# FINAL REPORT

# EXPLORATION LICENCE EL30738

# Ooratippra Project

*For the reporting period 18th August 2015 to 3rd March 2016*

## CKA Resources Pty. Limited

Project Name: Ooratippra

Map Sheets: ELKEDRA SF53–07 1:250,000
HUCKITTA SF53–11 1:250,000

Commodities: Gold, Base Metals, Diamonds

Licensee: CKA Resources Pty. Limited.

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Date: April 2016

## CONTENTS



## LIST OF FIGURES



## LIST OF TABLES

## SUMMARY

EL30738 is situated approximately 300 kilometres northeast of Alice Springs straddling the Sandover Highway and is part of the CKA Resources Pty Limited's (CKA's) Ooratippra Project. The license was granted on the 16th August 2015 and surrendered on the 3th March 2016.

No exploration was carried out on the tenement for the duration it was held and the tenement was relinquished whilst CKA prioritised its holdings in the Ooratippra Project.

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# 1.0 INTRODUCTION

EL30738 is part of CKA's Ooratippra Project purchased in 2011 from Acacia Minerals Pty Limited, a wholly owned subsidiary of Equator Resources Limited. The transfer was approved by the Department on 31/10/2011. The Ooratippra Project straddles the Sandover Highway approximately 300 kilometres northeast of Alice Springs and in 2015 covered approximately 1,220 square kilometers.

In 2015 the project consisted of Exploration Licences EL 27568, EL 27626, EL 27718, and EL 27526 (EL27526 was previously SEL 27526 (granted in March 2010) which replaced EL's 22488, 24822, 24993, 25019 and 26866). EL 31033, 31034 and 30738 were granted during the year.

Whilst holding this ground, CKA explored for Diamonds and Olympic Dam style iron oxide copper gold ("IOCG") deposits based on the regional scale Ooratippra coincident magnetic and gravity anomaly.

CKA relinquished EL30738 on 3th March 2016.

# 2.0 LOCATION

The Ooratippra project is situated approximately 350km southeast of Tennant Creek and 300km northeast of Alice Springs. The Licence area spans the boundaries of the Elkedra and Huckitta 1:250 000 scale map sheets and are located on the Lucy (6153) and Ooratippra (6154) 1:100 000 scale map sheets.

Access to the Licence area from Tennant Creek is south via the Stuart Highway and then east onto the Ali Curung Aboriginal Community road. This leads to the Sandover Highway which is then followed approximately 80kms east to the northwest portion of the Licence area. Alternatively, the Licence area can be accessed via the Sandover Highway from Mount Isa or Alice Springs, and south using the Lucy Creek Station roads.

Most of the EL has little relief and vegetation, and is quite accessible via good station tracks servicing the water bores in the area.

There is also a good all-weather landing strip approximately 3 kilometres south of the Ooratippra Homestead.

Much of the project area is drained by the upper tributaries of the east flowing Sandover River system which includes Ooratippra Creek. These watercourses flow after rain during the wet season but are dry for most of the year.

Figure 1 shows the location of the Exploration Licence within the Ooratippra Project area in relation to the Sandover Highway.

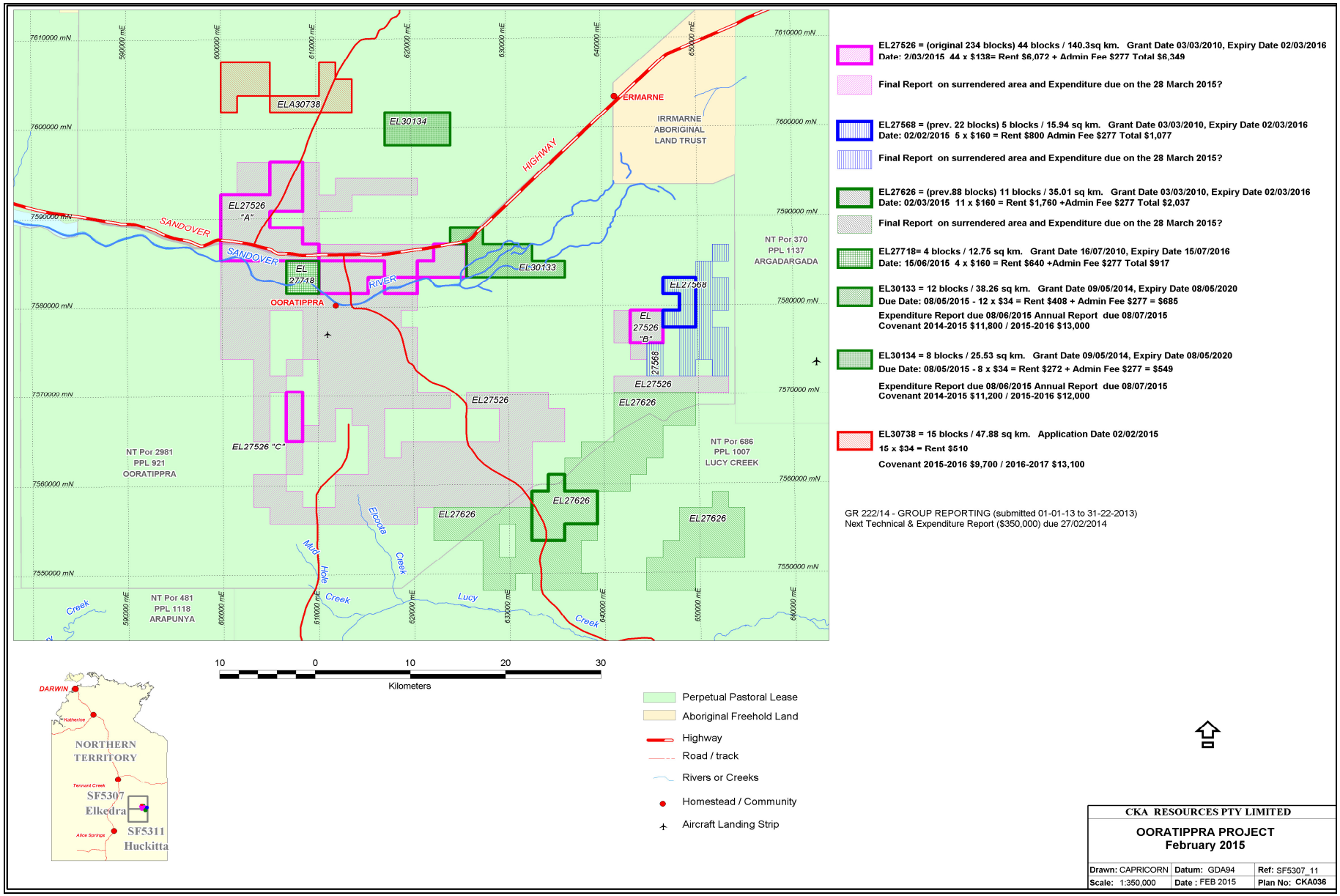


**Figure 1: Ooratippra Project Location Plan (Prior to 2016 surrender of ground)**

## 3.0 TENURE

EL30738, which was granted 18/8/2016, was 100% owned by CKA. The tenement was relinquished on 2/03/16. This report is for activities carried out on the Licence area during it's period of tenure.

The license lies within NT Portion 2981, being Ooratippra Perpetual Pastoral Lease 921.

There is currently one approved native title claim over the project area (Figure 2), represented by the Central Land Council: NTD6043/01, DC01/42 Kngwarrey on behalf of the members of the Irrkwal, Irrmarn, Ntewerrek, Aharreng, Arrty/Amatyerr and Areyn Landholding Groups.

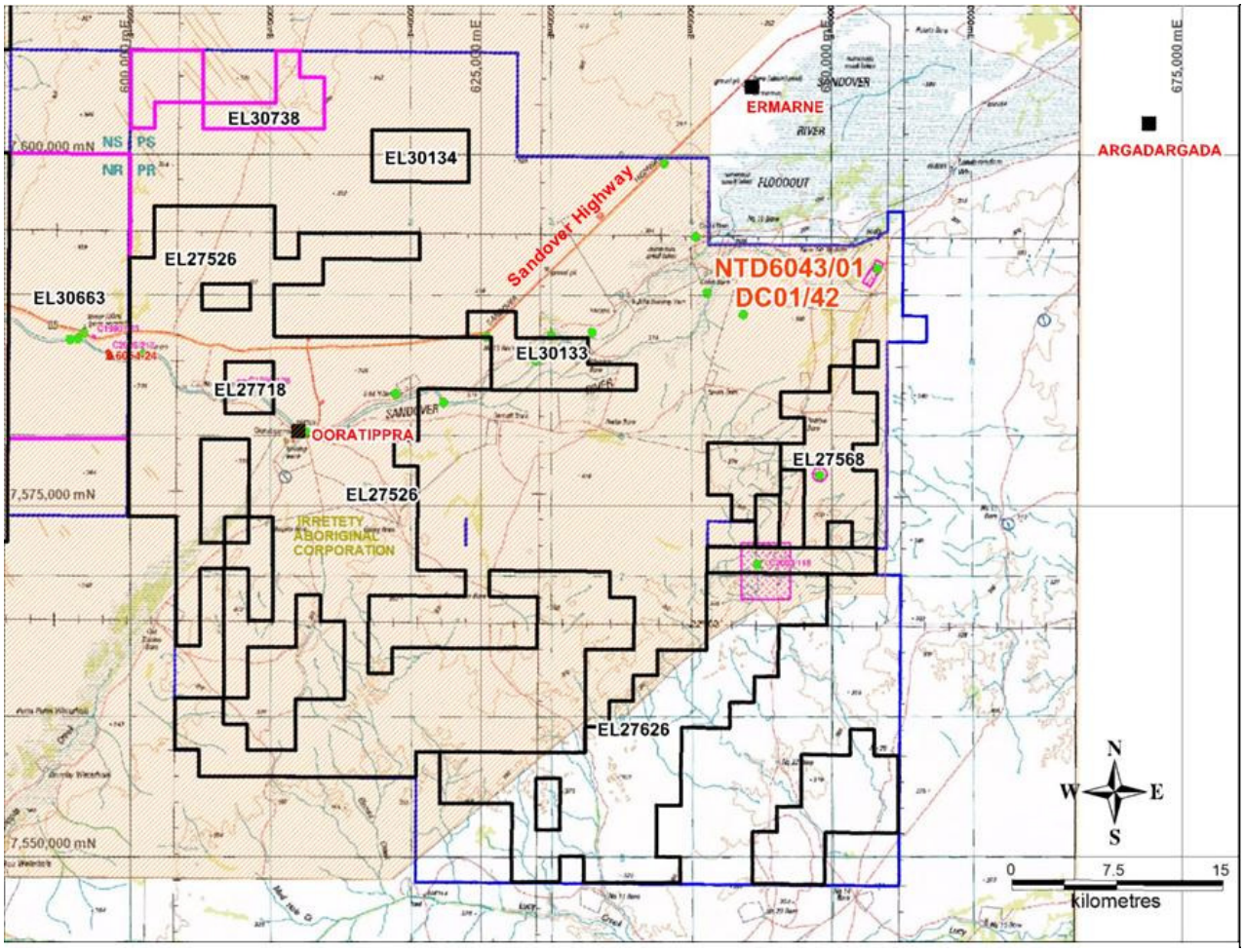


**Figure 2: Ooratippra Project Location Plan**

# 4.0 GEOLOGY

## 4.1 Regional Geology

The Georgina Basin (Dunster, et al 2006) is a 330,000km2 erosional remnant of a series of originally interconnected central Australian intracratonic basins, including the Savory, Officer, Ngalia and Amadeus Basins, which range from Neo-proterozoic to mid-Palaeozoic in age. It covers most of the central-eastern Northern Territory and extends into Queensland. In excess of 1.5km thickness of Neo-proterozoic sedimentary rocks are preserved in down-faulted blocks and half-grabens on the southern margin of the Georgina Basin in the Northern Territory. Depocentres and synclines contain up to 2.2km of Cambrian to Devonian stratigraphy. The southern part of the basin contains the thickest successions and demonstrates the strongest structuring related to distal effects of the 320Ma Alice Springs Orogeny. This part of the basin is the most prospective undeveloped onshore petroleum province in the Northern Territory.

In contrast to the southern region, the central Georgina Basin north of latitude 21°S (well outside the project area) contains a relatively thin stratigraphic succession less than 450m thick, deposited on a tectonically quiescent platform. This central platform has been subdivided into the eastern Undilla Sub-basin and the western Barkly Sub-basin, separated by the Alexandria-Wonarah Basement High.

The northern Georgina Basin is largely concealed beneath Mesozoic sedimentary rocks of the Dunmarra Basin.

The CKA Resources tenement area sits within the south part of the Georgina Basin and is entirely underlain by Palaeozoic sediments (Figure 3). The cover sequence of this area is a simple sequence of gently folded, predominantly calcareous, sediments. The three main units are:

- The Lower Ordovician-Upper Cambrian Tomahawk Beds of calcareous sandstone; buff, green and white siltstone; brown dolomite, grey siliceous limestone, grey oolitic limestone, glauconitic sandstone and chert.
- The Upper Cambrian Arrinthrunga Formation which is mainly brown and buff massive dolomite and limestone, plus thin interbeds of calcareous sandstone, blue oolitic algal limestone and shale.
- The Upper Cambrian Eurowie Sandstone Member consisting of brown quartz sandstone.
- Tertiary laterites and recent surface deposits are the youngest rocks in the area (Figure 3).

Deep basement regional gravity and magnetic data suggest that the central part of the Ooratippra project area overlies a basement high forming part of a crustal block referred to as the Altjawarra Block. It is unclear whether rocks directly below the basin in this area are an extension of the Davenport Province or part of the Arunta Region Aileron Province such as an extension/offset of the Jervois or Jinka sections. The high metamorphic grade of basement rocks intersected in BMR13 (drilled through the Cambrian cover intersecting altered gneiss and granite at approximately 1000m) indicates the latter.

## 4.2 Local Geology

The CKA Resources tenement area sits within the south part of the Georgina Basin and is entirely covered by Palaeozoic sediments (Figure 3). The cover sequence of this area is a simple sequence of gently folded, predominantly calcareous, sediments. The three main units are:

- The Lower Ordovician-Upper Cambrian Tomahawk Beds of calcareous sandstone; buff, green and white siltstone; brown dolomite, grey siliceous limestone, grey oolitic limestone, glauconitic sandstone and chert.
- The Upper Cambrian Arrinthrunga Formation which is mainly brown and buff massive dolomite and limestone, plus thin interbeds of calcareous sandstone, blue oolitic algal limestone and shale.
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Tertiary laterites and recent surface deposits are the youngest rocks in the area (Figure 3). Deep basement regional gravity and magnetic data suggest that the central part of the current entire Ooratippra project area overlies a basement high. Several moderate linear magnetic features cut the area and some of these can be correlated with surface faults.

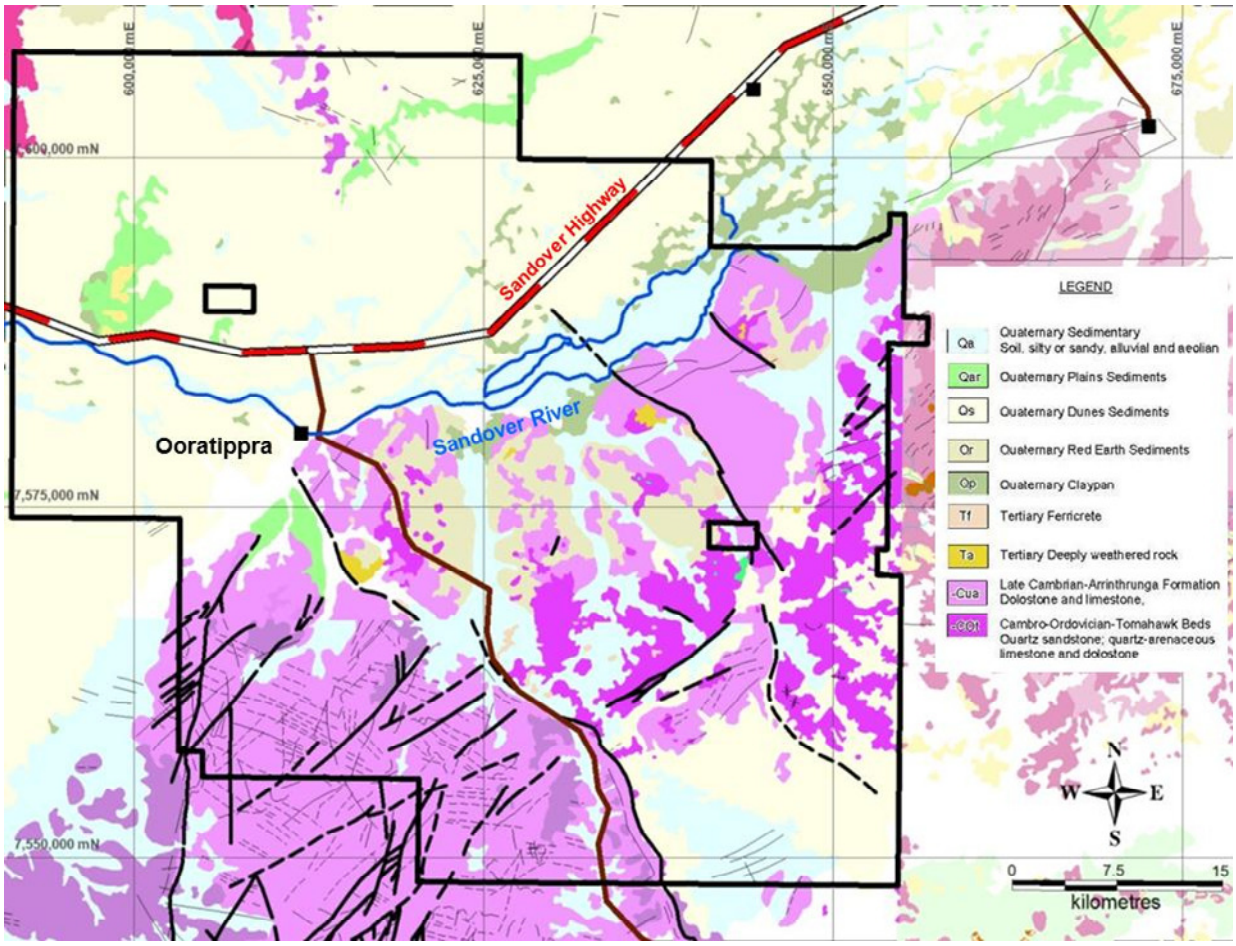


**Figure 3: Geological setting and outline of Ooratippra Project area**

### 4.3 Known mineralisation

The Georgina Basin Palaeozoic cover sequences have been explored for a range of mineral deposit styles, including Mississippi Valley Type ("MVT") lead-zinc deposits, stratiform/stratabound Irish- and Century-type base metal deposits, sedimentary phosphate deposits (phosphorites), uranium in phosphorites, and diamonds in kimberlite pipes. The basement rocks are almost completely unexplored, other than during petroleum exploration stratigraphic drilling (e.g. BMR Sandover 13). No systematic investigation of the pronounced magnetic and gravity anomalies in the Altjawarra Craton basement has yet been conducted.

**Table 1**: Mineralisation in southern Georgina Basin outside the project area

| Company/Deposit | Details |
|---|---|
| Minemakers Limited | 167Mt at 21.3% $P_2O_5$ at the Wonarah phosphate deposit on the Alexandria-Wonarah Basement High |
| Boat Hill Prospect | 'Percent levels' of Zn |
| Mount Skinner Prospect | A drill core from this area assayed above 2,000ppm Pb over 2.4 metres |
| Baldwin 1 (Baraka Petroleum Limited) | Zn-Pb mineralisation (up to 1.2% Zn) with hydrocarbons in and below shale cap at contact of Arthur Creek Formation and Thorntonia Limestone possible Century-type mineralisation. |
| Box Hole Mine | 15t of ore mined, averaging 65-70% Pb and 60g/t Ag |
| Duchess (Queensland) | Large phosphate deposits, average about 16% $P_2O_5$ |

No economic mineralisation has been identified on the Ooratippra project area.

## 5.0 PREVIOUS EXPLORATION

### 5.1 Geophysics

Previous geophysics over the Ooratippra gravity and magnetic complex includes:

- An airborne magnetic-radiometric survey was flown by the Northern Territory government in 1999 on N-S 400 metre line spacing.
- The national gravity grid data coverage within the Ooratippra project area includes 36 sample points 1.5-17km apart (compared to 4 and 11km national grid).
- A limited 10km-line spaced gravity survey with sampling at 1km along the lines.
- A gravity survey with east west lines 10km apart, readings at 190-300 metres covering a small part of the south west project area.
- CKA completed 1km spaced gravity survey was completed over its previous tenement EL28308 identifying anomaly V.

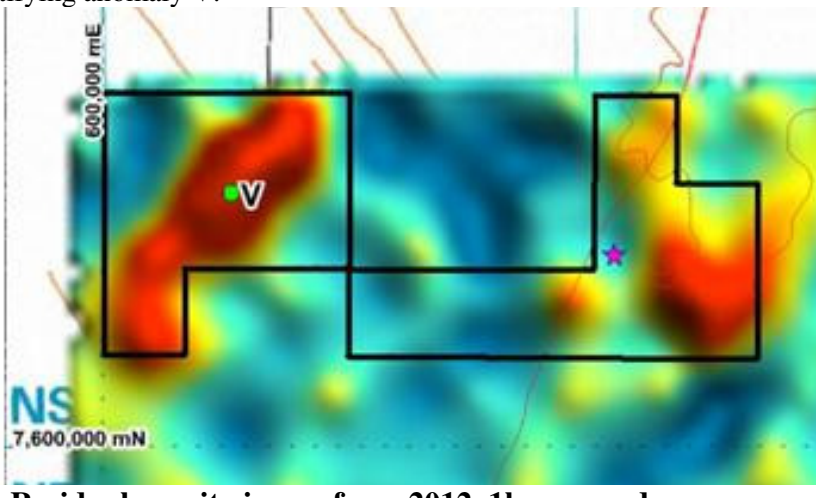


**Figure 4: Residual gravity image from 2012, 1km spaced survey over EL30738. Showing location of anomaly V.**

## 5.2 Drilling

In 1964, the Bureau of Mineral Resources ("BMR") drilled BMR Sandover 13 bore on the Ooratippra project area (Figure 1).

Drilling by exploration companies within the Ooratippra project area is limited to two diamond holes drilled by BHP and four percussion holes drilled by Centamin NL targeting MVT-style mineralisation.

The Trackrider barite-fluorite-lead-zinc prospect was drilled by Dampier Mining Company Limited (a subsidiary of BHP) in 1976, targeting a MVT-style Pb-Zn model.

Exploration work was undertaken by Centamin NL (Cotton, 1973) during 1972 in the central portion of what is now the Ooratippra Project area. Soil and rock chip sampling in the vicinity of scattered surface galena mineralisation near the Trackrider Prospect was followed by four percussion drillholes to average depths of approximately 91m in conjunction with frequency domain Induced Polarisation.

There was no historical drilling within the relinquished ground.

## 5.3 Other Exploration

Reconnaissance mapping and prospecting by Plenty River Mining Company in 1985 were concentrated in the central part of the present day project area in the vicinity of the Trackrider Prospect. Dragon Resources (Cheetham, 1990, 1991) review of the regional magnetic and gravity geophysical data concluded that basement structures appear to extend into the cover sequence and may be suitable for MVT mineralisation. Similarities with the Olympic Dam geophysical signature justified more geophysics to better define the anomaly and determine the depth to basement.

Exploration for kimberlitic indicator minerals was carried out in the area by Stockdale Prospecting Ltd and Amoco Minerals Australia Company in 1984 and CRA Exploration Pty Ltd in 1985. No anomalous results were obtained from these reconnaissance surveys. More recently, Elkedra Diamonds NL found a number of micro-diamonds and a macro-diamond, as well as high-grade manganiferous outcrops and lead mineralisation in the Altjawarra Craton region adjacent to NT Resources' ground (Elkedra Diamonds NL Annual Reports for 2002-2004).

From 2004 to 2009, Acacia Minerals and its predecessor Southwestern Mining Pty Limited surface sampled approximately 80 analytic magnetic anomalies and circular features in searching for diamonds. No significant key indicator minerals or diamonds were identified and no drilling was carried out.

## 6.0 WORK DONE YEAR 1.

No work was completed on the tenement during the reporting period.

## 7.0 ENVIRONMENTAL

During the term of this exploration license, there was no disturbance to the ground surface and no rehabilitation is required.

## 8.0 Conclusion

While EL30738 is still considered to be prospective for IOCG mineralisation and diamonds, however CKA considers some of it's other tenements better justify exploration based on magnetic, gravity, geological and structural data.

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