

NORTHERN MINING LIMITED

ACN 113 654 229

Titleholder	Northern Mining Limited
Operator (if different from above)	as above
Titles/tenements	EL 24503
Tenement Manager	Austwide Mining Title Management Pty Ltd
Mine/Project Name	Mount Watt
Report title including type of report and reporting period including date	Final report for Mount Watt EL 24503 for the period 03/07/2005 to 02/07/2010
Personal author(s)	Dr Michael Green Remote Area GeoScience
Corporate author(s)	Northern Mining Limited
Target commodities	uranium, manganese
Date of report	3 December 2010
Datum/zone	GDA94/Zone 53
250 000 K mapsheet(s)	Finke (SG53-06)
100 000 K mapsheet (s)	Idracowra (5647)
Contact details	Dr Michael Green remote.geo@bigpond.com

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Contents

1.0	Summary	pg 1
2.0	Introduction	1
3.0	Tenure	1
4.0	Geology/prospectivity	1
5.0	Northern Mining Limited Work	
	5.1 Year 1	2
	5.2 Year 2	2
	5.3 Year 3 & 4	3
	5.4 Year 5	3
6.0	Environmental	3

Tables

Table 1	Year 5 expenditure
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Figures

Figure 1	Locality map.
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1.0 Summary

EL 24503 was part of Northern Mining Limited's 'Finke Project' in Central Australia and was considered prospective for massive stratiform Mn and sandstone-hosted and Tertiary remobilised uranium. In the fifth year of tenure, a final field visit was undertaken to the general area to re-evaluate the geology of the project. No evidence came to light of stratiform manganese and so the project was downgraded and the tenement was relinquished in full.

2.0 Introduction

EL 24503 'Mount Watt' was located 180 km south of Alice Springs, 40 km east of the Adelaide-Alice Springs Railway and 30 km west of the Finke River (Figure 1). It has been part of the Finke Project, along with EL 24467, which has its border only 6 km to the northeast. Access is difficult with no station tracks crossing the tenement and many sand-dunes within the tenement. This report covers all work completed on the tenement.

3.0 Tenure

EL 24503 was granted to Lockett Consulting Services Pty Ltd (90 %) and Imperial Granite & Minerals Pty Ltd (10 %) on 13 October 2005. Agreement to transfer the tenement to Northern Mining Limited was completed during the first year of tenure; formal transfer of ownership was not completed until the following year. Originally, the tenement comprised 297 sub-blocks overlying NT Portions 2958, 259 and 659, which are part of the Idracowra, Lilla Creek and Horseshoe Bend perpetual pastoral leases, respectively.

A waiver to reduce the tenement was approved at the end of the second year of tenure. At the end of the third year of tenure, the northernmost 151 sub-blocks were relinquished leaving 146 sub-blocks. At the end of the fourth year of tenure, the westernmost 74 blocks were relinquished leaving 72 sub-blocks, all within the Lilla Creek perpetual pastoral lease. The entire tenement has now been relinquished.

4.0 Geology/Prospectivity

The Finke Project covers the southernmost part of the Amadeus Basin; a large intracratonic basin with a complex Neoproterozoic to Carboniferous depositional history, and the northeast margin of the Mesoproterozoic Musgrave Block. In the Finke area, the Musgrave Block probably forms the basement to the Amadeus Basin (Figure 2), although the nearest outcrops of the Musgrave Block - felsic gneiss, granite and dolerite dykes are 25 km south of EL 24503. Interpretation of aeromagnetic data suggests that the Amadeus Basin and other overlying sediments are relatively shallow in the southern part of the project area with large



northeast-trending faults, subparallel to the Black Hills Range, controlling basin depth.

The Finke Project area is dominated by Palaeozoic Finke Group sediments and the northeast-trending Black Hill Range (Neoproterozoic Winnall Beds). These sediments have been deformed and eroded, and then unconformably overlain by flat-lying Mesozoic sediments (Jurassic De Souza Sandstone, Cretaceous Rumbalara Shale) and Quaternary alluvial outwash, colluvium and aeolian sand, including abundant north- to northwest-trending sand dunes. Some minor Tertiary sediments have been mapped in the area (Wells *et al.*, 1969), though subsequent mapping by explorers has highlighted a greater extent of these outcrops.

Previous exploration within EL 24503 has been limited and included:

- Groundwater analyses,
- Airborne magnetic and radiometric surveys, and
- Ground reconnaissance of exposed geology.

Anomalous uranium results were obtained from water derived from bores penetrating the Polly Conglomerate (basal Finke Group), and are consistent with other uranium results across the southern Amadeus Basin. RAB drilling east of EL 24503 suggests that the Langra Formation is most prospective for uranium, though no mineralisation was delineated.

In 1940, a rock sample collected by a station worker from Horseshoe Bend Station was analysed by Broken Hill Propriety (BHP) Limited in Newcastle. The sample returned 52.45 % Mn, 0.78 % Fe, 0.068 % P and 11.75 % insolubles (see 2nd Annual Report EL 24467 for original correspondence). The sampling site has never been rediscovered and no other manganese mineralisation has been reported in the area. However, the sample was probably collected from the Winnall Beds within EL 24467, but could be from within EL 24503.

5.0 Northern Mining Limited Work

5.1 Year 1

In the first year of tenure, work on EL 24503 was limited to producing the prospectus for Northern Mining Limited. This work involved a major desktop study by an independent geological consultant, and included compilation and interpretation of public-domain geophysics. No field work was undertaken.

5.2 Year 2

In the second year of tenure, a reconnaissance field trip was undertaken to check the field expression of certain geological features and discuss logistics with the station owner at Horseshoe Bend. Two rockchip samples of silicified Tertiary lacustrine carbonate sediments were collected from an adjacent exploration



licence where there are prominent uranium anomalies in the wide-spaced radiometric data. These rockchips returned low, but slightly anomalous uranium results, which suggests that the airborne anomalies are not measuring uranium directly, but possibly the daughter products derived from uranium decay. If so, uranium mineralisation may have been mobilised recently and so further work is required to identify local, favourable trapsites.

5.3 Years 3 & 4

Extensive field mapping and geochemistry were proposed for the third year of tenure with the aim of defining areas to drill test. None of this work was completed during the 3rd or 4th year of tenure due to the difficulty of obtaining geological staff and contractors during the boom and then the uncertainty of corporate financing during the global recession.

5.4 Year 5

In the fifth year of tenure, it was decided to complete a short field visit to find some evidence of stratiform manganese in the Black Hills Range. A number of traverses were completed, including one along the Finke River where the cross-section through the Black Hills Range is well exposed. No evidence of stratiform manganese was noted. Coupled with the difficulty of exploring for uranium in the area it was decided to relinquish the tenement in full.

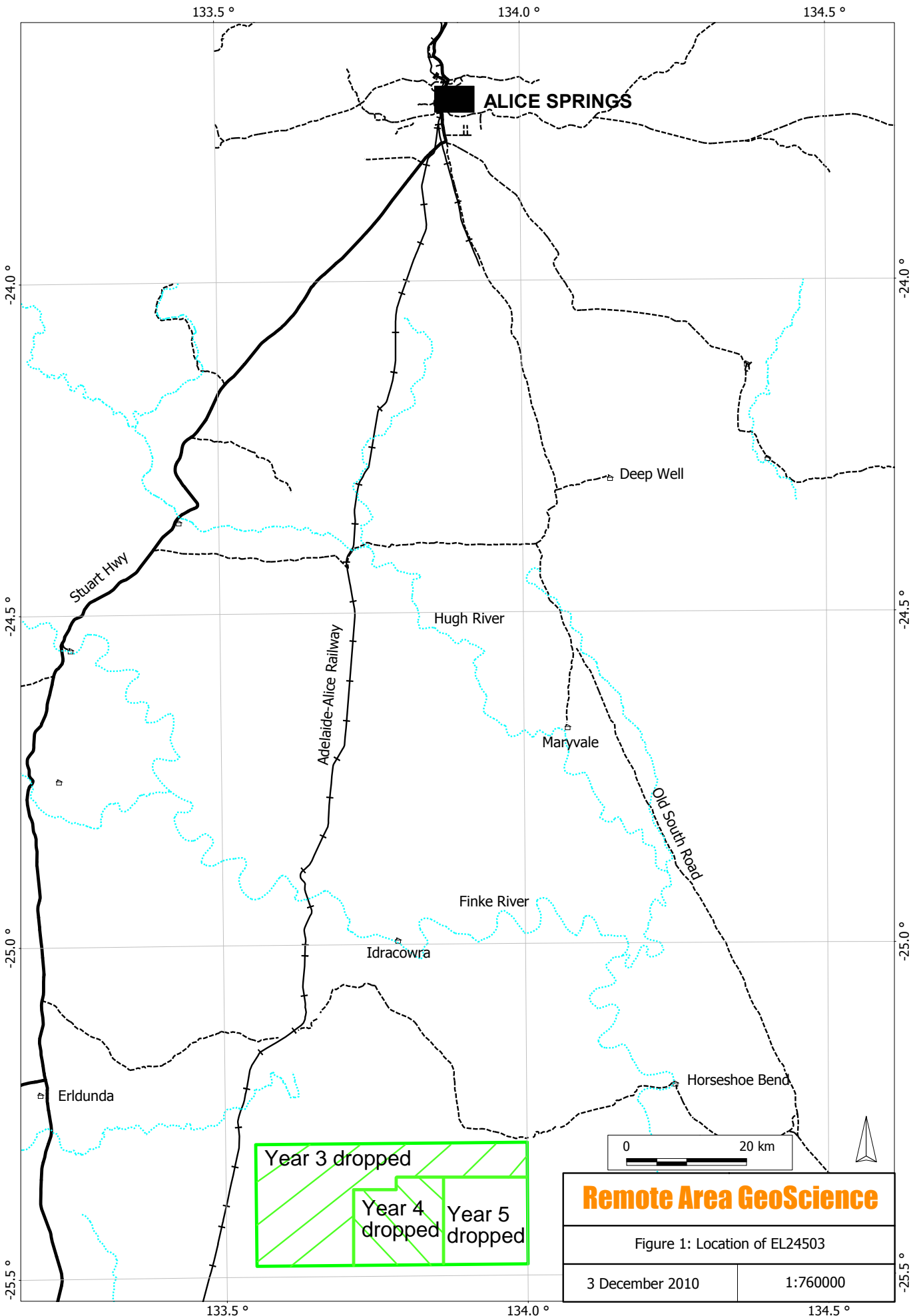
A covenant of \$44,000 was proposed for the third year, but with no fieldwork completed only \$2,100 was spent.

Item	Expenditure
Salary/wages (incl consultants)	1,800
Administration (15 %)	300
Total	\$2,100

Table 1: Expenditure on EL 24503 for fifth year of tenure.

6.0 Environmental

No ground disturbing work has been undertaken on EL 24503.



Year 3 dropped
 Year 4 dropped
 Year 5 dropped

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Figure 1: Location of EL24503	
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