

WESTERN MINING CORPORATION LIMITED
EXPLORATION DIVISION

OPEN FILE

FOURTH ANNUAL REPORT
EXPLORATION LICENCE 5114
MARCH 11, 1990 TO MARCH 10, 1991

CR91/229

Ref:	
1:250,000	NATMAP SE 53-14 Tennant Creek
1:100,000	DM & E 52/2 Flynn
1:50,000	5759S

RICHARD EVANS
March, 1991

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Regional Stratigraphy ✓ - table

E.L. Location Plan ✓

1:250 000

7005-87

1. TENURE

Exploration Licence 5114 was granted to D.H. Byrne and P. Purich on March 11, 1987. The E.L. covered an area of one hundred and eighty square kilometres (fifty six blocks). This was reduced on the grant's subsequent anniversaries, and partly reduced again for its third anniversary, the remaining area is the subject of this report.

On August 1, 1988, the E.L. became subject to a Joint Venture between Giant's Reef Mining Pty. Limited (G.R.M.) and Western Mining Corporation Limited (W.M.C.). The Joint Venture also includes twelve other Exploration Licences held by G.R.M. and by N. Byrne and Associates Pty. Ltd.

Under the terms of the joint venture, W.M.C. will manage and operate future exploration in the Tennant Creek area, and field work commenced at the end of August, 1988.

2. REGIONAL GEOLOGY

Exploration Licence 5114 is underlain by the Lower Proterozoic Warranunga Group (see Table 1), part of the Tennant Creek Inlier of exposed Paleozoic rocks.

The Warranunga Group, which lies unconformably on Archean age highgrade (amphibolite facies) metamorphic basement (Black & McCulloch, 1984), is a thick succession of variably iron-bearing turbiditic sediments and volcanics. This sequence has been metamorphosed to greenschist facies, folded and cleaved between two episodes of granitic intrusion at 1870 ± 20 Ma to 1846 ± 8 Ma and 1650 - Ma (Black, 1984). It is believed that formation of the massive replacement magnetite/haematite bodies and their later mineralisation occurred during and soon after folding.

These sediments are overlain by the laterally equivalent Carpentarian Tomkinson Creek Beds in the north, and the Hatches Creek Group in the south which are in turn succeeded by Cambrian lithologies.

3. WORK COMPLETED

No further field work has been done on the Exploration Licence due to the project nature of the management of the WMC/GRM Joint Venture. Work cannot be carried out on all tenements for each year of tenure given our other commitments within the project. It has been necessary to prioritise work and carry it out sequentially. Further work is being considered pending the results of the intensive investigation of an area of mineralisation in the nearby EL 5432. The character of further exploration in this and other adjoining ELs will be controlled by the results of this work and will be determined after the data has been assessed.

4. EXPENDITURE

Expenditure costed to this Exploration Licence, for the period April 1, 1990 to January 31, 1991, is as follows:

	\$
Geology	13 906
Geophysics	5 593
Geochemistry	248
Drafting	2 051
Analysis	2 127
Leasing	2 775
Administration	1 244

	27 944

TABLE 1

REGIONAL STRATIGRAPHY

CAMBRIAN

Gum Ridge Formation

Helen Springs Volcanics

CARPENTARIAN

Tomkinson Creek Beds

LOWER
PROTEROZOIC

Warramunga Group

Carraman Formation

Black Eye Member

Bernborough Formation

Whippet Sandstone

ARCHEAN

Schist to Gneiss after shale,
quartzite, greywacke BIF,
tuffs, and volcanics

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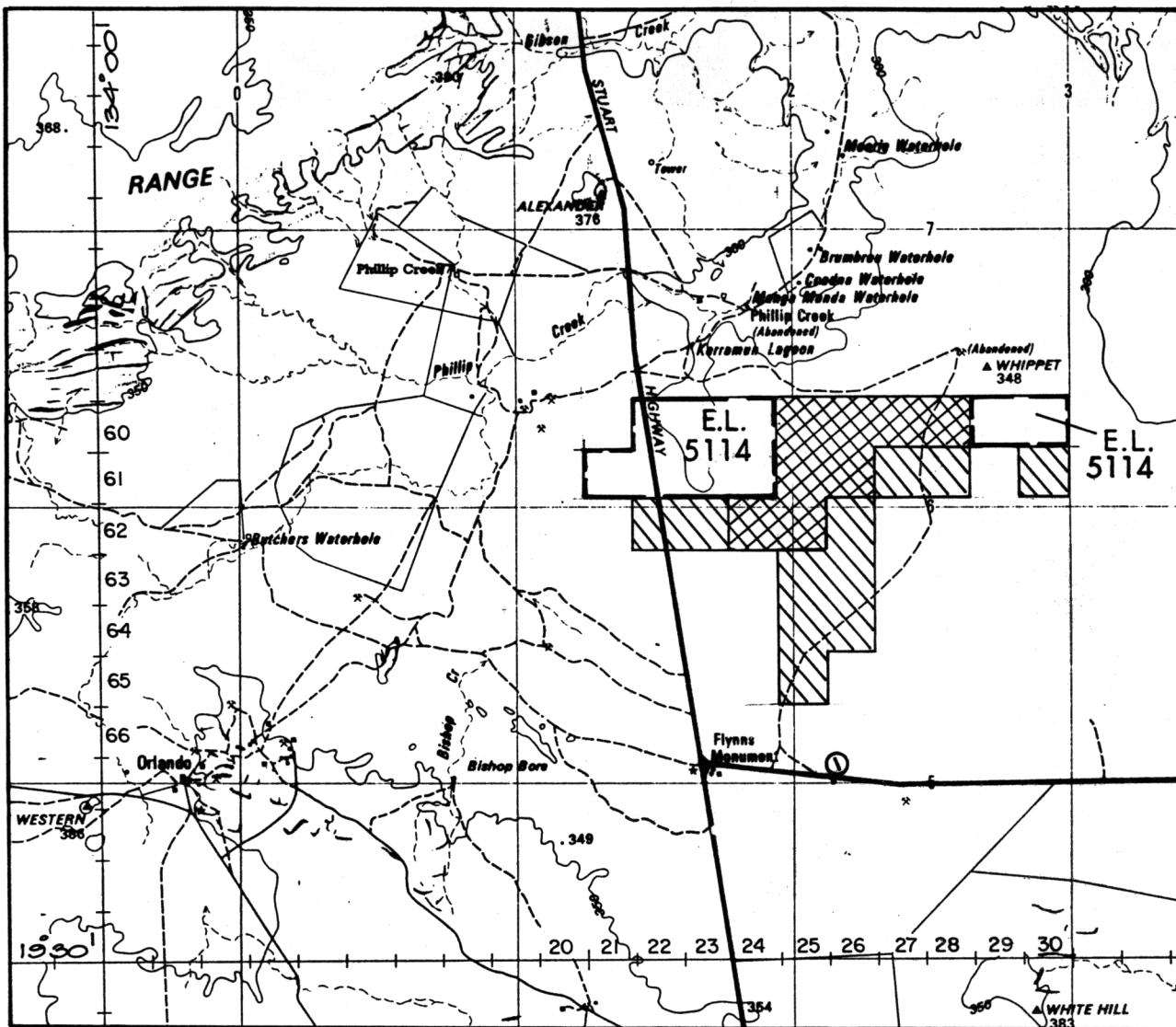
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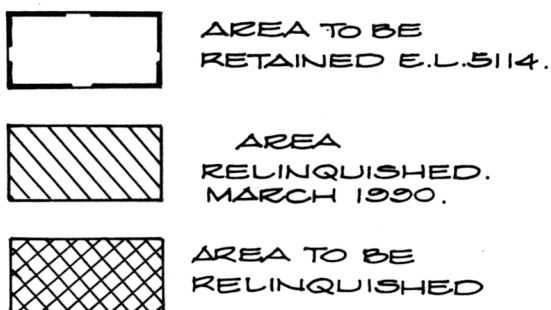
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(After Williams, in prep.)



INDEX TO ADJOINING MAPS
1: 100 000 MAPS SHOWN IN BLUE



SE 53-9 SOUTH LAKE WOODS THURING 5560	SE 53-10 HELEN SPRINGS MUCKATTY BRUM- CHILLY 5660 5760	SE 53-11 BRUNETTE DOWNS MUCKATTY DOWNS 5900
SE 53-13 GREEN SWAMP WELL BRIANT 5558	SE 53-14 TENNANT CREEK KELLY 5658 5758 5858	SE 53-15 ALROY FAVING 5958
SF 53-1 LANDER RIVER 5557	SF 53-2 CHALUBA BONNEY 5657 5757 5857	SF 53-3 FREW RIVER 5957

SHEET SE 53-14
TENNANT CREEK
NORTHERN TERRITORY

WESTERN MINING CORPORATION LIMITED - EXPLORATION DIVISION			Scale 1:250 000
Map-Ref.	SE53-14	LEASING PLAN E.L.5114. TENNANT CREEK JOINT VENTURE N.T.	Figure No.
Date	16.3.90		Plan No.
Author	D.A.B. R.EVANS		7005/87
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