CASTILE RESOURCES PTY LTD
wholly owned by
METALS X LIMITED

ANNUAL EXPLORATION REPORT 2013

EL26034

Operator: Castile Resources Pty Ltd
1:250,000 Sheet: Tennant Creek SE53-14
1:100,000 Sheet: Short Range 5659
Datum: GDA94
Projection: MGA
Zone: 53
Report Type: Annual Exploration Report
Report Period: 25 February 2012 to 24 February 2013
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 Warramunga Province of the Tennant Region, and is 55kms north-west of the town of Tennant Creek. It occupies an area of about 58 square kilometres, and forms part of Castile’s Tennant Creek Project.

Geology
The project is located within the Warramunga Province of the Tennant Region. EL26034 lies on the north-eastern end of the highly productive Tennant Creek mineral field, and is 10 kilometres to the north of the Warrego Mine. It lies immediately to the south of the elevated ridges of arenites and dolerites of the Tomkinson Creek Group which form the Short Range. The tenement is almost entirely blanketed by recent alluvial cover. In the eastern part of the tenement the alluvium is underlain by arenites, siltstones and shales of the Ooradidgee Group. In the south western quarter the alluvium is underlain by the Warrego Granite, which is thought to be part of the Devils Suite. The contact between the two is obscured by recent sediments, but from inspection of the aeromagnetic data it appears to be faulted, and strikes northwest. Warramunga Group rocks may underlie the Ooradidgee Group at an unknown depth within the tenement. Deposits within the Warramunga Group rocks represent the most important mineral producers of Au and Cu regionally and remain the most important exploration target for the area.

Work Completed

Exploration for the year ending 24 February 2013 included continuation of negotiations for a heritage agreement over the tenement along with continuous review of historic data and report writing. No on-ground field work was completed as the company has agreed with the Central Land Council not to undertake ground disturbing activities until a heritage agreement is finalised.

Results / Conclusions

Future work will assess the potential for a new style of mineralisation away from the typical deeper seated magnetic targets which may yield shallower targets. Proposed work activities being assessed include ground IP and helicopter-borne EM surveys.
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1.0 INTRODUCTION

EL26034 lies within the highly prospective Proterozoic Tennant Creek province, noted for its rich copper-gold deposits associated with the iron oxides magnetite and hematite (IOCG deposits). The tenement was granted to Castile Resources Pty Ltd (Castile) on 13 February 2008 to cover a small area of land on the Peko – Argo line, 4.5kms west of the Peko mine, and 1km east of the Argo mine.

Metals X, through its wholly-owned subsidiary Castile, has a large tenement holding in the region, mostly within the Rover Field which lies under Palaeozoic cover to the west and southwest of Tennant Creek. The exploration target is IOCG deposits in the shales and greywacke of the Warramunga Group.

Exploration efforts by Castile in the region for the 2012 year concentrated on the regional work throughout the Rover, Navigator, and Explorer Fields, where deep penetrating IP was completed with selected follow-up drilling. Work on EL26034 for the year was restricted to desk-top reviews pending the signing of an exploration agreement with the aboriginal Traditional Owners. Additional assessment of the potential for a new styles of mineralisation away from the typical magnetic ironstone targets based on recent results reported by Emmerson Resources in the Tennant Creek Region.

1.1 Location and Access

EL26034 is located 55kms NNW of the town of Tennant Creek, NT. Access to the tenement is 47kms from Tennant Creek via the Warrego Road, then approximately 18kms north along small tracks (Figure 1).

The sealed Stuart Highway passes through Tennant Creek, and is 38kms to the east of the tenement. The Alice Springs to Darwin railway line passes through the eastern edge of the tenement.
Figure 1: Location Plan showing relative positions of tenement with Tennant Creek
1.2 **Tenement Details**

EL26034 consists of nineteen graticular blocks, and totals approximately 58 square kilometres. (Figure 1) It was granted on 25 February 2008. An exemption from the statutory partial relinquishment was granted for the tenement for the 2011 year.

The tenement title is held 100% by Castile Resources Pty Ltd, a wholly owned subsidiary of Metals X Limited.

Table 1: Tenement details

<table>
<thead>
<tr>
<th>Lease</th>
<th>Project</th>
<th>Granted Area</th>
<th>Approximate Area ha</th>
<th>Application Date</th>
<th>Grant Date</th>
<th>Expire Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>EL26034</td>
<td>Tennant Creek</td>
<td>19 Blocks</td>
<td>5,798</td>
<td>10-Apr-07</td>
<td>25-Feb-08</td>
<td>24-Feb-14</td>
</tr>
</tbody>
</table>

2.0 **GEOLOGY**

2.1 **Regional Geology**

The Tennant Creek Region contains three different geological provinces, the Warramunga Province, and the unconformably overlying Palaeo - to Mesoproterozoic Davenport Province to the south, and the Tomkinson Creek Province to the north. To the east and west the Palaeozoic Georgina and Wiso basins overlie Proterozoic rocks of the Tennant Creek Region. The Aileron Province of the Arunta Region occurs to the south of the area, the contact between it and the Tennant Creek Region being obscured by Palaeozoic basinal cover sequences.

The 1860-1850Ma Warramunga Province is approximately centred on the township of Tennant Creek, and contains the Palaeoproterozoic Warramunga Formation. This is a weakly metamorphosed turbiditic succession of partly tuffaceous sandstones and siltstones which includes argillaceous banded ironstones locally referred to as 'haematite shale'.

Rocks of the Warramunga Formation show open to closed folding about approximately east-west-orientated, open, upright fold axes, and a well-developed axial-planar slaty cleavage. This 1850-1845Ma deformation, the Tennant Event (Barramundi Orogeny), is contemporaneous with predominantly felsic magmatism of the Tennant Creek Supersuite. Two overprinting cleavages and associated kink bands are also present, which are attributed to the superimposition of the ~1700Ma Davenport Event deformation. Volcano-sedimentary rocks of the Warramunga Province are intruded by granite and porphyry of the Tennant Creek Supersuite, (~1850Ma) the Treasure Suite (~1810Ma) and the Devils Suite. (~1710Ma) The Tennant Creek Supersuite includes the Tennant Creek, Cabbage Gum, Channingum, and Hill of Leeders granites, and the Mumbilla Granodiorite. In the Warramunga Province, the Treasure Suite includes felsic and mafic volcanic rocks, porphyry, granophyre, monzodiorite, diorite and dolerite. However, granite is not represented in outcrop. The Devils Suite is represented by the Warrego Granite, with the Gosse River East Syenite Lamprophyre being penecontemporaneous with the Devils Suite.

The Woodenjerrie beds outcrop in the south of the province and are correlated with the Warramunga Formation. The Woodenjerrie beds apparently lack the massive ironstone bodies that are associated with the Warramunga Formation.

The Junalki Formation is also approximately correlated with both the Warramunga Formation and Woodenjerrie beds, but includes a greater proportion of intercalated volcanic rocks than the latter unit. Volcanic rocks have not been recognised in the Warramunga Formation.

Volcano-sedimentary rocks of the Ooradidgee Group (~1850-1820Ma) unconformably overlie the Warramunga Formation and its correlates, extending to the south into the adjacent Davenport Province.
The Tomkinson Creek Province (1800-1400Ma) unconformably overlies the Palaeoproterozoic Warramunga Province to the north. Three successions outcrop in the province, the Tomkinson Creek, Namerinni and Renner groups. These are all predominantly sedimentary successions and contain sandstone, siltstone and shale. The Tomkinson Creek Group also includes a mafic volcanic unit. The oldest succession in the province, the Tomkinson Creek Group, is mildly deformed but unmetamorphosed and is correlated with the Hatches Creek Group of the Davenport Province. The successively unconformable Namerinni and Renner groups are correlated with the McArthur and Roper groups respectively.

The Davenport Province (1800-1700Ma) unconformably overlies the Warramunga Province to the south. It contains the Hatches Creek Group, which is composed predominantly of sandstone, siltstone and shale, with felsic volcanic beds in the lower part of the sequence, and a mafic volcanic unit in the middle parts. The ~1710Ma felsic Devil’s Suite intrudes the sequence. The ~1700Ma Davenport Event has produced widespread concentric and disharmonic folding in the Davenport Province succession.

Palaeozoic rocks of the Georgina and Wiso basins unconformably overlie the Proterozoic sequence of the Tennant Creek Region to the east and west respectively. These are largely covered by a thin veneer of unconsolidated Cainozoic cover.

The Warramunga Formation hosts major IOCG deposits of Au-Cu-Bi, temporally associated with the Tennant Suite granites, intruded into the Warramunga Province. Deposits of this type are the most important mineral producers, and remain the most important exploration target, for the region. Occurrences of W-Sn, U, Ni, Cu, Pb, Zn are known from the Davenport Province. The “Tomkinson Creek” Province hosts manganese deposits at Bootu Creek.

Figure 2: Regional Geological Setting, EL 26034, Tennant Creek, NT. (After Ahmad et al 2004)
2.2 Local Geology

EL26034 lies about 55kms to the NNW of the town area of Tennant Creek. It lies immediately to the south of the elevated ridges of arenites and dolerites of the Tomkinson Creek Group which form the Short Range. The tenement is almost entirely blanketed by recent alluvial cover.

In the eastern part of the tenement the alluvium is underlain by arenites, siltstones and shales of the Ooradidgee Group. In the south western quarter the alluvium is underlain by the Warrego Granite, which is thought to be part of the Devils Suite. The contact between the two is obscured by recent sediments, but from inspection of the aeromagnetic data it appears to be faulted, and strikes NW. Warramunga Group rocks may underlie the Ooradidgee Group at an unknown depth within the tenement.

The Warrego mine occurs in Warramunga Group sediments 10kms to the south of EL26034.

![Local Geological Setting, EL 26034. (After Donnellan, 2004) 1:50,000](image)

2.2.1 Exploration History

Small traces of gold were discovered in the creeks and gullies south of the telegraph station at Tennant Creek in 1879. In 1926 a miner named Charlie Windley worked a claim in weathered rock on what was to be the site of the Great Northern Mine. One of the telegraph operators, 'Woody' Woodforde, enlisted local Aborigines in the search for gold and in 1932 an Aboriginal man brought Woodforde a lump of ironstone containing visible specks of gold. This led to the discovery of gold in ironstone deposits returning as much as 1.2kg Au per tonne, and led to Australia's last great goldrush. By 1934 population numbers prompted the government to gazette a new township, to be called Tennant Creek.

The Eldorado Mine, which opened in 1932 and closed in 1958, produced nearly 175,000 ounces of gold. It was also a significant producer of copper, and was the only mine in the field to continue production throughout World War II. The discovery of the copper deposits in the field proved profitable, and dominantly copper-producing mines were established.
The Nobles Nob Mine was founded by Jack Noble, and became an open-cut operation in 1967 after the main shaft collapsed. Nobles Nob produced assays which regularly exceeded 100oz (3.2kg) of gold per metric ton. One particularly rich area within the orebody produced over 300oz per ton. Nobles Nob produced over a million ounces (32 tonnes) of gold.

Historical production from the Tennant Creek field has been in excess of five million ounces of gold and 500,000 tonnes of copper.

The Tennant Creek 1:250,000 map sheet was geologically mapped in 1970-71 by the then BMR (Dodson, 1978). The Tennant Creek 1:100,000 map sheet was mapped by NTGS in 1995, and reported as the combined Flynn-Tennant Explanatory Notes.

In 2008 Kevron completed an airborne magnetic and spectrometer survey of the Tennant Creek 1:250,000 map sheet. Lines were flown at 180° at a spacing of 200m. The Short Range 1:100,000 map sheet was mapped by NTGS in 2001.

The Tennant Inlier gravity survey, which covered the area approximately bounded by 324,000 - 500,000E and 7,733,000 - 7,897,000N was completed in 2001. Station spacing was approximately 4km. The region is also included in the wide-spaced Australia-wide gravity dataset.

The area of EL26034 has been subjected to numerous programs of exploration since 1970.

1968/69 Geopeko Ltd held A to P 1846 which covers the northern half of EL26034. They completed mapping, surface magnetics and auger soil surveys over the Explorer 36 anomaly, which located no geochemical anomalies.

1970-71 Geotechnics Australia explored A to P 2892 on behalf of Inter-Copper Ltd. The work was mostly carried out outside the area of EL26034, and included mapping, ground magnetics, an airborne VLF EM and Scintillometer survey. A few anomalies were noted. In 1972 Inter-Copper re-pegged the area as EL59, and re-interpreted the magnetics. No follow-up was reported.

1970-71 The Westmorland JV explored EL2090 with an airborne magnetic survey. A low-order anomaly immediately south of EL26034 was followed up with ground magnetics and auger drilling, with disappointing results.

1972-75 ADL / Nobelex flew aeromagnetics over EL375 and EL376, which together covered a large part of the EL26034 area. One anomaly was located within EL26034, which was more closely defined with ground magnetics. This does not appear to have been followed-up any further.

1977-83 In this period several companies, including Uranerz, Marathon, and CRA, explored the region for uranium. The majority of this work consisted of surface mapping, radiometrics and rock-chip sampling, with water sampling from some existing bores. Two large ground-water uranium anomalies were located, well outside the area of EL26034, which were considered to be caused by the leaching of nearby granites.

1983-85 Peko explored EL3573 and 4179 for copper-gold deposits. They flew aeromagnetics/ radiometrics, locating 3 anomalies which were all outside EL26034. The ground over 26034 was relinquished.

1986-91 CEGB explored EL4895, which covered all of EL26034, between 1986 and 1988. They re-assessed the 2 large uranium-in-groundwater anomalies located by CRA, and completed ROAC and U-in leaf-ash surveys, ground magnetics, radiometrics and EM. From 1989 to 1991 Poseidon took over exploration, and completed aeromagnetics and multi-element region stream sediment sampling. Several anomalous areas were delineated, over which they carried out gravity surveys, soil sampling and RC drilling. None of these anomalies was on EL26034. RC drilling on the Chook anomaly, to the south west of EL26034, returned a best intersection of 4m @ 2.37% Cu.
1991-94 Western Mining Corporation completed magnetic interpretation, ground magnetics and gravity in EL7153. Most of the follow up work was on the Alaska anomaly, which is south of EL26034. No additional follow up was completed.

1993-2002 Between 1993 and 1995 Poseidon explored a number of EL’s in the general region of EL26034. They compiled and reinterpreted the 1984 Aerodata and 1989 Austirex airborne magnetic surveys, identifying anomalous areas based on magnetic response and the intersection of magnetic features with structural zones. Selected anomalies were explored with ground magnetics, gravity surveys, soil sampling, vacuum drill multi-element geochemistry. Work done within the area of EL26034 included vacuum drilling 95 holes in EL8080, and a further 95 holes in EL8081. About 40 vacuum holes were also drilled in EL7896, on the most western edge of EL26034. This work located a number of low-order geochemical anomalies in heavy mineral concentrated from samples of drilled overburden.

In 1995 Poseidon amalgamated 7 EL’s into a single substitute exploration licence, SEL8814. This covered parts of EL26034. They carried out a global interpretation of the region, and drilled an additional 255 vacuum holes within the EL26034 area. This was followed up with 3 RAB holes with disappointing results. All further work was done south of the EL26034 area. Giants Reef acquired all of Normandy Poseidon’s assets in the Tennant Creek region in 2001, and the SEL was relinquished in 2002.

1995-98 Yardarino Mining NL held EL9095, 2 blocks of which coincided with EL26034. They carried out vacuum drilling with limited RAB follow-up, but all south of EL26034.

2001-06 Giants Reef held EL9995, and Meteoric Resources held EL24364. Each carried out literature searches, and relinquished the ground.

3.0 WORK COMPLETED DURING THE REPORTED PERIOD

No on-ground field work was carried out in EL26034 during the reporting period. Exploration activities were restricted due to the lack of a signed heritage agreement, and included:

- Continued negotiation of a draft exploration deed of agreement with the Traditional Owners through the CLC;
- Review of historical data including digital compilations of history Geochem
- Assessment of the potential for a new styles of mineralisation in the Tennant Creek region;
- Report writing.

4.0 RESULTS

Progress is steadily being made towards a heritage agreement with the CLC for the tenement. Due to the sensitive nature of exploration in the region, and the discovery by Westgold of the Rover 1 deposit to the south, Metals X will not mount an exploration program on the ground until an access agreement has been signed.

Processing of the 2010 high-resolution helimag survey identified several ENE-trending anomalies including the historic Explorer 27, 35, 36, and 60 anomalies. Modelling of these anomalies in conjunction with regional structural interpretation and correlation against historic on-ground exploration programs indicated the need to apply additional geophysical techniques to better rank and define confidence in potential targets.
Fugro Airborne Surveys where contracted as part of Castile Resources regional Rover and Tennant Creek Field exploration program to trial deep penetrating, 3-component directional time domain Helicopter-borne EM (HeliTEM) system. Four targets identified by the 2010 helimag survey each had two 2.5 km HeliTEM lines flown over them (Figure 4) indicating several potential conductive anomalies. The anomalies will be modelled in the coming year, and ranked with the other anomalies on Castile's tenements in the region for follow-up ground mapping, and additional geophysical surveys such as IP if warranted, subject to a heritage agreement being in place.

Two historical diamond drill holes from the tenement, drilled into the Explorer 27 and 36 anomalies, were selectively sampled for downhole geochemistry. No significant anomalies were identified, however an interpreted dolerite intrusive did indicate slight re-mobilisation of sulphides.

Vacuum and RAB drilling has been carried out within nine of the 19 blocks which comprise the tenement. Apart from the 2 diamond drill holes no testing has been completed to depths greater than about 50m.

The tenement is underlain by interpreted Ooradidgee Group sediments, and not the more commonly mineralised Warramunga Formation. However, it is evident that the copper mineralisation at the Chook Prospect, about 10kms south west of EL26034, occurs within the Ooradidgee Group, and thus the Ooradidgee Group may represent a valid target stratigraphy. It is also possible that the Warramunga Group underlies the Ooradidgee Group at an unknown depth within the tenement area.

![Figure 4: HeliTEM Flight Lines on backdrop of RTP magnetic image EL 26034. (mga94)](image)

5.0 ENVIRONMENTAL / REHABILITATION REPORT

No environmental rehabilitation has occurred during the reporting period as no exploration work of a ground-disturbing nature was carried out.
6.0 CONCLUSION AND RECOMMENDATIONS

EL26034 lies on the western end of the belt of the Tennant Creek field, 10 kilometres north of the 1.6 million-ounce Warrego Mine. Work by previous companies has demonstrated that low-order magnetic and geochemical anomalism occurs within the tenement. This has been tested in several areas by surface magnetic surveys, geochemical sampling of the overburden material to depths of up to 5m, and 3 RAB holes. Two diamond drill holes have also been drilled on the tenement.

One mid-order magnetic anomaly occurs within the area of the tenement, and modelling indicates the magnetic target at depths greater than 500m. Potential for new styles of mineralisation away from the more classic magnetite rich ironstone host are currently being considered. The potential for shallower (<500m depth) sulphide rich deposits is being considered with targeting to be focussed on geophysical methods.

Work for the 2013 year will include formalising the heritage agreement over EL26034 to allow exploration access on the ground. Modelling of the new HeliTEM and aeromagnetic data will be integrated with historical results to define and prioritise drill targets.

The application of deep penetrating IP is to be considered to define potential sulphide targets associated with the newly defined EM anomalies.

7.0 REFERENCES

