



# PARTIAL RELINQUISHMENT REPORT

## PLENTY RIVER (EL 27897)

<b>Title Holder:</b>	<b>NATURAL RESOURCES EXPLORATION PTY. LTD.</b>
<b>Operator:</b>	Natural Resources Exploration Pty. Ltd.
<b>Tenement Manager:</b>	Nicole Munro, Natural Resources Exploration Pty. Ltd.
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<b>Author(s):</b>	Munro, N.
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<b>Contact Details:</b>	

### **NATURAL RESOURCES EXPLORATION PTY. LTD.**

PO Box 9235, Gold Coast Mail Centre, QLD 9726  
Level 8 Corporate Centre, 2 Corporate Ct, Bundall QLD

**Tel:** (07) 5644 5500 **Fax:** (07) 5528 4558

**Email:** [info@naturalresources.net.au](mailto:info@naturalresources.net.au)

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## Summary

Section 94 of the ***Mineral Titles Act*** requires the submission of a Relinquishment Report prepared by the titleholder for each current Exploration Licence. This Partial Relinquishment Report for EL27897 offers a summary of the activities undertaken on the relinquished area for the life of the permit, including any results produced by those activities.

Natural Resources Exploration ('NRE') is the sole titleholder and operator of EL27897. NRE was granted EL27897 on 11 August 2010 for a term of six (6) years. NRE was subsequently granted the approval from the Department of Resources to incorporate this tenure into Group Technical Reporting for the project area known by NRE as its GR177-10 'Jervois Project'.

The work and expenditure program for EL27897 consisted of a geological and geophysical review of existing data and information towards determining the location of possible base metal mineralisation within the tenement. NRE carried out a detailed desktop evaluation but also a detailed on-ground geological assessment of EL27897.

NRE conducted two (2) helicopter assisted reconnaissance programs in relation to its Jervois Project area which included an area covered by this Relinquishment Area. NRE also collected various samples during this activity and engaged in geological mapping of the area. Although no samples were collected from within the relinquished area itself, NRE based its conclusions on the results of samples collected within the retained area and the surrounding tenements within the region.

NRE also attended the Darwin Core Library for the purposes of analysing water bore cuttings available within close proximity to the retained area of EL27897. These water bores were tested by NRE using a portable XRF and where NRE felt appropriate, also sent some samples to ALS Laboratories for confirmation of initial analysis by portable XRF.

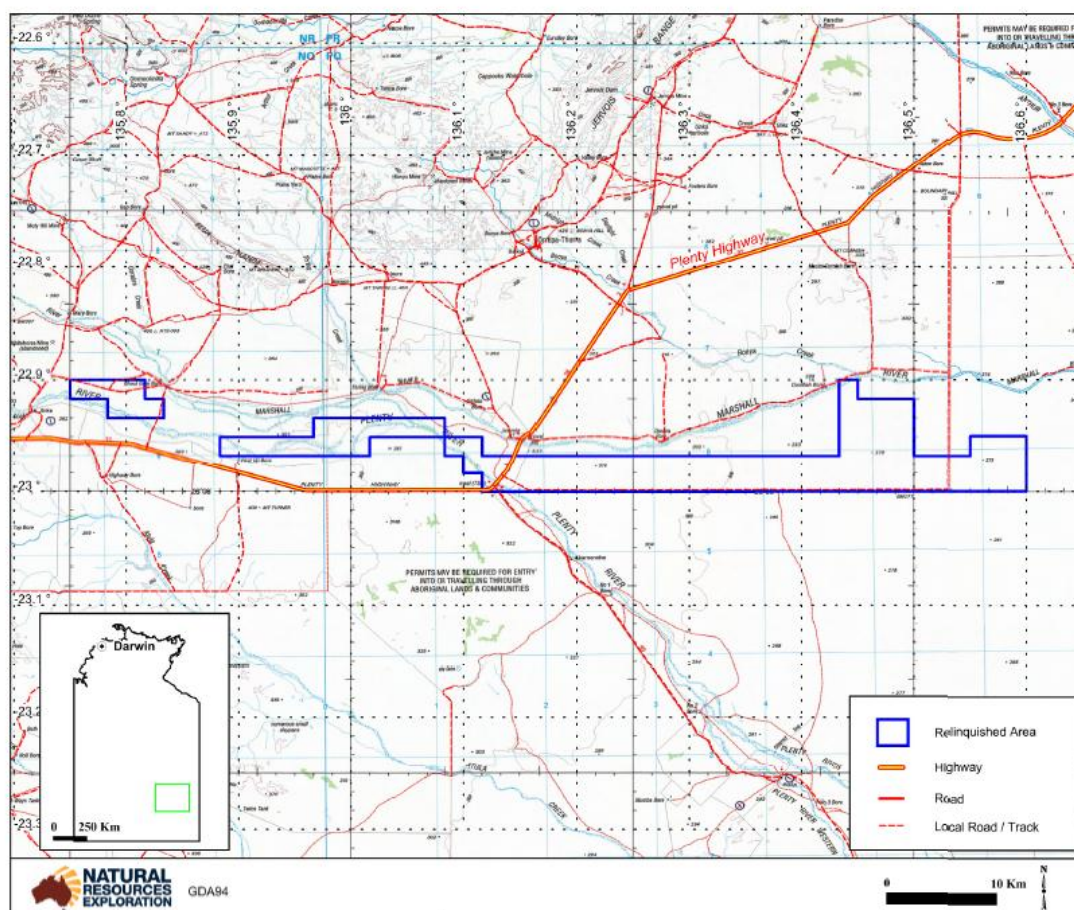
# 1. Introduction

Natural Resources Exploration's ('NRE') rationale and objectives for EL27897, more commonly known by NRE as its Plenty River Project, considered the evaluation of potential base metal mineralisation.

NRE also considered the potential for these forms of mineralisation across a broader area n being known as NRE's 'Jervois Project'. This tenure formed part of a number of tenures which make up NRE's 'Jervois Project'.

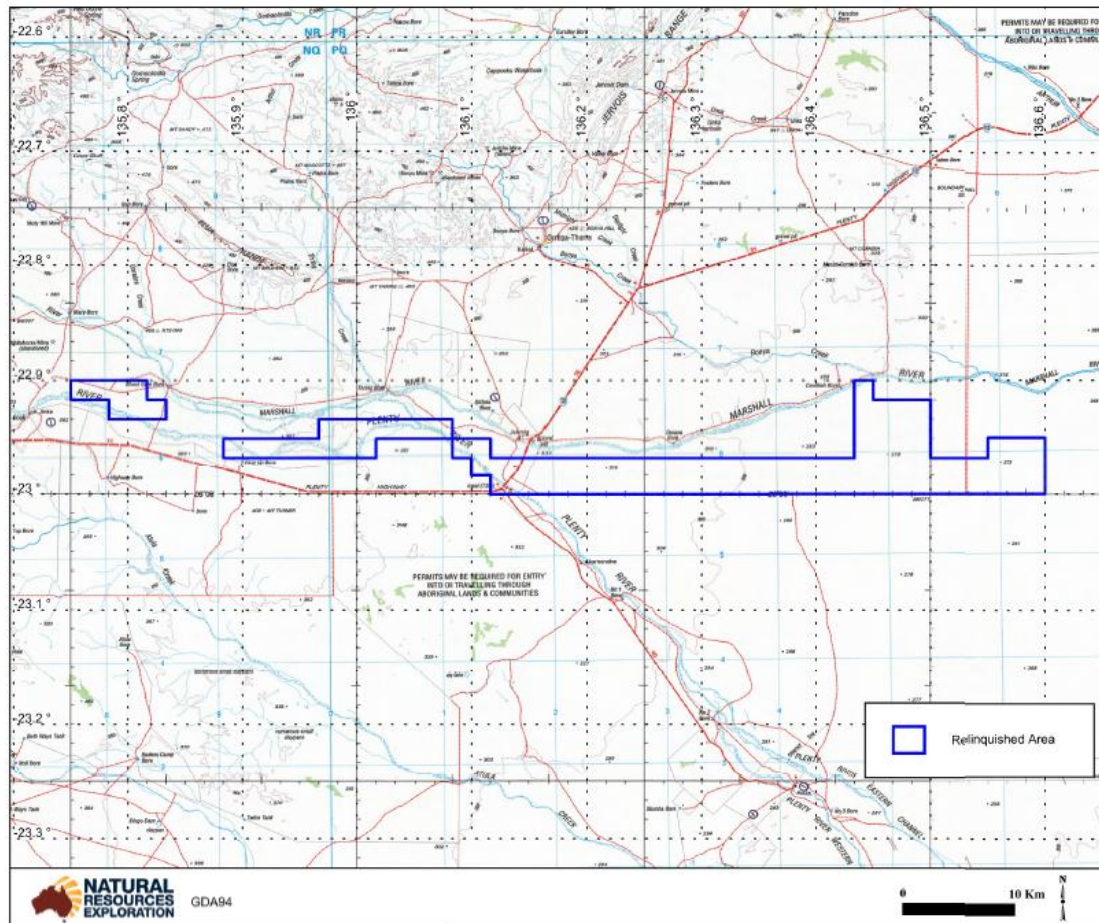
EL27897 was granted to NRE on 11 August 2010, consisting of a total of 145 sub-blocks. EL27897 is located in the Aileron Province along the Plenty Highway. **Figure 1** identifies the location of the relinquished area subject of this report.

**Figure 1. Location Map of Relinquished Area**



EL27897 ranges from a vast terrain of flat sandy area to undulating hilly ground with isolated rugged rocky outcrops. A small parallel channel to Fault Creek is within the south of the Project area as well as small tributary gullies and creeks flowing throughout. **Figure 2** shows the topography within the relinquished area.

**Figure 2. Topographic Map of Relinquished Area**



NRE's exploration activities for EL27897 and its Jervois Project have included two (2) helicopter assisted reconnaissance programs, soil sampling, geological mapping and associated rock chip sampling as well as analysis of water bore cuttings on a regional scale.

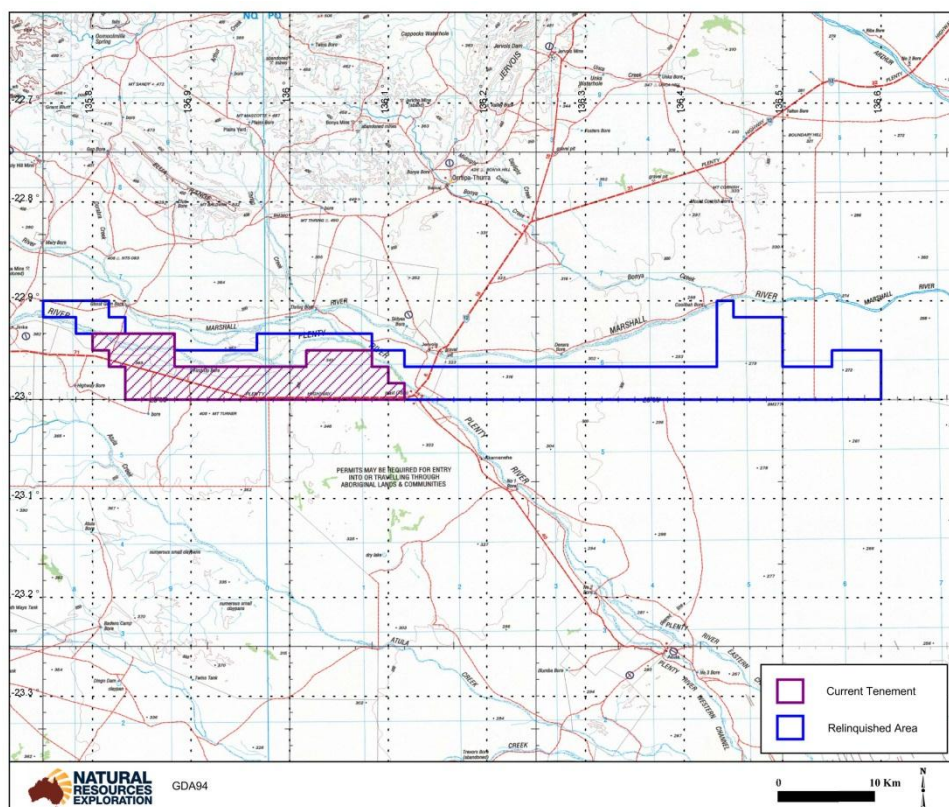
Currently, office-based exploration activities continue with results confirming the need for follow up work in relation to the remainder of the tenure and overall Jervois Project.



## 2. History

EL27897 was granted to NRE for six (6) years commencing on 11 August 2010, as the sole titleholder and operator. NRE has recently nominated to relinquish 99 sub-blocks with the remainder of the permit comprising 46 sub-blocks. **Figure 3** below identifies both the retained permit area and the relinquished permit area.

**Figure 3. Relinquished Area & Permit Area Map**



The relinquished Sub-blocks subject to this report are as listed in **Table 1** below.

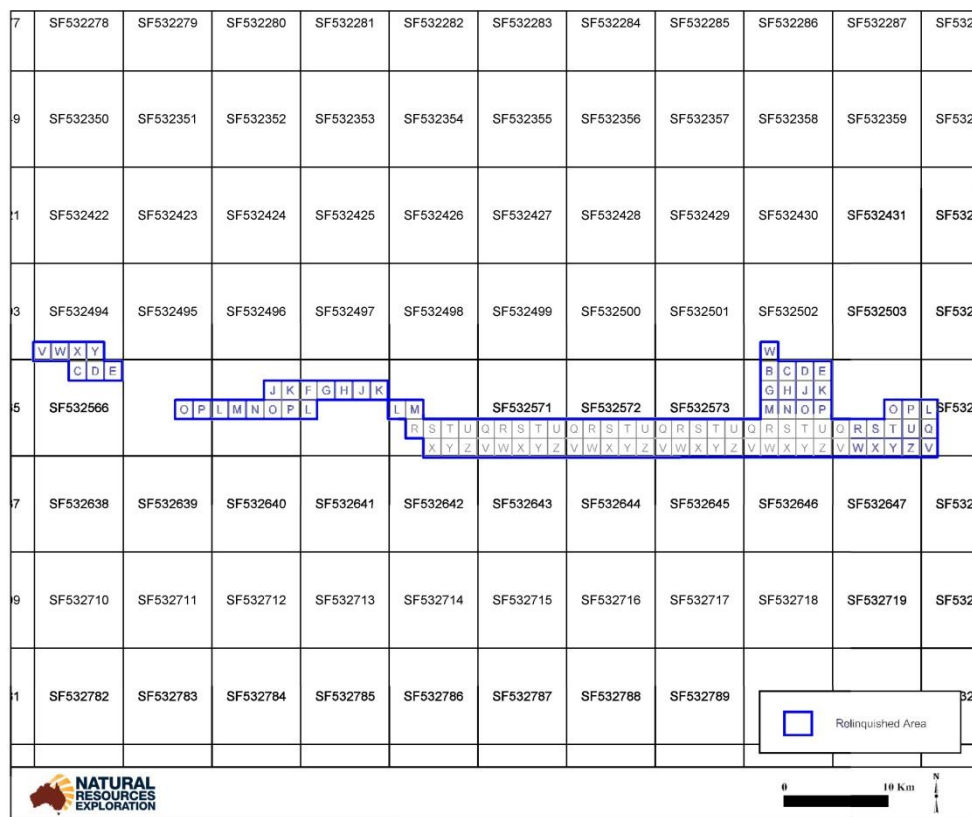
**Table 1. Relinquishment Area Sub-block Identification**

Block Identification	Sub-block(s)
2494	V,W,X,Y
2502	W
2566	C,D,E
2567	O,P
2568	J,K,L,M,N,O,P
2569	F,G,H,I,J,K,L
2570	L,M,R,S,T,U,X,Y
2571	Q,R,S,T,U,V,W,X,Y
2572	Q,R,S,T,U,V,W,X,Y

2573	Q,R,S,T,U,V,W,X,Y
2574	B,C,D,E,G,H,J,K,M,N,O,P,Q,R,S,T,U,V,W,X,Y
2575	O,P,Q,R,S,T,U,V,W,X,Y
2576	L,Q,V

**Figure 4** below illustrates the blocks and sub-blocks which have been nominated for relinquishment.

**Figure 4. Sub-block Map of Relinquished Area**



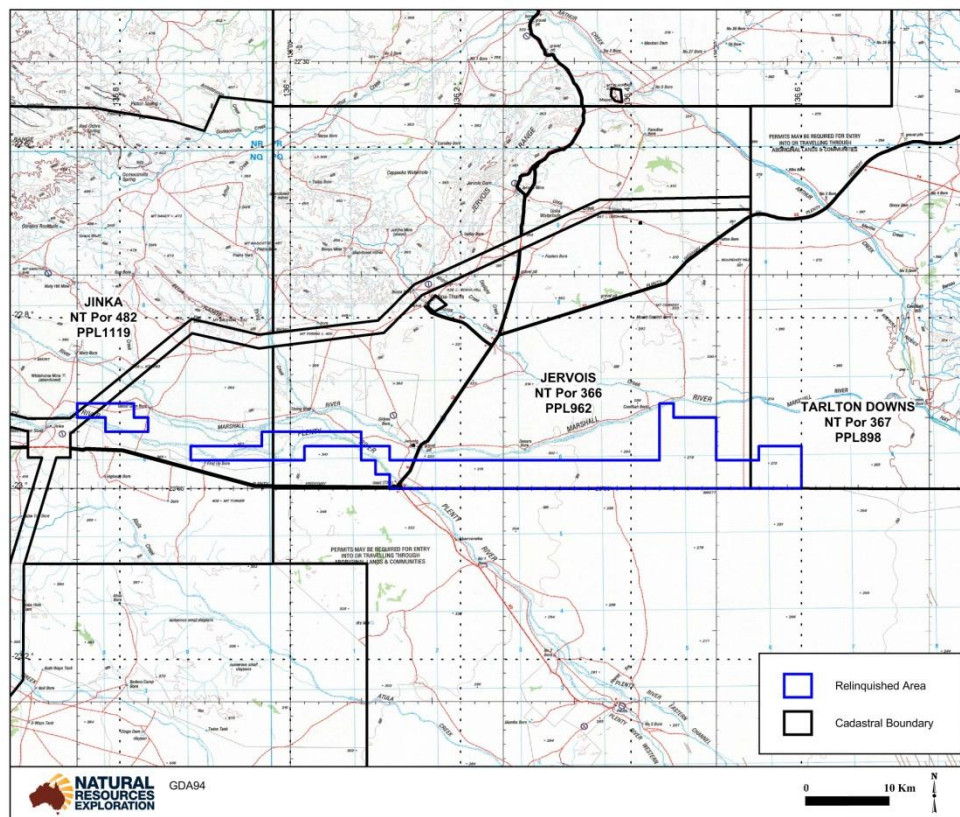
### Native Title

There are currently no Native Title Claims over the relinquished area.

### Pastoral Leases

Both the relinquished areas and retained permit area are located over surface lands that are comprised primarily of Perpetual Pastoral Leases (**Figure 5**).

**Figure 5. Cadastral Map of Relinquished Area**



### 3. Geology

#### 3.1 Regional Geology

The Jervois Project tenements are located entirely within the Palaeoproterozoic Aileron Province. There are two major geological provinces recognized in the area the Georgina Basin and the Arunta Block. The Georgina Basin is a mixture of sandstone and calcareous sedimentary rocks, which overlies granitic intrusions and metamorphics of the Arunta Block.

The Jervois Project area has fairly limited outcrop with the majority of the area covered by a mixture of Quaternary sand, sand dunes, sandy soil and Cenozoic regolith. The main outcrops found in this area are Paleoproterozoic Arunta Block migmatites and Proterozoic granitic intrusives of the Jervois Granite, Mount Teitkens and undifferentiated suites. Several units of these granites are commonly found intruding the Arunta Block migmatites.

The region near the Jervois mines contains significantly more outcrops and these outcrops are of Proterozoic Arunta Block Bonya Schist intruded by early Proterozoic undifferentiated S-type granitoids and the Atturtra Metagabbro. To the north west of the Jervois Mine area is the Jervois Ranges contains sandstones and siltstones of the Paleozoic Mopunga Group.

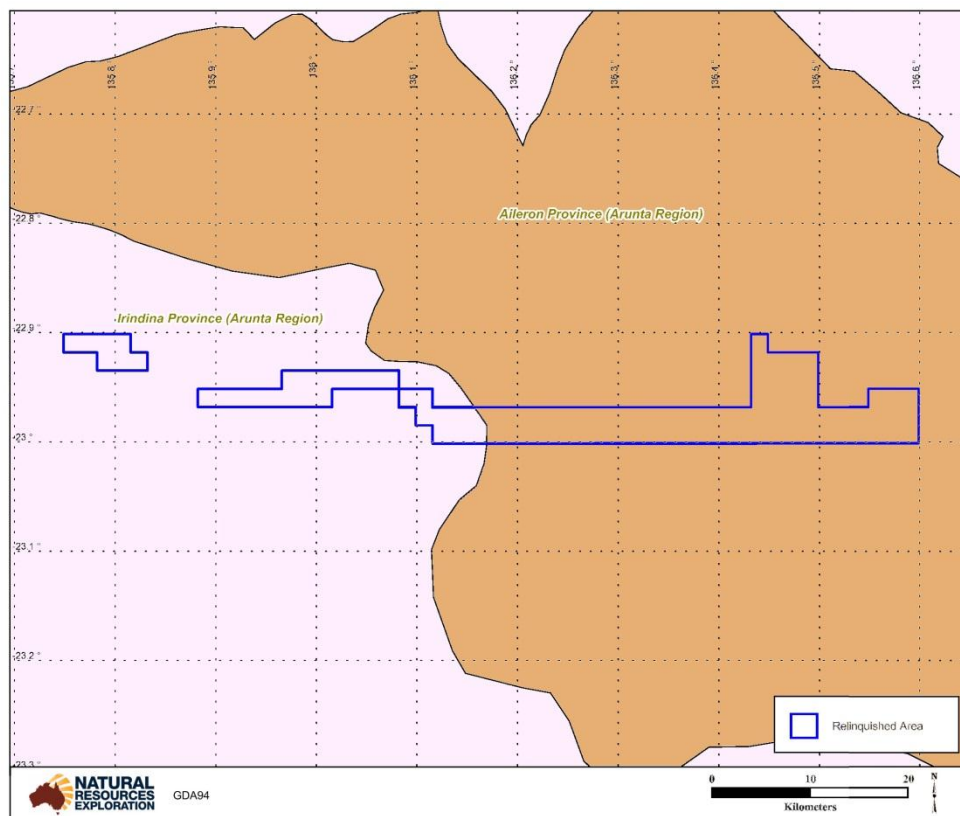


The majority of mineralisation and prospects in this region are found in the Jervois Mine area. Some 12 strike kilometres of sporadic mineralisation occurs in this area which represents the north eastern margin of the lower Proterozoic Arunta Block. Mineralisation in this area can be grouped into three types of stratabound mineralisation.

1. Stratiform Cu (chalcopyrite) in a quartz-magnetite-garnet-chlorite rock which though highly variable resembles banded iron formation in places
2. Stratabound Cu-Pb-Zn-Ag in calc-silicate rocks
3. Stratabound scheelite in calc-silicate rocks.

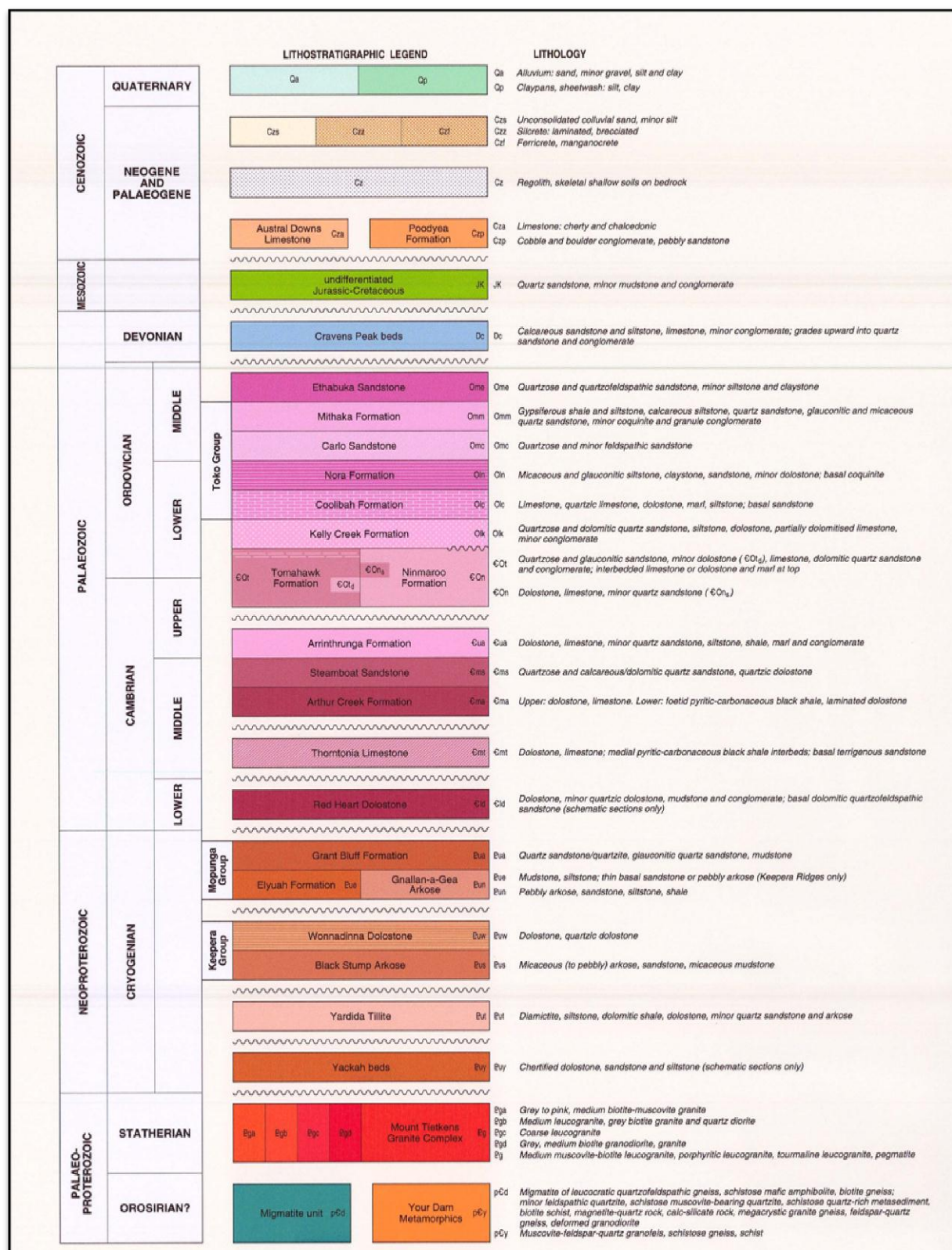
The regional geology is shown in **Figure 6** being the North Australia Proterozoic Units (after Rawlings et al 2008).

**Figure 6. Regional Geology Map of Relinquished Area**



The region also has potential for phosphates within the Georgina Basin sedimentary sequences but no phosphate prospects or deposits have been found in the parts of the Basin near the Jervois tenures. A general lithostratigraphic legend illustrating the rock relationships across part of the Tobermorey 1:250,000 geological map is shown in **Figure 7**.

Figure 7. Lithostratigraphic legend for rock units on Tobermorey 1:250K sheet.

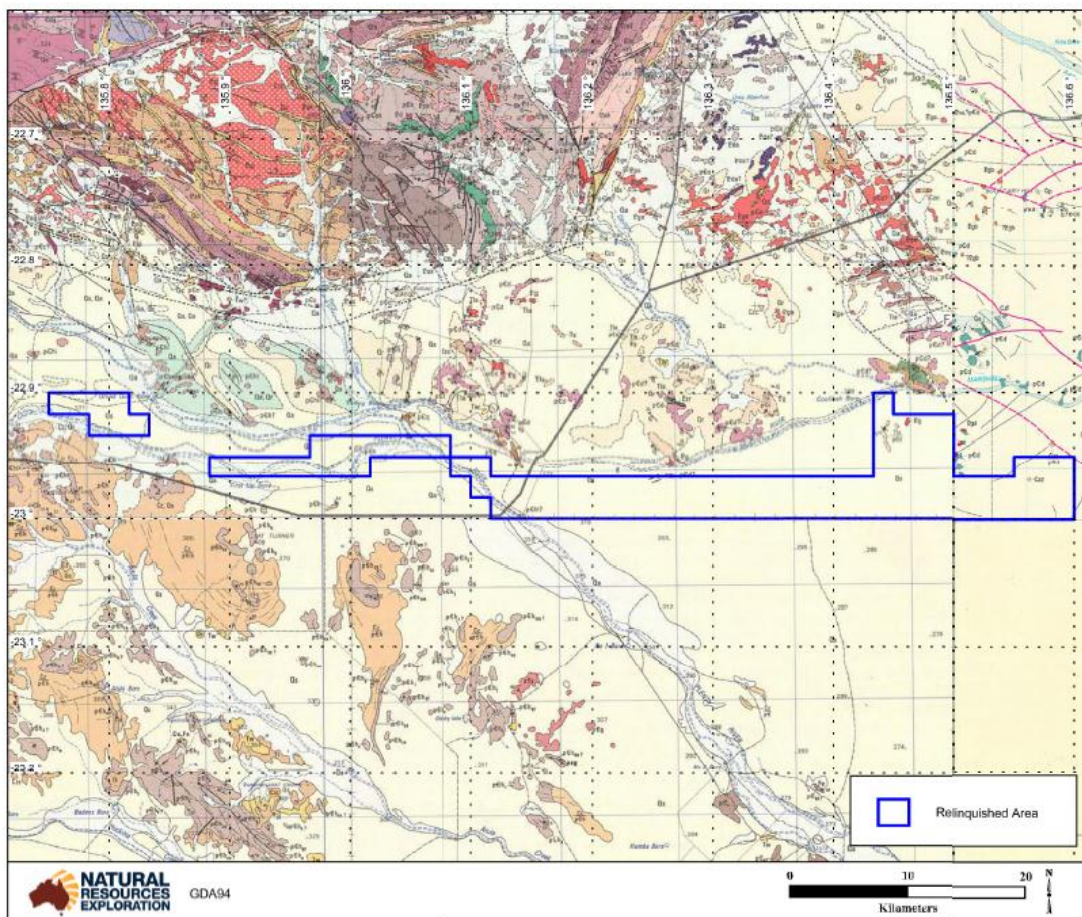




### 3.2 Permit Geology

The permit / local geology within the area subject of relinquishment is largely Quaternary cover consisting of sand, sand dune and sandy soil. There are several small outcrops of Early Tertiary deeply weathered rock overlying outcrops and subcrops of Early Proterozoic basement gneisses of the Harts range group. In the western part of the tenure there are minor outcrops of Paleoproterozoic leucocratic migmatite overlain by deeply weathered early Tertiary rock and one outcrop of undivided Proterozoic granites and leucogranites. There are no known mineralisation occurrences within this tenure. The permit geology is illustrated in **Figure 8** below.

**Figure 8. Permit Geology of the Relinquished Area**



## 4. Exploration Objectives and Rationale

NRE's exploration rationale and objectives for its Jervois Project considered the evaluation of base metal mineralisation. The Project was also considered for other targets such as uranium during the early phases of exploration. Investigations during the second term were

intended to locate any possible areas of outcropping mineralisation and any indicators of any subsurface mineralisation across the tenements.

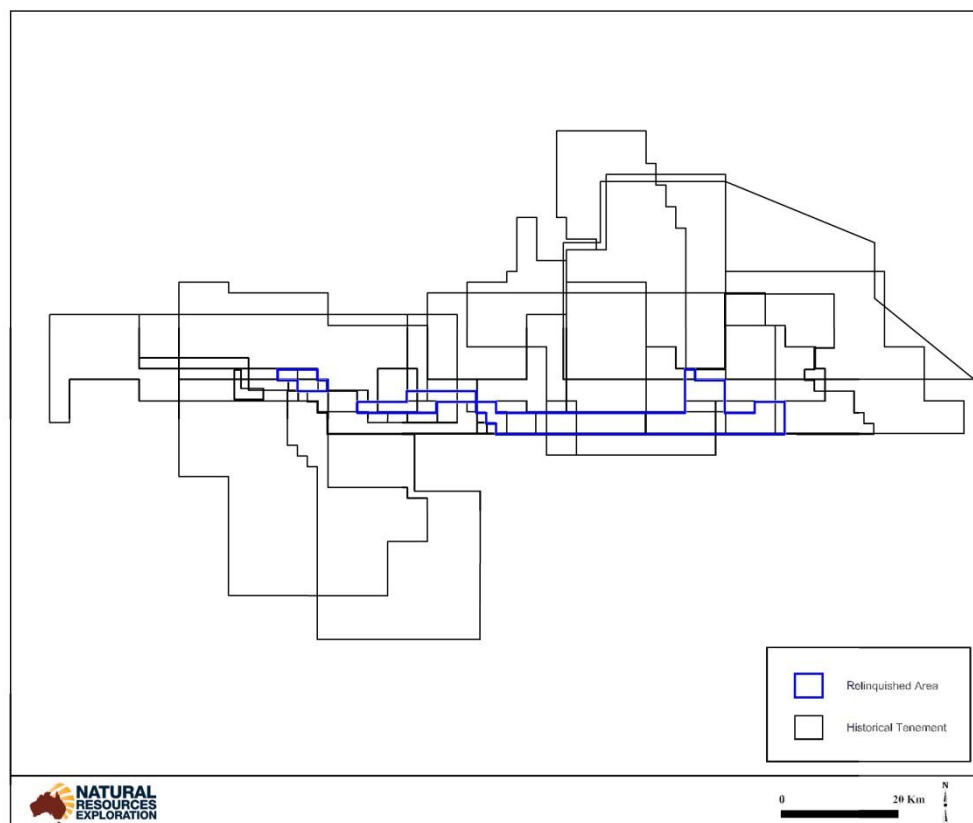
## 5. Exploration Activities carried out on the Relinquished Area

NRE's exploration activities during the term of the permit and in particular, of the relinquished area, consisted of both office-based and field activities. An initial regional assessment of the areas within NRE's Jervois Project for base metals was conducted during the initial term.

The targets areas were identified based on desktop research of regional geological and geophysical data, augmented with compilation and assessment of all previous exploration results. The aim of work has been to carry out a field assessment of the prospects in order to identify target characteristics and define the next phase of exploration.

An array of material was assessed prior to field work, to assist with optimal target generation. This material included an extensive review of historic exploration conducted over the relinquished area. There has been a number of previous exploration tenements over the subject relinquished area (**Figure 9** below).

**Figure 9. Historical Tenements over the Relinquished Area**





The Aileron Region has been explored for base metals, uranium, diamonds and rare-earth. There has been exploration for a variety of commodities across the Jervois ELs targeting mainly base metal mineralisation. A list of the previous exploration reports in relation to the relinquished area is shown in **Table 2** below.

**Table 2. Historical Reports**

Tenement	Period	Company Reports	Company
EL 25937	2007-2009	Not Listed	Not Listed
EL 6993	1990-1996	CR1992-0008,CR1993-0042,CR1993-0169,CR1994-0111,CR1995-0108,CR1995-0235,CR1996-0283	Poseidon Exploration
EL 7089	1991-1992	CR1992-0367,CR1993-0042,CR1993-0230	Poseidon Exploration
EL 7180	1990-1992	CR1992-0212	BHP Minerals
EL 7287	1991-1996	CR1992-0367,CR1993-0042,CR1993-0169,CR1994-0111,CR1994-0111,CR1995-0108,CR1995-0313,CR1996-0283	Poseidon Exploration
EL 7470	1991-1992	CR1992-0212	BHP Minerals
EL 8423	1993-1997	CR1995-0516,CR1996-0132,CR1997-0275,CR1998-0850,CR1998-0851	Chambigne Resources
EL 22515	2001-2007	CR2002-0339,CR2004-0058,CR2004-0731,CR2004-0732,CR2005-0589,CR2006-0114,CR2007-0009,CR2007-0289	White GeoServices
EL 9604	1996-1998	CR1998-0670	Ashcourt Corporation
EL 22788	2001-2002	CR2002-0338	White GeoServices
EL 740	1972-1974	CR1974-0174	Attutra Mining Company
EL 3012	1981-1987	CR1982-0381,CR1983-0173,CR1984-0203,CR1985-0167	Attutra Mining Company
EL 4677	1984-1990	CR1986-0028	BHP Minerals
EL 4018	1983-1988	CR1983-0296	CRA Exploration
EL 3317	1982-1988	CR1983-0173,CR1984-0202,CR1984-0203,CR1984-0204	Attutra Mining Company
AP 3161	1971-1975	CR1972-0016	Petrocarb Exploration

EL 1584	1977-1980	CR1978-0117,CR1979-0122,CR1980-0121,CR1980-0175,CR1980-0252	Otter Exploration
EL 1583	1977-1980	CR1978-0116,CR1979-0121,CR1980-0120,CR1980-0174,CR1980-0252	Otter Exploration
EL 2774	1982-1988	CR1984-0105,CR1985-0051,CR1986-0050	Petrocarb Exploration

NRE completed two (2) reconnaissance helicopter assisted field trips of the Jervois Project, one in August 2011 and the other in May 2012. NRE introduced themselves to local landholders, assessed a number of field targets across the tenement and carried out geological mapping of the project area. The field trips proved successful in evaluating the tenements in the most effective and timely manner possible.

Geological characteristics were recorded at each site and bulk surface samples were collected. Although no samples were collected from within the relinquished area itself, NRE based its conclusions on the results of samples collected within the retained area and the surrounding tenements within the region.

NRE also engaged Terra Search Pty. Ltd. to attend the Northern Territory's Alice Springs Core Facility to analyse a number of cuttings available from historically drilled water bores within its project areas. There were no water bores located within the relinquished area however NRE tested those water bores within the retained area and surrounding tenements in order to gain a better understanding of the region.

NRE lodged an Exploration Report with the Northern Territory Department of Resources' Geoscience Division on 12 September, 2011. This report was required in respect of the XRF and ALS Assaying of Water Bore Chips at the Alice Springs Core Facility. The Exploration Report was titled '*XRF & ALS Assaying of Water Bore Chips – Core Facility: Alice Springs*'.

## 6. Reports lodged during the reporting period

NRE lodged an Exploration Report with the Northern Territory Department of Resources' Geoscience Division on 12 September 2011. This report was required in respect of the XRF and ALS Assaying of Water Bore Chips at the Alice Springs Core Facility. The Exploration Report was titled '*XRF & ALS Assaying of Water Bore Chips – Core Facility: Alice Springs*'.

NRE also lodged its Year 2 Group Annual Technical Report with the Northern Territory Department of Resources on 9 October 2012, the report of which covered a number of tenures forming NRE's 'Jervois Project'.

## **7. Conclusions**

Natural Resources Exploration's exploration activities focused on delineating surface targets within the relinquished area with the aim of identifying any base metal mineralisation in the region.

NRE has conducted extensive office-based studies and field work during the second term of Exploration Licences forming part of its Jervois Project. NRE conducted an extensive review of all previous exploration within the Project area, completed two (2) helicopter reconnaissance assisted field trips, geological mapping of the area, sampling programs (soil and rock chip sampling) and analysis of water bores within the region.

In relation to the relinquished area, NRE has concluded that the potential for mineralisation within this area is much lower than the remaining tenement area. NRE has delineated this area and nominated same after its extensive review of all previous exploration data and its newly acquired data in relation to this ground.

## 8. Bibliography

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Note these (and many more) references are also located in the References section of the Huckitta and Tobermorey 1:250,000 geological map series explanatory notes.