EXPLORATION LICENCE 5514 McCALLUM CREEK NORTHERN TERRITORY

FINAL REPORT

Prepared for Robert Johnston,

by

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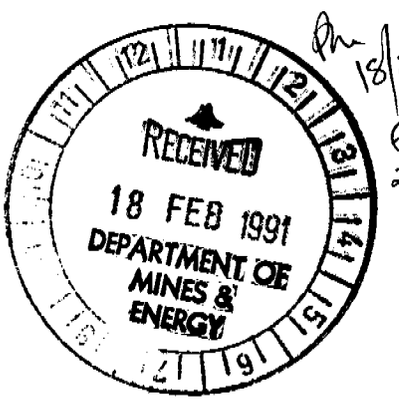
February 1991.



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CONTENTS.

1. INTRODUCTION.

Exploration Licence 5514 was granted to Robert Johnston for a three year term commencing 20th November 1987. It originally comprised three graticular blocks, with an area of ten square kilometres, located east of McCallum Creek in the Ringwood area some 115 kilometres southeast of Darwin (Figures 1 & 2). In November 1989 the Licence area was reduced two graticular blocks.

The area lies mainly between the northerly flowing Mary River and McCallum Creek, and consists mainly of extensive alluvial flood plains, with some low ridges and rock outcrops confined to the eastern parts. Access is by a bush track connecting homesteads at Ban Ban and Mount Ringwood. For all practcal purposes the area is innaccessible to vehicles during the wet season.

During the first year of the Licence, the area was explored as part of a regional program, known as the Mount Bundey Project, which was undertaken as a joint venture of Golden Plateau N.L. and Zapopan N.L.. With the withdrawal of Golden Plateau in November 1988, exploration continued under a joint venture of Zapopan N.L. with Pegasus Gold Australia.

This is the Final Report on the Exploration Licence which expired in November 1990. It summarises all the exploration work and results obtained during the three year term.

2. GENERAL GEOLOGY.

The area is situated towards the northwestern part of the Early Proterozoic Pine Creek Geosyncline. The geology is described in the 1:100,000 map and explanatory notes "Geology of the Batchelor-Hayes Creek Region" (BMR 1985), and a portion of the map is reproduced in Figure 3.

Over most of the area the Precambrian rocks are concealed by extensive deposits of Quaternary sands, silts and black clay soils deposited on the flood plains of the Margaret River/ McCallum Creek drainages. It is inferred that the underlying rocks consist of weakly metamorphosed sediments, dominently turbidites with minor chert, ironstone and tuff horizons, belonging to the Mount Bonnie and Burrell Creek Formations in the upper part of the Early Proterozoic sequence.

Outcrops are restricted to low areas of slate and greywacke rubble in the west, and a ridge of red slates with minor cherts (presumed Mount Bonnie Formation) in the east.

In terms of the regional structure, the area lies in a transitional zone between the upright moderately compressed north-south folding regime to the north, and the domal structure surrounding the Burnside Granite to the south. Magnetic data suggests that the NW - SE Pine Creek Fault Zone, marked by mafic dyke intrusions, passes through the southwest corner of the area, and is accompanied by a northeast-trending fault set.

There is no known mineralisation within the EL area. Minor gold production has come from quartz veining associated with anticlinal hingelines at Great Northern and Great Western situated respectively five and ten kilometres to the north-northwest, while the Goodall Goldmine of Western MIning lies twelve kilometres to the northwest.

3. EXPLORATION WORK COMPLETED.

During the first year of the Licence period exploration was conducted as part of a much broader regional campaign and included the following:-

* airborne geophysical surveys carried out by Aerodata on east=west flight lines, with 200m line spacing, 70m mean terrain clearance and 0.2 seconds recording interval. Readings were recorded of total magnetic field and radiometrics. The data was compiled as i:25,000 scale magnetic contours and 1:50,000 scale image enhancements.

* drainage geochemical surveys for gold, using analyses of both minus 80 mesh material by low level AAS, and of nominally minus 10 mesh by cyanide leach (BLEG).

* rock chip sampling of selected materials of interest, with gold analyses by AAS.

* reconnaissance geological mapping, assisted by photointerpretation.

Anomalous targets identified from the above surveys were subjected to detailed follow up towards the end of the first year, and during the second year of the project. However no anomalies worthy of follow up were found in EL 5514, and follow up here was restricted to more detailed interpretation of the geophysical data, and continuing review of all results.

The detailed interpretation of the aeromagnetic results is illustrated in Figure 4. Sample locations are given in Figure 5, and the analytical results in Appendix I.

Total expenditures over the three year term of the Licence are estimated to be $15,000.

4. CONCLUSIONS.

Programs of reconnaissance geochemistry and airborne geophysics have failed to indicate any anomalies of significance. It is concluded that the Exploration Licence has low prospectivity for the discovery of commercial gold deposits. Accordingly no further exploration is recommended.

5. REFERENCES.

ANDERSON C.G., 1989. Interpretation of Aeromagnetic Data, Mount Bundey/Pegasus Joint Venture Area Northern Territory. Unpublished report for Zapopan N.L..

FERGUSON K.M., 1989. Annual Report Mount Bundey Project. Unpublished report for Oceania Exploration & Mining N.L..

FERGUSON K.M., 1990. Mount Bundey Project Area, Report on Areas Relinquished. Unpublished report for Oceania Exploration & Mining N.L..

MARSHALL T.R., THORNET J.R., BLAKE T.S., 1988. Mount Bundey Joint Venture Final Report. Unpublished report for Golden Plateau N.L..

APPENDIX I.

Analytical results.

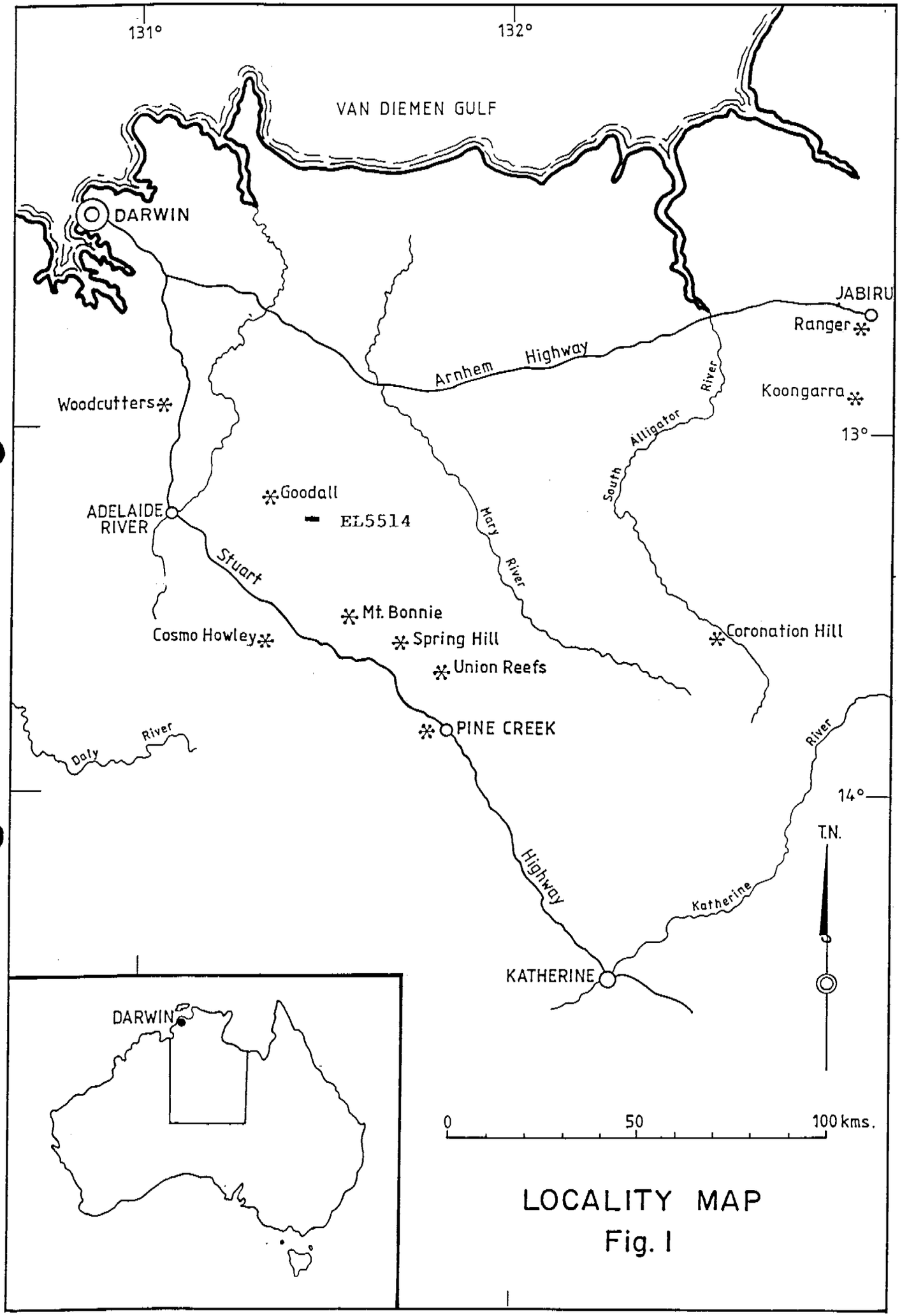
1. ROCK CHIP SAMPLES.

SAMPLE No.	ASSAY ppm Au.	SAMPLE No.	ASSAY ppm Au.
28943	- 0.001	30048	- 0.001
28944	- 0.001	30049	0.003
28945	- 0.001	30093	0.11
30044	- 0.001	30094	0.15
30045	- 0.001	31358	- 0.001
30046	- 0.001	31359	- 0.001
30047	- 0.001	31360	0.002
30048	- 0.001	31361	0.002
30049	0.003		

DRAINAGE SAMPLES.

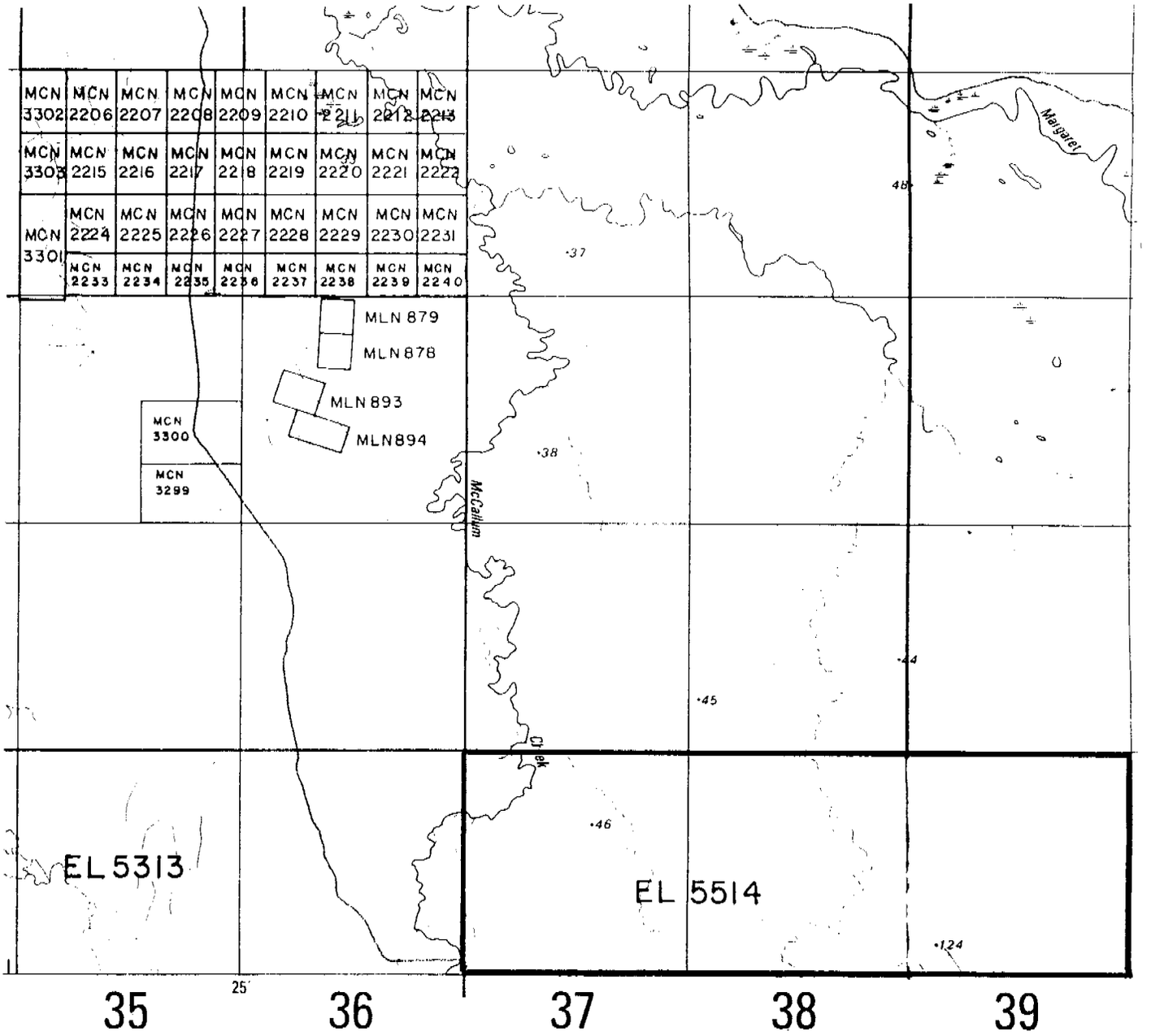
Minus 10 mesh 5000gm.		Minus 80 mesh 1000gm.	
SAMPLE No.	ASSAY ppb Au.	SAMPLE No.	ASSAY ppm Au.
28937	1.00	28938	- 0.001
28941	1.04	28942	- 0.001
29683	0.28	29684	- 0.001
29685	1.93	29686	0.001
29687	0.97	29688	0.003
29960	1.12	29860	0.003

N.B. "-" signifies less than.



LOCALITY MAP

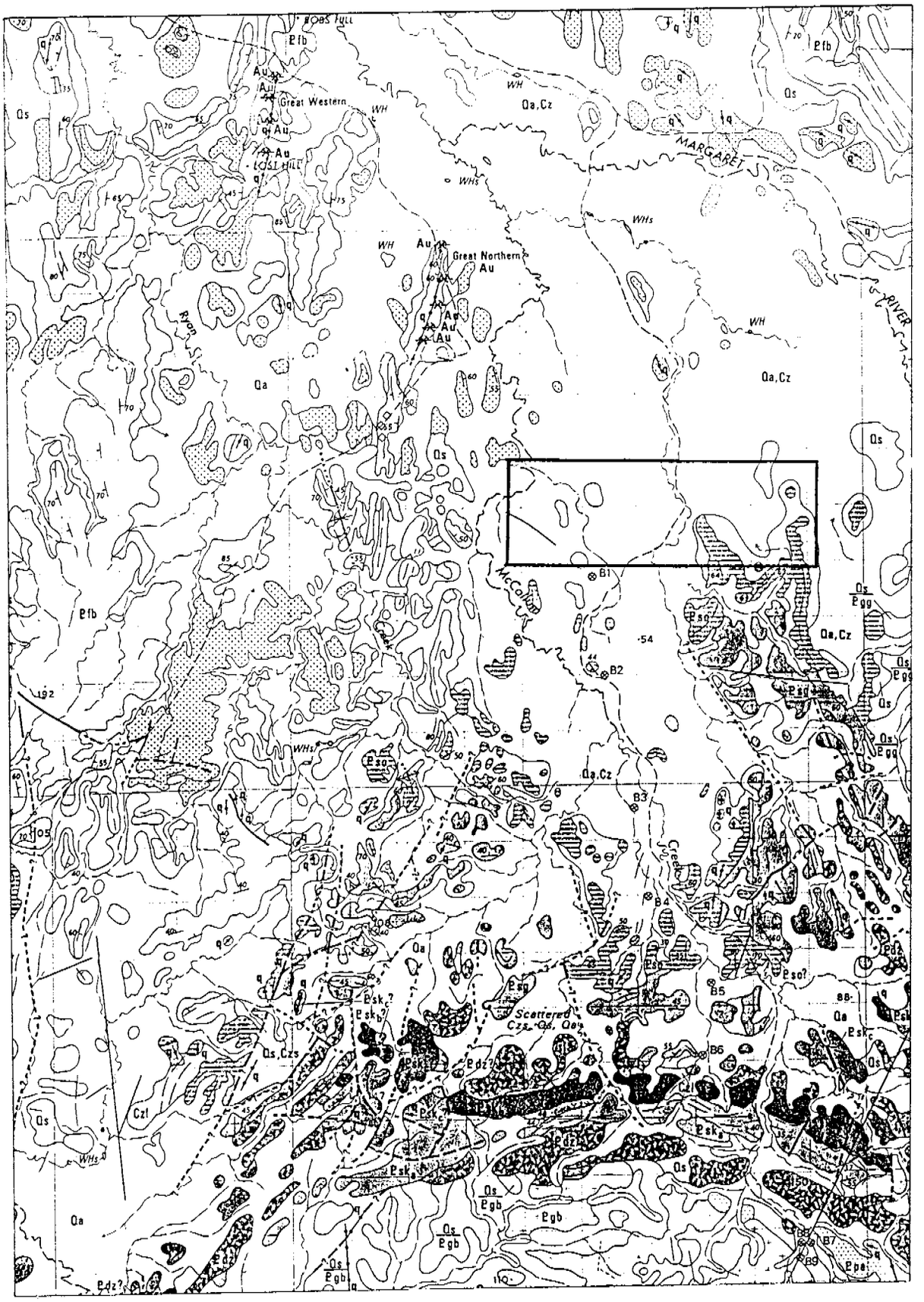
Fig. 1



TENEMENT MAP EL5514

Scale 1 : 50,000

Figure 2.



QUATERNARY Qa Alluvium.

Qs Soils.

EARLY PROTEROZOIC

Pfb Burrell Creek Formation.

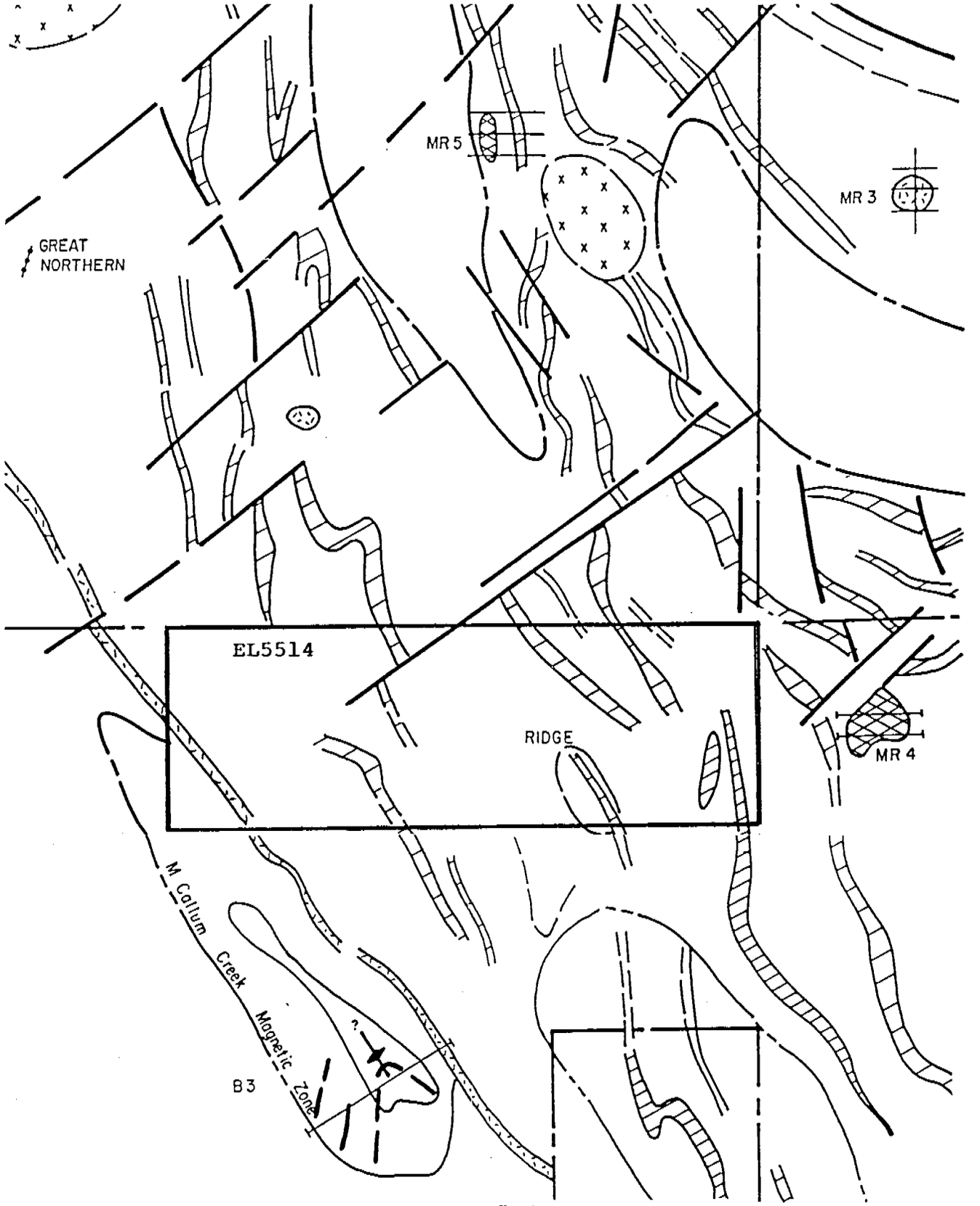
Pso Mount Bonnie Formation.

Psg Gerowie Tuff.

REGIONAL GEOLOGY EL5514

Scale 1 : 100,000

Figure 3.



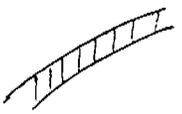
AEROMAGNETIC INTERPRETATION EL5514

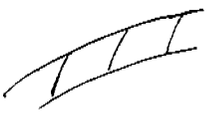
Scale 1 : 50,000

Figure 4.

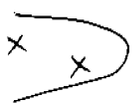
L E G E N D

Figure 4

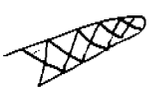
 - Strongly magnetic lithology - amphibolite or thin BIF

 - Moderately magnetic lithology - ferruginous bands within Mt Bonnie Formation

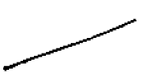
 - Weakly magnetic linear trends - Burrell Creek Formation

 - Circular zone of low relief - intrusive?

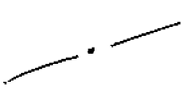
 - Mafic Dyke

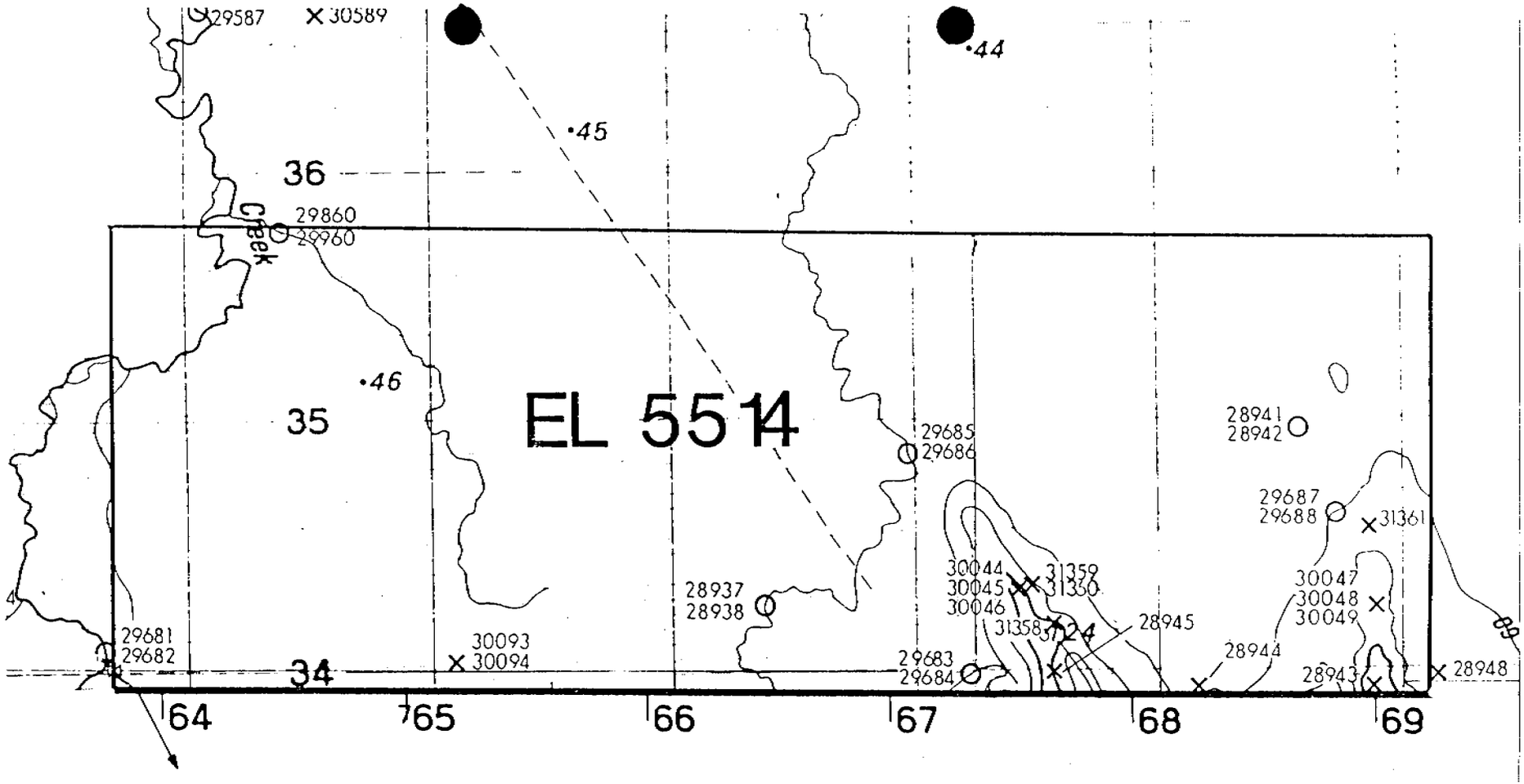
 - Linear, low amplitude 'pyrrhotite' style target anomaly

 - "Bulls-eye" style target anomaly

 - Interpreted fault

 - Interpreted lineament or shear

 - Magnetic domain or zone boundary



o Drainage sample.

x Rock sample

SAMPLE LOCATION MAP EL5514

Scale 1 : 25,000

Figure 5.