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INTRODUCTION TO MAGNUM

ASX listed company with a 232Mt iron ore JORC 2012 Mineral Resource in Nevada, USA*.

Magnum's vision is to supply US and international steel makers with low emission biochar pig iron.

"A 21st Century ESG project": low carbon footprint, premium, high-demand product, and supports the low emission revolution of the steel industry.

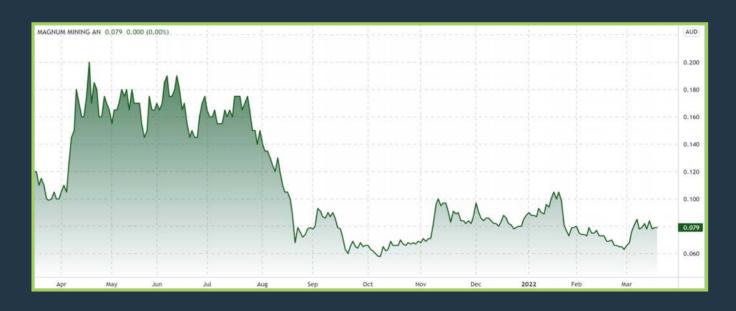
Magnum has a clear pathway to production, with several key milestones expected to be achieved through FY22.

*232 million tonnes at 18.6% Fe. See ASX announcement dated 23 March 2021 for further details regarding the Mineral Resource.



CORPORATE PROFILE

ASX Ticker	MGU
Shares on Issue	497M
Options (Listed and unlisted)	250M
Share Price	7.4cps
Market Cap	\$34.79M
Cash Balance as at 31 Dec 2021	\$4.5M





Dano Chan Managing Director

Mr Chan is an expert in iron ore mining, logistics, marketing and HBI/Pig iron/steel manufacturing. With over 27 years experience in iron ore and steel, Mr Chan has held senior positions in Iscor/Kumba Resources SA; Glencore AG; Noble Resources & Chartering, including being instrumental in the world's first iron ore pellet shipped from USA to China in 2003.

https://www.linkedin.com/in/dano-chan-42a5b3169/



Don Carroll Executive Chairman

Mr Carroll has extensive experience in the international resources business primarily in the marketing and development of minerals. In a career spanning 29 years with BHP Billiton, and prior to that Rio Tinto, he has held a number of senior positions including President BHP Billiton Japan, President BHP Billiton India and Group General Manager Marketing Asia based in Hong Kong. Mr Carroll has been active in the development of coal, bauxite and iron ore resources as well as the marketing of most mineral and energy products.

https://www.linkedin.com/in/don-carroll-b3288924/



Guy Lauzier Head of Operations

Mr Lauzier is a highly saught after mining and project manager. Focussing on project design, control, construction and management, Mr Lauzier has extensive experience including engagements across the Americas, Europe and Africa. Prior to Magnum, Mr Lauzier has led many large scale projects with extensive engineering, geological and other technical teams.

https://www.linkedin.com/in/don-carroll-b3288924/

BUSINESS STRATEGY





AN INTEGRATED GREEN OPERATION FROM MINING TO PIG IRON

Our Vision is to become a Green Pig Iron producer for the US and international steelmakers.

By processing magnetite iron ore to Green Pig Iron at site, Magnum minimizes logistics costs, reduces GHG emissions and maximizes shareholder return.

Extremely favorable market conditions for this strategy with a worldwide push for Electric Arc Furnace (EAF) steelmaking and growing demand for Green Pig Iron

Magnum expects added premiums for low emission biochar Green pig iron due to limited global supply.

Nevada Buena Vista magnetite location ticks all the boxes for world class logistic and power infrastructures.

Nevada is consistently in the top 5 favored mining & industry jurisdiction globally.

Magnum has an experienced in-house technical and financial team with key knowledge across both mining and steel making.

Anglo American shares our vision and is an important partner for the financing & development of the project.

WHAT IS 'GREEN PIG IRON'

 Green Pig Iron is iron ore that has been processed using low emission technologies and inputs.

 Green Pig Iron is produced without the use of coal, instead using the renewable input of biomass.

• Green Pig Iron is purchased by steelmakers to make green steel.

 Green Pig Iron allows for a lower carbon footprint and a premium price.



MAGNUM'S INTEGRATED GREEN PIG IRON OPERATION





Phase 1 500K-650K Pig Iron per year

Iron Ore Concentrate



Biochar

Iron Ore

Pellet

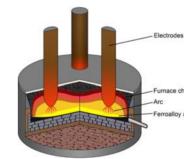
Rotary Kiln

Natural Gas

Biochar Oven Syngas

Submerged Arc Furnace

1000C Hot **Green DRI**



Green Pig Iron



Sale of Green Pig Iron to **Green Steelmakers**



Iron Ore Concentrate Green Pig Iron Green Steelmakers

WHY GREEN PIG IRON?





The **Green** Pig Iron Company

There is a world-wide push for steelmaking's low emission revolution and a global shortage of green steelmaking raw materials.

Magnum is surrounded by USA's West Coast EAF steelmakers who <u>currently</u> require 1.5 million tonnes per annum of pig iron. These steelmakers need stable pig iron supply.

With international High grade iron ore becoming increasingly expensive and scarce, Magnums' cost-advantage (due to local ingredients and reduced logistic costs) positions them as the ideal partner for EAF steelmakers.

USA's demand for steel and pledge to reduce carbon footprints provide the perfect environment for Magnum. Further option to supply select customers throughout Asia.

Potential for Carbon Credits and other tax incentives which should deliver lucrative flow through effects for all in chain.

The bottom line?

In-demand, premium product attracts premium prices with significant gross margins.

VALUE ADDING OF IRON ORE HAS MAJOR ADVANTAGE





The **Green** Pig Iron Company

	62% Iron Ore Fines CNF China (USD)	Pig Iron FOB New Orleans, USA (USD)	Value Difference (USD)
Sept 2020	130	375	245
Mar 2022	160	850	690

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Fastmarkets

Price Gap - US Pig Iron vs China 62% Iron Ore



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EXCLUSIVE PIG IRON PRODUCER ON THE WEST COAST USA





The **Green** Pig Iron Company



UNIQUELY PLACED TO SUPPLY US WEST COAST CUSTOMERS





All West Coast steelmakers are moving up the value chain for premium steel products. More pig iron is needed.

All West Coast steel mills are EAF operations, currently totaling over 7 million tonnes of steel (requiring approx. 1.5 million tonnes of pig iron)

No stable pig iron supply for all the West Coast steel mills.

All regional steel mills are expanding capacity due to record market demand.

MAGNUM'S HIGH-GRADE RESOURCE





The **Green** Pig Iron Company

Total reported Mineral Resources 232Mt (JORC 2012 compliant).*

Metasomatic deposit formed through deposition of magnetite into an intensely altered gabbro host.

Magnetite is present as high grade pods, desseminations and veins.

Mineral resource estimate based on 23,061 metres of diamond and 13,024 metres of RC drilling and three generations of extensive metallurgical testing.

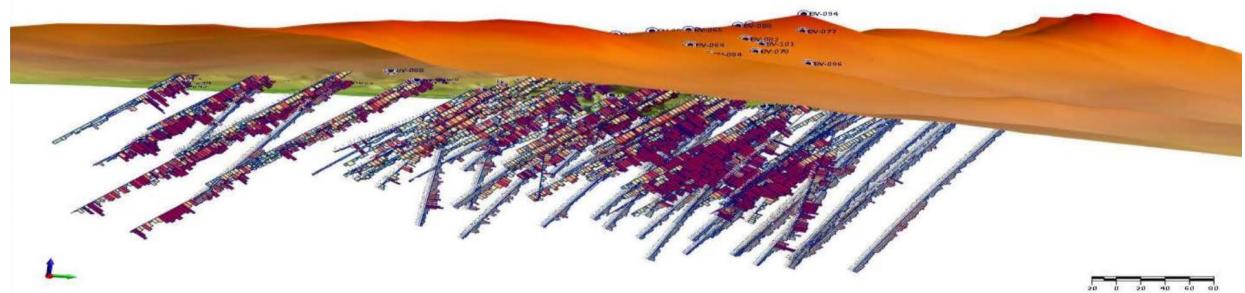
Resources modelling very well understood.

Very favourable mining and benefication characteristics because of metsomatic genesis.

Significant capex and opex benefits compared to typical BIF hosted magnetite deposits.

Cut off	Deposit		Indicate	d		Inferre	ł		Total	
Fe %		Mt	Fe %	DTR %	Mt	Fe %	DTR %	Mt	Fe %	DTR %
10.0	Sect 5	34	17.4	21.0	8.0	16	18	42	17.1	20.5
	West	117	19.5	23.9	40	17	21	157	18.9	23.2
	East				33	19	23	33	19.0	23.0
	Total	151	19.0	23.2	81	18	22	232	18.6	22.7
15.0	Sect 5	21	20.2	25.1	3.8	19	24	25	20.0	24.9
	West	90	21.4	26.7	26	20	24	116	21.1	26.1
	East				25	21	26	25	21.0	26.0
	Total	111	21.2	26.4	55	20	25	166	20.9	25.9
20.0	Sect 5	9.1	24.1	30.9	1.3	23	29	10	24.0	30.7
	West	40	26.5	34.4	9.6	25	32	50	26.2	33.9
	East				13	24	31	13	24.0	31.0
	Total	49	26.1	33.8	24	24	31	73	25.5	33.0
25.0	Sect 5	2.8	28.6	37.7	0.3	27	36	3.1	28.4	37.5
	West	19	31.5	41.9	3.5	30	39	23	31.3	41.4
	East				3.6	29	38	3.6	29.0	38.0
	Total	22	31.1	41.4	7.4	29	38	29	30.7	40.6

* DTR% is the estimated proportion of the rock mass recoverable by simple magnetic concentration on the basis of the Davis Tube Recovery analyses for drill hole samples. It is strongly correlated to iron grades.



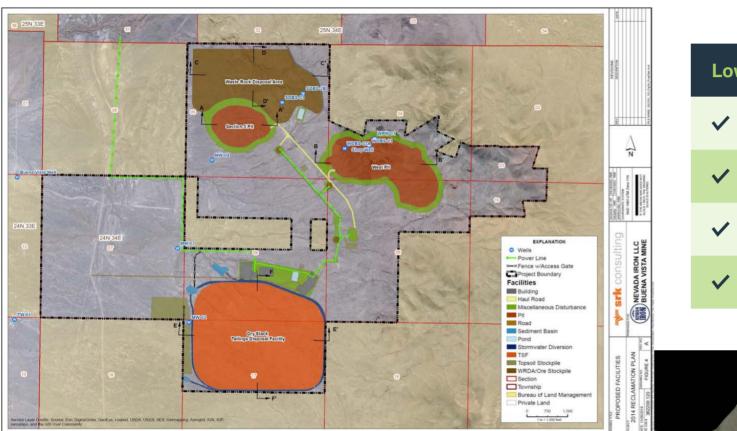
*232 million tonnes at 18.6% Fe. See ASX announcement dated 23 March 2021 for further details regarding the Mineral Resource.

BUENA VISTA PIT DESIGN AND WASTE DUMP LAYOUT COMPLETED





The **Green** Pig Iron Company

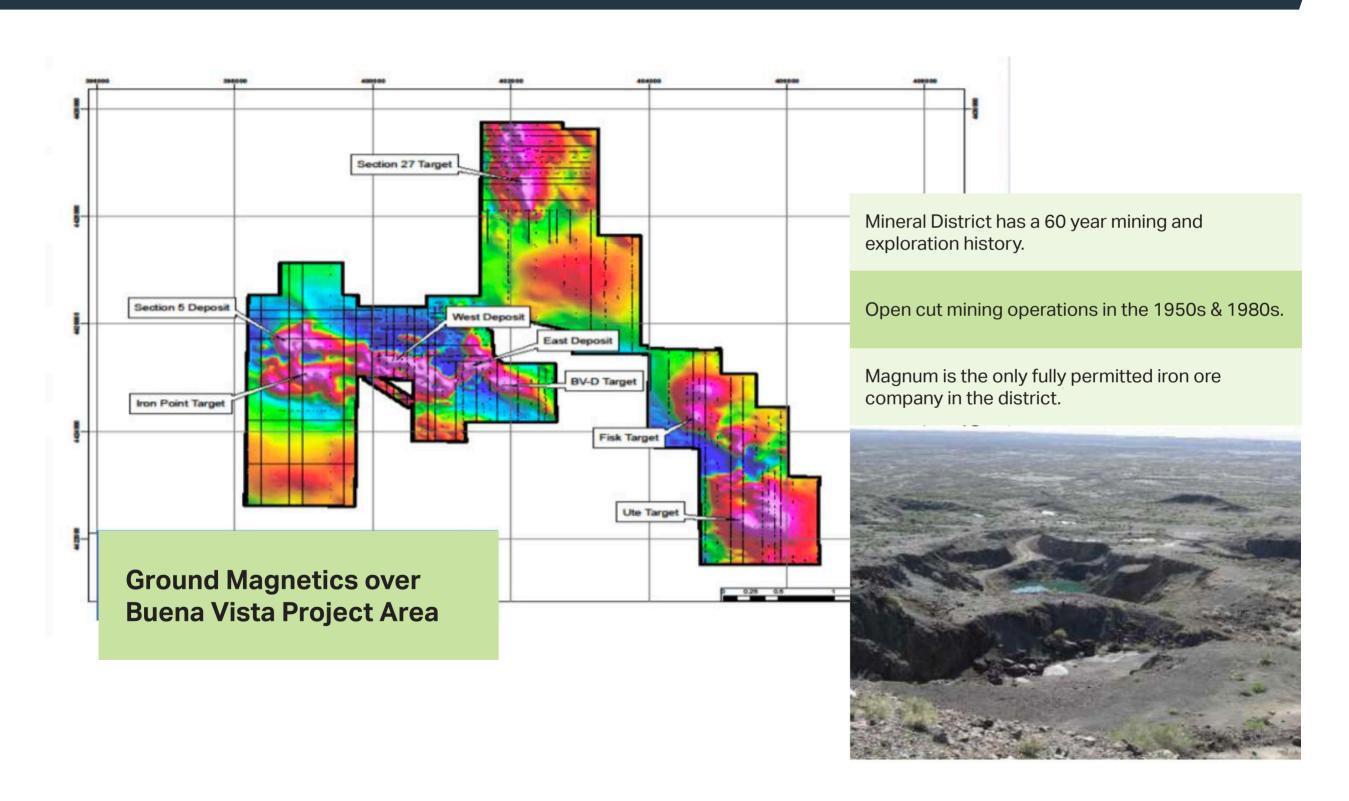


Low Strip Ratio

- ✓ Existing Open Pit Mine
- ✓ Flat waste dumps
- ✓ Strip ratio of 0.86:1
- ✓ Short haul to processing

RESOURCES EXPANSION OPPORTUNITY





MAGNUM GREEN PIG IRON PRODUCT SPECIFICATION





The **Green** Pig Iron Company

Pilot plant test completed in association with Beijing Shougang Engineering & Technology.

100% biochar pig iron with low impurity for EAF usage.



Green Pig Iron Test Video

https://www.youtube.com/watch?v=fnseAYRHz54



SGS

Lab Reference No.:MNT215097QD SGS Report No.:MSRQD2100795-01A Testing Report Page: 2 / 2

Test Items	Unit	Result	
rest items	Offic	1	
Fe	%	94.46	
Si	%	0.086	
С	%	4.63	
Р	%	0.129	
S	%	0.0270	

*****The end*****

Best for Electric Arc Furnace (EAF) Application ↓

	Typical Blast Furnace Pig Iron	MGU Biochar	Charter Steel Purchase Req	Gerdau Midlothian Purchase Req	SDI USA Purchase Req	
Fe	95	94.5				
Si	1	0.1	1.5 Max	0.7 Min	1.2 Max	Excellent
С	3	4.5	3.5-4.5	3.5-4.5	3.0-5.0	Excellent
Р	0.05	0.12	0.08 Max	0.08 Max	0.15 Max	Within Spec
s	0.05	0.02	0.05 Max	0.05 Max	0.05 Max	Excellent

HIGH QUALITY CONCENTRATE & SIMPLE BENEFICIATION PLANT





The **Green** Pig Iron Company

- ✓ Dry magnetic processing to produce +63% Fe concentrate.
- ✓ Coarse grained magnetite ore with easy grinding ~ 100 mesh
- ✓ "Plug & Play" easy installation of beneficiation plant.
- ✓ Dry beneficiation means lower capex, processing cost and water usage.
- Low cost processing plant.
- Material capital and operational savings to achieve target product.



Lab Reference No.:MNT215097QD SGS Report No.:MSRQD2100795-01A Testing Report Page: 2 / 2

Buena Vista Concentrate Specification

Test Items	Unit	Result	Standard No.	
rest items	Offit	1		
TFe	%	63.00	GB/T 6730.5-2007	
FeO	%	21.82	GB/T 6730.5=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	

Remark: 1.Upon Client's request, the report has been issues in both Chinese and English. Only Chinese version has legal effect. In case of any discrepancy between the Chinese and English version shall prevail.

2. The test result of Volume average particle size was performed by SGS internal other laboratory.





Example of Dry Benefication Plant



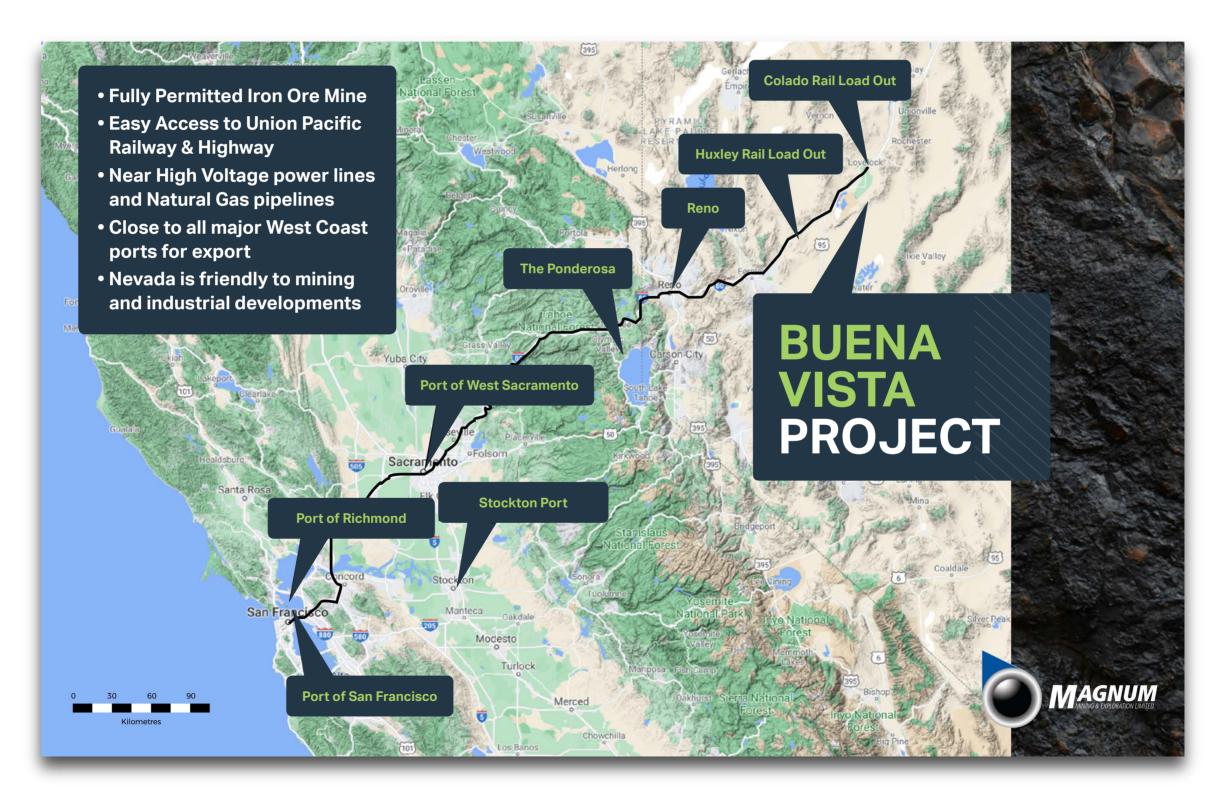
Coarse grained magnetite ore (BVDDH3)

INFRASTRUCTURE IN PLACE





The **Green** Pig Iron Company



KEY MILESTONES PROGRESS & CRITICAL WORK PLANNED





The Green Pig Iron Company

PROGRESS ON KEY MILESTONES: MAY 2021 - JAN 2022

- **Completed** beneficiation test and established high quality iron ore specification in association with BSIET (Beijing Shougang International Engineering & Technology Co. Ltd).
- **Completed** pilot plant metallurgic test using 100% biochar. Green pig iron specification confirmed in association with BSIET.
- **Completed** purchase of Colado site for raw material stockpile and unit train operation. 3
- **Appointed** key technical consultants SRK, COREM, BBA, JDS, Samuel Engineering, TOA and Rail Pro.
 - **Commenced** Engineering Study with TOA Consulting Services Ltd, which includes process design and project financial modelling (expected to be completed June 2022). http://www.toaconsulting.com/index.html
 - Commenced iron ore dry beneficiation plant design with COREM. https://www.corem.qc.ca/en/
- 7 Commenced Biochar supply MOU with Biochar Now! https://biocharnow.com
- Continued negotiation with Union Pacific Railway, Stockton Port & Richmond Terminal. 8



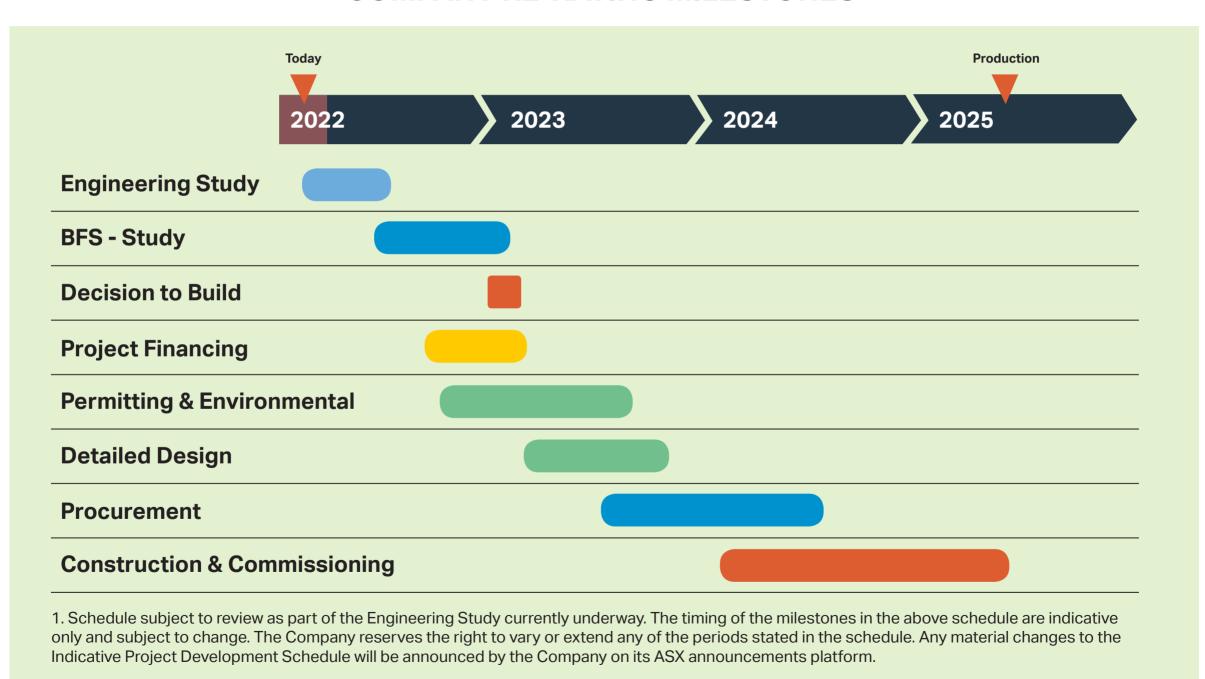
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INDICATIVE PROJECT DEVELOPMENT SCHEDULE¹



COMPANY RE-RATING MILESTONES



REPLACING COAL WITH ABUNDANT, LOW COST RENEWABLE BIOMASS



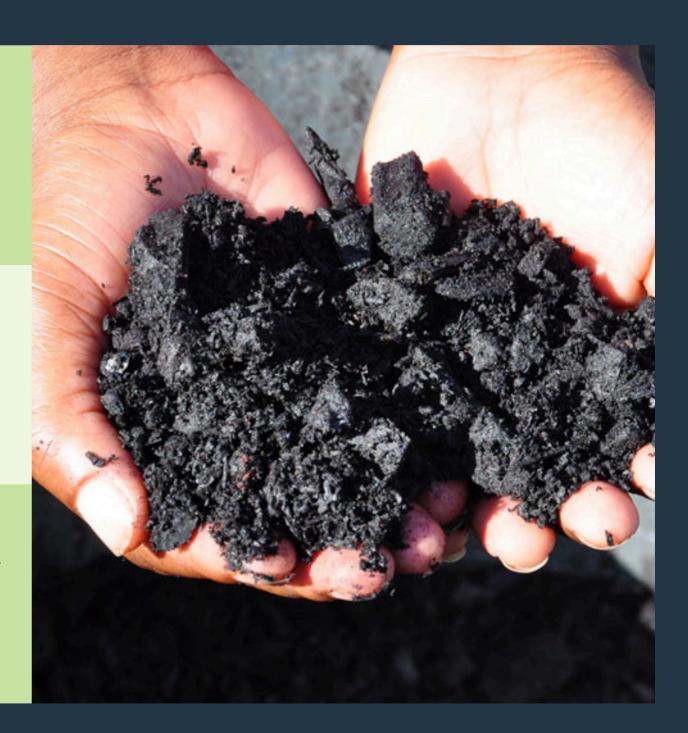


The **Green** Pig Iron Company

To produce Green Pig Iron, Magnum uses biochar to replace coal.

By removing coal and using a renewable, low-cost input, Magnum's product achieves Green certification

The proximate abundance of biomass further contributes to small carbon foot prints with reduced logistics costs and processing.



ABUNDANT, LOW COST LOCAL BIOMASS SUPPLY





The **Green** Pig Iron Company

Local Biomass (California)

FACTS:

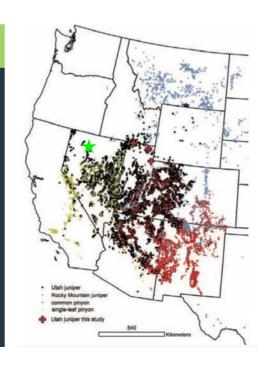
- California landfill is charging USD200 per cubic foot for waste wood.
- Waste wood is trucked to Reno and Utah landfills.
- Trees charred in California forest fire need to find usage.
- Waste wood from Los Angeles area with railway access.
- Additional local farm/ forestry biomass .



Juniper Trees

FACTS:

- Juniper Tree is an invasive species.
- A single juniper tree drinks up to 40 gallons of water per day.
- Juniper Tree Biochar is up to 8,500kCal/kg better than most thermal coal.
- A fire hazard with potent Greenhouse gas emission.
- BLM indicates 700,000 acres in Nevada for harvest per year.





PARTNERSHIP WITH BIOCHAR NOW!





The **Green** Pig Iron Company



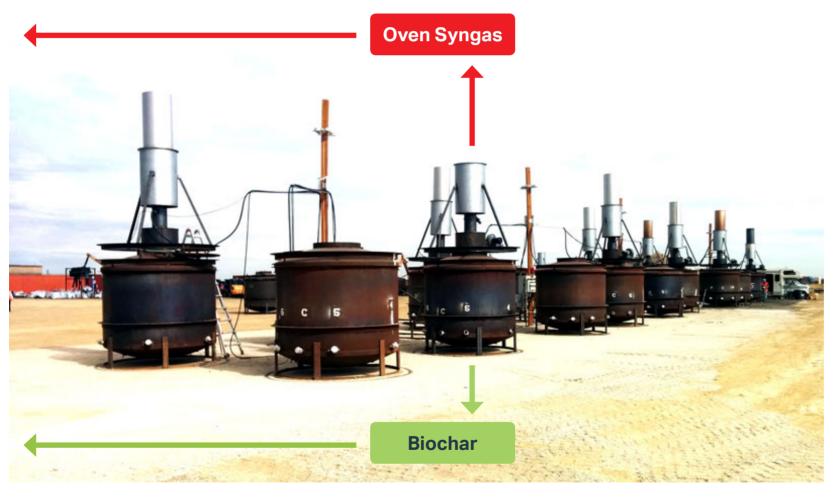
https://biocharnow.com

- Operating biochar facility in Denver
- The only ISO carbon credit certified in the USA
- The only **US EPA certified** biochar











- Low cost local biomass
- Biochar oven syngas for heating in DRI production
- Maximize carbon credits
- Federal & State incentive programs

CARBON CREDIT INCOME



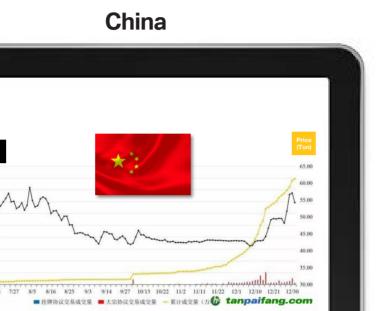


The **Green** Pig Iron Company

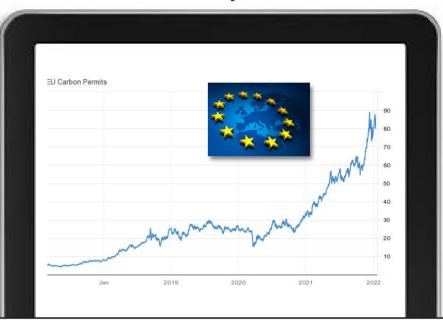
Biomass/ Biochar is renewable energy.

Low logistic carbon footprint.

Significant Carbon Credit / Tax Incentive potential.



Europe



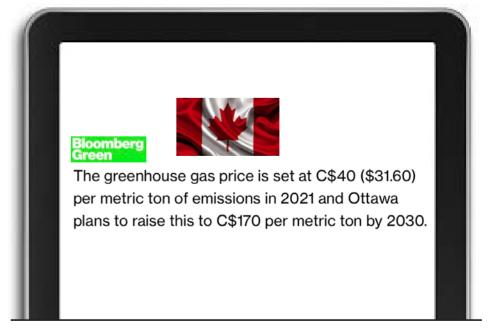
https://tradingeconomics.com/commodity/carbon

USA



https://kfafunds.com/major-oil-lobby-supports-carbon-pricing-a-potential-performance-catalyst-for-carbon-allowance-markets/

Canada



https://www.bloomberg.com/news/articles/2021-03-05/canada-on-track-to-build-nation-al-carbon-trading-marketplace

DELIVERING PREMIUM GREEN PIG IRON TO PREMIUM US & INTERNATIONAL STEELMAKERS





The **Green** Pig Iron Company

Low Cost Iron Ore

- Fully permitted iron ore mine
- Only iron ore operation in the Mineral District for additional resources
- Large water permits

Pig Iron Advantages

- Will be the Only pig iron producer in Western USA
- Surrounded by 7 million tons of EAF need stable pig iron supply
- Minimum logistic cost by value adding at site
- Easy access to electricity and natural gas

Readily Available Logistics

- Ready access to railway and highway via Coledo property
- Ports in California are standing by to export
- Union Pacific Railway is supportive of Green projects

Green Initiatives

- Abundant local biomass for renewable biochar
- Small logistic carbon footprint
- Global decarbonization
- Large carbon credit and tax incentive potentials

Premium Products in Demand

- Global expansion on EAF steelmaking
- Severe pig iron supply shortage
- Export restrictions are in place for major economies
- Magnum will be one of the very few Green pig iron producers

KEY MILESTONES PROGRESS & CRITICAL WORK PLANNED





CRITICAL WORK PLANNED PROCEEDING TO BFS: THROUGH JULY 2022

1	US off-take partners - Confirm pig iron specification and requirements Experienced US steel marketing executive appointed.
2	Nevada state government - Project update and policy support.
3	Nevada Energy - Electricity connection to the grid.
4	Southwest Gas - Natural gas connection via its pipeline in Colado.
5	Biomass - Secure supply MOU from sources in California and Nevada.
6	Resources - Expansion of available resources.
7	Drilling - Proven resources & water.
8	Basic Infrastructure Design - Logistics and utilities.

REFERENCES





The **Green** Pig Iron Company

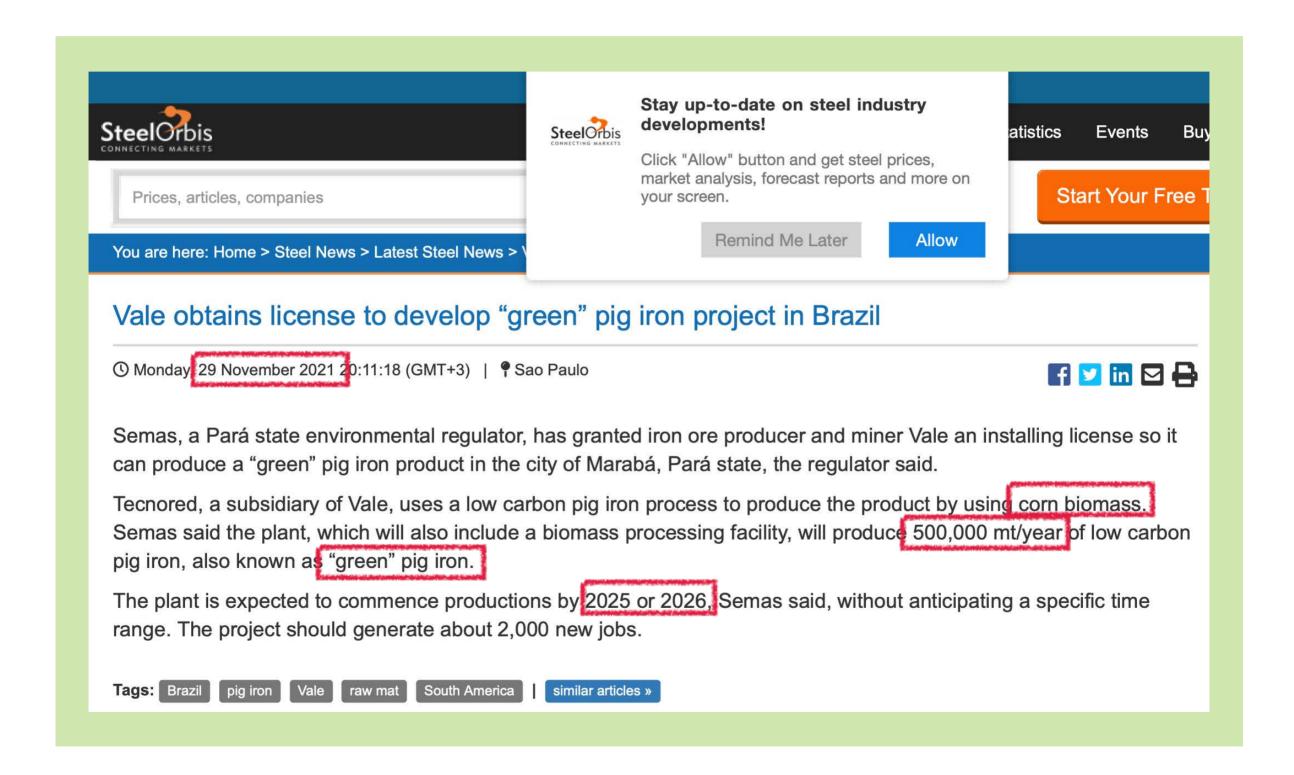
- 1. ASX Announcement 02/02/2022 Green Pig Iron Engineering Study Contract signed
- 2. ASX Announcement 31/01/2022 Quarterly Activities / Appendix 5B Cash Flow Report
- 3. ASX Announcement 11/01/2022 MGU Project Update MOU signing with Biochar Now
- 4. ASX Announcement 16/12/2021 Buena Vista Iron Ore project update
- 5. ASX Announcement 13/12/2021 Successful Green Pig Iron Production
- **6.** ASX Announcement 29/10/2021 Quarterly Activities / Appendix 5B Cash Flow Report
- 7. ASX Announcement 28/09/2021 Green Iron Production Pathway Update
- 8. ASX Announcement 23/08/2021 MGU Green Iron production strategy for development & growth
- **9.** ASX Announcement 13/08/2021 Anglo American Agreement
- 10. ASX Announcement 28/07/2021 Magnum Project Update
- 11. ASX Announcement 09/07/2021 Investor Presentation July 2021
- 12. ASX Announcement 28/06/2021 Magnum DSO Progress Update
- 13. ASX Announcement 18/06/2021 Magnum Adopts ESG Reporting
- 14. ASX Announcement 11/06/2021 AMG Announces mandate with Anglo American
- 15. ASX Announcement 27/05/2021 Magnum releases project plan for DSO
- 16. ASX Announcement 07/05/2021 Magnum Corporate Presentation May 2021
- 17. ASX Announcement 27/04/2021 Progress with Mine & Green Steel development
- **18.** ASX Announcement 23/03/2021 Maiden JORC 2012 Resource for Buena Vista Magnetite Project

GREAT MINDS THINK ALIKE





The **Green** Pig Iron Company



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