FINAL REPORT

EL29318 - Mt Bundy Project

For Period Ending 22\textsuperscript{nd} October 2015

Distribution:-

1. DME Darwin NT
2. Primary Gold, Perth Australia

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1 EXECUTIVE SUMMARY

EL29318 is a tenement of the Mt Bundy exploration group located 90 km SE of Darwin, and is situated approximately 30km SW of the historic Toms Gully Mine owned by Primary Gold and 30km NE 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 and was surrendered in entirety on 21st October 2015. Primary Minerals is a wholly subsidiary of Primary Gold Ltd.

The tenement is underlain 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.

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 south of the tenement.

Work completed on EL29318 by Primary Minerals during project tenure (23rd October 2012 to 22 October 2015) was limited to desktop literature reviews of available public data.

The tenement formed part of the greater Primary Gold Mount Bundy Project which includes the historic Toms Gully, Rustlers Roost and Quest 29 Mines. A review of the potential for the tenement to host economic mineralisation based on the work completed by previous explorers was conducted during 2015, the result of this work indicated low likelihood for economic mineralisation and the tenement was recommended for surrender.
2 COPYRIGHT

This document and its content are the copyright of Primary Gold Ltd (PGO). The document has been written by Ben Cairns for submission to the Northern Territory Department of Resources as part of the tenement reporting requirements as per Regulation : 8 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)(d).
3 INTRODUCTION

EL239318 is a tenement of the Mt Bundy exploration group located about 90 km SE of Darwin. The tenement forms part of the broader Mt Bundy group of projects owned by Primary Gold (PGO) covering some ~2,000km². The licence was granted PGO in October 2012 and surrendered in October 2015.

This report documents the exploration activities conducted from 23rd October 2012 to 22nd October 2015.

4 LOCATION AND ACCESS

EL29318 is best accessed via the Stuart Highway, travelling some 95km south from Darwin to the Mt Ringwood Road and thence heading east for some 34km to the Mt Ringwood Station Homestead 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 during the wet season.

In the south the tenement is cut by the Margaret River and the landform is dominated by the riverine plains associated with this feature. In the north east of the tenement low lying ridges of Cainozoic soil are orientated NNE reflecting the regional strike of the near surface, underlying Burrell Creek Formation.

5 TENEMENT DETAILS

EL29318 was granted to Primary Minerals on 23rd October 2012 for a period of 6 years and was to expire on 22nd October 2018. Following a review of the tenement in 2015 Primary Gold opted to relinquish the tenement at the end of the 2014-2015 reporting year. Primary Minerals NL is a wholly owned subsidiary of the ASX listed Primary Gold Ltd. At relinquishment the tenement was 4 blocks in size covering 13.4km².

The tenement is located on Crown Lease Perpetual 1222, Crown Lease Perpetual 1058, Perpetual Pastoral Lease 1212 and Perpetual Pastoral Lease 1163 and 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

EL29318 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$^2$ 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 a 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 Finniss 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 Finniss 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.

![Stratigraphic column Pine Creek Orogen](image-url)
Figure 3: Geology of the Pine Creek Orogen (NTGS Mapping)
6.2 LOCAL GEOLOGY

The tenement is largely underlain by Cainozoic alluvial and colluvial cover (Figure 4), particularly in the south west of the tenement where the riverine plains of the Margaret River transect the tenement. In the north east of the tenement thin Cainozoic soils have developed over feldspathic greywackes of the Burrell Creek Formation. Where outcrop is
observed outside and adjacent to the tenement the Burrell Creek Formation is noted to
dip moderately to steeply to the east with a variable NNW to NNE strike.

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 but outcrop is exceptionally poor. The formation is thought to have been
deposited in a submarine fan dominated by turbidity flows.

There are several Au prospects in ground adjacent to EL29318; Star of the North, Great
Western, Great Northern and Goodalls, the latter being the most significant.
Mineralisation at Goodalls is hosted in a greywacke-shale sequence in sheeted
auriferous quartz-sulphide veins. The mineralised zone is 750m long and up to 50m wide
and extends to at least 400m deep and trends approximately north south. The zone is
approximately 60m east and sub-parallel to of a major antiformal axis.

After a review of the regional geological setting and the work of previous explorers it was
been decided that the exploration potential of EL29318 was limited and the tenement
was relinquished in entirety.
No field work has been undertaken on EL29318, work has been restricted to desktop studies of the geology and compilation of historic data. Reconnaissance trips to the project were undertaken to assess accessibility and project logistics.

Carpenteria Exploration briefly held tenure over the area as EL5507 in 1989. They undertook regional mapping, hammer prospecting and soil traverses over areas of outcrop and subcrop, mostly associated with anticlinal hinge zones. A 5ppb Au in soil anomaly was located (peak to 26.5ppb Au) and hammer prospecting and mapping identified small, discontinuous quartz veins as the source of the anomaly. Rock chips yielded no significant results and the ground was recommended for surrender.

Over the period 1992 to 1997 the land was held by a syndicate of five prospectors as EL7119. Minor soil and rock chip sampling was undertaken but their main focus was to sell the tenement into an IPO, this fell through and Giants Reef Mining briefly entered into a JV with the syndicate in 1995/96 but sold their interests to Paladin Resources as part of a package and Paladin withdrew from the EL7119 JV in 1996. The syndicate subsequently broke down and the ground was relinquished.

In 2004 the ground was acquired by Australasia Consolidated Limited and held until 2010. Work completed included a literature review, reinterpretation of regional magnetic and radiometric data; an orientation biogeochemical sampling program and four reconnaissance air core drill holes. The results from the bio sampling were equivocal but an aircore program was undertaken which confirmed the anomalies. Follow up air core drilling for 2154m was completed in 2007/2008, the second drilling confirms the location of the anomaly but it is described as too low a tenor to warrant further work (no results supplied).

There are several Au prospects in ground adjacent and to the south of EL29318; Star of the North, Great Western, Great Northern and Goodalls, the latter being the most significant, although none have been identified on EL29318. Mineralisation at Goodalls is hosted in a greywacke-shale sequence in sheeted auriferous quartz-sulphide veins. The mineralised zone is 750m long and up to 50m wide and extends to at least 400m deep and trends approximately north south. The zone is approximately 60m east and sub-parallel to of a major antiformal axis. No such vein systems are reported on EL29318.

Given the historic exploration that has been undertaken, the small size of the tenement; its proximity to the Mary River and significant amount of colluvium it is recommended that the tenement be surrendered.
9 REFERENCES


