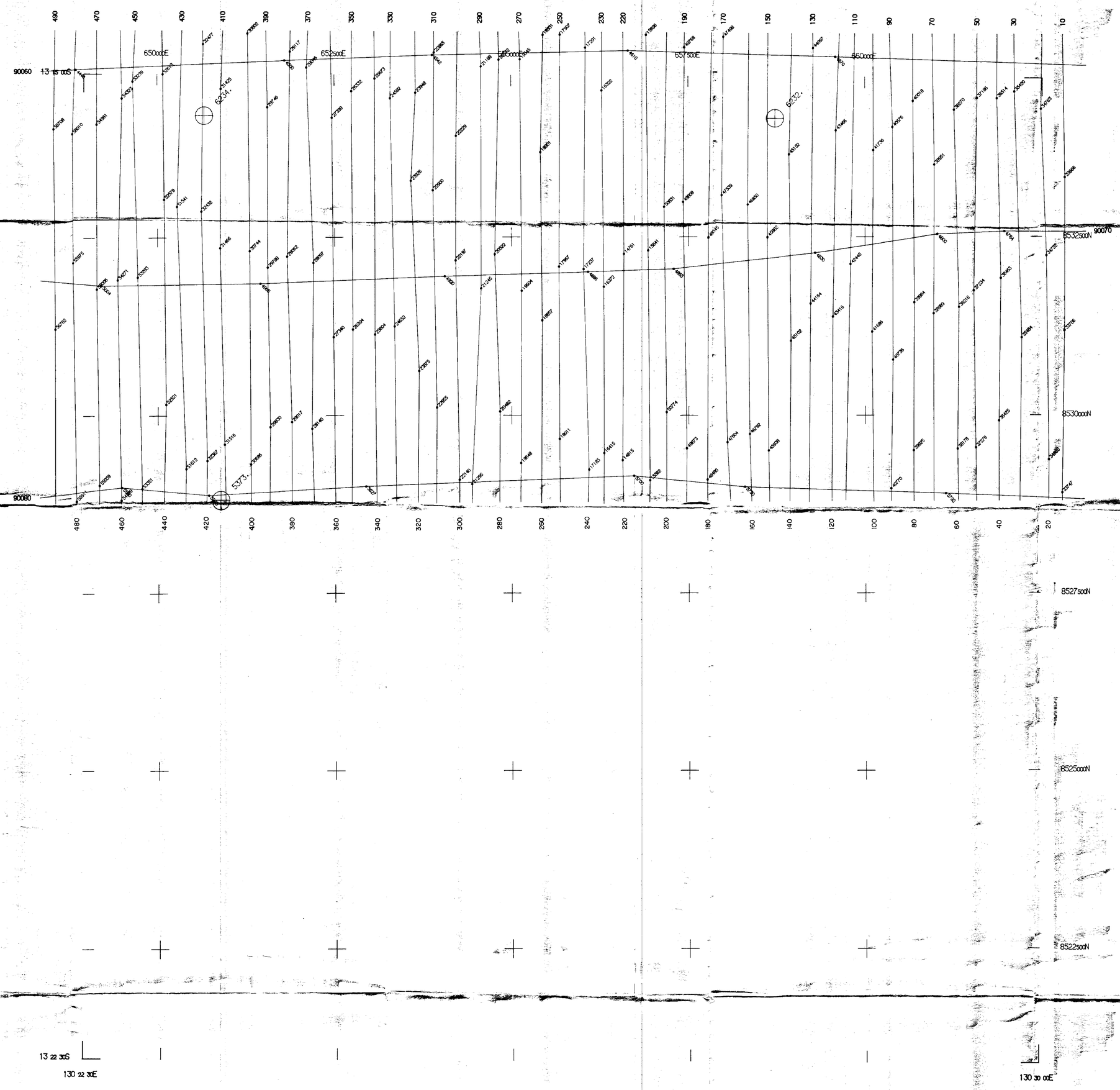
PLAN 5
E.L.1408 — SHEET 2
PATH RECOVERY PLOT

DATE: JANUARY, 1983



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FLIGHT PATH RECOVERY PLOT
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MAGNETICS	: LEVELLED AND DIURNALLY CORRECTED
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PLAN 6
E.L.1408 — SHEET 3
PATH RECOVERY PLOT

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