

The Time The Place The Metal

Mining 2008 Resources Convention Brisbane 2008

Mike Young, Managing Director



#### www.bciron.com.au

This release may include forward-looking statements. These forward-looking statements are based on management's expectations and beliefs concerning future events. Forward-looking statements are necessarily subject to risks, uncertainties and other factors, some of which are outside the control of BC Iron Limited, that could cause actual results to differ materially from such statements. BC Iron Limited makes no undertaking to subsequently update or revise the forward-looking statements made in this release to reflect events or circumstances after the date of this release.

The information relating to the terms "iron ore", "exploration target", "direct shipping ore", "conceptual pits" and "upgrade" should not be misunderstood or misconstrued as an estimate of Mineral Resources and Reserves as defined by the JORC Code (2004) and therefore the terms have not been used in this context. It is uncertain if further exploration or feasibility study will result in the determination of a Mineral Resource or Mining Reserve.

The information that relates to exploration targets, exploration results and drilling data is based on information compiled by Michael Young who is a Member of The Australian Institute of Geoscientists and a Director of the Company. Mr Young has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which he is 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 Young consents to the inclusion of his name in the matters based on their information in the form and context in which it appears. A full description and JORC Statement relating to the Mineral Resource Estimate is provided in the release to the Australian Securities Exchange dated March 31, 2008.

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# EXECUTIVE SUMMARY

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ASX Listed	Listing on ASX December 2006 to maiden resource March 2008 – 15 months						
	Major shareholders $\rightarrow$ Consolidated Minerals (Palmary) and Alkane Resources						
	Cash on hand – circa \$6.0M						
Nullagine	Direct Shipping Ore in a series of Channel Iron Deposits (CID)						
Project	Bonnie Creek CID is a high quality Sinter Blend Ore						
	Positive Scoping Study completed June 2008 – <i>Company has moved to Feasibility</i>						
	Inferred Resource 28 Mt at 57.4% Fe & targets of 30 Mt DSO at 56% – 58% Fe						
Bonnie	Resource infill & extension drilling Completed						
Creek Mine							

- **Development** > Flora, fauna & hydro surveys
  - Feasibility Study

**Completed Completed** Underway





## **EXECUTIVE SUMMARY - Corporate**

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Number 0/ Tetal Farmer

### **Capital Structure**

	<b>Fully Diluted</b>	65.1
	<b>TOTAL</b> Options	<b>59.4</b> 5.7
	Restricted	24.0
Shares on issue	Trading	35.4

BoardTony Kiernan - Non-executive ChairmanMike Young - Managing DirectorNon-executive DirectorsGarth Higgo - COO of Consolidated MineralsTerry Ransted - Consultant Alkane ResourcesSteven Chadwick - Independent

#### **Senior Management**

Blair Duncan – GM Operations Bill Oliver – Exploration Manager

### **Top Shareholders**

TOTAL	27.7	46.7%	
UBS Wealth Management	3.1	5.2%	
Alkane Resources	9.0	15%	<b>Dec 2008</b>
Consolidated Minerals	15.6	26%	<b>Dec 2008</b>
	Number	% 10tai	ESCIOW



Warrigal Well



# **EXECUTIVE SUMMARY - Location**

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#### **Project Locations**

Pilbara Region

### **Nullagine Project**

- > Close to emerging infrastructure
- > 35 km north of Fortescue's Christmas Creek Operation

### **Bungaroo Creek Project**

- Adjacent to Rio's Bungaroo CID
- Greenfields project
- Applications





# **EXECUTIVE SUMMARY – Nullagine Project**

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### **Bonnie Creek Channel Iron Deposit (CID)**

- > 28 Mt DSO 57.4% Fe (65% CaFe)
- +30 Mt CID at >56%Fe targeted
- > 5 DSO prospects only two at JORC status
- > High quality sinter blend
- Project is adjacent to Fortescue Metal's
   Operations at Christmas Creek

### **Nullagine River CID**

- > Potential for satellite deposits
- > DSO & upgrade CID (~5 Mt)

### **Shaw River CID**

> Potential for DSO, upgrade CID & detritals





# **BONNIE CREEK CID – Mineral Resource**

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### Inferred Mineral Resource Estimate – March 2008

DSO Resource Estimate										
Prospect	COG <sup>1</sup>	Zone	Mt	Fe	CaFe	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Р	S	LOI <sub>1000</sub>
Outcamp	55.0	DSO	20.6	57.3	64.9	3.18	1.70	0.016	0.017	11.8
Coongan	55.0	DSO	7.4	57.8	65.5	2.39	1.86	0.013	0.017	11.8
TOTAL DSO	55.0	DSO	28.0	57.4	65.1	2.98	1.76	0.015	0.017	11.8
		Mi	neral Re	esourc	e Estin	nate - C	CID			
Prospect	COG <sup>1</sup>	Zone	Mt	Fe	CaFe	SiO <sub>2</sub>	$Al_2O_3$	Р	S	LOI <sub>1000</sub>
Outcamp	45.0	CID	35.9	53.5	61.3	5.03	3.34	0.017	0.018	12.7
Coongan	45.0	CID	11.3	54.0	61.8	4.16	3.31	0.015	0.018	12.7
TOTAL DSO	45.0	CID	47.2	53.6	61.5	4.82	3.33	0.017	0.018	12.7

• For complete explanation see BC Iron release to the ASX, 31 March 2008

• The DSO resource estimate is a subset of the CID resource

### **IRON & STEEL MAKING**

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### **Iron Smelting**

- A reaction where iron ore  $(Fe_2O_3)$  is *reduced* to iron oxide (FeO) then melted to form iron metal
- Reduction is carried out at very high temperatures in a blast furnace (~1400° C)
- The fully reduced iron is then heated to its melting temperature to form molten metal
- The molten iron is formed together with molten floating *slag* carrying the gangue or waste
- Both streams are tapped from the furnace as separate liquids as a continuous process





## **IRON & STEEL MAKING**

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### **Iron Smelting**

- Iron-bearing materials, coke, and lime are charged at the top in alternating layers
- Hot air, at around 1250°C is blasted into the bottom of the furnace
- Coke combustion creates hot CO which travels up, countercurrent to the descending burden
- Ascending gases provide reducing environment for iron oxide reduction process
- Descending burden melts to create iron metal and slag

## **IRON & STEEL MAKING**

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## Sintering

BC

IMPTER

- All iron ore mines produce a *lump* and a *fines* product
- ➢ Fines (and some lump) cannot be
   charged directly to furnace → breaks
   down when heated
- Fines must be agglomerated or sintered
- Mechanical characteristics of ores are as important as the grades
- Coal agglomeration called *coking*



## CHANNEL IRON DEPOSITS

BC IRON

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# **Sintering Qualities of BCI Ore**

- Independantly tested in China
- Blended with a typical fines sinter feed including Carajas Fines
- Sample from composited RC samples at 55.9% Fe - ROM > 57%
- Using 10, 20, and 30% blend
- Resulted in increased quantity and quality of sinter – "First Class"
  - > Yield
  - Time & Sinter Speed
  - > Tumble Index
  - Fuel consumption
  - Productivity
  - 20% Blend best overall





# CHANNEL IRON DEPOSITS – Peer Comparison

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Other DSO Deposits	Element/ Compound	Typical Spec	BCI CID Bonnie Ck	BHP CID Yandi	RIO CID Robe R
	Fe	>57	57.4	58.0	57.0
	CaFe		65.1	64.2	62.8
	SiO <sub>2</sub>	3 - 5	3.0	5.0	5.7
	$Al_2O_3$	< 2.0	1.7	1.3	2.7
	Р	< 0.10	0.02	0.04	0.04
	S	< 0.03	0.02	0.01	0.01
	LOI		11.8	9.7	9.2

BCI at 55% COG RIO and BHP data from corporate websites



# **BONNIE CREEK CID**

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### **Mining Options**

### **Option 1 – Scoping Study**

- Startup Production 3 Mtpa
- CapEx
   A\$85 -100 M
- > OpEx ~\$40/tonne

### **Option 2 – Capex Minimisation**

- Startup Production 1.5 Mtpa
- CapEx
   A\$20 25 M
- > OpEx ~\$40/tonne
- In-pit secondary crushing
- Road haul to Christmas Creek/Cloudbreak
- > Expand capacity from cash flows





# **BONNIE CREEK CID – Outcamp Prospect**

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# **BONNIE CREEK CID – Outcamp Prospect**

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Shallow "pits" mainly above surrounding plains - mining ore from day 1

>Above water table - lower impact on subterranean aquatic fauna

>Low OpEx - low strip ratio, use of surface miners



## **BONNIE CREEK CID – Surface Miner**

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### VERMEER TL1255 Terrain Leveler

- Drill & Blast not required
- Primary Crushing not required
- > Mine Haul Trucks not required



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



# **BONNIE CREEK CID – Warrigal Well Prospect**

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### Warrigal Well CID

- Directly east of Outcamp Well
- ➤ Target 10 15 Mt DSO
- > Up to 27 m intersection CID
- > 7.2 km combined length
- Outcropping mineralisation mesa style
- Follow-up drilling completed
- > JORC Resource underway





# SHAW RIVER CID PROJECT

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#### **Shaw River CID**

- Med grade CID
  - High CaFe
- > Detrital deposits
- Low cost mining
- Potential source of upgradeable ore
- Simple to upgrade





# **BONNIE CREEK CID PROJECT – Infrastructure Solutions**

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#### **Short Term Strategy**

- Rail Haulage and Port Access Agreement with Fortescue
  - to be negotiated via existing MOU and "at market rates"
  - utilizes available capacity during Fortescue's production ramp up phase
- Rail Haulage Agreement with Fortescue
  - port access via common user facility and/or lease of alternate site/available capacity

#### **Longer Term Strategy**

- Rail Haulage Agreement with Fortescue
  - port access via planned North West Iron Ore Alliance (NWIOA) facility
- Rail Access Agreement with Fortescue
  - will require purchase of rolling stock
  - port access via NWIOA facility



Fortescue ore train – photo by BC Iron



# BONNIE CREEK CID PROJECT – Development Plan

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Timing		Scoping Study Bonnie Creek CID	Completed
		Baseline Environmental Surveys	Completed
	$\succ$	Infill drilling	Completed
	$\succ$	Resource Estimate	Second Half
	$\triangleright$	Feasibility Study	First Half 20
	$\succ$	Mining Approvals	Second Half
	$\triangleright$	Construction commences	Second Half

Production  $\geq$ 

2008 009 2009 Second Half 2009 First Half 2010

2H 2008	1H 2009	2H 2009	1H 2010
Drill & ResEst			
Feasibility			
Env Survey	/s & Permits		
Mining	Agreement	Constructio	n Production



Drilling at Coongan Well





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- **So far....** ✓ BCI is a Pilbara iron ore developer 100% project ownership
  - ✓ Maiden JORC Resource 28 Mt at 57.4% Fe
  - Exploration targeting an additional 30 Mt DSO
  - ✓ Feasibility Study on 3 5Mtpa operation underway
  - ✓ "First Grade" Sinter Blend Product *high value in use*
  - ✓ Low contaminants, high calcined iron grades
- ...moving forward
- ✓ CapEx (mine) \$85M and OpEx \$42/tonne
  - ✓ *"Fast Track" 1.5 Mtpa plan \$25M CapEx*
  - ✓ Access to infrastructure
  - ✓ Path to cash flow *path to growth*



Coongan Well



# IRON ORE INVESTORS CHECKLIST

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### *"Fill in the blanks ....."*

Iron Ore Investor's Checklist							
COMPANY	<b>BC</b> Iron						
Hematite – Limonite	Yes						
Simple ore body	Yes						
Direct Shipping Ore	Yes						
Sinter Blend	Yes						
Simple infrastructure	Yes						
Low CapEx	Yes						
Transport <sup>1</sup>	Yes						
Market for ore	Yes						

1 – see 'Infrastructure Solutions'



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