



ELLIOTT PROJECT

NORTHERN TERRITORY

TENEMENT EL27189

PARTIAL SURRENDER REPORT

FOR THE PERIOD 26 OCTOBER 2009 – 25 OCTOBER 2011

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Executive Summary

Exploration Licence 27189 is part of the Elliott Project (ELs 27186, 27187, 27189, 27190, 27544). To meet end of Year 2 50% reduction requirement, a total of 161 blocks was relinquished from EL27189, leaving the current retained area of 161 blocks. This Partial Surrender Report is for the period 26 October 2009 to 25 October 2011. The Elliott Project, located approximately 6km west of the historic town of Newcastle Waters and 13km west of Elliott, is a sub-project of Vale's Georgina Phosphate Exploration Project and covers Cambrian sedimentary rocks of the Wiso Basin. On the southern margin of the basin, the Cambrian rocks overly strata of the Arunta Block, whilst to the west they unconformably overly basement composed of Early Proterozoic rocks. The project area is flat lying with outcrop interpreted to be Middle Cambrian. Phosphate exploration work on EL 27189 comprised open file literature review; acquisition and reprocessing of geophysical data; acquisition of NRETAS environmental data; regional water bore analysis; flora and fauna desktop study report; in-house depth to basement gravity modelling; regional geophysical basin modelling study by Mira Geoscience; rock chip sampling; and gravity survey. The surrendered area was relinquished due to a lack of priority phosphate targets.

1 Introduction

1.1 Location and Access

Tenement EL27189 is part of the Elliott Project, which is located approximately 6 km west of the historic town of Newcastle Waters and 13 km west of Elliott ([Figure 1](#)). Mapping and drilling covered only the south-eastern part of the Elliott Project (tenements - EL27187, EL27189 and EL27190 known as Lakewoods). The project area can be accessed via the Stuart Highway, north of Tennant Creek, thence via station tracks to the south and north of Lake Woods.

The Elliott Project consists of contiguous tenements located on the Beetaloo SE53-06, Helen Springs SE53-10, Newcastle Waters SE53-05 and South Lakewood SE53-00 1:250,000 and Elliott 5662, Helen 5561, Kekwick 5561, Lakewood 5562, Murrnji 5463 and Newcastle Waters 5563 1:100,000 map sheets straddling parts of Murrnji (PPL1074), Newcastle Waters (PPL 947), Powell Creek (PPL948), and Hayfield (PPL1135) stations. EL27189 falls within the Newcastle Waters and South Lakewood 1:250,000 map sheets and the Lakewood and Kekwick 1:100,000 map sheets.

1.2 Tenement Details

The Elliott Project comprises granted ELs 27186, 27187, 27189, 27190, 27544, and EL application 27543. The tenements are held by Vale Australia EA Pty Ltd and operated by Vale Exploration Pty Ltd. End of Year 2 50% reductions were lodged for ELs 27186, 27187 and 27189. An application to waive the Year 2 50% reduction for EL27190 was approved by the Department.

EL 27188, previously part of the Elliott Project, was surrendered in full effective 12 September 2011.

[Table 1](#) summarises the number of blocks relinquished and retained. [Figure 2](#) shows the relinquished area for EL27187.

Table 1: Elliott Project Tenement Details

<i>Tenement Number</i>	<i>Holder</i>	<i>Blocks Relinquished</i>	<i>Date Relinquished</i>	<i>Blocks Retained</i>	<i>Grant Date</i>	<i>Expiry</i>
EL27186	Vale Australia EA Pty Ltd	251	25/10/2011	249	26/10/2009	25/10/2015
EL27187	Vale Australia EA Pty Ltd	202	22/10/2011	202	23/10/2009	22/10/2015
EL27189	Vale Australia EA Pty Ltd	161	25/10/2009	161	26/10/2009	25/10/2015
EL27190	Vale Australia EA Pty Ltd	reduction waived		315	26/10/2009	25/10/2015
EL27544	Vale Australia EA Pty Ltd	-	-	313	04/03/2010	03/03/2016

Exclusions (from EL27544) include all land vested in the Commonwealth, all radio telecommunication repeater sites and Reservation from Occupation 24350 NT Portions 5027 and 5026.¹ The gas pipeline transects EL27187 and EL27190. The area covered by EL27187 was reduced by Vale prior to grant to exclude the Longreach Waterhole Protected Area (which is just outside of and abuts the east of EL27187) from the tenement.

¹ From EL27544 Licence Document

Figure 1: Elliott Project (Post 2011 Relinquishment) Location Plan

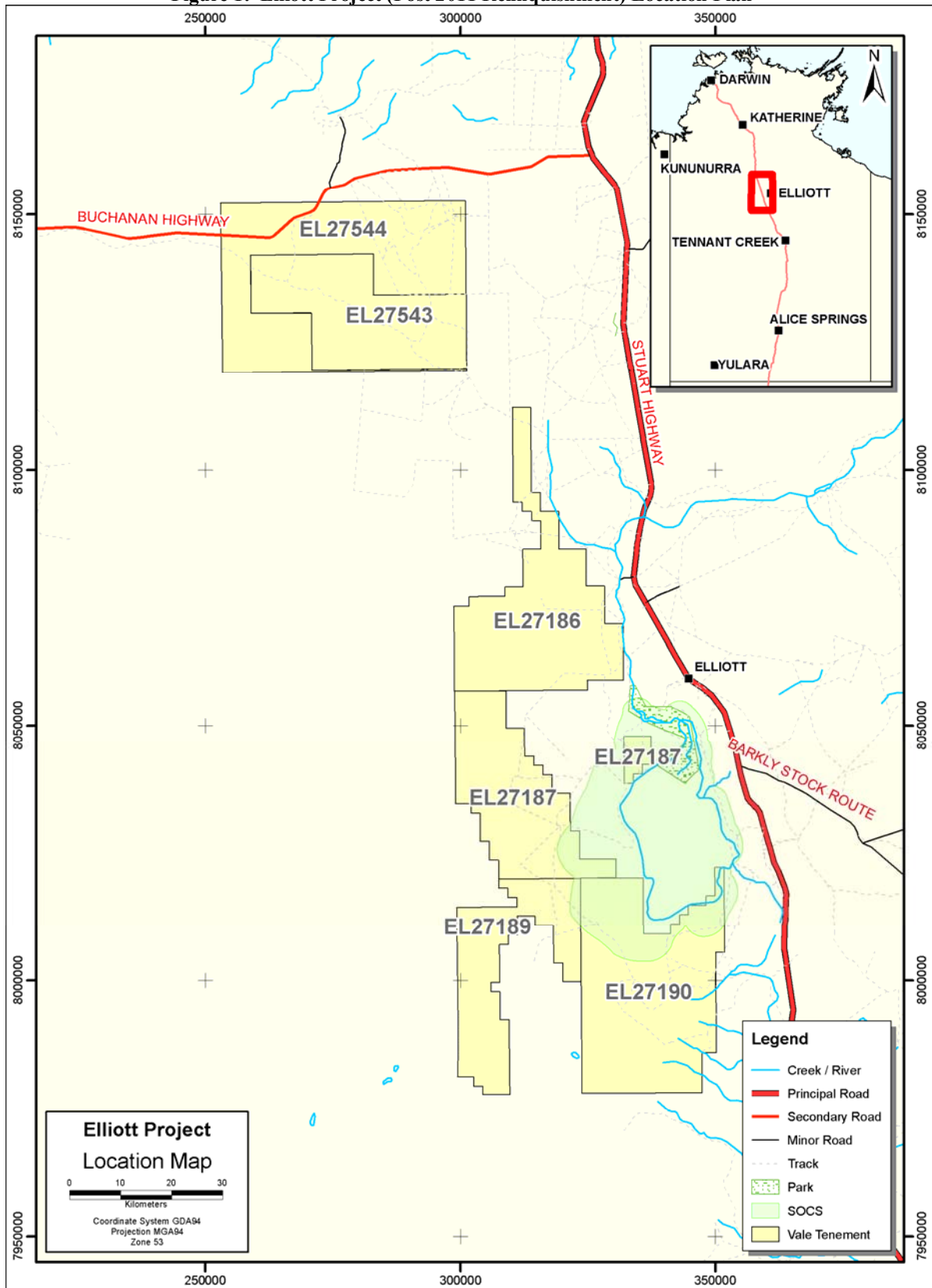
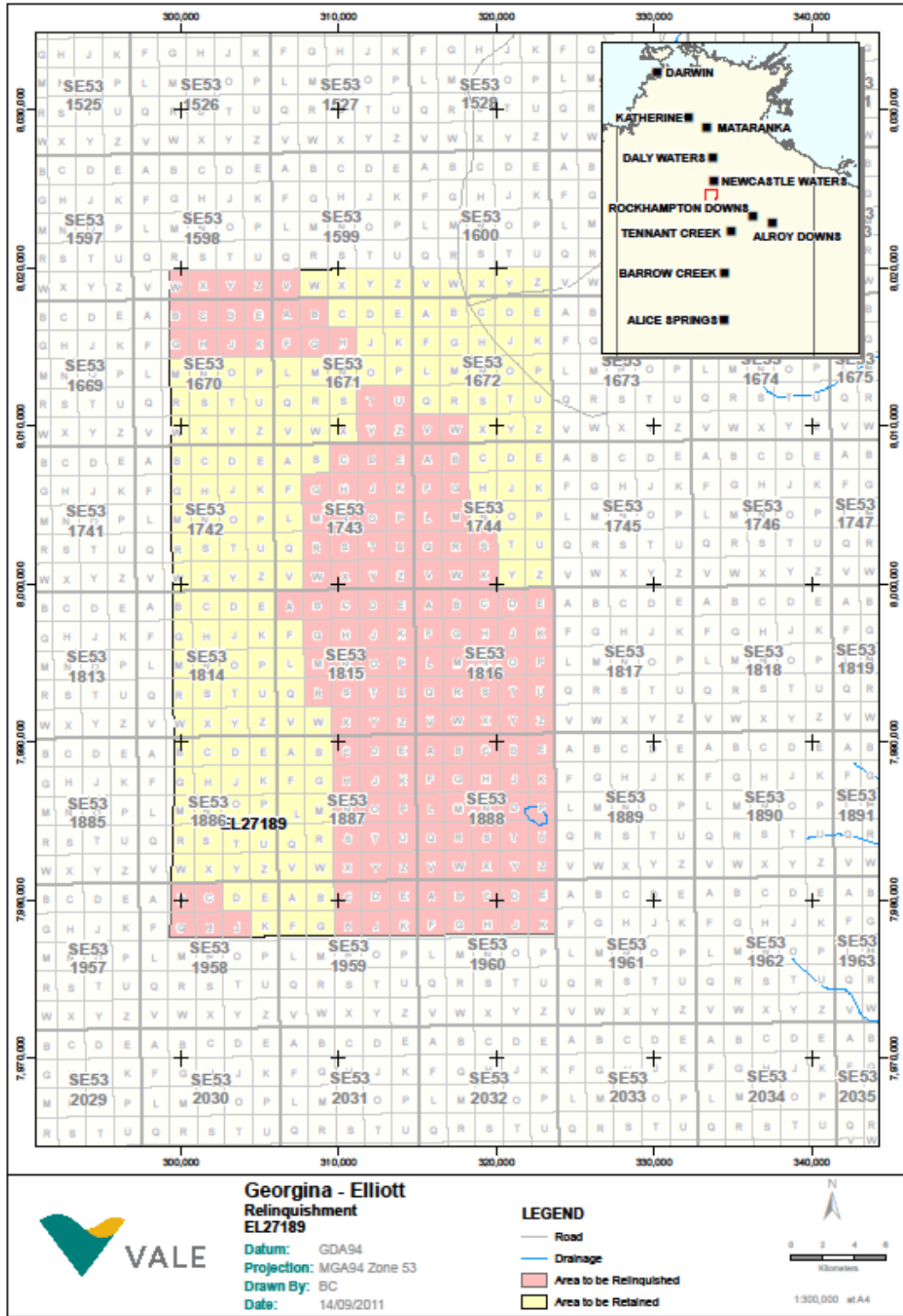


Figure 2: EL27189 Relinquished Area



1.3 Native Title

There are six registered Native Title claims over the project area tenements.

- Buchanan Downs DC02/16 is registered and overlaps the western portion of EL27544;
- Murrarji DC00/22 is registered and overlaps the western portion of EL27544;
- Murrarji No 2. DC02/12 is registered and overlaps a southern portion of EL27544 and the majority of EL27188;
- Newcastle Waters 2 DC02/32 is registered and overlaps the entire EL27186, the NE corner of EL27188 and the northern half of EL27187;
- Powell Creek DC01/37 is registered and overlaps the southern half of EL27187, the entire EL27189 and the majority of EL27190;
- Helen Springs DC01/39 is registered and overlaps the SE corner of EL27190.

All of these Native Title claimants are represented by the Northern Land Council.

1.4 Historical, Aboriginal, Heritage Sites

Historical sites that occur in the general area but outside the project boundary include Crawfords Grave and the Powell Creek Telegraph Station-Overland Telegraph Line Site (Table 2). The historic Newcastle Waters township is located to the east of the tenements but has been included in this document as an access route passes through the town.

Lake Woods is listed on the Register of the National Estate as a place of natural significance and is a 'Site of Conservation Significance' in the N.T. Lakewood is the largest freshwater lake in the Northern Territory, home to several varieties of fish and frequented by large numbers of birds including migratory species.

Table 2: Heritage Sites

<i>Name</i>	<i>Register</i>	<i>Class</i>	<i>Location & Comments</i>
Crawfords Grave	Register of the National Estate	Historic	18km Nth of Newcastle Waters in the NorthSouth Stock Route, 400m south of Ross Creek. AGD 17 12' 51'', 133 25' 46''.
Powell Creek Telegraph Station	Register of the National Estate	Historic	5kms West of Stuart Highway, 60kms south of Elliott on banks of Powell Creek
Newcastle Waters township	Register of the National Estate	Historic	Outside of the tenement area, however access passes next to the township
Lake Woods	Register of the National Estate	Natural	Occurs partly within tenements EL27187, EL27189 and EL27190.

An inspection of the Aboriginal Areas Protection Authority (AAPA) Register was conducted on 9 September 2009. This inspection identified several sacred sites within the tenements. Aboriginal Areas Protection Authority (AAPA) Certificate issued 18 June 2010 for EL27187, EL27189 and EL27190.

An information meeting with Traditional Owners was facilitated by the NLC for EL27187, EL27189 and EL27190 on 2 December 2009. Prior to any ground disturbance activities taking place (site preparation, sump excavation, hole pegging), a Vale representative accompanied an NLC representative and Traditional Owners on a field visit to check all proposed drill sites. The NLC representative and Traditional Owners were satisfied with all proposed ground disturbance and a good relationship with the NLC and Traditional Owners was established.

1.5 Climate and Hydrology

The Elliott region is semi-arid with annual rainfall of 604 mm (Table 3, BOM, 2010). The climate is characterised by distinct wet and dry seasons with the majority of rain falling between November and March. The predominant wind direction is from the east.

Table 3: Climate Statistics – Elliott Airport (BOM 2010)

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Mean Maximum Temperature °C ²	37.5	36.7	35.7	34.5	31.4	28.4	28.4	31.3	35.4	38.0	39.1	38.7
Highest Temperature °C	45.8	44.9	42.5	40.3	38.5	36.4	36.2	38.6	42.0	44.4	45.0	46.5
Mean days ≥ 40 °C	8.5	5.7	2.2	0.0	0.0	0.0	0.0	0.0	0.8	7.3	12.5	11.8
Mean Minimum Temperature °C	24.1	23.8	22.2	19.5	15.9	12.4	11.2	13.3	17.4	20.9	23.4	24.4
Lowest Temperature °C	16.0	16.2	12.2	9.0	6.6	2.5	1.5	1.8	7.2	7.5	12.3	14.4
Mean Rainfall (mm) ³	135.8	160.4	85.0	23.8	7.4	4.9	3.0	1.1	6.0	23.3	46.2	95.4
Mean number of days of rain	10.3	10.2	7.3	1.6	0.9	0.7	0.4	0.3	1.2	3.5	5.5	8.2

1.6 Land Area Type

The project covers the north eastern portion of the Wiso Basin and a small part of the Dunmurra Basin and straddles both the Sturt Plateau (STU) and Mitchell Grass Downs (MGD) bioregions, which are further described below:

MGD: Lies over the Georgina and Dunmurra basins containing sedimentary rocks of Cretaceous, Tertiary and Cambrian ages and soils are predominantly cracking clays. The vegetation is predominantly *Eucalyptus microtheca* low open-woodland with Bluebush (*Chenopodium auricomum*) sparse-shrubland understory and Mitchell Grass (*Astrelba*) grassland on the Barkly Tableland.

STU: Lies over the Dunmurra, Daly, Wiso and McArthur basins and comprises of a gently undulating plain on laterised Cretaceous sandstones. Soils are predominantly neutral sandy red and yellow earths. The most extensive vegetation is eucalypt woodland with tussock grass or *Triodia* understory but there are also large areas of lancewood (*Acacia shirleyi*) thickets and bullwaddy (*Macropteranthes kekwickii*) woodlands (Baker *et al.*, 2005).

Lake Woods, a large ephemeral wetland, is located within tenements EL27187, EL27189 and EL27190. The lake basin supports grass/sedge communities, including broad bands of lignum (*Muehlenbeckia florulenta*). The northern edge of the lake and Newcastle Creek are fringed by river red gum (*Eucalyptus camaldulensis*) and coolibah (*Eucalyptus coolabah*).

² Temperature measurements from 1980 – 2010 (29 years)

³ Rainfall measurements from 1949 – 2010 (48 years)

1.7 Flora

Vegetation is a mixed assemblage of Eucalyptus open woodlands, Bullwaddy (*Macropteranthes*) woodlands and forests, *Acacia* open forests and woodlands and *Melaleuca* woodlands (Figure 4).

Introduced flora (weed) species that may occur within the project area include:

Table 4: Introduced Flora (Weeds) that may occur within Elliott Project

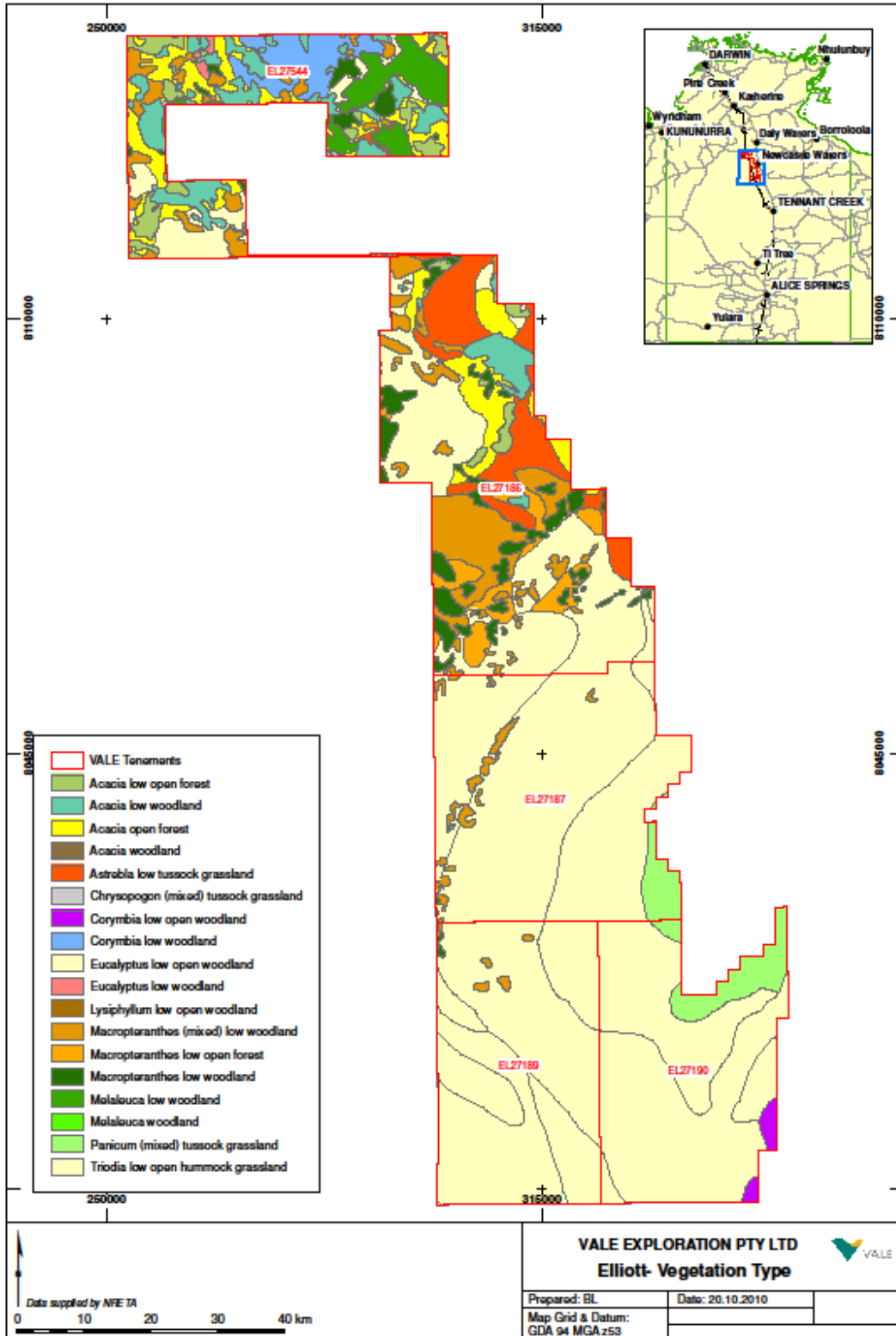
<i>Species Name</i>	<i>Generic Name</i>	<i>Where</i>	<i>Type of Presence</i>
<i>Andropogon gayanus</i>	Gamba Grass		Possibly
<i>Calotropis procera</i>	Rubberbush	Newcastle Waters, along access tracks	Infestation
<i>Hyptis suaveolens</i>	Hyptis	Newcastle Waters station	Occurrence
<i>Parkinsonia aculeata</i>	Parkinsonia	Lakewood, Elliott 5662 Map Sheet ⁴	Infestation, Common and widespread
<i>Pennisetum polystachion</i>	Mission Grass		Possibly
<i>Prosopis spp.</i>	Mesquite	Elliott 5662 Map sheet ⁵	Present – density unknown
<i>Tamarix aphylla</i>	Athel Pine	Helen Springs 5661 Map Sheet ⁶	Occasional and localized occurrences

⁴ NRETAS – 1:100,000 Grid Maps of Weed Distribution

⁵ NRETAS – 1:100,000 Grid Maps of Weed Distribution

⁶ NRETAS – 1:100,000 Grid Maps of Weed Distribution

Figure 4: Elliott Project (Pre 2011 Relinquishment) Vegetation Plan



1.8 Fauna

A search of NRETAS⁷ data found that the following vulnerable species have been recorded in the vicinity of the project area (Figure 5, Table 5).

Table 5: Vulnerable Fauna Species Recorded in the vicinity of the Project Area

<i>Species Name</i>	<i>Generic Name</i>	<i>Tenement</i>	EPBC ⁸ Status	TPWC ⁹ Status
<i>Macrotis lagotis</i>	Greater Bilby	EL27187	Vulnerable	Vulnerable
<i>Ardeotis australis</i>	Australia Bustard (Bush Turkey)	EL27186	-	Vulnerable
<i>Epthianura crocea</i>	Yellow Chat	Lakewood – Outside of tenement boundary	<i>spp macgregori</i> <i>Yellow Chat</i> (<i>Dawson</i>) is Critically endangered, <i>spp tunneyi</i> <i>Yellow Chat</i> (<i>AlligatorRivers</i>) is Endangered	<i>spp tunneyi</i> <i>Yellow Chat</i> (<i>AlligatorRivers</i>) is Endangered

The Australia Bustard (*Ardeotis Australis*) has been recorded within the Elliot Project. This species is not considered to be vulnerable, endangered or critically endangered under the *EPBC Act*; however it is considered vulnerable by the NT Government and is protected by the *Territory Parks and Wildlife Conservation Act 2009*.

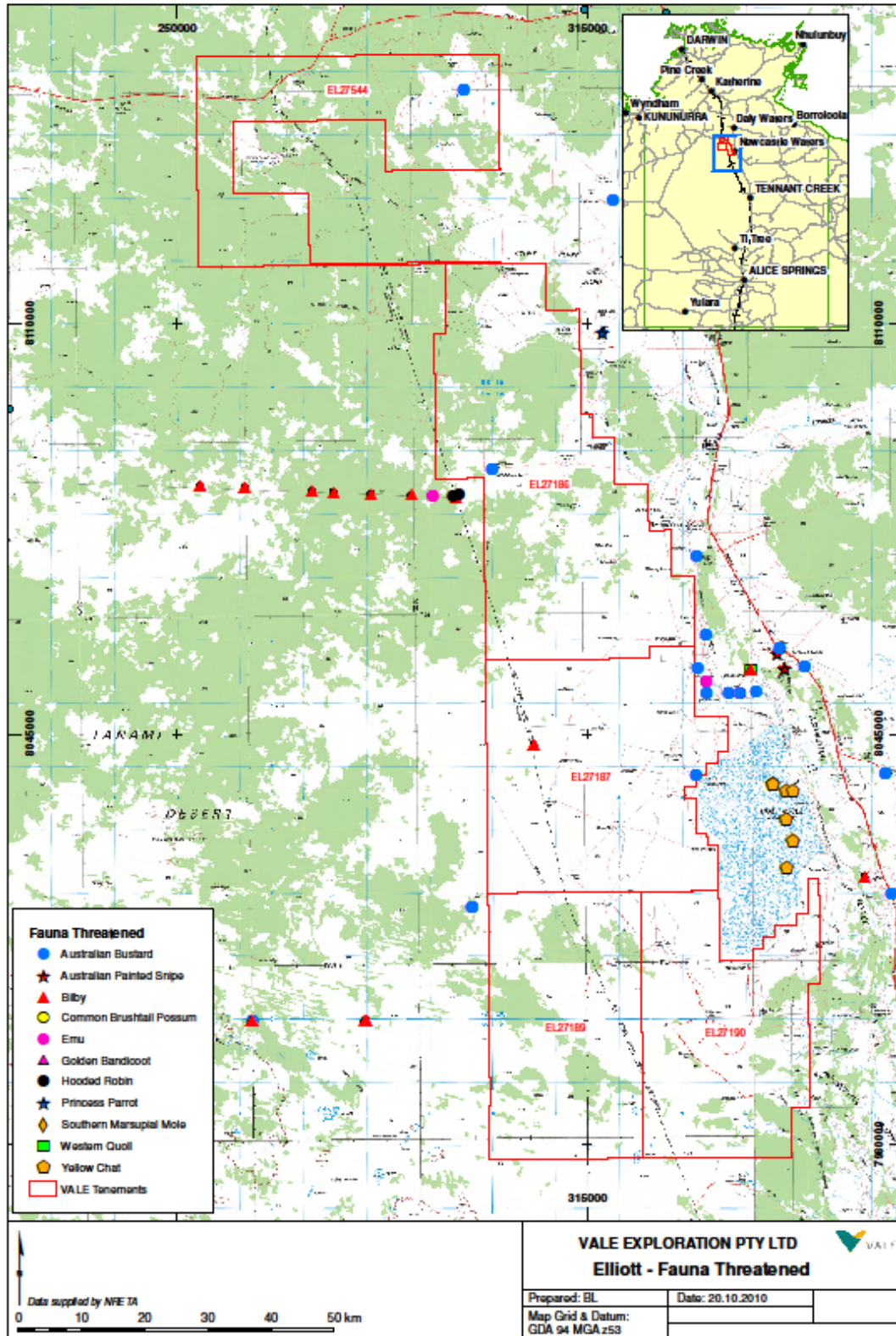
A search of the Australian Government Department of the Environment, Water, Heritage and the Arts website, 'Protected Matters Search tool' identified 7 threatened species and 11 migratory bird species within a rectangular search area encompassing the tenements. These species may also occur within the tenements, however birds listed as migratory or marine are most likely to be located the vicinity of Lake Woods.

⁷ NRETAS - NT Department of Natural Resources, Environment, the Arts and Sport

⁸ Environmental Protection and Biodiversity Conservation Act 1999

⁹ Territory Parks and Wildlife Conservation Act

Figure 5: Elliott Project (Pre 2011 Relinquishment) Fauna Plan



2 Regional Geology

The Elliott Project covers Cambrian sedimentary rocks of the Wiso Basin (Figure 6-7). On the southern margin of the basin, the Cambrian rocks overly strata of the Arunta Block, whilst to the west they unconformably overly basement composed of rocks of the Early? Proterozoic Hatches Creek and Warramunga Groups and their equivalents (Cook, 1986).

Facies relationships and stratigraphy in the Wiso Basin is complex. Figure 6 shows the schematic stratigraphic relationship of formations across the Wiso Basin and Georgina Basin. Stratigraphic locations of phosphate occurrences are also identified (Khan et al., 2007). The Undilla Sub-Basin sequence has been sourced from Kruse and Radke (2008) and the southern Georgina Basin after Dunster et al. (2007).

This section below is considered a useful guide however, it should be noted that Rio Tinto geologists who worked on the Wonarah Deposit considered Wonarah to be hosted in the Gum Ridge Formation (Lilley, 2002). However, the Wonarah Deposit is identified here as occurring in the Wonarah Formation, as others consider that the phosphorite interval on the Alexandria-Wonarah basement high is more likely to be the basal Wonarah Formation (Kruse et al., 2010).

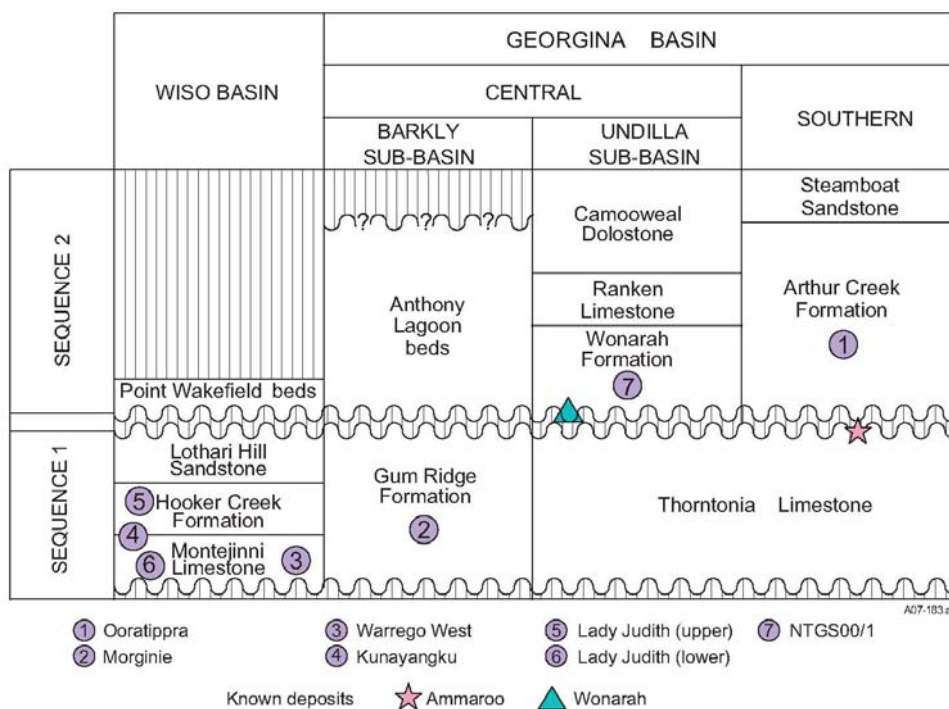
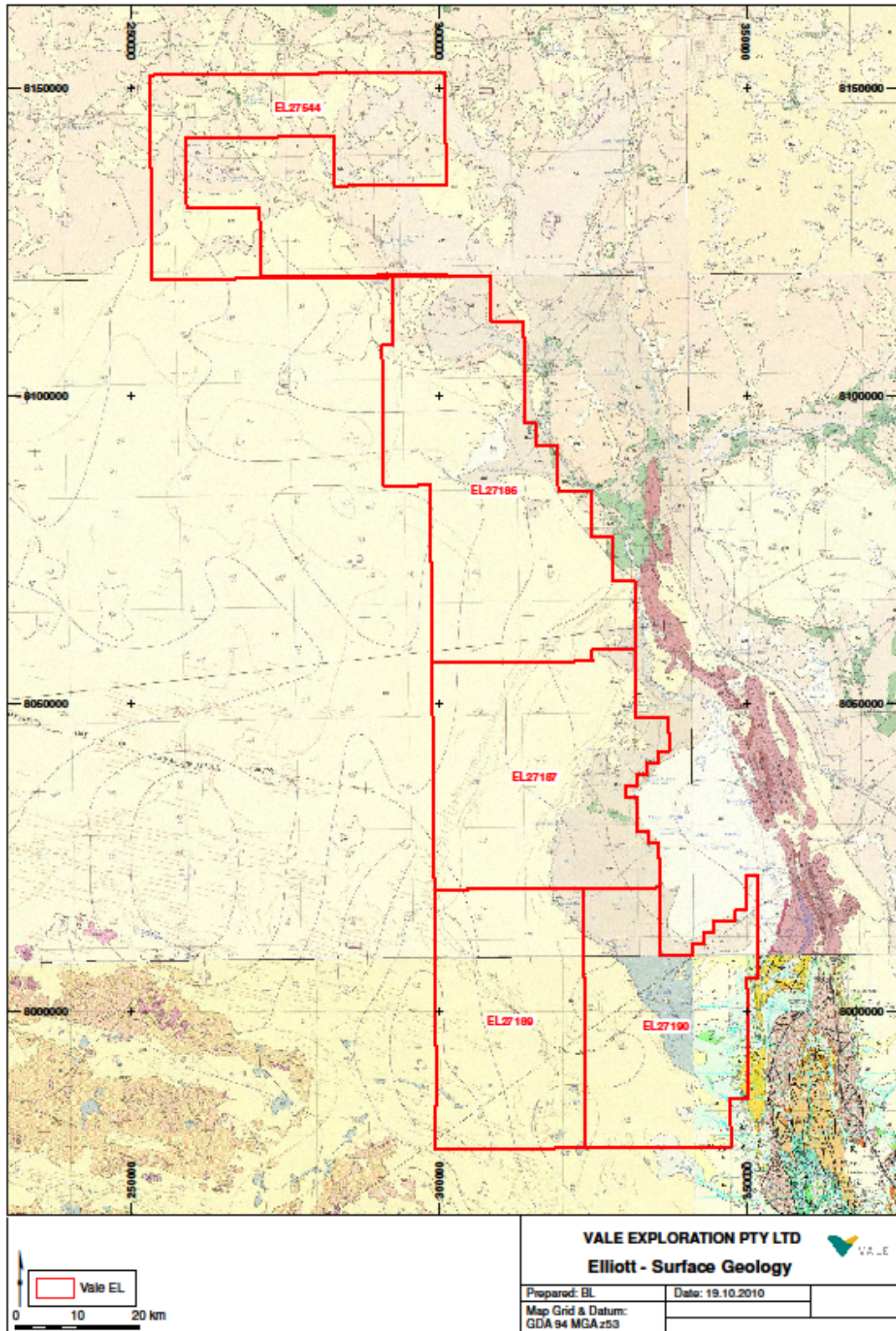


Figure 6: Schematic west to east stratigraphic transect across Wiso and Georgina (Khan et al., 2007)

Major phosphate deposition occurred in the Middle Cambrian (Templetonian), an interval which corresponds to a new rise in sea level and was the time of maximum phosphate deposition with up to 100m of siltstones, fine-grained sandstones, cherts and phosphorites being deposited around the eastern margins of the basin and adjacent to the Alexandria-Wonarah High (Cook, 1986).

Figure 7: Elliott Project (Pre 2011 Relinquishment) Geology Plan



3 Local Geology

The landscape of the project area is flat lying with outcrops of carbonate rocks in EL 27186 interpreted to be part of the Middle Cambrian Montejinni Limestone (Cmm). To the southeast and east of EL 27190, phosphate bearing (by Niton XRF field analysis) subcrops and lags of siltstones and sandstones interpreted to be part of the Middle Cambrian Merrina Beds (Cme) were observed.

Sand sheets cover much of the landscape in the west of EL 27187 and 27189. Lake sediments and grey vertisol soils cover a 5-10 km area surrounding the current shoreline of Lake Woods. To the east of the project, raised ridges and a plateau of upper Meso Proterozoic Jangirulu Formation (Prj) sandstones and quartzites outcrop to form the Ashburton Range, which trends south-southeasterly.

The Jangirulu Formation is characterised by widespread low angle cross current (cm scale) well bedded quartz sandstones. It appears in hand specimen to be indistinguishable to a similar lithological unit which outcrops in both the Brunchilly and Barkly prospect areas, where it was also interpreted as being a Proterozoic basement unit.

4 Previous Exploration

Apart from diamond exploration undertaken by Ashton in the 1980's, very little effective exploration activity has been recorded within the Elliott Project and the project has not been tested for phosphate.

Historic exploration has included:

- Diamond exploration (stream sediment, gravel and loam samples) in the 1980's
- Gold and base metals exploration (Rock chip sampling, stream sediment sampling) in the 1990's

In addition, 9 shallow NQ diamond holes [DDH1-7, DDH1A, DDH2A] were drilled in 1986 by the Department of Transport and Works for geotechnical testing to identify sources of ballast for construction of the Darwin to Alice Springs Railway. The deepest of these drill holes was 39m.

Exploration activity on each of the historic tenements is summarised below:

Table 6: Previous Exploration on Elliott Project

Dates	Company	Commodity	Tenement Numbers	Item Number	Work Completed	Comments
- 29 April 1971	Tin Creek Mining	Vanadium, Iron	AP3502	CR1971-0065	Exploration Proposal	Document proposes future exploration. Contains no data. Has one geological map and alludes to previous exploration having confirmed V enrichment in laterites without further details.
1986	Department of Transport and Works-Roads Division	Limestone, dolomite		TR23-86	Diamond drilling	9 shallow diamond holes (DDH1-DDH7, DDH1A,DDH2A) completed near Hassett Bore and Benaud Bore to identify sources of railway ballast. Average depth to limestone ~10m.
21/8/86-05/88	Arcadia Minerals	Base metals	AP4045	CR1988-0229	Gravity survey and drilling	Drilling intersected thick Roper Group sediments. Target formations considered too deep.
11/07/1983 – 20/07/1984	Aberfoyle / Ashton / AOG	Diamonds	EL4260	CR1984-0265	Loam sampling Gravel Sampling.	Loam and gravel sampling as part of a larger regional program. No diamonds of kimberlite indicator minerals identified.
11/07/1983 – 10/07/1989	Aberfoyle / Ashton / AOG	Diamonds	EL4261	CR1984-0238	Loam sampling	5 loam samples collected at each of 10 sites. No diamonds or indicator minerals found.
11/07/1983 – 10/07/1989	Aberfoyle / Ashton / AOG	Diamonds	EL4263	CR1985-0003	Loam sampling	25 loam samples collected from a single site. Two small diamonds recovered.
23/11/1983 – 22/11/1989	Aberfoyle / Ashton / AOG	Diamonds	EL4269	CR1985-0004, CR1985-0047	Loam sampling	52 loam samples from 12 sites. No diamonds recovered.
July 1983 – Aug 1984	Aberfoyle / Ashton / AOG	Diamonds	EL4274	CR1985-0006	Loam sampling Gravel Sampling.	17 gravel samples 35 loam samples.
Dec 1983 – Dec 1985	Aberfoyle / Ashton / AOG	Diamonds	EL4337	CR1985-0015, CR1986-0087	Loam sampling Gravel Sampling.	50 gravel samples, 3 microdiamonds identified.
1988-1991	Ronan	Gold	EL5302	CR1989-0679,0597 et al	Field mapping	Prospector travelled on foot but could not find any rock.
12/05/1988 - 25/01/1990	Northern Territory Gold Mines NL	Base metals	EL5770	CR1989-0412	Stream sed sampling, rock chips	Focus on Tomkinson Ck beds. No anomalous results.
1988-1989	Northern Territory Gold Mines NL	Gold	EL5833	CR1989-0477	Rock and BLEG samples	Target was structurally controlled auriferous qtz veins in Tennant Creek Inlier. 44 rock chip and stream sed samples. No anomalous gold.
1989	MacMahon Construction	Mineral sands	EL6320	CR1989-0438	Soil sampling	Exploration for heavy mineral deposits in sand ridges West of Lakewood. Subeconomic results
23/05/1989 -	CD Ronan	Gold	EL6415	CR1990-	Reconnaissance	Ground reconnaissance.

Dates	Company	Commodity	Tenement Numbers	Item Number	Work Completed	Comments
25/09/1990				0580		
20/01/1992 - 11/01/1993	CD Ronan	Gold	EL7574	CR1993-0078	Geochem samples	No accurate sample details. Ten samples were assayed for P. Highest P reading – 253 ppm.
28/04/1993 - 26/05/1995	CD Ronan	Au, Cu, Pb	EL8028, EL8495	CR1994-0597, CR1994-0599, CR1995-0432	Traverse	No sampling. Reconnaissance for Ag,Cu,Pb.
28/04/1993 - 04/07/1994	CD Ronan	Au	EL8030	CR1994-0691, CR1994-0599	Rock chips samples	Seven rock chips analysed for Au. No Significant Assays.
16/10/1995 – 20/08/1996	CD Ronan	Gold	EL8818	CR1996-0572, CR1996-0938	Geochem sampling	'Reports' not useful. Maximum value of 3695ppm P cited in results. Rockchip / soil samples. Assay results and a very rough sketch map contained in report.
1996	CD Ronan	Iron Ore	EL9202	CR1996-0597	Rock chips samples	46 rock-chip samples collected. Results of 20-30% Fe recorded.
16/12/2002 - 28/11/2003	De Beers Australia Exploration	Diamonds	EL23010-EL23015	CR2004-0019	Existing data review.	Review undertaken and tenement surrendered. No on ground work.
2004-2006	GS Eupene	Bae metals and gold	EL23688	CR2004-0344 CR2005-0250 CR2006-0315	Reconnaissance	Area was targeted as a 'Primary Hub' that on Paradigm Geosciences Confidential technology has the same signature as mineral deposits. Field reconnaissance only.

5 Work Completed on Relinquished Area

Work completed by Vale on the relinquished area comprised:

- AAPA Certificate0
- Open file literature review; acquisition and reprocessing of geophysical data; and acquisition of NRETAS environmental data.
- Commissioned CSIRO to undertake a regional study of the Elliott Project area involving XRF analysis of water bore chip samples from historic water bore holes to assist phosphate horizon targeting.
- In-house depth to basement gravity modelling to assist first pass drill targeting.
- Flora and fauna desktop study.
- Regional geophysical basin modelling study by Mira Geoscience and drill targeting.
- Rock chip sampling (1 sample).
- Gravity survey.

5.1 Flora and Fauna Study

The Elliott Project Flora and Fauna Desktop Study Report dated May 2011 by Sustainability is attached as [Appendix 3](#).

5.2 Geophysical Basin Modelling

Regional 3D Inversion Modelling of Gravity and Magnetic Data for Vale's Georgina Phosphate Project was completed by MIRA Geoscience (Brisbane) in May 2011. This modelling study assisted phosphate targeting by generating detailed images of depthbasement, gravity and magnetics. A Basement Depth Plan is shown at [Figure 8](#) and geo-referenced TIF images are located in [Appendix 4](#).

5.3 Rock Chip Sampling

A reconnaissance rock-chip sampling program was completed on the relinquished part of EL27189. One (1) sample was collected and the sample location is shown in [Figure 9](#). Rock chip analytical data is contained in [Appendix 5](#), along with additional rock chip samples from the retained part of EL27189. Rock chip sample lithology was reported as calcrete. The sample was analysed at ALS, Townsville. No elevated phosphate results were recorded.

5.4 Gravity Survey

The relinquished portion of EL27189 contained part a gravity survey (total 153 stations over all the Elliott Project area). The survey employed a 4000m x 4000m regular square grid pattern. Geo-referenced TIF images are located in [Appendix 6](#). Preliminary review of the final data shows that the gravity response appears to map the basement topography ([Figure 10](#)).

6 Conclusion

The surrendered area was relinquished due to a lack of priority phosphate targets identified from geophysical modelling studies. No ground-disturbing activities were conducted and hence no rehabilitation was necessary.

Figure 8: Elliot Project – Basement Depth Plan – Partial Surrendered Portion

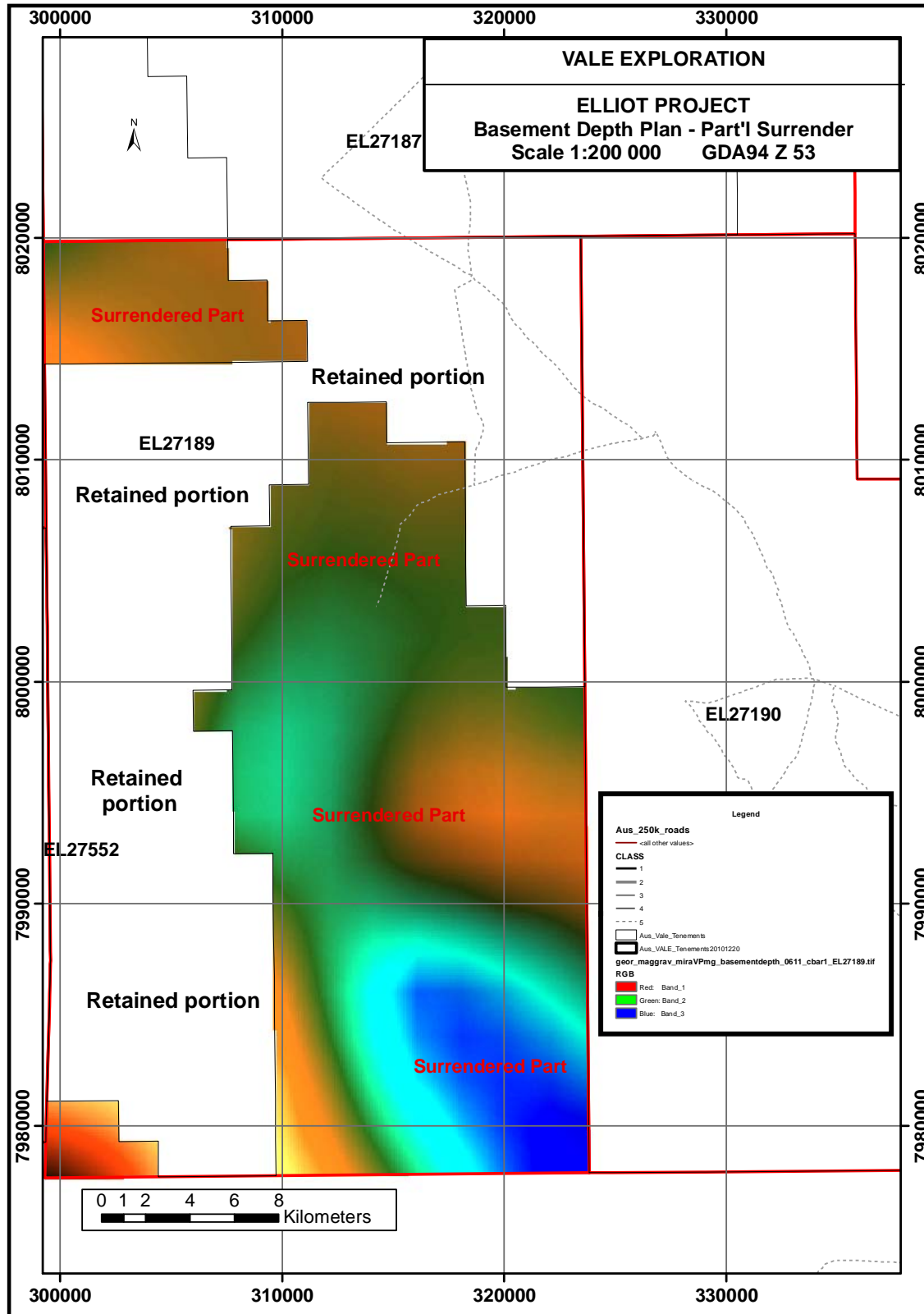
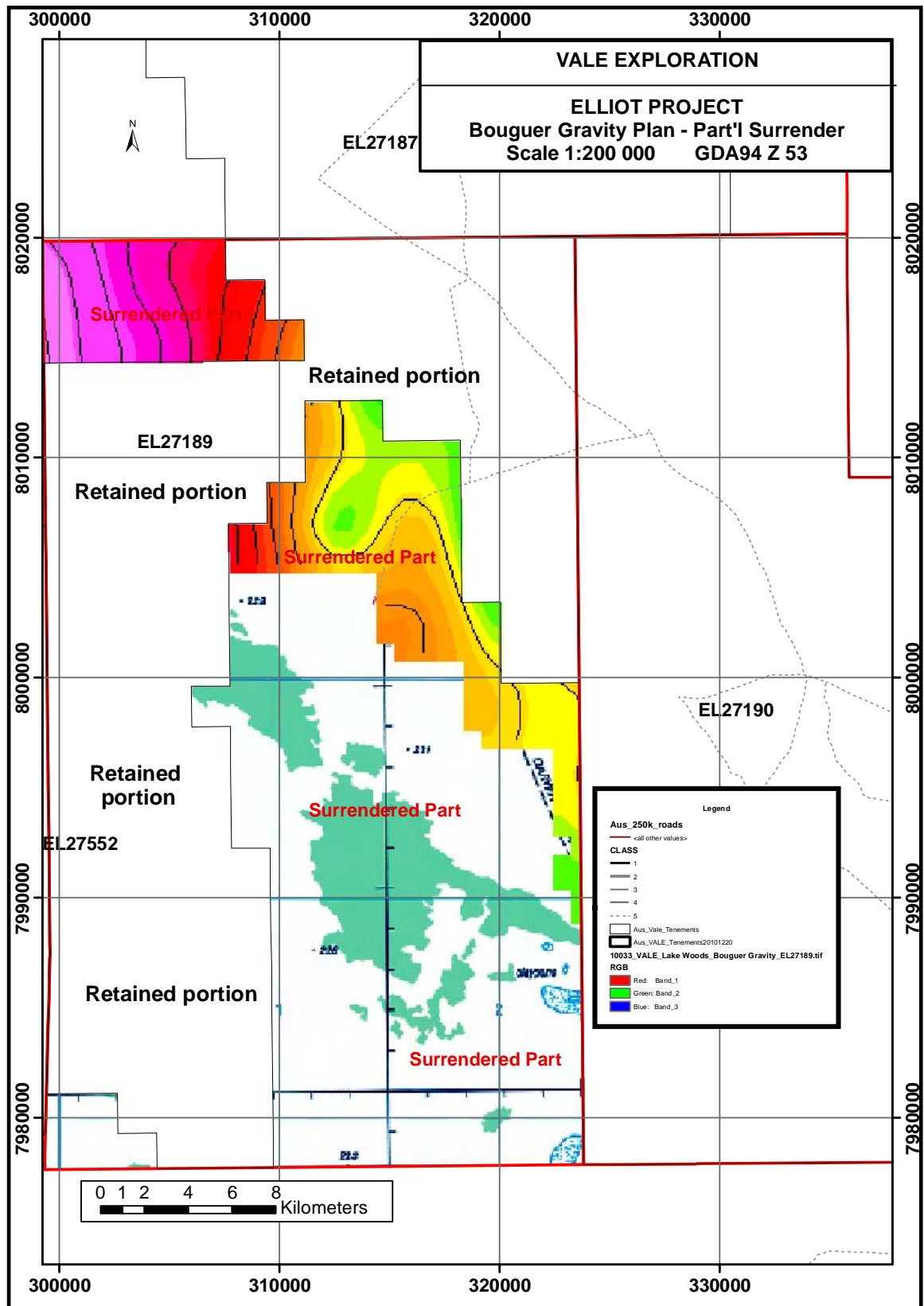


Figure 9: Elliot Project – Rock Chip Location Plan – Partial Surrendered Portion



Figure 10: Elliot Project – Gravity Survey Plan – Partial Surrendered Portion



7 References

- Ashton Mining Limited, 1984. Final Report EL4260, 11th July 1983 to 7th August 1984. NTGS Open File Report CR1984-0265.
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APPENDIX 1

**FLORA AND FAUNA DESKTOP STUDY REPORT
SUSTAINABILITY – MAY 2011**

APPENDIX 2

GEOPHYSICAL BASIN MODELLING

GEO-REFERENCED TIF IMAGES

APPENDIX 3

ROCK CHIP ASSAY DATA

APPENDIX 4

GRAVITY SURVEY

GEO-REFERENCED TIF IMAGES

APPENDIX 6

PDF FILES FOR REPORT FIGURES