CASTILE RESOURCES PTY LTD

FINAL SURRENDER REPORT

EL6732

11 September 2007 to 18 November 2015

Compiled by:
Robert J. Burke
January 2016
CASTILE RESOURCES PTY LTD
wholly owned by
METALS X LIMITED

FINAL SURRENDER REPORT 2015

EL6732

Operator: Castile Resources Pty Ltd
Tenement Holders: Lassact Pty. Ltd
1:250,000 Sheet: Mount Liebig SF52-16
1:100,000 Sheet: Kuta Kuta 505; Mount Liebig 5151.
Datum: GDA94
Projection: MGA
Zone: 52
Report Type: Final Surrender Report
Report Period: 11 September 2007 to 18 November 2015
Author: Robert Burke
Tenement Holders: Castile Resources Pty Ltd
Distribution: Department of Resources; and Castile Resources Pty Ltd / Metals X Limited
ABSTRACT

Location
The tenement is within the Warumpi Province of the Haasts Bluff Aboriginal Land Trust, and is approximately 300km west of the Alice Springs Township. It occupies an area of 96 graticular blocks, and forms part of Castile Resources Pty Ltd (“Castile”) Warumpi Project.

Geology
The project is located within the Western Springs area of the Warumpi Province that was originally considered the southern margins of the Arunta Inlier. EL6732 straddles the collisional boundary between the northern Arunta Inlier and the southern Warumpi Province and comprises predominately Paleoproterozoic rocks of the Yaya Domain of the Warumpi Province. Large portions of the tenement have a thin veneer on aeolian sand. The contact between the two provinces is obscured by recent sediments, but can be inferred from recent aeromagnetic data. Previous work completed by the NTGS in the late 1990’s to early 2000’s resulted in new Proterozoic ages for the Warumpi Province, defining it as being formed during a crucial period of development of the Australian continent. Deposits as Broken Hill, Mount Isa and McArthur River share similar ages to the newly defined Warumpi Province.

The area is interpreted to also have potential for a similar style of mineralisation as AngloGold’s newly discovered Tropicana deposit (5M+ oz Au). The province has seen little to no previous modern exploration work, and is considered to have high potential for economic mineralisation.

Work Completed
Exploration for the period of 11 September 2007 – 18 November 2016 included regional 1km x 1 km lag sampling and prospecting followed by a detailed soil program over an elevated pathfinder element anomaly in the central portion of the tenement.

Results / Conclusions
Numerous desktop studies and detailed analysis of geochemistry of regional lag programs in the western portion returned discouraging results, with no anomalous regions highlighted. Field prospecting along primary and secondary structures associated with the collisional boundary also returned with discouraging results and did not highlight any regions for additional work. Subsequently Castile Resources have opted to surrender this tenement.
TABLE OF CONTENTS

1 INTRODUCTION .................................................................................................................. 1
  1.1 LOCATION AND ACCESS ............................................................................................ 1
  1.2 TENEMENT DETAILS ................................................................................................. 4
2 GEOLOGY.............................................................................................................................. 4
  2.1 REGIONAL GEOLOGY ................................................................................................. 4
  2.2 LOCAL GEOLOGY ......................................................................................................... 6
  2.3 EXPLORATION HISTORY ........................................................................................... 8
3 MINERALISATION AND POTENTIAL ................................................................................. 8
4 WORK COMPLETED DURING PERIOD ........................................................................... 9
5 RESULTS ........................................................................................................................... 9
6 ENVIRONMENTAL / REHABILITATION ......................................................................... 11
7 CONCLUSION AND RECOMMENDATIONS .................................................................. 11
8 REFERENCES .................................................................................................................... 11
9 COPYRIGHT ....................................................................................................................... 11

LIST OF FIGURES

Figure 1: Tenement access map showing relative positions of tenement with Alice Springs and other communities .................. 3
Figure 2 : Tenement Location Map.................................................................................... 3
Figure 3: Geological Domains in the Warumpi Project area of the Warumpi Province ............................................................... 5
Figure 4: EL6732 Local Geology .......................................................................................... 6
Figure 5: High resolution Magnetics of Australia with the reconstruction of the collisions between the WAC/NAC and the SAC (Aitken and Betts, 2008) ........................................................................................................................... 8
Figure 6: Tropicana model developed by AngloGold Ashanti (Laurentian Goldfields Ltd, 2009) ................................................. 9
Figure 7: 2013-2014 Sample location through EL6732 over LandSat image. Refer to Figure 8 for map legend. ......................... 10
Figure 8: Lag sample location throughout EL6732. ................................................................................................................. 10

LIST OF TABLES

Table 1: Tenement Details ........................................................................................................ 4

LIST OF APPENDICES

Appendix 1: Regional Lag Samples Geochemistry .................................................................... 12
1 INTRODUCTION

EL6732 is located approximately 300km west of Alice Springs in the Northern Territory and is the northernmost tenement of Castile's Warumpi Project within the Haasts Bluff Aboriginal freehold land.

The Warumpi Project area lies in the Warumpi Province, a newly defined geological province, with bedrock ages ranging from 1690-1610Ma. The Warumpi Province shares similar ages to that of the Broken Hill Block, Mount Isa Block and the McArthur Basin, which all host world class deposits.

To date limited mineral exploration has been completed including remote sensed data acquisition and processing and interpretation of publicly available data. However, limited to no on-ground work has been completed prior to Castile's involvement. Exploration efforts in the region in the reported period concentrated on systematic regional-scale geochemical sampling throughout all cleared portions of granted tenement.

1.1 Location and Access

EL6732 is the most northern tenement of the Warumpi Project and is located approximately 300km west of Alice Spring Township. The project area consists of three additional granted tenements (EL10379, EL30306, and EL6861) and multiple other tenements on application within the Aboriginal freehold lands of the Haasts Bluff Land Trust.

Access to the project area is via the Stuart Highway, 20km north of Alice Springs, then northwest along the Tanami Road for approximately 118km until the Kintore Road is reached. Travel 170km west along Kintore Road passing the communities of Papunya and Mount Liebig, until the project area is reached, approximately 25km northwest of the main Kintore Road. No roads access the tenement north of the Kintore Road and off road travel through cleared heritage corridors nominated by Central Land Council were used.
Figure 1: Tenement access map showing relative positions of tenement with Alice Springs and other communities
Figure 2: Tenement Location Map
1.2 Tenement Details

The tenement was granted, on 11 September 2007 and exploration activities are governed by the negotiated Deed of Exploration with the Central Land Council on behalf of the traditional Aboriginal owners. EL6732 is 100% own by Castile Resources Pty Ltd.

In March 2012, Castile, a wholly owned subsidiary of Metals X Limited agreed to enter into a joint venture agreement with Lassact Pty Ltd to explore the tenements of the Warumpi Project and has the right to earn up to 80% equity in the tenement. To date Castile has passed all stages of the agreement and has earned up to the 80% equity transferring the title to Castile Resources.

Table 1: Tenement Details

<table>
<thead>
<tr>
<th>Lease</th>
<th>Project</th>
<th>Granted Area</th>
<th>Grant Date</th>
<th>Surrender Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL6732</td>
<td>Warumpi</td>
<td>96 Blocks</td>
<td>11-SEPT-07</td>
<td>18-NOV-15</td>
</tr>
</tbody>
</table>

2 GEOLOGY

2.1 Regional Geology

The Warumpi Project lies within the Western Spring area, which is entirely located in the Warumpi Province. This area was in the past considered to be the southern margins of the Arunta Inlier. It wasn’t until 1999 when the NTGS processed high resolution aeromagnetic data over central Australia that the Warumpi Province was identified as a separate entity from the Arunta Inlier. Further mapping and age dating of the Mount Rennie and Mount Liebig area that lie within the Warumpi Provence produced dates ranging from 1690-1610Ma giving further evidence that the Warumpi was part of a crucial period of the development of the North Australia Craton (NAC). This 500km east-west exotic terrain is hypothesised to have Grenville-aged architecture, thrusting it up onto the southern margins of the Arunta inlier during the Liebig Orogeny (1640-1630Ma).

Two high metamorphic grade domains of the Warumpi Province and the younger intracratonic basin of the Amadeus Basin dominate the Warumpi Project area. The two high-grade domains of the Warumpi Province are the Yaya Domain; located in the northern portion dominating EL10379, EL6732 and approximately 75% of EL6861 and the Haasts Bluff Domain located in the south, accounting for the remaining portion as well as the southern portion of EL6861 and western portion of EL26527. The Yaya Domain (1660-1640Ma) consists of psammites, pelites, calc-silicates, felsic migmatites and cordierite mafic granulites all of which have been intruded by various granite suites of the Papunya Igneous Complex. The Haasts Bluff Domain (1690-1660Ma) consists of rhyolitic volcanic, metasedimentary schists, amphibolites, orthogneisses, and various suites of granitoid intrusive. The remaining eastern portion of EL26527 overlays the Amadeus Basin comprising of dominantly younger sedimentary rocks including limestones, siltstones, sandstones, quartzites, and conglomerates.
The Yaya Domain (1660-1640Ma) consists dominantly of high-grade metamorphic migmatites intruded by voluminous felsic and mafic rocks of the Walwiga Suite (1640-1630Ma) conformably overlain by the Yaya Metamorphic Complex (1660-1650). The Yaya Metamorphic Complex is composed of four stratigraphic units:

- **Spears Metamorphics**: Generally mapped in the east portion of the Warumpi Province, although observed throughout the Mount Liebig area. They consist of augen gneisses, felsic gneisses, metapelites, and amphibolites.

- **Inyalinga Granulites**: Dominantly in the northern portion of the Yaya Metamorphic Complex. Similar lithologies to the Spear Metamorphics with massive cordierite granulites.

- **Alkipi Metamorphics**: Mapped throughout the eastern portion of the Warumpi Province and not seen on the project area. They consist dominantly of homogenous quartz-rich metasediments.

- **Liesler Metamorphics**: Forms near the Davenport Hills in the far west Yaya Metamorphic Complex and consists of metapelitic migmatites.

The Haasts Bluff Domain (1690-1660Ma) makes up the southern portion of the Warumpi Province in the project area and are some of the oldest rocks in the region. It consists of dominantly metasedimentary schists, orthogneisses, and various suites of granitoid intrusives with minor rhyolitic volcanics. An upper amphibolite metamorphic event during the Liebig Orogeny (1640-1635Ma) affected the region while the Iwupataka metamorphics were unconformably being deposited.

Numerous units compose the Iwupataka Metamorphics. However, only two are observed throughout the southwest portion of Warumpi Project area.

- **Lizard Schist**: Biotite-muscovite-quartz schist interlayered with muscovite quartz-rich psammite layers.

- **Nugman Metamorphics**: Lower Amphibolite metasedimentary rocks near the Mount Rennie area composed of biotite muscovite schists and minor mafic amphibolites.
The Amadeus Basin (850-350Ma) makes up the remaining portion of the Warumpi Project constituting the southern boundary of the Warumpi province and comprises the youngest rocks within the project area. The basin is an east west trending elongated basin covering approximately 170,000 km$^2$. The basin margins are well defined to the north and south by igneous and metamorphic rocks of the Musgrave and Warumpi Provinces. The stratigraphy reflects a basal Upper Proterozoic succession of shelf, lagoonal, continental, and shallow marine sediments including carbonates and evaporates overlain by Cambrian-Ordovician marine sediments - all unconformably overlain by continental Devonian-Carboniferous sediments (Ozimic et al, 1986).

### 2.2 Local Geology

EL6732 lies within the Yaya Domain of the Warumpi Province, which consists of dominantly high grade metasedimentary to igneous rocks types as described above. The tenement is dominated by intruding rocks of the Illili Suite to the southwest and Waluwiya Suite to the northeast (Figure 5). The Illili Suite throughout the south west sector of the tenement is composed of the Ehrenberg Granite, a foliated porphyritic, biotite granite, which is only seen to outcrop south of the tenement. In the northwest half of the tenement, the Waluwiya Suite is composed of two rock types; the Russell Charnockite and the Tjungkuba Granite. The Russell Charnockite is a relatively undeformed distinctive rock type containing an assemblage of orthopyroxene, clinopyroxene, plagioclase, quartz, hornblende, magnetite, minor biotite and K-feldspar, and mafic xenoliths, which sparsely outcrops throughout the tenement (Scrimgeour et al, 2005). The Tjungkuba Granite is foliated to weakly migmatitic biotite-hornblende granodiorite that is locally moderately magnetic. It is seen to outcrop sporadically throughout the eastern portion of the Tenement however; it is extensive throughout the Tjungkuba Hills east of the tenement.
2.3 Exploration History

Limited to no mineral exploration has been completed throughout the region due to its relative inaccessibility, harsh arid environment, lack of water sources and poor grazing conditions.

Geologically the area has been poorly understood due to limited outcrops, weathered profile and a thin veneer of aeolian sands masking vast areas of the region. Recent work by the NT Geological Survey, including outcrop mapping, broad-scale aeromagnetics and limited geochemical sampling to the direct east of the tenements was undertaken in 1999.

3 MINERALISATION AND POTENTIAL

No reported occurrences of any mineralisation have been recorded on the project tenements; however low-level anomalous results in NTGS stream sampling occur in the eastern most tenement (EL24825) and further to the east.

The Warumpi province is considered to have high potential, based upon appropriate rock types and structural settings. This potential is supported by the newly defined bedrock ages, 1690-1610Ma, which are similar to the Broken Hill Block (1690), Mount Isa Block (1654) and McArthur River Basin (1640) which all host world class orebodies.

Additionally, a major crustal feature, the Central Australian Suture Zone dissects the local geology and dips gently to the south separating the Warumpi Province form the Arunta Inlier. This collisional boundary, which is interpreted to be Grevillian in architecture, can be traced through to Albany, separating the South Australian Craton from the North and West Australia Cratons. This crustal-scale suture and its associated sub-parallel secondary structures could potentially significantly aid in the transportation and localisation of mineralised fluids as seen at Tropicana. Further, the clockwise rotation of this collision (Figure 5), folding and shearing seen throughout the Warumpi area have the potential to create dilatational zones which again aid in focusing and localising mineralised fluids (Aitken and Betts, 2008). These are characteristic of the right ingredients and plumbing that is seen in AngloGold’s Tropicana model (Figure 6).

![Figure 5: High resolution Magnetics of Australia with the reconstruction of the collisions between the WAC/NAC and the SAC (Aitken and Betts, 2008)](image-url)
4 WORK COMPLETED DURING PERIOD

Regional sampling and prospecting was conducted throughout EL6732 during the final field campaign of the 2012 field season. A total of 290 lag and 15 rock chip samples were taken at EL6732. Numerous prospective structures are found throughout EL6732 including the Central Bore Suture zone. However, no anomalous mineralisation was highlighted in either tenement.

A detailed geochemical review using ioGas software was conducted on the results of the 2012-2013 regional sampling as no obvious anomalies were initially detected. As a result, one area of interest was highlighted for follow-up work along an east-west shear zone on the contact of a charnockite and paragneiss in central EL6732. Detailed soil sampling lines accompanied by prospecting and rock chip sampling of nearby outcrops was conducted during a short campaign in May 2014 (Figure 7). Results from this program were discouraging.

5 RESULTS

Analysis of multi-element assays from the regional geochemistry initially did not highlight any prospective regions; however, upon further investigation using ioGas software, a subtle pathfinder anomaly was outlined. The anomalous region was characterised by an east-west shear zone on the contact of a charnockite and paragneiss in the central portion of the tenement. Detailed soil sampling lines accompanied by prospecting and rock chip sampling of nearby outcrops was conducted during a short campaign in May 2014 (Figure 7). Results from the program were discouraging.
Figure 7: 2013-2014 Sample location through EL6732 over Landsat image. Refer to Figure 8 for map legend.

Figure 8: Lag sample location throughout EL6732.
6 ENVIRONMENTAL / REHABILITATION

No environmental rehabilitation has occurred during the reporting period as no ground-disturbing work was undertaken.

7 CONCLUSION AND RECOMMENDATIONS

EL6732 lies on the northern portion of the Warumpi Province stretching over 27 km east-west along the prospective collisional boundary of the Proterozoic gneisses of the Yaya domain to the south and metamorphosed quartzites and pelites of the Arunta Inlier to the north. Regional magnetics throughout the tenement outline a major crustal scale structure interpreted as the Central Bore Suture Zone, a major collisional boundary that is Grevillian in architecture, striking east west through the northern portion of the tenement.

Systematic regional sampling throughout the tenement and detailed follow-up programs including prospecting along primary and secondary structures associated with the collisional boundary did not locate any anomalous regions for follow-up work. Castile has now focused its exploration efforts on other regions throughout the Warumpi Province and as such has opted to surrender this tenement.

8 REFERENCES


9 COPYRIGHT

This document and its content are the copyright of Castile Resources Pty Ltd. The document has been written by Robert J. Burke for submission to the Northern Territory Department of Mines and Energy as part of the tenement reporting requirements as per Regulation 126 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.

I authorise the department to copy and distribute the report and associated data.
Appendix 1: Regional Lag Samples Geochemistry