

### **Quarterly Activities Report** for period ended 31 December 2010

31 January 2011

### COMPANY OVERVIEW

BMG is an exploration company targeting iron mineralisation in Minas Gerais state, Brazil. BMG's tenements owned, under option and new peggings amount to 897 sq km.

BMG has commenced an aggressive drilling programme and is awaiting the first batch of assay results.

CAPITAL DETAILS					
ASX: BMG					
As at 27 January 2011					
Share Price:	\$0.35				
Tradeable Shares:	71,320,374				
Escrowed Shares:	72,198,501				
Tradeable Options:	Nil				
Unlisted Options:	4,528,892				
Market Capitalisation:	\$50 million				

### HIGHLIGHTS

- The Company acquired the Rio Pardo Iron Ore Project in Minas Gerais, Brazil.
- Company relisted under new name on 10 December 2010.
- BMG has expanded its tenure base to 897 square kilometres through further option agreements and pegging new ground.
- RC drilling commenced in December with two rigs and a support RAB rig.
- The Josilene GV01 Prospect covers an area of 3000 metres by 1100 metres and is one of 5 major target areas.
- Preliminary drilling identifies thick iron rich soil and weathered rock overlying magnetite bearing diamictites.
- Assays are awaited.

### THE NORTHERN MINAS GERAIS IRON ORE PROVINCE

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 billion years ("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 million years ("Ma") ago. These younger deposits, including the **Rapitan Iron Formation** in north-western Canada, North Minas Gerais and 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 30% is readily upgradable to 65% to 68%<sup>1</sup>. 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.

The Rio Pardo de Minas tenement block straddles the northern parts 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 targets identified to date.

<sup>1</sup> Refer Independent Geologist Report in the Company's prospectus dated 18 October 2010

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#### **REGIONAL GEOLOGY**

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.

### LOCAL GEOLOGY

Fold belts adjacent to the São Francisco Craton represent inverted sedimentary basins that underwent tectonic – metamorphic – orogenetic processes. In a general manner, local metamorphism is of low to medium degree and allows for stratigraphic reconstructions that make it possible to recognize sedimentary processes and environments involved.

The Macaúbas Group, a major stratigraphic unit in the Araçuaí Belt, which was deposited under glacial influence, is composed of metadiamictites, quartzites, phyllites and quartz schists. Local metadiamictites were initially interpreted, during the 1950s and 1960s, as being tillites. Depositional processes only recently have been better understood, with the various types of diamictites now being interpreted as related to glaciomarine sedimentation processes. Also in a general manner, these metadiamictites 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 metadiamictites, 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 member was separated from the latter, referred to as Riacho Poções Member, to 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 diamictites that grade into hematitic, often magnetitic diamictites. Banded quartzites and hematitic, quartz phyllites occur amidst diamictites. Diamictites 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 schistosities.

In genetic terms, the presence of diamictites 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 diamictite matrix with hematite suggests that exhalation of diamictite 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 Pocoes 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.

#### TENEMENT HOLDINGS



### MAGNETIC TRENDS AND IRON ORE MINERALISATION

The major iron ore mineralised zones identified by Vale, MIBA, Sul Americana, Mtransminas and Gema Verde to the south of Rio Pardo can be readily identified from strong trends in the aeromagnetic contours.



Aeromagnetic trends in the North Minas Gerais Province

BMG's tenements cover the strong magnetic trends in the north eastern part of the map.

#### **RC DRILLING PROGRAM**

Two reverse circulation drilling rigs were mobilized to the eastern side of the tenement block and drilling has commenced on a strong magnetic anomaly at the Josilene Prospect. A support RAB rig is also on site at Josilene to help define the limits of the target area. This prospect represents a strike length of over 20 kilometres with multiple broad magnetic zone. Current drilling is focussed on the GV01 zone which covers an area of 3000 metres by 1100 metres. RC drilling along the strike length of the zone within tenement 831.719/2008 has encountered iron rich soils overlying magnetite bearing diamictites. At the end of the reporting period five RC holes were completed and drilling recommenced on January 5, 2011. Hole locations are shown in the following table.



#### Reverse Circulation Drilling – 9 December, 2010 to January 24, 2011 Josilene Prospect

Hole_id	Easting	Northing	Azimuth	Declination	Depth (m)
JORC001	792759	8261947	360	-90	143
JORC002	792778	8262254	360	-90	118
JORC003	792405	8262162	360	-90	160
JORC004	791923	8262179	360	-90	150
JORC005	791616	8261971	360	-90	120
JORC006	791226	8261875	360	-90	94
JORC007	790837	8261788	360	-90	115

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JORC008	790484	8261693	360	-90		164
JORC009	790102	8261656	360	-90		120
JORC011	791161	8260545	360	-90		91
JORC012	791397	8260722	360	-90		100
JORC013	791570	8262178	360	-90		121
JORC014	791842	8260800	360	-90		81
JORC017	791183	8262080	360	-90		124
					Total	1701

All cordinates relate to the South American Datum 1969 (SAD69)

### Preliminary Drill Logs

	From	То	Interval (m)	Rocktype
Josilene Prosp [tenement 83	oect – 1.719/2008]			
JORC 001	0	70	70	Highly weathered iron rich sediments
	70	143	73	Magnetite bearing Diamictite
JORC 002	0	65	65	Highly weathered iron rich sediments
	65	105	40	Saprolite with iron traces
	105	118	13	Magnetite bearing Diamictite
JORC 003	0	65	65	Highly weathered iron rich sediments
	65	160	95	Magnetite bearing Diamictite
JORC 004	0	65	65	Highly weathered iron rich sediments
	65	150	85	Magnetite bearing Diamictite
JORC 005	0	48	48	Highly weathered iron rich sediments
	48	120	72	Magnetite bearing Diamictite
JORC 006	0	65	65	Highly weathered iron rich sediments
	65	94	29	Magnetite bearing Diamictite
JORC 007	0	49	49	Highly weathered iron rich sediments
	49	115	66	Magnetite bearing Diamictite
JORC 008	0	52	52	Highly weathered iron rich sediments
	52	164	112	Magnetite bearing Diamictite
JORC 009	0	52	52	Highly weathered iron rich sediments
	52	120	68	Magnetite bearing Diamictite
JORC 011	0	15	15	Highly weathered iron rich sediments
	15	91	76	Magnetite bearing Diamictite
JORC 012	0	34	34	Highly weathered iron rich sediments
	34	100	66	Magnetite bearing Diamictite
JORC 013	0	50	50	Highly weathered iron rich sediments
	50	121	71	Magnetite bearing Diamictite
JORC 014	0	46	46	Highly weathered iron rich sediments

	46	81	35	Magnetite bearing Diamictite
JORC 017	0	90	90	Highly weathered iron rich sediments
	90	124	34	Magnetite bearing Diamictite

Assays for these holes are awaited and will be reported when available.

### CHILEAN URANIUM EXPLORATION PROJECTS

Whilst the company is now focused on its iron tenements in Brazil it continues to maintain its Chilean uranium asset in good standing and will be actively looking for a farm in partner for this project.

### CORPORATE

During the quarter the Company completed the acquisition of the Rio Pardo Project changing the Company's focus to exploring for iron ore in Brazil. BMG also raised \$7 million in new capital and relisted on the ASX. Administrative expenses were high in the December quarter due to the transaction costs associated with the prospectus, fund raising and new project acquisition.

#### **CONTACT DETAILS**

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#### **Competent Persons Statement**

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.

The information in this report 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 the Chief Executive Officer of Brazilian Metals Group Limited. He has sufficient experience relevant to the style of mineralisation 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.