COPPER IN SOUTH AUSTRALIA
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COPPER ADVANTAGE AND OPPORTUNITY IN SOUTH AUSTRALIA

The Centre of Australia’s Copper Industry
27% of Australia’s production, a quarter of Australia’s copper exploration expenditure

Highly Prospective Geology
68% of Australia’s Economic Demonstrated copper resources

Exploration Advantages
PACE Copper initiative creating new opportunities for exploration and mining

Low Jurisdictional Risk
South Australia - a track record of mining investment

World-Renowned Research and Collaboration
World’s best-supported independent research initiative in mineral exploration
### WORLD COPPER DEMAND

- The long term growth in demand for copper is to accelerate driven in large part by the urbanisation of China and India.
- 1997-2011: Global refined copper demand increase of 2.8% p.a.

### WORLD COPPER SUPPLY

- The output from existing mines is expected to decline by 2.1% pa from 2013-2022.
- Forecast supply from committed projects are not expected to meet demand.
- New sources of production will be required with large discoveries occurring with less frequency.

Copper will be highly sought after in the following decade

- 5.2%pa increase in global copper demand 2011 - 2022
- 2.1%pa decline in existing mine production 2013 - 2022
GLOBAL COPPER PRODUCTION

**Australia**
- 1.00Mt, 5%

**Canada**
- 0.68Mt, 4%

**Chile**
- 5.80Mt, 31%

**Peru**
- 1.40Mt, 7%

**China**
- 1.60Mt, 9%

**Congo**
- 1.10Mt, 6%

**USA**
- 1.37Mt, 7%

**Zambia**
- 0.73Mt, 4%

**Russia**
- 0.85Mt, 5%

**World Copper Resources and Production**

- **Australia**: 13% of the world’s copper resources
- 2nd only to Chile
- 5% of the world’s copper production
- 956 million tonnes
- Australia’s resource is expected to support production for 100 years
- Export value of $8.7 billion
- Ore concentrate, intermediate & refined metal

Source: Geoscience Australia: Australia’s Mineral Resource Assessment 2015
COPPER IN SOUTH AUSTRALIA

SOUTH AUSTRALIAN COPPER RESOURCES

- South Australia: 68% of Australia's economically demonstrated resources
- Olympic Dam: 4th largest resource in the world
- One-quarter of Australia's 2014 copper exploration expenditure
- 27% of Australia's copper production in 2014-15

Source: Geoscience Australia: Australia’s Identified Mineral Resources 2015, Australian Bureau of Statistics 8412.0
COPPER IN SOUTH AUSTRALIA

South Australia’s copper deposits are held within three significant regions, Gawler Craton, Curnamona Province and the Adelaide Geosyncline, which host 3 producing mines, 4 developing projects and over 40 copper prospects:

**OPERATING MINES**

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>OPERATOR</th>
<th>PROVINCE</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olympic Dam</td>
<td>BHP Billiton</td>
<td>Gawler Craton</td>
<td>Production</td>
</tr>
<tr>
<td>Prominent Hill</td>
<td>OZ Minerals</td>
<td>Gawler Craton</td>
<td>Production</td>
</tr>
<tr>
<td>Kanmantoo</td>
<td>Hillgrove</td>
<td>Adelaide Geosyncline</td>
<td>Production</td>
</tr>
</tbody>
</table>

**DEVELOPING PROJECTS**

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>OPERATOR</th>
<th>PROVINCE</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrapateena</td>
<td>OZ Minerals</td>
<td>Gawler Craton</td>
<td>Feasibility</td>
</tr>
<tr>
<td>Hillside</td>
<td>Rex Minerals</td>
<td>Gawler Craton</td>
<td>Feasibility</td>
</tr>
<tr>
<td>Kalkaroo</td>
<td>Havilah Resources</td>
<td>Curnamona</td>
<td>Approvals</td>
</tr>
<tr>
<td>Mutooroo</td>
<td>Havilah Resources</td>
<td>Curnamona</td>
<td>Feasibility</td>
</tr>
</tbody>
</table>

Many of the deposits in South Australia’s copper provinces are covered by a sequence of younger rocks that have effectively hidden many large copper deposits from the early explorers.

Source: DSD Website, Geological Survey of South Australia
## COPPER IN SOUTH AUSTRALIA

### OPERATING MINES

<table>
<thead>
<tr>
<th>MINE</th>
<th>OPERATOR</th>
<th>JORC RESOURCE AMOUNT</th>
<th>PRODUCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olympic Dam</td>
<td>BHP Billiton</td>
<td>Sulphide: 10,100Mt @ 0.78% Cu, 0.30 g/t Au, 1.0 g/t Ag, 0.25 kg/t U₃O₈</td>
<td>124,500t Cu (cathode) 104,780oz Au 724,000oz Ag 3,144t U₃O₈</td>
</tr>
<tr>
<td>Prominent Hill</td>
<td>OZ Minerals</td>
<td>Copper-gold resource: 152Mt @ 1.20% Cu, 0.6 g/t Au, 2.8 g/t Ag Gold resource: 27Mt @ 0.1% Cu, 1.3 g/t Au, 1.5 g/t Ag</td>
<td>116,402t Cu 141,328oz Au 707,297oz Ag</td>
</tr>
<tr>
<td>Kanmantoo</td>
<td>Hillgrove Resources</td>
<td>31.3Mt @ 0.78% Cu, 0.20 g/t Au, 2.11 g/t Ag</td>
<td>20,308t Cu 7,199oz Au 114,472oz Ag</td>
</tr>
</tbody>
</table>

### DEVELOPING PROJECTS

<table>
<thead>
<tr>
<th>PROJECT</th>
<th>OPERATOR</th>
<th>JORC RESOURCE AMOUNT</th>
<th>STATUS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carrapateena</td>
<td>OZ Minerals</td>
<td>800Mt @ 0.8% Cu, 0.3g/t Au, 3.3g/t Ag</td>
<td>Pre-feasibility Study Completed</td>
</tr>
<tr>
<td>Hillside</td>
<td>Rex Minerals</td>
<td>337Mt @ 0.6% Cu, 0.14g/t Au</td>
<td>Bankable Feasibility Study</td>
</tr>
<tr>
<td>Khamsin</td>
<td>Oz Minerals</td>
<td>202Mt @ 0.690 Cu, 0.1G/T Au, 1.7 g/t Ag</td>
<td>JORC Resources defined</td>
</tr>
<tr>
<td>Kalkaroo</td>
<td>Havilah Resources</td>
<td>Copper-gold resource: 124Mt @ 0.5Cu, 0.39g/t Au Gold cap: 18Mt @ 0.74g/t Au</td>
<td>Approvals</td>
</tr>
<tr>
<td>North Portia</td>
<td>Havilah Resources</td>
<td>11.3Mt @ 0.8990 Cu, 0.64 g/t Au</td>
<td>JORC Resources defined</td>
</tr>
<tr>
<td>Mutooroo</td>
<td>Havilah Resources</td>
<td>13.1Mt @ 1.48% Cu, 0.14% Co</td>
<td>Pre-feasibility Study</td>
</tr>
</tbody>
</table>
COPPER IN SOUTH AUSTRALIA

MINE SIZE REPRESENTATION (Mt Cu Eq.)
South Australia vs other major copper destinations

**South Australia** has a statistical under-representation of large 1-3 million tonne copper occurrences and no giant 3 – 8 million tonne occurrence.

South Australia, unlike other copper mining jurisdictions, has a vast gap between its largest and second-largest known copper deposit. This suggests there is a good opportunity to find more giant deposits here.

The next journey is to uncover these giants in South Australia.

RECENT SIGNIFICANT DEPOSITS

- Prominent Hill (2001)
- Carapateena (2005)
- Hillside (2007)
- Khamsin (2012)

Source: CRU World Copper Conference, Santiago, 2012, Minex Consulting
Global copper grades declining
Approximately 0.65% Cu

South Australia has high grade copper
10 billion tonnes with an average grade of 0.93% Cu

South Australia is a world leader in terms of cost of discovery
Lowest cost of copper in Australia and comparable to Chile and Peru

South Australia is one of the few destinations to discover high grade copper at low cost

Source: CRU, GSSA projects
INFORMATION RESOURCES

INFORMATION ADVANTAGES
WORLD LEADER IN ONLINE DATA DELIVERY
The South Australian Resources Information Geoserver (SARIG)

KEY FEATURES OF SARIG
- Search and identify mineral, petroleum and geothermal geoscientific information
- Overlay data across 400 spatial layers including geophysical data, logistics and land access
- Save and download maps for customised use
- Instant access to petroleum and geothermal well completion reports, current and historical company reports.

WORLD CLASS DRILL CORE LIBRARY
- Drilling samples from companies required to be retained and stored under legislation
- Core library holds representative samples of all petroleum cores and cuttings
- Available for inspection and sampling in modern viewing facilities

FREE SMART PHONE APP: SOUTH AUSTRALIA MINING
Designed for investors, this free app highlights real-time investment opportunities within the state’s mineral and energy resources sector.

Available as a free download on Apple iPhones, iPads and iPad minis through the App Store and on Android smart phones and tablets through Google Play.

PACE
The South Australian Government's PACE initiative (Plan for Accelerating Exploration) is tasked with showcasing South Australia internationally as a premier minerals and energy resources investment destination.

Follow Twitter account “@PACE_sagov” for more details.

Source: DSD, Federal Department of Resources, Energy and Tourism
SOUTH AUSTRALIA – THE LOW-RISK MINING JURISDICTION

ROBUST GROWING ECONOMY
• South Australia has experienced 22 years of uninterrupted annual growth.

GOVERNMENT SUPPORT
• Opening up new areas for exploration.
• World leading geoscientific data.
• World class drill core library.
• Co-funding for exploration drilling.
• Mining Industry Participation Office.
• PACE Copper

FRASER INSTITUTE SURVEY OF MINING COMPANIES
• South Australia continues to perform well across key metrics in the Fraser Institute's survey, placed in the top quartile in 13 out of 19 categories and indices assessed in 2014 in a growing field of 122 jurisdictions.
• South Australia ranks second in the Oceania region for investment attractiveness, and for the last five years South Australia has ranked in the top 20 jurisdictions globally in the survey’s Investment attractiveness index.

RESOURCESTOCKS MAGAZINE WORLD RISK SURVEY
• South Australia was ranked 11th in the world for lowest risk resource investment destination.
• The survey asks global investors, executives and brokers around the world to rate various mining jurisdictions based on factors like red and green tape, infrastructure, sovereign risk and land access.

MINERALS COUNCIL OF AUSTRALIA 2012 SCORECARD
• Scorecard results for 2012 (released in June 2013) reveal that South Australia leads all jurisdictions in Australia and New Zealand for the majority of mining approval, environmental assessments and land access policies and regulation.

RESOURCESTOCKS MAGAZINE WORLD RISK SURVEY
• South Australia was ranked 11th in the world for lowest risk resource investment destination.
• The survey asks global investors, executives and brokers around the world to rate various mining jurisdictions based on factors like red and green tape, infrastructure, sovereign risk and land access.
EXPLORATION ADVANTAGES

South Australia leads the nation in providing potential investors with the latest exploration information and has in place streamlined approval processes.

PACE

A decade of investment in the Plan for Accelerating Exploration (PACE) has leveraged a return of 20:1 on geoscience expenditure, creating new opportunities for exploration and mining in South Australia.

The South Australian Government’s new investment of $20 million in PACE Copper will build on this foundation while responding to the current challenge facing the resources sector.

PACE Copper will lead the transformation of the South Australian mineral exploration industry over the next two years.

The initiative will provide the necessary information and opportunity to bring forward new discoveries and set the foundations for the next generation of mineral industry growth and job creation in the services, supplies and manufacturing sectors.

PACE Copper seeks to:

- Generate over $400 million in private mineral exploration return for South Australia
- Drive the exploration investment and discovery of the new high-quality copper resources required to meet the copper production goal of 1Mtpa by 2030 (see South Australia’s copper strategy)

CASE STUDY: PACE FRONTIERS
MINERAL SYSTEMS DRILLING 2015

The Department of State Development in partnership with the Deep Exploration Technologies Cooperative Research Centre (DET CRC) is embarking on a mineral systems drilling program in the southern margin of the Gawler Range Volcanic Range.

The program is well-advanced and will map minerals systems under cover.

The aim of the program is to map various components of mineral systems below cover, with the potential to identify regional vectors to preferred sites for metal concentration.

- More drilling metres for funds expended
- Drill-rig mobilisation
- Collection of multiple streams of data at the rig, allowing for real-time decision making and potential for follow-up during the drill program
- Utilisation of Solids Removal Unit allowing a significant reduction to environmental impact.
RESEARCH AND DEVELOPMENT

MINING AND PETROLEUM SERVICES CENTRE OF EXCELLENCE

The South Australian Government has committed $10 million over five years as innovation seed funding toward the development of strategically important capabilities in areas such as:

- Deep resource exploration and deep mining
- Next generation minerals processing
- Leading practice in mine rehabilitation and environmental protection
- Mine to mill optimisation, ore selection and pre-concentration, mine logistics
- Automating the resource sector through innovative ICT applications across the entire mining lifecycle
- Leading practice in multiple land use policy and community engagement
- Deep gas well operations and training.

PARTNERS INCLUDE:
- OZ Minerals
- BHP Billiton
- Institute for Mineral and Energy Resources at the University of Adelaide
- Ian Wark Centre at the University of South Australia
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Deep Exploration Technology Cooperative Research Centre

CASE STUDY: REMOTE OPERATIONS CENTRE (ROC)

- An eight month study for a collaborative Remote Operations Centre (ROC) for the minerals and energy sectors in South Australia was successfully completed in 2014 and has set the foundation for an information and communications technology (ICT) innovation platform for remote applications.
- The ROC is a collaborative innovation project between OZ Minerals, the University of South Australia, IPACS Power and the State Government.
- The ROC project looked at how remote vibration analysis of important equipment at a distant mine site can indicate impending problems and future failures, providing the opportunity for equipment to be repaired ahead of failure and allows it to be used more intensively for longer periods of time.
DEEP EXPLORATION TECHNOLOGIES COOPERATIVE RESEARCH CENTRE (DET CRC)

- Established in 2010, the DET CRC is the world's best-supported independent research initiative in mineral exploration with $145m of cash and in-kind funding from the Commonwealth Government of Australia and its Participants.
- The DET CRC will deliver research programs in more successful, cheaper and safer ways to drill, analyse and target deep mineral deposits.
- Industry participants include BHP Billiton, Heathgate Resources, Paladin Energy, Vale.
- The DET CRC will deliver research programs in more successful, cheaper and safer ways to drill, analyse and target deep mineral deposits.

THE IAN WARK RESEARCH INSTITUTE

- Established in 1994, The Ian Wark Research Institute at the University of South Australia, holds a prominent place in the Australian research landscape with high-end research facilities and instrumentation.
- Applied research is focused on chemistry and physics at interfaces, covering a wide range of mineral processing applications.

RESEARCH PARTICIPANTS:

- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- The University of Adelaide
- Curtin University (Western Australia)

AREAS OF RESEARCH:

- Energy Materials
- Minerals Processing
- Functional Coatings
- Lubrication
- Nanomedicine and biopharmaceuticals
Exploration and mining in South Australia is governed by the [Mining Act 1971](#) and [Mining Regulations 2011 amendments](#). The Act and the Regulations require licenses for both exploration and mining prior to any work being commissioned. Considerations must be included for each approval type.

**APPLICATION FOR AN EXPLORATION LICENCE**

**APPLICATION FOR A MINING LEASE**

**ONE STOP SHOP**

DSD provides a “one stop shop” for minerals companies. Please contact for further details

Further detail regarding legislation and regulation including contact details can be obtained by visiting the South Australian minerals website

[minerals.statedevelopment.sa.gov.au](minerals.statedevelopment.sa.gov.au)
## AUSTRALIAN RESOURCES TAXATION

### STATE BASED

#### STATE – MINERAL ROYALTIES

Royalties are payable to the State on minerals recovered. South Australia offers a competitive royalty scheme.

<table>
<thead>
<tr>
<th>MAJOR COPPER STATE</th>
<th>ROYALTY FOR COPPER</th>
</tr>
</thead>
</table>
| South Australia        | • 3.5% applies to refined metallic products, 5% applies to mineral ore and concentrates.  
                          | • New mines are eligible for a concessional rate of 2% for the first 5 years.        |
| Queensland             | • Variable rate between 2.50% and 5.00% (varying in 0.02% increments), depending on average metal prices.  
                          | [NB: 2013-14 average copper price of US$7,000/t equates to royalty of approximately 4.30%] |
| Western Australia      | • 2.5% applies to refined metallic products, 5% if sold as a concentrate           |
| New South Wales        | • 4% ex-mine value (value less allowable deductions)                                |

### FEDERAL

#### FEDERAL - COMPANY TAX

A Federal company tax rate of 30% tax rate applies to taxable income after a deduction for State royalties.

Source: ATO, WA Dept. of Mines & Petroleum, NSW Department of Primary Industries, Qld Treasury, SA Department of State Development
OPERATING COPPER MINES
OVERVIEW

The Kanmantoo Copper Mine is located in the Adelaide Hills region of South Australia, one of the most under explored and prospective base metal provinces in Australia, showing outstanding potential for copper-gold and silver-lead-zinc mineralisation.

The project's location, 55kms by road from Adelaide's CBD, brings significant inherent operating and capital cost advantages. The mine accesses low cost grid power and uses treated waste water from the nearby town of Mount Barker, and is three kilometres from the main dual carriageway South Eastern Freeway that leads to Adelaide and the export port of Port Adelaide.

The mine's location in the Adelaide Hills - one of South Australia's most attractive settings - also helps to attract and retain a high quality workforce who predominantly live within the region.

DEPOSIT DETAILS

<table>
<thead>
<tr>
<th>Deposit Type</th>
<th>Cu-Au-Ag</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Resource (Mt)</td>
<td>31.3</td>
</tr>
<tr>
<td>Cu (%)</td>
<td>Au (g/t)</td>
</tr>
<tr>
<td>0.78</td>
<td>0.20</td>
</tr>
<tr>
<td>Total Reserve (Mt)</td>
<td>22.1</td>
</tr>
<tr>
<td>Cu (%)</td>
<td>Au (g/t)</td>
</tr>
<tr>
<td>0.71</td>
<td>0.18</td>
</tr>
</tbody>
</table>

MINE DETAILS

<table>
<thead>
<tr>
<th>Style</th>
<th>Open pit, 120m deep strip ratio 5:1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Life</td>
<td>10 years</td>
</tr>
<tr>
<td>Production</td>
<td>Refer below</td>
</tr>
</tbody>
</table>

EXPENDITURE

<table>
<thead>
<tr>
<th>Capex ($m)</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opex Guidance (USD$/lb)</td>
<td>2.00-2.25</td>
</tr>
</tbody>
</table>

PORT DETAILS

<table>
<thead>
<tr>
<th>Port options</th>
<th>Adelaide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum vessel size</td>
<td>Panamax</td>
</tr>
</tbody>
</table>

SHARE INFORMATION (31.12.2015)

<table>
<thead>
<tr>
<th>Listing Details - ASX</th>
<th>HGO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Capitalisation</td>
<td>$30.1m</td>
</tr>
<tr>
<td>Cash</td>
<td>$9.1m</td>
</tr>
<tr>
<td>Top 20 Shareholders</td>
<td>60.77%</td>
</tr>
<tr>
<td>Significant Shareholders</td>
<td>Perennial Investment Partners 10.92%, Platinum Partners 12.68%, Renaissance Smaller Companies 8.39%, CBA 5.5.03%</td>
</tr>
</tbody>
</table>

TIMESCALE

<table>
<thead>
<tr>
<th>Cu (t)</th>
<th>Au (Oz)</th>
<th>Ag (Oz)</th>
<th>Production</th>
<th>Guidance</th>
</tr>
</thead>
<tbody>
<tr>
<td>13,744</td>
<td>6,570</td>
<td>121,656</td>
<td>20,693</td>
<td>18-20,500</td>
</tr>
<tr>
<td>6,798</td>
<td>5,900</td>
<td>56,000</td>
<td>5,600</td>
<td>5-6,000</td>
</tr>
</tbody>
</table>

No production guidance provided post 2015 to the end of mine life at 2023.
Olympic Dam was discovered in 1975 and now one of the world’s major mines, located some 550km north northwest of Adelaide. It is the site of an extremely large iron oxide copper gold deposit producing copper, uranium, gold and silver. The site hosts an underground mine as well as an integrated metallurgical processing plant. It is the fourth largest copper deposit and the largest known single deposit of uranium in the world, though uranium represents a minority of the mine’s total revenue. BHP has considered several options to construct an open pit to expand production.

<table>
<thead>
<tr>
<th>Deposit Details</th>
<th>Mine Details</th>
<th>Expenditure</th>
<th>Operator Details</th>
<th>Share Information (31.12.2015)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposit Type</td>
<td>Style</td>
<td>Capex ($m)</td>
<td>Headquarters</td>
<td>Primary Listing – ASX, LSE BHP</td>
</tr>
<tr>
<td>IOCGU</td>
<td>Underground</td>
<td>-</td>
<td>Melbourne, Australia</td>
<td>BHP</td>
</tr>
<tr>
<td>Total Resource (Mt)</td>
<td>10,100</td>
<td>-</td>
<td>Website</td>
<td>Market Capitalisation AUD$94,949.4m</td>
</tr>
<tr>
<td>Cu %</td>
<td>Estimated Life</td>
<td>47 years (reserve life)</td>
<td><a href="http://www.bhpbilliton.com">www.bhpbilliton.com</a></td>
<td>Cash AUD$9,336.8m</td>
</tr>
<tr>
<td>U₃O₈ kg/t</td>
<td>Production</td>
<td>Opex Guidance ($/lb)</td>
<td>Mr Jac Nasser, AO, Chairman</td>
<td>Top 20 Shareholders 58.44%</td>
</tr>
<tr>
<td>0.78</td>
<td>Refer below</td>
<td>-</td>
<td>Mr Andrew Mackenzie, CEO</td>
<td>Significant Shareholders No holdings greater than 5%</td>
</tr>
<tr>
<td>0.25</td>
<td></td>
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<tr>
<td>0.30</td>
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<tr>
<td>1.00</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Total Reserve (Mt)</td>
<td>484</td>
<td></td>
<td></td>
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<tr>
<td>Cu %</td>
<td>Au (g/t)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.95</td>
<td>0.59</td>
<td></td>
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<tr>
<td>U₃O₈ kg/t</td>
<td>Ag (g/t)</td>
<td></td>
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<tr>
<td>0.74</td>
<td>0.40</td>
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**TIMESCALE**

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</thead>
<tbody>
<tr>
<td>Cu Cathode (t)</td>
<td>166,200</td>
<td>187,800</td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Au Concentrate (Oz)</td>
<td>113,240</td>
<td>136,316</td>
<td></td>
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<tr>
<td>Ag Concentrate (Oz)</td>
<td>880,000</td>
<td>1,067,000</td>
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<td>U₃O₈ Concentrate (t)</td>
<td>4,066</td>
<td>3.952</td>
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No production guidance provided post 2014.
The Prominent Hill mine is an iron oxide copper gold deposit, located 650km north west of Adelaide and 130km south east of the town of Coober Pedy in South Australia.

The operation comprises the Malu open pit mine, the Ankata and Malu underground mines, a grinding and flotation processing plant with an 8mtpa capacity, a permanent village and haulage road, power line and bore field.

First production of copper concentrates occurred in February 2009 with the development of the Malu open pit. In 2010 the Company approved construction of the Ankata Underground with first ore from stoping produced in the first quarter of 2012. The Malu Underground commenced commission in 2014 and produced first ore from stoping in October 2014. An accelerated program of capital works and underground resource definition drilling was undertaken and the Malu Underground operations have been integrated with Ankata Underground.

### DEPOSIT DETAILS
- **Deposit Type**: IOCG
- **Total Resource (Mt)**: 178

### MINE DETAILS
- **Style**: Open pit & u/g
- **Estimated Life**: 2018 o/pit, 2024 u/ground
- **Production**: Refer below

### EXPENDITURE
- **Capex ($m)**
- **Opex Guidance (USD$/lb)**: 1.10-1.20

### SHARE INFORMATION (31.12.2015)
- **Listing Details**: ASX OZL
- **Market Capitalisation**: AUD$1,229m
- **Cash**: AUD$409.5m
- **Top 20 Shareholders**: 74.64%
- **Significant Shareholders**: Dimensional entities 5%, Black Rock 5.42%, NAB 6.64%, Alphinity 5.21%, Challenger 5.27%

### TIMESCALE
- **Cu (t)**
  - **2012**: 101,737
  - **2013**: 140,746
  - **2014**: 721,998
  - **2015**: 73,362
  - **2016**: 128,045
  - **2017**: 613,499
  - **2018**: 92,615
  - **2019**: 148,192
  - **2020**: 852,988
  - **2021**: n/d
  - **2022**: n/d
  - **2023**: n/d
  - **2024**: n/d
  - **2025**: n/d
  - **2026**: n/d
  - **Total to 2050**: n/d

- **Au (Oz)**
  - **2012**: 117,737
  - **2013**: 150,746
  - **2014**: 721,998
  - **2015**: 73,362
  - **2016**: 128,045
  - **2017**: 613,499
  - **2018**: 92,615
  - **2019**: 148,192
  - **2020**: 852,988
  - **2021**: n/d
  - **2022**: n/d
  - **2023**: n/d
  - **2024**: n/d
  - **2025**: n/d
  - **2026**: n/d
  - **Total to 2050**: n/d

- **Ag (Oz)**
  - **2012**: 117,737
  - **2013**: 150,746
  - **2014**: 721,998
  - **2015**: 73,362
  - **2016**: 128,045
  - **2017**: 613,499
  - **2018**: 92,615
  - **2019**: 148,192
  - **2020**: 852,988
  - **2021**: n/d
  - **2022**: n/d
  - **2023**: n/d
  - **2024**: n/d
  - **2025**: n/d
  - **2026**: n/d
  - **Total to 2050**: n/d
DEVELOPING COPPER MINES
CARRAPATEENA

OVERVIEW

The Carrapateena project is an IOCG deposit of a similar style to Prominent Hill with the potential for a significant mine life. The project is located in central South Australia on the eastern margin of the Gawler Craton. It is 100km southeast of BHP Billiton’s Olympic Dam operation and 250km south east of OZL’s existing Prominent Hill operation.

The Company released the PFS for the project in August 2014 which highlighted the financial and technical viability of the project and focused on the potential for a long mine life at low operating costs.

OZ Minerals is considering a number of options for the development of Carrapateena. These include a high grade option which will access the high grade core of the deposit (updated to 61 Mt at 2.9% Cu); an optimised block cave project and a rail option.

OWNERSHIP

Operator OZ Minerals 100%

OPERATOR DETAILS

Headquarters Adelaide, Australia
Website www.ozminerals.com
Key Executives Mr Neil Hamilton, Chairman
Mr Andrew Cole, CEO
Contact Details +61 8 8229 6600

SHARE INFORMATION (31.12.2015)

Listing Details - ASX OZL
Market Capitalisation $1,229m
Cash $409.5m
Top 20 Shareholders 74.64%
Significant Shareholders Dimensional entities 5%, Black Rock 5.42%, NAB 6.64%, Alphinity 5.21%, Challenger 5.27%

DEPOSIT DETAILS

Deposit Type IOCG
Total Resource (Mt) 800
Cu (%) Au (g/t) Ag (g/t)
0.8 0.3 3.3

Total Reserve (Mt) 270
Cu (%) Au (g/t) Ag (g/t)
0.9 0.4 4.5

MINE DETAILS

Style Underground
Estimated Life 24 years
Forecast 114kt Cu
Production (pa) 117kOz Au

EXPENDITURE

Estimated Capex (A$m) 2,488
Estimated Opex (US$/lb) 0.49 (C1 costs)

PORT DETAILS

Port options Adelaide
Maximum vessel size Panamax

TIMESCALE

The Hillside project is located 90km northwest of Adelaide and 12km south of the township of Ardrossan on the State’s Yorke Peninsula.

An open cut copper mine is proposed with gold produced as by-products. Concentrate will be slurried 12km to the existing port of Ardrossan for export.

Rex completed an Extended Feasibility Study in May 2015, which include an expected processing head grade of 0.66% copper and 0.17g/t gold over the first 12 years of production.

Rex has now received all of the necessary State and Commonwealth consents and approvals to develop the Hillside project. South Australian Government has approved a 12 month extension for the submission of the Program for Environment Protection and Rehabilitation (PEPR) and the Social Management Plan (SMP) for the project.

**Overview**

**Ownership**
- Operator: Rex Minerals 100%

**Operator Details**
- Headquarters: Adelaide, Australia
- Website: www.rexminerals.com.au
- Key Executives: Mr Richard Laufmann, Managing Director
- Contact Details: +61 8 8299 7100

**Deposit Details**
- Deposit Type: IOCG
- Total Resource (Mt): 337
  - Cu (%): 0.6
  - Au (g/t): 0.14
- Total Reserve (Mt): 82
  - Cu (%): 0.62
  - Au (g/t): 0.16

**Mine Details**
- Style: Open Pit
- Estimated Life: 13+ years
- Forecast Production (pa): 35kt Cu
- Cu (%) Au (g/t)
  - Total Resource (Mt): 337
  - Cu: 0.6
  - Au: 0.14
  - Total Reserve (Mt): 82
  - Cu: 0.62
  - Au: 0.16

**Expenditure**
- Estimated Capex (USD$m): 360
- Estimated Opex (USD$/lb): 1.61

**Port Details**
- Port options: Adelaide
- Maximum vessel size: Panamax

**Share Information (31.12.2015)**
- Listing Details: ASX RXM
- Market Capitalisation: $12.6m
- Cash: $10.9m
- Top 20 Shareholders: 38.55%
- Significant Shareholders: Acorn Cap 9.24%, Grand South 5.34%

**Timescale**
- Exploration
- Scoping Study
- Pre-Feasibility Study
- Definitive Feasibility Study
- Application & Approvals
- Mine Development
- Total to 2050

**Location Map**

**Market Capitalisation**
- ($ Million)
- Dec11 Dec12 Dec13 Dec14 Dec15

**General Notes**

**Preparation**
- Timescale
- Owner Details
- Deposit Details
- Mine Details
- Expenditure
- Port Details
- Share Information
- Timescale

**Key Figures**
- Estimated Capex: 360 USD$m
- Estimated Opex: 1.61 USD$/lb
- Estimated Life: 13+ years
KALKAROO

OVERVIEW

Kalkaroo is owned by ASX-listed Havilah Resources NL (HAV). The deposit is situated 91km west northwest of Broken Hill and is a medium size copper gold deposit containing approximately 620,000 tonnes of copper and over 2 million ounces of gold from a 124 million tonne JORC mineral resource which would be mined from an open pit approximately 200 metres deep.

In operation, Kalkaroo would process 9Mtpa ore throughput for 44,000 tpa copper and 90,000oz pa gold over 13 years and as such remains one of Australia’s largest undeveloped copper and gold deposits.

Havilah Resources is considering a low capex start up option for the project with a more progressive ramp-up of production.

STATUS

Approvals

OWNERSHIP

Operator Havilah Resources 100%

OPERATOR DETAILS

Headquarters Adelaide, Australia
Website www.havilah-resources.com.au
Key Executives Mr Kenneth Williams, Chairman
Dr Chris Giles, Managing Director
Contact Details +61 8 8338 9292

DEPOSIT DETAILS

Deposit Type Cu-Au
Total Resource (Mt) 124 18
Resource Grade (Cu%) 0.52
Au (g/t) 0.39 0.74

MINE DETAILS

Style Open Pit
Estimated Life 14 years
Forecast 34kt Cu
Production (pa) 108koz Au

EXPENDITURE

Est. Capex (A$m) 340
Est. Opex (US$/lb) 0.59 (net of Au)

PORT DETAILS

Port options Adelaide
Maximum vessel size Panamax

SHARE INFORMATION (31.12.2015)

Listing Details - ASX HAV
Market Capitalisation $39.5m
Cash $2.1m
Top 20 Shareholders 63.59%
Mrs Selvie Tjiowasi 10.61%
IFG Trust 7.35%
Glencore 6.18%
Trindal 9.94%

MARKET CAPITALISATION

($ Million)

TIMESCALE


- Exploration
- Scoping Study
- Pre-Feasibility Study
- Definitive Feasibility Study
- Application & Approvals
- Mine Development
Mutooroo is owned by ASX-listed Havilah Resources NL (HAV). The deposit is situated 60km west of Broken Hill. The deposit is to the south of the Kalkaroo project.

In 2006 Havilah signed a JV agreement with Heilongjiang Resources Limited to fund feasibility studies in return for a 50% stake. Heilongjiang converted the earn in to a direct stake in Havilah in 2008.

Since 2009 Havilah has been seeking a BFS funding partner for the project.

**DEPOSIT DETAILS**
- Deposit Type: Cu-Au-Co
- Total Resource (Mt): 13.1
- Resource Grade (Cu%): 1.48
- Au (g/t): 0.22
- Co %: 0.14
- S %: 36

**MINE DETAILS**
- Style: Open Pit
- Estimated Life: -
- Forecast: -
- Production (pa): -

**EXPENDITURE**
- Estimated Capex ($m): -
- Estimated Opex ($/lb): -

**PORT DETAILS**
- Port options: Adelaide or Wallaroo
- Maximum vessel size: Panamax

**SHARE INFORMATION (31.12.2015)**
- Listing Details - ASX: HAV
- Market Capitalisation: $39.5m
- Cash: $2.1m
- Top 20 Shareholders: 63.59%
- Significant Shareholders: Mrs Selvie Tjowasi 10.61%
  - IFG Trust 7.35%
  - Glencore 6.18%
  - Trindal 9.94%

**OVERVIEW**
- Mutooroo is owned by ASX-listed Havilah Resources NL (HAV).
- The deposit is situated 60km west of Broken Hill. The deposit is to the south of the Kalkaroo project.
- In 2006 Havilah signed a JV agreement with Heilongjiang Resources Limited to fund feasibility studies in return for a 50% stake. Heilongjiang converted the earn in to a direct stake in Havilah in 2008.
- Since 2009 Havilah has been seeking a BFS funding partner for the project.

**STATUS**
- Feasibility

**OWNERSHIP**
- Operator: Havilah Resources 100%
- Headquarters: Adelaide, Australia
- Website: www.havilah-resources.com.au
- Key Executives: Mr Kenneth Williams, Chairman
  - Dr Chris Giles, Managing Director
- Contact Details: +61 8 8338 9292

**OPERATOR DETAILS**
- Operator: Havilah Resources 100%
- Key Executives: Mr Kenneth Williams, Chairman
  - Dr Chris Giles, Managing Director
- Contact Details: +61 8 8338 9292

**TIMESCALE**
- Exploration
- Scoping Study
- Pre-Feasibility Study
- Definitive Feasibility Study
- Application & Approvals
- Mine Development
- Total to 2050
COPPER PROSPECTS
### OVERVIEW

Acropolis is owned by ASX-listed BHP Billiton Limited and comprises two tenements totalling 3,111km² abutting BHP's licences at Olympic Dam. Previous work completed by WMC comprised 4 holes with results indicating Olympic Dam-style alteration and copper mineralisation occurs within iron breccias at depths in 3 of the 4 prospects. The historical work was biased towards testing magnetic anomalies however many significant gravity targets remain untested, and only about 50% of the total area has been subject to detailed geophysical survey work.

In 2011 the SA Government co-funded Minotaur’s drilling work in the tenement.

BHP purchased Minotaur Exploration's Gawler Craton tenements including Acropolis for $10m in 2012.

### DEPOSIT DETAILS

<table>
<thead>
<tr>
<th>Deposit Type</th>
<th>IOCGU</th>
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<tbody>
<tr>
<td>Total Resource (Mt)</td>
<td>-</td>
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<tr>
<td>Resource Grade (Cu%)</td>
<td>-</td>
</tr>
<tr>
<td>U₃O₈ (kg/t)</td>
<td>-</td>
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<tr>
<td>Au (g/t)</td>
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<tr>
<td>Ag (g/t)</td>
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### MINE DETAILS

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<tr>
<td>Estimated Life</td>
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<tr>
<td>Forecast Production (pa)</td>
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### STATUS

- **Exploration**

### OWNERSHIP

- **Operator**: BHP Billiton (100%)

### OPERATOR DETAILS

- **Headquarters**: Melbourne, Australia
- **Website**: www.bhpbilliton.com
- **Key Executives**
  - Mr Jac Nasser, AO, Chairman
  - Mr Andrew MacKenzie, CEO
- **Contact Details**: +61 1300 55 47 57

### EXPENDITURE

<table>
<thead>
<tr>
<th>Estimated Capex ($m)</th>
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<tr>
<td>Estimated Opex ($/lb)</td>
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</table>

### PORT DETAILS

- **Port options**: Adelaide
- **Maximum vessel size**: Panamax

### SHARE INFORMATION (31.12.2015)

- **Primary Listing – ASX, LSE**: BHP
- **Market Capitalisation**: AUD$96,631.2m
- **Cash**: AUD$9,502.2m
- **Top 20 Shareholders**: 58.44%
- **Significant Shareholders**: No holdings greater than 5%
ALFORD

OVERVIEW
The Alford Copper / Gold Project includes the Netherleigh Park prospect and Alford East prospect. The project is located north of the historical Moonta/Wallaroo copper mining district and north northwest of Rex Minerals' Hillside project.

Sandfire Resources and Argonaut Resources have signed a farm-in agreement where Sandfire can earn up to 75% interest for $8 million expenditure.

Sandfire identified and prioritised areas of interest during the course of the technical due diligence conducted in mid-2012 over EL3969.

Further exploration work is planned including further geophysical surveys, including IP and Gravity with follow up aircore and diamond drilling.

OWNER DETAILS

Operator: Argonaut Resources NL 100%
JV Partner: Sandfire Resources (up to) 75%

OPERATOR DETAILS

Headquarters: Sydney, Australia
Website: www.argonautresources.com
Key Executives: Mr Pat Elliott, Chairman
Mr Lindsay Owler, Executive Director
Contact Details: +61 2 9299 9690

DEPOSIT DETAILS
Deposit Type: Cu-Au
Total Resource (Mt): -
Resource Grade (Cu%): -

MINE DETAILS
Style: -
Estimated Life: -
Forecast Production (pa): -

EXPENDITURE
Estimated Capex ($m): -
Estimated Opex ($/lb): -

PORT DETAILS
Port options: Adelaide
Maximum vessel size: Panamax

SHARE INFORMATION (31.12.2015)
Listing Details - ASX: ARE
Market Capitalisation: AUD$1.8m
Cash: AUD$0.8m
Top 20 Shareholders: 54.65%
Significant Shareholders: Antofagasta 17.17%, Tattersfield Group 13.50%
Bagot Well is an exploration tenement of ASX-listed PNX Metals Limited (formerly Phoenix Copper) located 81km northeast of Adelaide. Bagot Well is located in a historical copper mining province.

Previous exploration (by others) in this area had concentrated on geochemical sampling and drilling of the stratigraphic unit hosting the Kapunda ore body to the south. This work had proven unsuccessful and Phoenix Copper’s aim was to test the northern extension of the structure that is adjacent to mineralisation at Kapunda for near-surface copper carbonate ore and deeper copper sulphide mineralisation that may have been transported in this structural conduit. A copper anomaly over 1km in length was identified.

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<tr>
<th>OVERVIEW</th>
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<tr>
<td>Bagot Well is an exploration tenement of ASX-listed PNX Metals Limited (formerly Phoenix Copper) located 81km northeast of Adelaide. Bagot Well is located in a historical copper mining province.</td>
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<th>DEPOSIT DETAILS</th>
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<tr>
<td>Deposit Type</td>
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<tr>
<td>Total Resource (Mt)</td>
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<tr>
<td>Resource Grade (Cu%)</td>
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<table>
<thead>
<tr>
<th>MINE DETAILS</th>
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<tbody>
<tr>
<td>Style</td>
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<tr>
<td>Estimated Life</td>
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<tr>
<td>Forecast Production (pa)</td>
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<tr>
<th>EXPENDITURE</th>
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<td>Estimated Capex ($m)</td>
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<td>Estimated Opex ($/lb)</td>
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<tr>
<th>PORT DETAILS</th>
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<tr>
<td>Port options</td>
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<tr>
<td>Maximum vessel size</td>
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<table>
<thead>
<tr>
<th>OWNERSHIP</th>
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<tbody>
<tr>
<td>Operator</td>
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<table>
<thead>
<tr>
<th>OPERATOR DETAILS</th>
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<tbody>
<tr>
<td>Headquarters</td>
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<tr>
<td>Website</td>
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<tr>
<td>Key Executives</td>
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<td>Contact Details</td>
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<tr>
<th>SHARE INFORMATION (31.12.2015)</th>
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<tbody>
<tr>
<td>Listing Details - ASX</td>
</tr>
<tr>
<td>Market Capitalisation</td>
</tr>
<tr>
<td>Cash</td>
</tr>
<tr>
<td>Top 20 Shareholders</td>
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<tr>
<td>Significant Shareholders</td>
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<tr>
<th>MARKET CAPITALISATION</th>
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<tbody>
<tr>
<td>AUD $ Million</td>
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<tr>
<th>LOCATION MAP</th>
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The Blue Rose copper-iron-gold-molybdenum property is located in the Olary Region of South Australia, 300km northeast of Adelaide and 130km west southwest of Broken Hill. Entrée (operator) has a 55.61% interest in the property, with Atlas Iron Limited, retaining a 44.39% interest. The property consists of one exploration licence EL5129 totalling 1,000km².

Magnetite iron formations and a molybdenum copper target (Netley Hill) occur in the southern portion of the tenement while copper oxide mineralization (Blue Rose) and a gold target (Golden Sophia) are located in the north-central area of the tenement.

The Blue Rose property is underlain by the late Precambrian metasedimentary rocks of the Adelaide Geosyncline, which include siltstone, quartzite, limestone and iron formation of the Burra, Umbaratana and Wilpena Groups. To the southeast of the property, these rocks have been intruded by the early Ordovician Anabama Granite (Netley Hill Mo-Cu target).
OVERVIEW

The Burra Projects is situated 150km north of Adelaide within the Adelaide Geosyncline on the outskirts of Burra. The project includes the Eagle, Burra North and Royal Princess prospects.

The Company recently completed the second phase of drilling at its Eagle prospect. The purpose of the second phase was to better define the high levels of mineralisation intercepted earlier in 2012.

Re-processing and subsequent re-interpretation of historical Induced Polarisation (IP) data identified new drill targets and provides strong geophysical support for the ongoing exploration program at Burra North. A new copper and base metal anomaly was identified in the area named the Condor Prospect directly to the south of Burra. A total of 718 Field Portable X-Ray Fluorescence (fpXRF) measurements were taken and the result have provided a strong correlation with existing IP targets.

PNX Metals was formerly known as Phoenix Copper.

DEPOSIT DETAILS (Royal Princess deposit)
- Deposit Type: Cu
- Total Resource (Mt): 0.216
- Resource Grade (Cu%): 0.96

MINE DETAILS
- Style: -
- Estimated Life: -
- Forecast Production (pa): -

STATUS
- Exploration

OWNERSHIP
- Operator: PNX Metals Limited 100%

OPERATOR DETAILS
- Headquarters: Adelaide, Australia
- Website: www.pnxmetals.com.au
- Key Executives: Mr Graham Ascough, Chairman
  Mr James Fox, CEO
- Contact Details: +61 8 8364 3188

EXPENDITURE
- Estimated Capex ($m): -
- Estimated Opex ($/lb): -

PORT DETAILS
- Port options: Adelaide
- Maximum vessel size: Panamax

SHARE INFORMATION (31.12.2015)
- Listing Details: ASX PNX
- Market Capitalisation: AUD$4.8m
- Cash: AUD$1.3m
- Top 20 Shareholders: 76.71%
- Significant Shareholders: ASIA Image 18.77%, Long Fortune 8.36%, Talis SA 8.74%, Cartet Group 8.86%, Sochrastem 6.87%, Marilei 6.26%
CURNAMONA PROVINCE PROJECT

OVERVIEW
PepinNini Minerals previously held a 40% interest (in a Joint Venture with Sinosteel Corporation) in five granted tenements which cover approximately 3,778km² and contain numerous prospects that warrant further investigation to explore the potential for economic mineralisation.

A Sale & Purchase Agreement was announced on 15 July 2014 whereby Sinosteel would acquire PepinNini’s 40% share in the project. The sale was completed on 22 September 2014.

STATUS
Exploration

OWNERSHIP
Operator Sinosteel Corporation 100%

OPERATOR DETAILS
Headquarters Perth, Australia
Website australia.sinosteel.com
Contact Details +61 8 9321 9966

MARKET CAPITALISATION
N/A (Private Company)

DEPOSIT DETAILS
Deposit Type Fe-IOCG
Total Resource (Mt) -
Resource Grade (Cu%) -

MINE DETAILS
Style -
Estimated Life -
Forecast Production (pa) -

EXPENDITURE
Estimated Capex ($m) -
Estimated Opex ($/lb) -

SHARE INFORMATION
Listing Details Private Company
Market Capitalisation N/A

PORT DETAILS
Port options Adelaide
Maximum vessel size Panamax
The Eastern Eyre Project comprises two properties on the southern Gawler Craton, about 250km northwest of Adelaide. Renascor Resources owns 100% of EL 5012 (Roopena) and EL 4721 (Iron Baron), covering a combined area of 1,180km².

The project is focused on locating large IOCGU deposits along the southern portion of the Olympic Dam IOCGU corridor.

The project tenements display several characteristics that confirm their prospectivity, including the Roopena Fault and Kalinjala Mylonite structures, which extend through the project areas.

The Company completed a nine hole, ~1,600 m RC drilling program on the project in 2015 and have identified multiple gravity and magnetic anomalies proximate to major fault structures that it considers highly prospective for large-scale copper deposits.
The Khamsin discovery was made in late 2012 and is located 10km northwest of Carrapateena.

Oz Minerals released a maiden mineral resource in May 2014 with the estimate based on 30 drill holes (including eight wedged holes) located approximately 100 m apart.

The Inferred Mineral Resource is:

202 Mt at 0.6% Cu, 0.1 g/t Au and 1.7 g/t Ag
Containing 1.1 Mt Cu, 0.9 Moz Au and 11 Moz Ag.

A scoping study to be completed with the potential feasibility of integrating the Khamsin deposit into the Carrapateena project.
The Lake Torrens Project is a very large and strategic tenement holding (over 2,000km²) adjoining BHP Billiton's world class Olympic Dam deposit in central South Australia. The prime target is iron-oxide associated copper-gold-uranium deposits of the Olympic Dam style, although potential for other base metal and diamonds deposits has been recognised.

Tasman has been exploring these tenements for a number of years, with drilling having been conducted at a number of prospects, including Titan and Vulcan.
OVERVIEW
The Melton projects are strategically located on Yorke Peninsula in South Australia, less than 200 km from Adelaide, with good access to infrastructure which includes road and ports.

Marmota Energy are part of a JV with Monax Mining over the Melton Project while Marmota hold a 100% interest in the Melton West Project.

Drill results at the Champion prospect (Melton West) have shown high grade copper mineralisation intercepted at shallow depths with grades ranging up to 2.92% copper.

Airborne electromagnetic surveys were undertaken in January 2015 and planning for follow up exploration is well advanced.

DEPOSIT DETAILS
Deposit Type        IOCG
Total Resource (Mt) -
Resource Grade (Cu %) -

MINE DETAILS
Style               -
Estimated Life      -
Forecast Production (pa) -

EXPENDITURE
Estimated Capex ($m) -
Estimated Opex ($/lb) -

PORT DETAILS
Port options        Adelaide
Maximum vessel size  Panamax

SHARE INFORMATION (31.12.2015)
Listing Details - ASX   MEU
Market Capitalisation  AUD$9.1m
Cash                AUD$0.3m
Top 20 Shareholders  32.11%
Significant Shareholders  Dr Colin Rose 18.45%
OVERVIEW

The Moonta project area is located at the southern end of the Olympic Copper-Gold Province, a 650km long belt at the eastern margin of the Gawler Craton, within which the Olympic Dam and Prominent Hill Copper-Gold deposits are situated. The exploration target is iron oxide copper-gold style mineralisation.

The Moonta project is Adelaide Resources' flagship project consisting of numerous prospects including: Willamulka, Paskeville, Wombat, West Doora, Alford West and Copper Hill.

On 30 April 2013, the company announced some of the highest grade copper-gold drill results in South Australian history at its Alford West prospect, including 20m @ 4.2% copper and 0.27g/t gold and 45m @ 1.55% copper and 1.81g/t gold. An 8 hole RC drilling program was conducted at the Bruce and Larwood zones at Alford West during March/April 2015 and returned broad intersections of moderate grade copper mineralisation which confirmed the continuity of mineralisation at depth.

DEPOSIT DETAILS

<table>
<thead>
<tr>
<th>Deposit Type</th>
<th>IOCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Resource (Mt)</td>
<td>-</td>
</tr>
<tr>
<td>Resource Grade (Cu %)</td>
<td>-</td>
</tr>
</tbody>
</table>

MINE DETAILS

| Style | - |
| Estimated Life | - |
| Forecast Production (pa) | - |

STATUS

| Operator | Adelaide Resources 100% |

OWNERSHIP

| Operator | Adelaide Resources |
| Website | www.adelaideresources.com.au |
| Key Executives | Mr Mike Hatcher, Chairman, Mr Chris Drown, Managing Director |
| Contact Details | +61 8 8271 0600 |

PORT DETAILS

| Port options | Adelaide |
| Maximum vessel size | Panamax |

EXPENDITURE

| Estimated Capex ($m) | - |
| Estimated Opex ($/lb) | - |

SHARE INFORMATION (31.12.2015)

| Listing Details - ASX | ADN |
| Market Capitalisation | AUD$3.2m |
| Cash | AUD$1.6m |
| Top 20 Shareholders | 40.73% |
| Significant Shareholders | Burato Pty Ltd 19.07% |

MARKET CAPITALISATION

![Graph showing market capitalisation over time]
OVERVIEW
The Mount Gunson Project lies in the centre of the Olympic Copper-Gold Province with the Olympic Dam copper-uranium-gold mine some 100km to the north of Mount Gunson. The project includes the Windabout, MG14, Cattlegrid South, Sweet Nell, Tailings Dam and Emmie Bluff deposits.

In December 2013, the company announced it had entered into a farm-in agreement with Torrens Mining Pty Ltd in respect to the MG14 and Windabout deposits with the right for Torrens to earn up to 51% subject to conditions. A scoping study has been completed over these prospects with the project now moving into pre-feasibility.

A drilling campaign is planned in the first half of 2015 to provide more samples to complete metallurgical test-work and assist with JORC 2012 mineral resource updates and preliminary planning of the mining operations.

DEPOSIT DETAILS
Deposit Type  Cu-Co-Ag
Total Resource (Mt)  53
Resource Grade Cu (%)  Refer below
Co (%)  Refer below
Ag (g/t)  Refer below
The Company report JORC resources for 6 deposits with varying grades of copper, cobalt and silver. Readers should refer to www.strandline.com.au for further details.

MINE DETAILS
Style  -
Estimated Life  -
Forecast Production (pa)  -

EXPENDITURE
Estimated Capex ($m)  -
Estimated Opex ($/lb)  -

PORT DETAILS
Port options  Adelaide
Maximum vessel size  Panamax

OWNERHIP
Operator  Strandline Resources  100%
JV Partner  Torrens Mining  option: up to 70%

OPERATOR DETAILS
Headquarters  Perth, Australia
Website  www.strandline.com.au
Key Executives  Mr Mike Folwell, Chairman
Mr Tom Eadie, Executive Director
Contact Details  +61 8 9226 3130

SHARE INFORMATION (31.12.2015)
Listing Details - ASX  STA
Market Capitalisation  AUD$9.1m
Cash  AUD$0.2m
Top 20 Shareholders  48.68%
Significant Shareholders  Kabunga Holdings 5.63%, Westoria Resources 5.59%, Artemis Corporate 5.59%
The Black Hills prospect and the Kangaroo Dam prospect are both part of the Mt Woods Copper-Gold Project which is located 55km southeast of Coober Pedy.

The Project was previously a JV between IMX Resources and OZ Minerals Limited (ASX: OZL) however Oz Minerals withdrew from the JV in October 2013 after spending $14m on exploration for the project.

IMX Resources sold its Mt Woods tenements to privately owned Chinese company Cu-River Mining Australia in November 2014 for $3.68m.

<table>
<thead>
<tr>
<th>OVERVIEW</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Black Hills prospect and the Kangaroo Dam prospect are both part of the Mt Woods Copper-Gold Project which is located 55km southeast of Coober Pedy. The Project was previously a JV between IMX Resources and OZ Minerals Limited (ASX: OZL) however Oz Minerals withdrew from the JV in October 2013 after spending $14m on exploration for the project. IMX Resources sold its Mt Woods tenements to privately owned Chinese company Cu-River Mining Australia in November 2014 for $3.68m.</td>
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<tbody>
<tr>
<td>Exploration</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>OWNERSHIP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator Cu-River Mining Australia 100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPERATOR DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private company - limited information is available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DEPOSIT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposit Type Cu-Au</td>
</tr>
<tr>
<td>Total Resource (Mt) -</td>
</tr>
<tr>
<td>Resource Grade (Cu %) -</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>MINE DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Style -</td>
</tr>
<tr>
<td>Estimated Life -</td>
</tr>
<tr>
<td>Forecast -</td>
</tr>
<tr>
<td>Production (pa) -</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EXPENDITURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Capex ($m) -</td>
</tr>
<tr>
<td>Estimated Opex ($/lb) -</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SHARE INFORMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Private company - limited information is available.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PORT DETAILS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port options Adelaide</td>
</tr>
<tr>
<td>Maximum vessel size Panamax</td>
</tr>
</tbody>
</table>
# MUSGRAVE PROVINCE

## OVERVIEW
The Musgrave Province Project is located in the far northwest of South Australia.

PepinNini has a 100% interest in three granted exploration licence and four exploration licence applications covering approximately 8,223km² of the Musgrave Province. In addition PepinNini subsidiary PepinNini Resources Pty Limited is earning a 51% interest in EL3931 and ELAs 278/82 and 491/94 covering approximately 1,382km² under a Farm-in and Joint Venture Agreement with Rio Tinto.

The tenements are considered prospective for nickel, base metals, gold, platinum group metals, ferrous metals and precious stones.

## DEPOSIT DETAILS
- **Deposit Type**: Ni-Cu-Au
- **Total Resource (Mt)**: -
- **Resource Grade (Cu%)**: -
- **Au (g/t)**: -

## MINE DETAILS
- **Style**: -
- **Estimated Life**: -
- **Forecast Production (pa)**: -

## EXPENDITURE
- **Estimated Capex ($m)**: -
- **Estimated Opex ($/lb)**: -

## PORT DETAILS
- **Port options**: Adelaide or Darwin
- **Maximum vessel size**: Panamax

## STATUS
- **Exploration**

## OWNERSHIP
- **Operator**: PepinNini Minerals 100%

## OPERATOR DETAILS
- **Headquarters**: Adelaide, Australia
- **Website**: www.pepinnini.com.au
- **Key Executive**: Ms Rebecca Holland-Kennedy, MD
- **Contact Details**: +61 8 8218 5000

## SHARE INFORMATION (31.12.2015)
- **Listing Details - ASX**: PNN
- **Market Capitalisation**: AUD$2.4m
- **Cash**: AUD$1.2m
- **Top 20 Shareholders**: 69.74%
- **Significant Shareholders**: Kalinda Outlook Pty Ltd 25.65%
  Deltta Pty Ltd 13.49%

## MARKET CAPITALISATION

## LOCATION MAP
OVERVIEW

The North Portia prospect is located 109km northwest of Broken Hill, it is part of the Wilkins Copper Mineralisation.

The magnetic anomaly associated with the copper mineralisation is more than 3km long. Expected to produce in 2016, the North Portia project is a higher grade addition to the Kalkaroo project.

The mining study for North Portia was fast tracked in August 2015. There is potential to follow on from Portia to take advantage of mining infrastructure currently in place.

Current company objectives are to determine oxidised copper and gold recoveries and increase resource confidence.

DEPOSIT DETAILS

Deposit Type: Cu-Au-Mo
Total Resource (Mt): 11.4
Resource Grade (Cu%): 0.886
Au (g/t): 0.777g/t
Mo: 500ppm

MINE DETAILS

Style: -
Estimated Life: -
Forecast: -
Production (pa): -

EXPENDITURE

Estimated Capex ($m): -
Estimated Opex ($/lb): -

PORT DETAILS

Port options: Adelaide
Maximum vessel size: Panamax

SHARE INFORMATION (31.12.2015)

Listing Details - ASX: HAV
Market Capitalisation: AUD$38.7m
Cash: AUD$2.1m
Top 20 Shareholders: 63.59%
Significant Shareholders:
Mrs Selvie Tjowasi 10.61%
IFG Trust 7.35%
Glencore 6.18%
Trindal 9.94%
The Punt Hill Project is located within the Olympic Copper-Gold Province on the eastern margin of the Gawler Craton.

To date, the Company has drilled 33 holes (~29,000m) testing a number of targets within the project area and has successfully discovered a very large alteration and mineralization system which has characteristics typical to IOCG deposits.

The project is eligible for up to $75,000 in funding from South Australian Government’s plan for accelerated exploration (PACE) initiative.

Overview Location Map

Market Capitalisation

($ Million)

<table>
<thead>
<tr>
<th>Dec11</th>
<th>Dec12</th>
<th>Dec13</th>
<th>Dec14</th>
<th>Dec15</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>10</td>
<td>8</td>
<td>6</td>
<td>4</td>
</tr>
<tr>
<td>2</td>
<td>4</td>
<td>6</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

Operator Details

Monax Mining 100%


Key Executives

Mr Robert Kennedy, Chairman

Mr Gary Ferris, Managing Director

Contact Details  +61 8 8232 8320

Deposit Details

<table>
<thead>
<tr>
<th>Deposit Type</th>
<th>IOCG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Resource (Mt)</td>
<td>-</td>
</tr>
<tr>
<td>Resource Grade (Cu%)</td>
<td>-</td>
</tr>
</tbody>
</table>

Mine Details

<table>
<thead>
<tr>
<th>Style</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Life</td>
<td>-</td>
</tr>
<tr>
<td>Forecast Production (pa)</td>
<td>-</td>
</tr>
</tbody>
</table>

Expenditure

| Estimated Capex ($m) | - |
| Estimated Opex ($/lb) | - |

Port Details

<table>
<thead>
<tr>
<th>Port options</th>
<th>Adelaide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum vessel size</td>
<td>Panamax</td>
</tr>
</tbody>
</table>

Share Information (31.12.2015)

<table>
<thead>
<tr>
<th>Listing Details - ASX</th>
<th>MOX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market Capitalisation</td>
<td>AUD$2.6m</td>
</tr>
<tr>
<td>Cash</td>
<td>AUD$1.1m</td>
</tr>
<tr>
<td>Top 20 Shareholders</td>
<td>44.26%</td>
</tr>
<tr>
<td>Significant Shareholders</td>
<td>Antofagasta 22.14%</td>
</tr>
</tbody>
</table>
The Titan Base Metals Project is located within the Olympic Copper-Gold Province. The Project is focused on discovering a major IOCG deposit in a new frontier of the world class Gawler Craton. The Project consists of:

- Commonwealth Hill Project JV (High Power Exploration Inc (HPX) earning up to 80% interest);
- Eaglehawk JV (Apollo Minerals earning up to 75% interest from Mincor Resources); and
- Aurora Tank JV (Apollo Minerals earning up to 75% interest from Marmota Energy).

Exploration work is continuing across all project areas. In November 2014 Apollo announced discovery of significant iron oxide-titanium-phosphate mineralisation in the Boulder and Claypan prospects. Project drilling was completed in May 2015.
## DEPOSIT DETAILS
- **Deposit**: Sn - Pb-Zn-Ag-Cu-Au
- **Resource Size (Mt)**: -
- **Resource Grade (Au g/t)**: -

## MINE DETAILS
- **Style**: -
- **Estimated Life**: -
- **Forecast Production (pa)**: -

## EXPENDITURE
- **Estimated Capex ($m)**: -
- **Estimated Opex ($/lb)**: -

## PORT DETAILS
- **Port options**: Adelaide
- **Maximum vessel size**: Lucky Bay

## SHARE INFORMATION (31.12.2015)
- **Listing Details - ASX**: TYX
- **Market Capitalisation**: AUD$2.4m
- **Cash**: AUD$0.9m
- **Top 20 Shareholders**: 37.64%
- **Significant Shareholders**: Admark Investment 8.7%

## STATUS
- **Exploration**

## OWNERSHIP
- **Operator**: Tyranna Resources Limited 100%

## OPERATOR DETAILS
- **Headquarters**: Perth, Australia
- **Website**: www.tyrannaresources.com
- **Key Executives**: Mr Ian Finch, Chairman
  - Mr Bruno Seneque, Managing Director
- **Contact Details**: +61 8 9485 1040

## OVERVIEW
The Wilcherry Hill Project is located 30km north of the township of Kimba on the northern Eyre Peninsula of South Australia.

The project is prospective for base metals, precious metals, iron ore and manganese.

Tyranna Resources is the result of the recent merger of IronClad Mining and Trafford Resources (the former holder of Wilcherry Hill),
**OVERVIEW**
Wirrda Well is owned by BHP Billiton and is located 25km south of Olympic Dam.

There is limited public information available for Wirrda Well.

---

**STATUS**
Exploration

**OWNERSHIP**
Operator | BHP Billiton Ltd | 100%

**OPERATOR DETAILS**
Headquarters | Melbourne, Australia
Website | www.bhpbilliton.com
Key Executives | Mr Pat Elliott, Chairman
| Mr Lindsay Owler, Executive Director
Contact Details | +61 2 9299 9690

---

### DEPOSIT DETAILS
- **Deposit Type**: IOCGU
- **Total Resource (Mt)**: -
- **Resource Grade (Cu%)**: -
- **U₃O₈ (kg/t)**: -
- **Ag (g/t)**: -

---

### MINE DETAILS
- **Style**: -
- **Estimated Life**: -
- **Forecast Production (pa)**: -

---

### EXPENDITURE
- **Estimated Capex ($m)**: -
- **Estimated Opex ($/lb)**: -

---

### PORT DETAILS
- **Port options**: Adelaide
- **Maximum vessel size**: Panamax

---

### SHARE INFORMATION (31.12.2015)
- **Primary Listing – ASX, LSE**: BHP
- **Market Capitalisation**: AUD$95,025.4m
- **Cash**: USD$9,532.8m
- **Top 20 Shareholders**: 58.44%
- **Significant Shareholders**: No holdings greater than 5%

---

**MARKET CAPITALISATION**

<table>
<thead>
<tr>
<th>Year</th>
<th>Value ($ Billion)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dec11</td>
<td>-</td>
</tr>
<tr>
<td>Dec12</td>
<td>-</td>
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<tr>
<td>Dec13</td>
<td>-</td>
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<td>Dec14</td>
<td>-</td>
</tr>
<tr>
<td>Dec15</td>
<td>-</td>
</tr>
</tbody>
</table>

---

**LOCATION MAP**

Wirrda Well is owned by BHP Billiton and is located 25km south of Olympic Dam.

There is limited public information available for Wirrda Well.

**DEPOSIT DETAILS**
- **Deposit Type**: IOCGU
- **Total Resource (Mt)**: -
- **Resource Grade (Cu%)**: -
- **U₃O₈ (kg/t)**: -
- **Ag (g/t)**: -

**MINE DETAILS**
- **Style**: -
- **Estimated Life**: -
- **Forecast Production (pa)**: -

**EXPENDITURE**
- **Estimated Capex ($m)**: -
- **Estimated Opex ($/lb)**: -

**PORT DETAILS**
- **Port options**: Adelaide
- **Maximum vessel size**: Panamax

**SHARE INFORMATION (31.12.2015)**
- **Primary Listing – ASX, LSE**: BHP
- **Market Capitalisation**: AUD$95,025.4m
- **Cash**: USD$9,532.8m
- **Top 20 Shareholders**: 58.44%
- **Significant Shareholders**: No holdings greater than 5%
The Yorke Peninsula Project consists of four exploration licences and covers a significant land area of 1,413km². The tenements are adjacent to Rex Minerals’ Hillside deposit.

Prospective geology and geochemistry within a significant alteration system has been identified together with a new area at the Cross prospect and has the potential for mineralisation at depth.

The next stage of exploration will be to test the depth extents of the surface anomalies at Cross and Balgowan through basement drilling, along with further interpretation and analysis of geochemical results from the last round of drilling in 2013.

Landholder consultation is currently underway for proposed geophysical surveys and drilling testing, subject to funding.
Further Information

Please contact Investment Attraction Agency for detailed investor-ready information across copper, gold, uranium, iron ore and resources infrastructure.

Investment Attraction Agency
Level 9, The Conservatory
131-139 Grenfell Street
Adelaide 5000
South Australia

T: +61 8 8303 2439
E: investinsa@sa.gov.au

www.invest.sa.gov.au

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