

**PRiMARY**  
GOLD



**ANNUAL REPORT**

***EL29330 - Mt Bundy Project  
Gold Exploration***

**For Period Ending 22<sup>nd</sup> October 2016**

**Distribution:-**

1. DPIR Darwin NT
2. Primary Gold Limited

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# TABLE OF CONTENTS

<b>1</b>	<b>EXECUTIVE SUMMARY</b> .....	<b>3</b>
<b>2</b>	<b>COPYRIGHT</b> .....	<b>4</b>
<b>3</b>	<b>INTRODUCTION</b> .....	<b>5</b>
<b>4</b>	<b>LOCATION AND ACCESS</b> .....	<b>5</b>
<b>5</b>	<b>TENEMENT DETAILS</b> .....	<b>5</b>
<b>6</b>	<b>GEOLOGICAL SETTING</b> .....	<b>7</b>
6.1	Regional Geology.....	7
6.2	Local Geology .....	9
<b>7</b>	<b>EXPLORATION ACTIVITY YEAR ENDING 22<sup>nd</sup> October 2016</b> .....	<b>11</b>
<b>8</b>	<b>RECOMMENDATIONS AND CONCLUSIONS</b> .....	<b>11</b>
<b>9</b>	<b>REFERENCES</b> .....	<b>12</b>

## 1 EXECUTIVE SUMMARY

EL29330 is a tenement of the Mt Bundy exploration group located about 81 km SE of Darwin and approximately 40km SW of the historic Toms Gully Mine owned by Primary Gold Limited (PGO) and 9km east of the small township of Adelaide River. The licence was granted to Primary Minerals Pty Ltd in October 2012 for a period of 6 years. Primary Minerals Pty Ltd is a wholly owned subsidiary of PGO.

The tenement is underlain in the north by extensive areas of Cainozoic alluvium, colluvium and soil with minor outcropping feldspathic lithic greywackes of the Burrell Creek Formation of the Finniss River Group becoming more frequent in the south of the tenement and lies predominantly west of the Mt Shoobridge Fault.

The thickness of the Burrell Creek Formation is difficult to establish but is thought to be >1000m and is conformably underlain to the NE of the tenement by the formations of the South Alligator Group. This Burrell Creek Formation hosts numerous small to moderately sized gold bearing quartz vein style prospects, the largest of which is the abandoned Goodalls Mine some 11km east of the tenement.

Work completed during the reporting period by PGO was limited to a desktop review of the tenements prospectivity by the new management team and the preparation of an application for an Authority Certificate. The desktop assessment included the review of internal company data and available public data. The lodging of an Authority Certificate to survey for aboriginal sacred sites is to provide future access to proposed exploration sites within EL29330.

The tenement forms part of the greater PGO Mount Bundy Project which includes the historic Toms Gully, Rustlers Roost and Quest 29 mines/deposits. PGO has undertaken a successful feasibility study on the Toms Gully Mine and has commence a feasibility covering the larger Toms Gully, Rustlers Roost and Quest 29 mining area. In the future it is hoped to use the infrastructure development at the existing mining area to realise the potential of regional prospects such as may be found on Exploration Licence 29330.

The proposed work program for the fourth year of tenure is to include completion of the sacred site survey (i.e. Authority Certificate granted), ground reconnaissance with follow up geochemical programs and geophysical surveys as appropriate to generate high priority drill targets. Drill-testing of the identified targets will also be considered and decision will be made based on the results of the ground reconnaissance and prospecting work.

## **2 COPYRIGHT**

This document and its content are the copyright of Primary Gold Ltd (PGO). The document has been written by Justin Robins and Marat Abzalov for submission to the Northern Territory Department Industry and Resources as part of the tenement reporting requirements as per Regulation 87 of the Minerals Titles Act.

Any information included in the report that originates from historical reports or other sources is listed in the “References” section at the end of the document.

This report may be released to open file as per Regulation 125(3)(a).

### **3 INTRODUCTION**

EL29330 is a tenement of the Mt Bundy exploration group located about 81 km SE of Darwin. The tenement forms part of the broader Mt Bundy group of projects owned by Primary Gold Limited (PGO) covering some ~2,000km<sup>2</sup>. The licence was granted PGO in October 2012.

This report documents the exploration activities conducted from 23<sup>rd</sup> October 2015 to 22<sup>nd</sup> October 2016.

### **4 LOCATION AND ACCESS**

EL29330 is best accessed via the Stuart Highway, travelling some 112km south from Darwin to Haynes Road then travelling north east on Haynes Rd past Mt Bundy Station for some 10km to the western tenement boundary and then north via station tracks into the tenement (Figure 1). The station tracks provide good access for 4WD vehicles during the dry season, however these tracks become impassable after heavy rain, and therefore access is restricted throughout the wet season. The extent of the Authority Certificate survey area was defined by a desktop review. The Authority Certificate is to enable access across the site while protecting sacred aboriginal sites in the area.

The northern end of the tenement is traversed NE-SW by the Adelaide River and the local topography is dominated by the riverine flats of the same. In the south of the tenement outcrop increases and landform becomes more undulose. Topography generally reflects the underlying geology, low hills generally indicative of the presence of more massive feldspathic lithic greywackes of the Burrell Creek Formation with intervening lower lying areas possibly having a more argillaceous parent.

### **5 TENEMENT DETAILS**

EL29330 was granted to Primary Minerals on 23<sup>rd</sup> October 2012 for a period of 6 years and expires on 22<sup>nd</sup> October 2018. In February 2013 Hydrotech International purchased 100% of the shares of Primary Minerals Pty Ltd and changed their name to Primary Gold Limited, Primary Minerals Pty Ltd is a wholly owned subsidiary of PGO. The tenement is 66 blocks in size covering approximately 220.9km<sup>2</sup>. A waiver from third year reduction was applied for and granted in late 2015.

The tenement overlies numerous cadastral leases;

- Perpetual Pastoral Lease, 991,1213 and 1183
- Pastoral Lease 903
- Crown Lease Pastoral (CLP) 1222 and 900
- Crown Land Trust (CLT) 1905 and 1914
- Hundred of Playford parcels 174, 198, 234 and 235
- Hundred of Howard parcel 181

The tenement falls within the Pine Creek SD 52-08 1:250,000 map sheet and the Batchelor 5171 1:100,000 map sheet.

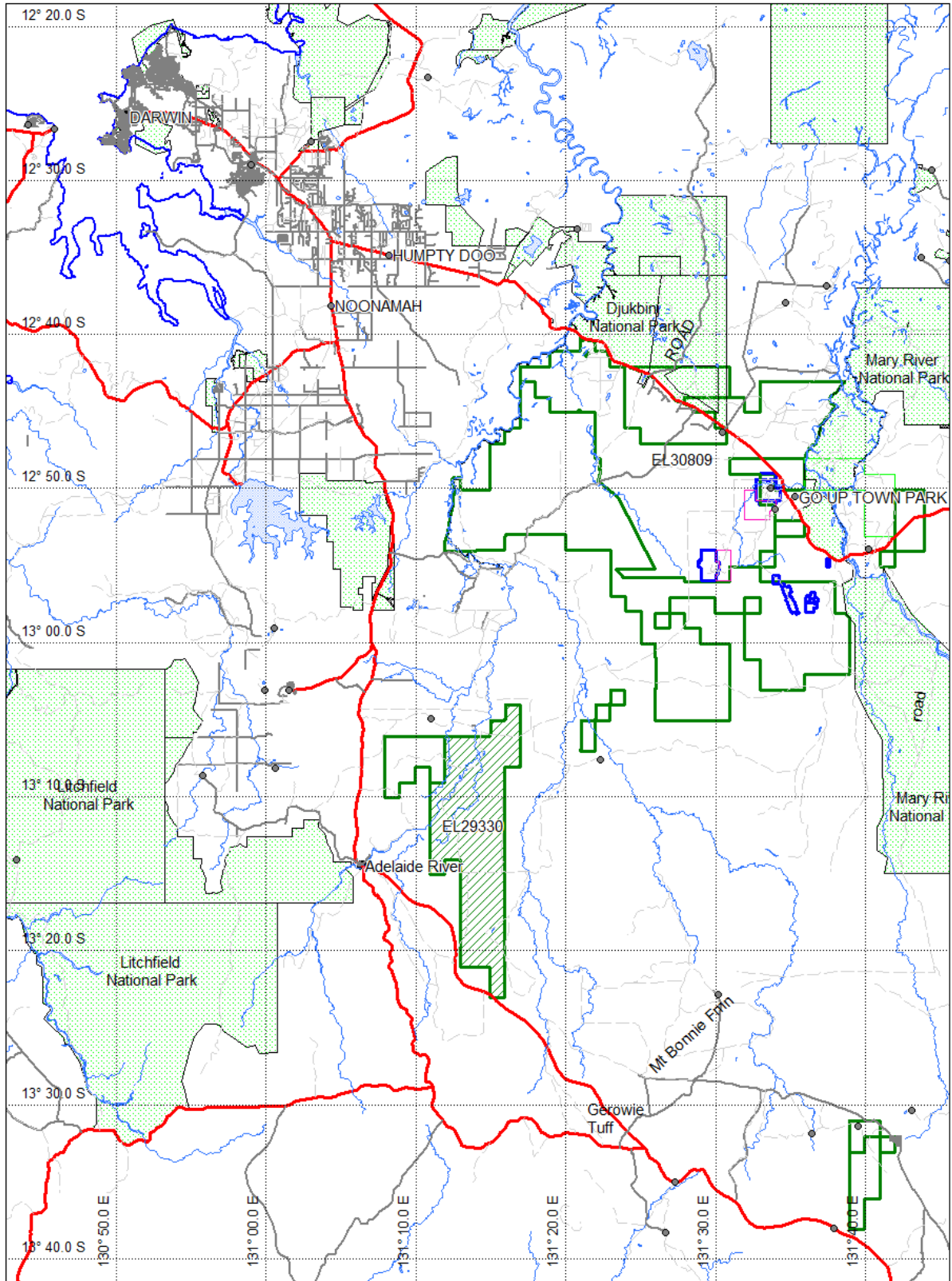


Figure 1 shows the location of EL29318.

## 6 GEOLOGICAL SETTING

### 6.1 REGIONAL GEOLOGY

EL29330 is located within the Archaean to Palaeoproterozoic Pine Creek Orogen, one of the major mineral provinces of Australia. The Pine Creek Orogen is a deformed and metamorphosed sedimentary basin up to 14 km maximum thickness covering an area of approximately 66,000 km<sup>2</sup> and extending from Katherine in the south to Darwin in the north. It hosts significant resources of gold, uranium and platinum group metals (“PGMs”), as well as substantial base metals, silver, iron and tin-tantalum mineralization.

The Pine Creek Orogen comprises series of late Archaean granite-gneiss basement domes, which are overlain by a fluvial to marine sedimentary sequence. Several highly reactive rock units are included within this sedimentary sequence including carbonaceous shale, iron stones, evaporite, carbonate and mafic to felsic volcanic units of the South Alligator and Finnis River Groups. This sequence has been subjected to regional greenschist facies metamorphism and multiphase deformation, which has resulted in the development of a northwest trending fabric. Subsequent widespread felsic volcanism and the intrusion of granitoids caused contact metamorphism, in aureoles between 500 m and 2 km wide that overprint the earlier regional metamorphism. After the granitoid intrusions an extensive array of northeast and northwest trending dolerite dykes intruded the metasedimentary sequence during regional extensional deformation.

Gold mineralization within the Pine Creek Orogen is preferentially developed within strata of the South Alligator Group and lower parts of the Finnis River Group along anticlines, strike-slip shear zones and duplex thrusts located in proximity to the Cullen Granite Batholith. Of particular stratigraphic importance are the Wildman Siltstone, the Koolpin Formation, Gerowie Tuff, Mount Bonnie Formation and the Burrell Creek Formation.

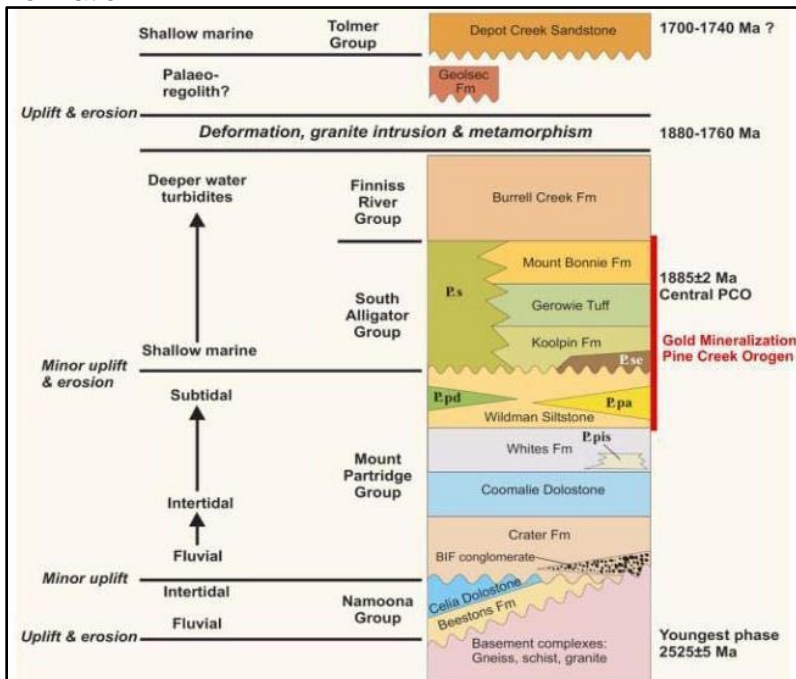


Figure 2: Stratigraphic column Pine Creek Orogen

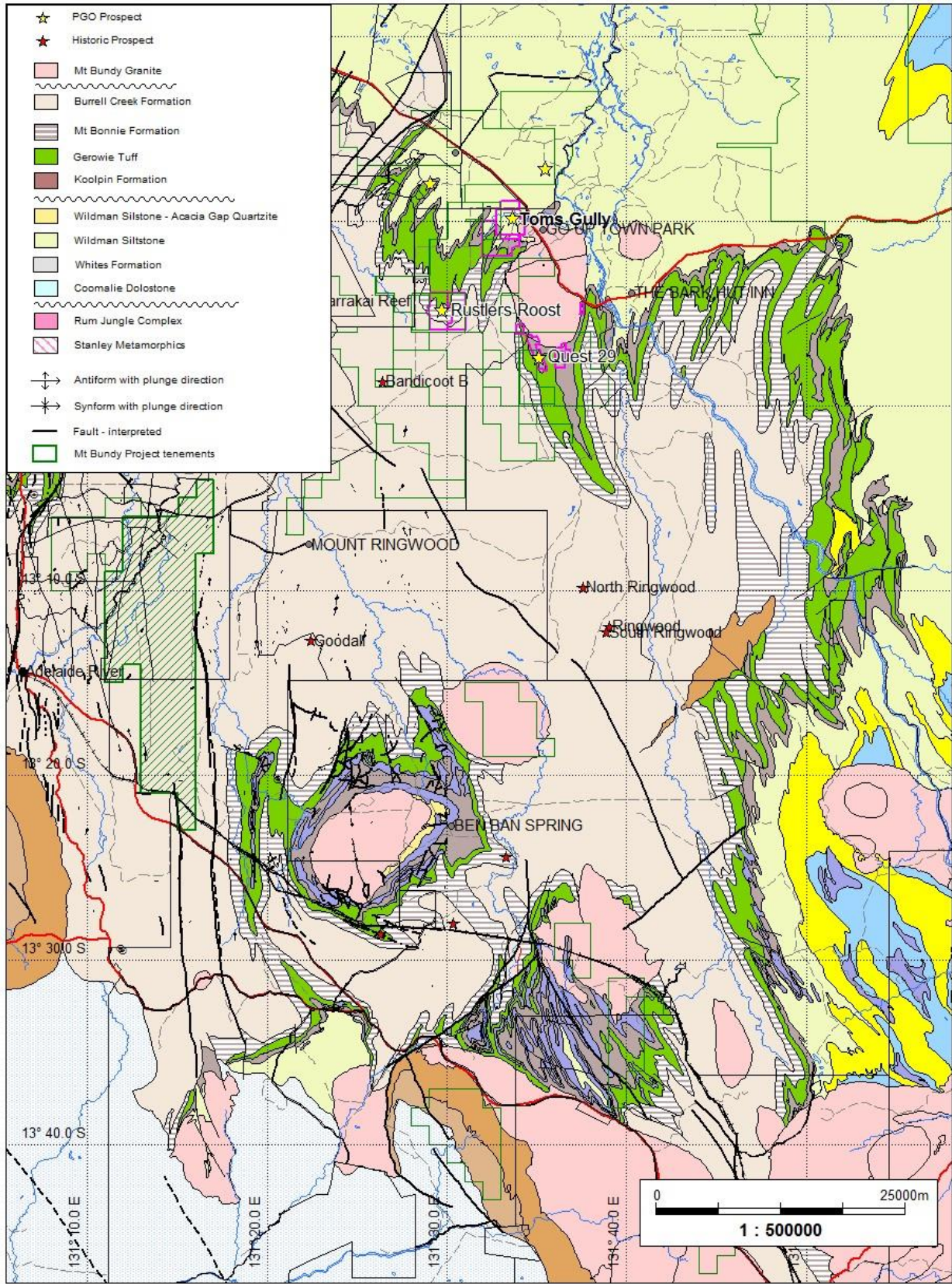


Figure 3: Geology of the Pine Creek Orogen (NTGS Mapping)



## 6.2 LOCAL GEOLOGY

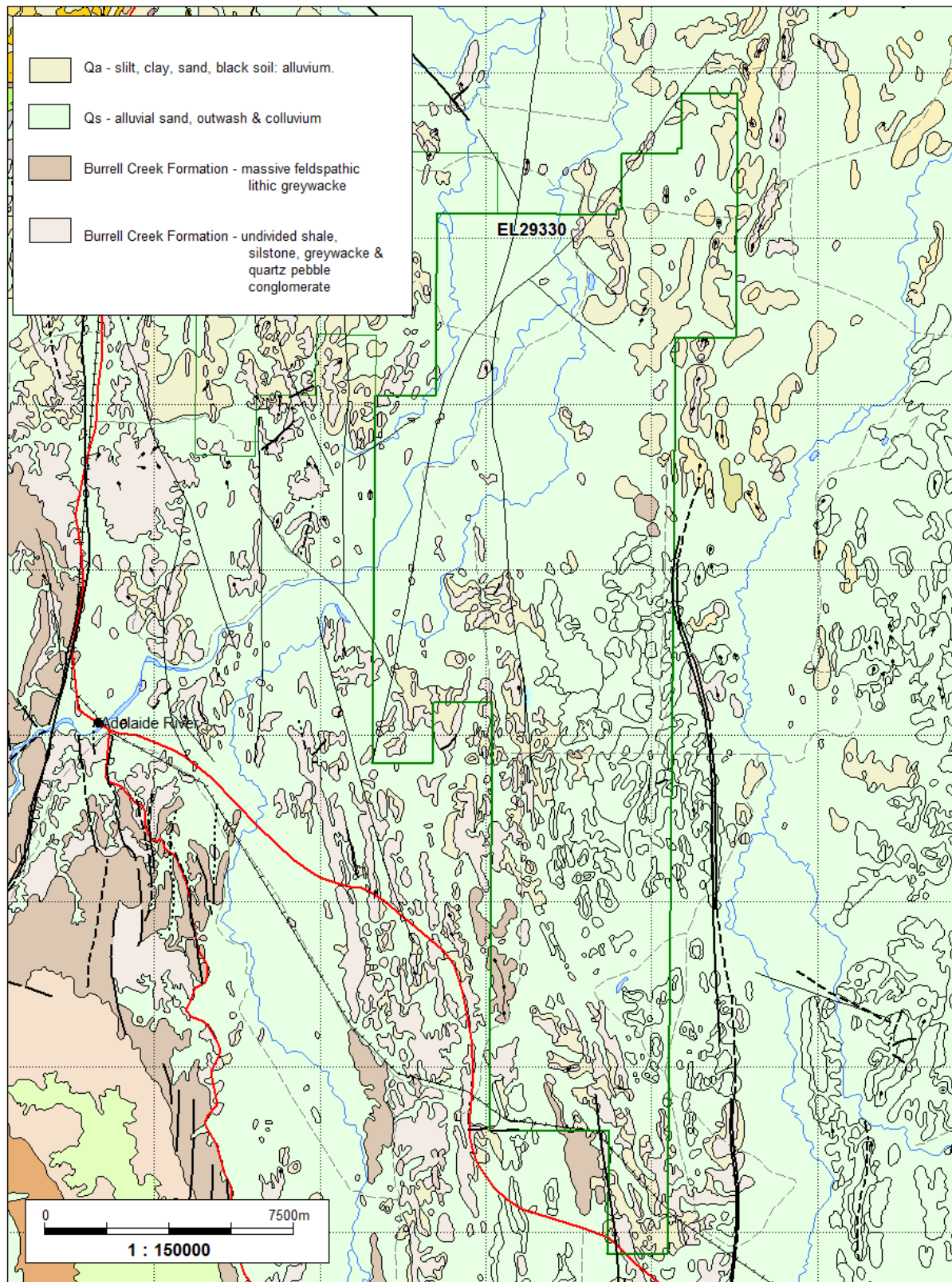


Figure 4: Tenement geology of EL29330 from Batchelor 5171 1:100,000 map sheet

The tenement is largely underlain by Cainozoic alluvial and colluvial cover, particularly in the north of the tenement where the riverine plains of the Adelaide River transect the tenement. In the south of the tenement Cainozoic soils have developed over massive feldspathic lithic greywackes of the Burrell Creek Formation and undivided Burrell Creek Formation. Where outcrop is observed stratigraphy dips steeply to the west / sub vertical and strikes approximately north south. Outcrop becomes more frequent in the south of the tenement and a greater topographic expression is noted over the units logged by the NTGS as massive feldspathic lithic greywackes of the Burrell Creek Formation.

The NTGS has described the Burrell Creek Formation as consisting of reddish brown siltstone and shale with a well defined cleavage, greywacke and quartz pebble conglomerate. Cross cutting quartz veins are common. The maximum measured thickness of the Burrell Creek Formation is 1800m near Predictor Hill, 15km north of the Adelaide River township. Massive felspathic lithic greywacke is interpreted to underlie the tenement, outcrop is poor in the north of the tenement adjacent to the Adelaide River floodplain but improves to the south. The formation is thought to have been deposited in a submarine fan with deposition dominated by turbidity flows.

Historic mineralisation has been noted in the south of the tenement at the Mt Tymn Au Mine. Here small open cut workings on narrow hydrothermal veins have produced approximately 203t of ore grading 1.7g/t Au for approximately 300g of gold.

## **7 EXPLORATION ACTIVITY YEAR ENDING 22<sup>ND</sup> OCTOBER 2016**

No field work has been undertaken during the past twelve months on EL29330, work has been restricted to a desktop review of the geology and previously compiled historic data by the new management team that replaced previous management during the early part of 2016. At the same time the company's focus remained on the completion of the Environmental Impact Statement (EIS) for the nearby Toms Gully Mine.

Management's review has been focused on an evaluation of the prospectivity of all tenements across the project package. This work has included:

- Compilation of the all available geological and geophysical maps into a single and coherent georeferenced GIS dataset. In order to facilitate the 3D interpretation of the data, the GIS data were transferred into Micromine® project, which was a basis for metallogenic analysis of the areas encompassed into PGO's tenements;
- Various geochemical data (BLEG, LAG, rock chip, stream sediments) have been compiled into a single database and used for assessment exploration prospectivity of the various tenements. EL 29330 was among the priority exploration targets of PGO.

The desk-top study has culminated in the lodgment of several Authority Certificates to the Aboriginal Areas Protection Authority to survey areas for aboriginal sacred sites thus allowing future access to proposed exploration targets. This includes the lodgment of an Authority Certificate for EL29330. Additionally, PGO has received feedback on the EIS from the Northern Territory Environmental Protection Authority (NTEPA) to recommence operations at the nearby Toms Gully Mine site. Based on the feedback further environmental work is required which has been commenced. It is anticipated that a supplement containing this further work will be submitted to the NTEPA in late 2017.

EL29330 forms part of the greater PGO Mount Bundy Project which includes the historic Toms Gully, Rustlers Roost and Quest 29 mines/deposits. PGO has undertaken a successful feasibility study on the Toms Gully Mine and has commence a feasibility covering the larger Mount Bundy area that incorporates Rustlers Roost and Quest 29. The longer term strategy of re-opening Toms Gully and additional deposits across the project is a critical step in realising the potential of other smaller regional prospects such as might be found on EL29330. Further additions to the known mineral inventory across the Mount Bundy Project will lead to the further enhancement of the project's economics and longevity.

A total of \$22,425.71 was spent on EL29330 during the reporting period. This was below the required covenant.

## **8 RECOMMENDATIONS AND CONCLUSIONS**

During the 2017-2018 exploration year activities will include with reconnaissance field visits and geological mapping. Rock chip and soil sampling will be conducted to follow up areas of interest and investigate identified targets. The scanning and collation of the reports and documents from previous explorers will continue.

Ground geophysical surveys, with emphasis on the ground magnetics and IP surveys, will be planned, ~~as required~~, over the extensions of identified mineralising structures at Mt Tymn and over validated geochemical anomalies.

PGO considers the EL 29330 tenement as highly prospective and intends to retain this license as it does suggest significant potential to discover new mineralisation near the

Toms Gully, Rustlers Roost and Quest 29 deposits.

## 9 REFERENCES

Ahmad, M., Wygralak, A.S., Ferenczi, P.A. and Bajwah, Z.U. 1993. *Pine Creek SD52-8 Explanatory Notes and Mineral Deposit Data Sheets. 1:250,000 Metallogenic Map Series*. Department of Mines and Energy, Northern Territory Geological Survey, Darwin Australia.

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