

ASX Release 29 April 2022

Magnum Mining and Exploration Limited ABN 70 003 170 376

ASX Code MGU

**Executive Chairman** Don Carroll

Managing Director Dano Chan

**Non-Executive Directors** Matt Latimore John Dinan

Company Secretary John Dinan

**Issued Shares** 497,120,156

Listed Options 136,151, 598 Exp 30/09/2022 @ \$0.05

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# Quarterly Activities Report for the three Month Period ending 31 March 2022

# **HIGHLIGHTS**

## **Pig Iron Industry Update**

• Pig Iron is a major ingredient in Electric Arc Furnace (EAF) steelmaking which is growing rapidly in response to environmental restrictions on blast furnaces using sinter and coke.

• Russia and Ukraine are major pig iron suppliers, accounting for over 60% of global pig iron trade.

• Pig iron is currently trading at over \$US1,000/tonne (an increase of over 60% to date in 2022) in the US market.

• Global long term demand for pig iron is forecast to increase at an accelerated rate.

## **Buena Vista**

• The Buena Vista project is focused on the near-term development of an integrated mining and production facility for low emission green pig iron products for both the US domestic market and the premium Asian steelmakers.

• This value add rather than just the production of high purity magnetite concentrate will create real long term wealth for the project and avoid much of the extreme volatility of iron ore prices.

• Magnum's Buena Vista project is set to become the first green pig iron producer in North America and the only pig iron producer on the West Coast of the USA.

• Major US based steel producers have committed to significant Electric Arc Furnace (EAF) capacity expansion (ref to ASX release dated 28 September, 2021).

• In addition to low emission price premiums, the Buena Vista Project will also benefit from US carbon credit and related tax incentives.

• Rising demand and projected continuance of limited supply for low emission green pig iron worldwide accentuates the significant potential of Buena Vista.

## Corporate

- US biomass/ biochar supplier selected and MoU signed.
- Green Pig Iron Engineering Study Contract signed.
- Discussions initiated with potential buyers of pig iron product
- Divestment of Gravelotte Project, South Africa completed.

### MARCH QUARTER 2022 - SUMMARY OF ACTIVITIES

### 1.0 OVERVIEW

Magnum Mining & Exploration Limited (ASX: MGU) (Magnum or the Company) continues to make significant progress for the near term development of the Company's Buena Vista magnetite project located in Nevada, USA.

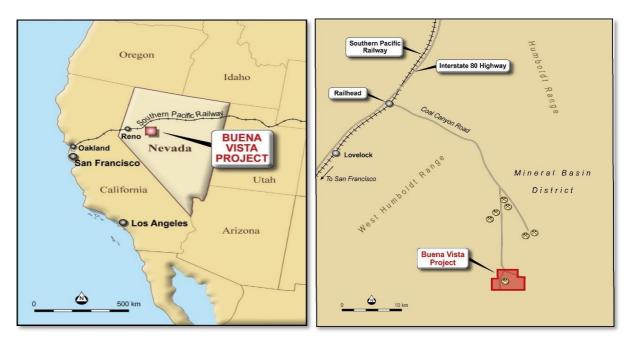


Figure 1: Buena Vista Location

Cognizant of the price volatility in the iron ore market and growing demand for "green iron", the Board of Magnum is targeting the development of the Buena Vista project into an integrated steel operation.

By the value adding processing of premium quality Buena Vista magnetite iron ore into low emission (carbon neutral) pig iron products on site, the project will be ideally positioned to capture premium returns for the Company's shareholders.

This integrated pig iron strategy coincides with the global push for a greener steel making industry. Currently the steel industry accounts for 9% of global greenhouse gas emissions and as a consequence the well-known and proven Electric Arc Furnace (EAF) steel making technology is rapidly being accepted as the way forward for low emission steel production.

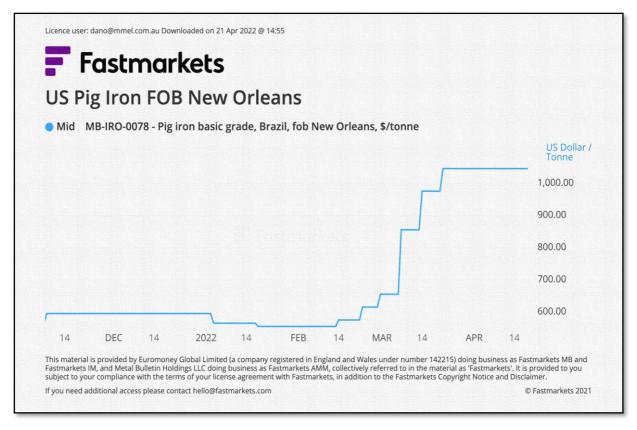
Pig iron is a major raw material for EAF steel making process and with new EAF plants already under construction and planned, global pig iron trade is expected to rise rapidly. For the transition into a carbon neutral economy and to meet emission restrictions, all major economies are competing for EAF raw materials. There are for example, 30 million tonnes of new EAF production capacities planned in the USA alone.

The US steel market out-performed the rest of the world in 2021. Supported by a number of long term policies and anti-dumping duties, the demand for quality steel in the USA is expect to last well into 2022. As such, there is an acute shortage in pig iron supply in North America.

The Buena Vista Green pig iron project will become the ONLY pig iron producer on the West Coast USA with the nearest competitor located in the state of Illinois, over 2,000 km away.

Magnum's project is surrounded by over 7 million tons of existing EAF producers in the region.

All are seeking long term stable and quality pig iron supply.



#### Figure 2: US pig iron import price ex New Orleans (2021-2022)

Key to the Buena Vista Green Iron strategy is a supply of biomass for the production of biochar which is used as a charge carbon and slag foaming agent in EAF steel production.

In this regard and as an added plus for Buena Vista, biomass in the form of waste wood from forest fire debris, packing industry and agriculture is currently being transported from California to landfills in Nevada.

Together with the previously reported Juniper tree resources, the Buena Vista project is therefore very well positioned to produce the required quality biochar for pig iron production at a very competitive cost.

Whilst the USA is yet to announce a federal carbon trading scheme, each US state is planning its own carbon credit and tax incentives. Given biochar is a renewable carbon source and as all raw materials will be sourced locally, Buena Vista will have a minimum carbon footprint and will likely be eligible for sizable carbon incentives.

The Buena Vista integrated strategy will make us the FIRST Green pig iron producer in North America. With easy access to ports in California, Magnum is set to extract added product premium for Green pig iron supply to both domestic and international steel makers.

This is an exciting development strategy for Magnum as well as the USA and one that as it progresses will see Magnum transformed and the value of the Buena Vista Project as a key US magnetite asset more fully recognised.

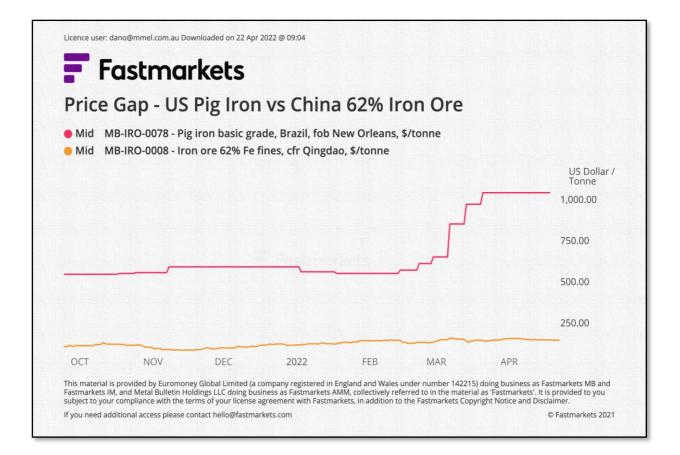


Figure 3: Widening price gap between iron ore and pig iron (Source: Fastmarket)

### 2.0 KEY DEVELOPMENT MILESTONES ALREADY ACHEIVED

- Buena Vista Project mine schedule and initial pit design completed.
- Purchase of strategic landholding at Colado for railway logistics hub proximal to the Buena Vista Project completed.
- Review of dry magnetic beneficiation plant design & product iron ore quality completed.
- Successful green pig iron pilot plant test production completed.
- Pig Iron production process identified.

### 2.1 Mining and Dry Beneficiation Plant Layout

A provisional operation layout for Buena Vista has now been completed.

The mining & pit design has been completed by SRK Consulting and covers the initial two years of production at the mine.

The provisional plant layout has been carried out by Samuel Engineering.

### 2.2 Iron ore product quality

Extensive historical metallurgical test work that has been re-confirmed by more recent testing has shown that Buena Vista ore beneficiates very easily to a +60% Fe concentrate (see September 2021 quarterly report).

As a consequence this will allow Magnum to use a 'dry concentrate 'process to produce the magnetite concentrate that will be the feed for the proposed integrated processing facility.

The use of a dry concentrating process has the potential to reduce capital costs and operating costs significantly.

Test work has been undertaken by SGS in a dry magnetic processing plant. The results of this test work re-confirmed that a coarse magnetite iron ore concentrate with low impurities can be produced by dry concentrating.

SGS		Fe grade produced	d by dry concentrate
Lab Reference No.:MNT214561Q SGS Report No.:MSRQD2100712-01A Testing Report Page: 2 / 2			
		Result	
Test Items	Unit	1	Standard No.
TFe	%	63.00	GB/T 6730.5-2007
FeO	%	21.82	GB/T 6730.8-2016
Si	%	3.02	GB/T 6730.62-2005
AI	%	0.69	GB/T 6730.62-2005
Р	%	0.016	GB/T 6730.62-2005
S	%	0.0680	GB/T 6730.17-2014
Volume average particle size	μm	43.21	GB/T 19077-2016

#### Figure 4: SGS quality analysis Buena Vista magnetite iron ore concentrate

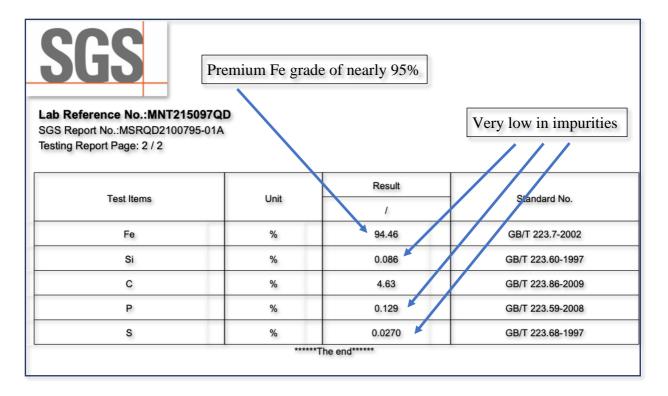
This iron ore concentrate is suited for the biochar based reduction process.

#### 2.3 Direct Reduction Iron Test Work

Magnum is continuing test work for the trial production of green sponge iron/ direct-reduced iron (DRI) sample products using 100% biochar (refer to ASX release dated 28 September 2021).

This test work uses magnetite ore from the Buena Vista Project and is in association with Beijing Shougang International Engineering Technology Co. Ltd. which is a subsidiary of the Shougang Group which ranks No 2 in steel enterprises in China.

The trial production uses a rotary kiln facility which is widely used worldwide and is capable of the integrated process of blending the magnetite iron ore directly with bio-char to produce green sponge iron / DRI products.



#### Figure 5: SGS quality certificate 100% biochar Green pig iron using Buena Vista iron ore

The results from this work will provide Magnum with the technical data required to design the optimal kiln size and feed grade of magnetite iron ore and bio-char and to estimate the initial capital cost and operating cost for a commercial sized rotary kiln.

Most importantly as the testing progresses it provides the Company with a low impurity pig iron product to show potential customers.



Figure 6: 100% biochar Green pig iron produced using Buena Vista iron ore

Magnum management is planning to commence supply discussions with customers domestically in the USA as well as in Asia by early in the second quarter calendar 2022.

Magnum has produced a 100% biochar pig iron test production video. This can be accessed with the following link:

https://youtu.be/YqRFszHG4GI

#### 2.4 Biochar Supply

Magnum has signed a Memorandum of Understanding (MOU) with Biochar Now, a company which owns and operates biochar research and production facilities in Colorado USA. (ASX Announcement 11 January 2022)

Biochar Now, is the ONLY biochar producer certified by both the International Organization for Standardisation (ISO), and the United States of America Environmental Protection Authority (EPA).

Its products also are approved by the United States Department of Agriculture (USDA) and the Canadian Environmental Protection Act (CEPA).



Figure 7: Premium quality biochar from Biochar Now!

Through this partnership, the Buena Vista project will have access to reliable and economic biochar supply for the Green pig iron production.

The parties are to jointly study:

- Engineering and design of biochar production facility at Magnum Buena Vista site

- Logistics arrangement of local biomass supply
- Maximize federal and state governments 'carbon credit incentives
- ESG funding options from both government and private sectors

### 2.5 Green Pig Iron engineering Study Contract Signed

During the reporting period the Company advised that it had engaged TOA Engineering Services Corp (TOA) to undertake a detailed Engineering Study (Study) for its Nevada Iron Buena Vista Project. This follows the successful test work program which confirmed the production of high-grade iron ore concentrate and conversion to Green pig iron using 100% biochar.

The Study will consist of a technology review and series of trade-off studies that will define the most appropriate technology that should be deployed at site to process the magnetite ores from the Buena Vista Project and the subsequent manufacturing of pig Iron at the proposed facility to be constructed in the State of Nevada. The Company estimates that the Study will take between 16 to 18 weeks and commenced in February 2022.

The Company will also contract with other firms (including suppliers) as required regarding the feasibility portion of the Study. TOA will manage the overall planning initiative and facilitate the provision and sharing of information as required to third parties, which may also be engaged or required to contribute such that a proposed facility plan (technical and economic valuation) can be confirmed.

The intent is that TOA validate the capital cost (CAPEX) and operating costs (OPEX) for a variety of viable options for the Buena Vista Project. The TOA will propose the viable options and review the economic alternatives for the various reduction processes at differing level of production. In addition, TOA will execute portions of the study and planning documentation using information solicited from various suppliers and other information already available to:

- (a) develop typical overall basic plant configurations and their support systems;
- (b) expedite a quality study and to support the business plan for the Buena Vista project, with reasonable overall cost accuracy; and
- (c) make extensive use of its in-house expertise, including costing and technical information from other similar projects. TOA will also solicit confirmed pricing for various aspects of the program (supply and install (so that the overall accuracy of the program CAPEX might be improved.

### 2.6 Preliminary Marketing Studies

The Buena Vista Project is strategically located to supply US West Coast steel producers as can be seen in the map on the adjacent page.

These steel producers could be provided with pig iron products produced from a production facility at the Buena Vista Project.

The location of the proposed Nevada production facility close to West Coast steel producers compared to alternative suppliers, will provide a competitive advantage to Magnum as well as diversification of end user options and will ensure that the Company captures a transportation premium. See also the release dated 28 September 2021.



Figure 8: West Coast of USA EAF Steel Mill Locations and capacities

### 3.0 ABOUT THE BUENA VISTA MAGNETITE IRON ORE PROJECT

### **3.1 Location and History**

Buena Vista is located approximately 160km east-north-east of Reno in the mining friendly state of Nevada, United States.

The Buena Vista Project was discovered in the late 1890's and in the late 1950's to early 1960's around 900,000 tonnes of direct shipping magnetite ore with an estimated grade of 58% Fe was mined.

In the 1960's, US Steel Corporation acquired the Buena Vista Project and carried out an extensive exploration program including 230 diamond drill holes and considerable metallurgical test work.

The Buena Vista Project was refreshed in 2009 when Richmond Mining Limited, an ASX listed company, acquired Buena Vista and commenced a detailed exploration program culminating in a definitive feasibility study in July 2011 and an updated study in 2013 for an expanded production rate.

A key component of these studies was extensive investigation of the optimal logistics plan for development of Buena Vista.

This included the negotiation of in-principle agreements with existing rail and port operators and the securing of all major mining permits.

In addition, detailed costings were completed on the trucking or slurry pipeline options to deliver the concentrate to the rail head located some 50 kilometres from mine site

A significant decline in iron ore prices to an eventual low of less than US\$50/ tonne caused the then proposed development of Buena Vista to be deferred.

#### 3.2 Geology

The Buena Vista Project magnetite deposits are the product of late-stage alteration of a localised intrusive local gabbro that resulted in intensely scapolitised lithologies and the deposition of magnetite.

The most well-known example of this type of magnetite mineralisation is the Kiruna magnetite deposit in Sweden, which has been in production since the early 1900's.

The distribution and nature of the magnetite mineralisation at Buena Vista is a function of ground preparation by faulting and fracturing, forming a series of open fractures, breccia zones and networks of fine fractures.

	Buena Vista (Magmatic)	Taconite (Banded iron)
Genesis	Metasomatic (hot solutions)	Non-magmatic precipitate
Grain size	Coarse	Fine
Grind size to liberate magnetite	+100 microns	Sub 15-20 microns
Capex	Lower capital intensity	Higher capital intensity
Opex	Lower opex	Higher opex

#### Figure 9: Comparison table Buena Vista (magmatic) vs Taconite (BIF)

These ground conditions produce variations in mineralization types from massive pods grading +60% magnetite to lighter disseminations grading 10-20% magnetite.

Metasomatic magnetite deposits such as those at Buena Vista have important positive beneficiation characteristics over the other main type of magnetite deposit which is a banded iron hosted magnetite, also known as a taconite.



Figure 10: Buena Vista Project Area showing historic loadout facility and stockpiles

#### **3.3 Historic Drilling**

The Buena Vista Project has been extensively drilled with three main programs carried out.

The initial program was by US Steel Corporation in the early 1960's and was by BQ, NQ and HQ diamond drilling and holes were surveyed for dip using a Tropari instrument.

A total of around 13,600 metres of core was completed and all holes were geologically logged and QA/QC'ed.

Around 5,000 samples across the magnetite mineralised zones were taken from the drill core and the magnetite content determined by Davis Tube. All testing was carried out at the Colorado school of Mines Research foundation.

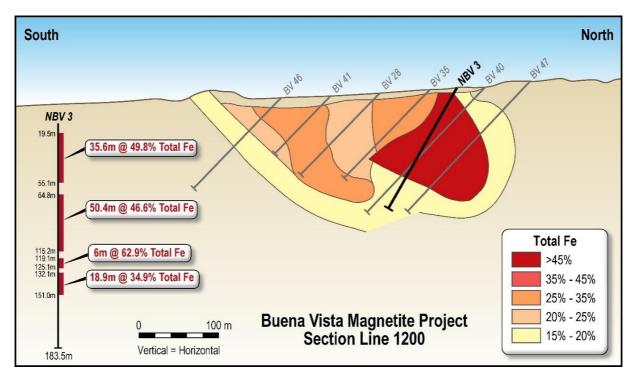
In 2010, a confirmatory diamond drill program of around 930 metres was carried out by Richmond Mining Limited. This program, which was HQ was designed to twin various 1960's holes in order to test for vertical and lateral continuity as well as provide QA/QC confirmation on the historic drilling.

All of the core was geologically logged and then halved or quartered and samples assayed by American Assay Laboratories in Reno and SGS Laboratories in Perth.

In 2012, Nevada Iron Limited carried out a program comprising 3,420 metres of HQ diamond drilling and 13,024 metres of 138 mm reverse circulation drilling.

This program was designed to provide infill drilling for an expanded resource estimate, extend the boundaries of the known mineralised areas and provide additional core for definitive metallurgical beneficiation test work.

All drill holes from this program were geologically logged and the diamond holes surveyed down hole.



Samples from this program were prepared by ALS Global Laboratories in Reno and analysed by ALS Laboratories in Perth.

Figure 11: Section Line 1200 (2011 feasibility study)

### 3.4 Metallurgy

Unlike banded iron hosted magnetite deposits (taconites) where the magnetite mineralisation is finely disseminated in siliceous bedding planes, the Buena Vista ore is of magmatic origin and as a consequence is coarser grained in association with the siliceous host rock.

The prime benefit of this is that metallurgical test work has shown that the primary crush of the Buena Vista ore on average increases the mill grade to +45% irrespective of the primary ore grade.

This is an important distinction to taconites and results in reduced energy usage for the subsequent crushing and grinding upgrade to the concentrate grade of +67.5%.

The Buena Vista concentrate contains no deleterious concentrations of impurities with silica typically 1.4-1.5%, alumina less than 1% and negligible sulphur and phosphorous content (around-0.003% respectively).

In addition, titanium and vanadium levels are low in the Buena Vista concentrate, typical levels are around 0.2% TiO 2 and 0.3% V.

### **3.5 Project Logistics**

The Buena Vista Project mine site is ideally located, with towns Fallon (20,000 population) and Lovelock (8,000 population) within close proximity to the mine site. This provides site personnel and their families the opportunity to reside in local communities with existing infrastructure and facilities.

The mine site is around 50kms from the Union Pacific rail line which connects with multiple export port options including Stockton, West Sacramento, Oakland, San Francisco and Richmond.

Grid power is available within 40km of the deposits and sufficient water can be sourced from ground water aquifers located in the North Carson sink.

The Nevada Department of Conservation and Natural Resources has already granted the required water rights for the life of the mine.

The mine is located in Churchill County in the State of Nevada which has a strong history of supporting mining developments and is easily accessed via the sealed Coal Canyon road.

#### 3.6 JORC 2012 Resources

On 23 March 2021, Magnum announced that the Buena Vista Mineral Resource had been updated in accordance with the 2012 edition of the JORC Code (JORC 2012).

Magnum reported that the Mineral Resources previously reported in 2012/13 under the 2004 JORC Code and the NI43-101 Code had undergone a comprehensive review and full evaluation by the Company's highly experienced and qualified independent consultant, MPR Geological Consultants.

The total Mineral Resource estimate increased as a result of this update with the key changes:

- A 31% increase in total reported Mineral Resources from 177.3Mt to 232Mt, and
- A 6% increase in the indicated resource for the Section 5 area and a 25% increase in the DTR% (Davis Tube Recovery Percentage), and
- An additional 40Mt of inferred mineral resources for the West Pit area and 13% increase in the DTR%, and
- A 14% increase in the inferred resource for the East Pit area.

The Company confirms that it is not aware of any new information or data that materially affects the information included in this Quarterly Report and that all material assumptions and technical parameters underpinning the estimates in the announcement of the 'Maiden JORC Resources for the Buena Vista Magnetite Project 'dated 23 March 2021 continue to apply and have not materially changed.

	Estimates at 10% Fe cut off									
Deposit	Resource		2013			2021			Differenc	e
	Category	Mt	Fe%	DTR%	Mt	Fe%	DTR%	Mt	Fe%	DTR%
	Ind	32.1	17.7	16.8	34	17.4	21.0	6%	-2%	25%
Section 5	Inf	0	0.0	0.0	8.0	16	18	-	-	-
	Subtotal	32.1	17.7	16.8	42	17	20	31%	-3%	22%
	Ind	116.6	19.1	21.2	117	19.5	23.9	0%	2%	13%
West	Inf	0	0.0	0.0	40	17	21	-	-	-
	Subtotal	116.6	19.1	21.2	157	19	23	35%	-1%	9%
	Ind	0	0.0	0.0	0.0	0.0	0.0	-	-	-
East	Inf	28.9	19.6	23.4	33	19	23	14%	-3%	-2%
	Subtotal	28.9	19.6	23.4	33	19	23	14%	-3%	-2%
	Ind	148.7	18.8	20.3	151	19.0	23.2	2%	1%	15%
Total	Inf	28.9	19.6	23.4	81	18	22	180%	-10%	-8%
	Total	177.6	18.9	20.8	232	18.6	22.6	31%	<b>-2</b> %	9%

#### Table 1: JORC (2012) reported mineral resources compared with 2013 NI43-101 estimate.

The data base for the JORC 2012 mineral resource estimate utilised data from 139 diamond drill holes totaling 23,061 metres and 50 reverse circulation drill holes totaling 13,024 metres.

#### 4.0 SALE OF GRAVELLOTTE PROJECT

During the reporting period, the Company announced it had entered into a sale and purchase agreement (**SPA**) for the sale of its 74% interest in the Gravelotte Project in South Africa. The divestment is part of the Company's strategy of crystalising value from its portfolio of non-core assets while maintain a strong focus on progressing the Company's Buena Vista Project for green pig iron production.

The Company has agreed to sell its wholly owned South African subsidiary Gem Venus Holdings (Proprietary) Limited (**Gem Venus**) which holds Magnum's interest in the Gravelotte Project to London Stock Exchange listed company URA Holdings PLC (LSE:URAH) (**URA**) (**Transaction**).

As the Company has previously reported to the market, activities at the Gravelotte Project had remained restricted to care and maintenance and desk stop studies because of travel restrictions and restrictions placed on site due to the COVID-19 pandemic. The divestment of the Gravelotte project will allow the Company to remain focused on the Buena Vista project in establishing a green Pig Iron steel making facility in Nevada, United States.

The Transaction is conditional on URA and MGU obtaining the consent to the Transaction by the Minister of Mineral Resources pursuant to the Mineral and Petroleum Resources Development Act 2002 (South Africa) (**Condition**).

The Condition must be satisfied by the first anniversary of execution of the SPA or such later date as may be mutually agreed by the parties.

URA will pay Magnum, as consideration for the Transaction, a total consideration of A\$2,000,000 to be paid as follows:

(a) The sum of A\$200,000.00 for each 5,000,000 carats of gemstones produced at the Gravelotte Project, and this sum is payable within 30 days of the date on which the production has been determined;

(b) Thereafter, the sum of A\$200,000.00 for each successive 5,000,000 carats of gemstones produced at the Gravelotte Project, and this sum is payable within 30 days of the date on which the production has been determined,

#### (Collectively, Cash Consideration),

provided that that Cash Consideration shall not exceed a maximum aggregate sum of A\$2,000,000.

URA will also issue to Magnum GBP100,000.00 (one hundred thousand British Pounds) in URA fully paid ordinary shares (**Consideration Shares**).

On signing of the SPA, URA has also agreed to be responsible for all operation costs relating to the Gravelotte Project until completion.

#### **5.0 EXPLORATION INTERESTS**

The following tenement information is provided in accordance with ASX Listing Rule 5.3.3 for the quarter ended 31 March 2022:

Claim Name	BLM Serial Nos.	BLM Lead Serial No.	Claim Type
KMD 1	NMC956471	NMC956471	Lode
KMD 2	NMC956472	NMC956471	Lode
KMD 3	NMC956473	NMC956471	Lode
KMD 4	NMC956474	NMC956471	Lode
KMD 5	NMC956475	NMC956471	Lode
KMD 6	NMC956476	NMC956471	Lode
KMD 7	NMC956477	NMC956471	Lode
KMD 8	NMC956478	NMC956471	Lode
KMD 9	NMC956479	NMC956471	Lode
KMD 10	NMC1049632	NMC1049632	Lode
KMD 11	NMC956481	NMC956471	Lode
KMO 12	NMC956482	NMC956471	Lode
KMO 13	МИС956483	NMC956471	Lode
KMD 14	NMC956484	NMC956471	Lode
KMD 15	NMC956485	NMC956471	Lode
KMD 16	NMC956486	NMC956471	Lode
KM0 17	NMC956487	NMC956471	Lode
KMD 18	NMC956488	NMC956471	Lode

#### Buena Vista Project

KMD 19	NMC956489	NMC956471	Lode
KMD 20	NMC956490	NMC956471	Lode
KMD 21	NMC956491	NMC956471	Lode
KMD 22	NMC956492	NMC956471	Lode
KMD 23	NMC956493	NMC956471	Lode
KMD 24	NMC956494	NMC956471	Lode
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KMD 29	NMC956499	NMC956471	Lode
KMD 30	NMC956500	NMC956471	Lode
KMD 31	NMC956501	NMC956471	Lode
KMD 32	NMC956502	NMC956471	Lode
KMD 33	NMC956503	NMC956471	Lode
KMD 34	NMC956504	NMC95Б471	Lode
KMD 35	NMC95E505	NMC956471	Lode
KMD 36	NMC956506	NMC956471	Lode
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KMD 50	NMC956520	NMC956471	Lode

KMD 51	NMC956521	NMC956471	Lode
KMD 52	NMC956522	NMC956471	Lode
KMD 53	NMC956523	NMC956471	Lode
KMD 54	NMC956524	NMC956471	Lode
KMD 55	NMC956525	NMC956471	Lode
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KMD 57	NMC1049633	NMC1049632	Lode
KMD 58	NMC1049634	NMC1049632	Lode
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KMD 60	NMC979429	NMC979387	Lode
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KMD 62	NMC979431	NMC979387	Lode
KMD 63	NMC979432	NMC979387	Lode
KMD 64	NMC979433	NMC979387	Lode
KMD 65	NMC979434	NMC979387	Lode
KMD 66	NMC979435	NMC979387	Lode
KMD 67	NMC979436	NMC979387	Lode
KMD 68	NMC979437	NMC979387	Lode
KMD 69	NMC979438	NMC979387	Lode
KMD 70	NMC979439	NMC979387	Lode
NvFe 1	NMC1045283	NMC1045283	Lode
NvFe 2	NMC1045284	NMC1045283	Lode
NvFe 3	NMC1045285	NMC1045283	Lode
NvFe 4	NMC1045286	NMC1045283	Lode
NvFe 5	NMC1045287	NMC1045283	Lode
NvFe 6	NMC1045288	NMC1045283	Lode
NvFe 7	NMC1045289	NMC1045283	Lode
NvFe 8	NMC1045290	NMC1045283	Lode
NvFe 9	NMC1068429	NMC1068429	Lode
NvFe 10	NMC1068430	NMC1068429	Lode
NvFe 11	NMC1068431	NMC1068429	Lode
NvFe 12	NMC1068432	NMC1068429	Lode

NvFe 13	NMC1068433	NMC1068429	Lode
NvFe 14	NMC1068434	NMC1068429	Lode
NvFe 15	NMC1068435	NMC1068429	Lode
NvFe 16	NMC1068436	NMC1068429	Lode
NvFe 17	NMC1068437	NMC1068429	Lode
NvFe 18	NMC1068438	NMC1068429	Lode
NvFe 19	NMC1068439	NMC1068429	Lode
NvFe 20	NMC1075996	NMC1075996	Lode
NvFe 21	NMC1075997	NMC1075996	Lode
NvFe 22	NMC1075998	NMC1075996	Lode
NvFe 23	NMC1075999	NMC1075996	Lode
NvFe 24	NMC1076000	NMC1075996	Lode
NvFe 25	NMC1076001	NMC1075996	Lode
NvFe 26	NMC1076002	NMC1075996	Lode
NvFe 27	NMC1076003	NMC1075996	Lode
NvFe 28	NMC1076004	NMC1075996	Lode
NvFe 29	NMC1076005	NMC1075996	Lode
NvFe 30	NMC1076006	NMC1075996	Lode
NvFe 31	NMC1076007	NMC1075996	Lode
NvFe 32	NMC1076008	NMC1075996	Lode
NvFe 33	NMC1076009	NMC1075996	Lode
NvFe 34	NMC1076010	NMC1075996	Lode
NvFe 35	NMC1076011	NMC1075996	Lode
NvFe 36	NMC1076012	NMC1075996	Lode
NvFe 37	NMC1076013	NMC1075996	Lode
NvFe 38	NMC1076014	NMC1075996	Lode
NvFe 39	NMC1076015	NMC1075996	Lode
NvFe 40	NMC1076016	NMC1075996	Lode
NvFe 41	NMC1076017	NMC1075996	Lode
NvFe 42	NMC1076018	NMC1075996	Lode
NvFe 43	NMC1076019	NMC1075996	Lode
NvFe 44	NMC1076020	NMC1075996	Lode

NvFe 45	NMC1076021	NMC1075996	Lode
NvFe 46	NMC1076022	NMC1075996	Lode
NvFe 47	NMC1076023	NMC1075996	Lode
NvFe 48	NMC1076024	NMC1075996	Lode
NvFe 49	NMC1076025	NMC1075996	Lode
NvFe 50	NMC1076026	NMC1075996	Lode
NvFe 51	NMC1076027	NMC1075996	Lode
NvFe 52	NMC1076028	NMC1075996	Lode
NvFe 53	NMC1076029	NMC1075996	Lode
NvFe 54	NMC1076030	NMC1075996	Lode
NvFe 55	NMC1076031	NMC1075996	Lode
NvFe 56	NMC1076032	NMC1075996	Lode
NvFe 57	NMC1076033	NMC1075996	Lode
NvFe 58	NMC1076034	NMC1075996	Lode
NvFe 59	NMC1076035	NMC1075996	Lode
NvFe 60	NMC1076036	NMC1075996	Lode
NvFe 61	NMC1076037	NMC1075996	Lode
NvFe 62	NMC1076038	NMC1075996	Lode
NvFe 63	NMC1076039	NMC1075996	Lode
NvFe 64	NMC1076040	NMC1075996	Lode
NvFe 65	NMC1076041	NMC1075996	Lode
NvFe 66	NMC1076042	NMC1075996	Lode
NvFe 67	NMC1076043	NMC1075996	Lode
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NvFe 71	NMC1076047	NMC1075996	Lode
NvFe 72	NMC1076048	NMC1075996	Lode
NvFe 73	NMC1076049	NMC1075996	Lode
NvFe 74	NMC1076050	NMC1075996	Lode
NvFe 75	NMC1076051	NMC1075996	Lode
NvFe 76	NMC1076052	NMC1075996	Lode

NvFe 77	NMC1076053	NMC1075996	Lode
NvFe 78	NMC1076054	NMC1075996	Lode
NvFe 79	NMC1076055	NMC1075996	Lode
NvFe 80	NMC1076056	NMC1075996	Lode
NvFe 81	NMC1076057	NMC1075996	Lode
NvFe 82	NMC1076058	NMC1075996	Lode
NvFe 83	NMC1076059	NMC1075996	Lode
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NvFe 85	NMC1076061	NMC1075996	Lode
NvFe 86	NMC1076062	NMC1075996	Lode
NvFe 87	NMC1076063	NMC1075996	Lode
NvFe 88	NMC1076064	NMC1075996	Lode
NvFe 89	NMC1076065	NMC1075996	Lode
NvFe 90	NMC1076066	NMC1075996	Lode
NvFe 91	NMC1076067	NMC1075996	Lode
NvFe 92	NMC1076068	NMC1075996	Lode
NvFe 93	NMC1076069	NMC1075996	Lode
NvFe 94	NMC1076070	NMC1075996	Lode
NvFe 95	NMC1076071	NMC1075996	Lode
NvFe 96	NMC1076072	NMC1075996	Lode
NvFe 97	NMC1076073	NMC1075996	Lode
NvFe 98	NMC1076074	NMC1075996	Lode
NvFe 99	NMC1076075	NMC1075996	Lode
NvFe 100	NMC1076076	NMC1075996	Lode
NvFe 101	NMC1076077	NMC1075996	Lode
NvFe 102	NMC1076078	NMC1075996	Lode
NvFe 103	NMC1076079	NMC1075996	Lode
NvFe 104	NMC1076080	NMC1075996	Lode
NvFe 105	NMC1076081	NMC1075996	Lode
NvFe 106	NMC1076082	NMC1075996	Lode
NvFe 108	NMC1076083	NMC1075996	Lode
NvFe 109	NMC1076084	NMC1075996	Lode

NvFe 110	NMC1076085	NMC1075996	Lode
NvFe 111	NMC1076086	NMC1075996	Lode
NvFe 112	NMC1076087	NMC1075996	Lode
NvFe 113	NMC1076088	NMC1075996	Lode
NvFe 114	NMC1076089	NMC1075996	Lode
NvFe 115	NMC1076090	NMC1075996	Lode
HNVFE NO 1	NMC1093640	NMC1093640	Mill Site
HNVFE NO 2	NMC1093641	NMC1093640	Mill Site
HNVFE NO 3	NMC1093642	NMC1093640	Mill Site
HNVFE NO 4	NMC1093643	NMC1093640	Mill Site
HNVFE NO 5	NMC1093644	NMC1093640	Mill Site
HNVFE NO 6	NMC1093645	NMC1093640	Mill Site
HNVFE NO 7	NMC1093646	NMC1093640	Mill Site
HNVFE NO 8	NMC1093647	NMC1093640	Mill Site
HNVFE NO 9	NMC1093648	NMC1093640	Mill Site
HNVFE NO 10	NMC1093649	NMC1093640	Mill Site
HNVFE NO 11	NMC1093650	NMC1093640	Mill Site
HNVFE NO 12	NMC1093651	NMC1093640	Mill Site
HNVFE NO 13	NMC1093652	NMC1093640	Mill Site
HNVFE NO 14	NMC1093653	NMC1093640	Mill Site
HNVFE NO 15	NMC1093654	NMC1093640	Mill Site
HNVFE NO 16	NMC1093655	NMC1093640	Mill Site
HNVFE NO 17	NMC1093656	NMC1093640	Mill Site
HNVFE NO 18	NMC1093657	NMC1093640	Mill Site
HNVFE NO 26	NMC1093665	NMC1093640	Mill Site
HNVFE NO 27	NMC1093666	NMC1093640	Mill Site
HNVFE NO 28	NMC1093667	NMC1093640	Mill Site
HNVFE NO 29	NMC1093668	NMC1093640	Mill Site
HNVFE NO 30	NMC1093669	NMC1093640	Mill Site
HNVFE NO 31	NMC1093670	NMC1093640	Mill Site
HNVFE NO 32	NMC1093671	NMC1093640	Mill Site
HNVFE NO 33	NMC1093672	NMC1093640	Mill Site

HNVFE NO 34	NMC1093673	NMC1093640	Mill Site
HNVFE NO 35	NMC1093674	NMC1093640	Mill Site
HNVFE NO 36	NMC1093675	NMC1093640	Mill Site
HNVFE NO 37	NMC1093676	NMC1093640	Mill Site
HNVFE NO 38	NMC1093677	NMC1093640	Mill Site
HNVFE NO 39	NMC1093678	NMC1093640	Mill Site
HNVFE NO 40	NMC1093679	NMC1093640	Mill Site
HNVFE NO 41	NMC1093680	NMC1093640	Mill Site
HNVFE NO 42	NMC1093681	NMC1093640	Mill Site
HNVFE NO 43	NMC1093682	NMC1093640	Mill Site
HNVFE NO 44	NMC1093683	NMC1093640	Mill Site
HNVFE NO 45	NMC1093684	NMC1093640	Mill Site
HNVFE NO 46	NMC1093685	NMC1093640	Mill Site
HNVFE NO 47	NMC1093686	NMC1093640	Mill Site
HNVFE NO 48	NMC1093687	NMC1093640	Mill Site

## **CORPORATE REPORT**

## 6.0 ASX: ANNOUNCEMENTS RELEASED DURING THE MARCH 2021 QUARTER

11/01/2022	MGU Project update – MOU signing with Biochar Now
14/01/2022	Notice of Change of Interests of Substantial Holder
20/01/2022	Notification of cessation of securities - MGU
28/01/2022	Change of Director's Interest Notice
28/01/2022	Change of Director's Interest Notice (correction)
31/01/2022	Quarterly Activities/Appendix 5B Cash Flow Report
31/01/2022	Notification under ASX Listing Rules 3.10A
02/02/2022	Green Pig Iron Engineering Study Contract signed
15/03/2022	MGU pig iron strategic focus
23/03/2022	Appendix 2A - Correction
24/03/2022	Sale of Gravelotte Project, South Africa
31/03/2022	Annual Report to shareholders
31/03/2022	Appendix 4G

#### 7.0 APPENDIX 5B

In accordance with ASX Listing Rule 5.3.2, the Company advises that no mining development or production activities were conducted during the March 2022 Quarter.

As set out in the attached Appendix 5B, exploration expenditure during the quarter totaled A\$ 946,000. Payments to related parties totaling A\$105,000 consisted of remuneration paid to executive and non-executive directors and an associate of a director under respective service agreements.

This document has been authorised for release to the ASX by the Company's Board of Directors.

Further information please contact:

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