

Open File Envelope

No. 8717

EL 1501

DARKE RANGE

PARTIAL SURRENDER REPORT FOR THE PERIOD 4/7/88 TO 3/7/93

Submitted by
Western Mining Corp. Ltd
1993

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**PRIMARY INDUSTRIES
AND RESOURCES SA**

ENVELOPE 8717

TENEMENT: EI 1501, Darke Range

TENEMENT HOLDER: Western Mining Corporation Ltd

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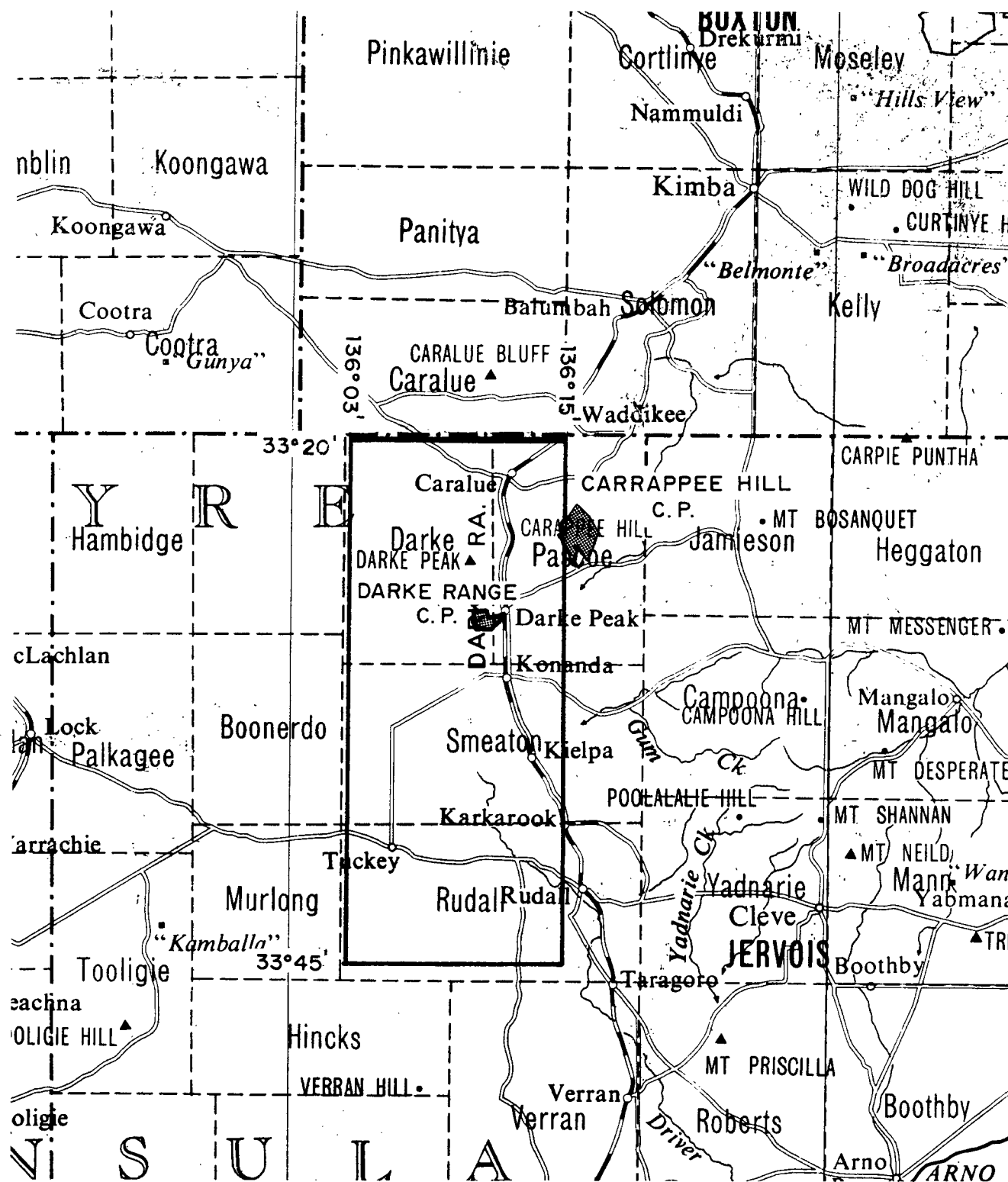
SEPARATELY HELD DATA

DATA TAPES (held by Information Services Branch):

Survey no. 88SA 12A. Airborne magnetic/radiometric survey (part only of 88SA 12).

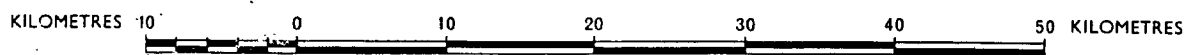
Gravity data (3.5" floppy disk) D 94/2.

SCHEDULE A



EXPIRED

SCALE 1:500,000



APPLICANT: WESTERN MINING CORPORATION LIMITED

DM: 81/88

AREA: 858 square kilometres (approx.)

1:250 000 PLANS: KIMBA

LOCALITY: DARKE RANGE AREA - Approx. 70 KM NORTHWEST of Cowell

DATE GRANTED: 4-7-88

DATE EXPIRED: 3-7-88 ⁹¹⁹² ~~20~~ 93 EL No: 1501 ✓

**WESTERN MINING CORPORATION LIMITED
EXPLORATION DIVISION**

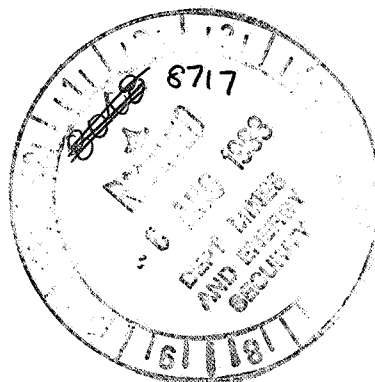
**PARTIAL RELINQUISHMENT REPORT
FOR EYRE PENINSULA
E.L. 1501 - DARKE RANGE**

JULY, 1993

**S. J. G. WOFFENDEN
PROJECT GEOLOGIST - EYRE PENINSULA**

Distribution:

Director General - S.A.D.M.E.



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1. INTRODUCTION

Exploration Licence 1501 is located about 70 km west of Cowell on the Eyre Peninsula and lies between the eastern boundary of the Hambidge Conservation Park and the northern boundary of the Hincks Conservation Park. It forms part of W.M.C.'s Eyre Peninsula Project which includes E.L.s 1516, 1613, 1724, 1745 and 1790. These licences are all considered to be prospective for Broken Hill style Zn-Pb mineralisation.

Exploration Licence 1501 comprises 858 km² and was granted to W.M.C. on July 4th, 1989 for a term of 1 year. It was subsequently renewed for one year in 1990, 1991 and 1992. The E.L. was jointly explored by W.M.C. and Stockdale Prospecting (S.P.L.) under the terms of the Eyre Peninsula Minerals Joint Venture. As of July 1st, 1992 S.P.L. withdrew from the Joint Venture.

In July 1993 the E.L. was reduced to approximately 329 km² (Figure 1). This report describes exploration work carried out by W.M.C. since 1989 on that portion of E.L. 1501 which has been relinquished.

2. REGIONAL GEOLOGY

The regional geology of the Eyre Peninsula is well documented in Parker (1990), Parker *et al* (1985) and Parker and Lemon (1982). The reader is referred to these papers for more detailed descriptions of the geology of the Eyre Peninsula.

The target stratigraphy for W.M.C.'s base metal exploration on the Eyre Peninsula is the Paleoproterozoic Hutchison Group which has a probable depositional age of 1950-1850Ma (Parker, 1990). The Hutchison Group represents a major cycle of sedimentation comprising fluvial to shallow marine clastic sediments, carbonates, iron formations and possible mafic volcanics (Parker and Lemon, 1982). They are thought to have formed in an extensional tectonic setting, commencing with rift phase sediments and volcanics, and grading up to sag-phase clastic sediments.

Shortly after deposition the Hutchison Group was repeatedly and intensely deformed during the Kimban Orogeny which is thought to span the period 1850-1700Ma (Parker, 1990). Metamorphic grade peaked at middle to upper amphibolite facies.

Hutchison Group sediments host small, historically exploited deposits of base metals and silver. They have been correlated stratigraphically and chronologically with the host rocks at Broken Hill, although dating work by Page and Laing (1989) casts doubt on the chronological correlation, and hence Hutchison Group rocks are considered prospective for Broken Hill style mineralisation.

3. WORK COMPLETED

3.1 Geophysics

A regional aeromagnetics survey which included coverage of E.L. 1501 was flown in 1988. The part of the survey covering the portion of E.L. 1501 being relinquished is included in this report (Figure 2).

A semi regional gravity survey which includes partial coverage of E.L. 1501 was conducted. The portion of this survey which covers the section of the E.L. being relinquished is included with this report (figure 3).

3.2 Geochemistry

No geochemistry has been conducted on the portion of E.L. 1501 being relinquished.

3.3 Drilling

No drilling has been done on the portion of E.L. 1501 being relinquished.

4. SUMMARY

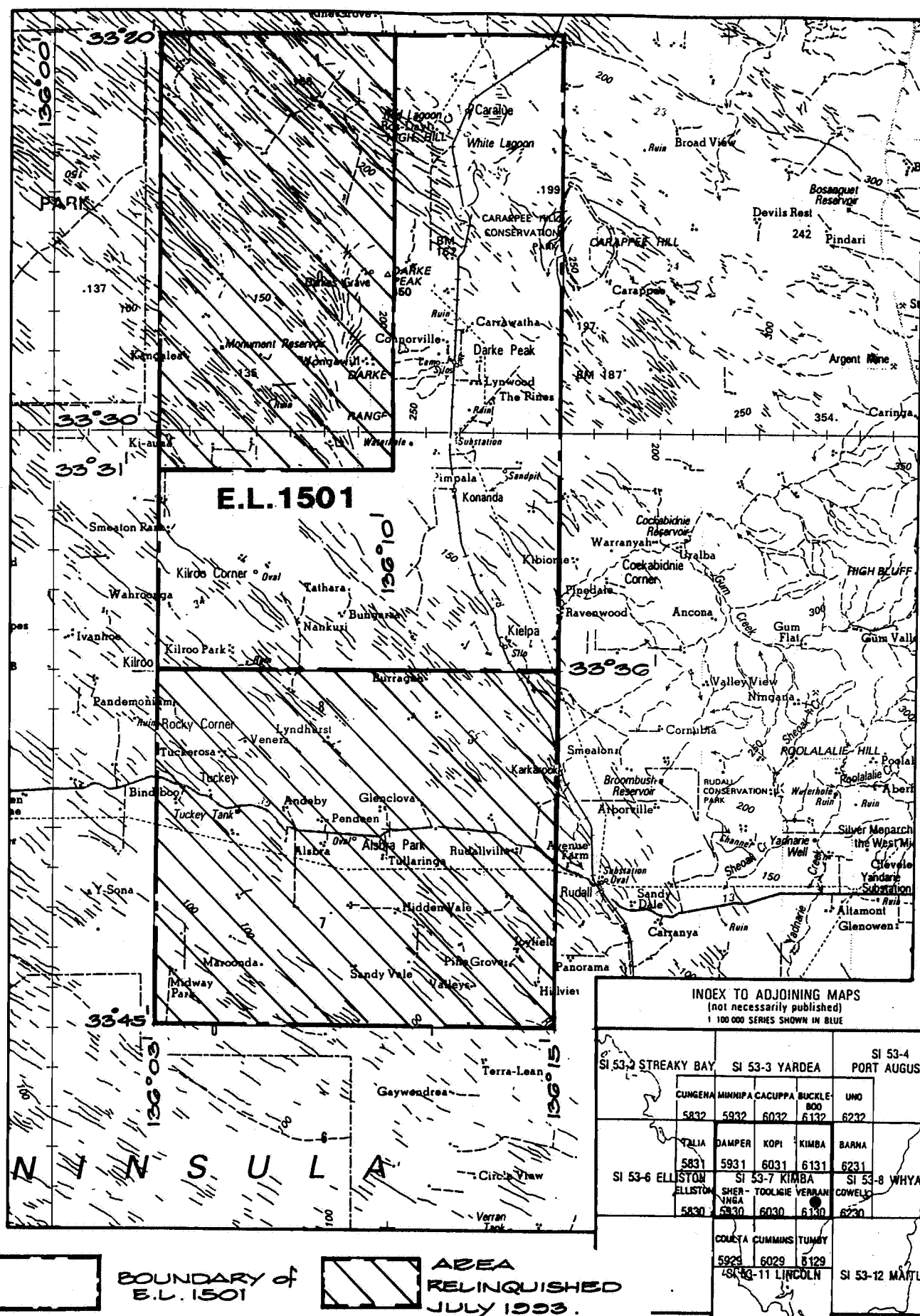
Very little exploration work has been done on the portions of E.L. 1501 which are being relinquished. This is because the southern portion lies over deep Polda Trough sediments and the northern portion covers a magnetically featureless area interpreted to be Warrow Quartzite, the basal unit of the Hutchison Group.

5. REFERENCES

- Page, R.W. and Laing, W.P., 1989, Depositional age of the Broken Hill Group from volcanics stratigraphically equivalent to the Ag-Pb-Zn orebody. Australian Geological Society Conference abstracts 1989, p18-19.
- Parker, A.J. and Lemon, N.M., 1982, Reconstruction of the Early Proterozoic Stratigraphy of the Gawler Craton, South Australia. Jnl. Geol. Soc. Aust., v29, p221-238.

Parker, A.J., Fanning, C.M. and Flint, R.B., 1985, 2: Geology in Natural History of Eyre Peninsula. Royal Society of S.A., p21-45.

Parker, A.J., 1990, Gawler Craton and Stuart Shelf - Regional Geology and Mineralisation, in Geology of the Mineral Deposits of Australia and Papua New Guinea (Ed. F.E. Hughes) Aus. I.M.M. Monograph 14, p999-1008.



WESTERN MINING CORPORATION LIMITED - EXPLORATION DIVISION

Map Ref. SI 53-7
Date 7.11.91
Author M.C.D.
D.A.B.
Revised SIGW
21.7.93

LOCATION PLAN. E.L. 1501 - DARKE RANGE

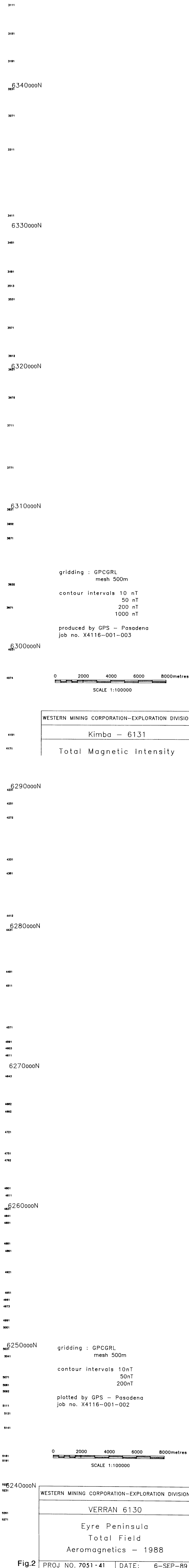
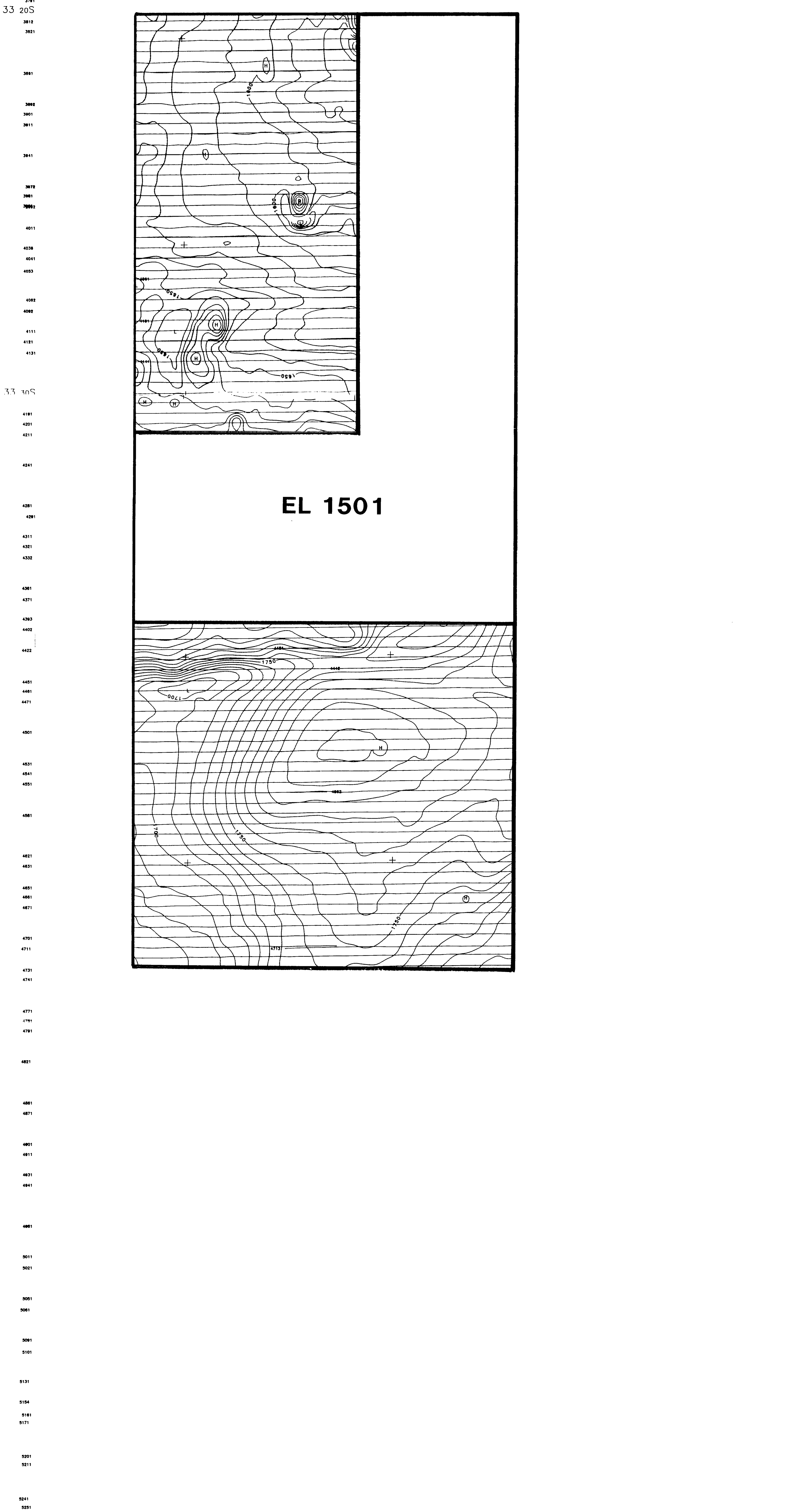
EYRE PENINSULA PROJECT, SOUTH AUST.

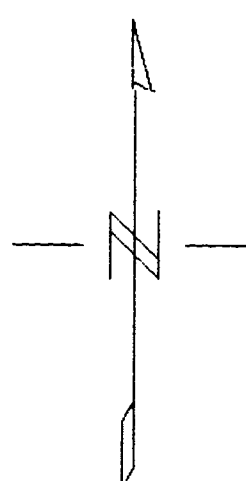
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Figure No. 1

Plan No.

7051 / 249





595000 E 600000 E 605000 E 610000 E 615000 E 620000 E 625000 E 630000 E 635000 E 640000 E 645000 E 650000 E

6310000 N

6305000 N

6300000 N

6295000 N

6290000 N

6285000 N

6280000 N

6275000 N

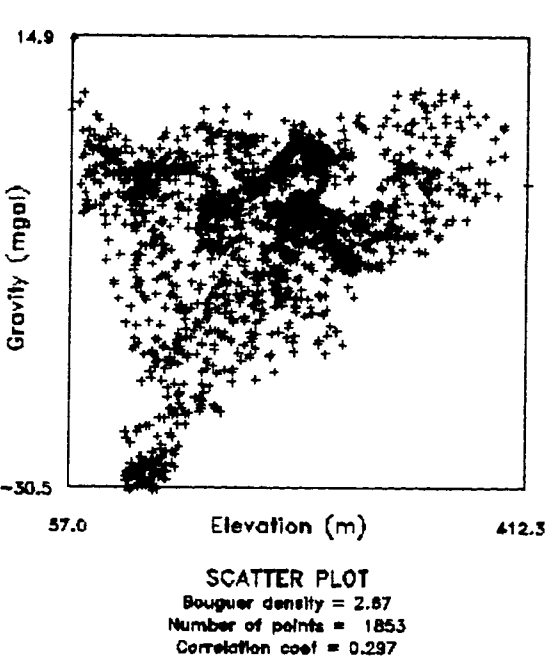
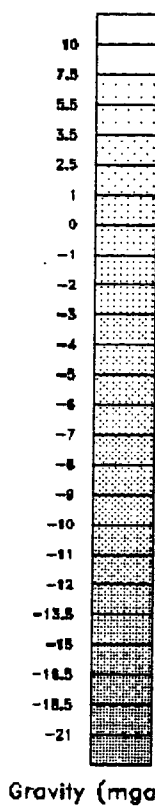
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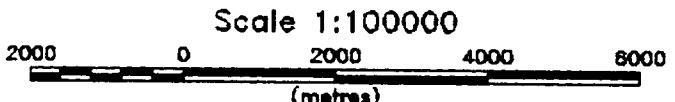
6260000 N

595000 E 600000 E 605000 E 610000 E 615000 E 620000 E 625000 E 630000 E 635000 E 640000 E 645000 E 650000 E

EL 1501



Contour Interval = 0.50 mgal
Grid cell size = 750
Datum: IGSN71
Base easting = 611308
Base northing = 6296210
Base elevation = 175.90 m
Base value = 979571.88 mgal
Survey date = 1990-93
Author: JEH
Data File: DARKCLEV GRV
Cost Code: 4117



EYRE PENINSULA PROJECT
Cleve Regional
Bouguer Gravity Map
WMC Exploration Division