

# EL30468

## Kurundi project

### Annual Technical Report.

For the period 9<sup>th</sup> March 2015 to 8<sup>th</sup> March 2016

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Report date:	15/8/15
Target commodities:	Gold (reef and alluvial), lead, copper, zinc, silver
Map sheets:	Bonney Well (SF5302); Ooradidgee (5857) & Davenport Range (5856)
Date:	24 <sup>th</sup> March 2016

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## Verification listing

Exploration work type	Filename	Format

### **Mapsheets:**

1:250.000: Bonney Well (SF5302)  
 1:100,000 Ooradidgee (5857) & Davenport Ranges (5856)

### **Keywords:**

*Location Name;* Kurundi  
*Earth science & related terms;* Quartz veins, anticlines  
*Environment of mineralisation;* Orogenic gold deposits, alluvial gold deposits, base metal deposits  
*Commodities/minerals;* Gold (reef and alluvial), lead, copper, zinc, silver  
*Exploration methods;* Research, structural interpretation, field mapping, aeromagnetic interpretation, soil geochemistry  
*Prospect names;* Kurundi, Six Holes, Andy's Find, Ray's Find, Kevin's Find, Three Holes, One Hole  
*Stratigraphic names;* Ooradidgee Group, Hatches Creek Group, Wauchope Subgroup, Hanlon Subgroup  
*Lithological name;* Mafic volcanics, arenites  
*Geological province name;* Davenport Province (Wauchope Fold Belt)  
*Geological age;* Mesoproterozoic

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## Abstract

The Kurundi project comprises four exploration licences; 30040, 30205, 30468 and 30664 which are held by the Kurundi Group. The project area hosts part of the historic Kurundi goldfield and is located in the Davenport Province, located in the central part of the Northern Territory.

The field program for EL30468 comprised one part of a larger exploration program completed over EL's 30040, 30205 and EL30468, conducted by members of the Kurundi Group during June and July 2015.

Work completed on EL30468 during the current reporting period included; a review of aerial survey imagery for the tenement area followed by reconnaissance field mapping. The field traverse identified surficial occurrences of quartz veining which suggested further occurrences of highly prospective quartz veining as was observed at the Angelo's Find and Maria's Find prospect areas immediately south of the EL30468 tenement boundary.

Further programs of geological mapping and sampling are currently proposed on EL30468 to further explore for prospective quartz veining along the extension of the Edmirringie basalt towards the north-west of the Angelo's Find and Maria's Find prospect areas.

## Project location and title history,

Exploration Licences 30040, 30205, 30468 and 30664 are held by the Kurundi Group over the historic Kurundi goldfield area approximately 100 km southeast of Tennant Creek (Figure 1).

EL30040 was granted on 24/4/2014, EL's 30205 was granted shortly thereafter on 17/7/2014. EL30468, the subject of this report was granted on 9/3/2015 and EL30664 was granted on 3/8/15 (Table 1).

**Table 1:** Summary of exploration licences held by the Kurundi Group

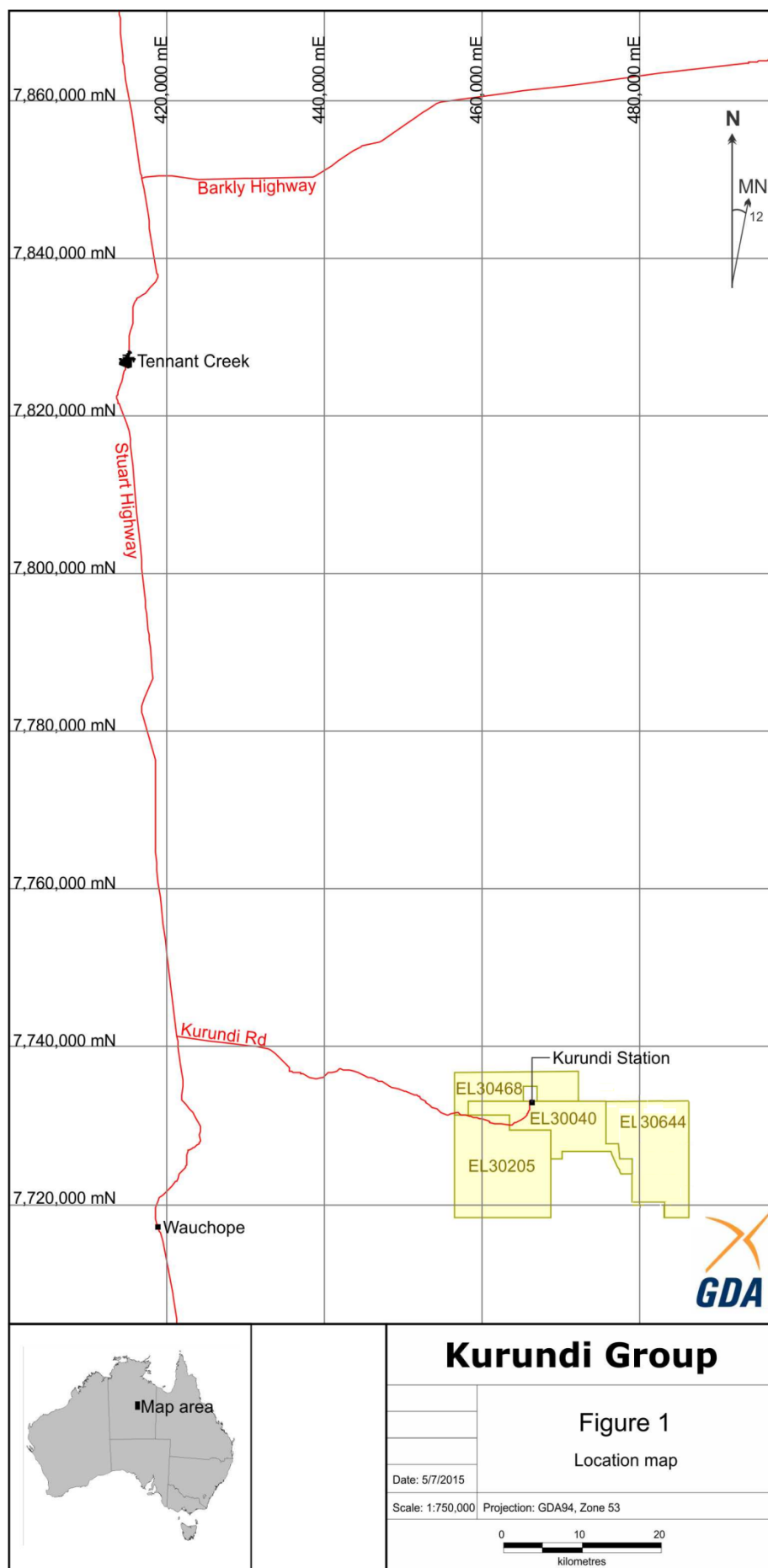
Licence No	Licencees	Granted	Expiry	Area (km <sup>2</sup> /units)
EL30040	Kevin DUNNELL Mary Ann HALL Thomas Raymond HALL Angelo FALZON Andrew HOPPE	24/4/14	23/4/20	81.54km <sup>2</sup> 28 blocks
EL30205	Kevin DUNNELL Andrew HOPPE Mary Ann HALL Angelo FALZON Thomas Raymond HALL	17/7/14	16/7/20	147.91km <sup>2</sup> 46 blocks
EL30468	Kevin DUNNELL Stevan ADDISON	9/3/15	8/3/21	57.9 km <sup>2</sup> 18 blocks
EL30664	Kevin DUNNELL Stevan ADDISON	3/8/15	2/8/21	118.98 km <sup>2</sup> 37 blocks

## Physiography and access

The Kurundi region has semi-arid tropical climate. The topography of the licence areas is variably flat to undulating punctuated with rugged ridge lines, cuestas and mesas.

The Kurundi project is located within the Kurundi and Singleton Pastoral leases. The nearest settlement is at the Kurundi homestead, which incorporates a small shop (including fuel) and mechanical workshop. An airstrip is located immediately west of the Kurundi homestead.

Access to the tenement area is via the sealed Stuart Highway from the regional centre of Alice Springs (380km south) or from the regional centre of Tennant Creek (120km north), then via the Kurundi Road (Binns Track), a well-formed dirt road off the Stuart Highway for a distance of 50km to the Kurundi homestead. Target areas within the tenements are then accessed via a series of established station tracks which provide access via 4WD, quad bike or motor bike or alternatively, are traversed on foot.



## Previous exploration & mining

The first prospecting in the district was Brown (1986) who discovered tin mineralisation in the Hatches Creek area to the southeast of Kurundi and outside the tenement area. Mapping and trial mining of quartz reefs in the Kurundi area was conducted by Davidson (1905). Despite gold results commonly reaching 1oz./tonne and quartz reefs reaching several metres width and hundreds of metres length, they were not good enough to be considered payable at the time.

The Kurundi Goldfield was proclaimed in 1940 following a series of small prospecting operations that continued through to the 1960's (Roarty, 1977). Following discoveries to the southeast of Kurundi, Geopeko acquired the exploration licences in 1965. Geopeko failed to delineate sufficient mineralisation however, with the leases being relinquished. Mineral Horizons held EL4815 from 1985 to 1987 conducting regional stream sediment and rock chip sampling. Australian Energy and Gold NL sought bulk tonnage operations under EL5884 but did not conduct on-ground exploration upon realising the narrow vein, high-grade nature of the goldfield.

EL9714 and subsequently, EL24937 were initially held by founding members of the Kurundi Group for metal detecting purposes. EL24937 was taken over by Grey Wolf Resources and relinquished in 2013.

## Geological setting

The Kurundi project is located in the Davenport Province, in the central part of the Northern Territory. The Davenport Province has been described by Donnellan (2013) as constituting the southern portion of the Tennant Region, defined by the Palaeoproterozoic Hatches Creek Group and similar, Palaeoproterozoic-aged rocks of the Warramunga Province. The province is defined by a wider domain of Palaeoproterozoic-aged rocks that are unconformably overlain by younger units of the Georgina Basin on the east and Wiso Basin on the west.

The project area encompasses part of the historic Kurundi Goldfield, hosted within the lower units of the prospective Hatches Creek Group which is adjacent to the historic Tennant Creek mineral field, a world-renown gold field hosted within rocks of the Warramunga Province further towards the north, north-west of the Kurundi area.

The Kurundi project leases are largely contained within the Kurundi Dome (or Kurundi Pound) which forms a distinctive landform, characterised by dome and basin folding of the Middle Proterozoic marine and non-marine clastics, carbonates, volcanics and volcanoclastics of the Ooradidgee Subgroup which are the lower-most units of the Hatches Creek group (Figures 2 & 3).

Within the Dome, the Edmirringee Volcanics are a succession of massive, vesicular, porphyritic and brecciated (flow top) basalts, volcanoclastics, clastic sedimentary rocks and chert. The interfingering Kurinelli Sandstone quartz arenites and conglomerates mostly underlie the Edmirringee Volcanics but have some incursions (or potential thrust repetition).

Exploration to date by the Kurundi Group et al., has focussed on the mineralised Ooradidgee Group, in particular; the Edmirringee Volcanic and Kurinelli Sandstone units which occur in deflationary outcrops and under shallow, transported cover that comprise the inner core of a large, regional anticline identified as the Kurundi Dome.



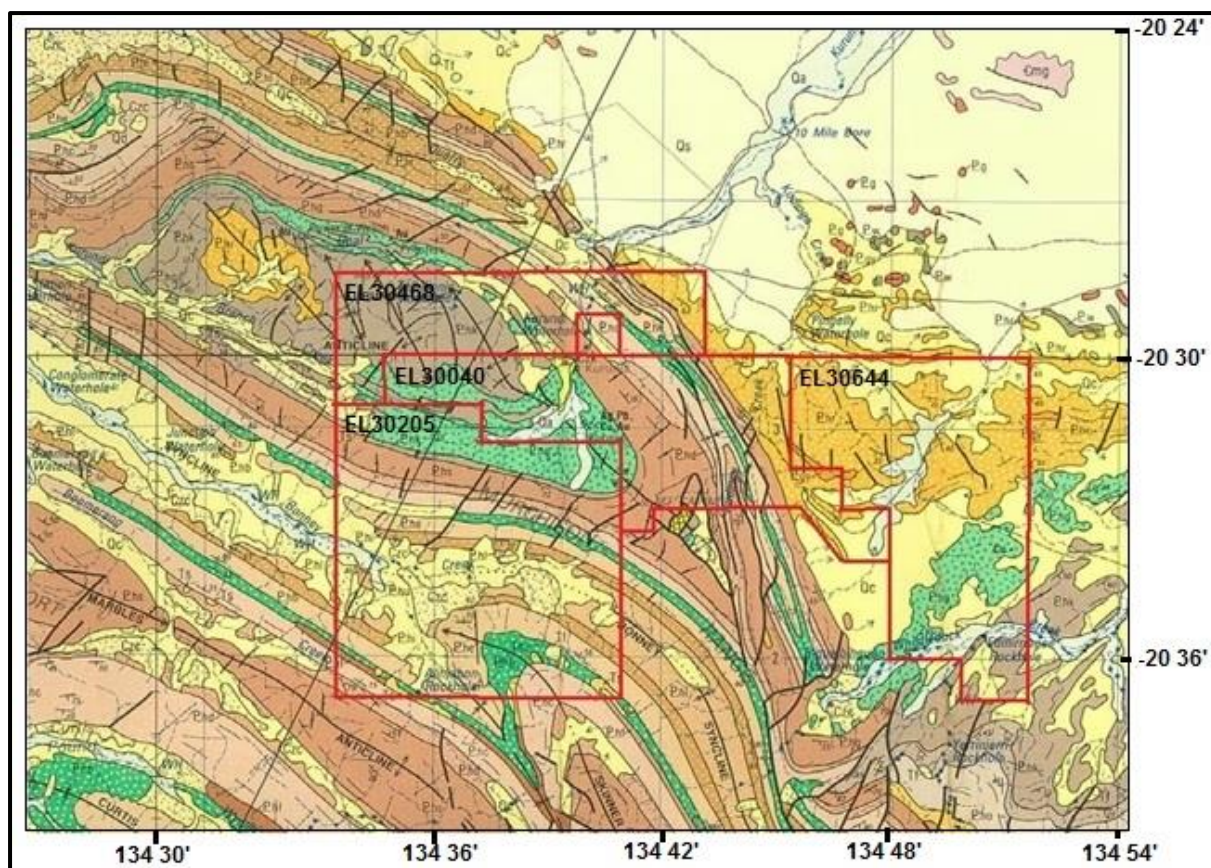


Figure 2: Regional geology of the Kurundi project (Stuart, et. al., 1986)

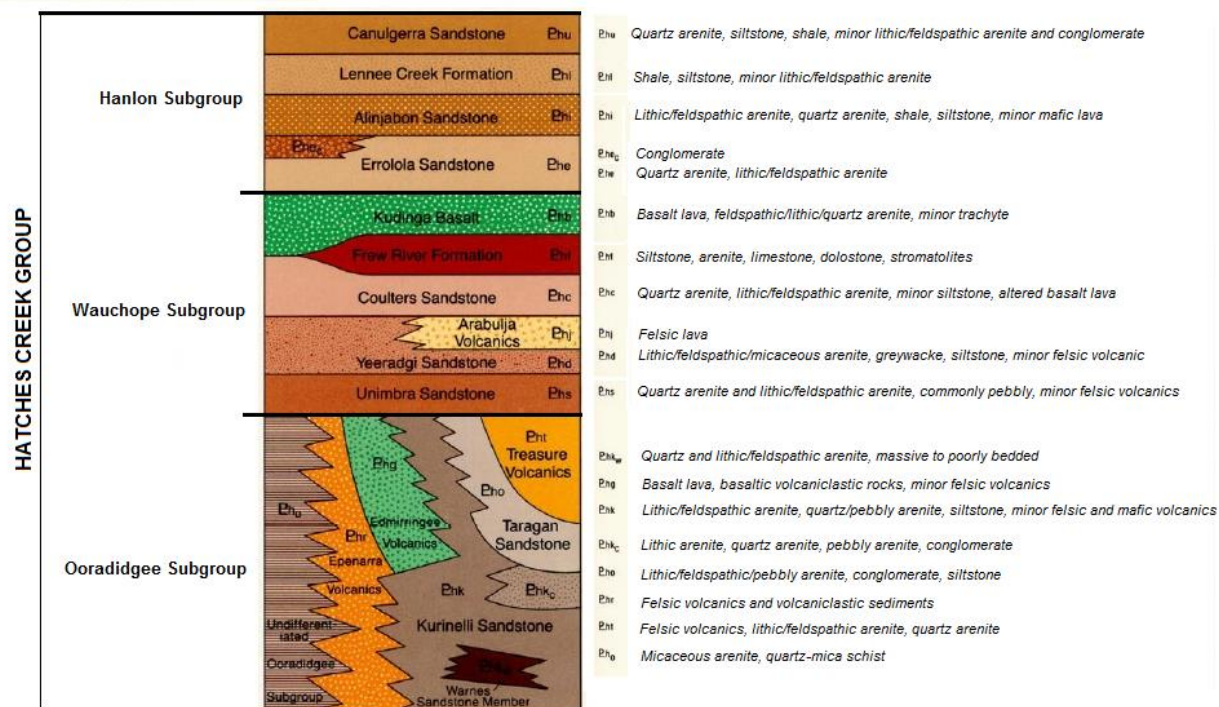
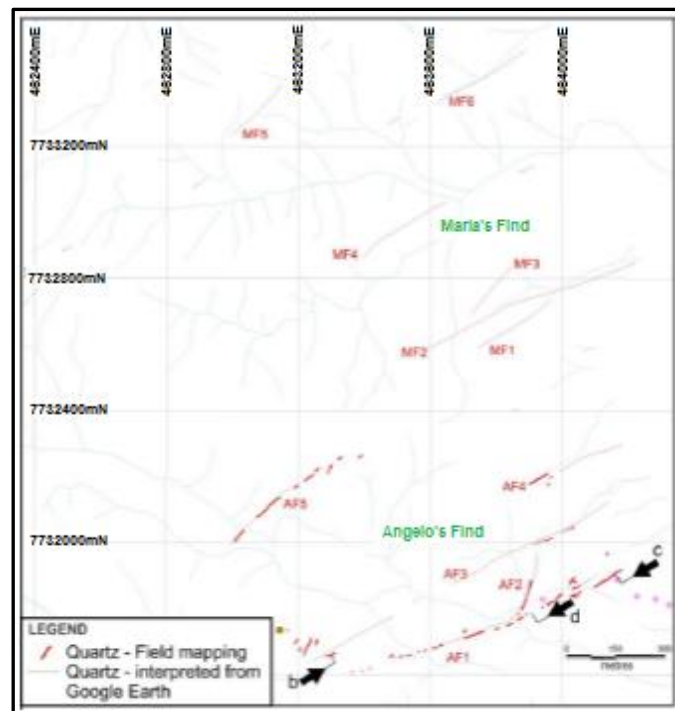


Figure 3: Lithological sequence for the Proterozoic Hatches Creek Group (Stuart, et. al., 1986)







**Figure 5:** Plot detailing location of quartz reefs in the Angelo's Find and Maria's Find prospects, based on interpretation of aerial survey images of the Kurundi project area (after Boucher, 2015)

This traverse identified minor occurrences of surficial quartz veining however, detailed geological mapping was not conducted at that point owing to the preliminary nature of the field program on EL30468.

The confirmation of surficial quartz veining on EL30468 provides evidence of the occurrence of highly prospective quartz veining similar to what was mapped at the Angelo's Find and Maria's Find prospects.

Further programs of geological mapping and sampling are currently proposed to further explore the extension of the Edmirringie basalt towards the north-west on EL30468. This work will be aimed at locating any further occurrences of highly prospective quartz veining along the north-western extension of this unit from the Angelo's Find/Maria's Find prospect areas.

### Future exploration program

A program of geological mapping and rock chip sampling is proposed to be completed on EL30468 during the next reporting period as part of a comprehensive exploration program currently planned by the Kunundi Group for EL's 30040&30205, EL30468 and the recently granted EL30664.

On EL30468, the field program will involve completion of detailed geological mapping along the extension of the Edmirringie basalt, which will aim to identify and sample further occurrences of highly prospective quartz veining similar to what was mapped further to the south-east of the EL30468 tenement boundary at the Angelo's Find and Maria's Find prospect areas.

## References

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