



Nullagine Iron Ore Project  
Company Update  
June 2009

Mike Young  
Managing Director

## **A brief history in time**

- BC Iron lists – December 2006 from combined assets of Alkane and ConsMin
- Resource drilling identifies DSO at Outcamp May 2007
- MoU with Fortescue Metals Group July 2007
- Drilling/resource estimates 2007 through 2009
- Joint Venture FMG June 2009 and rail haulage and port agreement
- Feasibility Study June 2009
- Production April 2010

- Joint venture with Chichester Pty Ltd (FMG)
- Resource **51Mt @ 57% Fe** and low  $Al_2O_3$  and *ultra low P*
- Direct Shipping, high-quality **Sinter Blend Ore**
- Mining – simple geometry, surface miners, low capital intensity
- Feasibility Study nearing completion – June '09
- Infrastructure – Rail and Port Haulage Agreement, May '09
- Marketing – up to 50% offtake – *strong interest in the rest*



## Joint venture with Chichester Metals (FMG) – Rail & Port haulage with TPI

- 50 : 50 unincorporated Joint Venture
- Capital contribution of \$10m each
- BC Iron manage mining, trucking, marketing and ore sales
- The Pilbara Infrastructure (FMG) manage rail haulage and port services
- Fast track to cash flows – priority is production

*“The alternative (access) would have been a Pyrrhic victory.”*

Robin Bromby, The Australian June 8, 2009



**Capital Structure** Number

Shares 60.3M

Options 6.1M

**Fully Diluted Total** **65.5M**

**Market Cap @ \$1.20** **\$72M**

**Cash on hand** **\$3.9M**

**Major Shareholders** Number % Total

Consolidated Minerals 15.6M 26%

Alkane Resources 9.0M 15%

UBS Wealth Management 2.9M 4.8%

**TOTAL** **26.5M** **45.8%**

**Board**

**Tony Kiernan** – Chairman

**Mike Young** – Managing Director

**Garth Higgo** – Non-exec Director

**Terry Ransted** – Non-exec Director

**Steven Chadwick** – Non-exec Director

**Management**

**Simon Storm** – Company Secretary

**Blair Duncan** – GM Operations

**Greg Hudson** – Chief Geologist

## Bonnie Creek CID

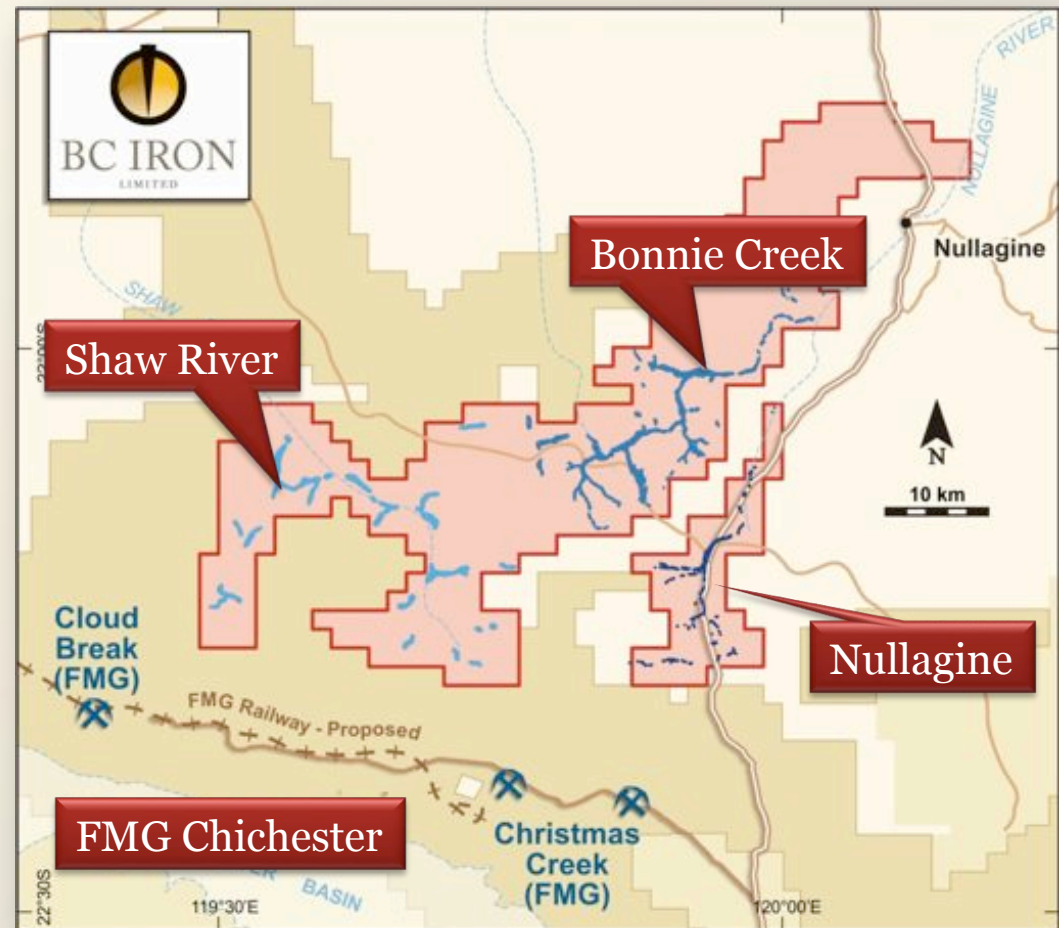
- 51 Mt DSO @ 57.0% Fe (65% CaFe)
- ~65 Mt @ 56.0% Fe present
- Low Al<sub>2</sub>O<sub>3</sub> & Ultra-low P
- Ore at surface, low strip ratio

## Nullagine River CID

- DSO & upgrade CID (~5 Mt)

## Shaw River CID

- Potential DSO, upgrade & detritals



## Total Mineral Resource Estimate – March 2009

### DSO Resource Estimate

Class	Mt	Fe	CaFe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	P	S	LOI <sub>1000</sub>
Measured	1.7	57.0	64.8	3.49	2.15	0.018	0.016	12.0
Indicated	38.6	57.0	64.7	3.15	2.09	0.016	0.011	12.0
Inferred	10.4	57.0	64.8	3.27	2.00	0.013	0.010	12.1
<b>TOTAL DSO</b>	<b>50.7</b>	<b>57.0</b>	<b>64.8</b>	<b>3.19</b>	<b>2.07</b>	<b>0.015</b>	<b>0.011</b>	<b>12.0</b>

### CID Resource Estimate

Class	Mt	Fe	CaFe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	P	S	LOI <sub>1000</sub>
Measured	2.2	54.5	62.1	4.94	3.65	0.018	0.017	12.1
Indicated	68.8	54.0	61.8	4.48	3.08	0.017	0.011	12.7
Inferred	18.1	54.7	62.3	4.27	2.85	0.013	0.018	12.1
<b>TOTAL CID</b>	<b>89.1</b>	<b>54.1</b>	<b>61.9</b>	<b>4.45</b>	<b>3.05</b>	<b>0.016</b>	<b>0.013</b>	<b>12.6</b>

- The DSO resource estimate is a subset of the CID resource
- DSO resource reported at 57% Fe specification grade
- $CaFe = Fe / (100 - LOI) * 100$

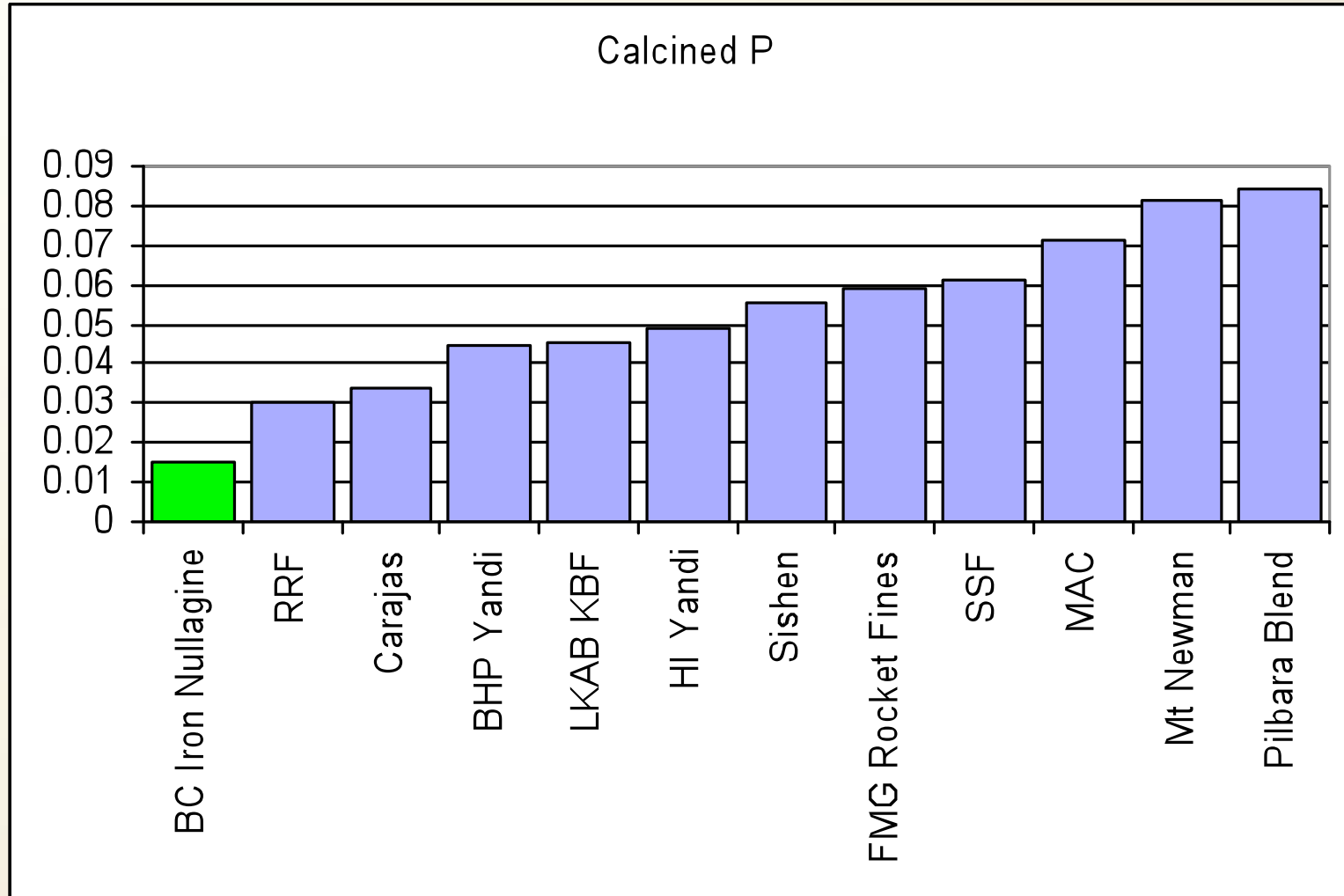


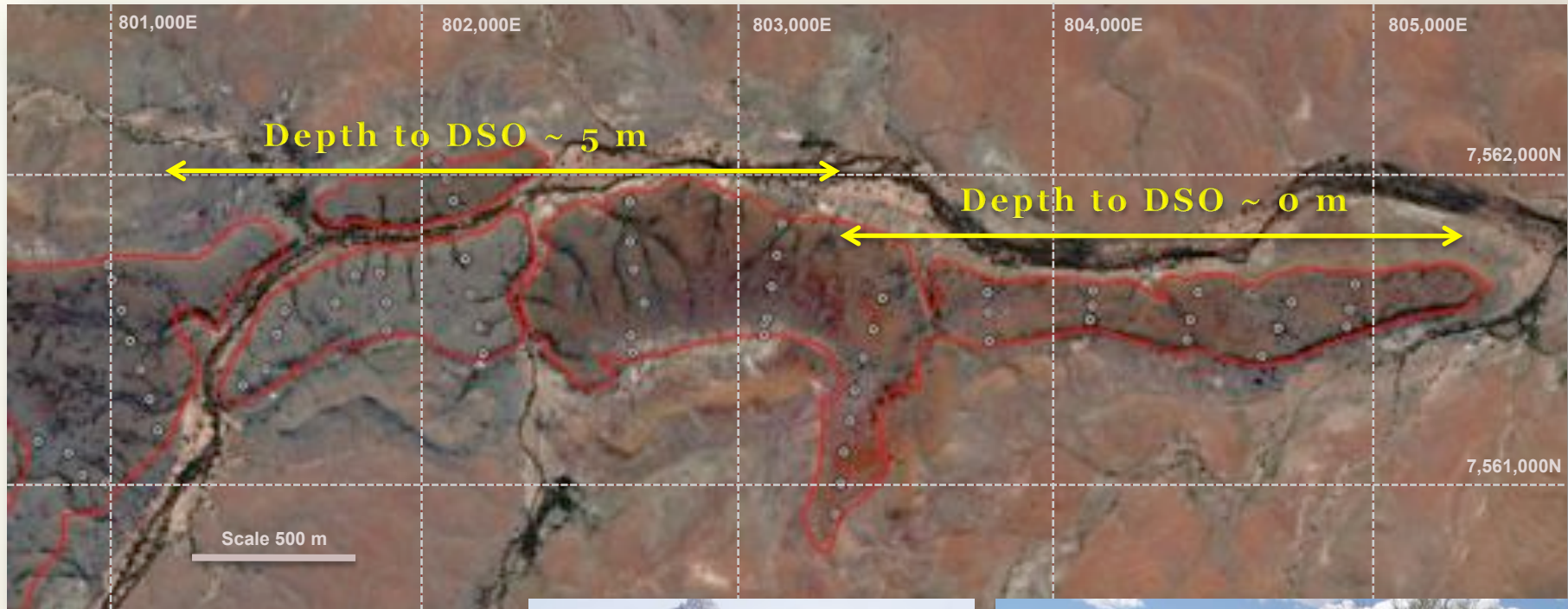
Element	Nullagine CID	Channel Iron Deposits (CID)	Fine ores
Fe	57	57 – 58.5	58 - 64
Calcined Fe*	65	64	63-65
SiO <sub>2</sub>	3.4	3 – 6	3 – 4
Al <sub>2</sub> O <sub>3</sub>	2.0	1.4 – 2.7	1.3 – 2.1
P	0.013	~0.04	0.05 – 0.09
LOI	12	9-11	3-8
-0.15mm	14	5-20	10-30

### Direct Shipping Ore – DSO

- Little or no beneficiation or upgrade
- DSO should be at or near to accepted specification
- Nullagine CID requires only crushing and screening, and offers low contaminant levels



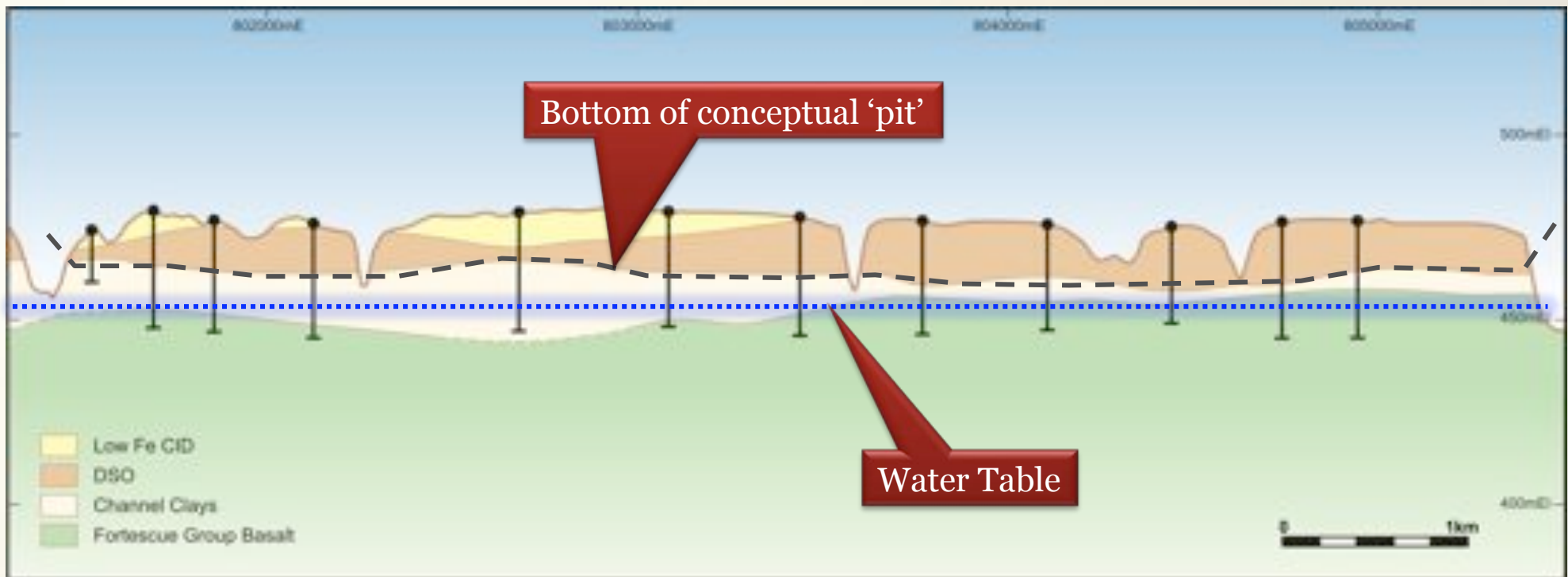




### Outcamp-Warrigal

- 38 Mt at 57.0% Fe (64.7% CaFe)
- Low strip ratio
- Outcropping mineralisation

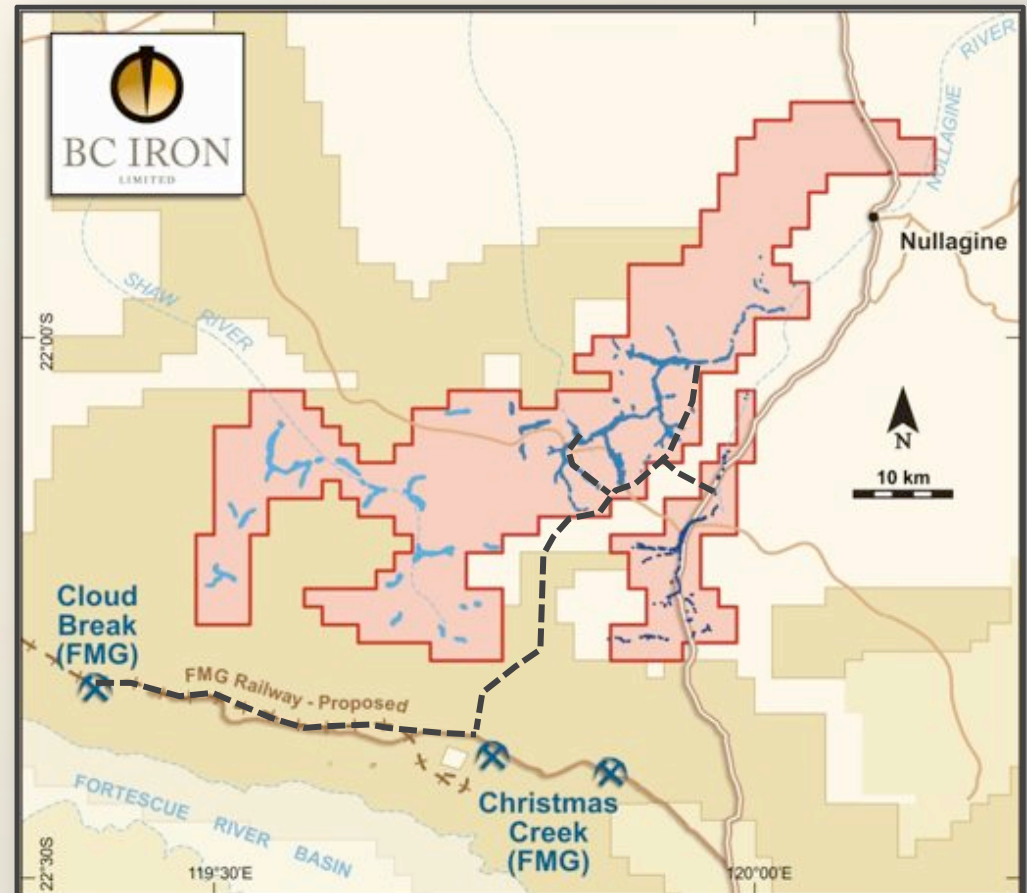




- Shallow “pits” mainly above surrounding plains - mining ore from day 1
- Above water table - lower environmental impact
- Low OpEx - low strip ratio, use of surface miners

## Project Parameters

- 51Mt DSO 57.0% Fe (65% CaFe)
- Surface mining; in-pit crushing
- Startup 1.5 Mtpa, Ramp-up 3 → 5 Mtpa
- CapEx A\$35-50M
- OpEx ~\$40/tonne LOM
- Mine to ship via TPI rail and port
- Ultra-low P, high-quality sinter blend
- Expand capacity through cashflow

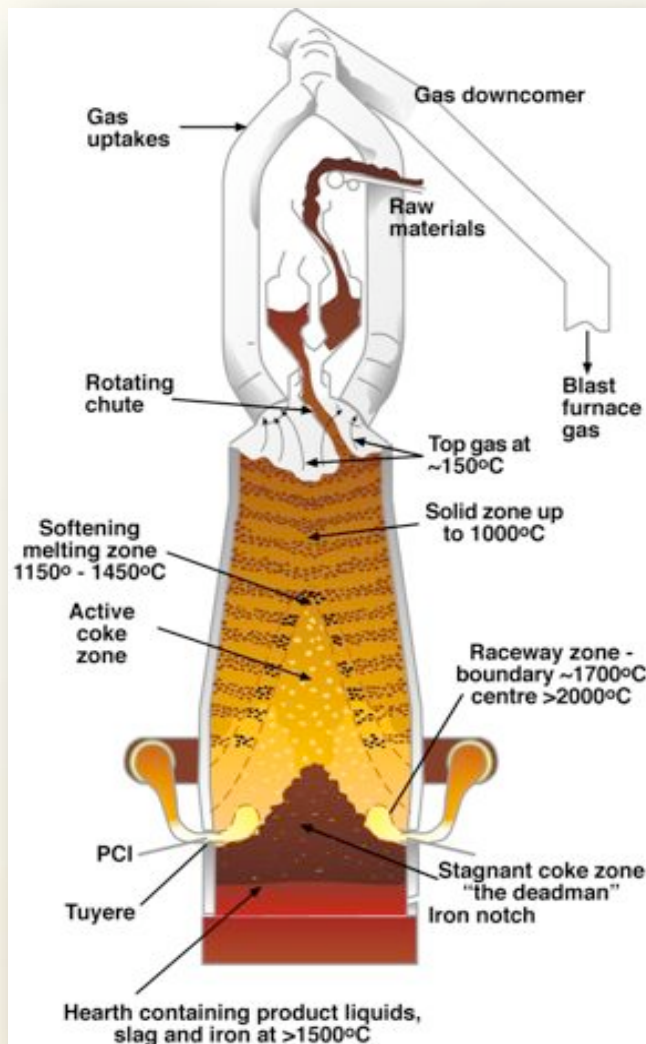




### **VERMEER TL1255 Terrain Leveller**

- Drill & blast not required
- Primary crushing not required
- In pit secondary crushing
- Mine haul trucks not required

*VERMEER TL1255 operating at Cloud Break (FMG) – photo by BC Iron*

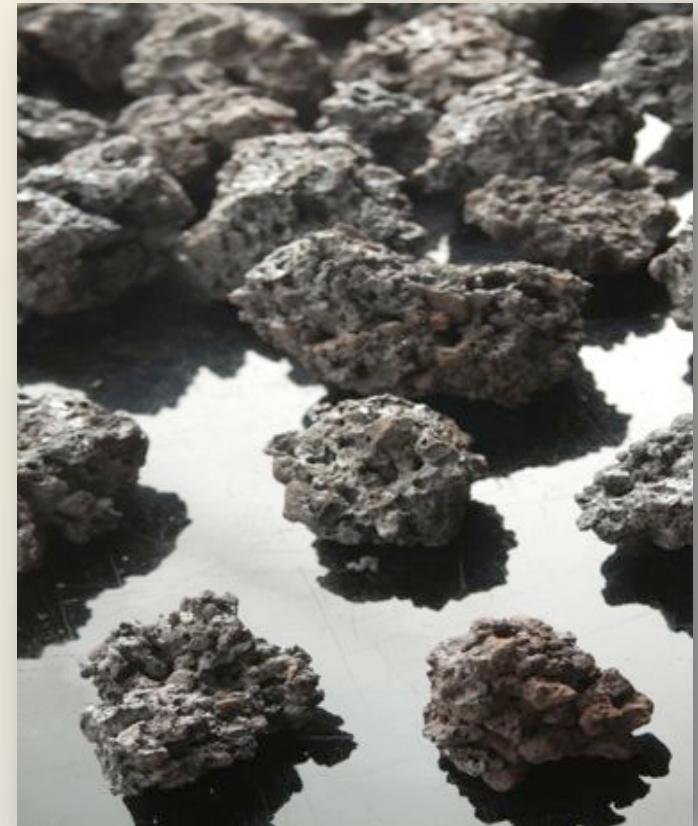


## Blast furnace

- Iron ore & coal are added at the top in alternating layers – *lump & coke only*
- Hot air is blasted into the bottom of the furnace
- Rising gases provide environment for reducing the iron oxides –  $\text{Fe}_2\text{O}_3 \rightarrow \text{FeO}$
- Descending burden melts to create iron metal
- High  $\text{Al}_2\text{O}_3$ ,  $\text{SiO}_2$  affect furnace efficiency
- High P affects the final steel quality – added costs

## Sintering

- All iron ore mines produce a *lump* and *finer* but only lump can be used in the blast furnace
- Synthetic lump is made by from *finer* by high temperature agglomeration - **sintering**
- Sintering creates “**Made to order lump**”
- Optimal physical properties of the sinter:
  - Strength, Fe content, impurities, reducibility
- Optimal sintering efficiency
  - Productivity, yield, assimilation (how particles melt together)



## Why is NIOP ore so good?

### Chemical advantages

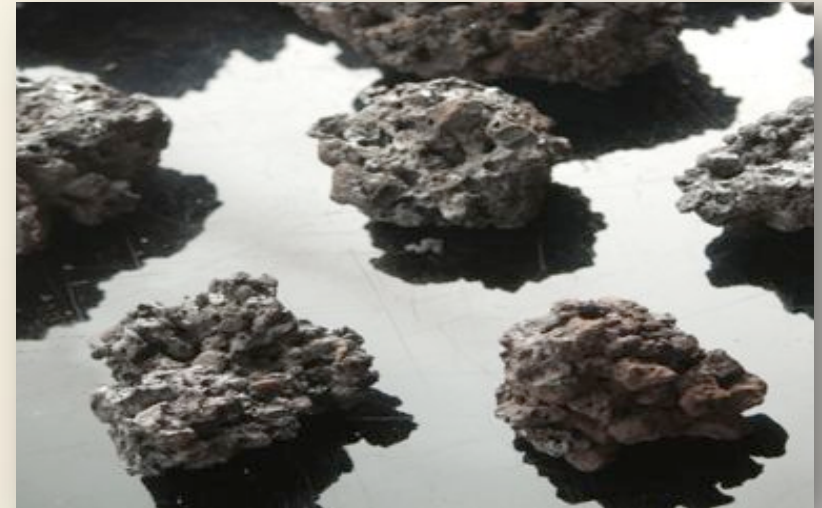
- “Ultra-low” Phosphorous (<0.02%)
- High Calcined Fe (>64%)

### Physical advantages

- Low ultra-fines – improves sintering speed
- Large fines product sizing (9-10 mm) – lower crushing costs

### Sintering advantages (Results from Shandong University, PRC)

- Sintering efficiency up 10% (Yield increased from 66% up to 77%)
- Productivity up 40% (Increased from 1.05 to 1.48 t/m<sup>2</sup>/hr)
- Sinter strength improved (Tumble Index up from 64% to 68%)
- Considered a ***First Class*** sinter blend feedstock





## Nullagine Joint Venture (NJV)

- BC Iron Nullagine & Chichester Metals - 50:50
- Up to \$10m contribution each – then project finance
- BCI manages JV – mining, sales, marketing
- Price participation on sales over US\$60/t up to 3 Mtpa
- Logistical synergies & technical expertise

## Infrastructure

- Rail Haulage and Port Services agreement with FMG/TPI
- Heavy road haul mine to railhead
  - Cloud Break 1.5 → 3 Mtpa on completion haul road
  - Christmas Creek 3 → 5 Mtpa on completion rail expansion
- Rail haulage & port services to be managed by TPI (FMG)



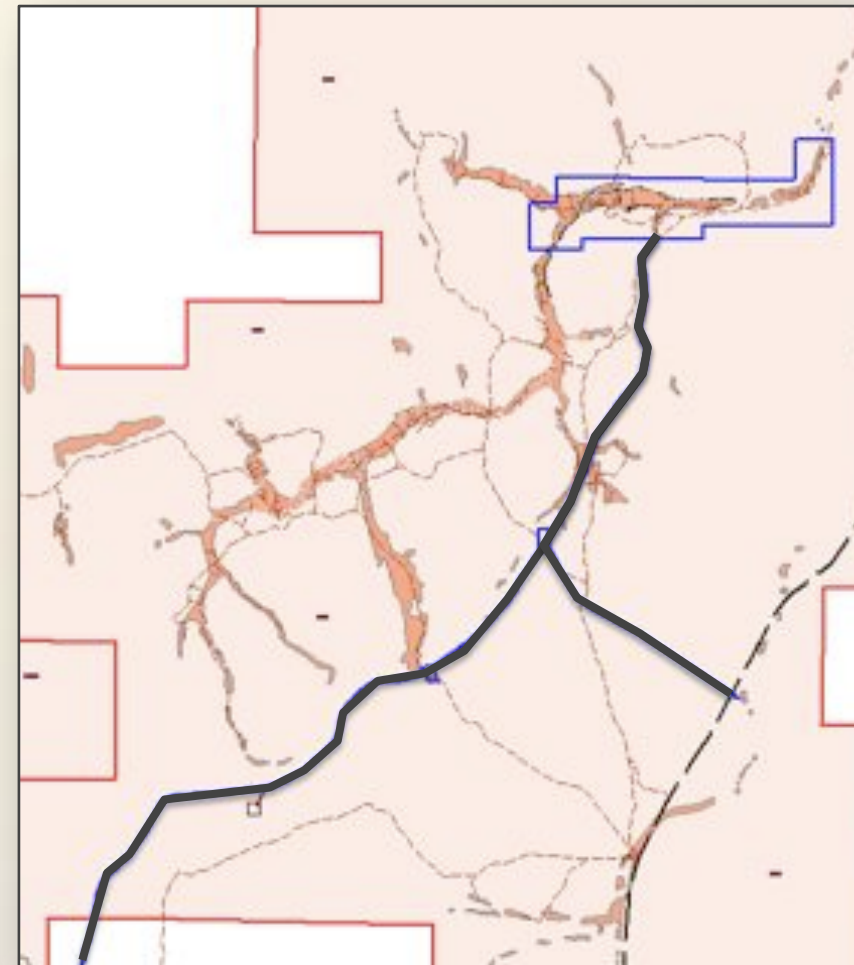
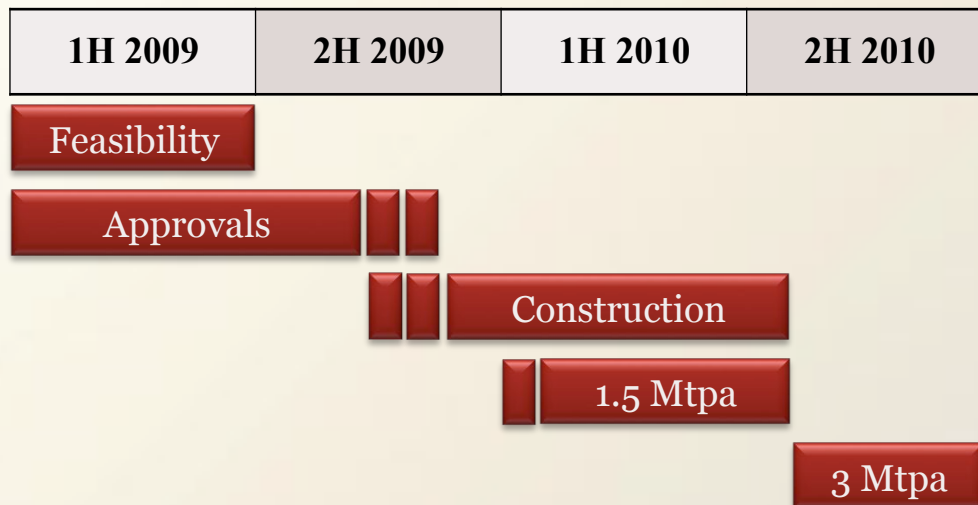
*Fortescue ore train – photo by BC Iron*

## Marketing Offtake

- Offtake agreement with Tennant Metals
  - 25% Offtake as Principal or Agent at BC's option
  - Mechanisms for increased offtake to 50%
  - Australian company – *reduced counter party risk*
- BC Iron Ore Marketing Strategy
  - Customised sinter blend – *High Value in Use*
  - Ultra-low P – *“like gold”* – blend with lower quality ores
  - Develop Long Term Contracts with mills that require our specific product – *relationship sales*



- Tenders major works *Completed*
- Feasibility Study to BCI & FMG *June 2009*
- Mining Approvals & Agreements *4<sup>th</sup> Qtr 2009*
- Construction Commences *2<sup>nd</sup> Half 2009*
- Production Start-up 1.5 Mtpa *1<sup>st</sup> Half 2010*
- Production Ramp-up 3.0 Mtpa *2<sup>nd</sup> Half 2010*



*Timetable conceptual only and dependant on mining approvals and funding*

## Simple Path to Mining

- Mineable Resource High-quality sinter, low  $\text{Al}_2\text{O}_3$  & *ultralow P*
- Statutory Approvals Aboriginal Agreement, low environmental impact
- Simple Mining Methods Surface miner, low strip ratio, ore at surface
- Infrastructure TPI providing Haulage and Port Services
- Market Offtake secure, *sought after sinter product*
- Community Benefit >100 employees, local jobs, State royalties

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*The information that relates to the drilling data and geological interpretations is based on information compiled by Michael Young who is a Member of The Australian Institute of Geoscientists and a Director of the Company. The information that relates to the Mineral Resource Estimate has been compiled by Mr Richard Gaze who is a member of the Australasian Institute of Mining and Metallurgy and an employee of Golder Associates. Both Mr Young and Mr Gaze have sufficient experience that is relevant to the style of mineralisation and type of deposit under consideration and to the activity that they are undertaking to qualify as a Competent Persons as defined in the 2004 Edition of the 'Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves'. Mr Gaze and Mr Young consent to the inclusion in their names in the matters based on their information in the form and context in which it appears.*

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