FINAL REPORT

EXPLORATION LICENCE EL30134

Ooratippra Project

For the reporting period 9th May 2014 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, Diamond

Licensee: CKA Resources Pty. Limited.

Author: A Chapman

Date: April 16
CONTENTS

SUMMARY ................................................................................................................................. iii
1.0 INTRODUCTION .................................................................................................................. 1
2.0 LOCATION .......................................................................................................................... 2
3.0 TENURE ............................................................................................................................... 4
4.0 GEOLOGY ............................................................................................................................. 5
   4.1 Regional Geology .............................................................................................................. 5
   4.2 Local Geology .................................................................................................................. 7
   4.3 Known mineralisation ...................................................................................................... 8
5.0 PREVIOUS EXPLORATION ............................................................................................... 8
   5.1 Geophysics ...................................................................................................................... 8
   5.2 Drilling ............................................................................................................................ 9
   5.3 Other Exploration ......................................................................................................... 10
6.0 WORK DONE BY CKA ..................................................................................................... 11
   Year 1 ..................................................................................................................................... 11
   Year 2 ..................................................................................................................................... 11
7.0 ENVIRONMENTAL ............................................................................................................. 12
8.0 Conclusion and Recommendations ................................................................................... 12
BIBLIOGRAPHY ......................................................................................................................... 13

LIST OF FIGURES

Figure 1: Ooratippra Project Location Plan .................................................................................. 3
Figure 2: Ooratippra Project Location Plan .................................................................................. 4
Figure 3: Ooratippra structural regional setting ......................................................................... 6
Figure 4: Interpreted dilational jog in the major crustal lineament at Bouguer gravity anomaly ... 6
Figure 5: Geological setting and outline of Ooratippra Project area ........................................... 7
Figure 6: Prospects on EL30134 over residual gravity image .................................................... 11

LIST OF TABLES

Table 1: Mineralisation in southern Georgina Basin outside the project area ............................ 8
Table 2: Maximum Trackrider drillhole intersections ................................................................. 9
Table 3: Selected Trackrider Significant Percussion Drillhole Results ........................................ 10

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SUMMARY

EL31034 is part of the CKA Resources Pty Limited’s (CKA) Ooratippra Project. The Ooratippra Project covered approximately 1,220 square kilometres in 2015 straddling the Sandover Highway approximately 300 kilometres northeast of Alice Springs. EL30134, was granted 9/5/2014 and was relinquished on 3 March 2016. It was 100% owned by CKA Resources.

Exploration consisted of geological review (including interpretation and evaluation of historic sampling) and target prioritization which was undertaken across the whole Ooratippra Project during the time the tenement was held. IOCG and diamond Targets within EL30134 being gravity Anomalies K and O.

Gravity Anomalies K and O require further geophysical analysis using the 200m spaced gravity data and subsequent assessment for IOCG and Kimberlite pipe potential. However due to unforeseen delays in proposed exploration in 2015 work was not completed and CKA has had to reassess its holdings and will focus its efforts on EL27526.
1.0 INTRODUCTION

EL30134 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 the Ooratippra Project 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 EL30134 on 3rd March 2016.
2.0 LOCATION

The Ooratippra project is situated approximately 350km southeast of Tennant Creek and 300km northeast of Alice Springs. The Project 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 project 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 Project area. Alternatively, the Project can be accessed via the Sandover Highway from Mount Isa or Alice Springs, and south using the Lucy Creek Station roads.

Most of the project 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 Licenses within the Ooratippra Project area in relation to the Sandover Highway.
Figure 1: Ooratippra Project Location Plan
3.0 TENURE

EL30134, was granted 9/5/2014 and is 100% owned by CKA Resources. The tenement covers ground that was dropped during compulsory reduction of CKA Resources tenement EL 27526 and subsequently re-applied for. This report covers exploration activities on this tenement for the duration that it was held.

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

The Ooratippra project consists of Exploration Licenses EL 27526, EL 27568, EL 27626, EL 27718, EL 30133, EL 30134 and application EL 37038. Amalgamated Reporting and project expenditure reporting for EL 27526, EL 27568, EL 27626 and EL 27718 was granted on 9/3/12 (GR222/12). CKA will apply to include EL30133 and EL30134 in this group.

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/Amatye rr and Areyn Landholding Groups v Northern Territory of Australia [2011] FCA 428 (5 May 2011).

The native title agreement for this tenement was signed on the 24th of April 2012 and received by CKA on 30/03/12. Site clearances from the CLC for a tenement wide gravity survey are pending.

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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 tenement area sits within the south part of the Georgina Basin and is entirely underlain by Palaeozoic sediments (Figure 5). 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 Arrinthurunga 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 5).

Deep basement regional gravity and magnetic data (Figure 4) 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.

Structurally the Ooratippra gravity and magnetic complex is situated along strike of a major NNW crustal lineament which influences the majority of mineral occurrences in the Tennant Region including the Tennant Creek mineral field (Figure 3). Also from the 1:250K fault geometry and fractures identifiable from the regional magnetics it could be interpreted that the western side of this project sits on a dilational fracturing/jog regime of this lineament possibly caused or influenced by whatever the Altjawarra Block is (Figure 3, Figure 4). This would be a favourable setting for focusing mineralising fluids.
Figure 3 Ooratippra structural regional setting

Figure 4 Interpreted dilational jog in the major crustal lineament at Bouguer gravity anomaly
4.2 Local Geology

The CKA tenement area sits within the south part of the Georgina Basin and is entirely covered by Palaeozoic sediments (Figure 5). 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 Arrinthruna 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 5). 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 5: Geological setting and outline of Ooratippra Project area](image-url)
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, Figure 4). No systematic investigation of the pronounced magnetic and gravity anomalies in the AltjawarraCraton basement has yet been conducted.

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

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.

In 2010 the previous owner of the Ooratippra project ELs, NT Resources Ltd, applied for and was awarded a ‘bringing forward discovery’ geophysics collaboration with the NT Government for the Ooratippra project. A 1km spaced gravity survey was completed by NT Resources as set out in the collaboration and subsequently a 200m infill survey was completed by CKA in 2011 at two prominent targets (Anomalies A and B, Figure 4). Later interpretation by Frank Lindeman identified a much larger anomaly centred on 602000E 7589000N known as Anomaly F.
5.2 Drilling

In 1964, the Bureau of Mineral Resources (“BMR”) drilled BMR Sandover 13 bore on the Ooratippra project area (Figure 4). This deep stratigraphic bore was part of a petroleum assessment of the Georgina Basin. BMR 13 was drilled to 3330 feet (1015 metres) and intersected basement gneiss and granite at 3310 feet. Overlying sediments include predominantly dolomitic limestone, with lesser limestone, siltstone and some sandstone (Lloyd and Bell, 1964).

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. Two diamond drill holes, TRD 1 and TRD 2, were collared in the Tomahawk Beds and intersected the Arrinthrunga Formation. Selected analytical results are presented below in Table 2.

<table>
<thead>
<tr>
<th>Hole ID</th>
<th>From (m)</th>
<th>To (m)</th>
<th>Pb ppm</th>
<th>Zn ppm</th>
<th>Ag g/t</th>
</tr>
</thead>
<tbody>
<tr>
<td>TRD1</td>
<td>16</td>
<td>19</td>
<td>2480</td>
<td>167</td>
<td>1</td>
</tr>
<tr>
<td>TRD1</td>
<td>19</td>
<td>21</td>
<td>2.26%</td>
<td>1160</td>
<td>1</td>
</tr>
<tr>
<td>TRD2</td>
<td>35</td>
<td>36</td>
<td>473</td>
<td>228</td>
<td>1</td>
</tr>
</tbody>
</table>

In 1976, Dampier Mining assayed BMR 13 and results showed locally highly anomalous values up to 0.78% Zn over a 3m sample interval, but were too deep and too low grade to justify follow up work.

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. Drill results (Table 3) suggested that mineralisation was confined to the upper 16m in the weathered zone and did not seem to be controlled by lithology. High manganese and iron values corresponded with high lead values. The IP results did not indicate any continuity of mineralisation with depth.
Table 3: Selected Trackrider Significant Percussion Drillhole Results

<table>
<thead>
<tr>
<th>HoleID</th>
<th>From Depth (m)</th>
<th>To Depth (m)</th>
<th>Pb (ppm)</th>
<th>Zn (ppm)</th>
<th>Host Rock</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHD1</td>
<td>0</td>
<td>1.5</td>
<td>990</td>
<td>150</td>
<td>Mn dolomite rubble</td>
</tr>
<tr>
<td>PHD1</td>
<td>1.5</td>
<td>3</td>
<td>3,250</td>
<td>130</td>
<td>Mn dolomite rubble</td>
</tr>
<tr>
<td>PHD1</td>
<td>3</td>
<td>4.5</td>
<td>710</td>
<td>40</td>
<td>Mn dolomite rubble</td>
</tr>
<tr>
<td>PHD1</td>
<td>4.5</td>
<td>6</td>
<td>1,400</td>
<td>65</td>
<td>Fe-Mn stained sandstone</td>
</tr>
<tr>
<td>PHD1</td>
<td>6</td>
<td>7.5</td>
<td>2,200</td>
<td>10</td>
<td>Fe-Mn stained dolomite</td>
</tr>
<tr>
<td>PHD1</td>
<td>7.5</td>
<td>9</td>
<td>1,900</td>
<td>100</td>
<td>Fe-Mn stained sandstone</td>
</tr>
<tr>
<td>PHD1</td>
<td>9</td>
<td>10.5</td>
<td>2,200</td>
<td>140</td>
<td>Fe-Mn stained dolomite</td>
</tr>
<tr>
<td>PHD1</td>
<td>10.5</td>
<td>12</td>
<td>1,800</td>
<td>65</td>
<td>Mn jointed dolomite</td>
</tr>
<tr>
<td>PHD1</td>
<td>12</td>
<td>13.5</td>
<td>1,350</td>
<td>50</td>
<td>Fe stained dolomite</td>
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<tr>
<td>PHD1</td>
<td>13.5</td>
<td>15</td>
<td>1,450</td>
<td>80</td>
<td>Fe stained dolomite</td>
</tr>
<tr>
<td>PHD1</td>
<td>15</td>
<td>16.5</td>
<td>1,850</td>
<td>70</td>
<td>Fe stained dolomite</td>
</tr>
<tr>
<td>PHD2</td>
<td>0</td>
<td>1.5</td>
<td>8,350</td>
<td>520</td>
<td>Mn stained soil</td>
</tr>
<tr>
<td>PHD2</td>
<td>1.5</td>
<td>3</td>
<td>1.2%</td>
<td>800</td>
<td>Fe-Mn stained dolomite</td>
</tr>
<tr>
<td>PHD2</td>
<td>3</td>
<td>4.5</td>
<td>1.4%</td>
<td>730</td>
<td>Fe-Mn stained oxides</td>
</tr>
<tr>
<td>PHD2</td>
<td>4.5</td>
<td>6</td>
<td>8,000</td>
<td>830</td>
<td>Fe-Mn stained oxides</td>
</tr>
<tr>
<td>PHD2</td>
<td>6</td>
<td>7.5</td>
<td>2,850</td>
<td>210</td>
<td>Mn stained dolomite</td>
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<tr>
<td>PHD2</td>
<td>7.5</td>
<td>9</td>
<td>4,100</td>
<td>290</td>
<td>Mn banded dolomite</td>
</tr>
<tr>
<td>PHD2</td>
<td>9</td>
<td>10.5</td>
<td>200</td>
<td>200</td>
<td>Mn banded dolomite</td>
</tr>
<tr>
<td>PHD2</td>
<td>10.5</td>
<td>12</td>
<td>790</td>
<td>60</td>
<td>Mn stained dolomite</td>
</tr>
</tbody>
</table>

5.3 Other Exploration

Reconnaissance mapping and prospecting by Plenty River Mining Company in 1885 were concentrated in the central part of the present day project area in the vicinity of the Trackrider Prospect. This work suggested that the boundary between the Tomahawk Beds and the Arrinthuranga Formation is defined by a gently undulating, near-horizontal unconformity. Sulphidemineralisation observed to date appears to be concentrated at this unconformity. Surface rock samples taken 2km east of Trackrider showed 3.25% Pb and 42g/t Ag in siliceous dolomite, 4.2% Pb and 72g/t Ag in Mn-rich siliceous boulders with 18.25% Mn which also contained 2.5% Ba and 168ppm F (Ypma, 1986).

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 AltjawarraCraton 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.
CKA previously held this ground as part of EL 27526. Prospects include Anomalies K and O. Exploration included a 1km spaced gravity survey which covered the entirety EL30134 and subsequent 400m spaced gravity to cover the identified anomalies (anomalies K and O).

### 6.0 WORK DONE BY CKA

**Year 1**

Geological review (including interpretation and evaluation of historic sampling) and target prioritisation was undertaken across the whole Ooratippra Project during the year as CKA continued to develop its diamond exploration strategy. Targets assessed in EL30134 being gravity anomalies K and O (figures below) which are considered IOCG or kimberlite style targets based on coincident residual gravity and magnetic anomalies. Depth to top of bodies estimates from the 1km spaced data are from 250 to 500m however further work including depth estimation is required from the 200m spaced gravity data acquired by CKA following the earlier 1km survey.

![Figure 6. Prospects on EL30134 over residual gravity image](image)

**Year 2**

No work was completed on the tenement during year 2.
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 and Recommendations

Gravity Anomalies K and O require further geophysical analysis using the 200m spaced gravity data and subsequent assessment for IOCG and Kimberlite pipe potential. However due to unforeseen delays in proposed exploration in 2015 work was not completed and CKA has had to reassess its holdings and will focus its efforts on EL27526.
BIBLIOGRAPHY


Rogers, K.R. 2011 Year 2 Annual Exploration Report, Ooratippra Project, EL27714. Equator Resources ltd