



**KOONGIE  
A COPPER ZINC PROJECT  
IN THE MAKING**

**INFORMATION AND UPDATE BROCHURE  
NOVEMBER 2010**



## Introduction

The Koongie Copper Zinc Project is located approximately 25km south west of the regional Centre of Halls Creek in the Southern Eastern Kimberley Region of Western Australia. The Great Northern Highway transects the project area.

Geologically the project is located within the highly mineralised Halls Creek Mobile Belt which also hosts The Savannah and Copernicus Nickel Deposits, the Argyle Diamond Mine, platinum / palladium mineralisation and numerous alluvial gold occurrences. 100 -200km to the west in the Lennard Shelf MVT Province, lead and zinc have been mined at Cadjabut and Pillara. At Koongie the copper zinc mineralisation of the VHMS (volcanic hosted massive sulphide) style is hosted by Koongie Park Formation a sequence of volcanic rocks and volcanic derived sediments.

Two significant copper zinc resources have been defined at Sandiego and Onedin. Anglo Australian Resources NL has focused its feasibility activity on the Sandiego deposit which has better grade, metallurgical and geometric characteristics.



Figure 1: Drilling Sandiego

## History

In 1886 alluvial gold was first discovered in Western Australia near Halls Creek. The gold rush was, however, short term with no major discoveries made. In the Halls Creek area two small gold deposits, Nicolson's Find and Palm Springs, were mined in the 1990's by open cut.

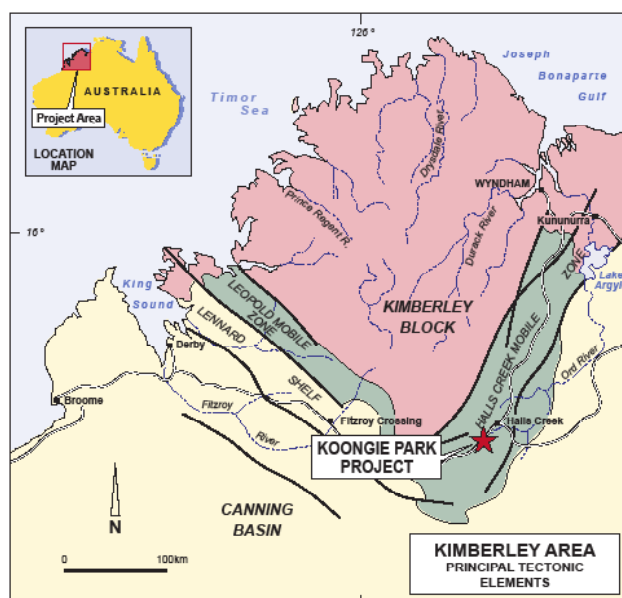
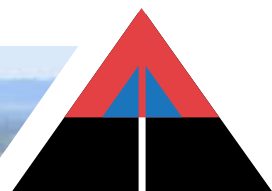


Figure 2: Project Location

Base metal exploration commenced in the area 85 years after the first gold discovery. In 1972 Kennecott discovered 6 base metal rich gossans, two of which are now known as Onedin and Sandiego. Initial drilling proved to be difficult at Onedin (due to structural complexity and depletion due to weathering) with only two diamond holes out of eighteen intersecting mineralisation, but more successful at Sandiego with eight holes out of eleven intersecting significant zinc mineralisation.





Anglo Australian Resources NL purchased the Koongie Project in 1989 from RTZ (Kennecott's owner). Subsequently the project was subject to joint ventures with firstly Billiton then Lachlan Resources where AAR was the minority partner.

Exploration activity intensity has varied over the years often in line with zinc prices. This has included 245 RC and Diamond holes, numerous shallow RAB holes, surface geochemistry, various electrical geophysical techniques and airborne magnetics.

In 2003 Anglo Australian Resources obtained 100% ownership of the project when Lachlan Resources withdrew from the joint venture. In 2006, following a substantial improvement in base metal commodity prices, AAR commenced its first drilling program in its own right and established the first JORC code resource for the Sandiego and Onedin deposits. In October 2008 AAR completed a Preliminary Feasibility Study on underground mining of the Sandiego Deposit just as commodity prices crashed and the Global Financial Crisis began. In 2010 AAR began a more copper focussed program, recognising the potential of high grade near surface copper to drive the economics of the project.

## Sandiego JORC Compliant Resource Estimate

A new resource estimate to JORC guidelines was announced in November 2010 following two earlier estimates in 2007 and 2009. The resource quoted separately for the copper and zinc lodes stands at a indicated and inferred resource for the copper **Lode of 2Mt @ 2.8% Cu, 1.8% Zn, 0.39g/t Au and 18g/t Ag** (which includes a maiden high grade supergene resource of **0.37mt @ 4% Cu, 2.7% Zn, 0.29g/t Au and 48g/t Ag**) and a zinc lode indicated and inferred resource of **1.57Mt @ 6.8% Zn, 0.2% Cu, 0.16g/t Au, 22g/t Ag**.

Exploration by AAR has substantially improved zinc and copper metal content of the resource as well as providing substantial material for metallurgical testwork.

The new resource will provide the basis for a mining study which will include an open pit optimisation study. Previous feasibility activity focused entirely on an underground option.



Figure 4: Chalcocite mineralisation section

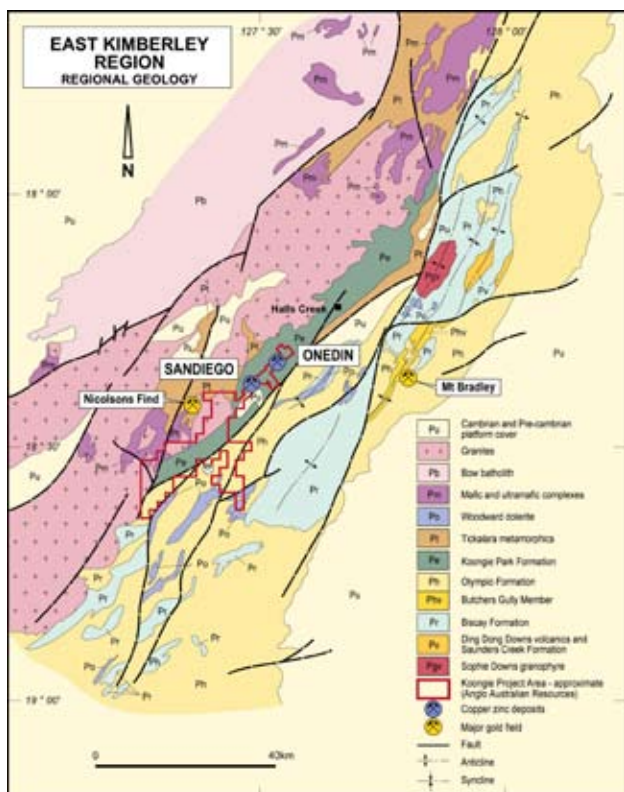
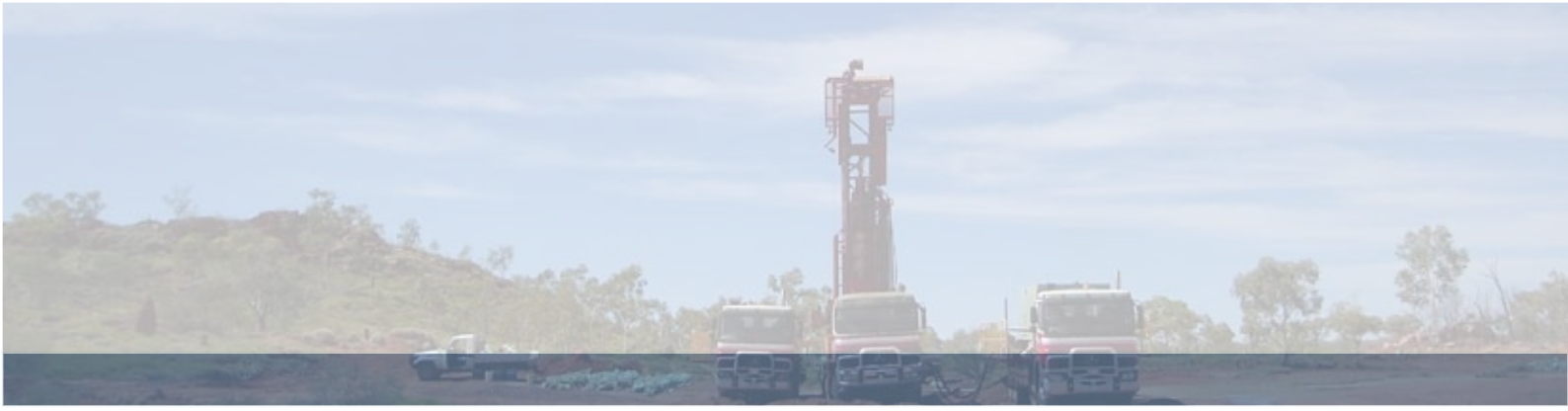


Figure 3: Regional Geology

## Key Criteria of the Sandiego Deposit

**Depth of Ore:** The partially oxidised Sandiego sulphide mineralisation commences 50m below surface on the north end and 120m below surface on the south end. Above this level silver and gold mineralisation and low grade copper oxide may add to the inventory requires to be confirmed by additional drilling.





**Shallow High Grade Chalcocite Mineralisation:** A sub horizontal zone of high grade copper mineralisation in the form of chalcocite is draped over the copper and zinc lodes. (0.37mt @ 4% Cu, 2.7% Zn, 0.29g/t Au and 48g/t Ag). Mining this zone via an open pit could provide a low cost path to production, a maximisation of the value of this resource and an early cash flow. Economic evaluation of this option is in progress.

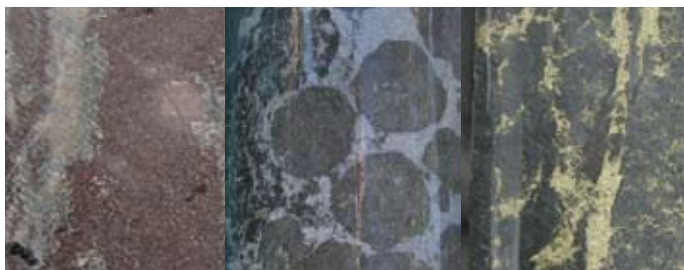


Figure 5: Typical Sphalerite and Chalcopyrite mineralisation

**Ore Body Geometry:** Economic grades and widths have been intersected over a strike length of 200m and down to 600m below surface. The ore body consists of at least two and up to four separate copper or zinc lodes which dip steeply to the east. Mineralisation thickness varies from 2m at the extremities to 50m within the central portion of the deposit.

**Resource Upside:** The Sandiego is open at depth. A potential southerly plunge to the deposit also remains to be tested.

Drilling in 2010 intersected potentially a new copper lode 50-100m north east of the main Sandiego mineralisation, 500m below surface. Follow up drilling is planned for the next dry season.

**Other Payable Products:** All the deposits at the Koongie Project contain high levels of silver, gold and cobalt. Sandiego contains more than 2 million oz of silver and 30,000 oz of gold. Tests to date suggest that silver and gold will report to both the copper and zinc concentrates. Only recent holes have been assayed for Cobalt which is insufficient to include in a resource estimate. Mineralised intervals range 0.05 to 0.2% Cobalt.

Common smelter terms are not favourable to maximise returns for these commodities if contained in the concentrate. The potential to extract these commodities separately to add value to the project is still to be evaluated.

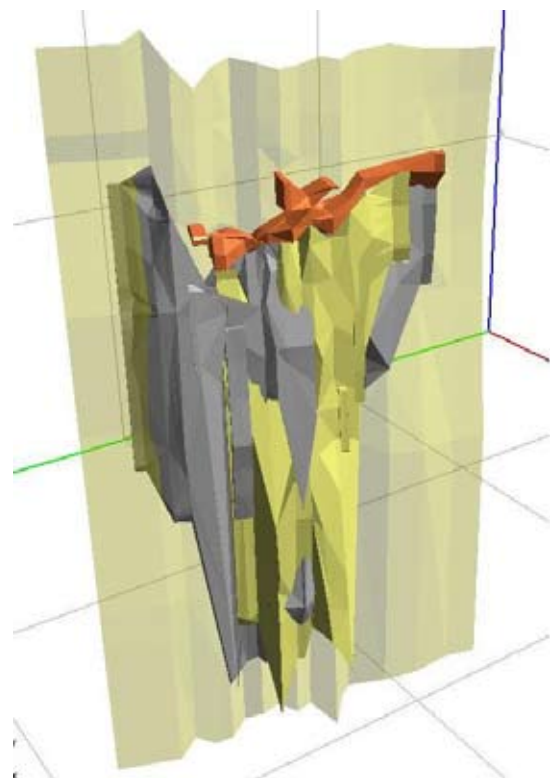


Figure 6: Sandiego Resource Wireframe Model – showing yellow copper lodes, grey zinc lodes and orange supergene copper lodes.



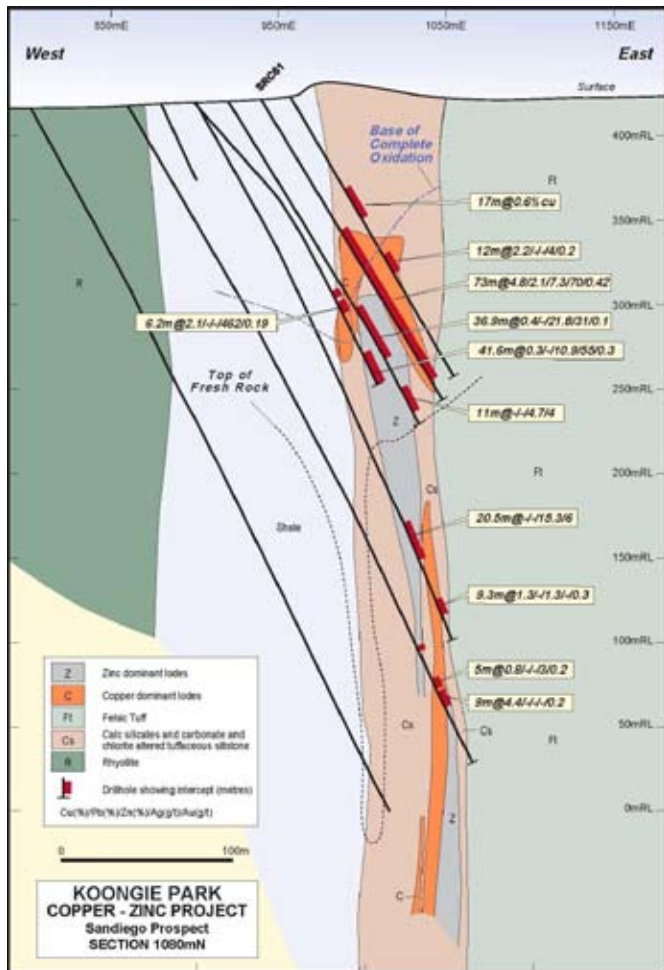


Figure 7: Typical Sandiego Cross- Section

**Metallurgy:** Test work on both the copper and zinc lodes in the sulphide and partially weathered zone utilising traditional flotation technology indicate metal recoveries will be high for these types of ore (75-92% for Zinc ores and 92-97% for Copper ores). Concentrates produced from this testwork resulted in grades of 24-26% Cu and 50-56% Zn which are well within most smelter specifications. There are no significant deleterious elements associated with Koongie concentrates.

Recent leaching testwork of Sandiego concentrates has successfully shown that the Galvanox methodology could be an effective tool to either directly produce copper

and zinc metal or produce value added products such as zinc sulphate or copper sulphate. A by-product of this process is acid which could be used for leaching oxide ores from Onedin.

**Mining:** The 2008 Pre-feasibility Study envisaged mining the Sandiego Deposit by underground methods utilising a decline. A potentially cheaper start-up option of an open pit followed by a decline of the base of the pit is currently under evaluation.

**Processing:** Based on mining Sandiego alone, a conventional 300,000tpa processing plant using flotation is envisaged, producing annually 24,000t of copper concentrate containing 6,000t of copper metal and 30,000t of zinc concentrate containing 15,000t of zinc metal. A 500,000tpa plant as planned in the 2008 Pre- Feasibility study cannot be sustained by underground mining rates.

**Transport:** The sealed Great Northern Highway transects the Koongie project. Development of Sandiego by open cut will require relocation of the highway.

Halls Creek has an all weather sealed airport which has a regular passenger service to Broome. The airport has previously been used to transport fly-in fly-out workers for the Savannah Nickel Mine.



Figure 8: Port of Wyndham





**Other Infrastructure:** The proximity of the project to Halls Creek, a major regional centre will reduce the need to build a project specific accommodation camp. Employment and training of locally resident staff will be encouraged.

**Power:** Halls Creek township operates a gas powered power station to feed local demand, however the current capacity of the plant is too low for a potential Koongie operation and a separate power plant will be required.

**Market Access:** It is envisaged that concentrates would be transported by road train 400km to the port of Wyndham. Concentrates would be sent to customers via cape sized vessels. Wyndham currently exports nickel concentrate from the Savannah Mine and has also previously shipped zinc and lead concentrates from the Cadjubar Mine.

**Native Title and Heritage:** Heritage and archaeological surveys have been completed with no significant issues identified.

**Environmental Surveys:** Environmental surveys required for our Environmental Impact Statement (EIS) and for approval for a mining plan are partly complete.

**Mining Leases:** Mining leases covering the Onedin and Sandiego deposits are current. Approval to mine is subject to submission of a mining proposal to the DMP which will include a mining environmental management plan.

**Other Tenure:** In addition to the two mining leases AAR has adjoining tenure of 5 exploration licences and 15 prospecting licences covering over 40km of strike of the Koongie Park Formation.

**Geotechnical Assessment:** Geotechnical assessment of the Sandiego Deposit by Dempers and Seymour is in progress.

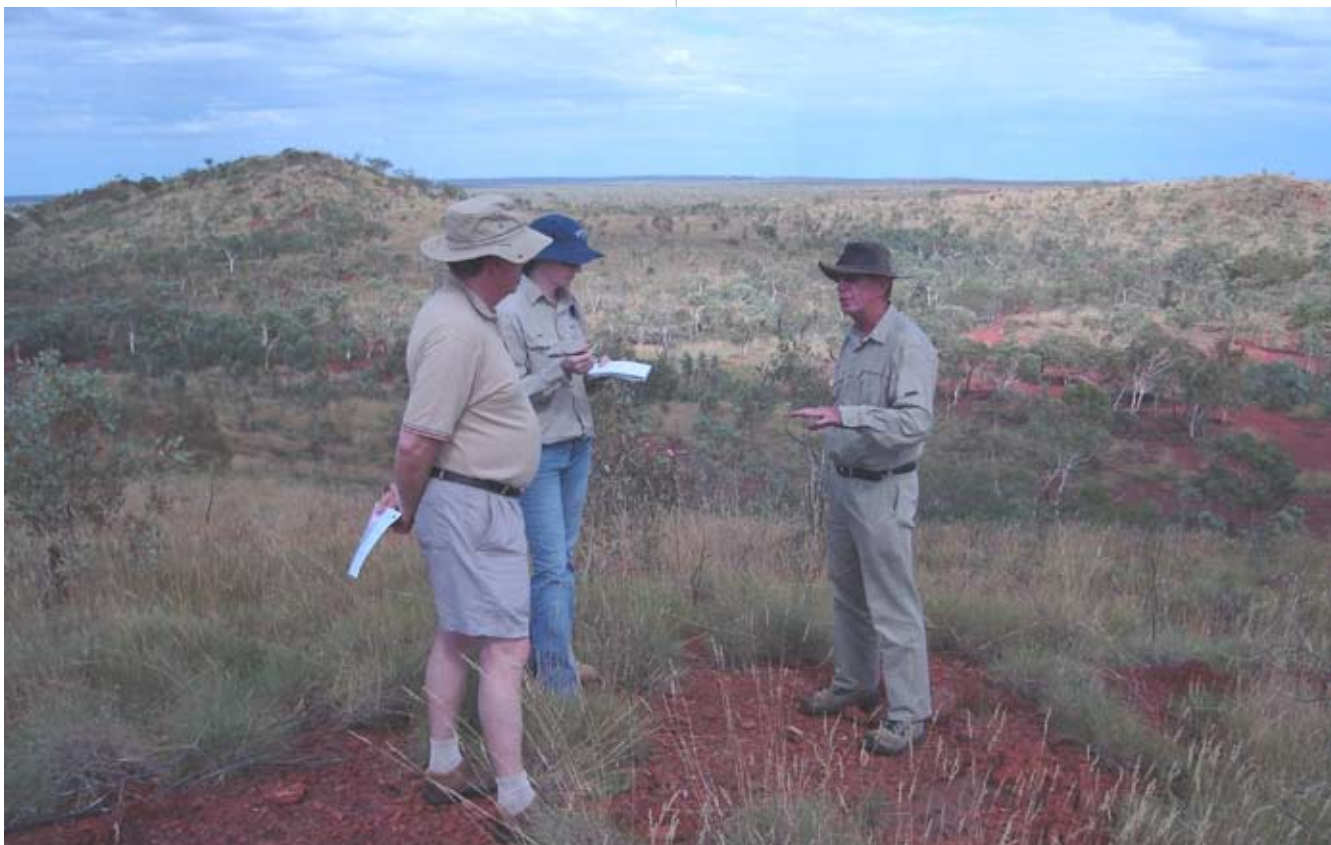


Figure 9: Environmental Consultants Discussing Flora and Fauna Survey at Onedin



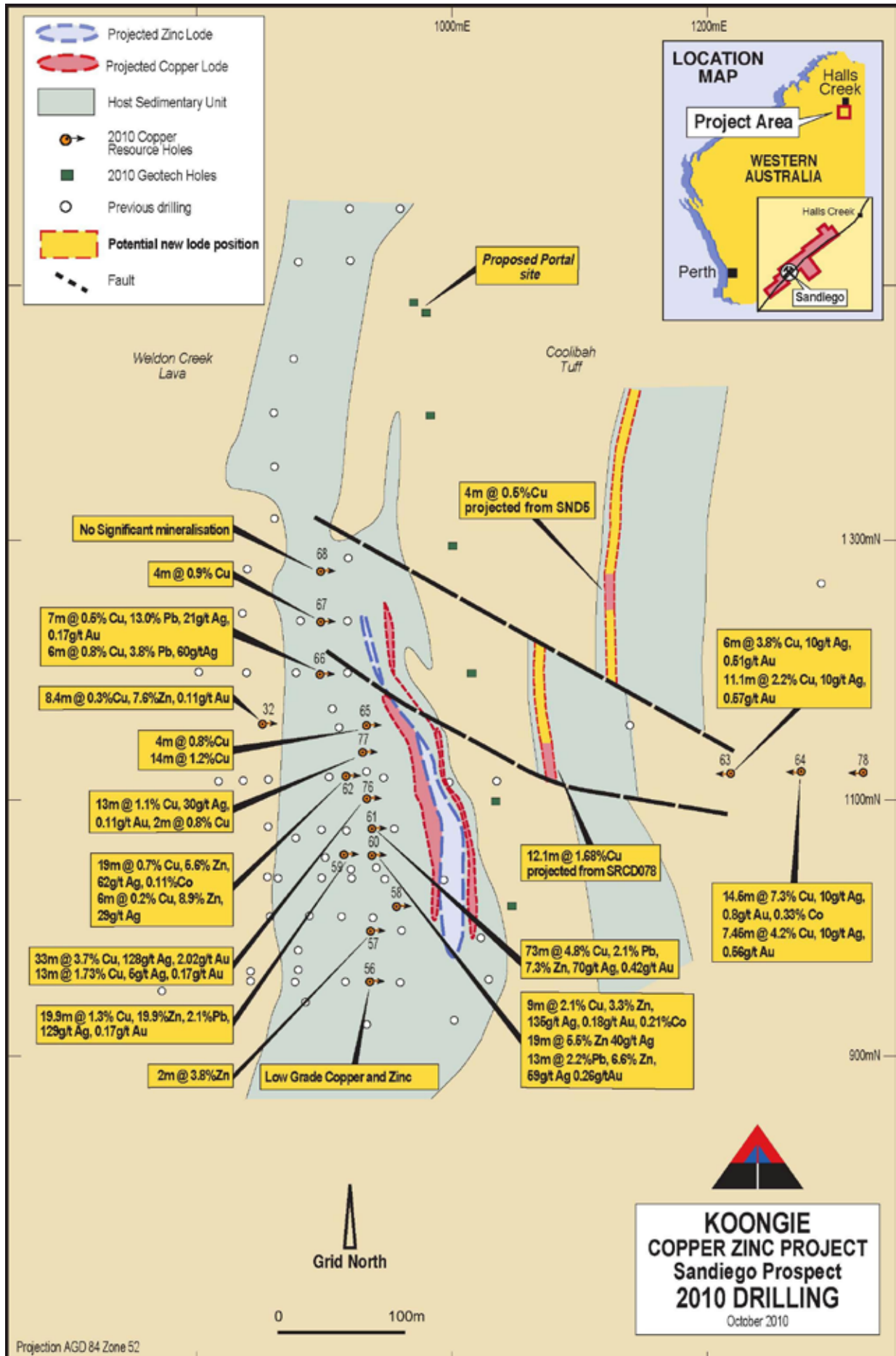


Figure 10: Sandiego Summary Plan



Figure 11: High grade Chalcopyrite mineralisation

**Other Potential Ore Sources:** Atlantis contains an exploration target of 100,000t @ 12% Zn at shallow open pit depths. A JORC compliant indicated resource is defined at Onedin, 7km to the north of Sandiego. AAR is also aware of two other resources outside of current tenure which could potentially provide feed for a central mill.

### Onedin Deposit

**JORC Compliant Resource Estimate:** The indicated resource estimated in 2009 stands at **2.5mt @ 1.1%Cu, 21g/t Ag, 0.3g/t Au** from the Onedin copper zone; **1.3mt @ 5.4% Zn, 25g/t Ag, 0.25g/t Au** from the Onedin zinc zone and **0.65mt @ 8% Zn, 1.1% Cu, 1.4% Pb, 47g/t Ag, 0.37g/t Au** for the Copper Zinc zone.

**Ore Body Geometry:** Economic mineralisation has been defined over 200m of strike. The mineralised lodes are folded and plunge to the south west at 45 - 60°. Weathering occurs down to 200m below surface.

**Metallurgy:** The metallurgical characteristics of the Onedin deposit are different to the Sandiego deposit. The Onedin sulphide ore has excellent flotation characteristics (good recoveries); however the bulk of the resource occurs in the transition zone which has responded only to leaching techniques.

**Mining:** Scoping and optimisation studies at Onedin suggest that, subject to suitable metal recovery open pit mining to 160m below the current surface could be feasible. However a leaching circuit in addition to the planned flotation circuit would be required to maximise the value of the oxide and partially weathered Onedin ore types. There are currently insufficient Onedin sulphide resources to justify underground development of the sulphide ore alone.







Figure 12: Onedin Gossan

### Exploration

Over 245 RC and diamond drill holes consisting of 50,0417m have been drilled on the project. Most of the previous exploration drilling has focused on the Sandiego and Onedin deposits. AAR has focused on resource, metallurgical and geotech drilling at Onedin and Sandiego with minor exploration drilling at the Atlantis prospect.

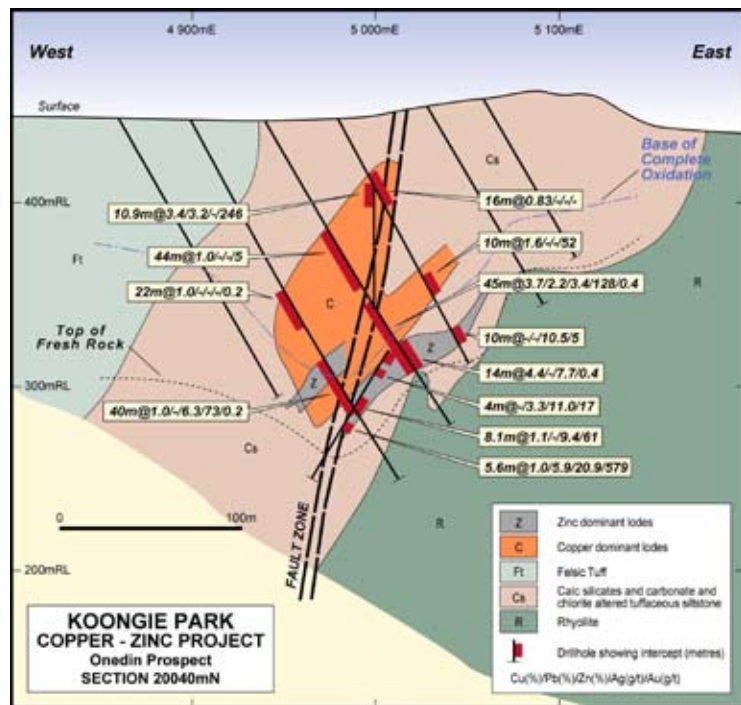


Figure 14: Typical Onedin Cross Section



Figure 13: Sandiego



Figure 15: Core Logging



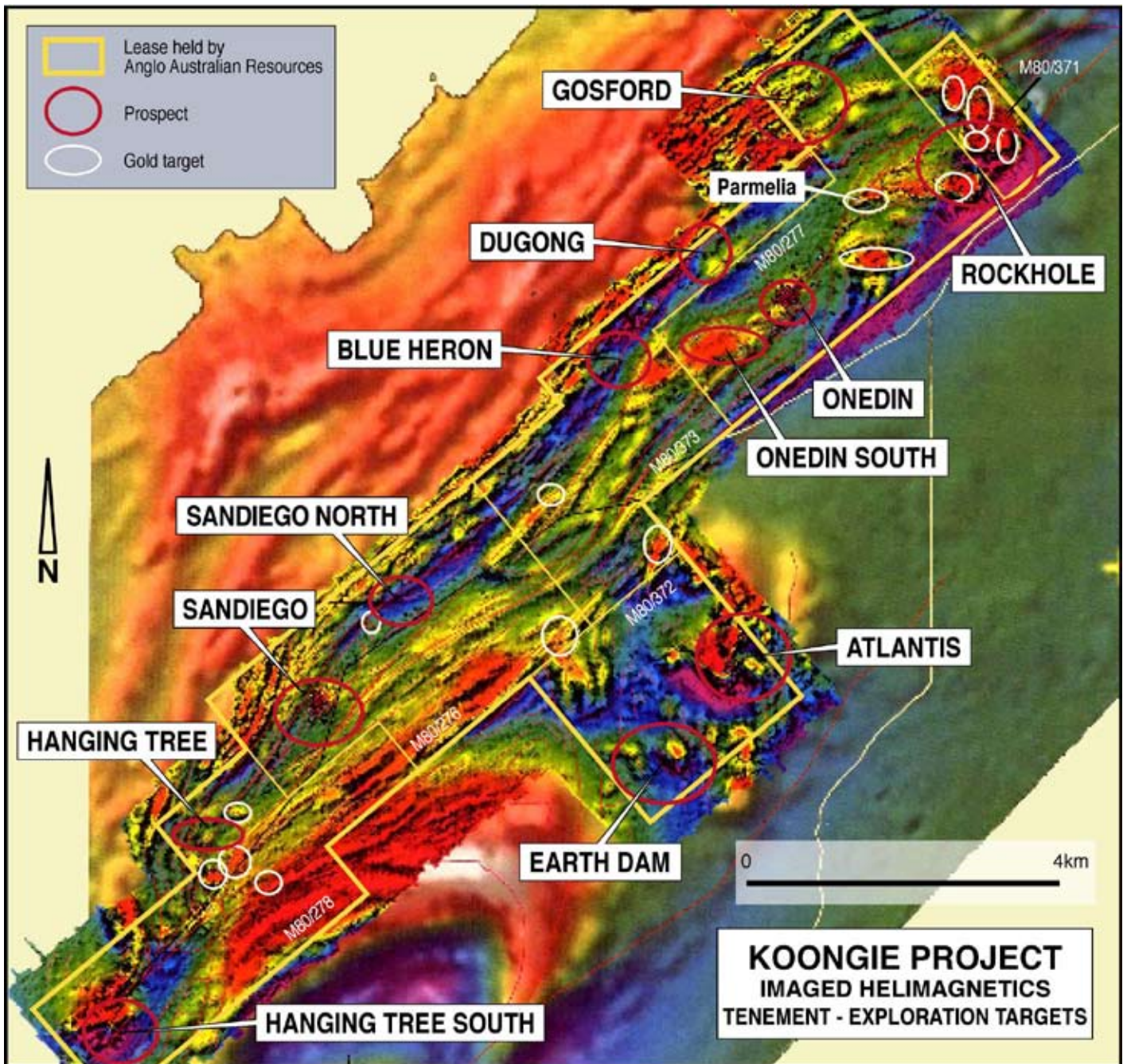


Figure 16: RC Drilling Sandiego

Anglo Australian Resources tenements cover over 40kms of the base metal prospective Koongie Park Formation.

Exploration targets correspond to a specific mappable horizon within the Koongie Park Formation. Previously collected geochemistry, EM and magnetic data will be used to target our activity. In particular the relationship between magnetite alteration and the associated magnetic anomaly will be used as a targeting tool. Deep weathering and associated depletion, structural complexity and some areas of cover has provided challenges to exploration.





Figure 17: Black Rock Gossan

### Exploration targets in 2011:

- Extensions of the newly discovered Eastern Sandiego Copper Lode
- Oxide copper, gold and silver mineralisation at Sandiego
- A combined magnetic / EM anomaly at the Highway Prospect
- A ground EM anomaly and off hole conductor at Onedin South
- An extensive magnetic anomaly under cover south west of Onedin corresponding to the interpreted host horizon.
- The Black Rock Gossan
- Copper anomalous gossans at Hanging Tree and Hanging Tree South

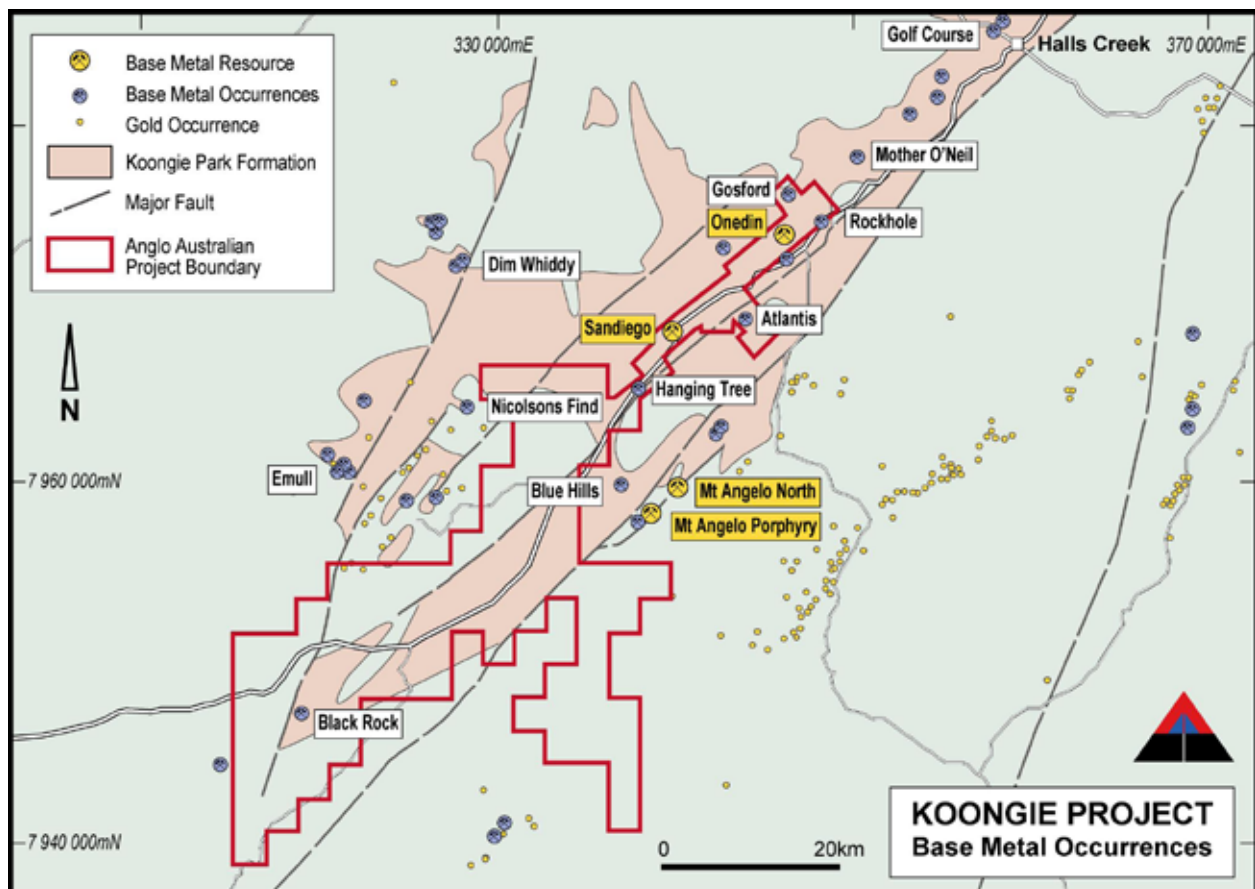
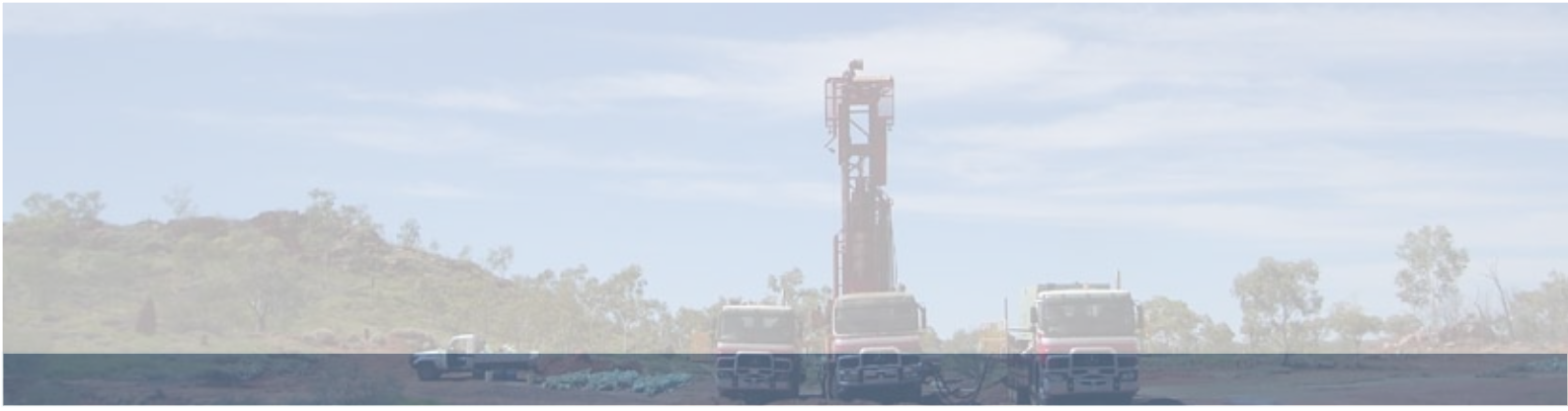


Figure 18: Koongie Tenure





## Potential Time Line

Time lines to development of the Koongie Copper Zinc Project are dependant on ongoing positive results from Scoping and Feasibility Studies, board approval, access to adequate financing, DMP approval and a favourable commodity prices. Potential time line scenario:

**December 2010:** Completion of Scoping Study and Sandiego Pit Optimisation

**February 2011:** Financing of Feasibility Study

**March 2011:** Commencement of Feasibility Study. This will include completion of Flora and Fauna Survey, water study, detailed examination of processing options, and commencement of documentation required for mining approval etc.

**April 2011:** Commencement of Open Pit Resource RC and diamond drilling program. This will include large diameter Core drilling to obtain bulk samples for metallurgical testwork.

**May 2011:** Commencement of Exploration drilling program on targets outside of Sandiego.

**August 2011:** Submission of a mining proposal to the DMP.

**Mid to Late 2012:** Commencement of Plant construction and pre-strip of Sandiego Open Pit



Figure 20: Director Angus Pilmer at Sandiego



Figure 21: Sandiego High Grade Chalcopyrite Mineralisation



Figure 19: Diamond Drilling Sandiego



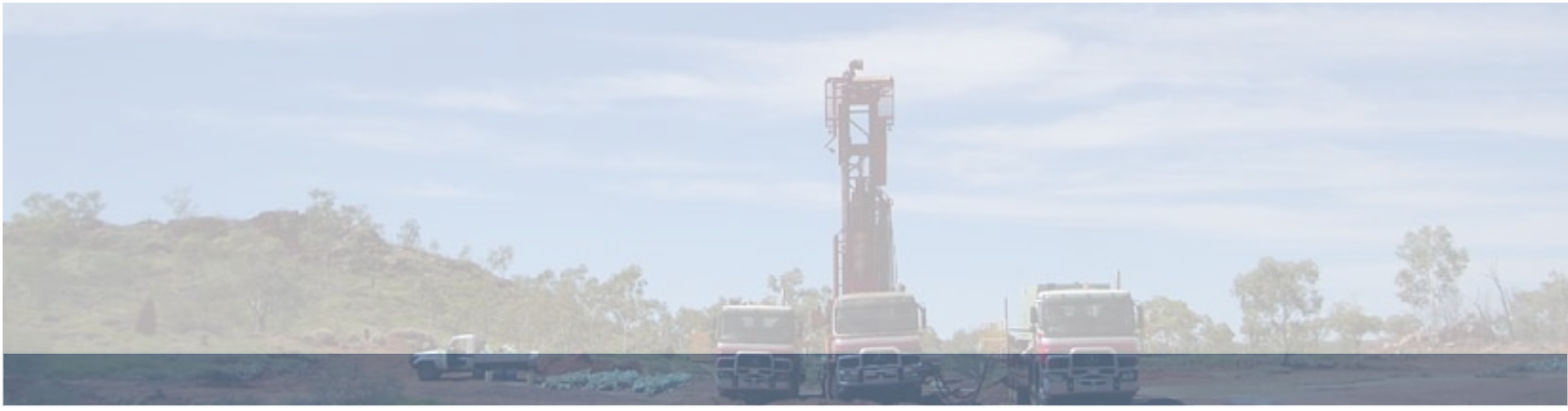


Figure 22: RC Drilling Sandiego



Figure 23: High grade Chalcocite and chalcopyrite mineralisation in RC Chips

#### Attribution

Information in this Report relating to geological data has been compiled by the Anglo Australian Resources NL General Manager Exploration, Peter Komyschan, who:

- is a full-time employee of Anglo Australian Resources NL;
- has relevant experience in relation to the mineralisation being reported on as to qualify as a Competent Person as defined by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2004 Edition);
- is a Member of the Australasian Institute of Mining and Metallurgy and is a Member of the Australian Institute of Geoscientists and has had more than twenty years experience in the field of activity reported herein;
- has consented in writing to the inclusion of this data.

The information in this Report that relates to Mineral Resources at Koongie was compiled and completed by David Slater, MAusIMM, a full time employee of Coffey mining Pty Ltd, who is a Competent Person as defined by the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (JORC Code 2004 Edition) and who consents to the inclusion in this report of the matters based on the information in the form and context in which it appears. The information in this report that relates to in-situ Mineral Resources is based on information provided by Peter Komyschan of Anglo Australian Resources NL.

