



YEAR 1
ANNUAL REPORT
JERVOIS RANGE
(EL 28780)

Title Holder:	NATURAL RESOURCES EXPLORATION PTY. LTD.
Operator:	Natural Resources Exploration Pty. Ltd.
Tenement Manager:	Nicole Munro, Natural Resources Exploration Pty. Ltd.
Titles / Tenements:	EL(s): 28780
Project Names:	Jervois Range
Report Title:	Year 1 Annual Report – Jervois Range (EL 28780) 13/1/12 to 12/1/13
Type of Report:	Annual Report
Author(s):	N. Munro, P. Forder.
Company Ref:	NRE_NT2012: JERVOIS RANGE Year 1 Annual Report
Target Commodity / Commodities:	Phosphate and Base Metal Mineralisation
Date of Report:	26 February 2013
Contact Details:	

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

Contents

Summary	4
1. Introduction	5
2.1 Location and Access	6
2.2 Topography and Drainage	7
3. Geology	8
3.1 Regional Geology	8
3.2 Permit Geology	10
4. NRE's Exploration Activities during the Reporting Period	12
4.1 Exploration Studies	12
4.2 Water Bore Cuttings Analysis	14
4.3 Geological Evaluation & Helicopter Reconnaissance Programs	14
4.4 Rock Chip Sampling Program	15
5. NRE's Exploration Activities for next 12 month period	17
6. Reports lodged during the reporting period	17
7. Conclusions	17
8. Bibliography	19

Figures

Figure 1. Location and Access Map	6
Figure 2. Cadastral Map	7
Figure 3. Topography Map and Drainage Map	8
Figure 4. Regional Geology Map	10
Figure 5. Permit Geology Map	11
Figure 6. Historic tenements over the Jervois Range Project	13
Figure 7. Location of rock chip samples	16

Tables

Table 1. Tenement Details	5
Table 2. Stratigraphy	11
Table 3. Historic Tenements and Previous Companies' Exploration Reports	13
Table 4. Selected Assay Results from Rock Chip Samples	16

Appendices

Appendix 1	Selected Assay Results from Rock Chip Samples	20
------------	---	----

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) 28780 is to provide a summary of the activities carried out over the licence area in the past 12 months, including results produced by those activities.

During the first year of grant, Natural Resources Exploration ('NRE') has carried out a detailed geological assessment of Exploration Licence (EL) 28780, known to NRE as its 'Jervois Range' Prospect. To delineate prospective areas for phosphate and base metal mineralisation and define the next phase of exploration, NRE carried out extensive office-based studies including desktop reviews of all previous exploration across EL28780 and its surrounding tenements.

NRE also attended the Alice Springs Facility with a view to analysing water bore cuttings held at the library. NRE carried out both XRF and ALS Analysis of water bores located in the region.

NRE's activities during the first year of grant have been a great success and have defined targets for further exploration activities to be conducted during the second term.

1. Introduction

During the first year of grant, Natural Resources Exploration ('NRE') has carried out a detailed geological assessment of Exploration Licence (EL) 28780, known to NRE as its 'Jervois Range' Prospect.

EL 28780 was granted to NRE on 13 January 2012, consisting of a total of 9 sub-blocks. EL28780 overlies the Georgina Basin with the Aileron Province (Arunta Region) to the south. The Georgina basin is a large intracratonic basin which is Neoproterozoic to Palaeozoic and was initiated as part of the Centralian Superbasin. The Arunta Region includes the Aileron Province of Palaeoproterozoic age, the Warumpi Province of Palaeoproterozoic age and the Irindina Province of Neoproterozoic to Carboniferous age.

During the reporting period, NRE's exploration rationale and objectives for its Jervois Range Prospect considered the evaluation of potential phosphate and base metal 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.

NRE has conducted a full review of all previous exploration within the project area including review of previous exploration data from NTGS open file company reports, review of aeromagnetism, of radiometrics and gravity survey provided by NTGS and review of satellite imagery, ASTER imagery and Google Earth Imagery.

NRE's activities during the first year of grant have allowed for the delineation of targets for further exploration activities to be conducted during the second term of EL28780 in conjunction with its surrounding tenements.

2. Tenure

NRE's exploration licence (EL) 28780, is more commonly known by NRE as its 'Jervois Range Project'. EL 28780 was granted to NRE on 13 January 2012 for a term of 6 years.

The Jervois Range Prospect consists of 9 sub-blocks covering 29 square kilometres of land across the Jervois Range. **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	Term (Yrs)	Expiry Date
Jervois	Jervois Range	28780	9	29	Granted	13 Jan 12	6	12 Jan 18

Native Title

There are currently no Native Title Claims over the area.

Recorded Sites

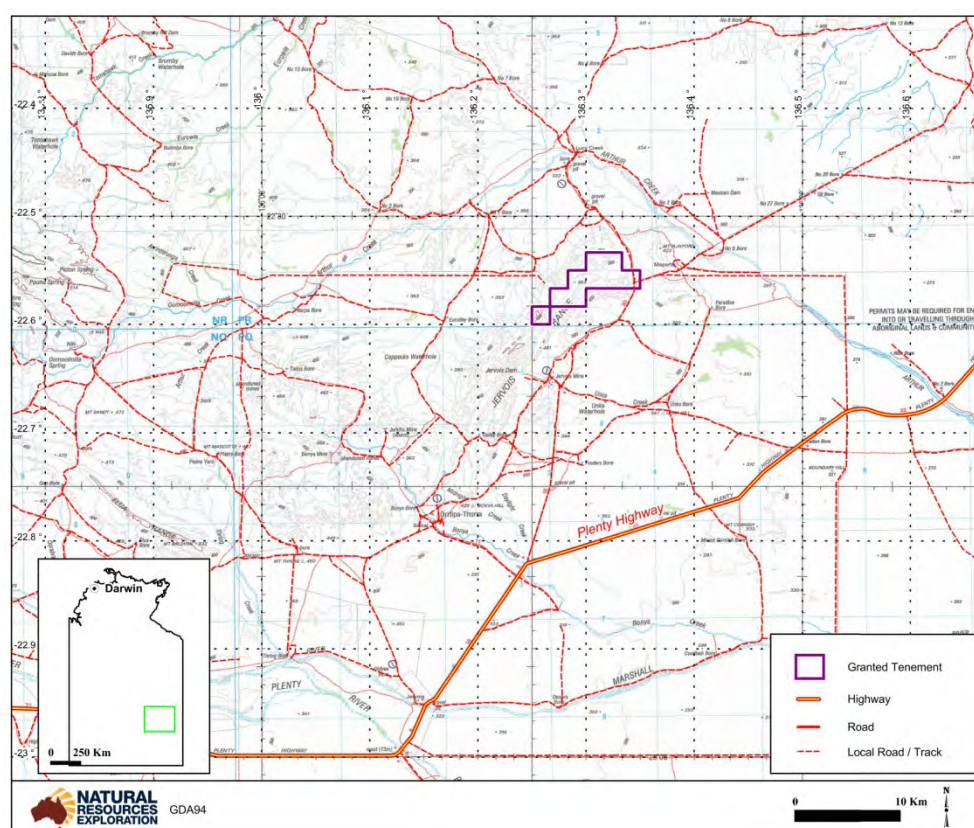
The Aboriginal Areas Protection Authority (AAPA) has not identified any recorded sacred sites or restricted work areas within the boundary of the EL.

2.1 Location and Access

Location & Access

Exploration Licence EL28780 is located approximately 300 kilometres north-west of Alice Springs. The location of the tenement is shown in **Figure 1** below. The Jervois Range Prospect is accessed via the Plenty Highway. Access to the tenement is also identified in **Figure 1**.

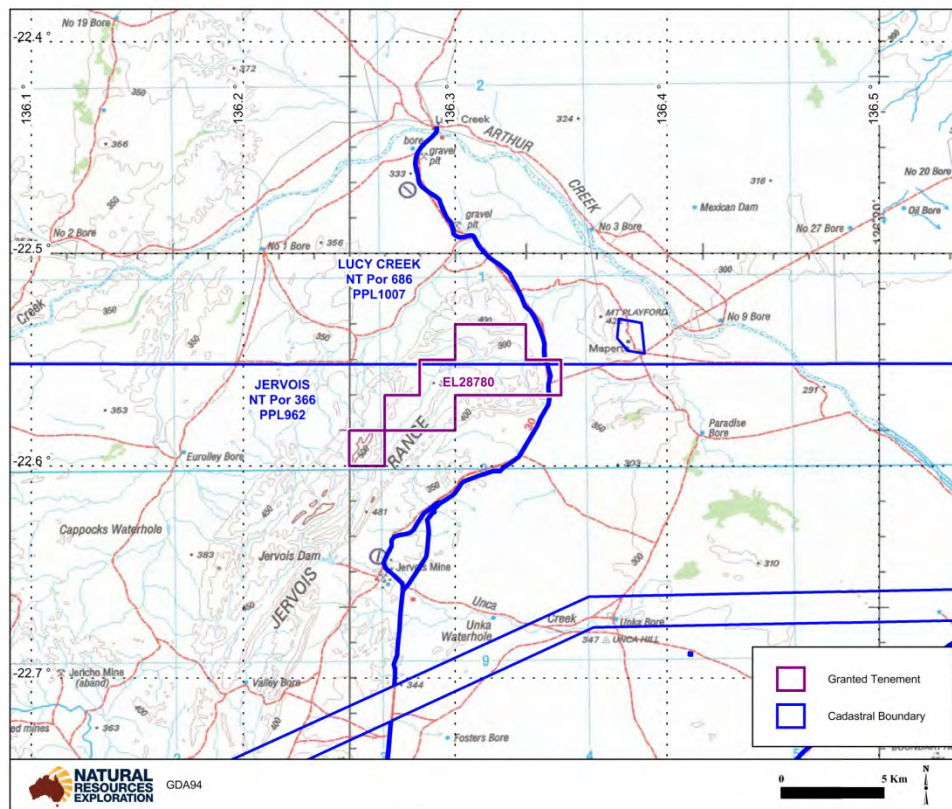
Figure 1. Location and Access Map



Pastoral Leases

NRE's Jervois Range Prospect overlies two (2) Pastoral Leases, namely 'Lucy Creek Station' NT Portion 686, Perpetual Pastoral Lease 1007 and 'Jervois Station' NT Portion 366, Perpetual Pastoral Lease 962. **Figure 2** shows these leases in relation to the Jervois Range Prospect area.

Figure 2. Cadastral Map



2.2 Topography and Drainage

Topography

The Jervois Range Prospect is much more elevated to the south west with readings of 500 metres. Further to the north east the tenement has an elevation of approximately 450 metres and in the northern most extent of the tenement the elevation is approximately 300 metres. The tenement also becomes less elevated towards the centre with the range on either side.

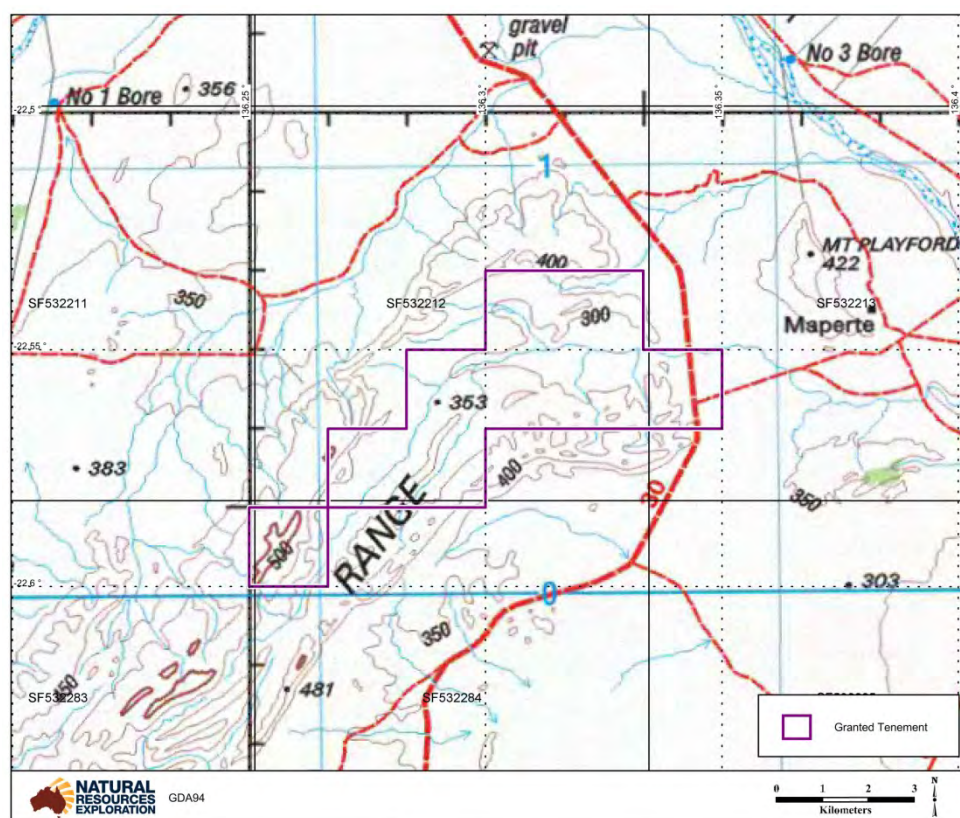
The topography map of the area is shown in **Figure 3**.

Drainage

The Jervois Range Prospect sits squarely on the Jervois Range and drains towards the middle of the tenement with the range on either side. A creek runs through the centre of the tenement and is fed by the runoff from the surrounding range.

Drainage of the area is also shown in **Figure 3**.

Figure 3. Topography Map and Drainage Map



3. Geology

3.1 Regional Geology

EL28780 overlies the Georgina Basin with the Aileron Province (Arunta Region) to the south (see **Figure 4**). The Georgina basin is a large intracratonic basin which is Neoproterozoic to Palaeozoic and was initiated as part of the Centralian Superbasin. It lies across the Queensland/Northern Territory border and occupies an area of approximately 325 000 km².

The Georgina Basin is aged between 850 Ma to 355 Ma and overlies the Aileron Province, Tennant Region, Murphy Inlier, McArthur and South Nicholson Basins and Lawn Hill Platform. The basin deepens towards the south along the margin with the Arunta Region and can be up 3.7 km thick.

The basin consists of mainly Cambrian to middle Ordovician marine sedimentary rocks. The Cambrian to early Ordovician rocks are essentially marine carbonate rocks with minor sandstone and siltstone. The middle Ordovician rocks are dominated by siltstone and sandstone. The early Palaeozoic Georgina Basin succession underlies the Silurian to Devonian freshwater sandstone and Permian boulder beds.

Deposits have been found of sedimentary phosphate including the Wonarah phosphate deposit. Several lead-zinc occurrences have also been located along the southern margin and oil is found throughout the basin. This basin is considered a major exploration target for sedimentary phosphate and there is also exploration for base metals, diamonds, manganese, oil and gas.

The Arunta Region includes the Aileron Province of Palaeoproterozoic age, the Warumpi Province of Palaeoproterozoic age and the Irindina Province of Neoproterozoic to Carboniferous age. The Aileron Province can be divided into two sequences: the Strangways Metamorphic Complex and the younger Oonagalabi Assemblage. The Irindina Province consists of the Harts Range Group.

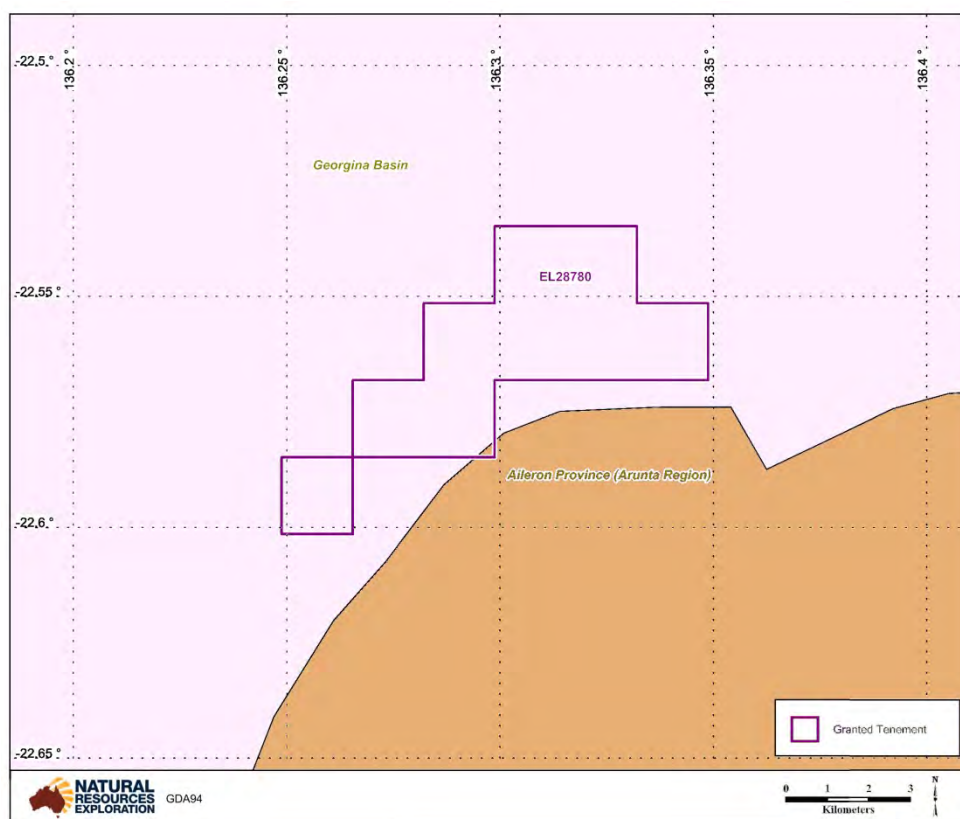
The Strangways metamorphic complex can be split into three groups: the Lander Package, the Ongeva Package and the Cadney Package. The Lander package is aged between 1865 Ma and 1820 Ma and consists of: tubiditic pelites and psammites. The Ongeva Package is aged between 1810 Ma and 1790 Ma and consists of: metapelitic and metapsammitic rocks with subordinate calc-silicate, marble and felsic and mafic orthogneiss. The Cadney Package is aged between 1780 Ma and 1730 Ma and consists of: marbles and calc-silicates.

The Oonagalabi Assemblage contains one sequence called the Ledan Package. The Ledan package is aged between 1770 and 1730 Ma and includes pelitic and psammitic metasediments that unconformably overlie the Strangways Metamorphic Complex.

The Warumpi Province can be split into three groups: the Madderns Package, the Yaya Package and the Iwupataka Package. The Madderns Package is aged between 1690 to 1670 Ma and includes K calc-alkaline felsic magmatism. The Yaya Metamorphic Complex is aged between 1660 and 1640 Ma and contains mudstones, sandstone, calc-arenites and mafic extrusives/intrusives. The Iwuputaka Metamorphic Complex is aged between 1630 and 1610 Ma and contains schist and amphibolite.

Finally, the Irindina Province consists of the Harts Range Group. The Harts Range Group is aged between 850 Ma and 500 Ma and contains a complex assemblage of granite gneiss, marble, calc-silicate, amphibolite, psammites and pelites which has gone under metamorphism.

Figure 4. Regional Geology Map



3.2 Permit Geology

According to the Huckitta 1:250 K Mapsheets, the permit geology of EL28780 consists of the following outcropping rock units:

Unconsolidated Sediments

Colluvium and scree, soil: silty or sandy, alluvial and Aeolian.

Errara Formation

The Errara Formation is an early Cambrian formation and contains Dolostone, silty to clean, laminated to thick-bedded, fossiliferous, quartz siltstone to pebble conglomerate in the east.

Mount Baldwin Formation

The Mount Baldwin Formation is aged between the Ediacaran and the early Cambrian and contains medium to coarse grained quart arenite.

Elyuah Formation

The Elyuah Formation is also Ediacaran age and contains: mudstone, sandstone, thin basal sandstone or pebbly arkose.

Grant Bluff Formation

The Grant Bluff Formation considered of Ediacaran age and comprises: quartz sandstone/quartzite, glauconitic quartz sandstone and mudstone.

Elkera Formation

The Elkera Formation is aged between 600 and 544 Ma and comprises: siltstone to sandstone, micaceous, laminated to thin-bedded, blue-grey to dusky red; dolostone horizons, some stromatolitic.

Figure 5 shows the permit geology within EL28780.

Figure 5. Permit Geology Map

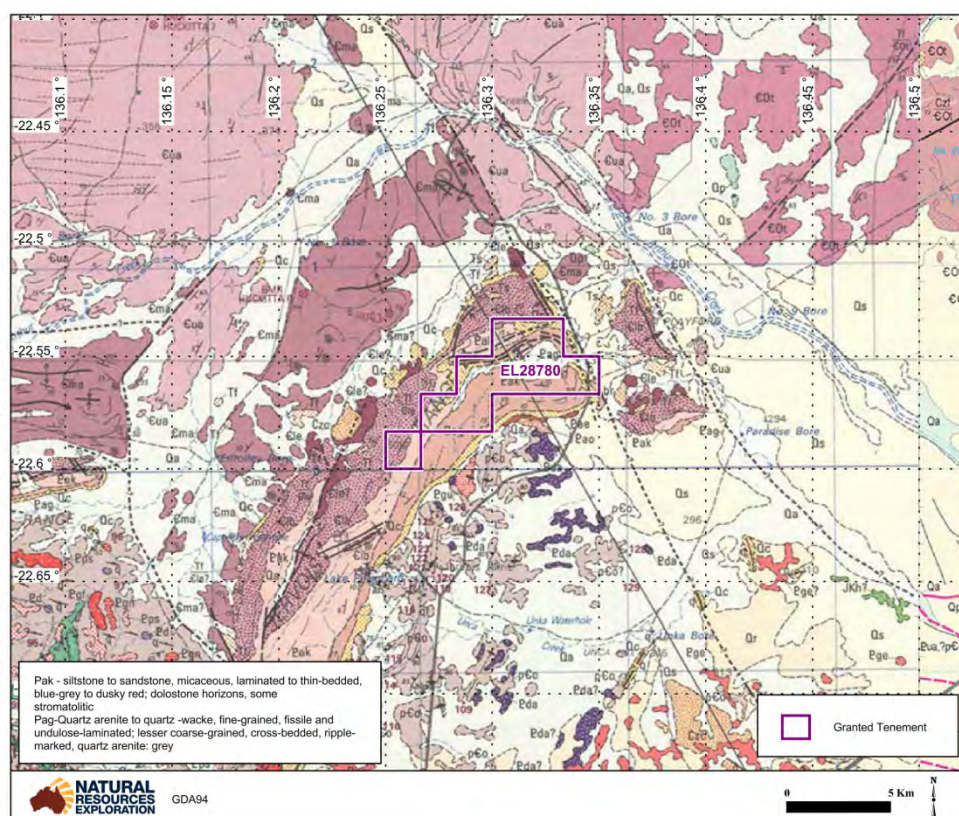


Table 2. Stratigraphy

Era	Period	Unit
Cenozoic	Quaternary	Unconsolidated Sediments
Palaeozoic	Cambrian	Errara Formation
		Mount Baldwin Formation
Precambrian	Ediacaran	Elyuah Formation
		Grant Bluff Formation
		Elkera Formation

4. NRE's Exploration Activities during the Reporting Period

NRE has carried out a detailed geological assessment of EL28780 during the first year of grant. NRE has also commenced active field work within the EL area. To delineate prospective areas for phosphate and base metal mineralisation and define the next phase of exploration, NRE carried out extensive office-based studies including desktop reviews of all previous exploration across EL28780 and its surrounding tenements.

NRE also attended the Alice Springs Core Facility for the purpose of conducting XRF and ALS Analysis of cuttings from previously drilled water bores in the region in order to gain a better understanding of the region. Following NRE's desktop studies, a reconnaissance helicopter assisted field trip of EL28780 was carried out. During this reconnaissance, rock chip samples were taken.

4.1 Exploration Studies

NRE has conducted an extensive review of historic exploration over its Jervois Range Prospect. 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.

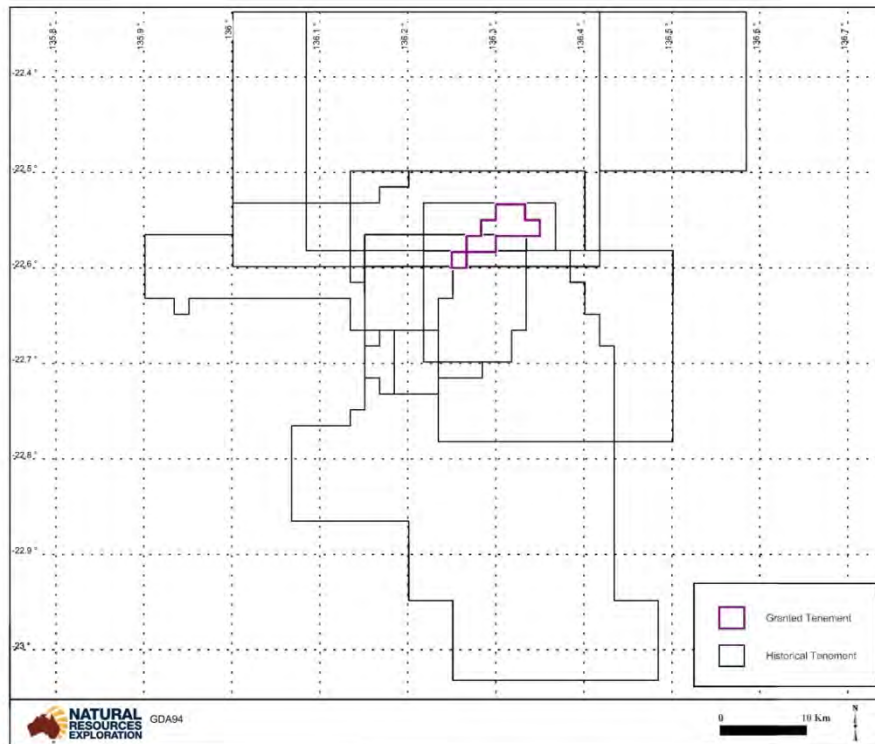
NRE also conducted an extensive review of historic exploration over its Jervois Range Prospect.

The review of the historical exploration discovered that most exploration companies have explored for base metal mineralisation in the area. Otter exploration conducted some geological reconnaissance and airborne geophysical surveys in the late 1970's to early 1980's. Poseidon Exploration explored this area quite extensively in the 1990's. They conducted airbourne electro-magnetic and magnetic surveys in the area. Lag sampling, stream sampling and mapping were also conducted. CRA Exploration acquired and processed radiometric and TM imagery and collected 42 rock chip samples. They also conducted geological mapping and some exploration drilling in the area.

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

Table 3. Historic Tenements and Previous Companies' Exploration Reports

Tenement	Period	Company Reports	Company
EL 6993	1990-1996	CR1992-0008,CR1993-0042,CR1993-0169,CR1994-0111,CR1995-0108,CR1995-0235,CR1996-0283	Poseidon Exploration
EL 8116	1993-1994	CR1994-0588	CRA Exploration
EL 3165	1982-1983	CR1984-0018	Plenty River Mining Company
EL 5149	1987-1988	CR1988-0104	Saracen Minerals
EL 3301	1982-1988	Not Listed	Not Listed
EL 1118	1976-1978	CR1977-0064,CR1977-0147	Dampier Mining
EL 1585	1977-1981	CR1978-0118,CR1979-0123,CR1980-0124,CR1980-0252,CR1982-0299	Otter Exploration
EL 128	1972-1973	CR1974-0103	Petrocarb Exploration
EL 6993	1990-1996	CR1992-0008,CR1993-0042,CR1993-0169,CR1994-0111,CR1995-0108,CR1995-0235,CR1996-0283	Poseidon Exploration
EL 8116	1993-1994	CR1994-0588	CRA Exploration
EL 3165	1982-1983	CR1984-0018	Plenty River Mining Company
EL 5149	1987-1988	CR1988-0104	Saracen Minerals
EL 3301	1982-1988	Not Listed	Not Listed
EL 1118	1976-1978	CR1977-0064,CR1977-0147	Dampier Mining
EL 1585	1977-1981	CR1978-0118,CR1979-0123,CR1980-0124,CR1980-0252,CR1982-0299	Otter Exploration
EL 128	1972-1973	CR1974-0103	Petrocarb Exploration

Figure 6. Historic tenements over the Jervois Range Project

4.2 Water Bore Cuttings Analysis

NRE engaged Terra Search Pty. Ltd. (referred to as NRE's geologists) to attend the Northern Territory's Alice Springs Core Facility to analyse a number of cuttings available from historically drilled water bores around the Jervois Range Prospect.

Although, there were no water bores located within the licence area itself. NRE analysed core cuttings from historically drilled water boards around the Jervois Range in an attempt to obtain a better understanding of the geology of the region and that within Jervois Range.

The Department kindly allowed NRE to set-up in the Alice Springs Core Facility where NRE's geologists undertook analysis of the water bore cuttings using a hand-held XRF device. Although no water bores were within EL28780, NRE was able to test a number of water bore cuttings from water bores in 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*'.

4.3 Geological Evaluation & Helicopter Reconnaissance Programs

NRE engaged Terra Search Pty. Ltd. to conduct a reconnaissance helicopter assisted field trip of EL28780 and its surrounding tenures. Local landholders were visited, a number of field targets across the area were assessed and geological mapping was carried out. The field trip proved successful in evaluating the tenements in the most effective and timely manner possible.

Field targets that required ground truthing or evaluation were identified based on desktop research of regional geological and geophysical data, augmented with compilation and assessment of all previous exploration reports. An array of material was assessed prior to field work to assist with optimal target generation, this included:

- Data from all previous exploration as documented in open file reports retrieved from the Northern Territory Government. This includes:
 - o Surface geochemical sampling;
 - o Geochemical anomalism mapping;
 - o Geological Mapping;
 - o Detailed geophysical survey data;
 - o Geophysical anomalism mapping;
 - o Drilling results; and

- o Local and regional geological assessments and conclusions derived from exploration programmes.
- Water bore data available for all bores drilled in the region. This data includes geological logging and water assaying.
- Geological maps provided by the Northern Territory government.
- Aeromagnetics, aero-radiometrics and gravity surveys provided by the Northern Territory government.
- Satellite imagery, ASTER and Google Earth imagery.
- Data supplied by landowners in relation to geological and topographic features of interest on their properties.

Assessment of the field targets involved an initial low fly over before determining whether a landing was viable for each target site. Assessment at each site involved a variety of the following tasks:

- Geological and structural note taking and measurements
- Radiometric measurements
- Collection of soils and rock chips
- Observations of outcrop boundaries where relevant
- Botanical and physiographic appraisal
- Photography of the features of interest at each site.

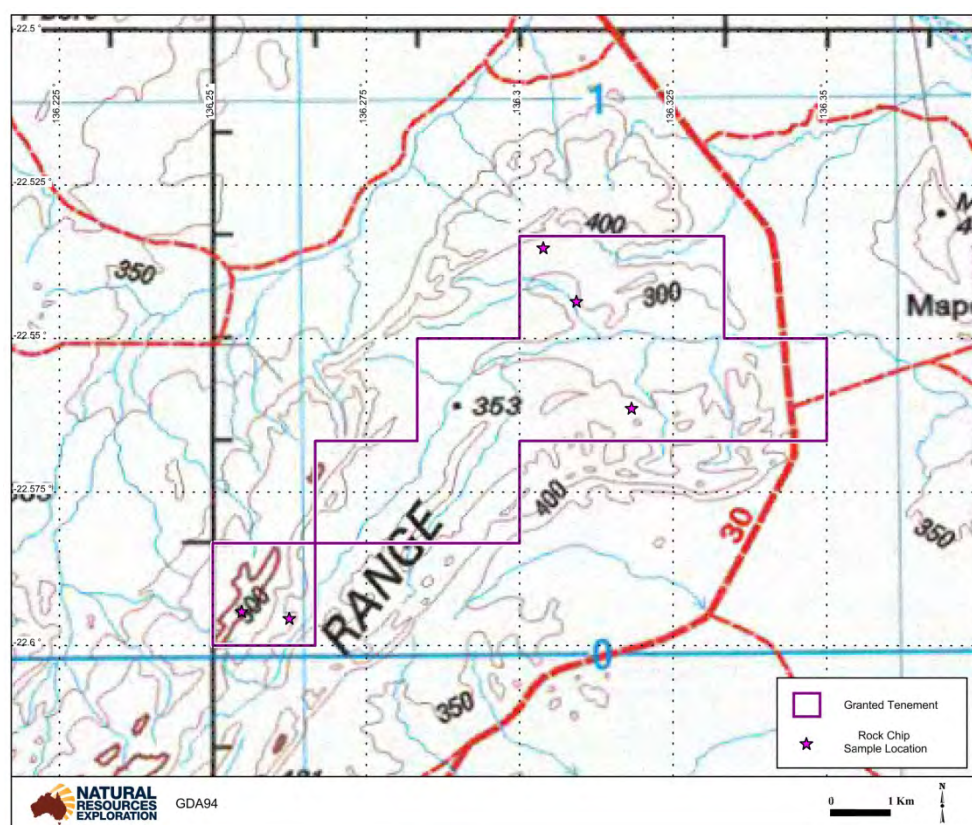
Detailed geological characteristics were recorded at each site and rock chip and bulk surface samples were collected. The helicopter assisted field trip was successful in evaluating the area in the most effective and timely manner possible.

4.4 Rock Chip Sampling Program

To ensure follow up work is carried out with optimal effectiveness, NRE's geologists confirmed regional geological mapping during the helicopter reconnaissance and collected samples. Observations at all target sites were made to detail the settings of each of those areas. The Jervois Range Prospect was assessed for phosphate and base metal potential. Six (6) targets were identified from a range of datasets including ASTER imagery, radiometrics, magnetics and gravity data.

Five (5) rock chip samples were collected within EL28780. The location of these samples is shown in **Figure 7** below.

Figure 7. Location of rock chip samples



The Jervois Range was assessed for phosphate and base metal mineralisation during the helicopter reconnaissance. Examination of the most obvious radiometric features failed to locate any areas of potential phosphate mineralisation that bore any resemblance to the nearby Lucy Creek phosphate prospect. Helicopter assisted reconnaissance over Jervois Range provided a very efficient appraisal of the area in one day. Although the results were not particularly encouraging for phosphate, NRE intends to conduct further reconnaissance exploration in the second term to identify any other areas with phosphate potential.

Table 4 provides information on the rock chip samples collected. Full assay results are provided in **Appendix 1**.

Table 4. Selected Assay Results from Rock Chip Samples

Sample	Au ppm	Ag ppm	Cu ppm	Fe %	Mg ppm	Mn ppm	Ni ppm	P ppm	Pb ppm	U ppm	Zn ppm
3014421	0.01	-0.2	29	22.4	1000	207	91	2940	13	-10	306
3014422	0.01	0.2	15	5.99	700	85	10	110	51	-10	23
3014423	0.01	0.2	25	17.4	1900	3080	53	260	14	-10	281
3014424	0.03	-0.2	7	1.99	109000	939	8	270	2	-10	27
3014425	0.01	0.2	11	4.21	600	100	5	130	10	-10	8

Although results were not particularly encouraging for phosphate, two areas of interest were seen:

- Geological Observation 201205JV013 located siliceous limonitic ironstone (sample 3014428); however no metals were detected by portable XRF or from laboratory assay. Possibly after carbonate rock or possibly ultramafic rock.
- Examination of massive quartz infilled fault structures in the south of the tenements located strongly altered leached zones which indicate strong fluid movement. No obvious mineralisation detected. Gold results were negative.

5. NRE's Exploration Activities for next 12 month period

The objective of NRE's exploration activities over the next 12 month period in relation to the Jervois Range Prospect is to identify any possible sub-surface mineralisation over the area and define targets within the EL.

The helicopter assisted reconnaissance over the EL provided an efficient appraisal of the area. NRE now intends to conduct further reconnaissance exploration to identify any other areas with phosphate potential. Geological mapping for any further targets will also be undertaken within EL28780 and its surrounding tenures.

NRE also foresees that additional rock chip and soil sampling will be carried out to allow for effective delineation of targets within the Jervois Range Prospect.

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

7. Conclusions

Natural Resources Exploration's exploration activities during the first term of its Jervois Range Prospect have been focused on delineating targets.

NRE has conducted a full review of all previous exploration within the project area including review of previous exploration data from NTGS open file company reports, review of aeromagnetism, of radiometrics and gravity survey provided by NTGS and review of satellite imagery, ASTER imagery and Google Earth Imagery.

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 in the region. Investigations were intended to locate any outcropping of mineralisation and any indicators of any sub-surface mineralisation within the tenement based on desktop reviews. Following NRE's desktop studies, a reconnaissance helicopter assisted field trip of EL28780 was carried out.

As a result of its first year activities, NRE has been able to assess the mineral potential within the tenement and is now in the process of developing programs to further define targets.

NRE is looking forward to commencing its exploration activities on EL 28780 in the second term, in conjunction with its surrounding tenements.

8. Bibliography

Ambrose G, 2006. Northern Territory of Australia, onshore hydrocarbon potential, 2006. Northern Territory Geological Survey, Record 2006-003.

Dunster JN, Kruse PD, Duffett ML and Ambrose GJ. Geology and resource potential of the southern Georgina Basin. Northern Territory Geological Survey, Digital Information Package DIP 007.

Dunster J.N., Kruse, P.D., Duffett, M.L. and Ambrose, G.J., 2007. Geology and resource potential of the southern Georgina Basin: Northern Territory Geological Survey, Digital Information Package DIP 007.

Freeman, M.J., Shergold, J.H., Morris, D.G. and Walter, M.R., 1990. Late Proterozoic and Palaeozoic basins of Central and northern Australia – regional geology and mineralization.

Munson TJ and Ambrose GJ (editors), 2007. *'Proceedings of the Central Australian Basins Symposium (CABS), Alice Springs, Northern Territory, 16-18 August, 2005.'* Northern Territory Geological Survey, Special Publication 2

Questa, 1994. Georgina Basin. Northern Territory Geological Survey Petroleum Basin Study.

Smith, K.G., 1972, Stratigraphy of the Georgina Basin., Bureau of Mineral Resources, Australia. Bulletin, 111,

Shergold, J.H., Druce, E.C., 1980, Upper Proterozoic and Lower Palaeozoic rocks of the Georgina Basin. IN Henderson R.A. & Stephenson P.J.(Eds) - The geology and geophysics of northeastern Australia., Geological Society of Australia. Queensland Division, 1v, p149-174.

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.

Appendix 1

Selected Assay Results from Rock Chip Samples