

# **GLADIATOR RESOURCES LIMITED**

**DEVELOPING A LEADING LOW COST PIG IRON PROJECT**

February 2011

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## Gladiator's Uruguay Project

- Gladiator's Uruguay Project will produce a higher value iron product (pig iron) at more modest capital cost than typical small producers:
  - ✓ **Low cost pig iron producer** – significantly lower cost than competing Brazilian producers by ~50% due to substantially reduced input costs as feedstocks sourced from:
    - ✓ own iron ore resources; and
    - ✓ surrounding timber plantations
  - ✓ **Proven processing technologies**
  - ✓ **Infrastructure in place**
  - ✓ **Close proximity to major US market**
  - ✓ **Strong project sponsors**
  - ✓ **Strong projected cash flow**
- Highly prospective, underexplored 750km<sup>2</sup> landholding prospective for large iron ore, manganese, nickel, PGM and copper deposits

# Capital Structure & Management



## Current Key Statistics (A\$)

Ordinary shares on issue	31-Jan-11	113.2m
Share price	3-Feb-11	\$0.46
Net debt / (cash)	31-Dec-10	\$(7.47)m
First F & M Involvement (Market Cap)	31-Dec-10	\$19.5m
Market capitalisation	3-Feb-11	\$52m

## Trading History



Source: ComSec, company announcements

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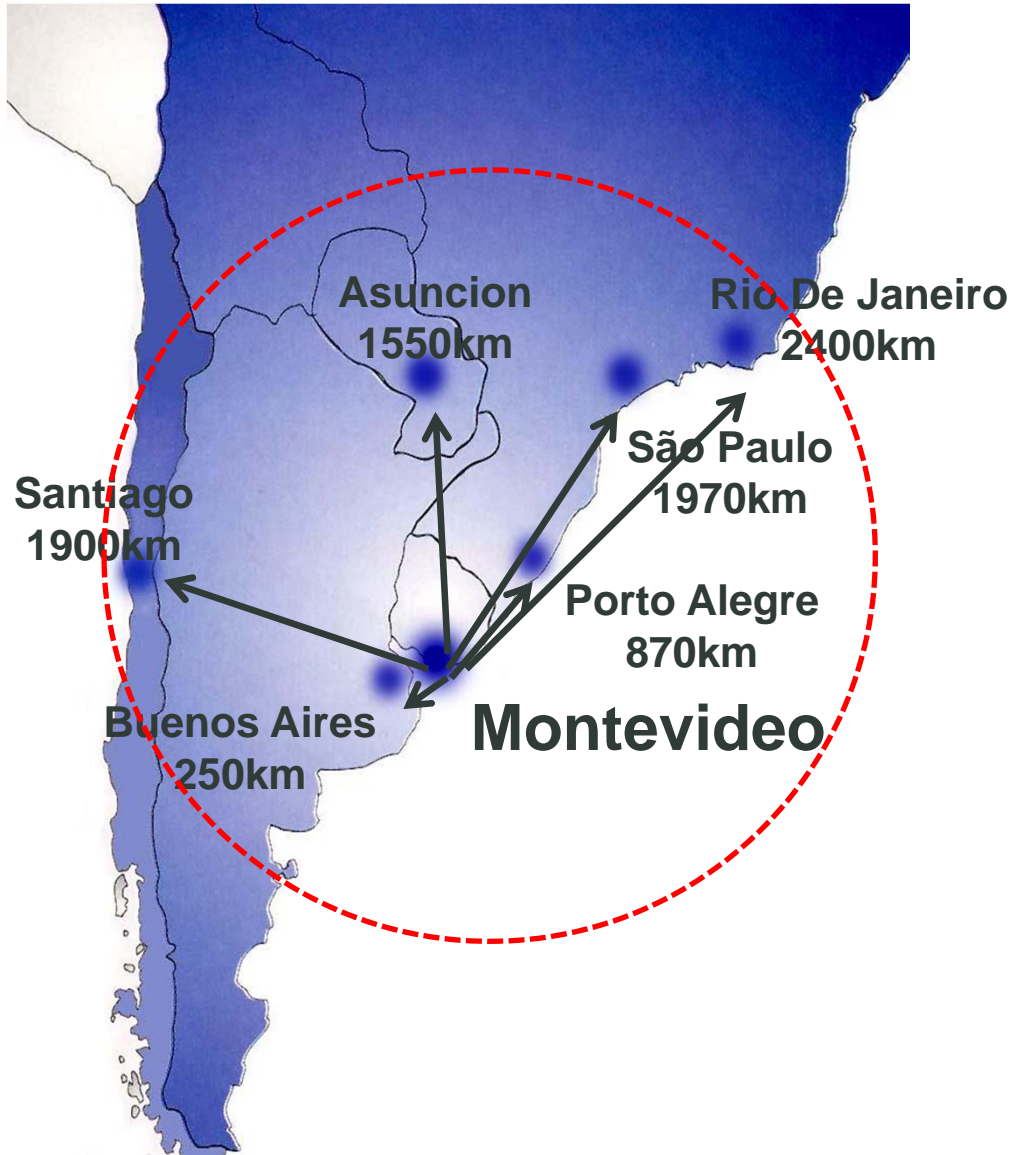
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## Board & Management

Name	Role
<b>Len Dean</b>	<b>Chairman</b>
<i>Experienced senior mining executive . Previously worked for BHP (36 years), Sesa Goa and consultant to CVRD, Portman Mining and Mitsui Iron Ore</i>	
<b>Tim Adams</b>	<b>Executive Director</b>
<i>Experienced mining engineer, senior executive and consultant in the resources sector. Previously worked with BHP, North Ltd, WMC &amp; Portman</i>	
<b>John Palermo</b>	<b>Executive Director</b>
<i>Chartered Accountant with significant experience in corporate consulting and company administration</i>	
<b>Daniel Bruno</b>	<b>Non-Executive Director</b>
<i>Experienced investment industry executive with over 15 years experience in financial markets</i>	
<b>Stuart Hall</b>	<b>Non-Executive Director</b>
<i>Qualified geologist with 40 years experience in exploration and mining projects</i>	

## Gateway to the Region



- Constitutional republic – independence from Brazil in 1835
- Population of ~3.5 million
- Politically stable – current elected president to remain in office to 2015
- Export oriented agricultural sector and tourism major industries
- Significant continued foreign investment
- Well educated workforce
- Secure investment environment
- Existing port and rail infrastructure with excess capacity

# Political and Social Stability



Low Corruption (Transparency International 2010)		Democracy Index (Economist Intelligence Unit 2010)		Economic Freedom Index (Heritage Foundation 2010)	
New Zealand	1	Norway	1	New Zealand	4
Norway	10	New Zealand	5	Ireland	5
Ireland	14	Ireland	12	US	8
Chile	21	US	17	Chile	10
US	22	Spain	18	South Korea	31
<b>Uruguay</b>	<b>24</b>	South Korea	20	<b>Uruguay</b>	<b>33</b>
France	25	<b>Uruguay</b>	<b>21</b>	Spain	36
Spain	30	Costa Rica	24	Norway	37
Portugal	32	Portugal	26	Costa Rica	54
South Korea	39	Italy	29	Colombia	58
Costa Rica	41	South Africa	30	Portugal	62
South Africa	54	France	31	France	64
Italy	67	Chile	34	South Africa	72
Brazil	69	Brazil	47	Italy	74
Colombia	78	Argentina	51	Brazil	113
Argentina	105	Colombia	57	Argentina	135

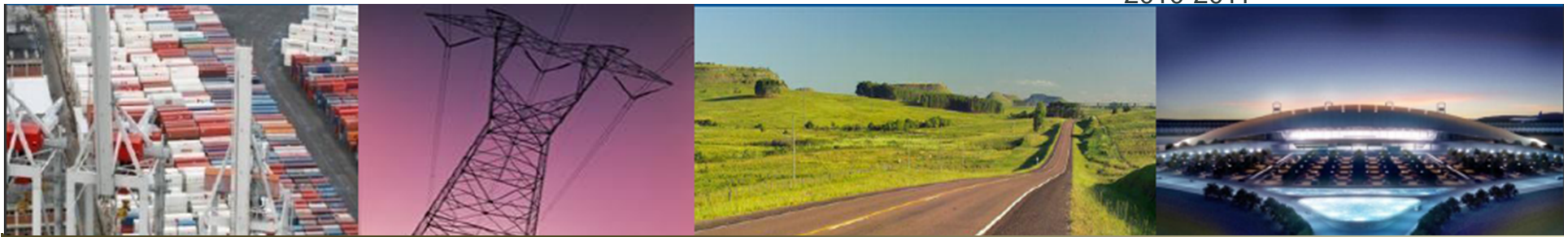
# Modern Infrastructure



- ✔ **World-class port facilities in Montevideo, a regional hub *par excellence* for South America’s Southern Cone region**
- ✔ **Boasts Latin America’s most dense highway network**
- ✔ **2009: new airport terminal, Colonia ferry port and Montevideo ring road**
- ✔ **98% of territory with access to low-cost electricity (most from renewable sources) and drinking water**

Quality of electricity supply (ranking)	
US	23
Ireland	25
Chile	30
Spain	36
<b>Uruguay</b>	<b>37</b>
Hungary	46
Italy	47
New Zealand	56
Brazil	63
Argentina	93

Source: World Economic Forum’s Global Competitiveness Report 2010-2011



# Quality of Life



- ✓ **Not prone to natural disasters**
- ✓ **Tolerant country: no ethnic, racial or religious conflicts**
- ✓ **Excellent sanitary level**
- ✓ **Third safest country in Latin America, evidenced by the booming second home market (*Latin Business Chronicle 2009 Index*)**
- ✓ **Ranked among the first countries, with the Scandinavian countries and Japan, in U.S.-based *Freedom House's Freedom in the World Survey 2009***

Global Peace Index (ranking)	
New Zealand	1
Ireland	6
<b>Uruguay</b>	<b>24</b>
Spain	25
Chile	28
Italy	40
Argentina	71
Brazil	83
US	85

Source: Economist Intelligence Unit 2010





# Exclusive Option Agreement to Explore & Develop the Isla Cristalina Belt in Uruguay



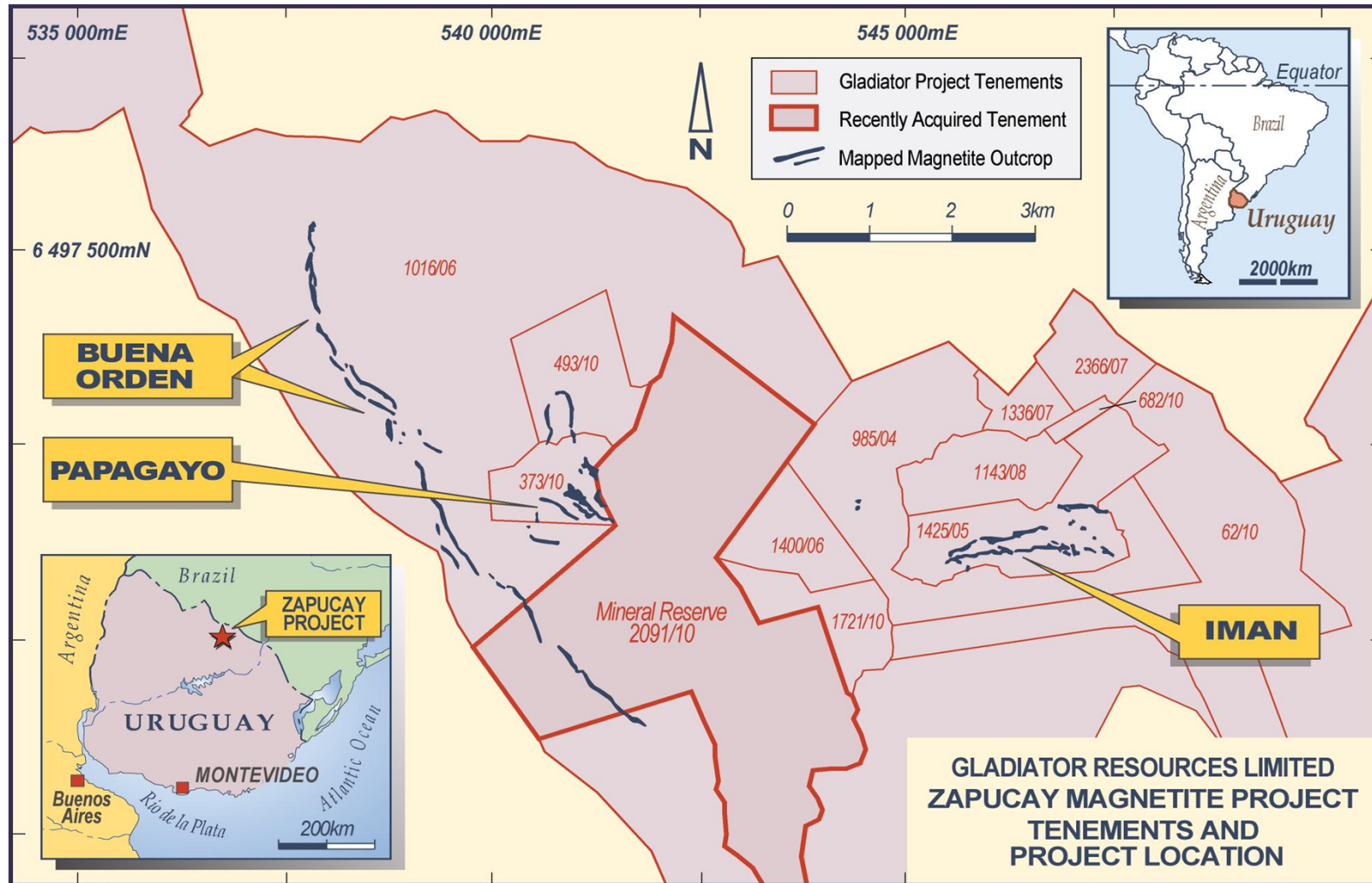
## Option Agreement with Orosur Mining Inc

- Gladiator (“GLA”) entered into an Exclusive Option Agreement (“Option”) with TSX listed Orosur Mining Inc (“OMI”) to explore and develop the iron ore, manganese and base metals potential in OMI’s project area in the Isla Cristalina Belt in Uruguay
  - The Agreement provides for GLA to earn up to an 80% interest in iron ore, manganese and base metals potential in the project area
  - GLA has exercised the Option and has finalized the agreement with OMI

## GLA’s Obligations

- US\$1 million will earn GLA a 20% interest in project area (expected 2010)
- A further US\$4 million will earn GLA an additional 31% (expected 1H 2011)
- By completing a BFS GLA’s interest in the project area will increase to 80%
- Drilling commenced in August 2010 and is expected to continue for 3 to 4 months, with metallurgical testwork occurring in parallel, with more scheduled for first half 2011

# Zapucay Prospect Identified for Initial Drilling

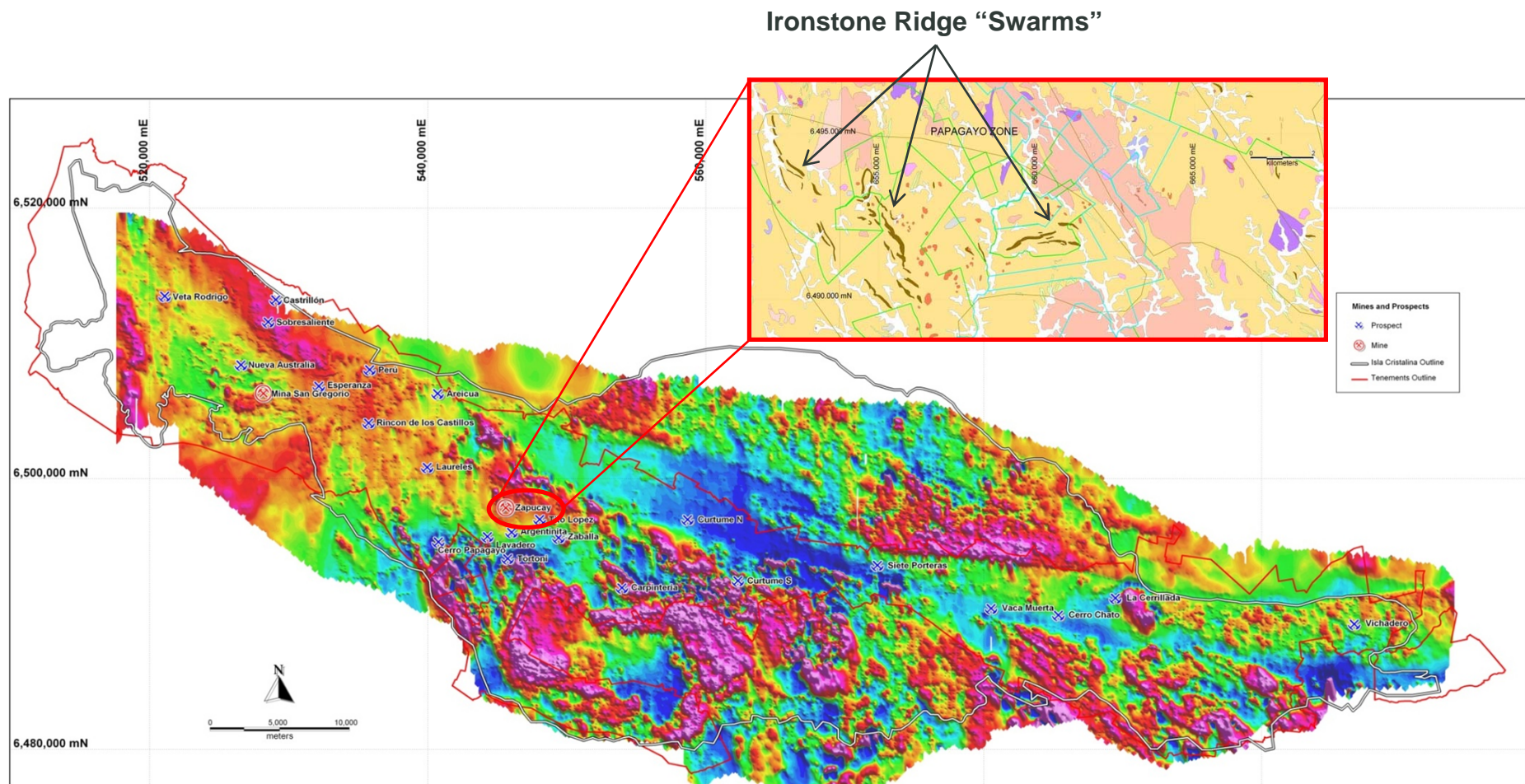


**Location of New Prospecting Permit on Mineral Reserve Area**

# Exploration Upside from Highly Prospective Isla Cristalina Belt



The project area comprises 750km<sup>2</sup> of exploration tenements in the highly prospective Isla Cristalina Belt. GLA has already identified initial iron targets for development.



## Drilling and Testwork Results to Date

- Drilling of **60 holes for 3,935 metres completed**
- **Initial assay results for 11 holes** received are consistent with test work and confirm that a high quality magnetite concentrate can be produced
- **Best intersections recorded at Papagayo included:**
  - CPRC 008 – 53m @ 26.5% Fe
  - CPDD 020 – 397m @ 29.8% Fe
  - CPDD 018 – 30m @ 33.2% Fe
- **Best intersections recorded at Iman included:**
  - CIDD 023 – 33m @ 29.9% Fe
  - CIDD 022 – 18m @ 32.4% Fe
  - CIDD 014 – 16m @ 31.6% Fe
- **High levels of manganese** mineralisation associated with the magnetite have been intersected by the drilling and best intercepts include:
  - CPRC 008 – 53m @ 13.3% MnO
  - CPRC 026 – 30m @ 12.7% MnO
  - CPDD 018 – 30m @ 9.4% MnO

# Uruguayan Project has Clear Path to Production



## Development Concept

- Production of pig iron via mini blast furnace technology using the magnetite mineralisation of the Isla Cristalina and the timber plantations of the surrounding area as feedstock
- The pig iron product is readily saleable throughout the world, particularly in the US and only requires Handysize vessels
- Preliminary indications are that the cost of production will be very competitive with the current main producer, Brazil

## Key Components

- **Mine Site** – Initial site has been identified and resource drilling commenced
- **Pig Iron Plant** – Conceptual study completed confirming low technology risk and relatively modest capital cost
- **Charcoal Production** – Charcoal manufacturing technology secured and abundance of stranded timber plantations identified close to plant site
- **Infrastructure** – Project will utilise existing infrastructure

# Geology Lends Itself To Simple Mining Operations



**Typical Magnetite Outcrop**



**Earlier Sampling**

# Historical Test Results Confirm Mineralisation



Initial sampling and testwork supports historical work undertaken in the project area confirming the existence of magnetite mineralization and suggests the ore can easily be upgraded.

## Krupp Report (1966)<sup>1</sup>

Deposits	Ore Mt.	Waste Mt.	W:O
Zapucay	64.0	26.0	0.4:1.0
Curtame	41.3	13.8	0.3:1.0
<b>Total</b>	<b>105.3</b>	<b>39.8</b>	<b>0.4:1.0</b>

Deposit	Fe%	Mn%	SiO <sub>2</sub> %	Fe/Mn
Zapucay	37	12	22	3

- Beneficiation through magnetic separation or dry cobbing and spirals is suggested in the Krupp Report to give a concentrate >60% Fe<sup>2</sup>
- Preliminary metallurgical work undertaken on surface samples collected by GLA indicates a concentrate of >65% Fe and 2-3% Mn can be produced at a relatively coarse grind<sup>3</sup>

1. This historical estimate is not reported in accordance with the JORC Code and it is uncertain that following evaluation and/or further exploration the resource and reserve will ever be able to be reported in accordance with the JORC Code
2. These results were obtained from rudimentary exploration techniques of pitting and sampling and therefore should be treated with caution.
3. These results may not reflect the metallurgy of the overall deposit.

# Abundance of Feedstock & Low Technology Risk



The technology risk involved in GLA's pig iron production process is negligible given it is largely based on existing technologies.



**Eucalypt Plantations**

*Preferred feedstock will be smaller diameter logs produced from the thinning of the surrounding plantations*



**Iron Ore Mine & Concentrator**

*Ore mined, crushed, grinded and screened followed by magnetic separation or jigging to produce concentrate of >66% Fe & 2 – 3% Mn*



**DPC Charcoal Plant**

*DPC biomass pyrolysis carbonisation technology which indicates an effective cost of charcoal at about 20% of traditional methods*



**Sinter Plant**

*Iron concentrate sintered (agglomeration of iron ore fines to produce a material suitable for charging of blast furnaces)*



**Mini Blast Furnace**

*Principal feedstocks of sinter and charcoal added to furnace with minor quantities of fluxes*



**Pig Iron**

## Advantages of DPC Technology

- Mechanised
- Non polluting
- Energy efficient
- Controlled carbonisation – maximum yield
- Can use as cut timber
- Shorter carbonisation time



# Significant Cost Advantage over Existing Producers



GLA's Uruguay Project compares favorably to the existing Brazilian pig iron producers resulting in significantly lower estimated operating costs.

Component	Description	Gladiator Uruguay Project	Existing Brazilian Producers
Iron Ore	<ul style="list-style-type: none"> <li>Access to a supply of ore able to produce a "sinterable" concentrate of required grade</li> </ul>	<ul style="list-style-type: none"> <li>✓ Ore to be sourced from GLA owned deposits</li> <li>✓ Further test work on quality of ore to be undertaken</li> </ul>	<ul style="list-style-type: none"> <li>Deposits generally not owned by pig iron producers</li> <li>Typically buy from 3<sup>rd</sup> party suppliers at export prices less rail and port costs</li> </ul>
Charcoal Cost	<ul style="list-style-type: none"> <li>Access to timber supply for charcoal production</li> <li>Must be able to produce for a modest cost</li> </ul>	<ul style="list-style-type: none"> <li>✓ The region around Isla Cristalina has stranded eucalypt and pine plantation offering very low cost timber feed for charcoal production</li> <li>✓ GLA is securing worldwide (except Brazil) license for the DPC biomass pyrolysis carbonisation technology</li> </ul>	<ul style="list-style-type: none"> <li>Charcoal supplied by independents – trucking up to 1,000kms</li> <li>High overall cost due to transportation and low efficiency</li> </ul>
Port & Logistics Infrastructure	<ul style="list-style-type: none"> <li>Ability to transport finished product to customers</li> </ul>	<ul style="list-style-type: none"> <li>✓ Ports accessible via road or rail</li> <li>✓ Export from either Fray Bentos Port (~250km); Montevideo Port (~440km); or Rio Grande Brazil (~400km)</li> </ul>	<ul style="list-style-type: none"> <li>~650kms by 3<sup>rd</sup> party rail</li> </ul>
Estimated Opex	<ul style="list-style-type: none"> <li>Estimated operating cost per tonne of pig iron produced</li> </ul>	<ul style="list-style-type: none"> <li>✓ ~US\$220-240/t <i>(est. ~50% less than existing Brazilian producers)</i></li> </ul>	<ul style="list-style-type: none"> <li>&gt;US\$450-495/t <i>(source: 2010 China International Pig Iron Seminar)</i></li> </ul>

# Low Cost Base Offers Significant Leverage to Price Increases



Initial financial modelling has confirmed a robust project and GLA is continuing to explore opportunities to further enhance returns.

## Indicative Preliminary Financials<sup>1,2</sup>

Item	Unit	Result
Stage 1 Production	'000 tonnes p.a.	396
Sales Price	US\$/t	400
Project Life	Years	>20
Operating Costs	US\$/t	220 – 240
Capex	US\$m	360
Payback	Years	5

1. These results may not reflect the metallurgy of the overall deposit.
2. Chinese provision of plant may reduce capital cost estimate.

## Commentary

- Project uniquely provides investors with direct leverage to the pig iron market
  - At US\$500/t project returns are significantly enhanced
- Preliminary test work<sup>1</sup> indicates that a resource of 26Mt can support a 0.4Mtpa pig iron operation for 18 years
  - GLA is targeting an initial resource of 50 – 100Mt. 100Mt is sufficient to support an operation of 1Mtpa for over 30 years
- Customers likely to be attracted by the high manganese content (2 – 3%) in GLA's pig iron product
- GLA continues to evaluate a number of opportunities to further enhance project economics. These include:
  - Additional revenue stream generated by sale of manganese fines product – potential to reduce opex by ~10% (by-product credit)
- IRR range of 16 – 20% (based on base & current pricing scenarios respectively) with potential to increase up to ~29% with manganese by-product included

*Economics to be confirmed during feasibility study*

# Project Sensitivity



Price (US\$/t)

Production (000 tpa)

Capex (US\$ million)

IRR

Cashflow (US\$ million/year)

400	500	600
-----	-----	-----

400	400	400
-----	-----	-----

360	360	360
-----	-----	-----

18%	26%	35%
-----	-----	-----

55	90	120
----	----	-----

Price (US\$/t)

Production (000 tpa)

Capex (US\$ million)

IRR

Cashflow (US\$ million/year)

400	500	600
-----	-----	-----

600	600	600
-----	-----	-----

480	480	480
-----	-----	-----

21%	28%	38%
-----	-----	-----

85	130	174
----	-----	-----

# Economics of Plant Comparison



	Brazil	Uruguay
	US\$/t	US\$/t
Iron Ore	208	35 Own supply
Charcoal	195	80 New technology improves yield Road transportation distance of <<100km vs 1000 to 1500km in Brazil
Logistics	47	58 All trucking to port, potential to use local railways
Other	45	67 Includes cost of sintering, fluxes, power, other consumables, labour, maintenance, administration etc.
<b>TOTAL</b>	<b>495</b>	<b>240</b>

# The Latin Pig Iron Market Offers Direct Exposure to the US Economy

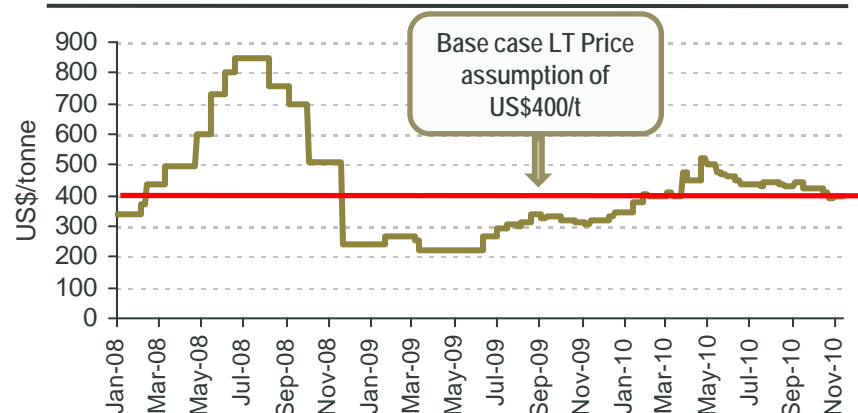


Gladiator's Uruguay Project is ideally situated to supply pig iron to the North American market, one of the largest importers.

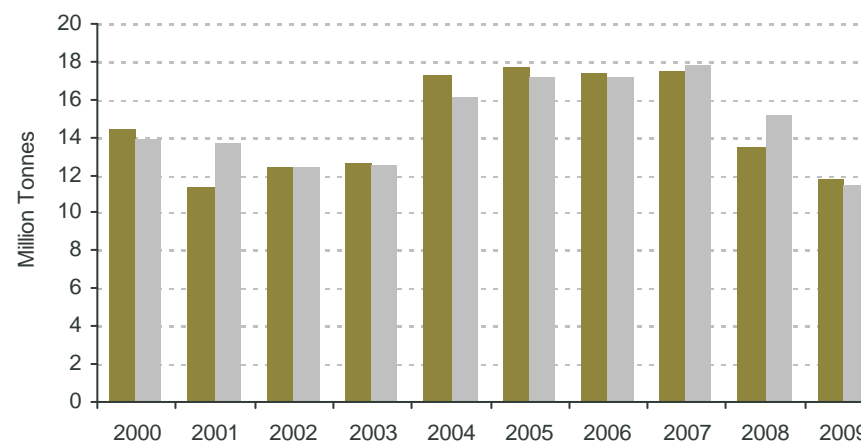
## Merchant Pig Iron market - Overview

- Merchant Pig Iron (**MPI**) is produced in blast furnaces with the principal ferrous raw material being iron ore for steel production
- MPI trade tends to be more of a spot that a contract market with prices being fixed on a shipment by shipment basis
- The principal driver of MPI prices is scrap prices that move from month to month according to supply-demand balance
- Total global market in 2009 estimated to be 18.5Mt with the internationally traded market estimated to be 11.5Mt
  - Excludes domestic China MPI market estimated to be 30-40Mtpa (no data published)
- Principal exporters are Brazil, Russia, India & South Africa
  - Producers impacted by rising input costs (charcoal and iron ore)
- Principal importing regions are North America, the Far East and Europe (Turkey, Italy & Spain)

## Steel Latin American Export Pig Iron Price FOB Vitoria



## Cross Border Merchant Pig Iron Trade



Source: Bloomberg (11/11/10)

# Project Timeline



	2011		2012		Future
	H1	H2	H1	H2	
Orosur Earn In	20%	51%	80%		
Resource Drilling	[Bar]				
Preliminary Feasibility Study	[Bar]				
Definition Drilling		[Bar]			
Feasibility Study		[Bar]			
Environmental Studies	[Bar]				
Permitting		[Bar]			
Detailed Engineering			[Bar]		
Construction				[Bar]	
Production					[Arrow]

- ▶ Ongoing drill results
- ▶ Earn in additional 31% from Orosur to 51%
- ▶ Earn in additional 29% from Orosur to 80%
- ▶ Potential TSX listing
- ▶ Appointment of new CEO
- ▶ Potential complementary acquisition

- ▶ **Low cost Pig Iron producer**
- ▶ **Infrastructure in place**
- ▶ **Experienced project sponsors**
- ▶ **Strong cashflow potential project**
- ▶ **Company is well funded to execute on its plan**



