AARD METALS LIMITED

COMBINED ANNUAL REPORT
PERIOD ENDING 31 DECEMBER 2013

Group Reporting Number: GR 197/11
Comprising MLC’s:
MLC81, MLC82, MLC103, MLC104, MLC105, MLC106, MLC682

Geology Map Sheets: 1:100 000 Tennant Creek 5758 and 1: 250 000 Tennant Creek Map Sheet

Target Commodities: Iron Ore (as magnetite concentrate), Gold, Copper

Tenure Holder and Operator: Aard Metals Ltd

Date: 25 February 2014

Author: George Jenkins (Chief Operating Officer)
Email: George@aard.com.au
Phone: (02) 9235 3188

<table>
<thead>
<tr>
<th>Rev</th>
<th>Date</th>
<th>Description</th>
<th>Prep</th>
<th>Check</th>
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<th>Approved for Distribution</th>
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<td>25/02/14</td>
<td>For Distribution</td>
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EXECUTIVE SUMMARY

Aard Metals is an emerging iron ore exploration and development company and as such is a newcomer into the market with the Warrego project expected to be the first operational project for the company. The company expects to continue exploration for, and development of, Iron Ore, Copper and Gold projects throughout Australia and Iron Ore product from its operations will be marketed largely in China.

The Warrego Tailings Project is located 50km northwest of Tennant Creek and has six granted Mining Lease Claims that are covered by group reporting status (GR197/11).

This report covers the activities for the period ending 31 December 2013 for Mining Lease Claim numbers as per the table below.

<table>
<thead>
<tr>
<th>Title No.</th>
<th>Title Holder</th>
<th>Grant Date</th>
<th>Expiry Date</th>
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</thead>
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<td>MLC 81</td>
<td>Aard Metals Limited</td>
<td>06 Mar 1969</td>
<td>31 Dec 2030</td>
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<td>MLC 82</td>
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<td>06 Mar 1969</td>
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<td>MLC 103</td>
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<td>10 Aug 1971</td>
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<td>MLC 104</td>
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<td>MLC 105</td>
<td>Aard Metals Limited</td>
<td>10 Aug 1971</td>
<td>31 Dec 2022</td>
</tr>
</tbody>
</table>

MLC 81 and 82 were renewed on 31 December 2009 and MLC’s 103, 104, 105 and 106 expired on 31 December 2012 and the renewals were approved on 27 February 2013 for a further period of 10 years to 31 December 2022. The next MLC expiry is on MLC 682 on 14 October 2015.
The title boundaries are shown in the diagram below.
The table below describes some of the more important work that has been completed on the project to date.

<table>
<thead>
<tr>
<th>Description</th>
<th>Author</th>
<th>Date</th>
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</thead>
<tbody>
<tr>
<td>JORC Statement</td>
<td>Hellman and Schoefield</td>
<td>Dec 2010</td>
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<tr>
<td>Independent Metallurgical Testwork Report</td>
<td>Promet Engineers</td>
<td>Jun 2012</td>
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<td>Warrego Shaft Water Draw</td>
<td>Coffey Geotechnics</td>
<td>Oct 2012</td>
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<td>Tailings Dam Conceptual Design</td>
<td>Capital Consulting Engineers</td>
<td>Nov 2012</td>
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<td>Siding Conceptual Design</td>
<td>Kellog, Brown and Root</td>
<td>Nov 2012</td>
</tr>
<tr>
<td>Feasibility Study</td>
<td>ProMet Engineers</td>
<td>Dec 2012</td>
</tr>
</tbody>
</table>

The current JORC Indicated Resource for the project is 7.8mt at 35.2% Iron and an Inferred JORC resource of 119,000 ounces of Gold at 0.48g/t and 16,500 tonnes of Copper 0.21%.

The metallurgical testwork has demonstrated that through the use of magnetic separators and disc filters, 2.92 million tonnes of magnetite concentrate at 64% Iron and 8% moisture can be produced from the tailings dams on the Warrego Project.

The feasibility study has shown that the Warrego Project is financially robust, technically of low risk, is expected to have environmental benefits to the area and can be brought into production within around 12 months from securing of project finance.

Aard Metals is currently working on securing project finance for the Warrego Project as well as investigating various Australian Stock Exchange listing options.

Due to the current challenges in the capital markets, Aard Metals have had to delay the whole project schedule (as proposed in the 2013 Group Annual Report) by 12 months.

Aard Metals believes that project financing will be secured in Q1 of 2014 and the first commercial sale of Magnetite concentrate is expected in Q2 of 2015.
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1. INTRODUCTION

1.1 Location

The Warrego mine site is located 51km North West of Tennant Creek in the Northern Territory of Australia and is approximately 1,000km south from Darwin via the Stuart Highway. (See Figures below)

The Warrego Tailings Project is located 51 kilometres NW of Tennant Creek, and 20 kilometres from the Alice-Darwin railway line and 1,000 km south of Darwin. Access to the site is north out of Tennant Creek on the Stuart highway past the airport and then west off the highway onto Warrego road. It is then 49 km on a double lane macadamised road to the project site.

Figure 1.1: Warrego Location
1.2 Title History

On 29th of August 2008 Aard acquired the tenements from Territory Resources Limited with no cash payments and future issuing of shares and a royalty agreement on the Iron and Gold within the tailings that is sold. The table below shows the current status of each of the tenements secured under this sale agreement.

Table 1.1: Tenement Status

<table>
<thead>
<tr>
<th>Title No.</th>
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<tr>
<td>MLC 105</td>
<td>Aard Metals Limited</td>
<td>10 Aug 1971</td>
<td>31 Dec 2022</td>
</tr>
</tbody>
</table>

Since Aard Metals acquired the tenements the company renewed MLC’s 81 and 82 on 31 December 2009 and MLC’s 103, 104, 105 and 106 on 31 December 2012 which was approved on 27 February 2013.

1.3 Physiography

1.3.1 Physical Environment

The Warrego Project is located on the undulating plains of the Barkly Tableland within the Davenport and Murchison Ranges Bioregion. Across the Barkly Tableland there is generally only a very gentle relief that varies less than 50 m in elevation from the highest to lowest point (Edgoose, 2003). The landscape of the project area has a general low relief, although small rocky outcrops are locally common.

1.3.2 Topography

The Warrego site is located on an alluvial plain to the south of the Short Range, in an ephemeral drainage system. Drainage lines, which trend in a southerly direction, are poorly developed and become less defined with distance from the Short Range. The Warrego Project area borders both the Davenport Murchison Ranges and the Tanami bioregions.

1.3.3 Hydrology

1.3.3.1 Description of Hydrology

The Warrego Project falls within the Western Plateau drainage division, in both the Wiso and Barkly basins. Natural drainage lines in the area are poorly developed due to the flat topography where sheet flow is dominant. Groundwater in the Tennant Creek area is typically saline with high Total Dissolved solids (TDS). As such it is unfit for consumption by humans or cattle.

The Warrego Tailings Project lies within a shallow, south-easterly sloping ‘low’ in the regional topography. Because of its topographical position, the area is prone to flooding during the wet season. Extensive bunding has been built to
the north and east of the neighbouring plant site to isolate Warrego from runoff by diverting overland flow. Surface water drainage lines include two shallow, partly rock armoured, drainage lines that redirect water deflected by the bunds. One of these drainage lines is located at the south-eastern end of the bund and the other at the western end.

1.3.3.2 Water Resource Management

At a regional level the Warrego project is within the Wiso Surface Water Management Area (WSWMA)[2]. The area covers 227,660 km² as represented in the diagram below.

![Figure 1.2: Wiso Surface Water Management Area](image)

As this SWMA is in arid zone, the sustainable yield is estimated as 5% of the Divertible Yield. There is no major infrastructure or diversions for surface water extraction within this SWMA. This management area is same as Wiso Basin. About 43% of the SWMA is pastoral leasehold land, and 57% is Aboriginal land. Half of the land has soils with moderate limitations to agriculture. The management area covers forty five pastoral leases, and twenty of these leases have more than 70% of their area within the SWMA. The management area in the south is covered by Reynolds Ranges and mountain ranges. In the southern part, the major rivers are Lander and Hanson, which originate from the ranges noted. It is said that these two rivers flow every twelve years throughout their full lengths. These rivers flow into the sand dune country and disappear, thus recharging the groundwater aquifer. On the eastern side of SWMA, McLaren, Phillip and Powell Creeks flow
frequently. Newcastle creek flows into Lake Woods, while others on the eastern boundary flow into the sand dune country. In the north it’s mainly a semi desert country. On the western side there are few creeks that flow from the low escarpment country and disappear into the sand dune country.

The mean annual rainfall varies from 250 mm in the south to 650 mm in the north. There is no surface water licensing, and surface water usage is mainly for stock watering. Surface water is also used for domestic water supply to a rural community. The salinity for the runoff water is less than 500 mg/l.

The figure below provides a summary of the Surface water resource.

![Surface Water Resource Summary](image)

**Figure 1.3: Wiso Surface Water Management Area Resource Summary**
The table below provides some key data for the Wiso Surface Water Management Area.

Table 1.2: Key Data for WSWMA

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Area</td>
<td>227,660 km²</td>
</tr>
<tr>
<td>Mean Annual Run-Off (Natural)</td>
<td>820,000 Ml/yr</td>
</tr>
<tr>
<td>In-stream commitment (Total available flow-imported water-sustainable yield)</td>
<td>780,000 Ml</td>
</tr>
<tr>
<td>Sustainable Yield - Developed Yield</td>
<td>39,680 Ml</td>
</tr>
<tr>
<td>Divertible Yield</td>
<td>820,000 Ml/yr</td>
</tr>
<tr>
<td>Developed Yield</td>
<td>320 Ml/yr</td>
</tr>
<tr>
<td>Sustainable Yield</td>
<td>40,000 Ml/yr</td>
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<td>Diversion</td>
<td>320 Ml/yr</td>
</tr>
<tr>
<td>Total Available Water</td>
<td>820,000 Ml/yr</td>
</tr>
</tbody>
</table>

At a more local level surface water is used by the pastoralist for watering of cattle. The pastoralist accesses two water dams constructed by previous mining companies. These dams are situated to the North West of the project area approximately 5.8 and 9.4 km from the closest tenement boundary. Surface water in wetlands approximately 0.7 km to the west of the nearest tenement boundary is clearly accessed by cattle however it is not certain if the pastoralist allows this practice during the normal course of their activities. The two surface water catchment ponds within the lease boundary are not for any water extraction purposes and fall within the fenced off area of the total site. There is currently no evidence that cattle have breached the fence line to access these surface water sources.

Figure 1.4: Local Area Pastoral Infrastructure
1.3.4 Hydrogeology

1.3.4.1 Description of Hydrogeology

The regional hydrogeology is described as being composed of fractured and cavernous silcrete. It occurs in a palaeovalley on the eastern edge of the Lower Palaeozoic Wiso Basin, a sequence of gently dipping carbonate rocks. The origin of the silcrete is unclear but is thought to be a replacement of the original Palaeozoic rocks by groundwater interaction.

At a more local level around the immediate tenements previous bore logs indicate that the strata compromises shales and fine grained sandstones of the Warramunga Formation. The rocks are highly oxidised to depths of 30 to 50 m. Holes drilled to target the hydrogeology intersected groundwater inflows. Moderate inflow volumes of up to 4 l/s were recorded in depths less than 50m.\textsuperscript{[3]}

A review of the test pit and borehole data (MPA Williams, 1994) indicates that a geological boundary exists between two “domains” of different rock types (granite and siltstone) NW to SE across the tailings dams area. The geological boundary, intersects the North Wall of Tailings Dam 2 (North) and the East Wall of Tailings Dam 3 (East). Because of the similar highly weathered nature of both the granite and siltstone, it is likely that their geophysical responses would be relatively similar and conductive. The data suggests that the geological contact may be a conduit flow.

Two significant groundwater flow zones are indicated by anomalously low potentials from 350m to 580m, and from 1,000m to 1,160m from the tailings dams. These zones may represent preferential flow paths such as fractures or fissures into which groundwater is moving. Modelled groundwater flows indicate directional flow in a south western direction.

Further review of the local Hydrogeology is expected to be completed as part of the detailed engineering design work that is expected to commence in Q1 of 2013.

1.3.4.2 Water Resource Management

The Warrego project is within the Tennant Creek Water Control District (TCWCD)\textsuperscript{[2]}. The TCWCD was gazetted on 18 September 2002 and covers an area of 6,772 km\textsuperscript{2}. The Warrego project site is close to the northern boundary of the district.
Figure 1.5: Tennant Creek Water Control District

The table below indicates the key parameters of the district.
This district surrounds the town of Tennant Creek and the bores tap an aquifer composed of fractured and cavernous silcrete. It occurs in a palaeovalley on the eastern edge of the Lower Palaeozoic Wiso Basin, a sequence of gently dipping carbonate rocks. The origin of the silcrete is unclear but is thought to be a replacement of the original Palaeozoic rocks by groundwater interaction. The sole use of the aquifer is for Tennant Creek water supply. A borefield consisting of some 10 bores each averaging 40 metres deep and capable of pumping 6 litres per second supplies 1,732 Ml/year of water. The water quality is marginally suitable for human consumption at just under 600 mg/l TDS. The borefield is located south of the town and remote from potential human impacts.

At a more local level around the Warrego project site there is a redundant borefield 24.9 km to the west of the tenement boundary. This borefield was used by previous owners of the Warrego mine however the field has been abandoned and the remaining infrastructure is beyond economical repair. Any future user of this borefield will need to reinstate the entire infrastructure.

There are several monitoring boreholes within the project area and also on the adjacent Warrego mine site. The mine site also has a redundant shaft which has flooded over the years. Currently no extraction of groundwater is taking place on the project site and adjacent mine site.

1.3.5 Climate

The regional climate is semi-arid with well-defined wet and dry seasons: hot, wet and relatively humid weather generally persists from October until March (with mean maximum of 36°C and minimum of 24°C) before becoming mild to cool between April and September (mean maximum 28°C and minimum 16°C). The average annual rainfall is 473 mm with the majority of this falling during January and February. Droughts and floods can occur in the region within a few years of each other and while tropical cyclones have passed through the region, they are infrequent and erratic in nature. On average, one cyclone will pass within 200 km of the project area every six or seven years, with these cyclones it is known to bring heavy falls of rain of up to 200 mm in one day.

Fires are sporadic within the region and are of little concern on the project area due to the lack of ground cover. Fire occurrences in the area range from 0 to 5 times per annum.

Aard does not currently have a presence on site and has not completed any on site monitoring within the project area. All climatic data has been taken off the Bureau of metrology website for the Tennant Creek Airport measuring station no. 015135 which is the closest measuring site to the project area. The data set runs from 1969 to Dec 2012.
No climatic condition studies have been completed for the project area

Table 1.4: Summary Climatic Data

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
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<tbody>
<tr>
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<td></td>
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<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Mean maximum temperature °C</td>
<td>36.7</td>
<td>35.7</td>
<td>34.2</td>
<td>31.6</td>
<td>27.5</td>
<td>24.4</td>
<td>24.5</td>
<td>27.5</td>
<td>31.5</td>
<td>34.7</td>
<td>34.6</td>
<td>36.4</td>
<td>37.2</td>
</tr>
<tr>
<td>Highest temperature °C</td>
<td>44.0</td>
<td>44.5</td>
<td>40.7</td>
<td>38.4</td>
<td>36.4</td>
<td>35.6</td>
<td>34.7</td>
<td>35.7</td>
<td>38.9</td>
<td>41.6</td>
<td>43.4</td>
<td>45.4</td>
<td>45.4</td>
</tr>
<tr>
<td>Mean minimum temperature °C</td>
<td>24.9</td>
<td>25.5</td>
<td>23.2</td>
<td>20.3</td>
<td>16.3</td>
<td>12.8</td>
<td>12.2</td>
<td>14.4</td>
<td>18.4</td>
<td>21.7</td>
<td>23.7</td>
<td>24.9</td>
<td>19.8</td>
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<tr>
<td>Lowest temperature °C</td>
<td>17.2</td>
<td>17.2</td>
<td>14.6</td>
<td>11.6</td>
<td>6.7</td>
<td>5.3</td>
<td>4.5</td>
<td>6.0</td>
<td>7.4</td>
<td>11.6</td>
<td>10.7</td>
<td>15.7</td>
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<tr>
<td>Mean rainfall mm</td>
<td>112.3</td>
<td>125.8</td>
<td>58.3</td>
<td>17.5</td>
<td>8.2</td>
<td>5.3</td>
<td>4.9</td>
<td>1.6</td>
<td>7.9</td>
<td>20.6</td>
<td>41.1</td>
<td>69.1</td>
<td>472.6</td>
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<tr>
<td>Highest rainfall mm</td>
<td>357</td>
<td>377</td>
<td>238</td>
<td>135</td>
<td>54</td>
<td>85</td>
<td>74</td>
<td>18</td>
<td>56</td>
<td>107</td>
<td>160</td>
<td>250</td>
<td>1,911</td>
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<tr>
<td>Lowest rainfall mm</td>
<td>2.2</td>
<td>1.0</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>1.8</td>
</tr>
<tr>
<td>Highest daily rainfall mm</td>
<td>138</td>
<td>154</td>
<td>96</td>
<td>108</td>
<td>23</td>
<td>46</td>
<td>62</td>
<td>18</td>
<td>30</td>
<td>57</td>
<td>72</td>
<td>135</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Mean daily evaporation mm</td>
<td>12.4</td>
<td>11.3</td>
<td>11.2</td>
<td>10.8</td>
<td>8.6</td>
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<td></td>
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</tr>
<tr>
<td>Mean Wind Speed km/h</td>
<td>16.2</td>
<td>16.4</td>
<td>18.6</td>
<td>20.5</td>
<td>20.7</td>
<td>20.4</td>
<td>19.6</td>
<td>20.7</td>
<td>20.8</td>
<td>19.8</td>
<td>17.8</td>
<td>16.4</td>
<td>19.0</td>
</tr>
</tbody>
</table>

The graph below demonstrates the seasonal nature of the rainfall as well as the potential extremes of a wet and dry season. No analysis of the data has been completed to determine design criteria for drains or other infrastructure. This work will form part of the detailed design phase of the project and will be included in the MMP that deals with the construction and operational activities. A key consideration is expected to be the maximum duration event e.g. 1 in 100, 72 hour duration rainfall event.

![Figure 1.5: Rainfall Data 1969 - 2012](image)

The graph below shows the temperature variations for the region. The average maximum for the spring/summer period between September and February is 35 °C and for the autumn/winter period between March and August is 28 °C.

The average minimum for the spring/summer period between September and February is 23 °C and for the autumn/winter period between March and August is 16.5 °C.
The highest mean maximum temperature is 37°C in December and the lowest mean minimum is 12°C in July.

The highest recorded monthly maximum was 45°C in December and the lowest monthly minimum was 5°C in July.

The annual mean evaporation is 11 mm per month with a high of 14 mm in November and a low of 7 mm in June. The mean evaporation decreases through the autumn months and starts to increase again towards the end of winter. Mean evaporation for the spring summer months of September to February is 13 mm per month and 9 mm per month for the autumn/winter months from March to August.

Figure 1.7: Temperature Data 1969 - 2012
The mean wind speed for the region is 19 km/h with a maximum of 21 km/h in September and a minimum of 16 km/h in January.

![Figure 1.8: Evaporation and Wind Data 1969 - 2012](image)

1.3.6 **Land Systems**

1.3.6.1 **Topsoil and Subsoil**

The soils of the Tennant Creek area can be categorised into four major types:

i. gravely laterite red earths  
ii. lateritic red earths  
iii. red-brown desert alluvial soils  
iv. skeletal soils

There are several other categories but these only make up a small percentage of the remaining types. The soils of the area are highly leached and lacking phosphorus, are low in nutrient value and lack many tract elements that normally assist in the revegetation of the area.

Topsoil cover is generally in the order of 5 – 10 cm thick however, topsoil has been stripped from much of the area inside the tailing's dam footprints and also in the adjacent mining and processing areas of the mothballed Warrego mine.

The regolith consists of up to three metres of alluvium overlying approximately thirty metres of deeply weathered siltstone.
Figure 1.9: Regional Topsoils
Figure 1.10: Regional Subsoils
1.4 Access

All to the Warrego site gate are public and then become private once access to the site is gained. The Warrego site is currently closed off with a locked gate and access is controlled by Emmerson Resources who own the adjacent tenements and the redundant Warrego Gold and Copper plants. The whole Warrego mine site is fenced off and these fences are maintained by Emmerson Resources. The Whole Warrego Minesite, including the Aard Metals leases fall within the Philip Creek Station, a Perpetual Pastoral Lease (PPL946).

Aard Metals currently has a good working relationship with Emmerson Resources and as such has been able to gain unimpeded access to the site. Aard Metals is currently working with Emmerson Resources to formalise the access agreements to site and this is expected to be completed by Q2 of 2013.

2. GEOLOGY

2.1 Geological Setting

2.1.1 Regional

On a regional scale, the Warrego project is located on an alluvial plain to the south of the Short Range, in an ephemeral drainage system. Drainage lines, which trend in a southerly direction, are poorly developed and become less defined with distance from the Short Range. The Warrego Project area borders both the Davenport Murchison Ranges and the Tanami bioregions.

The Tennant Creek gold field is located around the town of Tennant Creek, some 900 km SSE of Darwin in the Northern Territory of Australia. It falls within the central province of the Tennant Creek Inlier, surrounded by flat lying lower Palaeozoic carbonate.

The oldest rocks of the Inlier are the metamorphosed greywacke, siltstone, mudstone and haematitic siltstones/mudstones of the Warramunga Formation (maximum age 1860 Ma). Authigenic and detrital magnetite is characteristic of the Formation. This unit was intruded by 1850 Ma granitoids, then unconformably overlain by 1845 to 1825 Ma felsic volcanics, with accompanying intrusives, and a siliciclastic molasse like succession which includes minor dolomitic rocks and basalts, followed finally by the intrusion of an unfoliated granite.

All of the Tennant Creek mineralisation is associated with iron oxides, in particularly, ironstone bodies. Over 650 ironstone bodies are known in the Inlier, although only 25% contained any ore grade Cu, Au or Bi, many of which were only very minor in size, and only 100 of these have been mined in any way. Individual lodes vary from a few tens of tonnes up to 15 Mt of ore. The individual ore bodies are irregular, but overall ellipsoidal in shape and generally pipe like, with near vertical and near horizontal long axes, the latter trending east-west.

The figure below shows the 1:250 000 regional geology with respect to the Warrego project area (the legend for the geological map below can be found in Appendix 1).
2.1.2 Local

The Warrego deposit was concealed beneath cover and was discovered by Peko Mines Ltd who tested a prominent magnetic anomaly identified by the 1956 BMR magnetics survey.
Locally, the principal primary gangue minerals are magnetite, quartz, chlorite, talc, hematite, dolomite, sericite, jasper, pyrite and pyrrhotite. The most common ore minerals are chalcopyrite, native gold, native bismuth and bismuth sulphosalts, with lesser bornite, galena, sphalerite, cobalt, uraninite and scheelite. The deposits exhibit a spectrum of mineralogical associations, with the end members being more reduced and oxidised respectively.

Two main hydrothermal stages are recognised in the field. These are an early iron oxide phase producing magnetite-hematite-chlorite-quartz epigenetic ironstones during the 1860 to 1840 Ma Barramundi Orogeny, localised in dilational zones generated during the D1 reverse shearing and folding, and concentrated by haematitic shale seals in shears, faults and fold closures. Gold-copper-bismuth mineralisation followed during D2 at or before 1830-1825 Ma and overprinted the pre-existing ironstones where favourable D1 structures were re-activated.

2.2 Exploration and Mining History

Gold and copper have been mined throughout the district since the 1930’s (gold) and 1950’s (copper) producing over 5.5 million ounces of gold (19.3 g/t average) and 488,000 tonnes of copper. Mineralisation at Warrego was discovered by Peko Mines Ltd (PML) in the late 1960’s and mined for copper, gold and bismuth by PML from 1971 until late 1989 producing 4.94 Mt or ore. Normandy re-treated the tailings in the 1990’s and the material remaining on the tailings dams is largely oxidised.

Most of the orebodies in the Tennant Creek area were hosted in magnetite and therefore all the tailings dams in the area have recoverable grades of magnetite including Warrego.

Previous processing involved the crushing and grinding of the ore and as a result the tailings dams are typically fine in size, 80 % of the material passes 80 micron (0.08 mm)

The Warrego mine site as a whole is heavily disturbed and little to no rehabilitation has taken place over the years. The Aard metals leases cover the existing tailings dams on the Warrego site as well some heavily disturbed areas from previous mining and processing activities.

The Warrego Tailings Project area has been subject to limited previous exploration and processing test work. Previous exploration reported for the Warrego project area is summarised in the table below:

<table>
<thead>
<tr>
<th>Period</th>
<th>Work undertaken</th>
</tr>
</thead>
<tbody>
<tr>
<td>1998</td>
<td>Cursory investigation by: Davis Tube testing and magnetic susceptibility work.</td>
</tr>
<tr>
<td>2001</td>
<td>Two samples from the tailings dams submitted for mineral processing test work including Davis Tube and Eriez wet drum separator tests.</td>
</tr>
<tr>
<td>2004</td>
<td>One pit excavated in each tailings dam and carried out multiple processing tests.</td>
</tr>
</tbody>
</table>
2.3 Exploration Rationale

Hellman & Schofield Pty Ltd ("H&S") was commissioned by Aard on the 19th April 2010 to manage drilling and provided estimates on the remaining magnetite and gold resources contained in 5 tailings dam impoundments at the Warrego mine site. This was reviewed in 2012 and no changes were made to resource statement produced.

3. EXPLORATION INDEX MAP

Aard Metals has not produced a map showing the borehole locations on the tailings dams and also does not intend to do so in the future.

4. GEOLOGICAL ACTIVITIES AND OFFICE STUDIES

Aard Metals has not conducted any activities under this heading for the project area and does not expect to do any in the future.

5. REMOTE SENSING

No remote sensing has been conducted over the project area and Aard does not expect to do any in the future.

6. GEOPHYSICAL ACTIVITIES

No geophysical activities have been conducted over the project area and Aard does not expect to do any in the future.

7. SURFACE GEOCHEMISTRY

No surface geochemistry activities have been conducted over the project area and Aard does not expect to do any in the future.

8. DRILLING

No drilling activities have been conducted over the project area during this reporting period. Previous drilling of the tailings dams was not surveyed and no map has been produced showing the location and depth of the holes. Aard Metals does not expect to produce a map with the details of previous drilling and also does not expect to conduct any further drilling activities on the project area.

9. GEOTECHNICAL STUDIES

No surface geotechnical studies have been conducted over the project area during the reporting period. Historical studies were conducted prior to Aard Metals taking ownership of the tenements however the company has been unable to secure these reports to date.

As part of the development of the project Aard Metals expects to conduct some geotechnical assessments of the soils in the area for construction purposes.
10. RESOURCES AND RESERVE ESTIMATION

10.1 Resource Estimation

Magnetite contents in five tailings dams at the Warrego Tailings Project have been estimated and are reported largely as Indicated Resources. Copper and gold are reported as Inferred Resources.

Sample quality for the iron ore resource is good with continuity well demonstrated in the major magnetite containing dams and resource estimates are supported by an adequate number of samples to support an Indicated status. Only an area of 50m x 150m related to two undrilled locations in Dams 1 and 2 has insufficient sampling to qualify as an Indicated Resource resulting in an Inferred classification pending confirmation drilling.

Resources have been estimated using the method of Ordinary Kriging on assays of iron, copper and gold from 1 meter samples taken from push tube and aircore drilling from 67 holes totalling 348 meters across five tailings dams. The proportions of water in samples which are needed for conversion of volumes to tonnages were measured by the weights of wet and dry samples. These were estimated along with the metals of interest. A representative selection of 44 samples was additionally subjected to Davis Tube Recovery ("DTR") tests for magnetite at 75um grainsize. Pycnometer mineral specific gravity was also determined. Good regressions of both measures with iron grades enabled estimation of water contents and mineral specific gravity across the dams.

Porosity estimation from sample water proportions and pycnometer specific gravity enabled the estimation of wet and dry bulk densities. To estimate wet and dry tonnages, porosities were applied to dam volumes calculated from a
DTM model of the filled dam surface and wall geometries and depths of tailings’ fill obtained from drilling.

![Figure 10.2: Tailings Dams Showing Drill Hole Locations](image)

Additional drilling may be required to upgrade magnetite resources to the Measured Resource category and to upgrade copper and gold resources to Indicated Resources. Additional metallurgy will also be needed to establish how much of the copper and gold in magnetite concentrates may eventually be recoverable using conventional metallurgy after the extraction of magnetite as a separate product.

If project economics is dominated by magnetite then additional drilling may not be necessary as planning and determination of Probable Reserves can be done solely on the basis of the Indicated magnetite Resources.

The tables below provide a breakdown of the resources statement.
Table 10.1: Warrego Project Indicated Resources of Iron as Magnetite

<table>
<thead>
<tr>
<th>InSitu Quantity</th>
<th>Recoverable in 75um Concentrate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Million Cubic Meters</td>
</tr>
<tr>
<td>Dam 1</td>
<td>0.90</td>
</tr>
<tr>
<td>Dam 2</td>
<td>1.59</td>
</tr>
<tr>
<td>Dam 3</td>
<td>0.64</td>
</tr>
<tr>
<td>Dam 4</td>
<td>0.32</td>
</tr>
<tr>
<td>Dam 5</td>
<td>0.18</td>
</tr>
<tr>
<td>Total Indicated</td>
<td>3.63</td>
</tr>
</tbody>
</table>

As at 14th December 2010 (totals may not sum due to rounding)

Table 10.2: Warrego Project Inferred Resources of Iron as Magnetite

<table>
<thead>
<tr>
<th>InSitu Quantity</th>
<th>Recoverable in 75um Concentrate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Million Cubic Meters</td>
</tr>
<tr>
<td>Dam 2 Inferred</td>
<td>0.025</td>
</tr>
</tbody>
</table>

As at 14th December 2010 (totals may not sum due to rounding)

Table 10.3: Warrego Project Inferred Copper and Gold Resource Estimate

<table>
<thead>
<tr>
<th>InSitu Quantity</th>
<th>Metal Grade</th>
<th>Contained Metal</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Million Cubic Meters</td>
<td>Million Tonnes (Wet)</td>
</tr>
<tr>
<td>Dam 1</td>
<td>0.90</td>
<td>2.27</td>
</tr>
<tr>
<td>Dam 2</td>
<td>1.62</td>
<td>4.08</td>
</tr>
<tr>
<td>Dam 3</td>
<td>0.64</td>
<td>1.57</td>
</tr>
<tr>
<td>Dam 4</td>
<td>0.32</td>
<td>0.72</td>
</tr>
<tr>
<td>Dam 5</td>
<td>0.18</td>
<td>0.46</td>
</tr>
<tr>
<td>Total Inferred</td>
<td>3.66</td>
<td>9.11</td>
</tr>
</tbody>
</table>

As at 14th December 2010 (totals may not sum due to rounding)

At this stage Aard Metals does not expect to conduct any further drilling of the tailings dams or exploration drilling on the tenements.

10.2 Metallurgical Testwork

The findings from an independent metallurgical testwork report provided by ProMet in June 2012 concluded that the old tailings dams contain around 3.1 million tonnes of recoverable magnetite at a grade of greater than 64% Fe, which can be produced to a saleable blast furnace concentrate product by using conventional magnetite processing techniques. The report also indicated
that moderate to high gold extractions were possible however cyanide consumptions would be high. Further test work is expected to be completed on the Gold and Copper potential of the tailings dams in 2013.

The graph below is a summary of the results indicating that as the material is reduced in size through grinding, the achievable percentage of iron of the material improves however the total mass recovery reduces.

![Graph](image)

**Figure 10.3: Weight Recovery vs. % Fe vs. P80**

### 10.3 Process Flow Description

The following is a description of the production process that is anticipated to be used for the recovery of Magnetite concentrate from the Warrego tailings (See diagram below). Mining of the tailings dams is expected to be through hydraulic reclamation. The material will then go through a simple magnetite recovery plant where magnetic separation will remove the magnetite from the tailings. The product will then be passed over a ceramic disc filter to remove water before being deposited onto a stockpile on site. The copper/gold tailings from the magnetic separators will be pumped to a tailings dam for deposition. The filtered magnetite product will be transported via truck to a siding on the Adelaide Darwin railway and from there be loaded and transported via rail wagons to the Darwin port for dispatch via ships to China.

Future operations may include the recovery of gold and/or copper from the tailings.
11. CONCLUSIONS AND RECOMMENDATIONS

The results from the feasibility study have indicated that the project is technically of low risk, economically viable, is expected to have environmental benefits to the area and can be brought into commercial production within 12 months of securing project finance.

Aard Metals is currently in the process of securing project funding in order to develop the Warrego Project into an operational asset by Q2 of 2015.

For the next reporting period Aard Metals expects to conduct the following activities:

1) Complete geotechnical studies on
   a) proposed plant area
   b) proposed tailings disposal facility area
   c) proposed stockpile to be used for fill material

2) Commence with the detailed engineering design on:
   a) processing plant
   b) new tailings deposition facility
   c) new siding at the Warrego road crossing of the Adelaide to Darwin railway line

3) Commence with engineering study on Darwin port loading infrastructure to accommodate Warrego magnetite concentrates

4) Commence with construction activities for:
   a) processing plant
   b) new tailings deposition facility
   c) new siding at the Warrego road crossing of the Adelaide to Darwin railway line
APPENDIX 1

GEOLOGY MAP LEGEND