# **Rio Tinto Exploration Pty Ltd**

ABN 76 000 057 125 / ACN 000 057 125 A member of the Rio Tinto Group Annual Technical Report for the period 22 April 2016 to 21 April 2017 EL 23565 Zamia Creek

Report Title: Annual Report EL 23565 Zamia Creek

Tenement Number(s): EL 23565

Project: Arnhem Land Zinc

Tenement Holder: Rio Tinto Exploration Pty Ltd

Tenement Operator: DPG Resources Australia Pty Ltd

Commodity: Basemetals

Author: DPG Resources Australia Pty Ltd

Date of report: June 2017

Mapsheet: SD5307 Blue Mud Bay

**Distribution:** Department of Primary Industry & Resources, NT

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### **Digital Files**

EL23565\_2017\_A\_01\_Report.pdf EL23565\_2017\_A\_02\_SoilGeochem.txt EL23565\_2017\_A\_03\_RockGeochem.txt EL23565\_2017\_A\_04\_StreamGeochem.txt EL23565\_2017\_A\_05\_DetailsICP61Assay.pdf EL23565\_2017\_A\_06\_Files.txt

### 1 Abstract

This report documents work undertaken by DPG Resources Australia Pty Ltd (DPG) on EL 23565 for the period 22 April 2016 to 21 April 2017.

Following DPG's successful negotiation of a farm-in agreement with Rio Tinto Exploration Pty Ltd (RTX) for EL 23565 on 23 January 2014, DPG engaged a technical consultant to undertake a tectono-stratigraphic review of the tenement. DPG experienced delays with scheduled meetings with the Northern Land Council (NLC) and the Traditional Owners in 2015, and as a result field work could not be undertaken on EL 23565.

In August 2016 a Squirrel Helicopter was mobilized from Darwin for reconnaissance and initial soil, rock chip and stream sediment sampling. Due to the absence of a Traditional Owner of the area the programme was limited. The target lithology being the Barney Creek equivalent is recessive in the area traversed.

### 2 Introduction

### 2.1 Location

The tenement area is located approximately 80km north-west of Numbulwar in south east Arnhem Land.

### 2.2 Title History

EL 23565 was applied for on 3 April 2002. Partial consent of the application area resulted in the granting of EL 23565 to Rio Tinto Exploration Pty Limited (RTX) on 22 April 2010. The areas of nonconsent ELA 27919 and ELA 27920 are in moratorium. A reduction of 19 blocks was made on renewal in 2016.

Tenement No.	Teneme nt Name	Ownership	Application Date	Grant Date	Blocks Applied	Blocks Granted
EL23565	Zamia Creek	Rio Tinto Exploration Pty Limited	03/04/2002	22/4/2010	62	38
Reduction				22/4/2016		19

#### 2.3 Access

Activities conducted on the tenement are in accordance with the provisions of the Aboriginal Land Rights Act 1975 (ALRA) Access is by helicopter.

### 3 Geology

### 3.1 Geological setting

The tenement area covers ground surrounding the Parsons Range Fault. Dominant geological units in the area are Mesoproterozoic McArthur Group siltstones, sandstones and dolomites and Neoproterozoic Roper Group sandstones and conglomerates (Haines et al, 1999). The tenement is considered prospective for sedex-style base metal mineralisation, similar to that at McArthur River (HYC) lead-zinc deposit located approximately 300 km to the south.

### 3.2 Exploration History

No significant exploration activities have been undertaken by past explorers in the tenure area.

### 3.3 Exploration Rationale

The tenement is considered prospective for sedex-style base metal mineralisation, similar to that at McArthur River (HYC) lead-zinc deposit located approximately 300 km to the south.

### 3.4 Exploration Index Map

The tenement area is located approximately 80km north-west of Numbulwar in south east Arnhem Land and shown on Fig 1 below.

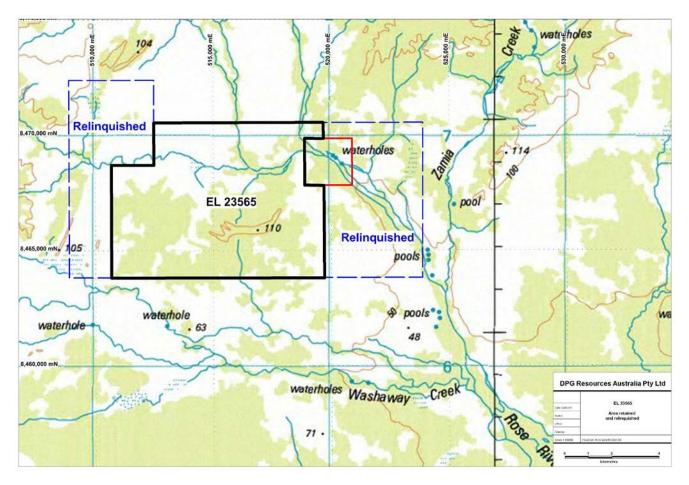


Figure 1: Location Plan

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### 4 Geological Activities and Office Studies

In August 2016 Dr Mark Hinman and DPG representatives spent two days walking the accessible areas and taking some orientation soil, rock and stream sediment samples. This work was based out of the Walker River camp on EL 24305. EL23565 is associated with target area A on the included map (Fig 2)

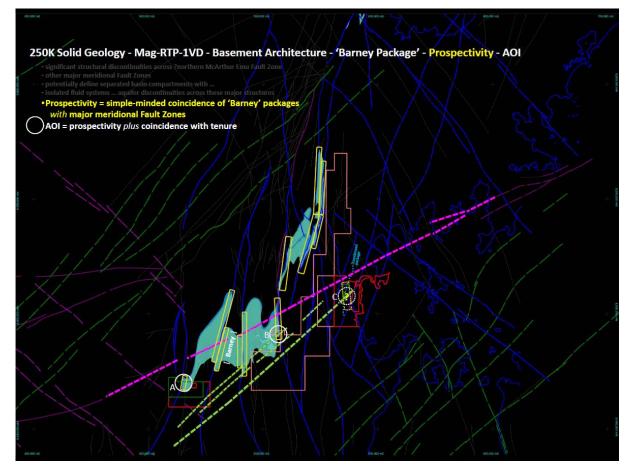


Figure 2: tectono-stratigraphic review of EL 23565

The area is lightly wooden grassland with low rubbly outcrop of certain units. The mudstones are recessive. The initial geochemistry is interpreted as effective in discriminating between rock units and gridded sampling is planned with geophysics. Assay results did not show elevated economic mineralisation.

No invasive activities were undertaken.

Sample locations are shown on Figure 3.

Assay data and details of ALS Method ICP-ME61 are included in;

EL23565\_2017\_A\_02\_SoilGeochem.txt EL23565\_2017\_A\_03\_RockGeochem.txt EL23565\_2017\_A\_04\_StreamGeochem.txt EL23565\_2017\_A\_05\_DetailsICP61Assay.pdf

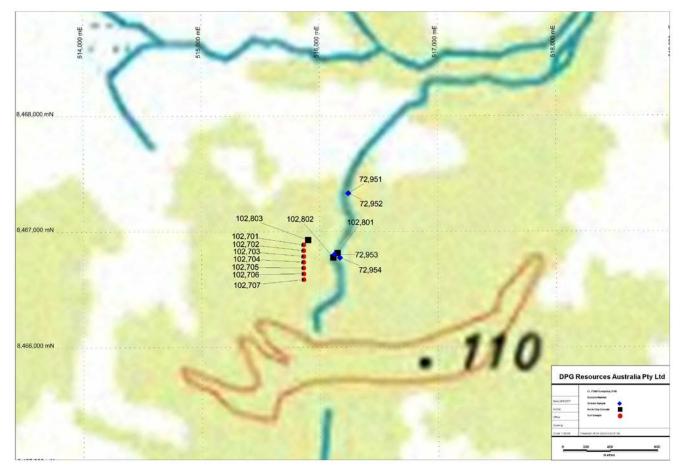


Figure 3. Sample Locations.

### 5 Conclusions and Recommendations

The tenement remains prospective for base metal mineralisation of the SEDEX style. The terrain is amenable to gridded soil sampling and ground based geophysics such as IP and magnetics. Geological mapping and gridded soil sampling is planned for the 2017 field season.

### 6 References

Haines, P W et al., (1999) 1:250 000 Geological Map Series Explanatory Notes. Blue Mud Bay SD53-7 Northern Territory Geological Survey.