TORO JV PROJECT

ANNUAL REPORT for the period

16th February 2015 to 15th February 2016

Exploration License EL27590

LICENSEE

TORO ENERGY LIMITED

OPERATED BY

NORTHERN MINERALS LIMITED

ANNUAL REPORT

GROUP REPORT:

NAME: TORO JV PROJECT – ANNUAL REPORT EL27590

PREPARED BY: K Warburton

DATE: 07/04/2016

NTU Report No: 2016-04

TARGET COMMODITIES: Heavy Rare Earths (HREE)

NT 1:100,000 SHEET: 4758 “Pargee””

NT 1:250,000 SHEET: SE5215 “Tanami””

Abstract

Tenement EL27590 forms part of a joint venture agreement between Northern Minerals and Toro Energy Limited. It was granted to Toro Energy Limited on the 16/02/2012.

The tenement is underlain by the Palaeoproterozoic MacFarlane Peak Group, Tanami Group, including the Dead Bullock Formation, and Pargee Sandstone. In the east of the tenement, The MacFarlane Peak Group is unconformably overlain by the Mesoproterozoic Gardiner Sandstone.

Northern Minerals is currently exploring the tenement as part of a wider exploration program covering contiguous tenements in the Tanami region of the Northern Territory. The targeted commodity is Heavy Rare Earths associated with xenotime mineralisation, similar to that discovered at the Wolverine prospect on the Western Australian side of the Browns Range Dome. A similar style of mineralization occurs at the Boulder Ridge prospect on a neighboring tenement held by Northern Minerals.

No on-ground exploration work was completed during the reporting period due to financial constraints experienced during the year.

Declaration

To the best of our knowledge, this document conforms to the format outline for an annual report, as shown by the Northern Territory Geological Survey- Minerals and Energy Division website.

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1.0 INTRODUCTION

The tenement EL27590 was granted to Toro Energy Limited on the 16/02/2012.

On the 23/04/2012, Northern Minerals announced to the ASX that it had entered into a joint venture agreement with Toro Energy Limited, where it can earn up to an 80% stake for the non-uranium rights in exploration licenses EL26270, EL26271, EL26286, EL26635, EL27000, EL27001 and EL27590, together referred to as the Toro JV Project. The agreement was not however formally signed off until the 08/02/2013, after which Northern Minerals was appointed project manager of the tenements.

2.0 LOCATION & ACCESS

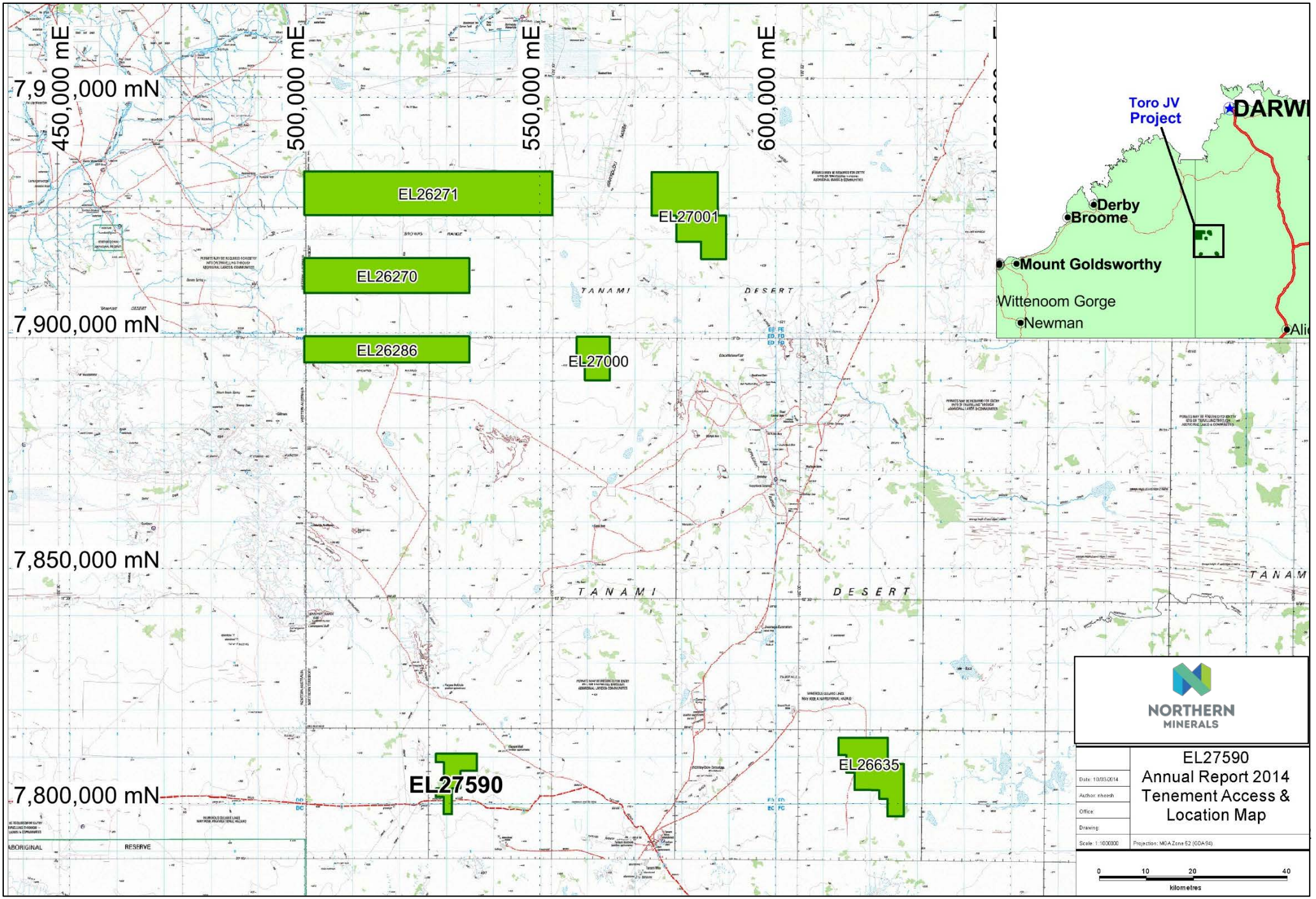
The tenement is located approximately 640km northwest of Alice Springs (Figure 1) within the Mount Frederick Aboriginal Land Trust. The primary access route is via the Tanami Track which runs through the south area of the tenement. From Alice Springs, the distance is 650km to the Tanami Mine, and then a further 51 kilometres to the tenement.

3.0 TENURE

The tenement EL27590 was applied for on the 9/07/2007 and granted on the 16/02/2012, consisting of 17 graticular blocks and covering an area of 55 square kilometers (Table 1). The tenement is held in the name of Toro Energy Limited, however by the end of the reporting period negotiations were underway form Northern Minerals to acquire a 100% interest in EL27590.

Table 1: Tenement Schedule

Tenement	Tenement No.	Blocks	Blocks Relinquished	Grant Date	Expiry Date
Toro JV Project	EL27590	17	0	16/02/2012	15/02/2018


450,000 mE
500,000 mE
550,000 mE
600,000 mE
7,900,000 mN
7,850,000 mN
7,800,000 mN
EL26271
EL26270
EL26286
EL27001
EL27000
EL27590
EL26635
TANAMI
DESERT
Toro JV Project
DARWI
Derby
Broome
Mount Goldsworthy
Wittenoom Gorge
Newman
NORTHERN MINERALS
EL27590
Annual Report 2014
Tenement Access & Location Map
Date: 10/03/2014
Author: nheesh
Office:
Drawing:
Scale: 1:1000000
Projection: MGA Zone 52 (GDA94)
0 10 20 40
kilometres
ABORIGINAL
RESERVE

4.0 REGIONAL GEOLOGY

In the Tanami Region, one of the most important tectonic units in the North Australian Craton, the stratigraphic succession shows similarities with the Pine Creek and Halls Creek Orogens, other Palaeoproterozoic successions in northern Australia.

Within the region, the MacFarlane Peak Group, which is interpreted to be the basal unit of the Palaeoproterozoic sequence, is dominated by volcanic and volcaniclastic rocks, along with clastic and calc-silicate sediments. These are overlain by siltstone, carbonaceous shale, calc silicates and BIF of the Dead Bullock Formation. This in turn is overlain by a thick sequence of turbidites, the Killi Killi Formation. Interbedded siltstone, greywacke and chert west of Tanami are included in the Twigg Formation. The latter three units are grouped together in the Tanami Group.

The Pargee Sandstone and the Mount Charles Formation occur in small extensional basins. A period of wider extension follows, accompanied by felsic volcanism in the Mount Winnecke Group and Nanny Goat Volcanics. Five main granitic suites are recognised in the Tanami Region, the most important being the Coomarie and Frederick Suites. The youngest granites in the area belong to The Granites Suite. Archaean rocks identified from drilling comprise of the Browns Range Metamorphics and the Billabong Complex.

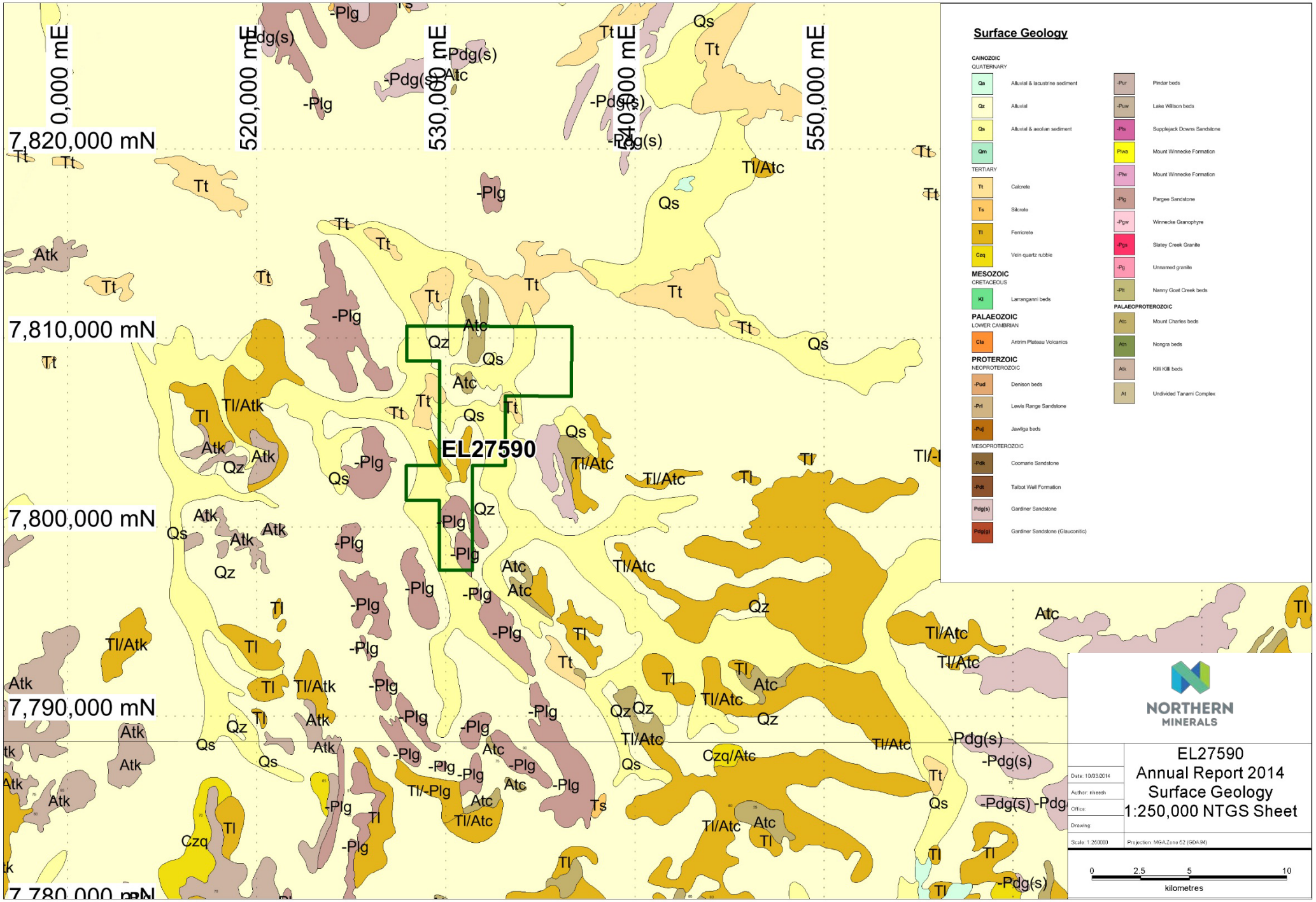
Deposition in the Birrindudu Basin began with sandstone transgressing over the metamorphic and crystalline basement probably at about 1.7 Ga. This was accompanied by regionally extensive north-trending growth faults and volcanism, possibly indicating rifting. The Birrindudu and Tolmer Groups represent the exposed basal section of this basin and may be as much as 6,000m thick locally. Apart from minor felsic volcanic rocks (tentatively assigned to undifferentiated Birrindudu Group) and carbonate rocks and shale in the upper Tolmer Group, these units are dominated by coarse clastic sedimentary rocks. Cambrian flood basalts (Antrim Plateau Volcanics) overlie the Mesoproterozoic Gardiner Sandstones of the Birrindudu Basin.

Several ESE, SE and N-trending structures have been identified within the region, which represent subsidiary structures to the major regional ESE-trending structures, such as the Trans-Tanami Fault and the Bluebush Fault. Large portions of the region are covered by ferricrete as well as surficial deposits including alluvium, lateritic lag and windblown sand. The Gardiner Formation outcrops are frequently capped by a silcrete layer of variable thickness.

EL27590 is located in the south west of the Tanami 1:250,000 Sheet. The tenement is interpreted to be underlain by Tanami Group sediments and mafic volcanics (Dead Bullock Formation) in the western and central part of the tenement, and the MacFarlane Peak Group in the east. The stratigraphy is arranged in a general north-south orientation along the western margin of the Coomarie Dome. The MacFarlane Peak is unconformably overlain by Gardiner Sandstone, whilst outcropping Pargee Sandstone occurs along the southern margin of the tenement.

The surface geology is dominated by unconsolidated Quaternary sediments and Tertiary calcrete and ferricrete deposits. Outcropping Dead Bullock Formation occurs in the

northernmost part of the tenement, and Pargee Sandstone in the south. Figure 2 shows the outcrop geology taken from the NTGS 1:250,000 scale geological mapping of the area.


Surface Geology
CAINOZOIC
QUATERNARY
Qa Alluvial & lacustrine sediment
Qz Alluvial
Qs Alluvial & aeolian sediment
Qm
TERTIARY
Tt Calcrete
Ts Silcrete
Tl Ferricrete
Czq Vein quartz rubble
MESOZOIC
CRETACEOUS
Kl Larranganni beds
PALAEOZOIC
LOWER CAMBRIAN
Cta Antrim Plateau Volcanics
PROTERZOIC
NEOPROTEROZOIC
-Pud Denison beds
-Prl Lewis Range Sandstone
-Puj Jawilga beds
MESOPROTEROZOIC
-Pdk Coomarie Sandstone
-Pdt Talbot Well Formation
Pdg(s) Gardiner Sandstone
Pdg(g) Gardiner Sandstone (Glauconitic)
-Pur Pindar beds
-Puw Lake Willson beds
-Pls Supplejack Downs Sandstone
Piwa Mount Winnecke Formation
-Piw Mount Winnecke Formation
-Plg Pargee Sandstone
-Pgw Winnecke Granophyre
-Pgs Slatey Creek Granite
-Pg Unnamed granite
-Plt Nanny Goat Creek beds
PALAEOPROTEROZOIC
Atc Mount Charles beds
Atn Nongra beds
Atk Killi Killi beds
At Undivided Tanami Complex
EL27590
520,000 mE
530,000 mE
540,000 mE
550,000 mE
7,820,000 mN
7,810,000 mN
7,800,000 mN
7,790,000 mN
NORTHERN MINERALS
EL27590
Annual Report 2014
Surface Geology
1:250,000 NTGS Sheet
Date: 10/03/2014
Author: nheesh
Office:
Drawing:
Scale: 1:250000
Projection: MGA Zone 52 (GDA 94)
0 2.5 5 10
kilometres

5.0 EXPLORATION TARGET RATIONAL

Northern Minerals is currently exploring for Heavy Rare Earth (HRE) mineralisation on its tenement holdings in the Tanami Region of WA and the NT. At the Browns Range project in WA, HRE mineralisation associated with xenotime mineralisation was first identified at what was called the Area 5 prospect in 1986 by PNC Exploration (Australia) Pty Ltd. The primary host of this mineralisation was vuggy quartz veins within a Palaeoproterozoic arkose unit of the Browns Range Metamorphics; although the xenotime also pervaded the arkose forming massive veins up to 30cm width. Subsequent shallow drilling at the prospect was disappointing.

More recently, Northern Minerals identified xenotime mineralisation from highly silicified and brecciated arkose at the Wolverine, Gambit and Gambit West Prospects, located within 3-5km north of Area 5. A JORC compliant resource of 8.98 million tons for 56,663t of contained TREO has recently been estimated for the project. The HRE distribution, of which the primary components were the elements yttrium and dysprosium, constitute 87% of the total rare earths.

Elsewhere in the Tanami Region, occurrences of xenotime associated HRE mineralisation have been identified at the Killi Killi Hills, where it is associated with the basal conglomerate unit of the Mesoproterozoic Gardiner Sandstone at the unconformity with the underlying Killi Killi Formation; and at the Boulder Ridge prospect located within Palaeoproterozoic - Mesoproterozoic Pargee Sandstone. The potential for additional (economic?) occurrences of xenotime mineralisation within the Tanami region is being assessed.

The exploration strategy is for a ground based follow-up of targets generated from the 2014 geophysical survey that includes radiometric and magnetic datasets. This work would include geological mapping and geochemical sampling, and ultimately to provide drill targets.

The detailed airborne radiometric and magnetic survey was designed to locate radiometric anomalies that may possibly be associated with xenotime. It has also helped in the understanding of the structural and geological framework of the project area.

6.0 EXPLORATION ACTIVITIES

No on-ground exploration was completed on EL27590 during the reporting period due to financial constraints.

6.1 Targeting Exercise

During 2015, NTU geologists conducted a detailed desktop targeting exercise using the same criteria used for Browns Range Dome in both Western Australia and the Northern Territory. The study incorporated interpretations of available geophysical and geochemical data sets with the aim of highlighting areas of interest and potential exploration targets. These targets were then ranked using a set of criteria that included strength and size of surface geochemical anomalies, presence of radiometric anomalies, potentially significant magnetic and electromagnetic (EM) structures as well as the incorporation of any mapped structures or aerial photography interpretations. This allowed for the development of a systematic approach to the next phase of exploration. Geophysical and geomechanical

targets identified by independent consultants were incorporated into the list of ranked targets using the same criteria.

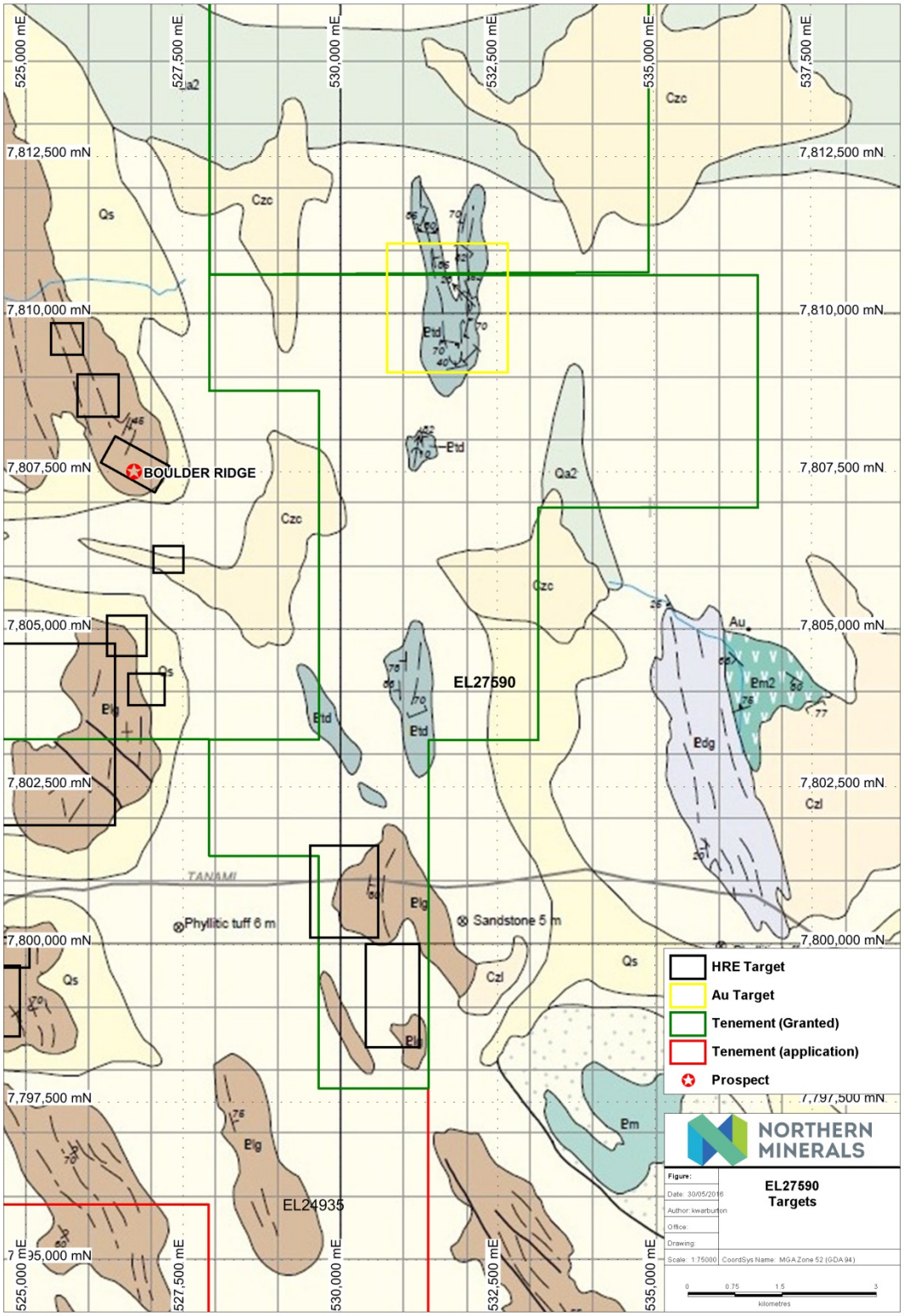


Figure 3: EL27590 Targets

7.0 PROPOSED EXPLORATION

The next phase of exploration strategy will be a ground based follow-up of targets generated in 2015. This work would include geological mapping and geochemical sampling, and ultimately to provide targets for drilling.

8.0 CONCLUSIONS

EL27590 has had limited exploration thus far with the acquisition of magnetic and radiometric geophysical data, hyperspectral data, and satellite and aerial imagery. No on-ground exploration has been completed on the tenement to date, however there is very good potential for xenotime mineralisation similar to that discovered at the nearby Boulder Ridge prospect. Several high ranking targets have been identified based on the radiometric data, and further work is required to ground truth these identified targets. The Pargee Sandstone, which is the host rock for the xenotime mineralisation at Boulder Ridge, occurs in the southern portion of EL27590 and is considered prospective for similar mineralisation.

9.0 REFERENCES

Tanami, NTGS 1:250,000 Geological Series Explanatory Notes, Sheet SE/52-15