



EPENARRA PROJECT
COMBINED ANNUAL REPORT for the period
1 January 2011 to 31 December 2011

Exploration License EL26818, EL26775, EL26776,
EL27085, EL27554 and EL27072

OPERATED BY
NORTHERN MINERALS LIMITED

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TABLE OF CONTENTS

1.0	SUMMARY	3
2.0	INTRODUCTION	3
3.0	LOCATION, ACCESS AND CLIMATE	3
4.0	TENURE	5
5.0	REGIONAL GEOLOGY	5
6.0	EXPLORATION ACTIVITIES	8
7.0	PROPOSED EXPLORATION	7
7.1	Geophysical Modelling	7
7.2	Geological Mapping and Geochemical Sampling	7
7.3	Aircore Drilling	7
8.0	REFERENCES	8

TABLES

Table 1 – Tenement Schedule.....	5
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FIGURES

Figure 1 – Tenement Location and Access Map	4
Figure 2 – Regional Geology Map	6

1.0 SUMMARY

The Epenarra exploration licenses EL26818, 26775, 26776, 27072, 27085 and 27554 lie approximately 50-210km to the south-east of the township of Tennant Creek. The package of tenements consists of a total of 1194 blocks and covers an area of 3733km². The licenses were granted to Northern Minerals in 2008, 2009 and 2010 for a period of 6 years.

Northern Minerals Limited is targeting Cambrian phosphorite deposits within the Georgina Basin. The Cambrian Gum Ridge Formation has been interpreted to underlie parts of the license areas and is considered to be a potential host for phosphate mineralization.

The Middle Cambrian Wonarah Formation, which underlies EL27085, hosts significant regional phosphate resources.

Regional bushfires burnt throughout August 2011 which delayed on-ground activities scheduled for that time. In addition, mustering activities (aerial and on-ground) surrounding the Epenarra Homestead located west of EL27085, during August 2011 further postponed exploration.

A second attempt in mid-November also had to be abandoned due to heavy rains in the region. As a result, it was not possible to complete the proposed mapping, sampling and drilling activities that were scheduled for 2011.

It is anticipated that the proposed exploration activities will be undertaken in 2012.

2.0 INTRODUCTION

This report details exploration activities conducted by Northern Minerals Ltd for the combined reporting group of Epenarra between 1 January 2011 and 31 December 2011.

Northern Minerals Limited is targeting phosphorite deposits of the Middle Cambrian within the Georgina Basin. Major phosphate deposits within the Georgina Basin include the Wonarah deposit, which is Australia's largest undeveloped phosphate resource. Other deposits include Arruwarra, Alexandria and Alroy deposits which are also hosted by the Middle Cambrian Wonarah Formation. The Cambrian Gum Ridge has been interpreted to underlie the parts of the license areas and is considered to be a potential host for significant phosphate mineralisation.

3.0 LOCATION, ACCESS and CLIMATE

The package of license areas lie approximately 50 through to 210km to the south-east of the township of Tennant Creek (Figure 1), EL27072 and EL27085 respectively.

Access to the exploration area is via the unsealed Wauchope-Epenarra road which passes in an easterly direction and is located to the south of EL26776. A well developed set of station tracks provides access to the north and south from this road. Off-road driving is relatively easy as most of the exploration area is flat with minor drainage. All streams flow intermittently during the 'wet' season and only minor amounts of rain are necessary to prevent vehicle movement.

EL26776 is located on the Epenarra Pastoral Station. The Tennant Creek Pastoral Lease covers the western area of EL27072.

Vehicular access to the central tenement areas and EL27085 is difficult, with few tracks. Access to the exploration area is via the Barkly Highway and then unsealed station tracks south. As most of the exploration area is flat with minor drainage, off-road access is possible. All streams flow intermittently during the 'wet' season and only minor amounts of rain are necessary to prevent vehicle access across 'black soils'.

The Epenarra region has a long, dry and hot summer with a cooler winter period. Rainfall is limited but can be heavy in the monsoon season (November through to March), and particularly when associated with cyclone activity. During winter strong easterly winds predominate.

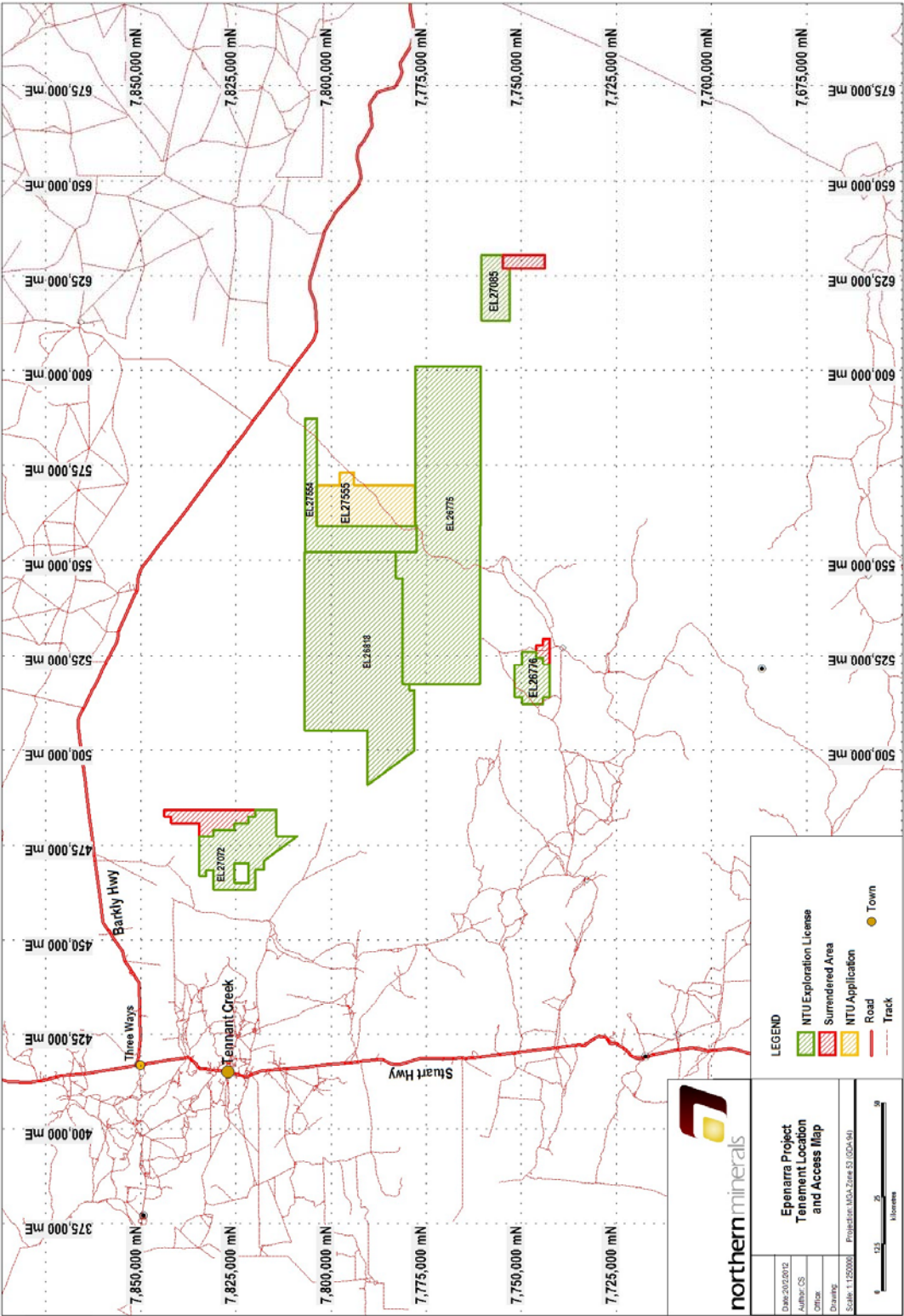


Figure 1: Tenement Location and Access Map

4.0 TENURE

The exploration license area consists of 1194 blocks and covers an area of 3733km². The license area was granted to Northern Minerals Ltd in 2008, 2009 and 2010 for a period of 6 years.

EL27072 was reduced from 126 blocks to 95 and EL27085 was reduced from 50 blocks to 38 in October 2011. EL26776 reduced from 39 blocks to 33 blocks in Feb 2011.

Tenement E27555 is also part of the combined reporting group, but currently in application.

Tenement	Tenement No	Area (Blocks)	Blocks Relinq	Grant Date	Expiry Date
Epenarra Project	EL26775	500	Nil	06/02/2009	05/02/2015
Epenarra Project	EL26776	33	6	04/12/2008	03/12/2014
Epenarra Project	EL26818	432	Nil	06/02/2009	05/02/2015
Epenarra Project	EL27072	95	31	15/09/2009	14/09/2015
Epenarra Project	EL27085	38	12	15/09/2009	14/09/2015
Epenarra Project	EL27554	96	Nil	11/04/2010	10/04/2016
Epenarra Project	EL27555	-	-	-	-

Table 1: Tenement Schedule

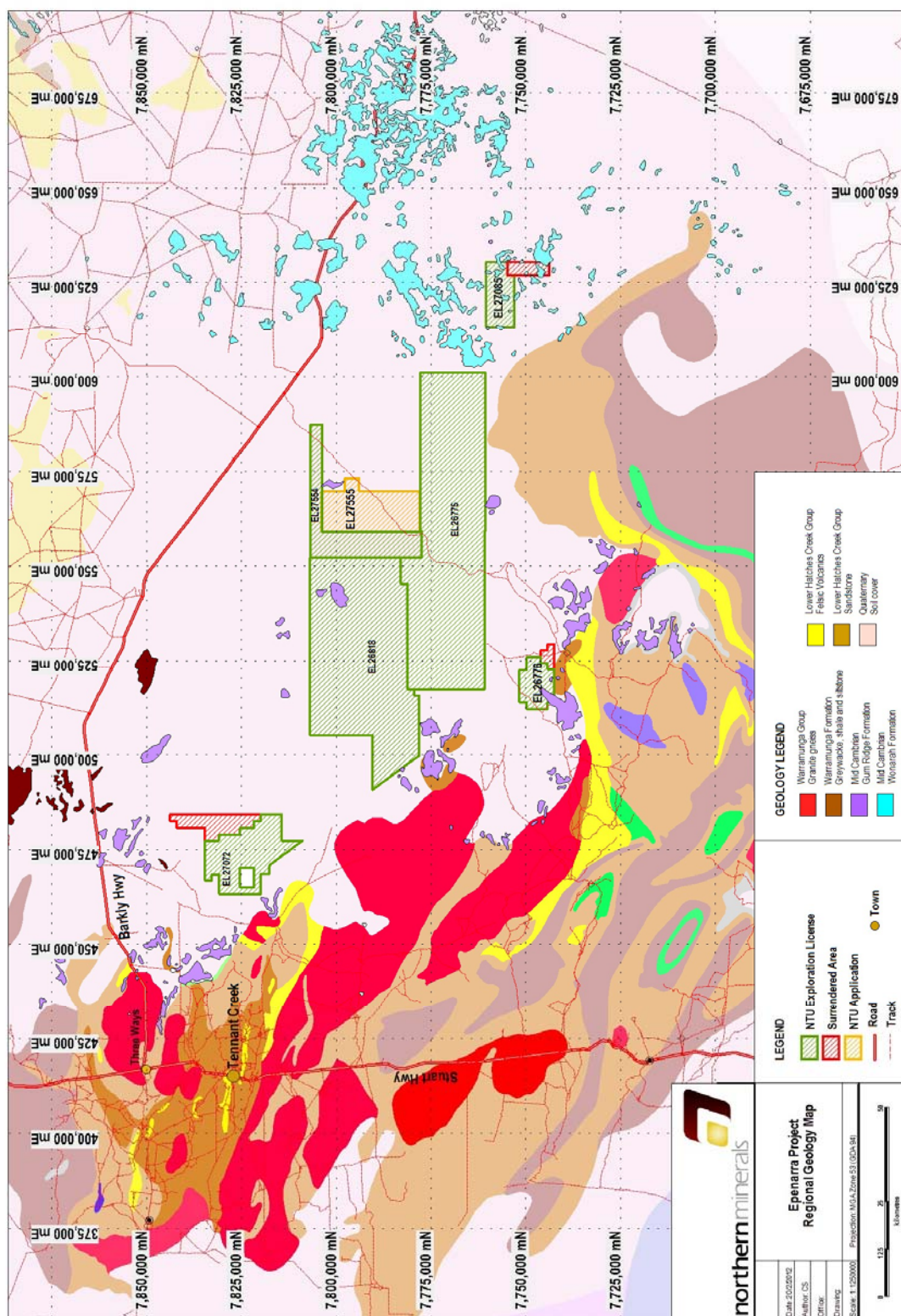
5.0 REGIONAL GEOLOGY

The majority of the exploration licenses, with exception to EL27072 lie within the Frew River and Alroy 1:250,000 map sheet. License EL27072 lies with the Tennant Creek 1:250,000 map sheet. The 1:250,000 explanatory notes, prepared by the NTGS, describe and map the majority of the license areas as being covered by Quaternary soil, sand and alluvium cover.

The Palaeozoic rocks in the Frew River sheet area are of Cambrian age and include the shallow marine and sub-aerial sediments which overlie the earlier lithologies in the north-western part of the Georgina Sedimentary Basin. The Cambrian sediments extend from the Frew River sheet area north and east towards the Barkly Tablelands.

The Gum Ridge Formation, comprised of chert, shale, sandstone, conglomerate, limestone and dolomite phases at subsurface, is the oldest Cambrian unit. The Wonarah beds overlie the Gum Ridge Formation and are considered to be slightly younger in age, comprising of chert, oolitic chert and silicified coquinite. An unnamed Cambrian unit which comprises of a grey dolomitic and brown oolitic chert sub-crops in the central-east and south-east of the Frew River map sheet area. It is uncertain, but this unit may be part of the Wonarah beds.

The Lower Proterozoic rocks include the Warramunga and Hatches Creek Groups and intrusive igneous rocks. The Warramunga Group is the oldest unit in the Frew river sheet and comprises of yellow-red-purple coloured thin bedded sandstone, greywacke and siltstone. The Hatches Creek Group overlies the Warramunga Group and comprises a grey-pink-brown, coarse grained thin to medium bedded quartz sandstone, quartz greywacke, quartzite, siltstone, shale, pebble conglomerate, basic and acid lavas (Figure 2).



6.0 EXPLORATION ACTIVITIES

During 2010-11 compilation of publicly available regional data sets such as aeromagnetism, radiometrics, gravity and geological mapping was completed. Interpretation and analysis of this data is being reviewed in order to determine and prioritise initial targets and areas for on-ground investigation.

Several attempts were made to commence on-ground exploration activities during 2011. Regional bushfires which burnt throughout August/September delayed on-ground exploration, and an attempt to get on the ground in late August/early September had to be postponed due to mustering activities (aerial and on-ground) in the area surrounding the Epenarra Homestead located west of EL27085.

A second attempt in mid-November also had to be abandoned due to heavy rains in the region. As a result, it was not possible to complete the proposed mapping, sampling and drilling activities that were scheduled for 2011.

7 PROPOSED EXPLORATION

7.1 Geophysical Modelling

In order to obtain a better regional and local understanding of the Georgina Basin depositional environment, a geophysical interpretation of the magnetic and gravity data will be undertaken to determine depth to bedrock in order to determine potential phosphate targets for drilling. Phosphate deposits such as Wonarah are known to be spatially associated with basement highs reflecting palaeotopographic highs.

The geophysical work will include structural interpretation and depth modelling of windowed areas which encompasses the Epenarra tenement. Previous interpretation of the regional magnetic data has identified potential targets around possible magnetic highs that are favourable depositional environments for phosphate mineralisation.

The geophysical modelling will be able to contribute valuable information which will help validate these magnetic features and provide a better understanding of the basement depths that surround them.

7.2 Geological Mapping and Geochemical Sampling

The entire tenement license areas will be subject to reconnaissance geological mapping and detailed mapping of target areas. The mapping programs will be focused on identifying target zones for surface geochemical sampling (rock chip and soil sampling) where appropriate. Following the identification of targets, a systematic geochemical sampling program will be implemented where appropriate (i.e. areas of outcrop and/or in-situ soil cover).

The follow-up mapping and sampling of target areas defined from the initial reconnaissance work will be initiated. This will include more detailed mapping and geochemical sampling where appropriate to refine target areas in preparation for drilling.

7.3 Aircore Drilling

Regional Aircore (AC) or Rotary Air Blast (RAB) Drilling will be carried out over target areas defined from the previous work. Drilling will be reconnaissance in nature with holes wide-spaced (1km) and to depths of 40-50m. Some site preparation may be required in order to facilitate drill rig access, although existing tracks will be used wherever possible.

8 REFERENCES

Frew River, NT 1:250,000 Geological Series Explanatory Notes, Sheet SF/53-3

Alroy, NT 1:250,000 Geological Series Explanatory Notes, Sheet SF/53-15

Tennant Creek, NT 1:250,000 Geological Series Explanatory Notes, Sheet SF/53-14