



**COMBINED REPORT:**  
**YEAR 2 ANNUAL & FINAL**  
**31/01/11 to 24/04/13**  
**SELBY (EL 27946)**

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## Summary

Section 94 of the ***Mineral Titles Act*** requires the submission of an Annual Report prepared by the titleholder for each exploration licence. The purpose of the following Annual Report for Exploration Licence (EL) 27946 is to provide a summary of the activities carried out over the permit in the past 12 months, including results produced by those activities.

To delineate prospective areas for base metal and uranium mineralisation and define the next phase of exploration, Natural Resources Exploration ('NRE') has carried out extensive office-based studies of EL27946, known to NRE as its Selby Project. NRE has conducted extensive desktop reviews of all previous exploration across the tenement including review of all previous historical exploration reports, acquisition and interpretation of ASTER imagery and other satellite data available.

Based on the exploration activities conducted on EL27946, NRE believes that no further exploration is warranted at this time. NRE made application to the Department to completely surrender the entire title for EL27946 under section 103 of the *Mineral Titles Act*. EL27946 was surrendered on 24 April 2013.

NRE believes that there is no rehabilitation required in relation to EL27946 as no field based activities have been undertaken within the tenure nor have any works involving land disturbance been carried out during the term of the licence.

## 1. Introduction

Natural Resources Exploration ('NRE') has conducted extensive office-based studies of its Exploration Licence (EL) 27946, known to NRE as its Selby Project.

EL 27946 was granted to NRE on 31 January 2011, consisting of a total of 110 sub-blocks. EL 27946 is situated in the Carpentaria zinc belt within the McArthur Basin. The region is strongly mineralised with a number of prominent commodities including Copper, Lead-Zinc Silver, Uranium, Gold, Iron, Phosphate and Diamonds.

NRE's exploration rationale and objectives for its Selby Project considered the evaluation of potential base metal and uranium mineralisation. Investigations were intended to locate any outcropping of mineralisation and any indicators of any sub-surface mineralisation within the tenement based on desktop reviews.

Office-based studies have included desktop reviews of all previous exploration across the tenement, assessment of the geology, radiometrics, aeromagnetism, gravity and ASTER imagery within the Selby Project.

## 2. Tenure

NRE's exploration licence (EL) 27946, is more commonly known by NRE as its 'Selby Project'. The Selby Project consists of 110 sub-blocks in the Carpentaria zinc belt within the McArthur Basin. EL27946 was granted to NRE on 31 January 2011. **Table 1** lists the pertinent tenement details.

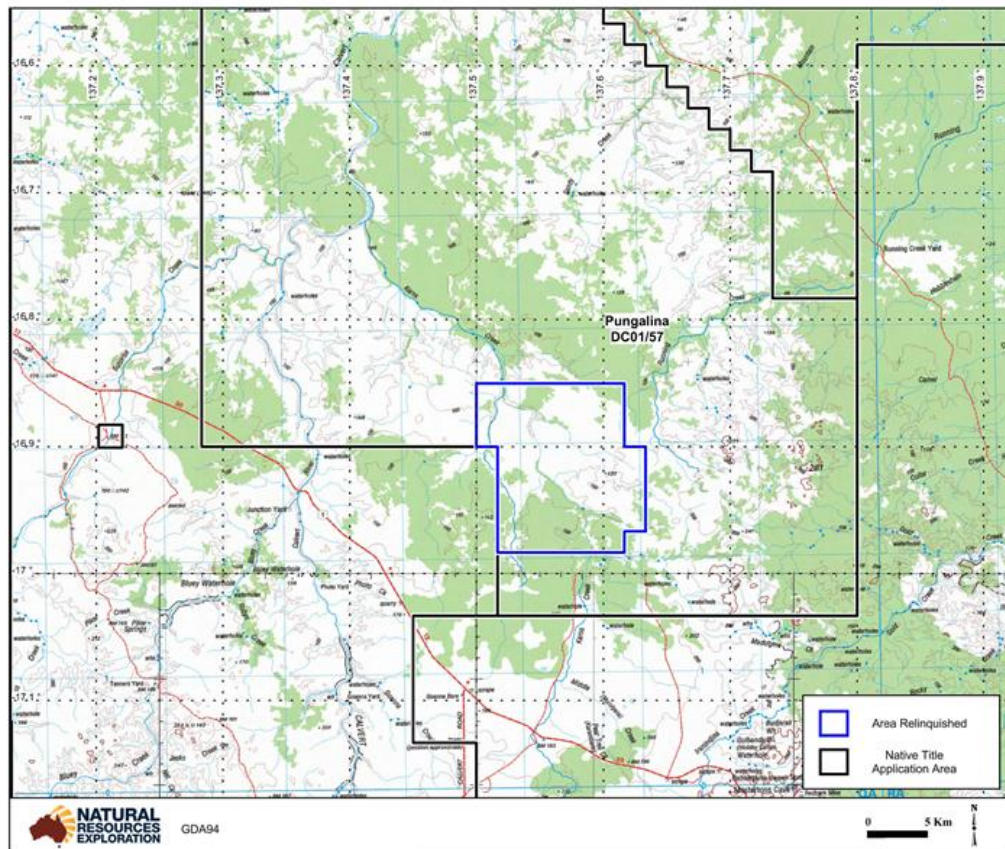
**Table 1. Tenement Details**

Project Name	Tenement Name	Title No. (EL)	Sub-blocks	Sq. Km	Status	Grant Date	Surrender Date
McArthur	Selby	27946	110	361.39	Granted	31-Jan-11	24-Apr-13

### Native Title

There is currently one (1) Native Title Claim over the area, namely the Pungalina Claim (Tribunal Number DC01/57). The Native Title Claim is identified in **Figure 1** below.

**Figure 1. Native Title Claim Map**



### Recorded Sacred Sites

There are three (3) Recorded Sacred Sites within the Selby Project.

## **2.1 Location and Access**

### Location

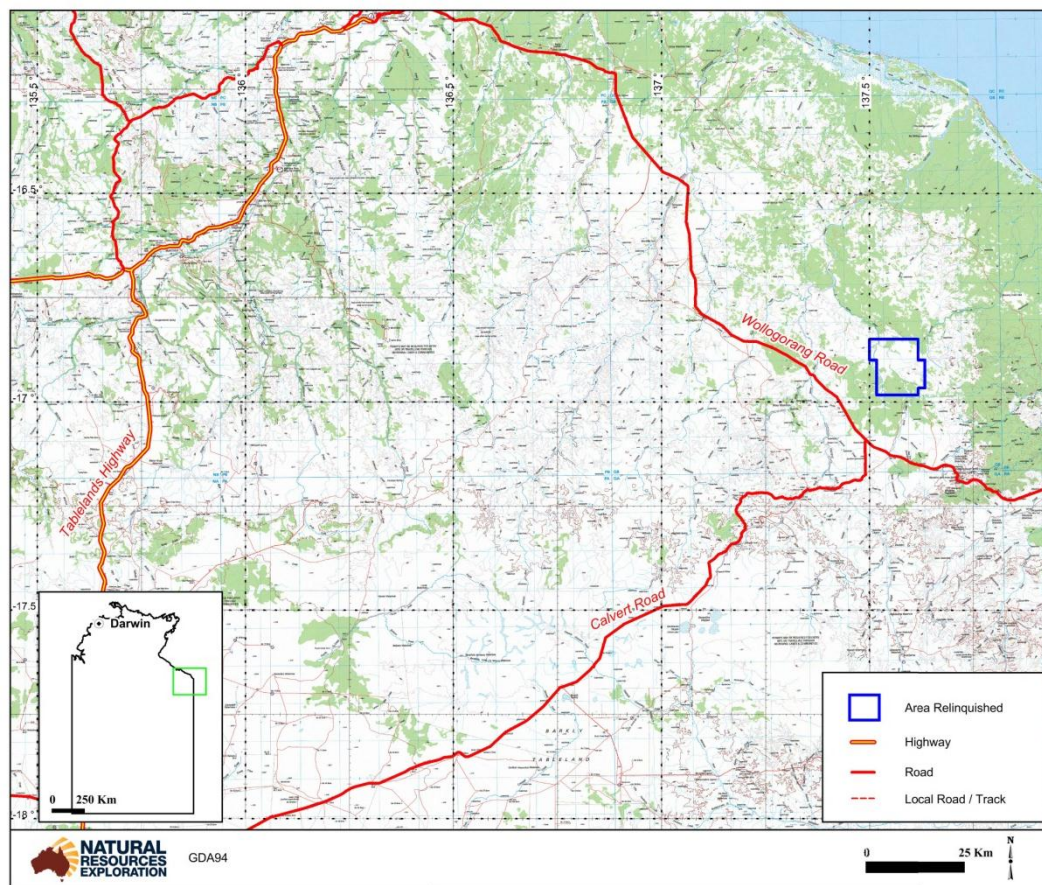
The Selby Project is located approximately one hundred (100) kilometres from Boorooloola, Northern Territory and approximately ten (10) kilometres north of Wollogorang Road.

The Selby Project area is accessible from Boorooloola along the Carpentaria Highway and the Seven Emu Road towards Pungalina Station, and then via numerous unsealed station tracks.

An alternative way of reaching the project area would be to access any focus areas via helicopter. The location and access of EL27946 is outlined in **Figure 2** below.



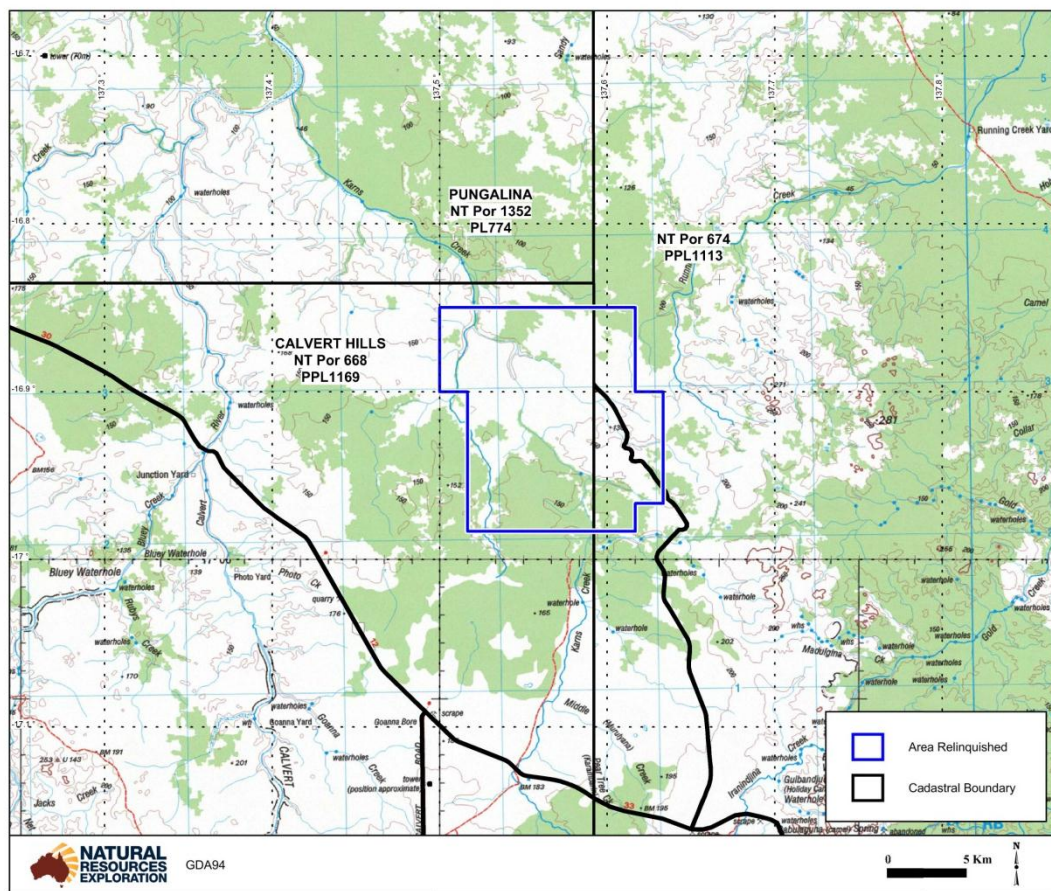
**Figure 2. Location & Access Map**



### Pastoral Leases

NRE's Selby Project overlies two (2) Pastoral Leases, namely NT Portion 0668, PPL 1169 and NT Portion 674 PPL 1113. **Figure 3** shows this lease in relation to the Selby Project area.

**Figure 3. Cadastral Map**



### 3. Geology

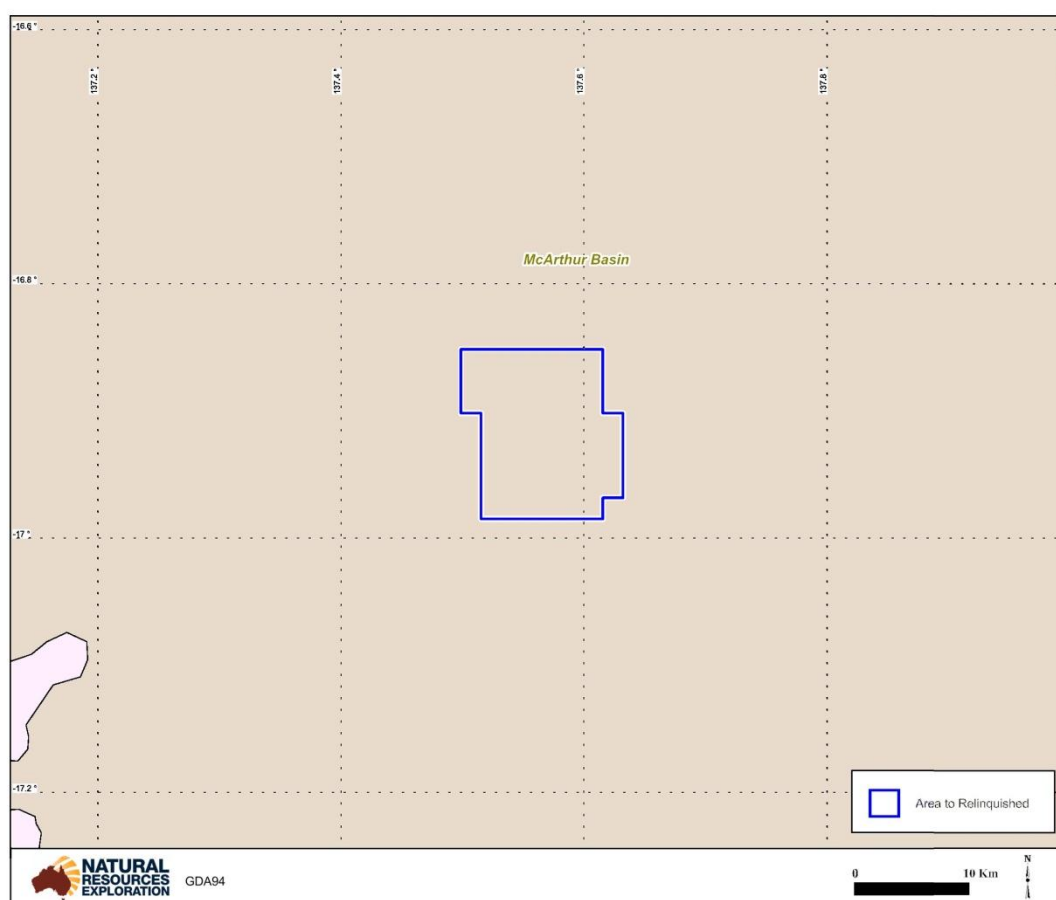
#### 3.1 Regional Geology

The Selby Project lies within the Carpentaria zinc belt consisting of Proterozoic sediments and volcanics. It is located within the unmetamorphosed, relatively undeformed Palaeoproterozoic to Mesoproterozoic succession of carbonate, siliciclastic and volcanic rocks of the McArthur Basin.

The Region is strongly mineralised with a number of prominent commodities including lead-zinc-silver, copper, uranium, gold, iron, phosphate and diamonds. The Regional Geology is depicted in **Figure 4** below.



**Figure 4. Regional Geology Map**



The McArthur Basin lies within the north-eastern portion of the Northern Territory which extends into Queensland. Its sedimentary sequence is interpreted to be up to approximately 12,000 metres in thickness.

The McArthur Basin hosts the major stratiform McArthur River lead-zinc-silver deposit. The Basin also contains marine and non-marine sedimentary rocks. Volcanic and associated intrusive rocks are present in some parts of the Basin.

### **3.2 Permit Geology**

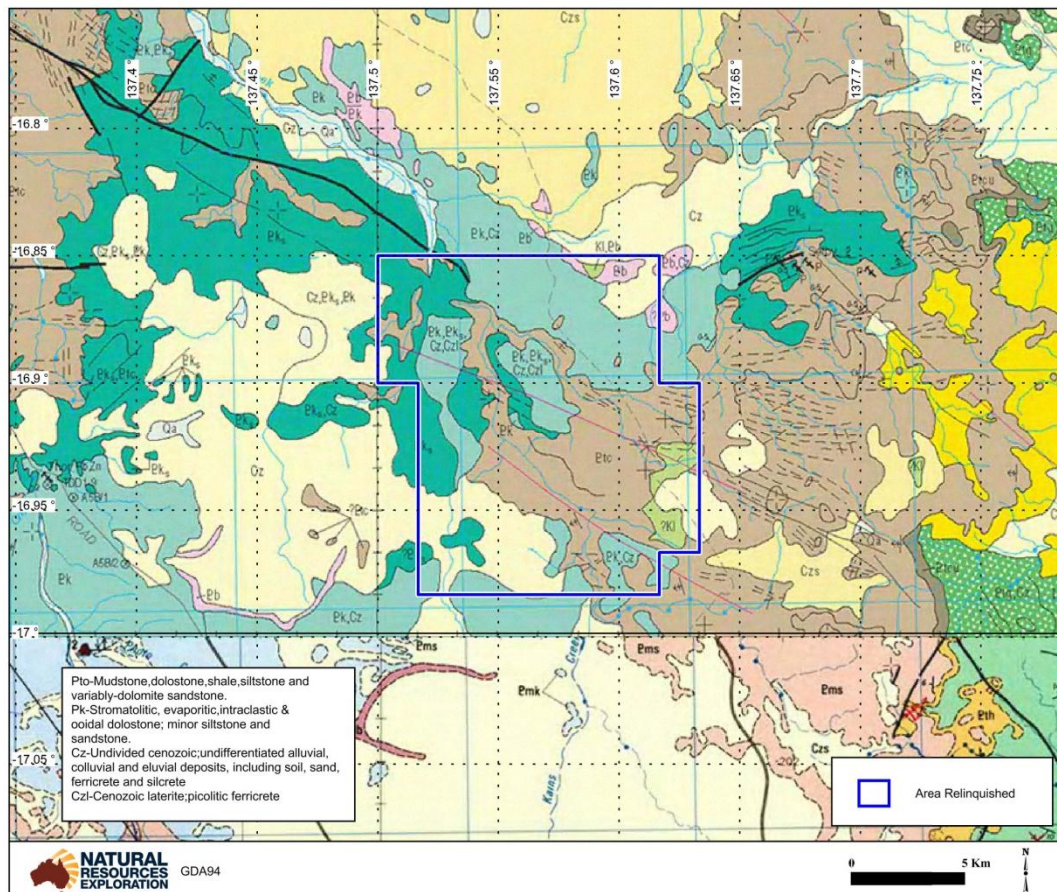
NRE's Selby Project area is situated in the Carpentaria zinc belt within the McArthur Basin. The Project area is located within the Wearyan Shelf tectonic element of the south-eastern McArthur Basin, encompassing the Proterozoic Karns Dolomite, a unit considered prospective for stratabound and stratiform base metal mineralization. Rocks of the Palaeoproterozoic Tawallah Group comprise the base of the local geological sequence.

The geology within the Selby Project area contains upper Tawallah Group sandstone overlain by Nathan Group Karns Dolomite. There are occurrences of phosphate and uranium

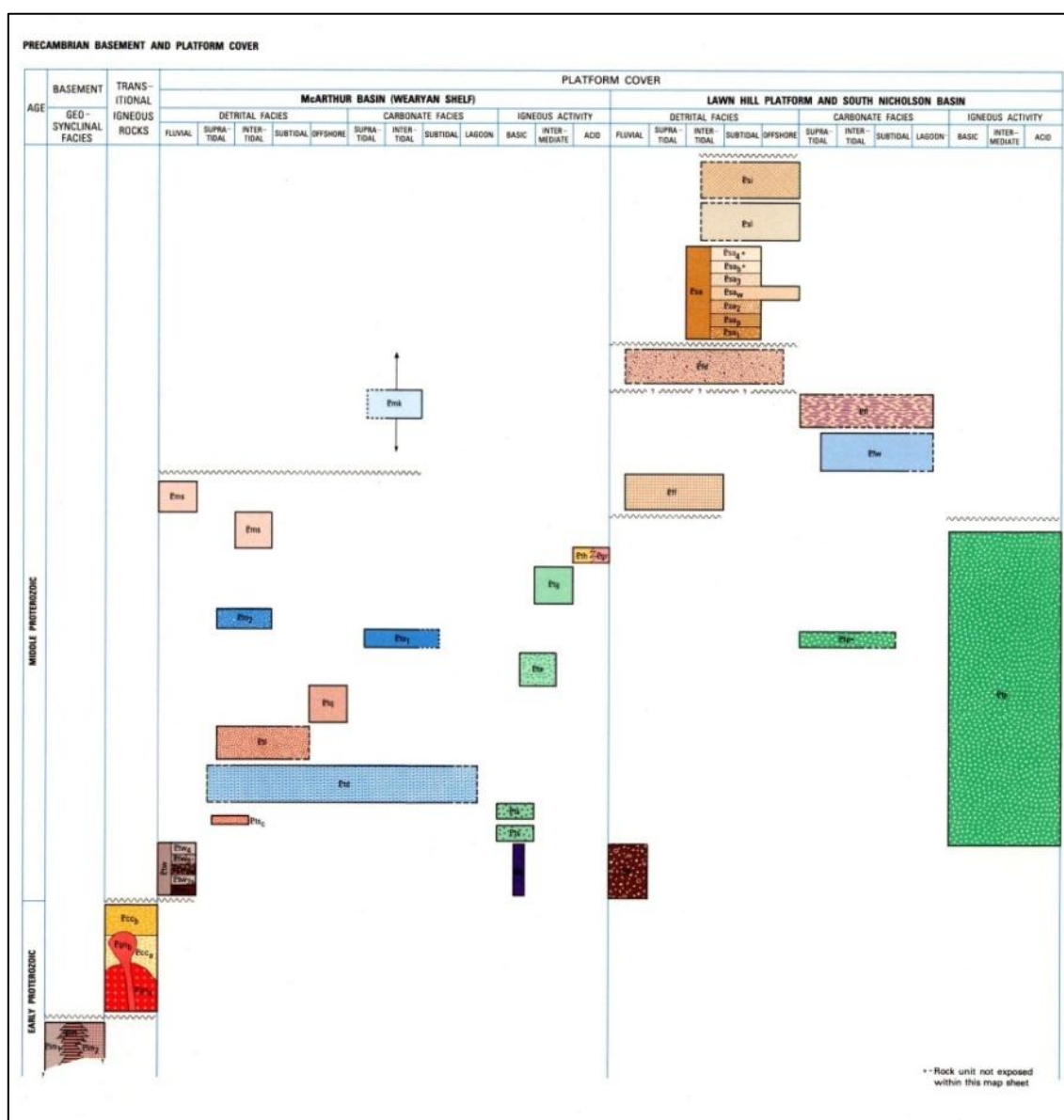
as well as nearby copper deposits. Cainozoic sediments cover a majority of the underlying geology with unconsolidated sands, alluvial, colluvial and eluvial deposits comprising most of the bulk of the Cainozoic cover.

The permit geology is illustrated in **Figure 5** and the changes in the interpreted stratigraphic succession over time are shown in **Table 2**.

**Figure 5. Permit Geology Map**



**Table 2. Stratigraphy (adapted from Northern Territory Geological Survey, 1989)**



#### 4. NRE's Exploration Activities during the Reporting Period

NRE's exploration program of its Selby Project consisted of extensive desktop studies and a historic review of previous exploration over the tenure area. Our office-based studies have allowed us to delineate prospective areas for base metal and uranium mineralisation.

## 4.1 Exploration Studies

NRE has conducted an extensive review of historic exploration over its Selby Project. A review of all previous exploration within the project area has been completed including:

- Review of previous exploration data from NTGS open file company reports; and
- Review of aeromagnetics, of radiometrics and gravity survey provided by NTGS; and

- Review of satellite imagery, of ASTER imagery, Google Earth Imagery.

Although no mineral occurrences have yet been documented in the region now held by NRE, the Selby Project is considered to be situated in a prospective locality between a number of mineralized zones.

### Historic

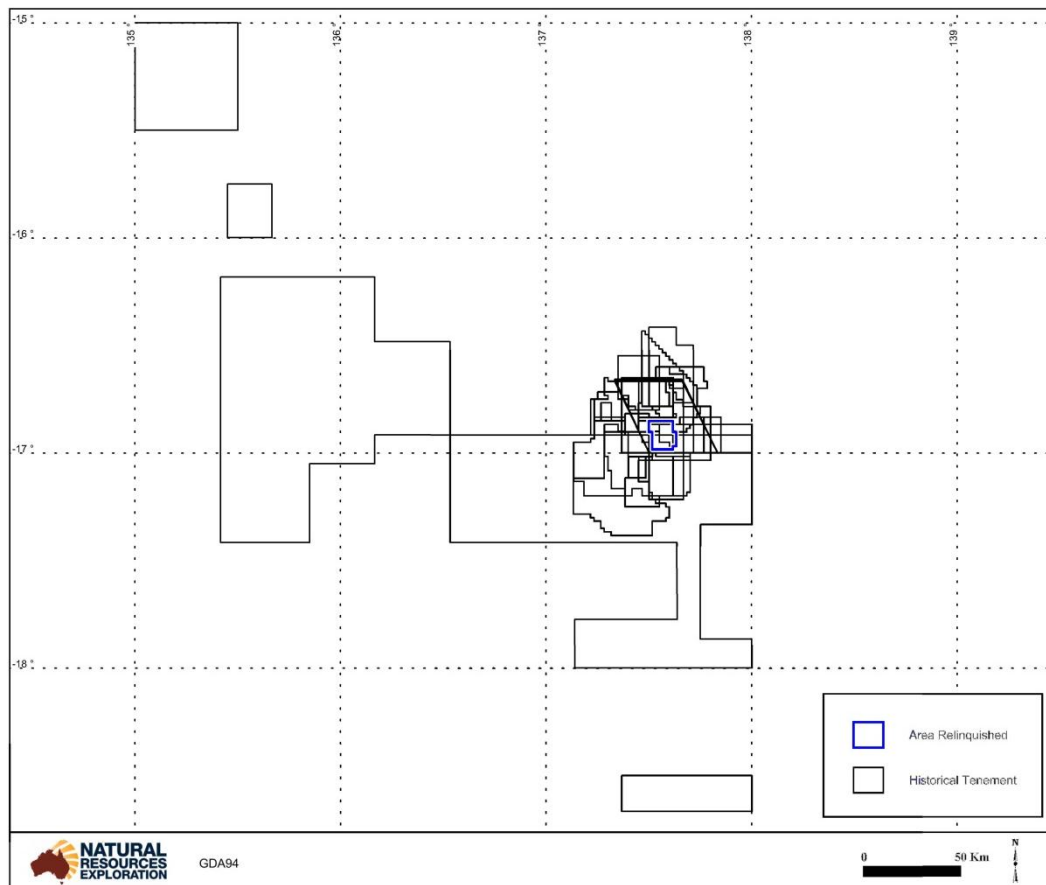
Previous exploration has been summarised in **Table 3** and location of historic tenements is shown in **Figure 6**.

**Table 3. Historic Tenures and Previous Companies' Exploration Reports**

Tenure Number	Granted	Company Reports	Company
EL 7351	1991-1992	CR1992-0570	Argold Holdings
EL 7200	1991-1994	CR1992-0422,CR1993-0406,CR1993-0534,CR1994-0064,CR1994-0431	CRA Exploration
EL 7964	1993-1995	CR1994-0401,CR1995-0469,CR1995-0638,CR1995-0796	CRA Exploration
EL 8084	1993-1997	CR1994-0551,CR1995-0603,CR1996-0813,CR1996-0814,CR1997-0683	Ashton Mining
EL 8342	1993-1995	CR1995-0076,CR1996-0076	CRA Exploration
EL 8996	1995-1996	CR1996-0243,CR1997-0182	BHP Minerals
EL 9266	1996-1997	CR1996-0681,CR1997-0682	BHP Minerals
EL 10046	2002-2004	CR2004-0228	Rio Tinto Exploration
EL 22251	2003-2010	CR2009-0389,CR2010-0061	Legend International Holdings
EL 4166	1983-1989	CR1984-0061,CR1985-0096,CR1986-0109,CR1987-0014	CRA Exploration
EL 1146	1976-1977	CR1978-0024	Amax Exploration
AP 983		CR1963-0004,CR1977-0020	Carpentaria Exploration Company
EL 28	1972-1972	CR1973-0135	Euralba Mining
EL 2564	1980-1986	CR1982-0041,CR1982-0371,CR1983-0171	ANZECO

AP 2295	1969-1971	CR1970-0023,CR1971-0098	Fisher
EL 26966	2009-2012	CR2011-0204	Phosphate Australia
EL 27956	2010-2012	CR2011-0289	Phosphate Australia

**Figure 6. Historic tenements over the Selby Project**



## 5. Reports lodged during the reporting period

NRE believes that no other reports were required to be lodged during this reporting period.

## 6. Conclusions

Natural Resources Exploration's exploration activities of its Selby Project Exploration Licence (EL) 27946 have been focused on delineating targets. Natural Resources Exploration's ('NRE') has carried out an extensive assessment of the geology, radiometrics, aeromagnetics, gravity and ASTER imagery within its Selby Project.



NRE believes that this tenure holds low mineral prospectivity and no further exploration is warranted at this time. NRE made application to the Department to completely surrender the entire title for EL27946 under section 103 of the *Mineral Titles Act*. EL27946 was surrendered on 24 April 2013.

NRE believes that there is no rehabilitation required in relation to EL27946 as no work involving land disturbance has been carried out during the term of the licence.

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