

## **Quarterly Activities Report**

for the period ended 31 December 2009

#### About Iron Road

Iron Road was established to capitalise on the growing global demand for iron ore. Iron Road has a strong project portfolio comprised of an advanced stage exploration project with excellent infrastructure nearby, complimented by early stage projects.

Road's principal Iron project is the Central Eyre Iron Project in South Australia. Early test work indicates that a high quality iron concentrate may be produced grading approximately 70.3% iron. The Central Eyre Iron Project is complemented by early stage projects prospective for iron ore mineralisation in Western Australia (Windarling, Murchison) and South Australia (West Gawler).

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

ASX Codes – IRD, IRDO

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Tel: (08) 9200 6020 Fax: (08) 9200 6021 Email: admin@ironroadlimited.com.au Web: www.ironroadlimited.com.au Iron Road continued its high level of activities aimed at advancing the flagship Central Eyre Iron Project, which is currently at pre-development status. An aeromagnetic survey was successfully completed and a metallurgical test work programme confirmed the favourable characteristics of the ore at the Boo-Loo prospect. At the Gawler Iron Project a detailed gravity survey was successfully completed and preparations made for a heritage clearance survey.

#### Highlights

#### **Central Eyre Iron Project**

- Successful completion of a major aeromagnetic survey covering the Warramboo, Kopi and Hambidge project areas.
- Completion of a metallurgical test work programme indicating readily upgradeable ore characteristics and a range of high grade saleable concentrates, including blast furnace (~68% Fe) and direct reduction (~70% Fe) grade material.
- Completion of a structural study at the Boo-Loo prospect with implications for target generation across the Central Eyre Iron Project.
- Release of a work programme for 2010 with the goal of increasing the mineral resource estimate across the project to 500Mt.
- Drilling commences 05 January 2010, aimed at increasing the mineral resource estimate at the Boo-Loo prospect.

#### **Gawler Iron Project**

- Previous in-situ rock chip and grab samples from ten localities returned an average grade of 53.4% Fe (55.7% CaFe) from all samples collected, with several samples >60% indicating potential suitability for direct shipping ore.
- Successful completion of a gravity survey following extensive aeromagnetic survey. Work is targeting hematite mineralisation confirmed from field mapping and a rock chip sampling programme.
- Preparation and finalisation of a heritage clearance survey to allow for a planned exploratory drilling programme commencing Q1 2010.

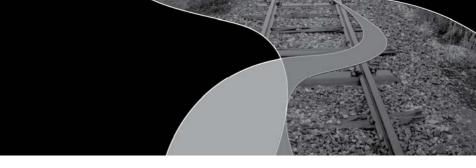
#### Corporate

• Internal goal set to increase the mineral resource estimate across the Central Eyre Iron Project to 500Mt in 2010.



Figure 1 – Current resource expansion drilling at Boo-Loo West, Warramboo Project. PIRSA approved the 12,600m drill programme during Dec 2009.





### **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 – Warramboo, Kopi and Hambidge. The project is located in a grain farming area with good infrastructure. Community relationships and support is excellent with great interest shown in possible development scenarios.

#### Aeromagnetic Survey

A major airborne survey was commissioned during October 2009 following the successful identification of several targets during an independent assessment by Coffey Mining of the exploration potential at Warramboo, Kopi and Hambidge (2.8 - 5.7 billion tonnes of magnetite gneiss) that collectively constitute the Central Eyre Iron Project. The airborne survey was undertaken by UTS Geophysics over six defined portions of EL3699 covering areas known to contain significant occurrences of magnetite gneiss (Figure 2).

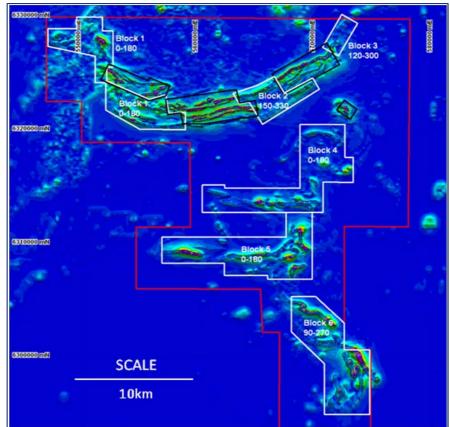


Figure 2 - Location of existing (black outlines) and new (white outlines) detailed magnetic survey coverage over iron targets at the Central Eyre Iron Project. Background image is the analytic signal from existing detailed and regional magnetic data.

The survey line spacing was 50m and flown at a mean height of 20m for a total of 4,153 line kilometres. The entire project area is now covered by a high resolution closely spaced aeromagnetic survey allowing for the detailed planning of drill programmes within the Kopi and Hambidge clusters in addition to the



Warramboo cluster. Hawke Geophysics analysed and interpreted the data and has made recommendations to assist in the planning of future exploratory and development drilling programmes.

#### Metallurgical Test Work

ProMet Engineers were engaged by Iron Road Limited to comprehensively investigate the metallurgical characteristics of the Warramboo mineralisation and recommend an initial process design for the Central Eyre Iron Project. The study included detailed metallurgical test work that was specifically used to investigate and design various processing plant options. Diamond core samples from various drill holes and a dedicated metallurgical drill hole from the Boo-Loo prospect were used for the test work with all testing conducted by AMMTEC under ProMet Engineers supervision.

The study confirmed viable process options for the project, using simple off the shelf processing technology. These options consist of a simple autogenous primary grind followed by fine grinding alternatives (Figure 3).

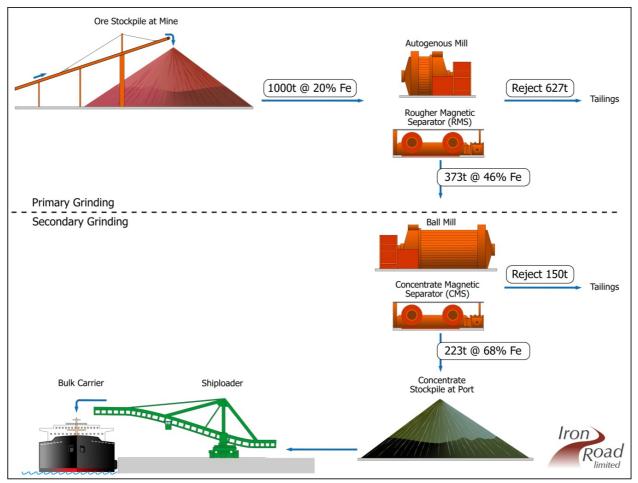


Figure 3 - Simplified process flow option – illustrating flow of hypothetical 1000t ore parcel

Test work completed in November 2009 confirmed that a high grade blast furnace quality concentrate (~68% Fe) can be produced at a coarse grind, with a range of finer grained products possible according to end-user needs. This has validated earlier Davis Tube Recovery test work. Potential exists to further improve the base case processing options, allowing for further reductions in potential operating costs.



In summary the test work results included the following:

- Coarse Grind Impact of grind on chemistry (silica) indicated that grinding to 80% passing minus 65µm (P80 at -65µm) produces a blast furnace quality concentrate. This suggests that a range of coarse grained products may be produced according to end-user needs.
- Simple Beneficiation Using a conservative design approach of 80% passing minus 40µm (P80 at -40µm), a high grade concentrate may be produced using simple and proven two or three stage 'off the shelf' processing plant technology.
- **Upgradeability of Ore Feed** Ore head grades may be upgraded by ~2.3 times at the front-end of the processing plant through simple primary grinding (autogenous) and Rougher Magnetic Separation (RMS). For example a head grade of 20.1% Fe is upgraded to 45.8% Fe prior to secondary (fine) grinding.
- High Rejection Rate of Waste The effective doubling of the iron content (head grade) occurs since up to 63% of the ore feed tonnage is rejected (as waste) during the primary grinding and RMS stage. This is prior to further processing within the secondary grinding circuit.
- **Minimisation of Operating Costs** Due to a high rejection rate of ore feed prior to fine grinding (the most power intensive part of the plant circuit), operating costs are significantly reduced. Furthermore, low abrasion indices for the ore indicates relatively lower wear rates within the processing plant and therefore reduced maintenance costs.
- **Ore Physical Properties** A relatively high Bond Work Index (BWI) is offset by coarse grinds to attain high iron concentrate grades. Crushing Work Indices, UCS and abrasion indices are regarded as favourable.
- Scope for Further Efficiencies Additional test work on ore characteristics and advanced media competency work may allow for refining of processing options leading to further significant reductions in operating cost.

From the test work it is evident that the coarse grained magnetite at the Boo-Loo prospect upgrades readily and attains blast furnace grade from a grind size of 80% passing minus 65µm (P80 at -65µm). This compares favourably with other magnetite deposits where the grind size to attain similar concentrate grades may be as low as -28µm. This characteristic also has significant implications for operating costs during beneficiation of the ore.

Test work indicates potentially high rejection rates during primary grinding and RMS resulting in a substantial increase in iron grade early in the process, with the added benefit of reduced operating costs. A reduction in costs is possible because of the significant reduction in feed to the secondary or fine grinding stage that is typically the power intensive element of the overall beneficiation process. Favourable Crushing Work Indices (CWI), UCS and abrasion indices may lead to further operating cost reductions.

ProMet Engineers proposed two possible plant designs based on the physical characteristics of the Boo-Loo ore. Both alternatives incorporate simple and proven technology in operation in the United States and Australia. Further work will firm up confidence on other processing options and assess further opportunities for reducing operating costs.

#### Structural Study

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Coffey Mining undertook a structural study from diamond core drilled at the Boo-Loo prospect. The main geological structures observed were: 1) gneissic banding including overprinting of banding generations, 2) small-scale fold hinge surfaces and fold axes 3) stretching lineations and 4) leucosomes (melt) infilling shear zones.

Based on gneissic banding overprinting relationships and fold orientations, it is inferred that two generations of tight to isoclinal overturned folding with approximately NNW-SSE oriented compression are preserved in the rock. Along with faulting, alteration and weathering, folding is an important control on the distribution and continuity of ore within the Warramboo and associated prospects (Figure 4). Understanding of the structure at Boo-Loo is important in the understanding of the structure on a regional scale and this knowledge is used during target generation.

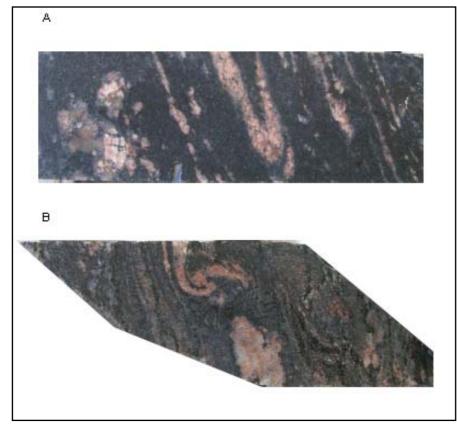


Figure 4

(A) Isoclinal fold and boudinage in gneissic banding (drill hole IRD086).

B) Refolded or shear folded gneissic banding (drill hole IRD080).

#### 2010 Work Programme

The analysis of the detailed aeromagnetic survey of the Warramboo, Kopi and Hambidge clusters at the Central Eyre Iron Project strengthens independent interpretation suggesting an exploration potential of 2.8-5.7 billion tonnes of magnetite gneiss. As outlined in the 2009 AGM Presentation, Iron Road has set an internal goal for 2010 of expanding the mineral resource estimate at the Central Eyre Iron Project to a total of 500Mt.

PIRSA has approved the first drilling programme at the Central Eyre Iron Project that commenced on 05 January 2010. The programme totals 12,600m of (RC and diamond) drilling with the intention of expanding the existing JORC 110Mt inferred mineral resource estimate at Boo-Loo (Figure 5).

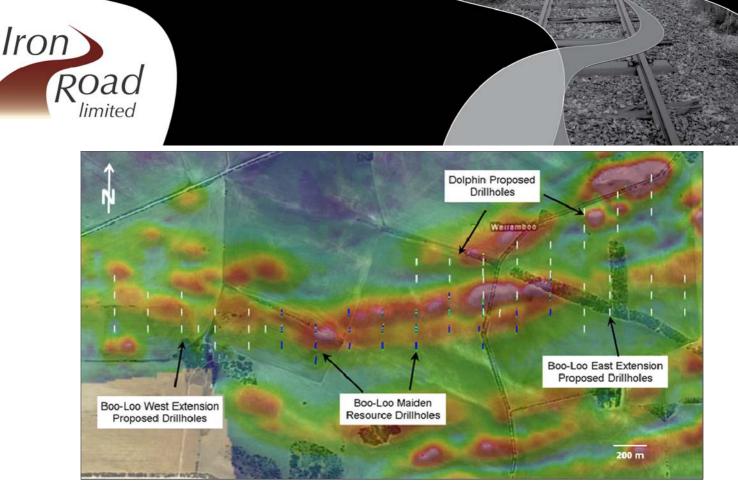


Figure 5 – Boo-Loo Resource expansion drilling commenced early January 2010 – existing drill holes are shown in blue, current drill holes in white. Total Magnetic Intensity image superimposed over surface satellite image.

Other drilling programmes are planned at the Central Eyre Iron Project utilising results from the recent detailed aeromagnetic survey and structural study.

There is strengthening potential for the Central Eyre project to be one of the major magnetite iron ore projects currently under review in Australia.

#### South Australia – Gawler Iron Project

The Gawler Iron Project is located 25km 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 to earn up to 90% interest in the iron ore rights.

The Project area includes over ten areas of known iron occurrences, including the Mt Christie deposit that was the subject of selected drilling and beneficiation test work in the 1960's by the South Australian Department of Mines. The test work indicated that lower grade hematite mineralization is amenable to upgrading using simple mechanical processes. In-situ rock chip and grab samples from ten localities at the West Gawler project returned an average grade of 53.4% Fe (55.7% CaFe) from all samples collected. Several in-situ chip samples returned grades of >60% Fe with low silica, alumina and phosphorous indicating potential suitability for direct shipping ore (DSO).

Following on from the promising field chip sampling programme, a detailed aeromagnetic survey commenced during mid-September 2009 at West Gawler. The survey, undertaken by Thomson Aviation over a large portion of EL4014 (Mulgathing), covered all known iron occurrences. The survey line spacing was 50m and flown at a mean height of 35m for a total of 5,319 line kilometres (Figure 6).

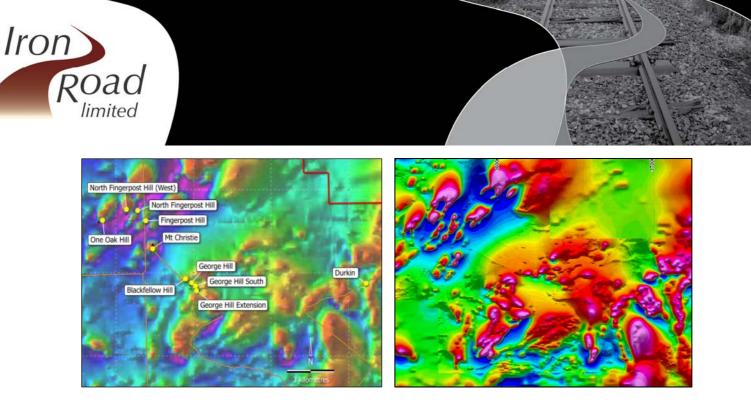


Figure 6 – Part of EL4014 highlighting location of known iron occurrences, superimposed on regional aeromagnetic image shown left. New image of same area from recent detailed airborne survey shown right.

Hawke Geophysics analysed and interpreted the data and made the recommendation to follow the survey up with a gravity survey. The survey was undertaken by Daishsat geodetic surveyors over a targeted portion of EL4014 (Mulgathing) that covers nine of a total of ten known iron occurrences (Figure 7). The survey comprised 6,559 individual stations with data collected on a 200x25m spacing over target areas, increasing to 400x50m spacing in the areas between targets. Hawke Geophysics analysed and interpreted the data and is currently involved in the planning of a drilling programme to investigate the most promising anomalies.

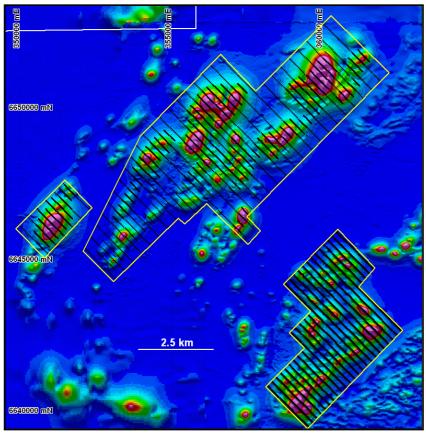


Figure 7 - Gravity survey stations across prospective magnetic highs.



Preparations were made for a heritage clearance with members of the Antakirinja Native Title Claimants and a survey scheduled for mid-January 2010.

#### CORPORATE

The company is encouraged by the results achieved to date and believes that there is strengthening potential for the Central Eyre Iron Project to become one of the major magnetite iron ore projects currently under review in Australia. As a consequence, the Company has set a number of internal goals, including increasing the mineral resource estimate across the Central Eyre Iron Project to 500Mt in 2010.

#### **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 ( $Fe_2O_3$ ), 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  $Fe_3O_4$  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).



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The information in this report that relates to Exploration Results 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 to the activity which he is and undertaking to gualify 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.

The information in this report that relates to Mineral Resources is based on and accurately reflects information compiled by Mr Iain Macfarlane, Coffey

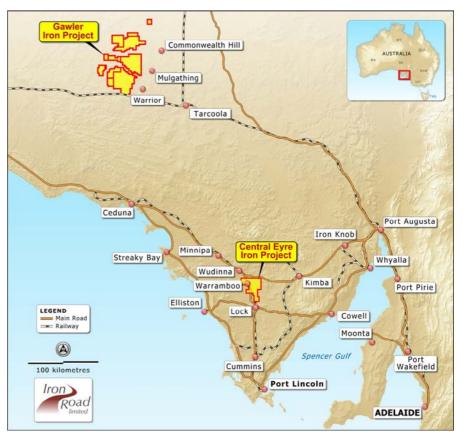


Figure 8 - Location of the Company's South Australian projects

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 potential 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.

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# Appendix 5B

### Mining exploration entity quarterly report

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

Name of entity

#### IRON ROAD LIMITED

ABN

51 128 698 108

Quarter ended ("current quarter")

Year to date

31 December 2009

Current quarter

#### Consolidated statement of cash flows

Cash flows related to operating activities		\$A'000	(6 months) \$A'000
1.1	Receipts from tax returns and related debtors	-	-
1.2	Payments for		
	(a) exploration and evaluation	(612)	(1,369)
	(b) development	-	-
	(c) production	-	-
	(d) administration	(209)	(493)
1.3	Dividends received	-	-
1.4	Interest and other items of a similar nature received	5	12
1.5	Interest and other costs of finance paid	-	-
1.6	Income taxes paid	-	-
1.7	Other (GST to be recouped)	27	65
	Net operating cash flows	(789)	(1,785)
	Cash flows related to investing activities		
1.8	Payment for purchases of:		
	(a) prospects	-	-
	(b) equity investments	-	-
	(c) other fixed assets	(6)	(9)
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 (state if material)	-	-
	Net investing cash flows	(6)	(9)

<sup>+</sup> See chapter 19 for defined terms.

1.13	Total operating and investing cash flows (brought		
	forward)	(795)	(1,794)
	Cash flows related to financing activities		
1.14	Proceeds from shares /shares to be issued	40	2,614
1.15	Proceeds from sale of forfeited shares	-	-
1.16	Proceeds from borrowings	-	-
1.17	Repayment of borrowings	-	-
1.18	Proceeds from release of tenement bond	-	-
1.19	Other (Cost of Capital Raising/Prospectus)	-	(45)
	Net financing cash flows	40	2,569
	Net increase (decrease) in cash held	(755)	775
1.20	Cash at beginning of quarter/year to date	3,066	1,536
1.21	Exchange rate adjustments to item 1.20		
1.22	Cash at end of quarter	2,311	2,311

### 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	106
1.24	Aggregate amount of loans to the parties included in item 1.10	NIL
1.05		

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

<sup>+</sup> 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	1,000
4.2	Development	-
	Total	1,000

### **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	311	439
5.2	Deposits at call	2,000	2,627
5.3	Bank overdraft	-	-
5.4	Other (provide details)	-	-
	Total: cash at end of quarter (item 1.22)	2,311	3,066

### **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	-			
6.2	Interests in mining tenements acquired or increased	-			

<sup>+</sup> See chapter 19 for defined terms.

**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</b> +securities (description)			(******)	(((((((((((((((((((((((((((((((((((((((
7.2	<ul> <li>(a) Increases through issues</li> <li>(b) Decreases through returns of capital, buybacks, redemptions</li> </ul>				
7.3	<sup>+</sup> Ordinary securities	63,611,608	37,599,108		Fully paid
7.4	Changes during quarter (a) Increases through issues	236,739	236,739	20 cents	Fully paid
	(b) Decreases through returns of capital, buy- backs				
7.5	*Convertible debt securities (description)				
7.6	<ul> <li>Changes during quarter</li> <li>(a) Increases through</li> <li>issues</li> <li>(b) Decreases through</li> <li>securities matured,</li> <li>converted</li> </ul>				
7.7	<b>Options</b> (description			Exercise price	Expiry date
	and conversion factor)	7,125,000 7,500,000		20 cents 35 cents	22/1/13 22/1/13
		2,000,000		20 cents	11/3/13
		3,000,000		35 cents	6/8/13
		26,560,410	26,560,410	20 cents	30/9/10
7.8	Issued during quarter				
	01	1,250,000		20 cents	15/12/14
		1,250,000		25 cents	15/12/14
		1,250,000 1,250,000		30 cents 35 cents	15/12/14 15/12/14
7.9	Exercised during				
	quarter	236,739	236,739	20 cents	30/9/10
	Expired during quarter				
7.10					
7.10	<b>Debentures</b> (totals only)				

<sup>+</sup> 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 January 2010 (<del>Director</del>/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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<sup>+</sup> See chapter 19 for defined terms.