



**CASTILE RESOURCES PTY LTD**  
ABN 93124 314 085

A wholly owned subsidiary of Metals X Limited

**Annual Report**

**EL10379**

**Reporting Period**

11 September 2011 to 10 September 2012

November 2012

**Tenement Holders:** **Lassact Pty Ltd**  
**ACN 101 620 277**

1:250,000 Sheets: Mount Liebig SF52-16  
1:100,000 Sheets: Mount Liebig 5151  
Datum: GDA94  
Projection: MGA  
Zone: 52  
Author: Robert Burke & Luke Meter  
Operator: Castile Resources Pty Ltd  
Distribution: Department of Mines and Energy; Central Land Council;  
Lassact Pty Ltd



## SUMMARY

This report covers exploration on EL10379 for the period of September 11, 2011 to September 10, 2012.

EL10379 is part of the Warumpi Project area approximately 300km west of the Alice Springs Township that falls within the Haast Bluff Aboriginal Land Trust. The Project area is considered to be prospective in a multitude of economic mineralization ranging from copper and gold to base metals within structurally controlled high grade metamorphic terrain.

The tenement was granted on 11<sup>th</sup> of 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.

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 development of the Australian continent. Such 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 newly discovered AngloGold's Tropicana deposit (5M+ oz Au). The province has seen little to no previous exploration work throughout the area and is considered to have high potential for economic mineralisation.

Heritage surveys were completed and approvals provided for reconnaissance style surface sampling in March 2010. Unfortunately, due to corporate changes the previous joint venture company withdrew from the project prior to completing any on ground exploration activities.

Subsequently, Lassact searched for another corporate partner, with a number of groups completing desktop reviews and a helicopter supported field inspection.

In March 2012, Castile Resources Pty Ltd entered into a joint venture agreement with Lassact Pty Ltd to explore the tenements and has the right to earn up to 80% equity in the tenement. Since entering into the joint venture, Westgold has completed a range of activities including numerous desktop reviews, reprocessing of regional geophysics and a small scale reconnaissance trip with associated sampling.



## CONTENTS

	Page
<b>SUMMARY</b> .....	<b>i</b>
<b>1. INTRODUCTION</b> .....	<b>1</b>
<b>2. LOCATION</b> .....	<b>1</b>
<b>3. TENURE</b> .....	<b>1</b>
<b>4. GEOLOGY</b> .....	<b>4</b>
REGIONAL GEOLOGY.....	4
LOCAL GEOLOGY .....	6
EXPLORATION HISTORY .....	6
<b>5. MINERALISATION AND POTENTIAL</b> .....	<b>7</b>
<b>6. WORK COMPLETED DURING THE PERIOD</b> .....	<b>9</b>
<b>7. RECOMMENDED WORK PROGRAM</b> .....	<b>9</b>
<b>8. REFERENCES</b> .....	<b>10</b>

### LIST OF FIGURES

Figure 1	Project Location Map	2
Figure 2	Tenement Location Map	3
Figure 3	Geological Domains of the Warumpi Province	4
Figure 4	EL10379 Local Geology	6
Figure 5	High Resolution Magnetic Image of Australia	7
Figure 6	Magnetics displaying the Yuwalki Fault and other Crustal Scale Structures	8
Figure 7	Tropicana Model Developed by AngloGold Ashanti	9

### LIST OF DIGITAL FILES

Geochemical File	EL10379_2012_A_02_SurfaceGeochem.txt
------------------	--------------------------------------



## 1. INTRODUCTION

EL10379 is located approximately 300km west of Alice Springs in the Northern Territory and is the eastern most tenement of Lassact Pty Ltd's Warumpi Project within Aboriginal freehold land.

The Warumpi Project area lies in the Warumpi Province, a newly defined and significantly important 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, processing and interpretation of publicly available data, on ground heritage surveys and a short reconnaissance trip with associated sampling. The area is still considered to be highly prospective for base metals and gold-copper mineralisation.

## 2. LOCATION

EL10379 is the most eastern tenement of the Warumpi Project and is located approximately 300km west of the Alice Spring Township. The project area consists of 3 additional granted tenements (EL6732, EL6861, and EL26527) and one application under moratorium (EL24825) within the Haasts Bluff Aboriginal Land Trust.

Access to the project area is via the Stuart Highway, 20 km north of Alice Springs, then northwest along the Tanami Road for approximately 118km to Kintore Road. The project area is approximately 195 km west along Kintore Road passing the communities of Papunya and Mount Liebig.

## 3. TENURE

The tenement was granted, on the 11<sup>th</sup> of 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. EL10379 is 100% own by Lassact Pty Ltd and was actively searching for a partner to help conduct mineral exploration throughout the tenement at the beginning of the reported period.

In March 2012, Castile Resources agreed to enter into a joint venture agreement with Lassact Pty Ltd to explore the tenements and has the right to earn up to 80% equity in the tenement.

Table 1: Tenement Details

Lease	Project	Granted Blocks	Application Date	Grant Date	Expiry Date
EL10379	Warumpi	29	12/2003	11/09/2007	

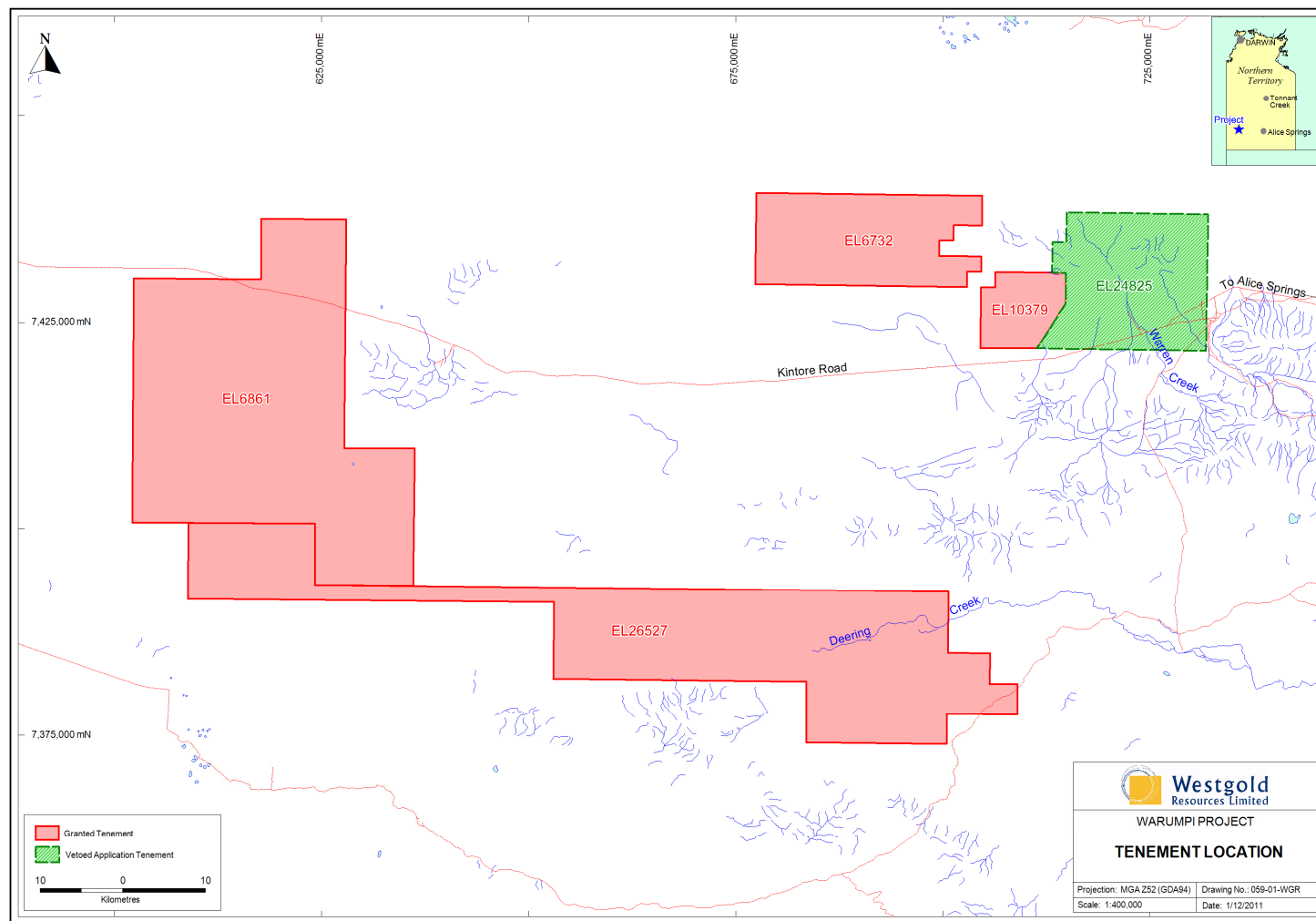


Figure 1: Project Location Map





Figure 2: Tenement Location Map





## 4. GEOLOGY

### 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 Province produced dates ranging from 1690-1610 Ma 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 (1640-1630 Ma).

Two high grade domains dominate the Warumpi Project area of the Warumpi Province; The Yaya Domain; located in the northern portion, which dominates EL 10379, 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. The Yaya Domain (1660-1640 Ma) consists of psammites, pelite, 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 (1690-1660 Ma) consists of rhyolitic volcanic, metasedimentary schists, amphibolites, orthogneiss, and various suites of granitoid intrusive.

**Figure 3: Geological Domains of the Warumpi Province**

### **Warumpi Province** 1690 – 1610 Ma terrane

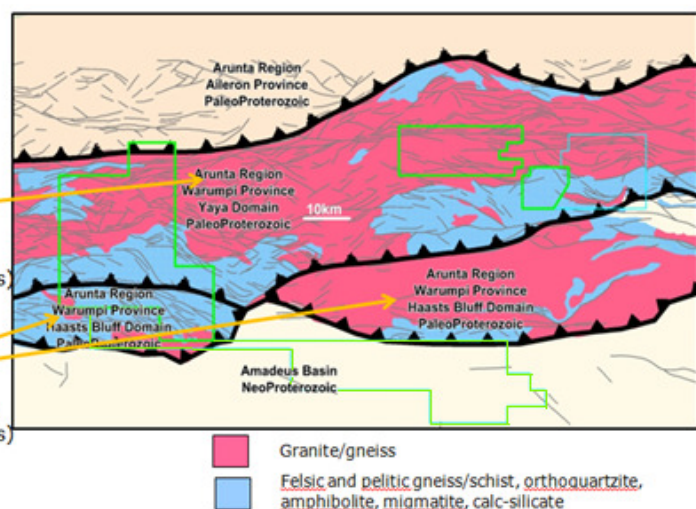
Southern Margin of the North Australian Craton

#### **Yaya Domain**

•Granulite Facies (metasedimentary, metavolcanic, metamorphosed plutonic rocks)

#### **Haasts Bluff Domain**

•Amphibolite Facies (metasedimentary, metavolcanic, metamorphosed plutonic rocks)







The Yaya Domain (1660-1640Ma) consists dominantly of high grade metamorphic migmatites intruded by volumous felsic and mafic rocks of the Walwiga Suite (1640-1630Ma) and conformly overlain by the Yaya Metamorphic Complex (1660-1650). The Yaya Metamorphic Complex is composed of four stratigraphic units:

<u>Spears Metamorphics</u>	Generally mapped in the east portion of the Warumpi Province, however, observed throughout the Mount Liebig area. It consists of Augen gneiss, Felsic gneisses, metapelites, and amphibolites.
<u>Inyalinga Granulites</u>	Dominantly in the northern portion of the Yaya Matamorphic Complex. Similar lithologies to the Spear Metamorphic with massive cordierite granulites.
<u>Alkipi Metamorphics</u>	Mapped throughout the eastern portion of the Warumpi Province and not seen on the project area. It consists 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 remaining portion of the Warumpi Province in the project area and is 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 grade amphibolites metamorphic event during the Liebig Orogengy (1640-1635Ma) affected the region while the Iwupataka metamorphics were unconformly being deposited.

Many units compose the Iwupataka Metamorphic, however only two are observed throughout the southwest portion of Warumpi Project area.

<u>Lizard Schist</u>	Biotite-muscovite-quartz schist interlayered with muscovite quartz rich psammite layers.
<u>Nugman Metamorphics</u>	Lower Amphibolite metasedimentary rocks near the Mount Rennie area composed of biotite muscovite schists and minor mafic amphibolites.

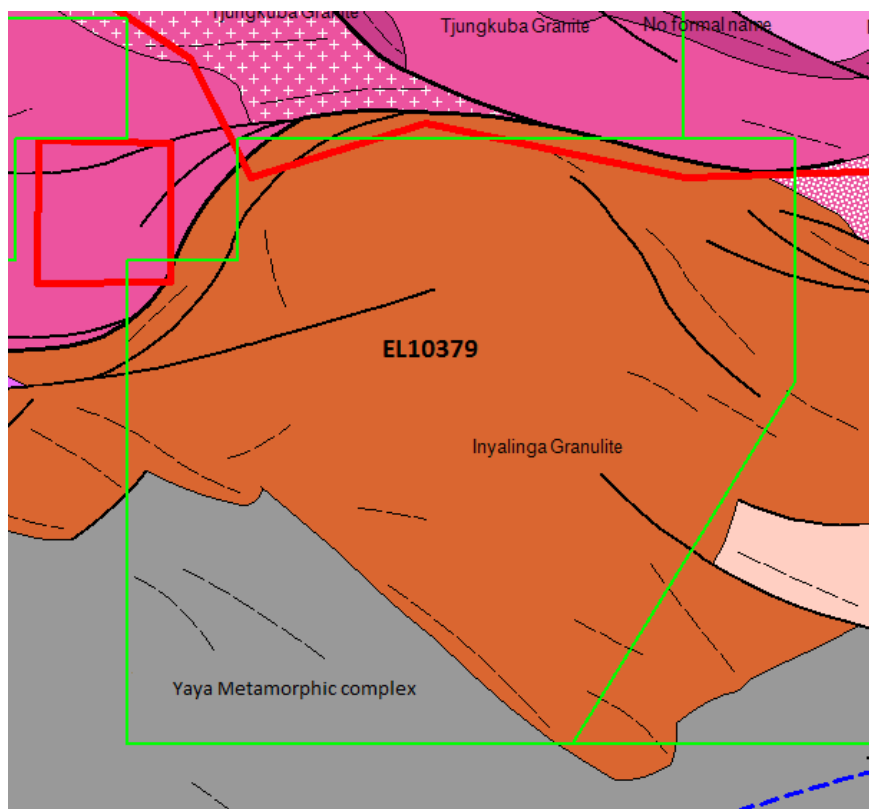




### Local Geology

EL10379 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 made up of two formations; the Inyalinga Granulites to the north, which consists of high grade calc-silicate rocks and unclassified Yaya Metamorphic Complex to the south, consisting of a multitude of migmatites and altered granites. The Inyalinga Granulites dominate the majority of the tenement with only the southwest sector containing the Yaya Metamorphic complex (Figure 4).

**Figure 4: EL10379 Local Geology**



### 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 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.



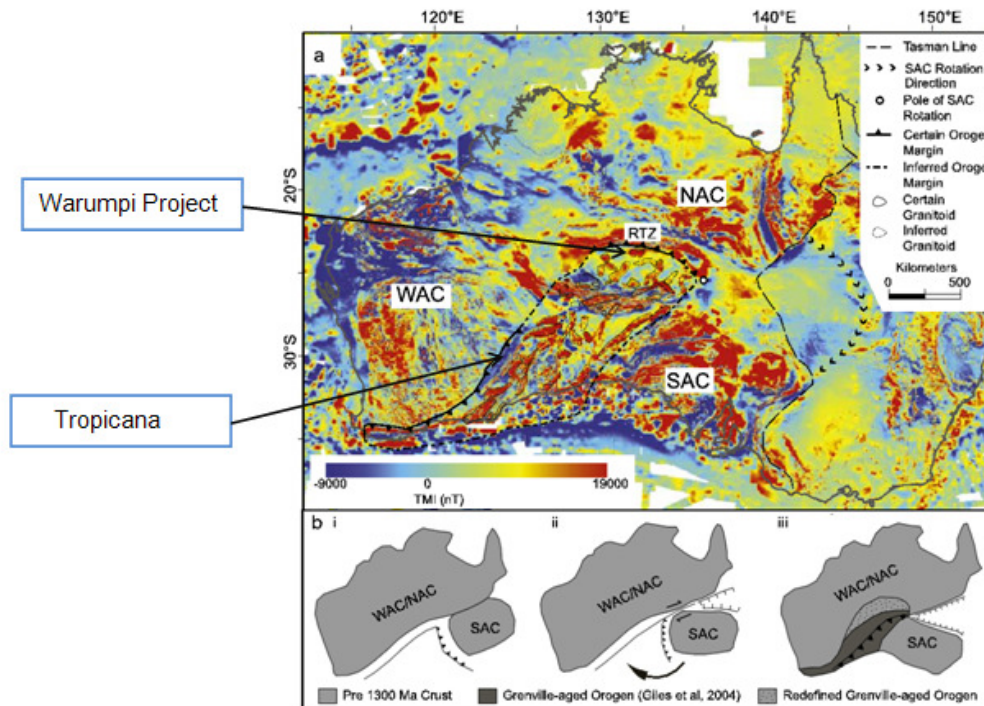
## 5. MINERALISATION AND POTENTIAL

No reported occurrences of any mineralisation have been recorded on the project tenements; however low level anomalous NTGS stream sampling does occur in the eastern most tenement (EL24825) and further to the east. Additionally historical and unqualified highly anomalous surface rock chip samples are supposedly taken for around the tenement area however location of this data is yet to be validated.

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

Additionally, most deposits in the world, structure plays an important role with the emplacement and controls on mineralisation. This can also be said within the Warumpi Project area of the Warumpi Province with two major crustal feature confining and dissected the local geology. To the north is the Central Australian Suture zone that dips gently to the south, separates the Warumpi with the Arunta Inlier. This collisional boundary, which is interpreted to be Grevillian in architecture, can be traced and is interpreted to go through areas near AngloGold's Tropicana deposit, all the way to Albany, separating the South Australian Craton with the North and West Australia Cratons. This main crustal scale suture and its associated sub-parallel secondary structures can significantly aid in the transportation and localisation of mineralized fluids as seen at the Tropicana deposit. Also with the clockwise rotation of this collision (Figure 5), folding and shear seen throughout the Warumpi Project area can potentially create dilatational zones which again aid in focusing and localizing these mineralised fluids (Aitken and Betts, 2008).

**Figure 5: High resolution Magnetics of Australia with the reconstruction of the collisions between the WAC/NAC and the SAC (Aitken and Betts, 2008)**

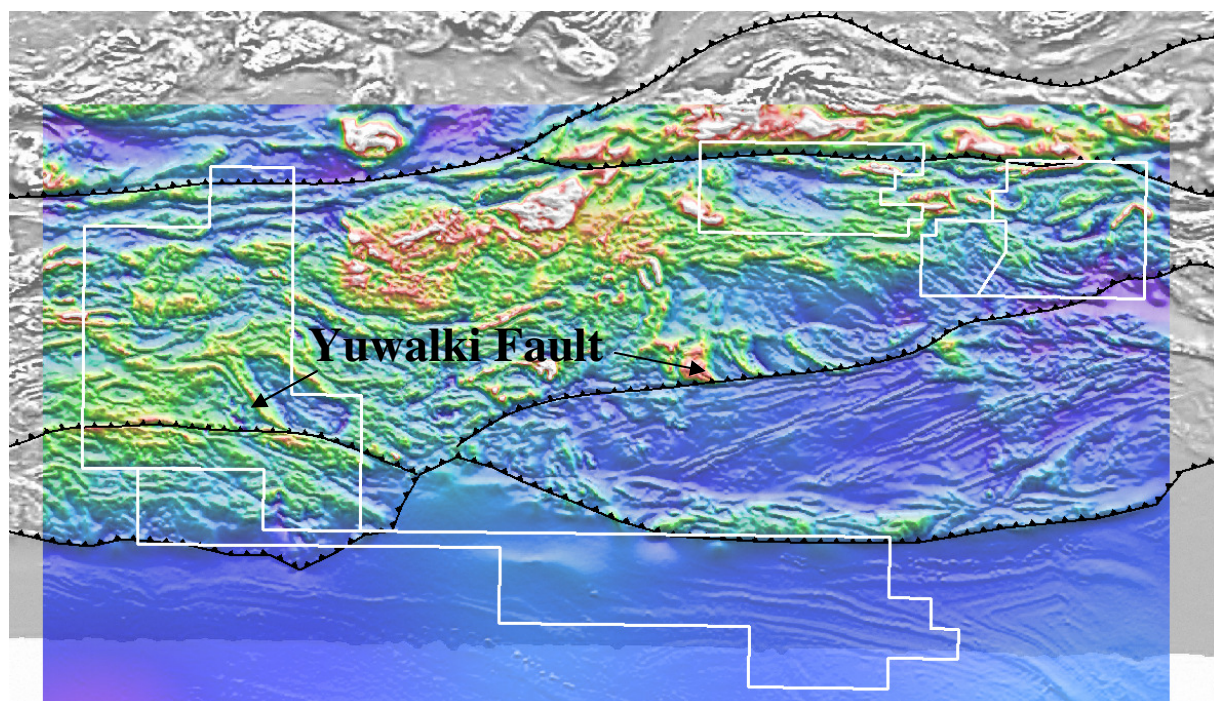




The second important crustal feature is the Yuwalki fault, which is part of the Edward thrust complex of the Alice Springs Orogeny (450-300 Ma). This fault separates the Yaya domain in the north with the Haasts Bluff domain in the south which will be discussed later on as a potentially important structure.

Mapping and magnetic interpretation have identified that both the Yaya and Haasts Bluff domains have been through at least three orogenic events (Liebig Orogeny (1640- 1635 Ma), Chewing Orogeny (1590-1560 Ma) and the Alice Springs Orogeny (450-300 Ma) (Scrimgeour et al, 2005), which is seen in the multiple zones of sub-parallel features that have been folded and cross cut by minor faults and shearing. This has resulted in recorded wide spread quartz veining and alteration throughout area.

**Figure 6: Magnetics displaying Yuwalki Fault and other Crustal Scale Structures**



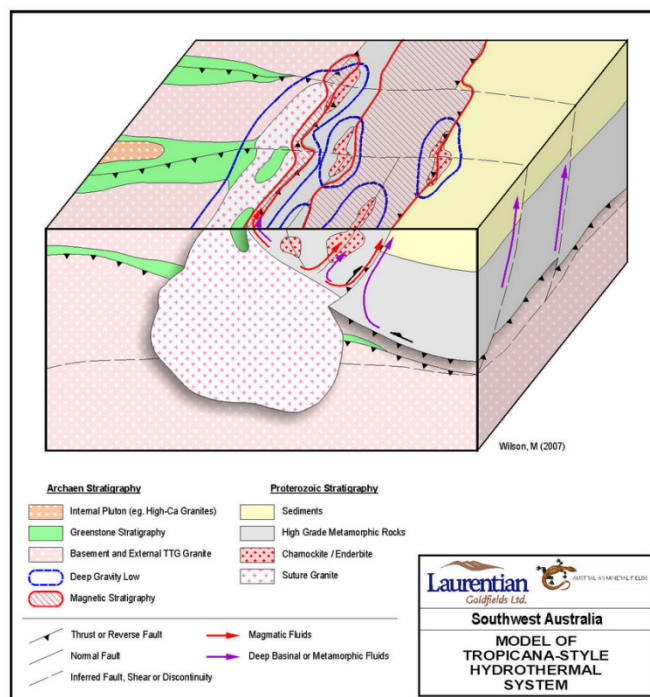
It is important to note the geology throughout the Warumpi Province. South of the Yuwalki fault are high grade orthogneiss, rhyolitic volcanics, and metasedimentary schists of the Haasts Bluff domain and to the north are the high grade metapelites (paragneisses), migmatites, and metasedimentary schists that have been intruded by Charnockites, granodiorites and granites of the Waluwiya Suite (1640-1630 Ma) of the Yaya Domain (refer to Figure .3). These all show the right ingredients and plumbing (Yuwalki fault) that is seen in Anglo-gold's Tropicana model (Figure 7).

High grade metamorphic rock types and a sound structural setting, the Warumpi Province remains highly prospective for significant economical copper-gold and base metal discoveries in the near future.





**Figure 7: Tropicana model developed by AngloGold Ashanti (Laurentian Goldfields Ltd, 2009)**



## 6. WORK COMPLETED DURING THE PERIOD

Desk-top reviews as well as reprocessing of regional geophysics dominated the majority of the work during the reported period of 11/09/2011 – 10/09/2012. Limited on-ground exploration work was carried out included a brief, one day reconnaissance trip throughout the tenement, at which time sporadic, prospecting style sampling was conducted. A total of 3 rock chip and 1 Lag sample were taken.

## 7. RECOMMENDED WORK PROGRAM

The Warumpi region is considered prospective for a wide range of commodities including precious metals, base metals (including copper, lead zinc, nickel) and diamonds. Westgold is predominantly targeting gold and other precious metals together with copper and lead zinc deposits within the region.

The project area has essentially never been explored for minerals and therefore the initial exploration activities are designed to provide baseline data to confirm the prospectivity of the region.

This initial work during 2013 will include attributes of the following:

- Further geological mapping of available outcrops (excluding heritage exclusion zones)
- Surface geochemical sampling ( lag ) throughout the tenements
- Detailed in-fill surface sampling
- Ground based geophysical surveys
- Potentially additional remotely sensed (airborne) geophysical surveys



## 8. REFERENCES

Aitken, A and Betts, P., 2008: *High-resolution data over central Australia assist Grenville-era (1300-1100 Ma) Rodinia reconstruction*. Geophysical Research Letters, Vol. 35, L01306.

Laurentian Goldfields Ltd., 2009: Grenville project, Quebec. <http://www.laurentiangoldfields.com/s/Grenville.asp?ReportID=387208& Title=2009-Exploration-Program>.

Scrimgeour IR, Close DF and Edgoose CJ, 2005. *Mount Liebig, Northern Territory*.

*1:250 000 geological map series explanatory notes, SF 52-16*. Northern Territory Geological Survey, Darwin and Alice Spring