

## About Iron Road

Iron Road Limited was established to capitalise on the growing global demand for iron ore. Iron Road has a strong project portfolio including a development stage project with excellent infrastructure, complemented by early stage projects.

Iron Road's principal project is the Central Eyre Iron Project (CEIP) in South Australia. A prefeasibility study demonstrates the viability of a mining and beneficiation operation initially producing 12.4Mtpa of iron concentrate for export. Test work indicates that a coarse-grained, high grade, blast furnace quality concentrate may be produced at a grind size of  $-106\mu\text{m}$  grading 67% iron with low impurities.

The Company has a multi-disciplinary Board and management team that are experienced in the areas of exploration, project development, mining, steel making and finance.

ASX Code – IRD

PO Box 2806  
West Perth 6872  
Western Australia

PO Box 485  
Wudinna 5652  
South Australia

Tel: (08) 9200 6020  
Fax: (08) 9200 6021  
Email: [admin@ironroadlimited.com.au](mailto:admin@ironroadlimited.com.au)  
Web: [www.ironroadlimited.com.au](http://www.ironroadlimited.com.au)

Iron Road continued its high level of activities aimed at advancing the flagship Central Eyre Iron Project and delivered a prefeasibility study indicating the viability for a significant magnetite concentrate export operation.

## Highlights

### Central Eyre Iron Project

- Delivery of a prefeasibility study indicating a robust and attractive project, with competitive operating and capital costs – 12.4 million tonne per annum high grade iron concentrate of 67% iron at  $-106\mu\text{m}$  (micron) grind.
- Upgrade of mineral resource estimate for Murphy South, in accordance with JORC guidelines, to 1.01Bt and project global mineral resource estimate of 1.33Bt1.
- Stage VI drilling programme at Murphy South approximately 65% complete with an exploration target of 500-800Mt magnetite gneiss1.
- Stage IV drilling programme results announced with magnetite gneiss intersected at all targets drilled – Bens Hill, Murphy South (Discovery Traverse), Joshua, Fairview East and Hambidge North.

### Gawler Iron Project

- An EWA for the Stage II diamond drilling programme has been lodged with PIRSA for approval. Drilling is expected to commence during Q3 2011.

### Corporate

- A\$21.6M raised through issue of 24.0 million shares at an issue price of \$0.90, subject to shareholder approval (granted 25 July 2011).



Figure 1 Murphy South produces a concentrate of 67% iron at  $-106\mu\text{m}$  grind.

<sup>1</sup> Refer to Competent Person's Statement

## Projects

### South Australia – Central Eyre Iron Project

The Central Eyre Iron Project (663km<sup>2</sup>) is located on the Eyre Peninsula of South Australia and consists of three distinct prospects – Warrambo, Kopi and Hambidge. The project is located in a grain farming area with good infrastructure. Current work is focussed on the Murphy South orebody.

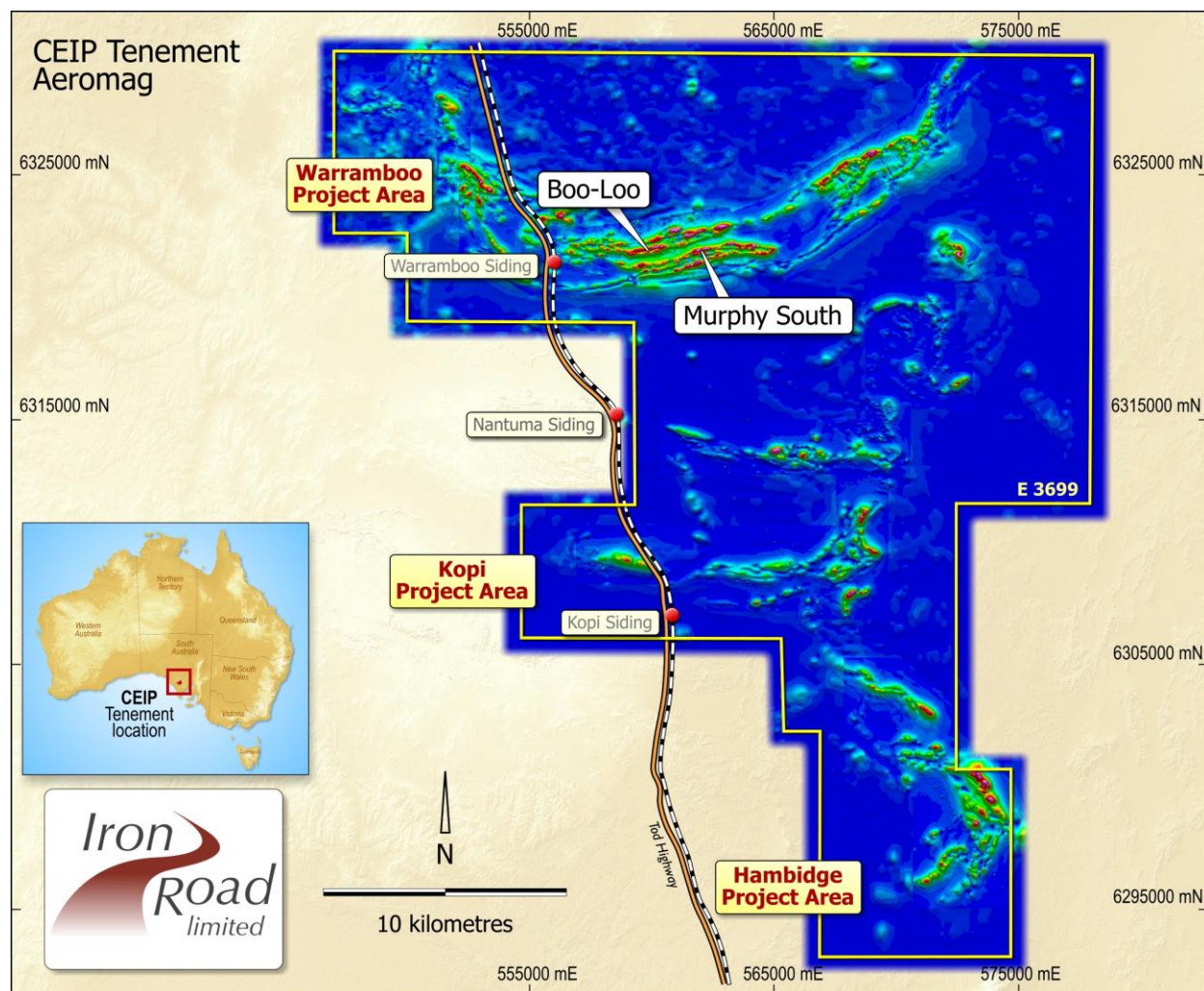


Figure 2

CEIP – Murphy South and Boo-Loo indicated.

### Prefeasibility Study

The prefeasibility study (PFS) findings announced on 14 June 2011 are based on a formally structured programme conducted over 15 months and incorporates results from over 47,000m of diamond drilling, 3,000 Davis Tube Recovery (DTR) tests and 8,000 XRF (X-Ray Fluorescence) analyses at the Project.

The PFS indicates that the Central Eyre Iron Project is a robust project with competitive capital and operating costs. The resulting high quality product will be desirable for almost all blast furnace steel mill customers, with an expected pricing premium as a result. Due to the coarseness of the concentrate, pelletising will be unnecessary, avoiding a possible shortage of pelletising capacity as several finer-grained magnetite projects commence production.

Key prefeasibility study outcomes are summarised below.

Item	Units	Value
Capital Cost – <i>Directs</i>	A\$ million	1,744
Capital Cost – <i>Indirects</i>	A\$ million	508
Capital Contingency	A\$ million	338
Cash Operating Cost	FOB A\$ per tonne of product	59.01
Base Case NPV	A\$ million	1,091
Strip ratio	Waste:ore	0.8 : 1.0
Process rate	Mtpa	67.6
Concentrate production	Mtpa	12.4
Concentrate grade	% iron	67
FX rate	US\$/A\$	0.80
Average iron price	US¢/dmu	150.67
Average product price	US\$/t	100.78

The main points of note are-

- Commercial viability of 12.4 million tonne per annum iron concentrate operation confirmed with production of a high grade concentrate of 67% iron (Stage 1 'base case').
- Concentrate with grind size of -106µm (80% passing or p80).
- Transport route to port via slurry pipeline with return water line.
- Expected capital costs of A\$2.59 billion (including contingency of A\$338M) and operating costs of A\$59 per tonne (FOB) of high quality iron concentrate.
- Stage 1 'base case' net present value of \$1.09 billion at 8% discount rate (based on Pilbara fines dmtu price).
- Indicative production specifications are for a 67% Fe coarse grained sinter feedstock, which is expected to fetch a premium above Pilbara fines prices.
- Sensitivity analysis of premium pricing to Pilbara fines indicates that project returns increase dramatically when pricing is linked to the expected value in use for the CEIP product.
- Excellent mineralogical characteristics of the ore have been confirmed. A simple process design delivers high quality sinter feed at a competitive cost.
- Coarse grinding with efficient high pressure grinding rolls reduces power and capital costs with higher iron recoveries.
- Metallurgical testing and marketing studies indicate that CEIP's -106 µm (p80) product will be highly attractive to standard blast furnace sinter plant operators, making the product attractive to a large number of customers.
  - The concentrate will be marketed as high quality sinter feed stock, avoiding a potential shortage of pelletising capacity.
  - Final product is expected to be suitable for blending with lower grade 'earthy' Pilbara style fines.
- The attractive physical and chemical characteristics of the ore body, including coarse grain size and simple liberation, result in efficient processing at lower head grades.
- Scoping level estimates in the CEIP PFS have assessed a -125 µm (p80) concentrate option with rail to port in lieu of a slurry pipeline. Initial results are encouraging and are being further developed for both the -106 µm and -125µm grind options.
- The prefeasibility study 'base case' incorporates the current Murphy South Mineral Resource estimate, which is a third, or two kilometres of the potential six kilometres, of strike.

- Current exploration drilling is increasing knowledge of the Murphy South and nearby deposits and is on track to substantially increase the Mineral Resource at Murphy South. The exploration target for the tenement is 2.8 to 5.8 billion tonnes of magnetite gneiss<sup>1</sup>.

The Key Findings table below illustrates the significant impact that additional resources, potential CEIP concentrate price premium and generally higher prices for iron ore will have on project value.

Item	Units	Base Case <sup>1</sup>	Spot FOB Price <sup>2</sup> over current resource	30 year project life <sup>3</sup> , long term pricing	30 year project life <sup>3</sup> , Spot FOB pricing <sup>2</sup>
Capital Cost - Direct	A\$ million	1,744	1,744	1,744	1,744
Capital Cost - Indirect	A\$ million	508	508	508	508
Capital Contingency	A\$ million	338	338	338	338
Operating Cost	FOB A\$/t of product	59	59	59	59
NPV	A\$ million	1,091	2,046	2,478	3,797

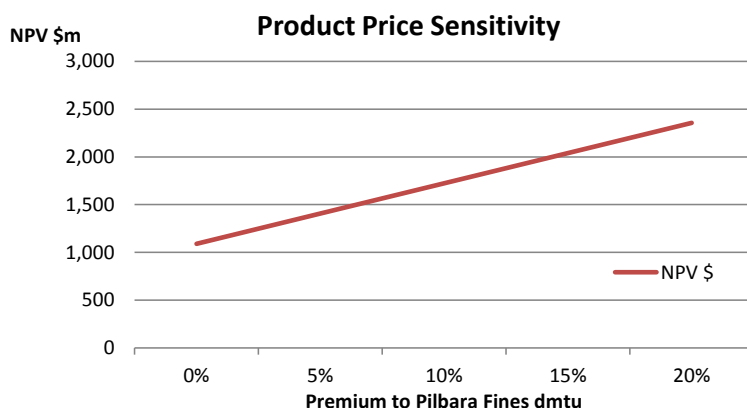
1. Base Case incorporates current Murphy South Mineral Resource and long term pricing forecast by Ferrum Consultants. Long term pricing average US\$/t 100.78 (FOB), US\$/A\$ exchange rate of 0.80.

2. Spot pricing US\$/t 154.00 (FOB), US\$/A\$ exchange rate of 1.07.

3. Refer Exploration Target notes on page 17.

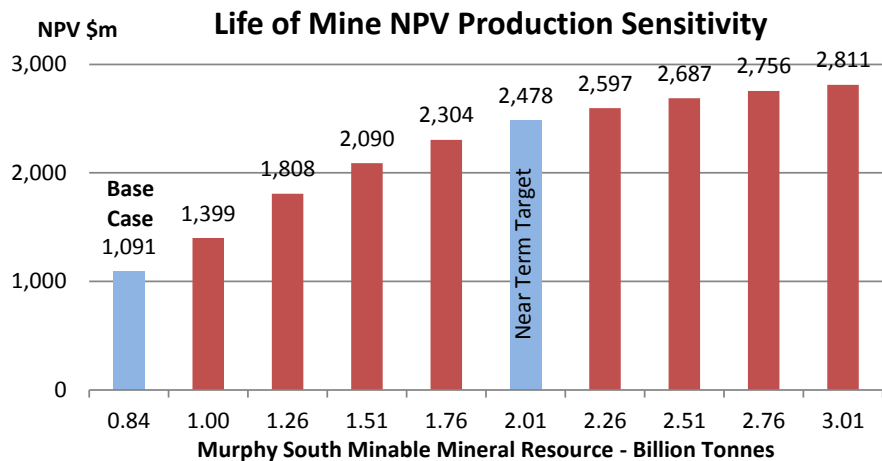
The PFS ('base case') incorporates the Murphy South Mineral Resource current at the time and long term pricing forecasts. The Murphy South extension drilling programme completed earlier this year has since added 99Mt to the Mineral Resource. The current drill programme at Murphy South (west) is expected to add 500-800Mt<sup>1</sup> late this year and a further drill programme for Murphy South (east) that has been approved by Primary Industry & Resources SA (PIRSA) is expected to add a significant additional tonnage.

Indicative production specifications are for a coarse grained sinter feedstock grading 67% iron, expected to fetch a premium above Pilbara fines prices. The sensitivity analysis of pricing fines indicates that project returns increase dramatically when pricing is linked to the expected value in use for the CEIP product.



<sup>1</sup> Refer Exploration Target notes on page 17

The ongoing development drilling programme is expected to increase Iron Road’s knowledge and the size of the Murphy South Deposit, as only two kilometres of the total six kilometres strike length is represented in the current resource estimate. **Project value will increase significantly as a result of an increase in Murphy South resources, as is shown below.**



The mining method incorporated in the PFS is a large scale conventional drill, blast, shovel, and truck mining operation. Preliminary pit shells, mine designs and tailings dam have been developed and fully scheduled for the existing Murphy South Mineral Resources.

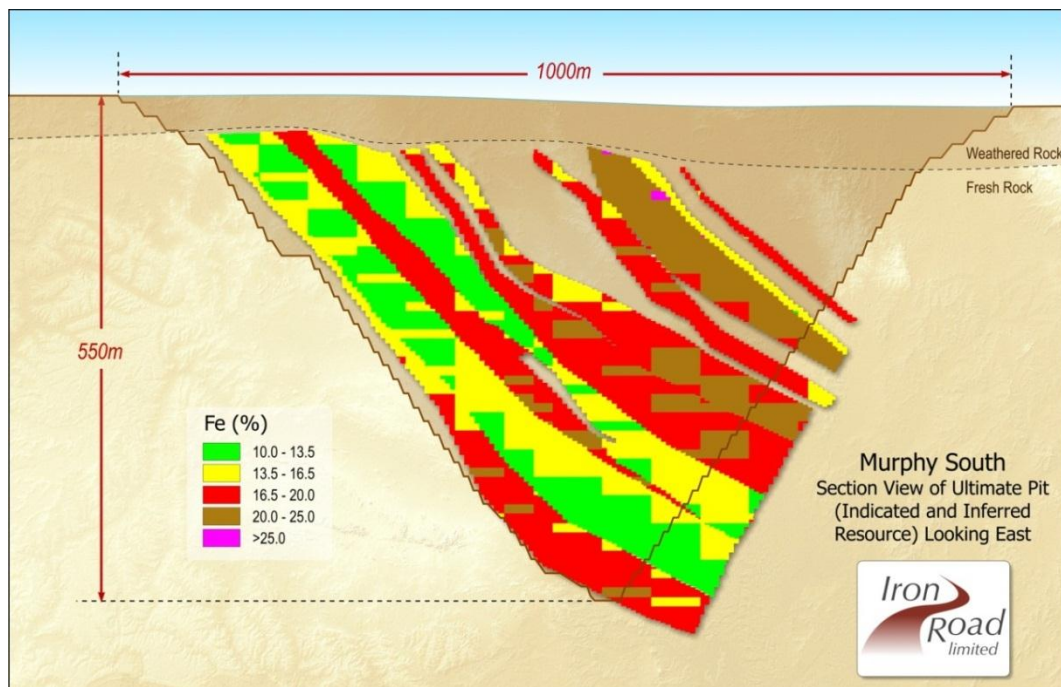


Figure 3 Cross section of Murphy South pit – bench height 15m, batters at 70 degrees.

Pit optimisation results by Coffey Mining demonstrate that the curve representing operating cash flow versus potential pit shell sizes is flat. This indicates that the pit is very robust and that the shell selected for the detailed pit design work is not critical.

Key contributors to the PFS include:

- Coffey Mining (Coffey)- Mineral Resource, geotechnical and mine modelling/scheduling;
- Mineral Engineering Technical Services Pty Ltd (METS)- process design;
- AMMTEC Limited, directed by METS – metallurgical test work;
- Sinclair Knight Mertz (SKM) – reviewed port options and ground water;
- Ferrum Consultants – considered the iron market specifically for the coarse CEIP product; and
- Evans & Peck Ltd (E&P) – provided oversight and independent review throughout the study.

For further details on the PFS please refer to the announcement 'Iron Road Announces PFS Results' dated 14 June 2011.

### **Mineral Resource Estimate Upgrade**

Following completion of the Stage V Extension drilling programme, the standalone mineral resource at Murphy South was upgraded by 99Mt to 1.01Bt. The global mineral resource at the Central Eyre Iron Project (CEIP) at Boo-Loo and Murphy South increased to 1.33Bt.

<b>CEIP Global Mineral Resource</b>							
<b>Location</b>	<b>Classification</b>	<b>Tonnes (Mt)</b>	<b>Fe (%)</b>	<b>SiO<sub>2</sub> (%)</b>	<b>Al<sub>2</sub>O<sub>3</sub> (%)</b>	<b>P (%)</b>	<b>LOI (%)</b>
Murphy South	Indicated	585	16.7	52.9	12.6	0.09	0.3
	Inferred	421	16.6	52.6	12.7	0.08	1.2
Boo-Loo	Inferred	328	17.3	52.4	11.5	0.09	2.1
<b>Total</b>		<b>1,334</b>	<b>16.8</b>	<b>52.7</b>	<b>12.3</b>	<b>0.09</b>	<b>1.0</b>

*The mineral resource estimates were carried out following the guidelines of the JORC Code (2004) by Coffey Mining Ltd.*

The Mineral Resource estimate was calculated by Coffey Mining and is summarised in the table below. Full details can be found in Attachment 1.

<b>Murphy South Mineral Resource Estimate</b>								
<b>Resource Classification</b>	<b>Oxidation</b>	<b>Material Type</b>	<b>Tonnes (Mt)</b>	<b>Fe (%)</b>	<b>SiO<sub>2</sub> (%)</b>	<b>Al<sub>2</sub>O<sub>3</sub> (%)</b>	<b>P (%)</b>	<b>LOI (%)</b>
Inferred	Fresh	Disseminated	272	17.7	52.5	12.0	0.09	0.3
		Banded	79	13.3	54.7	14.1	0.07	0.5
	Transitional Oxide	Disseminated	27	16.3	50.6	14.0	0.06	5.7
		and banded	43	16.4	50.3	14.0	0.06	5.9
<i>Total Inferred</i>			421	16.6	52.6	12.7	0.08	1.2

Indicated	Fresh	Disseminated	325	19.2	51.6	11.4	0.10	0.2
		Banded	259	13.6	54.4	14.0	0.08	0.5
<i>Total Indicated</i>			585	16.7	52.9	12.6	0.09	0.3

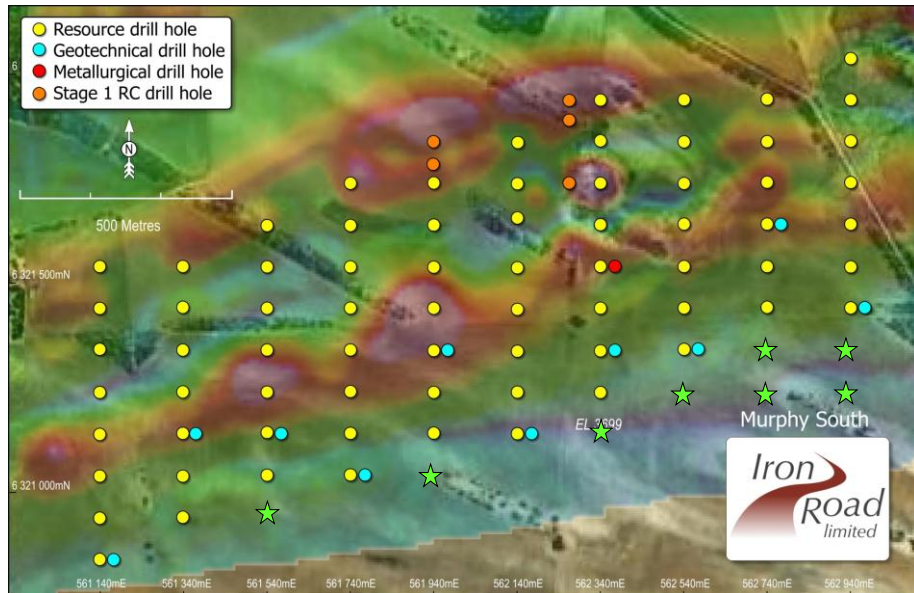
<b>Total Murphy South</b>			<b>1,006</b>	<b>16.7</b>	<b>52.8</b>	<b>12.6</b>	<b>0.09</b>	<b>0.7</b>
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*The Murphy South mineral resource estimate was carried out following the guidelines of the JORC Code (2004) by Coffey Mining Ltd.*

With the establishment of over one billion tonnes in Mineral Resources at Murphy South alone, Iron Road continues to demonstrate the necessary size and scale of resource to underpin the capital required for a potential long life initial 12.4Mtpa high grade iron concentrate export operation and the development of associated export infrastructure.

### Stage V Resource Extension Drilling

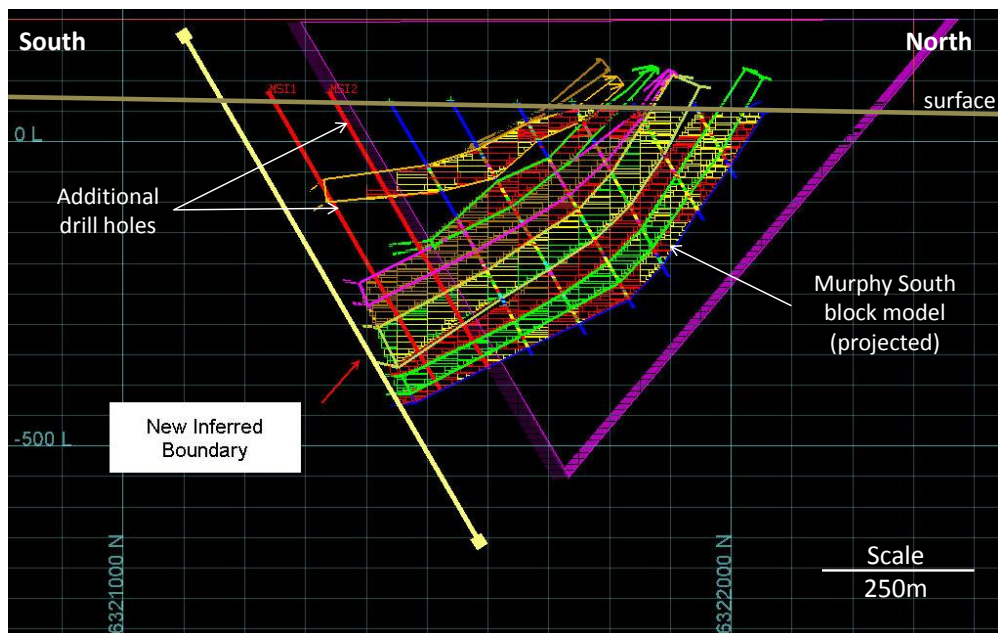
A resource extension programme of eight drill holes for 4,779m was completed during mid-April 2011.



**Figure 4 Plan of Murphy South – Stage V resource extension drill holes in green.**

The purpose of this drilling was to intersect the down dip extension of the magnetite gneiss along six traverses at Murphy South. The drilling added 99Mt to the existing mineral resource estimate of 907Mt at Murphy South, bringing the total to 1.01Bt.

The cross-section in Figure 5 below indicates the down-dip continuation of magnetite gneiss and expansion of the resource block model by an additional 200m. Details of the mineral resource expansion are tabulated in the section above and in the attachment at the end of the report.



**Figure 5 Cross-section 562740mE at Murphy South showing the position of the two additional drill holes extending resource block model down dip.**

### Stage VI Resource Expansion Drilling

The Stage VI drilling programme at Murphy South, comprising 64 diamond holes totalling in excess of 25,000m, commenced during April 2011. The programme is currently over 65% complete.

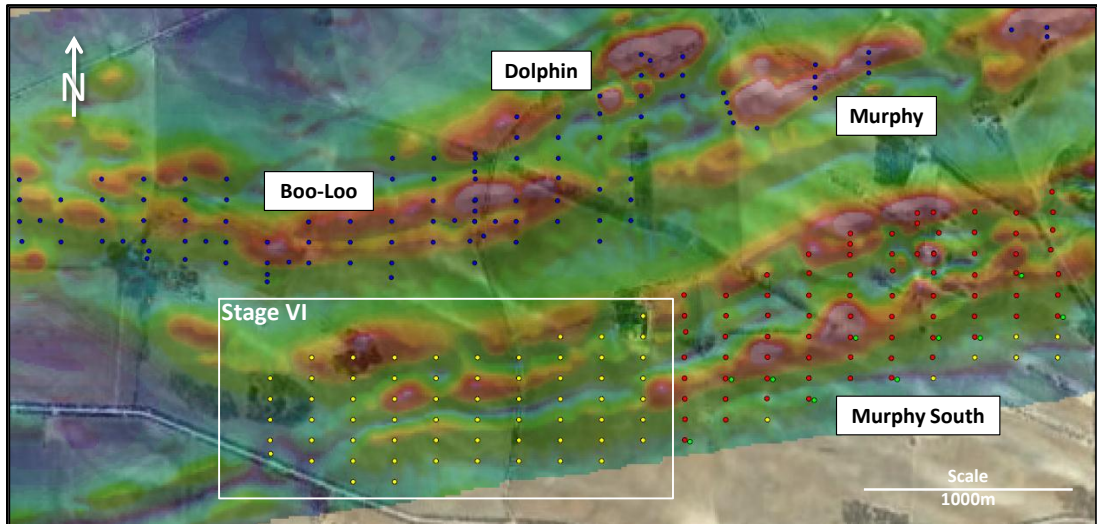


Figure 6

Stage VI drilling programme at Murphy South.

Individual diamond holes ranging from 100m to 700m downhole depth were designed based on the geophysical interpretation of the magnetic anomaly over the area. Stage VI drilling follows the same 200m x 100m grid pattern used at Murphy South during Stage V drilling. The programme aims to explore the economic potential of the western extension of the Murphy South orebody over an area approximately 800m wide x 2000m long.

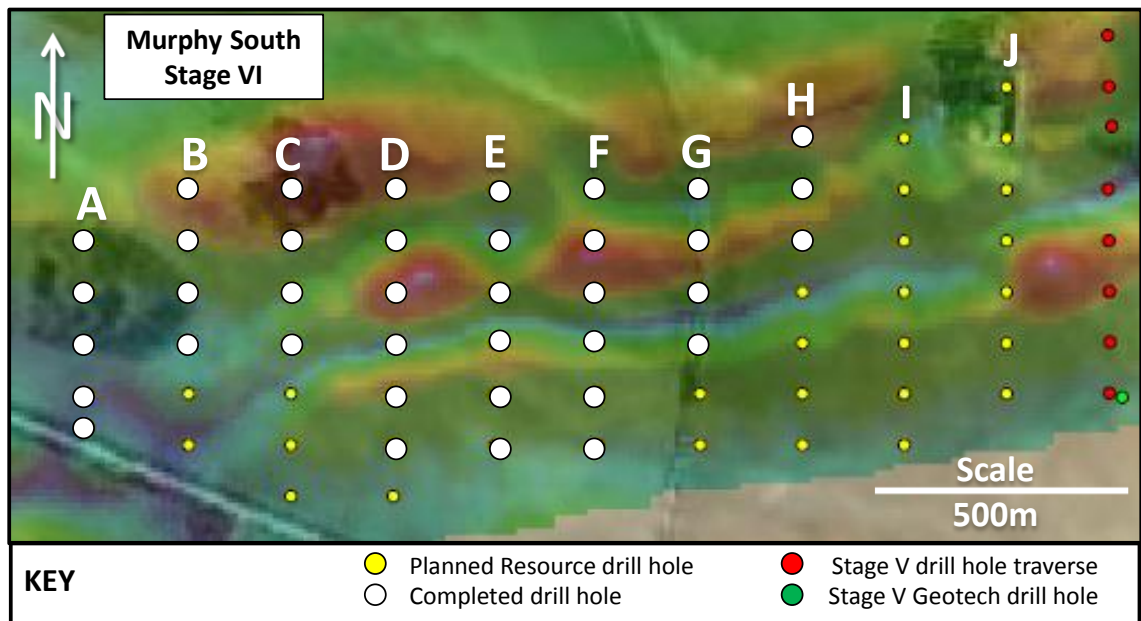
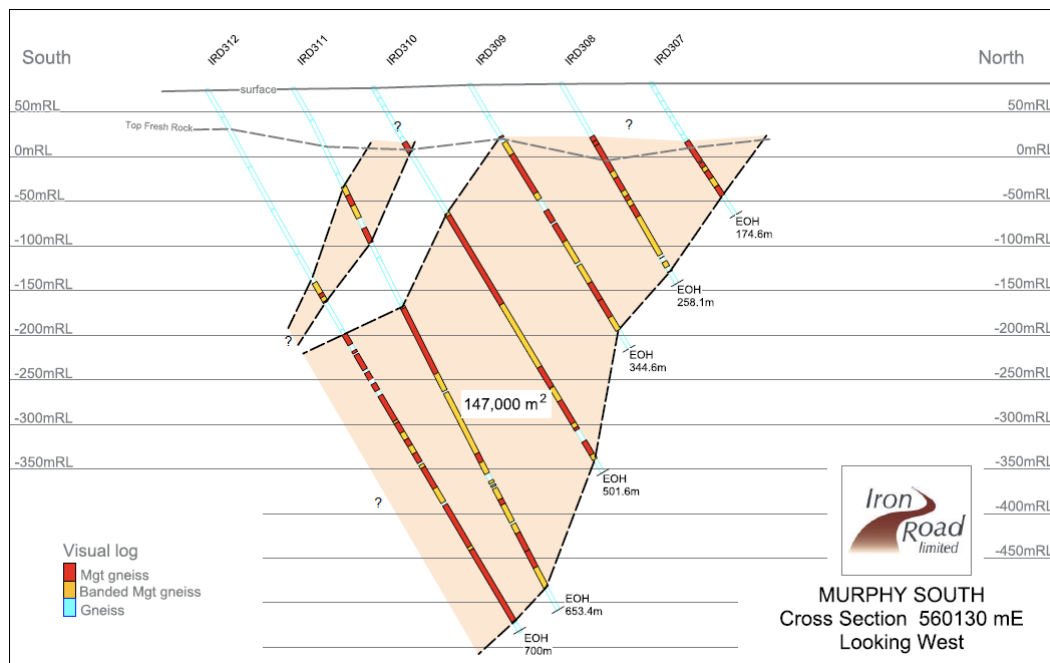


Figure 7

Plan view of Central Eye Iron Project (CEIP) Murphy South Stage VI Resource drilling programme. Drill holes completed from current programme shown in white.



Stage V drilling initially commenced 1,000m west of the next nearest drilled traverse at Murphy South and results received confirm the continuity of magnetite gneiss in this strike direction (Figure 8).

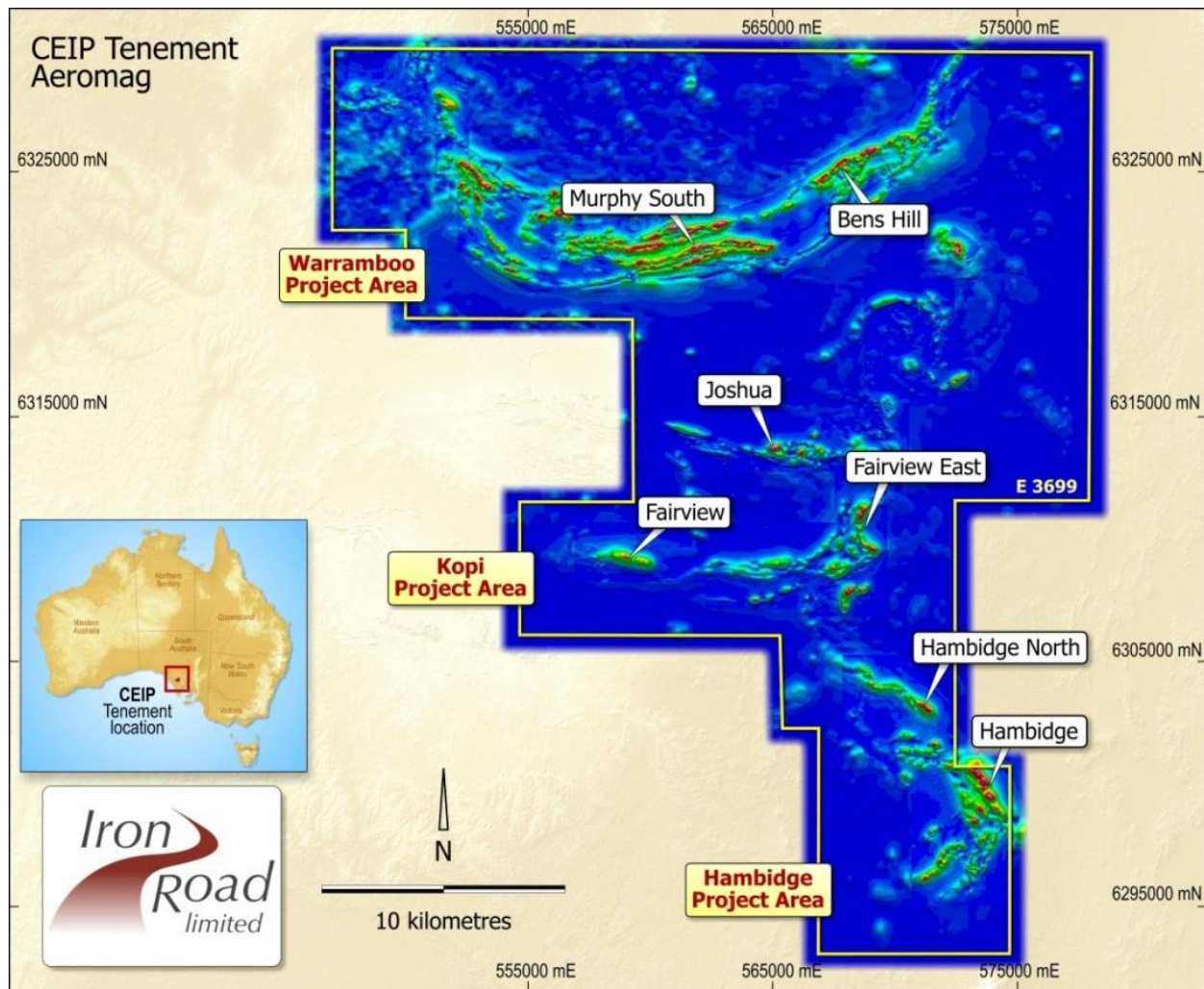


**Figure 8** Cross-section showing field logging of section 560130mE (F).

The exploration drilling target for Murphy South Stage VI, across ten traverses designed with the aid of aeromagnetic inversion modelling, is 500-800Mt magnetite gneiss<sup>1</sup>. Iron head grades are expected to be similar to those previously reported for Murphy South.

### Stage IV Drilling Results

The second of several drilling programmes planned by Iron Road at the Central Eyre Iron Project for 2010 commenced during June 2010. The programme tested five of seven high potential targets for 8,298m, of which 6,308m was diamond core. Targets were selected from analysis of geophysical as well as historical data (Figure 9).



**Figure 9 – Central Eyre Iron Project (CEIP) showing aeromagnetic anomalies and the locality of Stage IV targets.**

The drilling programme was designed to be both scalable and flexible since its purpose was to ultimately identify potential areas for resource expansion away from the Boo-Loo mineral resource. In line with this philosophy an initial traverse of three holes at Murphy South was extended by an additional five for a total of eight holes. Significant thicknesses of magnetite gneiss were intersected in the initial three holes, suggesting structural thickening and extension of magnetite gneiss to the south. Magnetite gneiss of similar thickness was subsequently intersected in the additional holes and this in turn led to the design of the Stage V drilling programme to further investigate this area as a high priority. The Stage V drilling programme culminated in the announcement in February 2011 of a JORC mineral resource estimate report of 907Mt at Murphy South (combined project mineral resource for CEIP 1.2Bt).

The initial success at Murphy South and subsequent commencement of the Stage V drilling programme to further investigate this area diverted resources away from the other targets; notably the large and intense aeromagnetic anomaly at Hambidge. In addition some core from the Stage IV drilling programme was stockpiled and processed after completion of the Stage V resource and geotechnical drilling programme.



Various targets were drilled as follows:

**Bens Hill** – Nine holes were drilled at Ben’s Hill across three traverses for a total of 2,373m. The magnetic anomaly targeted is over 4,000m in length (Figure 11).

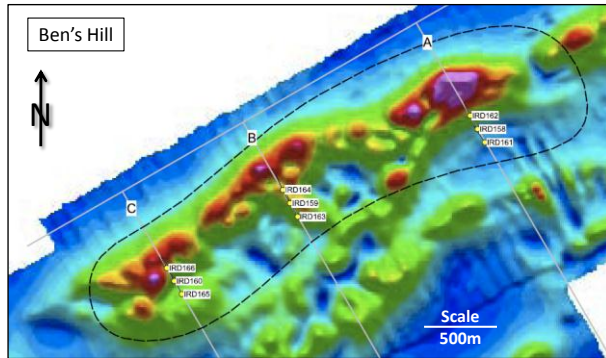


Figure 10 – Plan view of the three drill traverses targeting the Ben’s Hill magnetic anomaly.

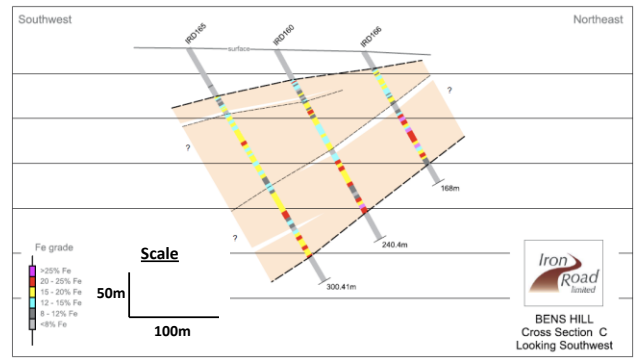


Figure 11 – Cross-section of Traverse C at Ben’s Hill.

All drill holes intersected magnetite gneiss. A cross section from drill traverse marked C in Figure 11 is presented above.

**Murphy South** – Three drill holes were originally planned for Murphy South. The traverse was subsequently expanded to eight drill holes for a total of 2,841m (Figures 9, 12). These drill holes, combined with Stage I drilling and geophysical inversion modelling, suggested that a large body of magnetite gneiss occurs in the area, possibly as an overturned isoclinal fold, with a south southeast dipping axial plane. This has the effect of thickening the magnetite gneiss through duplication; highly desirable from a mining perspective.

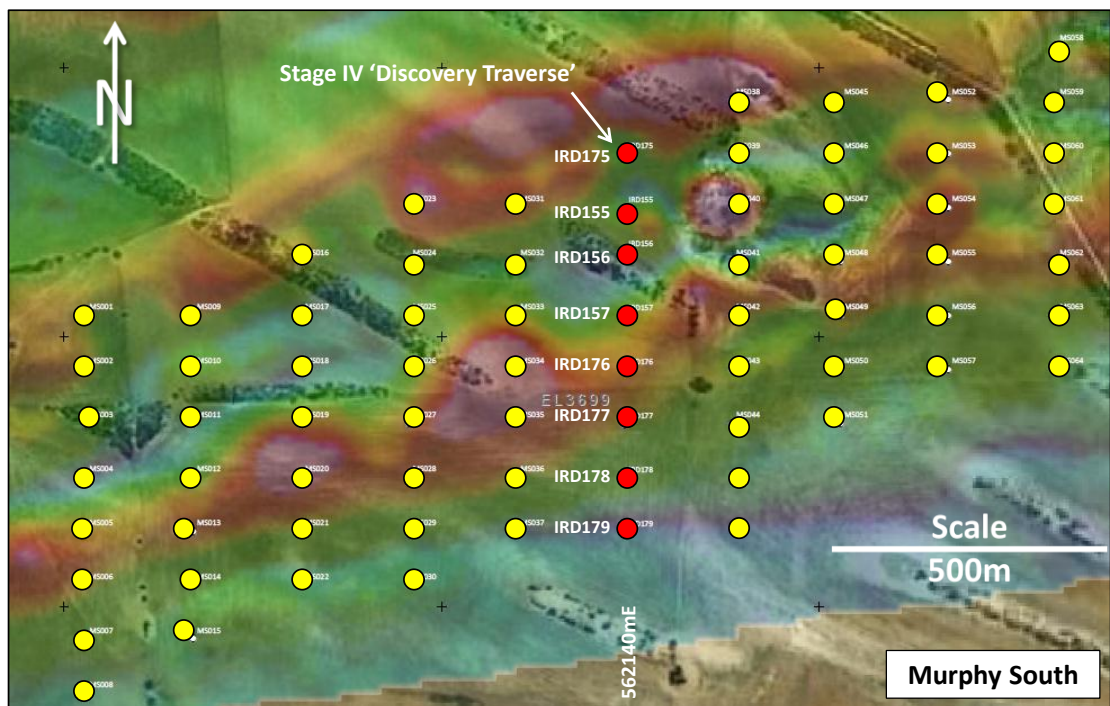


Figure 12 An initial traverse of three drill holes at Murphy South (IRD155, 156 & 157) was extended by an additional five drill holes (shown in red). The subsequent Stage V programme is denoted by drill hole collars shown in yellow.



The traverse, referred to as the 'discovery traverse', intersected a large body of magnetite mineralisation, with a sectional area of approximately 179,000m<sup>2</sup> (Figure 13).

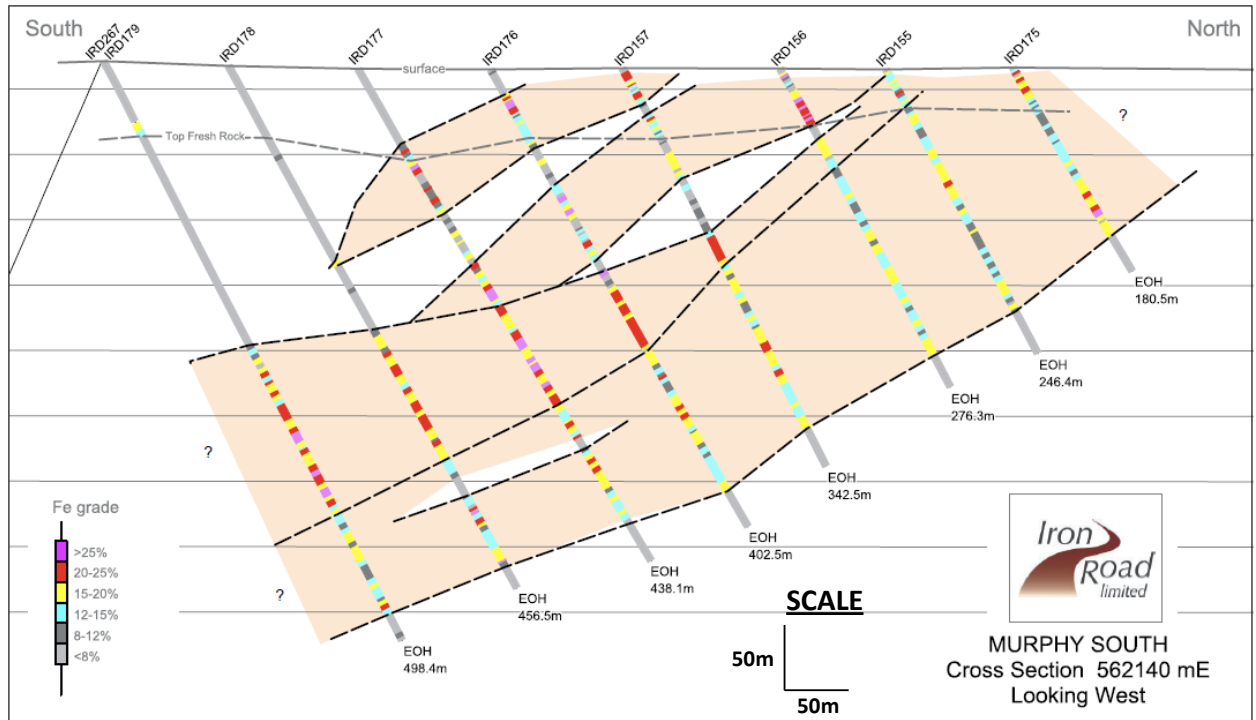


Figure 13

Stage IV 'discovery traverse' in cross-section.

Based on the success of the 'discovery traverse' the Stage V drilling programme commenced during August and concluded mid-December 2010. The programme comprised 22,645m, most of which was NQ2 diamond core. During mid-January 2011 a 2,600m geotechnical drilling programme commenced and during February 2011 a JORC mineral resource estimate report of 907Mt was announced.

**Joshua** – A single traverse of three holes for 801m was drilled at Joshua, targeting the strongest of a series of discrete magnetic anomalies (Figure 9). The drilling was successful in intersecting high grade magnetite gneiss.

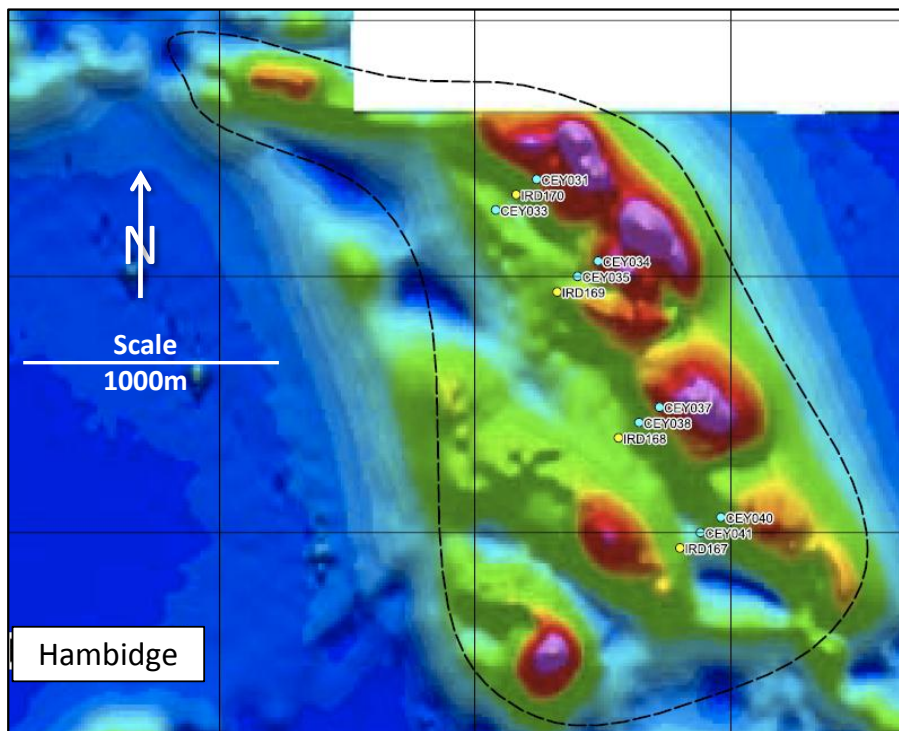
**Fairview East** – Six holes were drilled at Fairview East across two traverses for a total of 1,226m (Figure 9). The magnetic anomaly targeted is over 3,000m in length.

**Fairview** – Although originally the intention to target the 2,000m long magnetic anomaly at Fairview (Figure 9), a change in priorities meant that this drilling was postponed indefinitely.

**Hambidge North** – Three holes were drilled at Hambidge North across one traverse for a total of 883m (Figures 9). The magnetic anomaly targeted is over 1,500m in length and returned high grade results.

**Hambidge** – The magnetic anomaly targeted at Hambidge is over 3,000m in length and over 1,000m wide across its southern extent. Four pre-collars were drilled, one at each traverse, for a total of 174m (Figures 9, 14). Drilling was halted prematurely at Hambidge since the Stage V drilling programme at Murphy South was higher priority.

Hambidge is a large anomaly with the potential to rival Murphy South in size and tonnage. A time extension has been granted by PIRSA to complete the drilling programme later than originally submitted. A suitable drill rig has been sourced and drilling recommenced in the last week of July 2011.



**Figure 14** Plan view of the four drill traverses targeting the Hambidge magnetic anomaly.

For further details on the Stage IV drilling programme please refer to the announcement 'CEIP Stage IV Drilling Programme Results' dated 31 May 2011.

### **South Australia – Gawler Iron Project**

The Gawler Iron Project is located 25 kilometres north of the Trans Australian Railway and within 100 kilometres of the Central Australia Railway in South Australia. Iron Road has a farm-in agreement with tenement holder Dominion Gold Operations (a subsidiary of Kingsgate Consolidated Limited) to progressively earn up to 90% interest in the iron ore rights.

Stage I drilling has identified several new iron deposits in the district. The deposits occur within magnetite gneiss of the Mulgathing Complex and are capped by oxidised material containing a mixture of hematite and magnetite. The results of initial metallurgical studies suggest excellent beneficiation characteristics of the magnetite. Average iron content of magnetite concentrates is in the range 69-70% with minimal impurities and most concentrates meet DR (direct reduction) grade specifications and all meet or exceed high grade blast furnace requirements.

### **Ongoing Exploration and Test Work**

An EWA proposal for a 24 hole Stage II diamond drilling programme has been lodged with PIRSA for approval.

The Stage II drilling, planned to start in Q3 2011, will provide important new information on the structural geology and metallurgy of the known target areas and will also test a limited number of new targets that were identified during the Stage I drilling programme.

An oxide (hematite) and magnetite test work programme from the Stage II drilling will assess the metallurgy and mineralogy of each ore type. These studies will focus on cost-effective beneficiation methods such as dry magnetic separation that may allow for relatively simple upgrading of ore, possibly producing a product suitable for sinter feed.

### **Western Australia – Windarling**

The Windarling Peak project is located approximately 85km north of Koolyanobbing, Western Australia. The tenure consists of three granted exploration licenses and four prospecting licences. The Company entered into an agreement with Convergent Minerals Limited (Convergent) during September 2010 whereby Convergent may earn up to a 75% interest in the project by meeting certain expenditure and management criteria.

Field work commenced last year at Windarling Peak with some initial broad spaced ground magnetics conducted by Convergent, this was followed up with closer spaced ground magnetics in areas of interest and a program of rock chip sampling of outcropping rock units.

The magnetic survey defined a magnetic body in the southern tenement (E77/1236) which correlates with an outcropping BIF unit that was sampled previously with results ranging up to 40% iron. Another discrete anomaly has been defined on the north western tenement. This rock type is the precursor to the haematite-rich banded iron formation which is mined at the nearby mine operated by Cliffs Natural Resources Inc. where the resource grade is 64% iron.

A contractor has been engaged by Convergent to complete a survey over the southern tenure where it can be clearly seen that a magnetite BIF has been encountered within and on the northern boundary of E77/1236. It is also apparent from the magnetic survey that several detached BIF segments occur south of the main unit and it is in this area where haematite could be encountered.

Convergent also advises that it will also complete a gravity survey over a minor anomaly in tenement E77/1245.



Figure 15

CEIP core examination

## **CORPORATE**

### ***Capital Raising***

The Company announced on 22 June 2011 that it had raised \$21.6 million to further advance the Central Eyre Iron Project following the positive prefeasibility study.

The issue was strongly supported by clients of Southern Cross Equities alongside both new and existing global institutional investors, including the Company's largest shareholder The Sentient Group and two US university endowment funds of Columbia University and Duke University.

The placement was approved at a General Meeting of shareholders on the 25 July 2011.

### ***Community***

The Company continued to sponsor local community events and provide donations and support to local clubs in the district.

### ***Current and Future Work***

As a result of the robust prefeasibility study outcomes, the Company has resolved to accelerate progress at the Central Eyre Iron Project, including resource growth, continuation of project evaluation and financing options.

Key components include:

- Continue with orebody investigations, resource growth at Murphy South (west and east) and establish ore reserves;
- Further drilling on other high potential areas of the tenement, commencing with Hambidge at the end of July 2011;
- Investigate areas for potential increases in project value by extending mining and process optimisations, for example:
  - In-pit crushing and conveying;
  - Coarser concentrate production, namely -125µm product;
  - Refine preferred product transport, port and desalination options; and
  - Infrastructure sharing and synergies with others;
- Progress permitting and continue with government and community engagement through established Company protocols, the Eyre Peninsula Mining Alliance (EPMA) and Community Engagement Group Australia (CEGA) and others;
- Financing and partnering opportunities assessment and selection;

Prepare for and initiate Definitive Feasibility Study (DFS). The DFS will examine the PFS Stage 1 'base case' of 12.4Mtpa concentrate production with the expected larger Murphy South Mineral Resource over its entire six kilometres strike length (ie. including west and east extensions). This addition will substantially increase project NPV. Increased production for Stage 2 will also be assessed. Preliminary analysis suggests Stage 2 should further increase production by 50 to 100 per cent.

## ADDITIONAL INFORMATION

### *Glossary*

**DTR** – Davis Tube Recovery testing is used to separate ferromagnetic and non-magnetic fractions in small samples of approximately 20g at a time. The test is suited to establishing the recoveries likely from a magnetic separation process. This can assist mineral body assessment for magnetite, hematite or combinations thereof.

**XRF** – X-Ray Fluorescence spectroscopy is used for the qualitative and quantitative elemental analysis of geological and other samples. It provides a fairly uniform detection limit across a large portion of the Periodic Table and is applicable to a wide range of concentrations, from 100% to few parts per million (ppm).

**Hematite** – Hematite is a mineral, coloured black to steel or silver-gray, brown to reddish brown or red. Hematite is a form of Iron (III) oxide ( $\text{Fe}_2\text{O}_3$ ), one of several iron oxides.

**Magnetite** – Magnetite is a form of iron ore, one of several iron oxides and a ferrimagnetic mineral with chemical formula  $\text{Fe}_3\text{O}_4$  and a member of the spinel group. It is metallic or dull black and a valuable source of iron ore. Magnetite is the most magnetic of all the naturally occurring minerals on Earth, and these magnetic properties allow it to be readily refined into an iron ore concentrate.

**Aeromag survey** – Short for aeromagnetic survey, an aeromag survey is a common type of geophysical method carried out using a magnetometer aboard or towed behind an aircraft. The aircraft typically flies in a grid like pattern with height and line spacing determining the resolution of the data. As the aircraft flies, the magnetometer records tiny variations in the intensity of the ambient magnetic field and spatial variations in the Earth's magnetic field. By subtracting the solar and regional effects, the resulting aeromagnetic map shows the spatial distribution and relative abundance of magnetic minerals (most commonly magnetite) in the upper levels of the crust.

**Gravity survey** – A geophysical method undertaken from the surface or from the air which identifies variations in the density of the earth from surface to depth. It is used to directly measure the density of the subsurface, effectively the rate of change of rock properties. From this information a picture of subsurface anomalies may be built up to more accurately target mineral deposits. For iron exploration gravity surveys are commonly overlain on magnetic surveys to help identify and target fresh and oxidised iron ore (ie. magnetite and hematite).

**Martite** – The name given for Hematite pseudomorphs after Magnetite. More simply put primary magnetite that has been totally replaced by secondary hematite through oxidation.

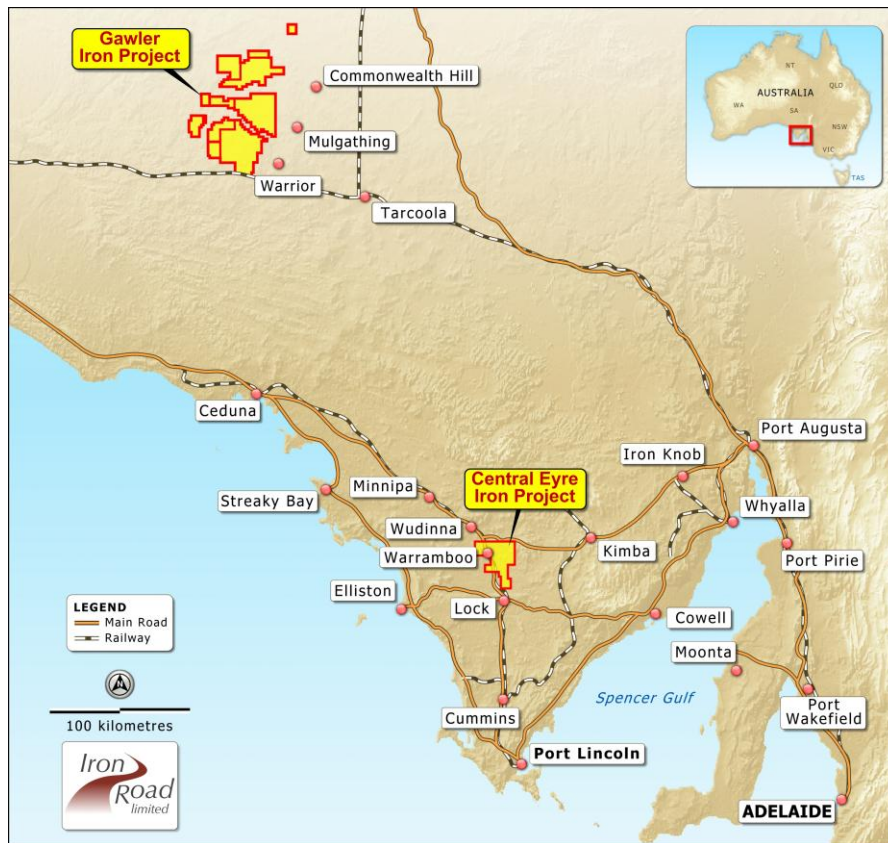
**Specularite** – A black or gray variety of hematite with brilliant metallic luster, occurring in micaceous / foliated masses or in tabular or disk-like crystals. Also known as specular iron.

**HBF** – Horizontal Belt Filters are commonly used vacuum filters due to their flexibility of operation and suitability to handle large throughputs.



**Competent Person's Statement**

The information in this report that relates to Exploration Results and the exploration target at Murphy South is based on and accurately reflects information compiled by Mr Larry Ingle, who is a fulltime employee of Iron Road Limited and a Member of the Australasian Institute of Mining and Metallurgy. Mr Ingle has sufficient experience relevant to the style of mineralisation and the type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Ingle consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.



**Figure 15** Location of the Company's South Australian projects

The information in this report that relates to Mineral Resources is based on and accurately reflects information compiled by Mr Iain Macfarlane, Coffey Mining, who is a consultant and advisor to Iron Road Limited and a Member of the Australasian Institute of Mining and Metallurgy. Mr Macfarlane has sufficient experience relevant to the style of mineralisation and the type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Macfarlane consents to the inclusion in the report of the matters based on his information in the form and context in which it appears.

The information in this report that relates to exploration targets is based on and accurately reflects information compiled by Mr Albert Thamm, Coffey Mining, who is a consultant and advisor to Iron Road Limited and a Fellow of the Australasian Institute of Mining and Metallurgy. Mr Thamm has sufficient experience relevant to the style of mineralisation and the type of deposits under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the 2004 Edition of the "Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves". Mr Thamm consents to the inclusion in the report of the matters based on his information in the form and context in which it appears on 31 August, 2009 in West Perth. The potential quantity and grade of an exploration target is conceptual in nature since there has been insufficient work completed to define the prospects as anything beyond exploration target. It is uncertain if further exploration will result in the determination of a Mineral Resource, in cases other than the Boo-Loo prospect.

Attachment



**Coffey Mining** ABN 52 065 481 209  
1162 Hay Street, West Perth WA 6005 Australia,  
PO Box 1671, West Perth WA 6872 Australia  
T (+61) (8) 9324 8800 F (+61) (8) 9324 8877  
coffey.com

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**Memorandum**

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**Date:** 30 June 2011  
**Company:** Iron Road Ltd  
**Attention:** Larry Ingle  
**Copy:** Alex Virisheff  
**From:** Iain Macfarlane  
**Subject:** Resource Estimation at Murphy South Magnetite Prospect - Update

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Dear Larry

The Mineral Resource estimate update for magnetite and goethite maghemite mineralisation at the Murphy South Magnetite Prospect is complete. The Mineral Resource Statement as at 30 June 2011 is tabulated overleaf. The update incorporates eight additional diamond holes drilled down dip of the area originally estimated, the resource statement for which was released on 8 February this year.

The information in the report which relates to the Mineral Resource is based on information compiled by Iain Macfarlane and Alex Virisheff, who are Members of The Australasian Institute of Mining and Metallurgy. Iain Macfarlane and Alex Virisheff are employed by Coffey Mining Ltd.

Iain Macfarlane and Alex Virisheff have sufficient experience relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as Competent Persons as defined in the 2004 Edition of the "Australasian Code for Reporting of Mineral Resources and Reserves".

For and on behalf of Coffey Mining Pty Ltd

Iain Macfarlane  
Associate Resource Geologist

Alex Virisheff  
Principal Resource Geologist

**Table 1**  
**Iron Road Limited**  
**Central Eyre Iron Project**  
**Murphy South Magnetite Prospect**  
**Mineral Resources**  
**Grade Tonnage – 30<sup>th</sup> June 2011**  
**Reported within Material Type Horizons**  
**Fresh (Magnetite) and Transitional (Mixed - Magnetite and Hematite) and**  
**Oxidised (Mixed - Goethite / Maghemite, Hematite and Magnetite)**  
**Lower Grade Cutoff of 12% Fe Applied**  
**Whole Rock Grades**

Resource Class	Material Type	Oxidation State	Tonnes (Mt)	Fe (%)	SiO <sub>2</sub> (%)	Al <sub>2</sub> O <sub>3</sub> (%)	P (%)	LOI (%)	CaO (%)	K <sub>2</sub> O (%)	MgO (%)	MnO (%)	S (%)	TiO <sub>2</sub> (%)
Inferred	Disseminated	Fresh	272	17.7	52.5	12.0	0.09	0.3	1.4	2.9	2.3	1.1	0.02	0.6
	Banded		79	13.3	54.7	14.1	0.07	0.5	1.1	3.3	2.5	2.4	0.01	0.6
	Mixed disseminated and banded	Transitional	27	16.3	50.6	14.0	0.06	5.7	0.9	2	0.9	1.3	0.13	0.6
			Oxidised	43	16.4	50.3	14.0	0.06	5.9	1.2	1.8	0.8	1.3	0.13
<b>Total Inferred</b>			<b>421</b>	<b>16.6</b>	<b>52.6</b>	<b>12.7</b>	<b>0.08</b>	<b>1.2</b>	<b>1.3</b>	<b>2.8</b>	<b>2.1</b>	<b>1.4</b>	<b>0.03</b>	<b>0.6</b>
Indicated	Disseminated	Fresh	325	19.2	51.6	11.4	0.10	0.2	1.2	2.7	2.3	0.9	0.01	0.5
	Banded		259	13.6	54.4	14.0	0.08	0.5	1.1	3.3	2.5	2.4	0.01	0.6
<b>Total Indicated</b>			<b>585</b>	<b>16.7</b>	<b>52.9</b>	<b>12.6</b>	<b>0.09</b>	<b>0.3</b>	<b>1.2</b>	<b>3.0</b>	<b>2.4</b>	<b>1.6</b>	<b>0.01</b>	<b>0.6</b>

**Notes:**

- There is drilling coverage for the whole rock grades (in total 11 grade items) on a 200m by 100m grid over the target areas, drilling being aligned along sections orientated north south. Indications are that the strongly metamorphosed host rocks were originally part of a clastic sedimentary sequence. These host rocks, were intersected by 86 drillholes. Five of the drillholes were drilled in 2008 as part of an initial scout programme using reverse circulation (RC) methods. The remaining 81, collared by RC drilling followed by diamond tails, were drilled in 2010 and 2011 (eight drillholes). The additional eight drillholes results in the addition of 43Mt and 56Mt @ 16.7% Fe to the Indicated and Inferred Resources respectively.
- No updates to Davis Tube Testwork (DTT) results, statistical or varlographic analyses or similar studies were carried out as a result of the eight additional drillholes, it being unlikely that they would make a material difference in the resource estimate update. This new data will be incorporated in a larger update scheduled for later in the year. However, the following mainly applies to the studies carried out during the original Murphy South resource estimate which was finalised in February 2011.
  - Statistical analyses on samples and 4m composites were completed. Varlography was also conducted as input into the grade estimation.
  - Grade estimates were calculated for 100m (east-west) by 50m (north-south) by 10m (vertical) blocks. The interpolation method used to obtain grade estimates was Ordinary Kriging.
  - Average in situ dry bulk densities were applied. For the various fresh host rocks, bulk density values of 3.1t/m<sup>3</sup> were used for grade ranges greater than 12% Fe. Density measurements obtained from downhole geophysical methods were assessed. Data is clustered and so is not representative of the prospect area as a whole. Further work is required in this aspect. No determinations have been carried out to ascertain in situ dry bulk density for the transitional or oxidised materials. Values of 2.6t/m<sup>3</sup> and 2.1t/m<sup>3</sup> estimated from the Boo-Loo and Dolphin prospects located about 1km to the northwest of Murphy South, have been assigned to these materials respectively.
  - Classification into Indicated and Inferred Mineral Resource was developed from the confidence levels of key criteria including drilling methods, geological understanding and interpretation, sampling, data density and location, grade estimation and quality. The requirements for infill drilling, together with uncertainties in geological interpretation and mineralisation envelopes in the more structurally complex zones and no density data for the oxide material have resulted in a part of the mineralised sequence being classified as an Inferred Mineral Resource.
  - Samples obtained from the existing drilling were composited to a nominal 4m interval and were submitted for DTT. Samples were taken from the unoxidised (fresh) portion of the drillholes.
  - DTT has been undertaken to determine the percent weight recovery (DTR) of magnetic material (concentrate). The concentrate has then been assayed to establish its grade characteristics.

- 
- As the concentrate grades are representative of the recovered portion only, the estimation requires the use of service variables to ensure the blocks are appropriately weighted. Service variables are calculated as DTR multiplied Fe grade, DTR multiplied  $\text{SiO}_2$ , DTR multiplied  $\text{Al}_2\text{O}_3$  and so on for the remaining grade items (11 in all).
  - Statistical analyses were also completed on DTT samples, subsequent 4m composites and service variables. Variography was undertaken on DTR, concentrate grades and service variables.
  - Ordinary Kriging was used to obtain estimates of DTR and service variables. However, the reduced density of DTT data resulted in a large proportion of blocks being unestimated. Where blocks were not estimated, the average DTR for the zone was employed. As a consequence, the confidence level in the DTR and concentrate grade estimates is considered to be low.
  - Hence, mean values were derived from composite DTT data values to indicate the possible recovery and concentrate characteristics. (Note: samples selected for DTT composites were on the basis of geological logging of magnetite-rich horizons or whole rock Fe grades > 8%. They indicate that the DTR is likely to be in the order of 16.8% and the concentrate grade approximately 69.5% Fe, 1.2%  $\text{SiO}_2$ , 1.0%  $\text{Al}_2\text{O}_3$ , 0.007% P, -3.3% LOI, 0.08% CaO, 0.06%  $\text{K}_2\text{O}$ , 0.2% MgO, 0.7% MnO, 0.002% S and 0.1%  $\text{TiO}_2$ . These recoveries apply only to the fresh material. Testwork has yet to be carried out on transition and oxide materials.

## Appendix 5B

### Mining exploration entity quarterly report

Introduced 1/7/96. Origin: Appendix 8. Amended 1/7/97, 1/7/98, 30/9/2001, 01/06/10.

Name of entity

IRON ROAD LIMITED

ABN

51 128 698 108

Quarter ended ("current quarter")

30 June 2011

#### Consolidated statement of cash flows

Cash flows related to operating activities	Current quarter \$A'000	Year to date \$A'000
1.1 Research and Development Offset (refund)	-	671
1.2 Payments for (a) exploration & evaluation	(2,749)	(15,928)
(b) development	-	-
(c) production	-	-
(d) administration	(182)	(856)
1.3 Dividends received	-	-
1.4 Interest and other items of a similar nature received	6	123
1.5 Interest and other costs of finance paid	-	-
1.6 Income taxes paid	-	-
1.7 Other (provide details if material)	(203)	235
<b>Net Operating Cash Flows</b>	<b>(3,128)</b>	<b>(15,755)</b>
<b>Cash flows related to investing activities</b>		
1.8 Payment for purchases of: (a) prospects	-	-
(b) equity investments	-	-
(c) other fixed assets	(20)	(102)
1.9 Proceeds from sale of: (a) prospects	-	-
(b) equity investments	-	-
(c) other fixed assets	-	-
1.10 Loans to other entities	-	-
1.11 Loans repaid by other entities	-	-
1.12 Other (provide details if material)	-	-
<b>Net investing cash flows</b>	<b>(20)</b>	<b>(102)</b>
1.13 Total operating and investing cash flows (carried forward)	<b>(3,148)</b>	<b>(15,857)</b>

+ See chapter 19 for defined terms.

**Appendix 5B**  
**Mining exploration entity quarterly report**

1.13	Total operating and investing cash flows (brought forward)	(3,148)	(15,857)
<b>Cash flows related to financing activities</b>			
1.14	Proceeds from issues of shares, options, etc.	-	13,213
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Dividends paid	-	-
1.19	Other – capital raising costs	-	(305)
<b>Net financing cash flows</b>		-	12,908
<b>Net increase (decrease) in cash held</b>		(3,148)	(2,949)
1.20	Cash at beginning of quarter/year to date	3,271	3,072
1.21	Exchange rate adjustments to item 1.20	-	-
1.22	<b>Cash at end of quarter</b>	123*	123*

\* \$A687K received early July 2011 following option conversion and A\$21.6M raised via placement in late July 2011 following shareholder approval obtained on 25 July 2011.

**Payments to directors of the entity and associates of the directors**  
**Payments to related entities of the entity and associates of the related entities**

		Current quarter \$A'000
1.23	Aggregate amount of payments to the parties included in item 1.2	138
1.24	Aggregate amount of loans to the parties included in item 1.10	Nil

1.25 Explanation necessary for an understanding of the transactions

All transactions involving Directors and associates were on normal commercial terms.

**Non-cash financing and investing activities**

2.1 Details of financing and investing transactions which have had a material effect on consolidated assets and liabilities but did not involve cash flows

Nil

2.2 Details of outlays made by other entities to establish or increase their share in projects in which the reporting entity has an interest

Nil

+ See chapter 19 for defined terms.

### Financing facilities available

Add notes as necessary for an understanding of the position.

	Amount available \$A'000	Amount used \$A'000
3.1 Loan facilities	Nil	Nil
3.2 Credit standby arrangements	Nil	Nil

### Estimated cash outflows for next quarter

	\$A'000
4.1 Exploration and evaluation	2,500
4.2 Development	-
4.3 Production	-
4.4 Administration	350
<b>Total</b>	<b>2,850</b>

### Reconciliation of cash

Reconciliation of cash at the end of the quarter (as shown in the consolidated statement of cash flows) to the related items in the accounts is as follows.

	Current quarter \$A'000	Previous quarter \$A'000
5.1 Cash on hand and at bank	73	3,271
5.2 Deposits at call	50	-
5.3 Bank overdraft	-	-
5.4 Other (provide details)	-	-
<b>Total: cash at end of quarter</b> (item 1.22)	<b>123*</b>	<b>3,271</b>

\* \$A687K received early July 2011 following option conversion and A\$21.6M raised via placement in late July 2011 following shareholder approval obtained on 25 July 2011.

### Changes in interests in mining tenements

	Tenement reference	Nature of interest (note (2))	Interest at beginning of quarter	Interest at end of quarter
6.1 Interests in mining tenements relinquished, reduced or lapsed	Nil			
6.2 Interests in mining tenements acquired or increased	Nil			

+ See chapter 19 for defined terms.

**Appendix 5B**  
**Mining exploration entity quarterly report**

**Issued and quoted securities at end of current quarter**

*Description includes rate of interest and any redemption or conversion rights together with prices and dates.*

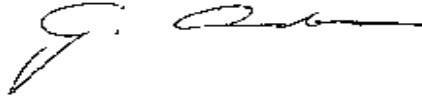
	Total number	Number quoted	Issue price per security (see note 3) (cents)	Amount paid up per security (see note 3) (cents)
7.1 <b>Preference securities</b> <i>(description)</i>				
7.2 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs, redemptions				
7.3 <b>+Ordinary securities</b>	113,695,564	113,695,564		Fully paid
7.4 Changes during quarter (a) Increases through issues (b) Decreases through returns of capital, buy-backs				
7.5 <b>+Convertible debt securities</b> <i>(description)</i>				
7.6 Changes during quarter (a) Increases through issues (b) Decreases through securities matured, converted				
7.7 <b>Options</b> <i>(description and conversion factor)</i>	7,125,000 7,500,000 2,000,000 3,000,000 1,250,000 1,250,000 1,250,000 1,250,000		<i>Exercise price</i> 20 cents 35 cents 20 cents 35 cents 20 cents 25 cents 30 cents 35 cents	<i>Expiry date</i> 22/1/13 22/1/13 11/3/13 6/8/13 15/12/14 15/12/14 15/12/14 15/12/14
7.8 Issued during quarter				
7.9 Exercised during quarter				
7.10 Expired during quarter				
7.11 <b>Debentures</b> <i>(totals only)</i>				
7.12 <b>Unsecured notes</b> <i>(totals only)</i>				

+ See chapter 19 for defined terms.



**Compliance statement**

- 1 This statement has been prepared under accounting policies which comply with accounting standards as defined in the Corporations Act or other standards acceptable to ASX (see note 4).
- 2 This statement does /does not\* (delete one) give a true and fair view of the matters disclosed.



Sign here: ..... Date: 29 July 2011  
(~~Director~~/Company secretary)

Print name: GRAHAM DOUGLAS ANDERSON

**Notes**

- 1 The quarterly report provides a basis for informing the market how the entity's activities have been financed for the past quarter and the effect on its cash position. An entity wanting to disclose additional information is encouraged to do so, in a note or notes attached to this report.
- 2 The "Nature of interest" (items 6.1 and 6.2) includes options in respect of interests in mining tenements acquired, exercised or lapsed during the reporting period. If the entity is involved in a joint venture agreement and there are conditions precedent which will change its percentage interest in a mining tenement, it should disclose the change of percentage interest and conditions precedent in the list required for items 6.1 and 6.2.
- 3 **Issued and quoted securities** The issue price and amount paid up is not required in items 7.1 and 7.3 for fully paid securities.
- 4 The definitions in, and provisions of, *AASB 1022: Accounting for Extractive Industries* and *AASB 1026: Statement of Cash Flows* apply to this report.
- 5 **Accounting Standards** ASX will accept, for example, the use of International Accounting Standards for foreign entities. If the standards used do not address a topic, the Australian standard on that topic (if any) must be complied with.

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+ See chapter 19 for defined terms.