

# NORTHERN MINING LIMITED

ACN 113 654 229

First Annual Report for  
**'HORSESHOE BEND'**  
**EL 24467**

For the period  
**7/9/2005 to 6/9/2006**

**Author:** Michael Green (Remote Area GeoScience)

**Date:** 30 October 2006

- DISTRIBUTION:**
- Northern Territory Department of Primary Industries,  
Fisheries & Mines
  - Northern Mining Limited

**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	2
	5.1 Year 1	2
	5.2 Year 2 (proposed)	2
6.0	Environmental	3
7.0	Bibliography	3

**Tables**

Table 1	Tenement details
Table 2	Expenditure on EL 24467 for first year of tenure.
Table 3	Proposed expenditure for second year of tenure.

**Figures**

Figure 1:	Locality map.
Figure 2:	Outcrop geological map of EL 24467.

## 1.0 Summary

EL 24467 is part of the Finke project in Central Australia and is considered prospective for sandstone-hosted uranium and massive Mn mineralisation. In the first year of tenure, all work on EL 24467 related to the transfer of the tenement to Northern Mining Limited and the subsequent compilation of an Australian Stock Exchange prospectus. No field work was completed.

## 2.0 Introduction

EL 24467 'Horseshoe Bend' is located 150 km south of Alice Springs along the Old South Road (Figure 1). It is part of the Finke Project, along with EL 24503. This report covers all work completed on EL 24467 in the first year of tenure.

## 3.0 Tenure

EL 24467 was granted to Lockett Consulting Services Pty Ltd (90%) and Imperial Granite and Minerals Pty Ltd (10%) on 7 September 2005. Agreement to transfer the tenement to Northern Mining Limited was completed during the first year of tenure, although formal transfer of ownership was not completed during this year. Northern Mining Limited applied for listing on the Australian Stock Exchange and was successfully floated in September 2006.

The tenement comprises 500 blocks all within NT Portion 659, which is part of the Horseshoe Bend perpetual pastoral lease.

Tenement	Ten no.	Blocks Granted	Blocks Relinq.	Blocks Retain	Grant Date	Expiry Date
Horseshoe Bend	24467	500	nil	500	7 Sept 2005	6 Sept 2011

**Table 1:** Tenement details

## 4.0 Geology/Prospectivity

The Finke Project covers the southern part of the Amadeus Basin; a large intracratonic basin with a complex Neoproterozoic to Carboniferous depositional history. The project area is dominated by Palaeozoic Finke Group sediments and the northeast-trending Black Hill Range (Neoproterozoic Winnall Beds). These sediments are overlain by 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 outcrop. The ephemeral south-flowing Finke River meanders through the eastern part of the project area.

Previous exploration within EL 24467 has focussed on sandstone-hosted uranium mineralisation and has been limited to:

- Groundwater analysis,
- Airborne magnetic and radiometric surveys,
- Ground reconnaissance of exposed geology, and
- 14 RAB holes in Palaeozoic succession.

Anomalous U results were obtained from water derived from the Polly Conglomerate (basal Finke Group), and is consistent with results in the wider region. RAB drilling results suggest that the Langra Formation is most prospective, although no mineralisation was delineated.

In 2004, a rock sample of the Winnall Beds south of Horseshoe Bend and within EL 24467 returned 52.45% Mn, 0.8% Fe and 0.68% Pb. No other work relating to manganese has been undertaken in the area.

The Finke Project area is prospective for sandstone-hosted U mineralisation in the Finke Group sediments, particularly the Polly Conglomerate and Langra Formation. The lack of modern exploration and the extensive shallow aeolian cover greatly enhances the prospectivity of the area. The discovery of elevated manganese abundances in the Winnall Beds, also provides a further commodity of interest in the area.

## 5.0 Northern Mining Limited Work

### 5.1 Year 1

In the first year of tenure, work on EL 24467 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. All costs associated with producing the prospectus (drafting, etc) have been included in the consultant's fee. No field work was undertaken. A Covenant of \$55,000 was proposed for the first year of tenure, with only \$32,827 spent.

Item	Expenditure
Consultants (includes all costs)	\$28,545
Administration (15%)	\$4,282
<b>Total</b>	<b>\$32,827</b>

**Table 2:** Expenditure on EL 24467 for first year of tenure.

### 5.2 Year 2 (proposal)

In the second year of tenure, an extensive field survey will be undertaken in the Finke Project. This will include extensive geological and regolith mapping, surface sampling and geochemical testing of water bores. A geophysical survey, probably gravity, will also be undertaken to better define targets under shallow cover. Some metallurgical studies of manganese mineralisation will also be undertaken.

Item	Expenditure
Rockchip assays	\$8,000
Geophysical survey (gravity)	\$17,000
Metallurgical studies	\$6,500
Vehicles	\$7,500
Wages, consultants	\$9,000
Administration	\$7,000
<b>Total</b>	<b>\$55,000</b>

**Table 3:** Proposed expenditure for second year of tenure.

## 6.0 Environmental

No ground disturbing work was undertaken on EL 24467 during the first year of tenure.

## 7.0 Bibliography

*CR1974-0028.* EL745 Annual Report 1973. Le Nickel (Aust) Exploration Pty Ltd.

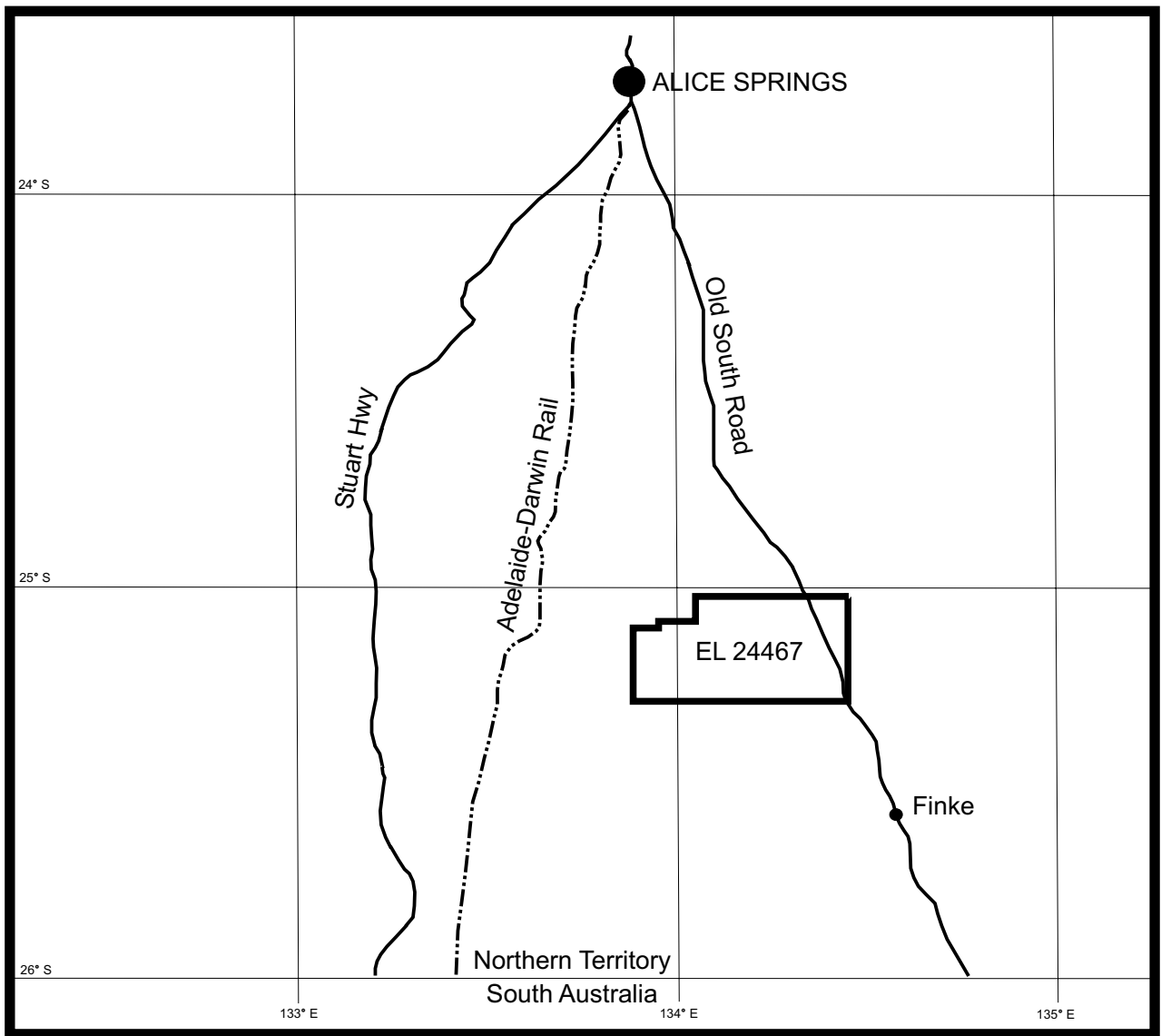
*CR1974-0183.* EL746 Annual Report 1973. Le Nickel (Aust) Exploration Pty Ltd.

*CR1974-0184.* EL747 Annual Report 1973. Le Nickel (Aust) Exploration Pty Ltd.

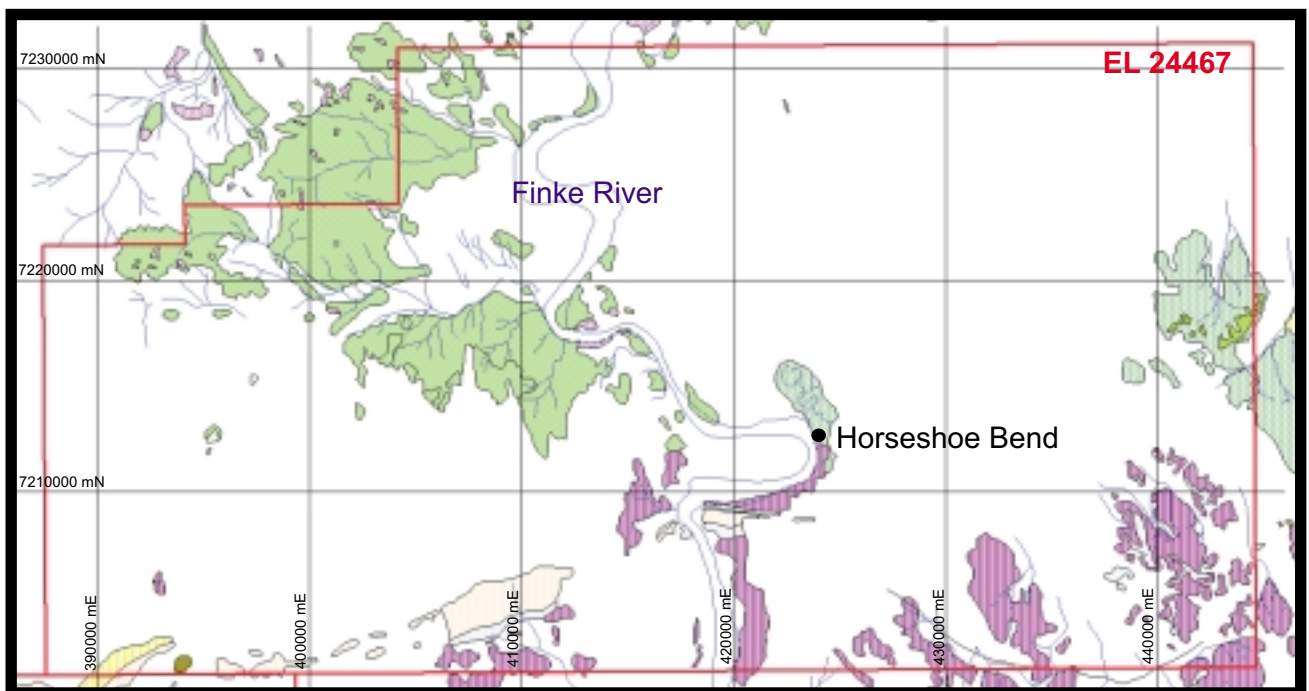
*CR1978-0005.* Annual Report EL744, 745, 746 & 747. Finke district, NT. Nickel (Aust) Exploration Pty Ltd. (Benko, D. Afmeco Pty Ltd)(Compiles by MRW Garman).

*CR1978\_0141.* Final report EL1214. Agip Nucleare Aust. Pty Ltd.

Well, AT, Stewart, AJ, Skwarko, SK. 1969. *Finke 1:250,000-scale Geological Map (SG5306)*. Bureau of Mineral Resources.



**Figure 1:** Locality of EL 24467.



**Figure 2:** Outcrop geological map of EL 24467 (adapted from Wells et al ,1969; LandSat 7).