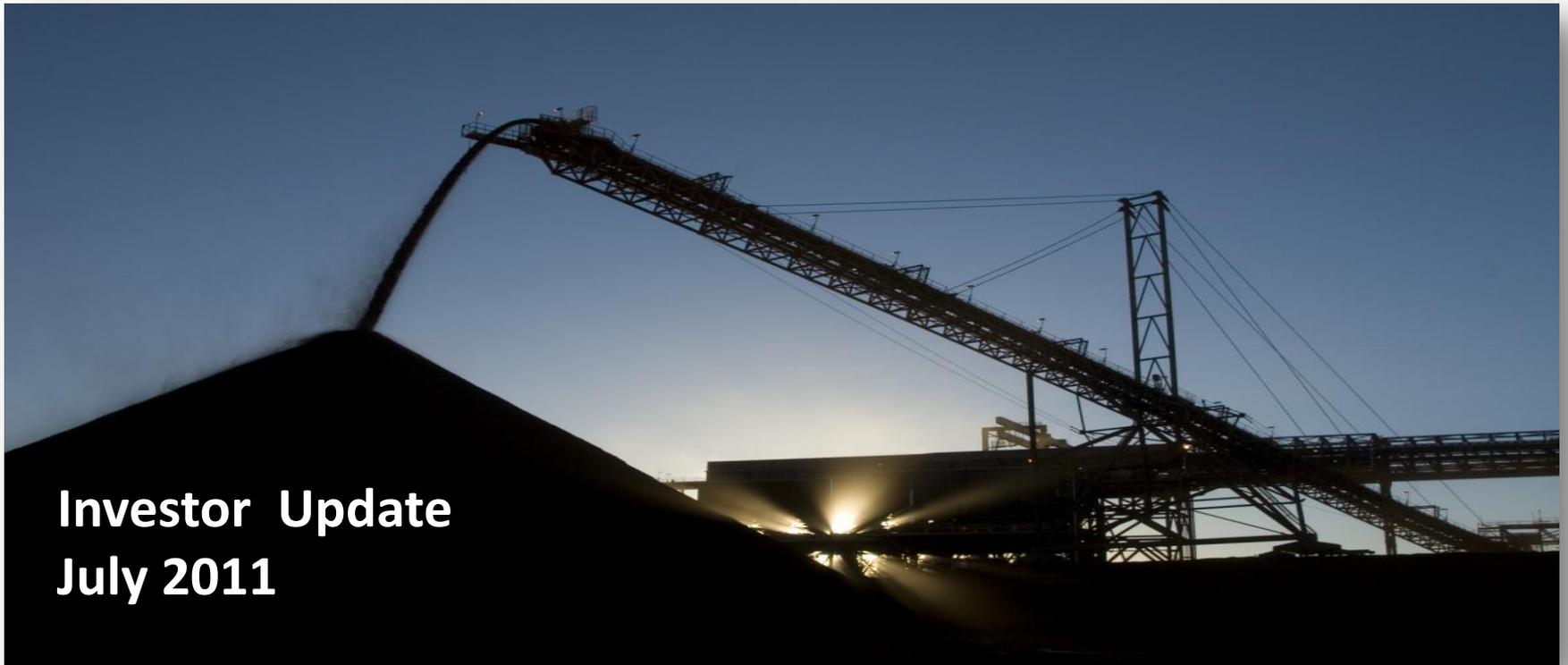




# BRAZILIAN METALS GROUP LTD

An emerging Australian Iron Ore company focussed on Brazil  
ASX: BMG



**Investor Update  
July 2011**



# Disclaimers

The information in this presentation that relates to Exploration Results, Mineral Resources or Ore Reserves is based on information compiled by Malcolm Castle, who is a Member of the Australasian Institute of Mining and Metallurgy (“AusIMM”). Mr Castle is a director of the Company and he has sufficient experience relevant to the style of mineralization and 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 Castle consents to the inclusion in this report of the matters based on his information in the form and context in which it appears. Whilst the Company remains optimistic that it will report resources and reserves in the future, any discussion in relation to exploration targets or resource potential is only conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. Resource and Reserve figures quoted in this presentation are in accordance with the JORC code.

Exploration Targets - While the Company remains optimistic that it will report resources and reserves in the future, any discussion in relation to exploration targets or resource potential is only conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource.

This Presentation contains statements attributable to third persons. These statements are made in, or based on statements made in previous geological reports that are publicly available from either a government department or the ASX. The authors of these previous reports have not consented to the statements’ use in this Report, and these statements are included in accordance with ASIC Class Order [CO 07/428] *Consent to quote: Citing trading data and geological reports in disclosure documents and PDS.*

The information contained in this presentation is for informational purposes only and does not constitute an offer to issue, or arrange to issue, securities or other financial products. The information contained in this presentation is not investment or financial product advice and is not intended to be used as the basis for making an investment decision. The presentation has been prepared without taking into account the investment objectives, financial situation or particular needs of any particular person.

No representation or warranty, express or implied, is made as to the fairness, accuracy, completeness or correctness of the information, opinions and conclusions contained in this presentation. To the maximum extent permitted by law, none of Brazilian Metals Group Limited, its directors, employees or agents, nor any other person accepts any liability, including, without limitation any liability arising out of fault of negligence, for any loss arising from the use of the information contained in this presentation. In particular, no representation or warranty, express or implied is given as to the accuracy, completeness or correctness, likelihood of achievement or reasonableness or any forecasts, prospects or returns contained in this presentation nor is any obligation assumed to update such information. Such forecasts, prospects or returns are by their nature subject to significant uncertainties and contingencies.

Before making an investment decision, you should consider, with or without the assistance of a financial adviser, whether an investment is appropriate in light of your particular investment needs, objectives and financial circumstances.

# Why Brazil?

## Minas Gerais, Brazil



- Project situated in emerging world class iron ore region in Northern Minas Gerais
- Strong economic environment – growth currently c. 7.7% per annum
- Stable political system, security of tenure on mineral licenses and low sovereign risk
- Significant and growing level of foreign investment in the Brazilian mineral sector including investments in iron, gold, nickel, bauxite and oil & gas
- Sophisticated banking and finance systems.
- Good communications with significant investment in road, shipping and rail infrastructure



# BMG at a Glance

- Company re-listed in December 2010 after successful \$7 million capital raising
- Focused on **Iron Ore** in world class Iron province in **Brazil**
- **Experienced management group** with commercial, corporate and technical expertise to deliver shareholder value
- **Potential multi-billion tonnes** at 17%-30% Fe with regional infrastructure under construction. **Easy upgrade to pellet feed within the lowest quartile of operating costs.**
- Two advanced projects at drilling stage with encouraging down-hole intercepts
  - **Gema Verde project** is the extension of Honbridge's Block 8 Resource (2,615Mt)
  - **Rio Pardo project** at Josilene-Scorpion extends over 13 km
- Drilling and other work underway to define initial JORC Resource and scoping study



# Corporate Strategy

## Strategic Vision

Develop a substantial mining enterprise in northern Minas Gerais, Brazil by developing a mining/processing and transport operation with the scale to export in excess of 25Mt of premium iron product per annum

## Goals

- **Identify and acquire areas prospective for large iron deposits with potential for development into an export mining operation**
  - Exclusive mineral rights for ~1,000 km<sup>2</sup> of Fe prospective ground secured, and 157 km<sup>2</sup> tenements pegged and granted directly
- **Undertake targeted exploration and drilling to confirm JORC Resource status of project area**
  - Infill drilling commenced at Gema Verde project and initial Resource statement due in near future
  - In-fill drilling for Resource definition at Josilene-Scorpion prospect at Rio Pardo project to commence October 2011
- **Undertake Scoping Study, Pre-Feasibility Study and Definitive Feasibility Study at project**
- **Establish structure & capability to support premium iron-ore export operation > 25Mtpa**



# Project Structure

**Minas Norte Mineracao Ltda**  
(wholly owned subsidiary of BMG)

## FOCUS - NORTH MINAS GERAIS IRON ORE PROVINCE

### GEMA VERDE PROJECT

**Overview:**

- Contiguous with the Honbridge Block 8. 2.65Bt resource
- Resource Delineation drilling

**Area:** 75.6 km<sup>2</sup>

**Current Focus:**

- 3000 metres of extension and infill drilling underway on a 5 km zone
- Progressing to Resource estimation

### RIO PARDO PROJECT

**Overview:**

- Advanced exploration project
- 10 targets identified on extensions to known mineralisation

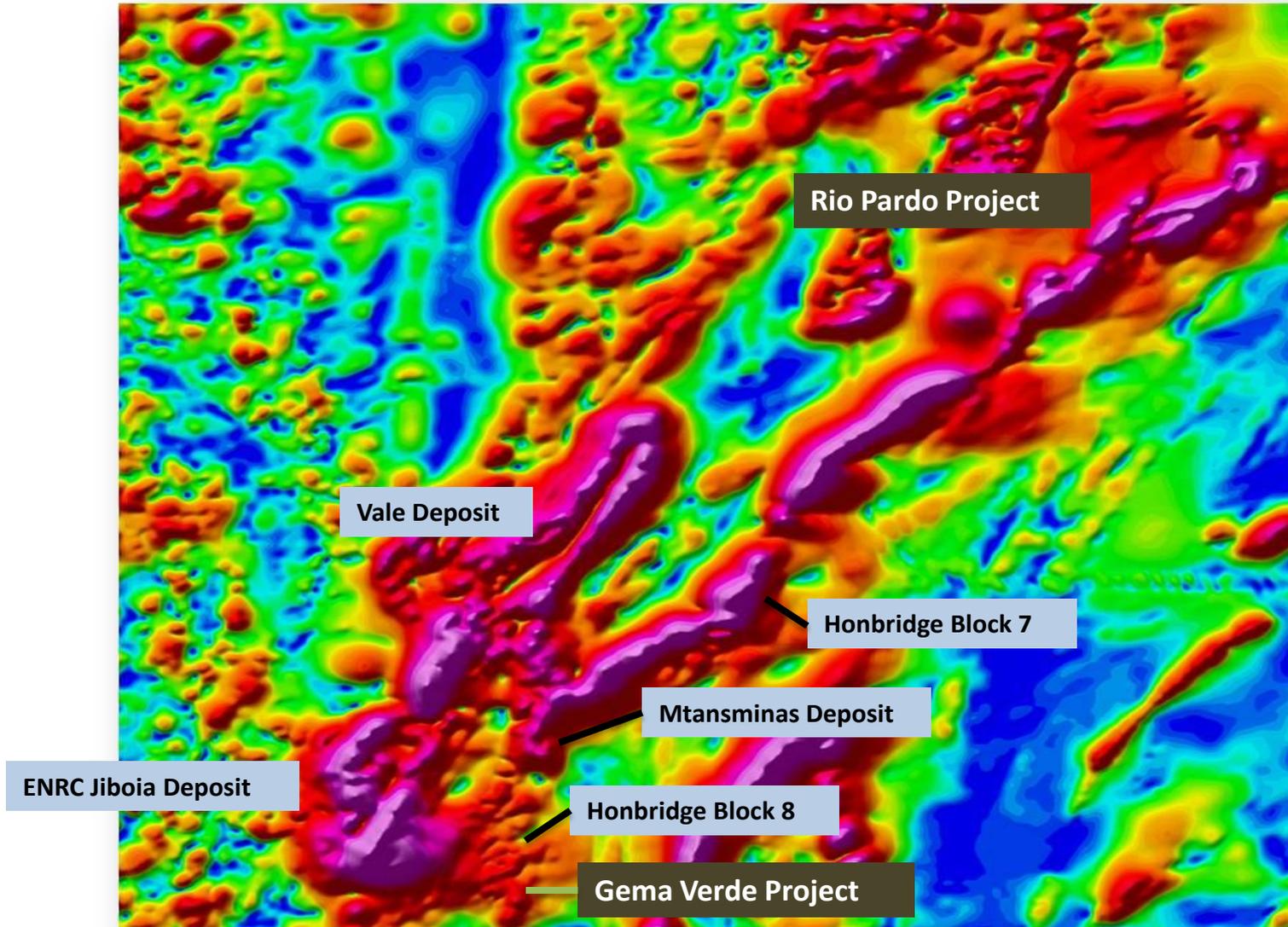
**Area:** 887 km<sup>2</sup>

**Current Focus:**

- Josilene - Scorpion Prospect
- 13 km continuous strike length of the prospect drill tested with 28 RC holes to date

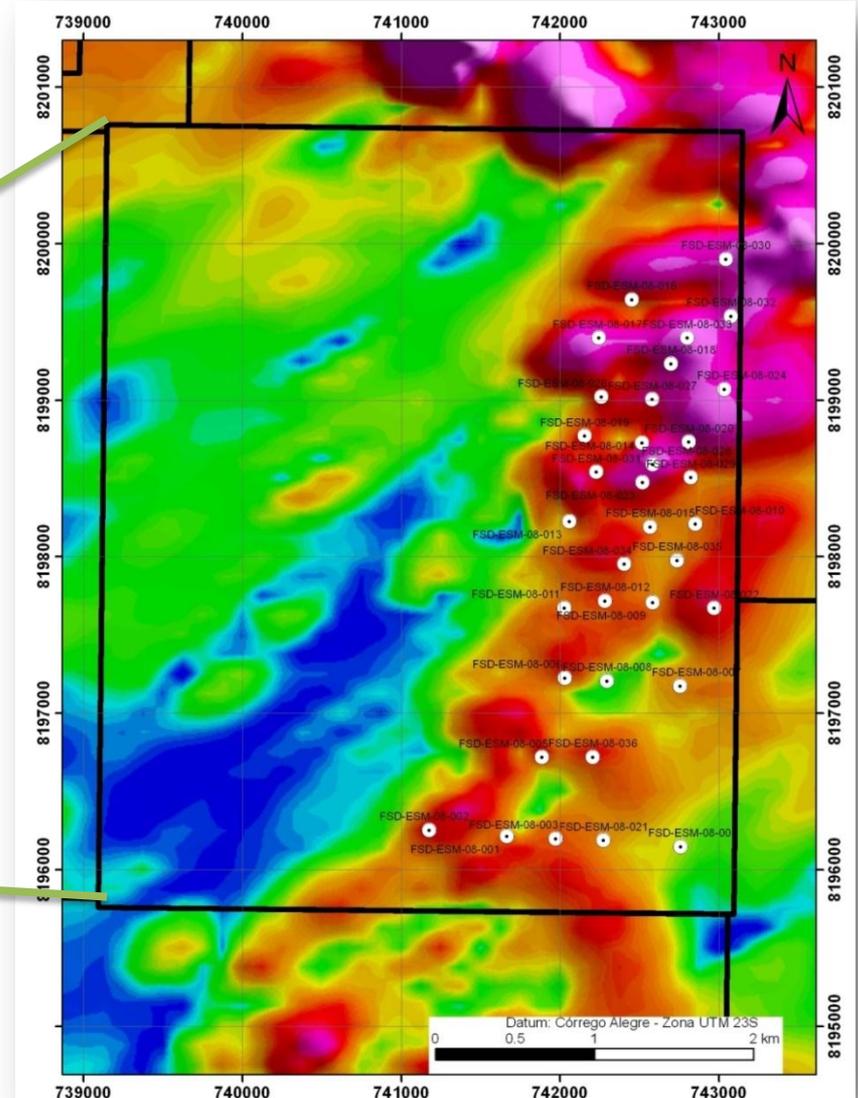
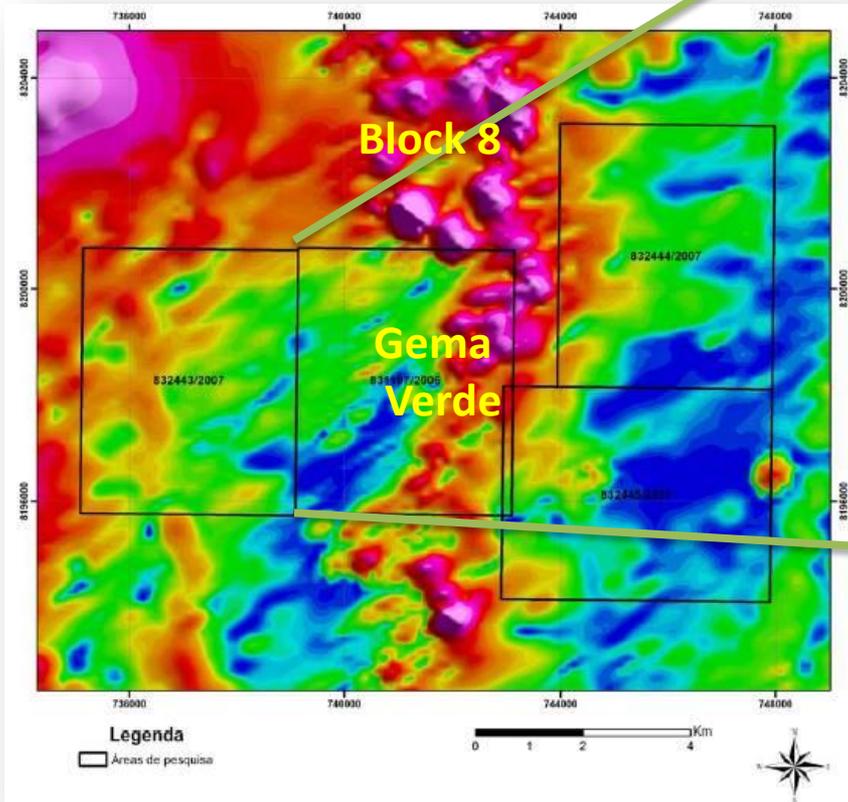
- BMG continues to actively seek opportunities to extend strategic holdings in Northern Minas Gerais region

# BMG's Projects



# Gema Verde Drill Locations

- Honbridge Block 8 orebody (2.6 billion tonnes) abuts the central tenement
- Further potential exists to the west and down dip from Block 8
- **Exploration Target of 370 to 680 million tonnes at 16.6% Fe to 19.9% Fe**





# Gema Verde Drill Results

- Project drilled with diamond coring in 35 holes for a total of 5,514 metres in 2008
  - 27.35m at **24.0%** Fe from 3.2m in FSD011
  - 25.7m at **23.4%** Fe from 103.7m in FSD032
  - 28.3m at **20.2%** Fe from 152.85m in FSD024
  - 16.8m at **27.8%** Fe from 2.9m in FSD013
  - 20m at **22.0%** Fe from 76.95m in FSD028
  - 20.4m at **21.5%** Fe from 59.8m in FSD033
  - 20m at **21.6%** Fe from 68.7m in FSD014
- BMG is currently drilling with RC and DD to expand these results
- The mineralisation can be readily upgraded to pellet feed grade
- Resource estimation is anticipated by October 2011

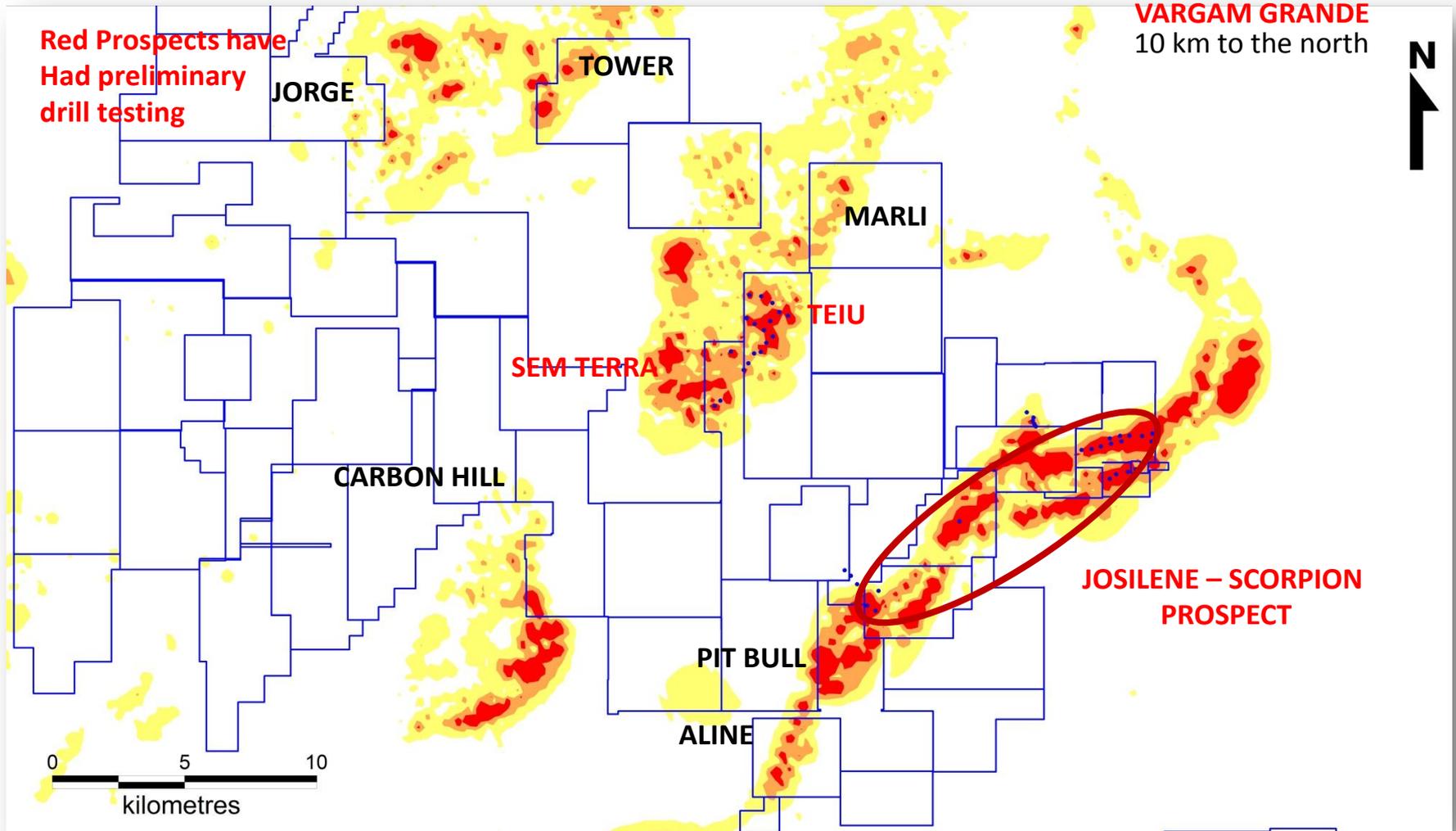


# Comparison With Honbridge

- Honbridge's **Block 8 Resource** represents the same mineralised zone as the adjacent Gema Verde mineralisation.
- Gema Verde abuts to the south separated by a tenement boundary and mineralisation has been delineated in BMG's tenement.
- Block 8 resource totals **2.6 billion tonnes** at 20% Fe and is at Definitive Feasibility stage
- Test work on nearby projects has demonstrated beneficiation to **pellet feed grade** with low impurities.
- Mineralisation is medium grained **hematite** – specularite with lower magnetite. Block 8 is gently dipping at ~15° with a low strip ratio of 0.4:1
- **Operating cost** is estimated at <US\$24 per tonne of pellet feed (FOB) which includes a \$1.00 royalty.

Source: "Game Changer: The SAM Iron Ore Project, February 2011", Honbridge Holdings Ltd [www.8137.hk](http://www.8137.hk)

# Rio Pardo Project





# Rio Pardo Drill Results

## *Highlights of the Josilene - Scorpion Drilling*

- Strike length of 13km with 26 of the 28 holes drilled returning results over 15% Fe with weighted average of 17% Fe, including:
  - 76 metres at **17.0%** Fe from surface in JORC006
  - 64 metres at **16.8%** Fe from surface in JORC005
  - 44metres at **18.75%** Fe from 92m in SCRC030
  - 40metres at **19.45%** Fe from 140m in SCRC022
  - 40metres at **18.89%** Fe from 152m in SCRC021
  - 44 metres at **16.3%** Fe from surface in JORC013
  - 44 metres at **17.0%** Fe from surface in JORC004
- The mineralisation can be readily upgraded to pellet feed grade
- BMG is drilling closer spaced RC holes to facilitate a resource estimation by July 2012
- **Exploration Target is expected to be 2 to 3 billion tonnes based on current drilling over the full strike length**



# Work Program

<b>Gema Verde Project</b> <i>June 2011 – Mid Oct. 2011</i>	<b>Comments</b>
<ul style="list-style-type: none"><li>▪ 5,000 metres RC drilling</li><li>▪ 1,200 metres DD Drilling</li><li>▪ Metallurgical Test work</li><li>▪ Resource Estimation</li></ul>	<ul style="list-style-type: none"><li>▪ BMG's drilling focus from June-August</li><li>▪ Resource definition drilling will be completed by mid September</li><li>▪ Metallurgical Testwork will be completed by September</li><li>▪ Resource estimation will be completed by mid October</li></ul>
<b>Josilene-Scorpion at Rio Pardo Project</b> <i>Sept 2011 – Aug. 2012</i>	<b>Comments</b>
<ul style="list-style-type: none"><li>▪ 10,000 metres RC drilling</li><li>▪ 1,200 metres DD Drilling</li><li>▪ Metallurgical Test work</li><li>▪ Resource Estimation</li></ul>	<ul style="list-style-type: none"><li>▪ An extensive zone of iron mineralisation has been established at the Josilene and adjacent Scorpion prospects at the Rio Pardo project, which have been drilled over a 13km strike length and a surface width up to 1000 metres based on aeromagnetic contours.</li><li>▪ Drilling has extended to approx. 120 - 150 metres and often ended in elevated assay values</li><li>▪ A more advanced drilling program is planned to add detail to the Josilene - Scorpion zone and test other viable targets on the project</li></ul>



# Beneficiation

- The proposed process design will be similar to that used at the operating Alegria Mine owned by Samarco (BHPBilliton and Vale JV) in southern Minas Gerais

## Conceptual Process Design

- Coarse grained hematite - silica mineralization with subordinate magnetite
- **Easily upgraded from 15 to 25% Fe to pellet feed at 65 - 68% Fe**
- Siliceous rock fragments included in Diamictites
- **Processing operating cost anticipated to be ~\$10 per tonne of product**
- Crush and Grind to ~0.5 mm
- Magnetic separation to extract magnetite
- De-slime to remove ultra fines
- Flotation to extract high iron component
- Products are pellet feed and sinter feed

## Pellet Feed Product

- **Market premium over lump and fines ores**
- Standardization – uniform size range, generally within a range of 9 to 16 mm
- Purity – 63 to 68 % iron
- Cost-effectiveness – virtually no loss on ignition while a high and uniform porosity of 25 to 30% allows fast reduction and high metallization rates
- Strength – high and uniform mechanical strength even under thermal stress in reducing atmospheres
- Transportable – low degradation under abrasive influences



# Australian Comparison: Braemar Iron Formation

- BMG's Brazilian iron ore projects at Gema Verde and Rio Pardo are very similar in mode of formation to the Braemar Iron Formation in SA-NSW
- Both are Neoproterozoic diamictites with magnetite – hematite minerals
- Both regions have target expectations of **20 – 40 billion tonnes**
- Grades are similar in both cases at **15 – 25% Fe**
- Both are very different to WA magnetite deposits and are easily upgradeable to pellet feed
- The Brazilian counterparts have significantly lower operating costs of **\$25 to \$30/t** compared to **\$59 to \$61/t** in Australia
- **Both are viewed as economically and commercially viable representing their countries next major iron ore provinces**



# Australian Comparison: Iron Road's SA Iron Project

- Iron road (ASX: IRD) has a Magnetite gneiss host, coarse grained moderate hardness iron deposit north of Port Lincoln, South Australian
- **Nothing like WA magnetite deposits** which are microcrystalline and very hard
- Current resource of 1.2 billion tonnes at **16.8% Fe** with easy beneficiation to pellet feed grade and operating costs of \$59 per tonne FOB
- An example in Australia of low grade Fe deposits able to produce saleable product with a simple upgrade process
- **Compare this with BMG's Brazilian projects that have similar grades of ~17% Fe (Rio Pardo) and ~20% Fe (Gema Verde), but materially lower Opex of \$25 - \$30 per tonne**

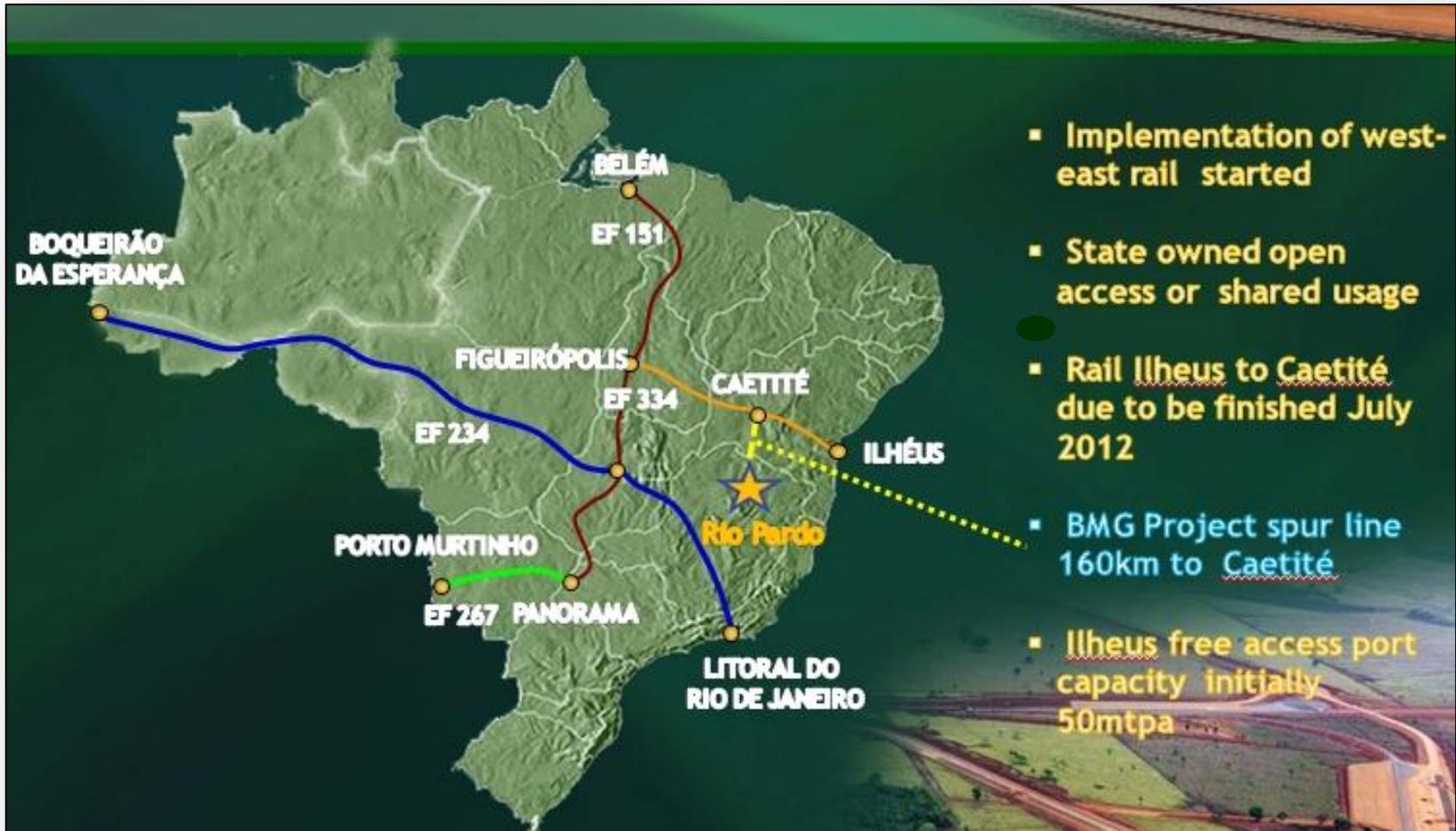
Source: "Prefeasibility Study Presentation – On the road to Production, 14 June 2011", Iron Road Limited  
[www.ironroadlimited.com.au](http://www.ironroadlimited.com.au).



# Australian Comparison: BMG's Advantage

	Iron Road, SA	Typical BIF, WA	North Minas Gerais
<b>Age</b>	Archean Magnetite gneiss	Lower Proterozoic BIF	NeoProterozoic diamictite
<b>Geological History</b>	High Grade Metamorphism	Low Grade Metamorphism	Structural disruption
<b>Mineralogy</b>	Granular magnetite – low impurities	Microcrystalline – impurities vary	Moderate sandy hematite – magnetite
<b>Magnetite grain size</b>	1.5mm average, crystalline, sharp boundaries	Very fine grained (colloidal), intergrown	0.5mm average, discrete grains of quartz and Fe minerals
<b>Hardness</b>	Moderate - Low Bond Work Index. Grind size 106-125um	Very Hard - High Bond Work Index Grind size 28-38um	<b>Friable to compact - Low Bond Work Index. Grind size 75-105um</b>
<b>Deposit Size</b>	Very Large, >1bt 16.8% Fe resource	Varies, 0.1 to >1.0 bt 35 – 40% Fe resource	<b>Very Large, &gt;1bt 16 – 25% Fe resource</b>
<b>Operating Cost</b>	A\$59-61/t product FOB	A\$65 – 75/t product FOB	<b>US\$25 – 30/t product FOB</b>

# Brazil Rail Infrastructure



- Implementation of west-east rail started
- State owned open access or shared usage
- Rail Ilheus to Caetité due to be finished July 2012
- BMG Project spur line 160km to Caetité
- Ilheus free access port capacity initially 50mtpa

- The Brazilian Government has commenced a program of rail infrastructure construction to extend across the country. The EF334 line from Ilheus to Caetite will be completed by mid 2012



# Regional Activity

- Very substantial ore bodies have been discovered in northern Minas Gerais state and iron ore projects (at all levels of development) are commanding very high values.
- **Vale do Rio Pardo** project was sold to Honbridge (backed by Chinese State owned Xinwen and Shandong Iron & Steel Group Co) for US\$430 million in April 2010. Currently in Definitive Feasibility Study phase. (Estimated at 2,639 million tonnes at 20.2% Fe\*; Honbridge market cap. US\$ 2.1 billion (as at 18 July 2011))
- **MIBA** sold to Steel do Brazil for US\$250 million in May 2010. Resold in November 2010 for US\$304 million to Eurasian National Resources Corp (ENRC). Currently in Definitive Feasibility Study. (Estimated at 824 million tonnes at 25.9% Fe\*).
- **Bamin** Project 200 km to the north of Rio Pardo at Caetite sold for US\$976M to ENRC on 21 September 2010. Currently in Development phase.
- **Vale** has announced a major initiative in the northern Minas Gerais iron ore province to upgrade their resource base and expand production. Currently in Advanced Exploration – Feasibility phase.
- **Mtransminas** is actively exploring its tenement holding north of Gema Verde. Currently in Resource Definition phase.

\* Measured plus Indicated category in accordance with JORC code



# BMG Opportunity Recap

- Major Iron project in **world class Iron province** in Brazil - early mover advantage permitted BMG to secure substantial land holding with multiple large prospects with ground floor entry
- **Potential** multi billion tonnes at 17% to 30% Fe with regional infrastructure under construction
- High acquisition prices paid and current market value for adjoining ground **demonstrates value**
- **Two Advanced Projects** at infill drilling and resource assessment stage
  - **Gema Verde** zone is the extension of Honbridge Block 8 - scoping study commenced
  - **Rio Pardo** zone at Josilene – Scorpion extends over 13 km length
- **Drilling** and other work underway to define initial JORC compliant resource and scoping study
- **Opportunity to build substantial value** with money spent in ground to build substantial mining and export business
- Experienced **management group** with commercial, legal and technical expertise and successful track record in delivering projects



Diamictite ore

# Appendix

**Corporate Directory**

**Director and Management Profiles**

**Capital Structure**

**Drill Intercept Criteria**

**Geological Notes:**

Iron Ore in Brazil

Style and Concept Model

The Northern Minas Gerais iron Ore Province

Geological Setting

Background to the Project

Beneficiation and Pelletizing

Josilene Drilling Results

Scorpion Drilling Results

Gema Verde Drilling Results



# Corporate Directory

## DIRECTORS

**Peter O'Connor** (Chairman)

**Bruce McCracken** (CEO)

Email: [bmccracken@bmgl.com.au](mailto:bmccracken@bmgl.com.au)

**Malcolm Castle** (Exec.)

Email: [mcastle@bmgl.com.au](mailto:mcastle@bmgl.com.au)

**Anthony Trevisan** (Exec.)

Email: [aatrevisan@bmgl.com.au](mailto:aatrevisan@bmgl.com.au)

**Robert Pett** (Non Exec.)

## COMPANY SECRETARY

**Fleur Hudson**

Email: [fhudson@bmgl.com.au](mailto:fhudson@bmgl.com.au)

ASX Codes: BMG, BMGO

## PRINCIPAL PLACES OF BUSINESS

### Australia:

Level 14, 191 St George's Terrace

Perth, WA, 6000, Australia

Telephone: (08) 9424 9390, Fax: (08) 9321 5932

Email: [info@bmgl.com.au](mailto:info@bmgl.com.au)

### Brazil:

Minas Norte Mineracao Ltda

Rua Antonio de Albuquerque, Av Professor Moraes, Savassi, Belo Horizonte, Minas Gerais, Brazil

## CHIEF OPERATING OFFICER – BRAZIL

**Phillip Fox**

Email: [pfox@bmgl.com.br](mailto:pfox@bmgl.com.br)



# Directors and Management

## **Mr. Peter O'Connor – Chairman**

MA Economics and Political Science, Trinity College, Dublin; called to the Irish Bar, King's Inns, Dublin (1964)

Mr O'Connor has over 40 years experience in international investment management, and is chairman of a number of publicly quoted investment companies with particular exposure to Asia, Australia and Canada, including; Advance Developing Markets Fund (listed on the London Stock Exchange - US\$500 million) and NEO Material Technologies Inc (a producer of rare earth/magnetic products in China and Thailand listed on the Toronto Stock Exchange).

## **Mr. Bruce Alexander McCracken - Chief Executive Officer**

BCom, LLB, MBA, GAICD - Commerce and Legal

Mr McCracken is a business executive with 20 years experience across a broad range of industries. Most recently he was Corporate Development Director of the Kirin Group-owned Lion Pty Ltd (previously Lion Nathan National Foods Ltd), focused on the execution of strategic opportunities, primarily through M&A. He was originally a banking and finance lawyer, and was previously Senior Vice-President Mergers & Acquisitions with Deutsche Bank and Group Manager, Corporate Development for industrial materials Amatek Group. Mr McCracken also spent eight years as an investment banker with Deutsche Bank, Merrill Lynch, Credit Suisse First Boston and Rothschild Australia Ltd.

## **Mr. Malcolm John Castle - Executive Technical Director**

B.Sc. (Hons), GCertAppFin (Sec Inst), MAusIMM – Applied Geology and Finance

Mr Castle has over 40 years experience in exploration geology and project evaluation. He has wide experience in a number of commodities including iron ore, gold, base metals, uranium and mineral sands, and has been responsible for project discovery through to feasibility study and development in a number of projects. He was a founding member of Fortescue Metals Group, and a key member of the team developing the definitive feasibility study for the Cloudbreak and Christmas Creek projects. Mr Castle is a Member of the Australasian Institute of Mining and Metallurgy (AusIMM).



# Directors and Management

## **Mr. Anthony Augustine Trevisan – Non-Executive Director**

Mr Trevisan has over 30 years corporate experience in the establishment and management of companies, equity and debt financings, mergers and acquisitions and the restructuring of mineral resources, petroleum and property based public companies. He has been responsible for over a billion dollars in public offerings and the floating of companies on the ASX and other major exchanges. Mr Trevisan has held senior executive positions in listed public companies in the oil & gas, mining, industrial and property sectors, including; Mediterranean Oil & Gas Plc (founder and executive director, Ombrina Mare oil discovery), Arabex Petroleum NL (founder and executive director, Rubiales oil discovery), Callina NL (executive chairman, petroleum work-over project at Komi Oil field, Russia), Aqua Vital (Australia) Ltd (executive chairman, now owned by Coca Cola), TRG Properties and the Roy Weston Group (executive chairman) amongst others. He was substantially responsible for identifying and acquiring BMG's Rio Pardo Project.

## **Mr. Robert James Pett – Non-Executive Director**

BA(Hons), MA (Econ), FAICD - Mineral Economist

Mr Robert Pett is a minerals economist with over 27 years experience in exploration and mining. He has overseen the successful exploration, development, operation and financing of a number of mining projects worldwide. This includes gold and nickel mines in Australia and gold mines in East and West Africa. He has also been involved in grass roots discoveries and exploration projects. He holds a Masters Degree from Queens University Canada. Mr Pett is Chairman of Ausgold Ltd (Katanning Gold discovery), Indochina Minerals Ltd and A-cap Resources Ltd and a director of Regalpoint Resources Ltd.

## **Mr Phillip Fox - Chief Operating Officer, Brazil**

BSc , MAIG - Geology

Mr Fox is an exploration geologist with 17 years experience, in gold, base metals and uranium exploration. He has held management roles in Australia, Romania, Brazil and Argentina. He also has experience in resource estimation and production geology. Mr Fox has the capacity to implement the exploration and feasibility aspects of projects to the highest standard. He is based in Belo Horizonte, MG, Brazil.



# Capital Structure

<b>ASX Codes:</b>	BMG/ BMGO
<b>Total Issued Shares:</b>	c.147.7 million
<b>Escrowed Shares*:</b>	c.72.2 million
<b>Tradeable Options:</b>	c.136.8 million (ex. 20c until 31/03/2014)
<b>Escrowed Options:</b>	c.1.24m (ex. 20c until 31/10/2011) 0.75m (ex. 20c until 30/11/2012)
<b>Net cash at 30 June 2011:</b>	A\$4.3 million

*\* Shares associated with BMG founders in escrow until December 2012, Included in total issued shares*



# Drill Intercept Criteria

## **Rio Pardo Reverse Circulation intercepts**

Significant zones of mineralisation are based on a lower cut off of 15% Fe. All assay intercepts are down hole intervals in vertical holes and at this stage the structure of the host rocks is not known in sufficient detail to estimate true widths. The assays quoted are based on weighted averages of the significant zone with included material of slightly lower grades. Weighting was based on down hole intercept length. All drill holes are by Reverse Circulation at approximately 13.25 cm size. Samples were collected by splitting the RC return material, compositing to 4 metre intervals, riffle split to an appropriate size for submission to a laboratory. Sample recovery was estimated by measurement of the weight of the return and was considered to be satisfactory.

## **Gema Verde Diamond Drill Intercepts**

Significant zones of mineralisation are based on a lower cut off of 15% Fe. 1480 metres of the diamond core was assayed with an average grade of 15.6% Fe. 47% of the metres exceeded 15% Fe with an average grade of 20.2%. All assay intercepts are down hole intervals in angled and vertical holes and at this stage the structure of the host rocks is not known in sufficient detail to estimate true widths. The assays quoted are based on weighted averages of the significant zone with included material of slightly lower grades. Weighting was based on down hole intercept length. All drill holes are by diamond coring at approximately HQ and size. Samples were collected by splitting to half core, compositing to 10 metre intervals, crushed and riffle split to an appropriate size for submission to a laboratory. Sample recovery was estimated by measurement of the drill core and was considered to be satisfactory.



# Iron Ore in Brazil

The geology of Brazil's land mass is not well known when compared with the large quantity and high quality of the geological studies of other countries with mining traditions, such as Canada, Australia and the United States. Despite this shortage of basic information, Brazil is known internationally for its diversity of geological environments, high volume of already identified mineral reserves and large variety of mineral products in its mineral provinces and districts. The Earth's largest iron reserves are composed of Banded Iron Formations (BIFs), which are altered sedimentary deposits with laminated rocks formed by alternating layers of silica and hematite-magnetite, as well as carbonates and iron silicates. The amount of iron found in BIFs typically varies from 20% to 35%, but percentages of more 55% do occur less frequently. The term "itabirite" is frequently used as a synonym for these formations, especially in the iron belt located in Minas Gerais state known as the Quadrilátero Ferrífero.

Brazil's reserves are known for their high metal content, which frequently exceeds 60%. Brazil's two most important iron provinces are Carajás in the state of Pará and the Quadrilátero Ferrífero iron belt in the state of Minas Gerais, which together account for approximately 98% of the country's iron ore production. A large number of companies quote resources in the 30% to 40% FE range which require beneficiation. This processing is well understood and pellet feed products with grades of 65% to 68% are achievable.

The **Quadrilátero Ferrífero** is recognized for its high volume of reserves, the high quality of the ore produced and the cumulative production. Major mining companies such as Vale, Ferteo and MBR first launched their operations in this region, which presents complex geology divided into three large units: the Basement and the Rio das Velhas Supergroup, both of which are Archean, and the Minas Supergroup, which is Paleoproterozoic. In the Quadrilátero Ferrífero province, the principal deposits are formed by itabirite layers with thicknesses measuring 250 meters that are associated with the Minas Supergroup, more precisely the Itabira Group of the Cauê Formation. These itabirites contain iron ore oxide facies, such as hematites, magnetites and martites. Overlaying the Cauê Formation is the Gandarela Formation, Itabira Group, where itabirites are also found, although in this case they are associated with dolomites.

The **Carajás** province located in Serra dos Carajás was discovered later and was the location chosen to install a large production unit that encompasses the mine, railroad and port known as the Carajás Project, which was developed in the 1970s by the federal government. Approximately 30% of Brazil's reserves are located in the Carajás province. These reserves are characterized by high iron content, in most cases above 65%, and are also associated with itabirites in the Carajás Formation. The main iron minerals are hematite and martite, followed by magnetite and goethite. Secondary deposits are also present, formed by supergene enrichment. The most important iron deposits in the Carajás region are located in Serra Norte, where ore production began in 1985, while the other secondary deposits are located in Serra Sul, Serra Leste and Serra São Félix. Among known deposits, the ones most similar to those in Carajás are located in Hamersley, Australia.



# Iron Ore in Brazil (Cont'd)

In addition to these two provinces, other important reserves exist in Brazil, such as Corumbá in the state of Mato Grosso do Sul, and Rio do Peixe Bravo, Guanhães and Morro do Pilar in the state of Minas Gerais.

In **Corumbá**, the most important reserves are concentrated in the region known as Urucum, which extends beyond Brazil's borders into Bolivia, with the main deposit located in Morro de Mutum. The reserves in Urucum are estimated at approximately 5 billion metric tons of jaspilite, with average iron content of 54%, plus 900 million metric tons of colluvial ore with average iron content of 63%. In this province, the iron formation has a thickness of 300 meters, composed of rhythmically alternating layers of hematite and jasper. Even more important are the secondary colluvial deposits, which contain enriched ore with silica depletion and iron content of up to 67%. There are several active mines in the Corumbá province that combined generate annual iron production of roughly 4 million metric tons.

The deposits in **Rio do Peixe Bravo** are located in northern Minas Gerais state in the regions of Rio Pardo de Minas, Porteirinha and Riacho dos Machados. Reserves in this region were estimated by Vale at approximately 3.5 billion tonnes in 1986 but a resource update in 2008 put this at 10 billion tonnes, with average iron content of 35%. This iron formation is 600 meters thick and is basically composed of diamictites and hematite quartzites. Stratigraphically these deposits are positioned in an intercalation of the Nova Aurora Formation of the Macaúba Group. There is a high probability of the existence of genetic and geochronologic equivalence between the deposits in Rio do Peixe Bravo and the abovementioned jaspilites in Urucum in the Corumbá region, given that both are proterozoic and associated with glacial sediments of the Macaúbas Group. Recent estimates or resources in the area are in excess of 20 billion tonnes.

The **Guanhães and Morro do Pilar** deposits are located in the region of Serra do Espinhaço in the state of Minas Gerais, some 100 kilometers northwest of the state capital Belo Horizonte. In Guanhães, the iron ore reserves exceed 460 million metric tons, while those of Morro do Pilar stand at 420 million metric tons.

The most valuable deposits are formed by itabirites with oxide facies, with thickness varying from 5 to 150 meters. Based on petrographic and lithostratigraphic evaluations and taking into account their trace elements, these deposits presented similarities with Superior type iron formations, which could be correlated with the itabirites in the Cauê Formation, which are also present in the Quadrilátero Ferrífero.

In 2007, Brazil's probable and proven iron ore reserves were estimated by the DNPM at approximately 26 billion metric tons, ranking Brazil fifth worldwide in terms of iron ore reserves. It is important to note that when based on the ore's iron content, Brazil's ranking increases, given the occurrence of high grade ores such as those in Carajás, which have iron content of 65%, and those in Quadrilátero Ferrífero and Corumbá, which have ore with iron content of 60%. Bear in mind that the DNPM adopts a specific methodology for estimating reserves that is not necessarily the same adopted by other corresponding agencies.



# Style and Concept Model

There is a clear distinction between older Banded Iron Formation iron ore deposits and the younger Rapitan type deposits which has an important bearing on their exploration approach and beneficiation characteristics. The North Minas Gerais (Rio do Peixe Bravo) deposits are of the younger Rapitan type associated with glaciomarine sediments.

Banded iron-formations (or BIF) are finely bedded chemical sedimentary rocks composed of interlaminated quartz (chert) and iron-bearing minerals with an iron content of about 30 wt%. Four principal types of BIF are distinguished, all of which are restricted to well defined time intervals in the Precambrian. BIF are notably absent from the Phanerozoic geological record.

Algoma-type BIF is widespread in the Archean greenstone belts, prior to 2.75 Ga. Many examples are known from all Archean cratonic nuclei. Algoma-type BIF are relatively restricted and always in close association with mafic volcanic rocks.

Hamersley-Transvaal-type BIF is very large and laterally extensive iron-formations that are essentially restricted between 2.0 Ga and 2.75 Ga. They represent by far the largest BIF deposits known. They formed as finely laminated mud below wave base of the extensive shelf platforms that developed around the first large stable Cratons. Hamersley-Transvaal-type BIFs have no apparent link to penecontemporaneous volcanism. Type examples are found in the Hamersley Group (Australia) and in the Transvaal Supergroup of South Africa. Most economically important BIF-hosted ore deposits are restricted to this type of BIF.

Granular iron-formations are closely related to the previous type, but are slightly younger (1.8-2.1 Ga), of much smaller lateral extent and were deposited above wave base. They show much coarser banding than the Hamersley-Transvaal-type and are typically composed of closely packed granules and oolites of iron oxides or chert. Type examples are found in the Lake Superior region (North America).

Rapitan-type iron-formations are Neoproterozoic (0.8-0.6 Ga) iron-formations that are characterized by their distinct association with glaciomarine sediments. They are thought to have been deposited in the immediate aftermath of a so-called '**Snowball Earth**' state which is a term used to describe the period when the Earth was entirely covered with an ice sheet. This created conditions underneath the ice sheet which were conducive to iron transportation and deposition from solution. Examples include the Rapitan Group (Canada), the Yudnamutara Subgroup (Braemar -Australia), the Chuos Formation (Namibia), and the Jacadigo Group (Brazil).



# Northern Minas Gerais Iron Ore Province

The geological structure in mid-eastern Brazil is largely derived from the Brazilian orogenesis which created a network of fold belts separated by cratons. The São Francisco Craton stretches over an area of approximately 680,000 Km<sup>2</sup>, comprising areas of the states of Minas Gerais, Bahia and Goiás. Overall, the Craton is surrounded by a network of 'Braziliana' fold belts or strips, known as Brasília, Araçuaí, Rio Preto, Riacho do Pontal and Sergipana belts. These belts, also known as "Moving Belts", are fold and thrust structures derived from the inversion of rift-type basins, infilled by gravity-induced, glaciation-influenced sedimentation. In the southeastern portion of the Craton, sediments crop out on the Jequitaí Formation (glacial diamictites) and, in the Araçuaí fold belt, deformed metasediments crop out on the Macaúbas Group, which is associated with the iron formations in northern Minas Gerais.

The iron ore deposits in Rio do Peixe Bravo are located in northern Minas Gerais state in the regions of Rio Pardo de Minas, Porteirinha and Riacho dos Machados. This iron formation is up to 600 metres thick and is basically composed of diamictites and hematite quartzites. Stratigraphically these deposits are positioned in an intercalation of the Nova Aurora Formation of the Macaúba Group. There is a high probability of the existence of genetic and geochronologic equivalence between the deposits in Rio do Peixe Bravo and the abovementioned jaspilites in Urucum in the Corumbá region, given that both are Proterozoic and associated with glacial sediments of the Macaúbas Group.

The distribution of banded iron formations in the geological record is limited to an early period in the Earth's history. Radiometric dating reveals that banded iron formations were primarily deposited during the Archaean (2.5 Ga) through the Early Proterozoic (between 2.5 and 1.6 Ga) eras, their greatest development occurring between 2.6 and 1.8 Ga ago. After about 1.8 Ga ago, there was essentially no deposition of banded iron formations, except for a slight resurgence of deposition that occurred between 800 and 600 Ma ago. These younger deposits, including the **Rapitan Iron Formation** in north-western Canada, Braemar Iron Formation in South Australia, The Macaubas Group in North Minas Gerais and the sequences in Corumba in Brazil, have a distinctly different character in comparison with the older banded iron formations, suggesting that they formed under different environmental conditions. Since 600 Ma ago, no true banded iron formations have been deposited.

The Northern Minas Gerais iron ore province covers the **Rio do Peixe Bravo** type deposits which are **Rapitan** in nature and associated with diamictites and hematitic quartzites.

In 2008 the Institute of Industrial Development of Minas Gerais announced the discovery of iron ore in the north of the state. This emerging iron ore province rivals the Iron Quadrangle in the Belo Horizonte region. Whilst Grades in this region are lower the iron content may be readily beneficiated and extensive tests have shown iron content of 15 - 30% Fe is readily upgradable to 65% to 68%. More recent work by Codemig, Miba, Vototantim, Mtransminas and Gema Verde established a firm foundation for a large iron ore industry in the area with extensive surface indications of iron ore mineralization.



# Geological Setting

The **Macaúbas Group**, a major stratigraphic unit in the Araçuaí Belt, which was deposited under glacial influence, is composed of metadiamicctites, quartzites, phyllites and quartz schists. Local metadiamicctites were initially interpreted, during the 1950s and 1960s, as being tillites. Depositional processes only recently have been better understood, with the various types of diamicctites now being interpreted as related to glaciomarine sedimentation processes. Also in a general manner, these metadiamicctites are related to quartzites and metapellites making up sedimentary continental rift-type and convergent basins near Neoproterozoic magmatic arcs.

Concordantly deposited on a basement made up of quartzitic rocks of the Espinhaço Supergroup, the Macaúbas Group reaches a few kilometers in thickness and is essentially composed of metadiamicctites, with a significant vertical and lateral gradation into pure and/or hematitic quartzites.

The Macaúbas Group has been subdivided into two distinct lithostratigraphic units, known as Rio Peixe Bravo Formation (basal unit) and Nova Aurora Formation. A lithologic unit separated from the latter is referred to as Riacho Poções Member and in which local hematite rocks are associated.

The Riacho Poções Member is intercalated into the Nova Aurora Formation, part of the Macaúbas Group, and is approximately 600m thick. It consists mostly of grayish diamicctites that grade into hematitic, often magnetitic diamicctites. Banded quartzites and hematitic, quartz phyllites occur amidst diamicctites. Diamicctites contain as much as 60% Fe throughout the entire formation. Structured cangas (detrital iron deposits – DID) are associated with the Iron Formation outcrops.

Hematitic quartzites are banded rocks, with quartz bearing beds (50-60% SiO<sub>2</sub>), rich in sericite, apatite, opaques, chlorite and zircon, alternating with hematite beds (35-40% Fe), with magnetite and martite, and ilmenite lamellae. Sedimentary structures are obliterated by recrystallization and metamorphic foliation. The sequence is folded and rocks have at least two schistositys.

In genetic terms, the presence of diamicctites with their matrix replaced with iron and banded quartzites suggests that the environment in which the Riacho Poções Member originally developed was a basin in which clastic and exhalative chemical sedimentation occurred. The replacement of diamicctite matrix with hematite suggests that infusion of diamicctite matrix with hematite and further suggests that exhalation of ferruginous fluids continued after chemical and clastic sedimentation and, probably, after diagenesis.

Surficial cangas are quite common in the area of occurrence of the rocks of Riacho Pocos Member. They are no more than 20 m thick and are typical of chemical interaction with iron rich groundwaters.

The Rapitan style glaciomarine sedimentary sequences of the Rio Pardo area host significant manganese deposits which form a viable target within the tenement area.



# Background to the Project

The area was first explored in 1964 - 78 by Vale and more recent work by Codemig, Miba, Vototantim, Mtransminas and Gema Verde has established a firm foundation for a large iron ore industry in the area with extensive surface indications of iron mineralization. The Rio Pardo Iron Project straddles the northern extensions of the known mineralized area. Field examination has demonstrated the presence of iron ore and manganese mineralization within the block, with a number of major drilling targets identified to date.

Several large iron deposits in the northern Minas Gerais province have been studied at definitive feasibility level and have focussed on the beneficiation aspects of the iron bearing material.

- The Vale do Rio Pardo project (formerly known as the Salinas project), located to the south of the Company's Rio Pardo iron project, was originally studied by Votorantim and more recently by the current owner, Honbridge Holdings Limited. Honbridge has announced a mineralised resource estimated in accordance with the JORC Code of 1,135 million tonnes at 20.57% Fe in the Measured Category, 1,479 million tonnes at 19.64% Fe in the Indicated Category and 1 million tonnes at 18.34% Fe in the Inferred Category in Block 8 and 25 million tonnes at 21.7% Fe in the Indicated Category and 1,031 million tonnes at 20.6% Fe in the Inferred Category in Block 7. The Salinas project was purchased by Honbridge in 2009 for a maximum of US\$430 million dollars. Beneficiation tests published by Honbridge indicate that the ROM feed material at grade of around 19% to 20% could readily be upgraded to pellet feed grades of 65% Fe for an estimated process operating cost of US\$10.73.
- The Jiboia Deposit located near the Vale do Rio Pardo deposit was initially drilled by Minas Bahia Mineracao Ltda (MIBA) and sold to Steel do Brazil who undertook further drilling to allow an estimate of resource to be completed. In May 2010, Golder Associates confirmed a JORC compliant mineralised resource of 824 million tonnes at 27.0% Fe in the Indicated category and 2,041 million tonnes at 25.5% Fe in the Inferred category. The project was subsequently sold to the Eurasian Natural Resources Corporation PLC (ENRC) for US\$256 million. The remaining 49% of an extensive exploration portfolio with very little work to date was also acquired for US\$50 million.
- Large deposits of iron ore are also known to be present on adjacent ground held by Vale, Mtransminas and Gema Verde though details have not been released to the required JORC standard.

BMG is targeting deposits similar in nature to the Vale do Rio Pardo and Jiboia deposits.

While the Company remains optimistic that it will report resources and reserves in the future, any discussion in relation to exploration targets or resource potential is only conceptual in nature. There has been insufficient exploration to define a Mineral Resource and it is uncertain if further exploration will result in the determination of a Mineral Resource. .

# Deposit Locations

Known Ore bodies in the North Minas Gerais Province

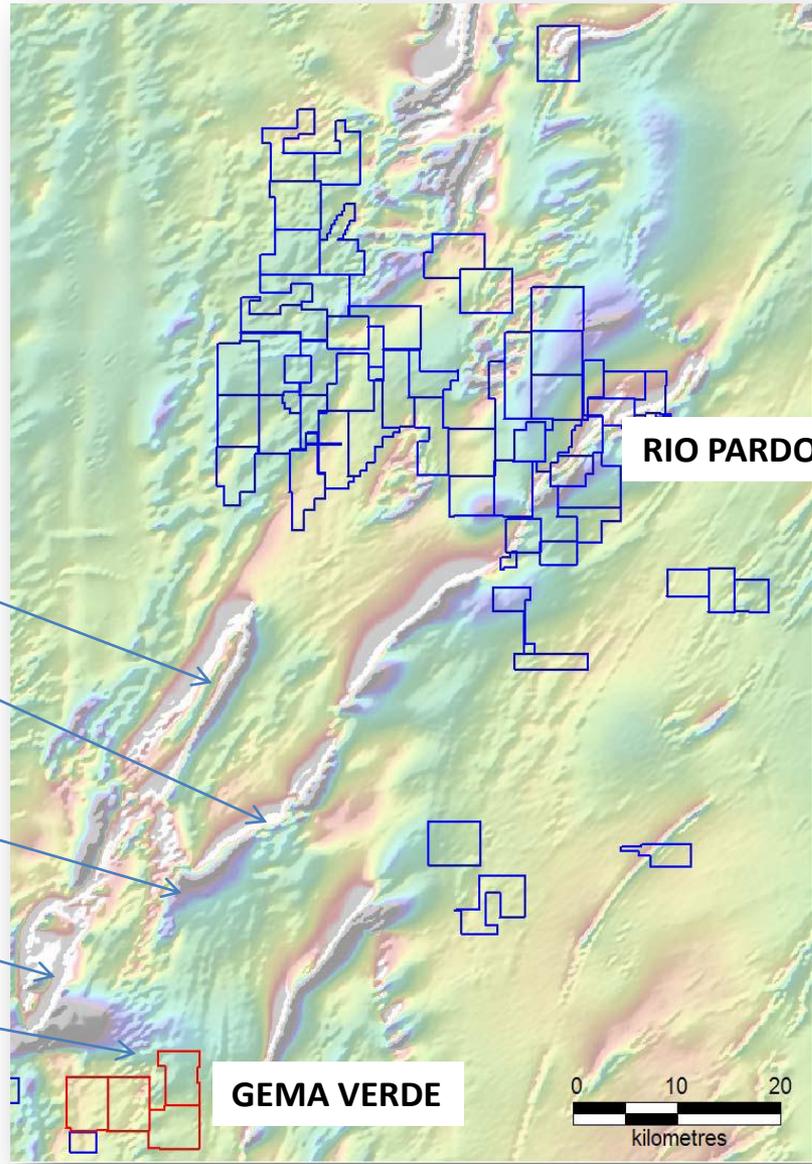
**VALE** Nova Aurora

**HONBRIDGE** Block 7

**MTRANSMINAS**

**ENRC** Jiboia

**HONBRIDGE** Block 8





# Beneficiation and Pelletizing

Lower grade Iron ore cannot be used directly in metallurgical plants and needs to be upgraded to increase the iron content and reduce the impurity content. A process adopted to upgrade ore is called Beneficiation. Iron ore is being beneficiated all round the world to meet the quality requirement of Iron and Steel industries. Several techniques such as washing, jigging, magnetic separation, advanced gravity separation and flotation are being employed to enhance the quality of the Iron ore.

Due to the high density of hematite relative to silicates, beneficiation usually involves a combination of crushing and milling, magnetic separation if magnetite is present as well as heavy liquid separation. This is achieved by passing the finely crushed ore over a bath of solution containing bentonite or other agent which increases the density of the solution. When the density of the solution is properly calibrated, the hematite will sink and the silicate mineral fragments will float and can be removed.

There is a clear distinction between older banded iron formations such as the Hamersley Ranges or the Carajas deposits where production has focused on high grade direct ship ore and the younger **Rapitan** type deposits associated with glacial sediments where grades are often between 15% and 30% Fe. Rapitan type deposits are usually formed on hematite and chert (jasper) and in North Minas Gerais deposits also contain magnetite.

Older banded iron formations generally consist of very fine grained (colloidal) chert and iron rich layers which require very fine grinding to release the valuable material. The Rapitan ores are easily upgraded because of their coarse sedimentary structure where iron minerals and deleterious rock fragments can be separated by magnetic separation, desanding and floatation at relatively low cost.

The proposed process route will be similar to that used at the operating Alegria Mine (for example) owned by Samarco in southern Minas Gerais. Itabiritic ore is delivered to a crushing and screening plant in the blending yard. At the Germano beneficiation plant the ore is screened, crushed and classified to feed the primary mills. This circuit assures sufficient reduction of the iron ore particles. Most of the magnetite is removed by magnetic separation. The non-magnetic material is then deslimed with the ultrafine material being removed in cluster cyclones before conventional flotation where waste material such as silica is separated from the iron particles. The ore is reground and enters a column flotation circuit.

Pelletizing turns very fine-grained iron ore into balls of a certain diameter, also known as pellets, which are suitable for blast furnace and direct reduction. Pellet plants can be located at mines, near harbours or be attached to steel mills. Equipped with advanced environmental technology, they are almost pollution-free, generating no solid or liquid residues.

Why pelletize? In the face of shrinking world reserves of high-grade ores, ores must now be concentrated before further processing. Pellets form one of the best options, thanks to their excellent physical and metallurgical properties. Moreover, due to their high strength and suitability for storage, pellets can be easily transported over long distances, with repeated trans shipments if necessary.



# Gema Verde Drilling Results

Hole ID	Easting	Northing	RL	Azi	Decl	Depth	Hole ID	From	To	Int.	Fe,%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P,%
FSD 08-001	741,668	8,196,214	924	0	- 90.00	169.15	FSD 08-001	42.95	52.95	10.00	20.90	65.20	2.92	0.086
FSD 08-002	741,177	8,196,252	921	330	- 75.00	102.00	FSD 08-002	No significant Results						
FSD 08-003	741,973	8,196,197	924	340	- 75.00	144.70	FSD 08-003	122.50	132.50	10.00	21.80	63.00	3.14	0.251
FSD 08-004	742,760	8,196,146	924	0	- 90.00	130.65	FSD 08-004	No significant Results						
FSD 08-005	741,886	8,196,717	914	315	- 75.00	79.50	FSD 08-005	16.65	34.05	17.40	24.82	53.32	6.05	0.070
							FSD 08-005	54.05	64.05	10.00	22.20	63.90	3.19	0.029
FSD 08-006	742,031	8,197,224	899	320	- 75.00	83.57	FSD 08-006	43.57	63.57	20.00	19.65	67.85	2.90	0.029
FSD 08-007	742,757	8,197,173	911	280	- 75.00	181.90	FSD 08-007	No significant Results						
FSD 08-008	742,296	8,197,205	904	280	- 75.00	195.80	FSD 08-008	133.07	138.07	5.00	23.80	56.80	1.93	0.276
FSD 08-009	742,586	8,197,707	894	280	- 75.00	196.25	FSD 08-009	176.25	196.25	20.00	18.20	64.50	2.99	0.187
FSD 08-010	742,853	8,198,208	894	280	- 75.00	203.75	FSD 08-010	No significant Results						
FSD 08-011	742,028	8,197,671	873	0	- 90.00	125.76	FSD 08-011	3.20	30.55	27.35	23.95	60.70	3.07	0.029
FSD 08-012	742,283	8,197,716	880	280	- 75.00	109.10	FSD 08-012	62.62	82.62	20.00	20.25	66.00	3.03	0.027
FSD 08-013	742,059	8,198,225	864	0	- 90.00	73.10	FSD 08-013	2.90	19.70	16.80	27.83	56.37	2.59	0.038
FSD 08-014	742,518	8,198,726	864	280	- 75.00	129.45	FSD 08-014	68.70	88.70	20.00	21.60	61.90	3.01	0.220
FSD 08-015	742,568	8,198,190	878	0	- 90.00	242.68	FSD 08-015	56.00	66.00	10.00	18.10	63.50	3.93	0.244
							FSD 08-015	121.00	126.46	5.46	20.50	61.60	2.59	0.230
FSD 08-016	742,455	8,199,641	830	0	- 90.00	172.95	FSD 08-016	8.05	17.20	9.15	26.70	56.20	3.30	0.040
FSD 08-017	742,246	8,199,397	867	280	- 75.00	302.00	FSD 08-017	No significant Results						
FSD 08-018	742,700	8,199,233	851	280	- 75.00	201.35	FSD 08-018	35.75	93.00	57.25	17.21	67.14	3.71	0.148
FSD 08-019	742,155	8,198,771	870	0	- 90.00	160.50	FSD 08-019	4.65	13.38	8.73	30.70	50.00	2.99	0.033
FSD 08-020	742,812	8,198,732	879	280	- 75.00	210.10	FSD 08-020	145.50	170.50	25.00	18.14	64.86	3.19	0.197
FSD 08-021	742,274	8,196,186	924	0	- 90.00	262.60	FSD 08-021	164.00	194.00	30.00	16.90	63.33	4.62	0.258
							FSD 08-021	224.00	234.00	10.00	21.60	60.10	2.64	0.236
FSD 08-022	742,971	8,197,670	909	280	- 75.00	232.15	FSD 08-022	No significant Results						
FSD 08-023	742,521	8,198,475	867	280	- 75.00	214.85	FSD 08-023	34.45	44.45	10.00	20.60	63.90	3.88	0.110
							FSD 08-023	74.45	89.51	15.06	21.02	60.55	2.53	0.222
FSD 08-024	743,037	8,199,069	874	280	- 75.00	185.30	FSD 08-024	152.85	181.15	28.30	20.22	61.65	2.75	0.211
FSD 08-026	742,262	8,199,020	865	280	- 75.00	86.75	FSD 08-026	No significant Results						
FSD 08-027	742,581	8,199,004	858	280	- 75.00	101.90	FSD 08-027	36.60	90.84	54.24	19.46	64.74	3.38	0.155
FSD 08-028	742,586	8,198,588	874	280	- 75.00	114.20	FSD 08-028	76.95	96.95	20.00	22.00	60.75	2.64	0.225
FSD 08-029	742,826	8,198,505	885	280	- 75.00	220.70	FSD 08-029	193.60	203.60	10.00	19.60	62.70	2.73	0.211
FSD 08-030	743,044	8,199,901	795	280	- 75.00	63.85	FSD 08-030	5.20	28.23	23.03	18.43	68.27	3.55	0.023
FSD 08-031	742,230	8,198,540	867	280	- 75.00	99.30	FSD 08-031	24.76	34.76	10.00	29.30	54.40	2.70	0.028
FSD 08-032	743,077	8,199,537	836	280	- 75.00	150.55	FSD 08-032	103.70	129.40	25.70	23.37	57.51	2.62	0.262
FSD 08-033	742,802	8,199,397	840	280	- 75.00	101.50	FSD 08-033	59.80	80.20	20.40	21.54	60.55	2.85	0.237
FSD 08-034	742,405	8,197,952	870	280	- 75.00	107.90	FSD 08-034	77.30	86.89	9.59	24.40	61.30	2.82	0.141
FSD 08-035	742,738	8,197,976	894	280	- 75.00	245.85	FSD 08-035	222.55	232.55	10.00	22.30	59.30	2.54	0.259
FSD 08-036	742,208	8,196,719	916	280	- 75.00	112.62	FSD 08-036	No significant Results						
Number of holes	35		Total Metres			5,514.28	Weighted Average			568.46	20.91	62.44	3.25	0.152



# Josilene Drilling Results

Hole ID	Easting	Northing	RL	Azi	Decl	Depth	Hole ID	From	To	Int.	Fe,%	SiO <sub>2</sub> %	Al <sub>2</sub> O <sub>3</sub> %	P,%	LOI,%	
JORC 001	792,756	8,261,935		0/360	- 90.00	143.00	JORC001	104	128	24	14.97	62.28	9.46	0.128		
JORC 002	792,785	8,262,250		0/360	- 90.00	118.00	JORC002	36	60	24	15.76	64.90	7.91	0.056	3.57	
JORC 003	792,395	8,262,158		0/360	- 90.00	160.00	JORC003	36	132	96	16.90	58.62	9.89	0.106	2.04	
JORC 004	792,006	8,262,066		0/360	- 90.00	150.00	JORC004	0	44	44	17.04	59.05	10.40	0.058	4.56	
JORC 005	791,617	8,261,974		0/360	- 90.00	120.00	JORC005	0	64	64	16.81	58.69	10.45	0.098	3.75	
JORC 006	791,228	8,261,882		0/360	- 90.00	94.00	JORC006	0	76	76	17.00	57.51	9.97	0.102	3.86	
JORC 007	790,838	8,261,790		0/360	- 90.00	115.00	JORC007	0	20	20	16.29	56.34	13.03	0.053	6.01	
							JORC007	56	68	12	17.03	58.91	9.50	0.123		
JORC 008	790,449	8,261,699		0/360	- 90.00	164.00	JORC008	0	36	36	15.17	59.74	11.66	0.064	5.42	
JORC 009	790,157	8,261,630		0/360	- 90.00	120.00	JORC009	8	24	16	15.15	58.83	12.38	0.034	5.66	
JORC 011	791,161	8,260,545		0/360	- 90.00	91.00	JORC011	64	80	16	15.69	62.97	8.23	0.132		
JORC 012	791,397	8,260,722		0/360	- 90.00	100.00	JORC012	0	16	16	26.91	44.87	9.01	0.086	6.75	
JORC 013	791,570	8,262,178		0/360	- 90.00	121.00	JORC013	0	44	44	16.25	58.48	11.86	0.060	5.19	
JORC 014	791,842	8,260,800		0/360	- 90.00	81.00	JORC014	No significant Results								
JORC 015	792,138	8,260,904		0/360	- 90.00	115.00	JORC015	No significant Results								
JORC 017	791,183	8,262,080		0/360	- 90.00	124.00	JORC017	0	40	40	18.51	57.23	10.36	0.057	4.23	
Number of holes		15		Total Metres		1,673.00	Weighted Average			528	16.92	58.56	10.33	0.085	3.65	



# Scorpion Drilling Results

Hole ID	Easting	Northing	RL	Azi	Decl	Depth	Hole ID	From	To	Int.	Fe,%	SiO <sub>2</sub> , %	Al <sub>2</sub> O <sub>3</sub> ,%	P,%	LOI,%
SCRC 001	781,910	8,255,826		0/360	-90.00	164.00	SCRC001	20	124	104	15.03	61.90	9.83	0.143	2.75
SCRC 002	782,347	8,256,381		0/360	-90.00	109.00	SCRC002	20	36	16	17.75	57.63	10.43	0.057	5.41
SCRC 003	781,540	8,256,644		0/360	-90.00	116.00	SCRC003	16	24	8	15.55	56.85	13.00	0.036	6.85
							SCRC003	88	112	24	17.40	60.73	8.43	0.179	
SCRC 008	785,449	8,258,996		0/360	-90.00	145.00	SCRC008	28	52	24	16.02	60.80	10.10	0.076	4.36
							SCRC008*	144	145	1	17.30	63.50	4.37	0.137	3.53
SCRC 021	788,329	8,262,672		0/360	-90.00	210.00	SCRC021	0	12	12	16.93	58.33	10.34	0.045	4.70
							SCRC021	152	192	40	18.89	58.51	8.56	0.152	
SCRC 022	788,264	8,262,795		0/360	-90.00	184.00	SCRC022	0	4	4	19.40	54.20	10.80	0.063	7.07
							SCRC022	140	180	40	19.45	56.83	8.40	0.156	
SCRC 023	781,665	8,252,240		0/360	-90.00	126.00	SCRC023	20	24	4	17.60	58.90	8.51	0.060	5.60
SCRC 024	781,308	8,256,969		0/360	-90.00	134.00	SCRC024	24	40	16	20.08	53.58	10.92	0.037	6.62
SCRC 025	781,073	8,257,182		0/360	-90.00	175.00	SCRC025	12	16	4	16.20	57.30	12.90	0.020	5.89
SCRC 026	788,044	8,263,125		0/360	-90.00	102.00	SCRC026	12	16	4	20.50	53.00	7.65	0.179	6.74
SCRC 030	788,300	8,262,913		0/360	-90.00	172.00	SCRC030	60	64	4	17.30	61.80	9.38	0.121	
							SCRC030	76	84	8	16.20	61.85	9.24	0.117	
							SCRC030	92	136	44	18.75	58.15	9.05	0.141	
SCRC 031	788,384	8,262,581		0/360	-90.00	210.00	SCRC031	152	172	20	16.42	60.40	9.95	0.135	
Number of holes		13		Total Metres		1,933.00	Weighted Average			377	17.23	59.33	9.51	0.126	2.12