

Nickel West overview Marcelo Bastos – President 19 September 2007



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#### Ore Reserves and Mineral Resources

The information in this presentation that relates to Ore Reserves and Mineral Resources is as at 30 June 2006 and is based on information prepared by the relevant Competent Persons. The Competent Persons agree with the form and context of the Mineral Resources and Ore Reserves presented. The complete tables of Ore Reserves and Mineral Resources as at 30 June 2006 (including the relevant Competent Persons) for Stainless Steel Materials are presented in the BHP Billiton Annual Report 2006 on pages 74 and 75.



#### Agenda – Nickel West Overview

- Zero contacts group to reflect on recent safety learning
- BHP Billiton's Global Business
- BHP Billiton's Nickel Business Stainless Steel Materials
- BHP Billiton in WA
- Zero Harm Health, Safety, Environment, Community & People
- Nickel West Business, Products and Operations
- Nickel West Business Model
- Nickel West Strategy
  - Exploration and Asset Life Extension
- Nickel West Pipeline
- Nickel West Summary
- Open Discussion



## BHP Billiton – a major global business





## Increasing our global exploration footprint for all nickel types





## Record Underlying EBIT performance for SSM

#### Year ended June 07 (US\$M)

#### **Stainless Steel Materials**

- Record EBIT contribution
- Record annual nickel production
- Increased exploration activity in Western Australia, Colombia and Guatemala
- Ravensthorpe commissioning and Yabulu expansion progressing well
- Nickel West Cliffs project approved
- Agreement with Jubilee Mines

2007	2006	% Change	
3,697	901	<b>†</b> 310%	





#### Overview – consistent records achieved

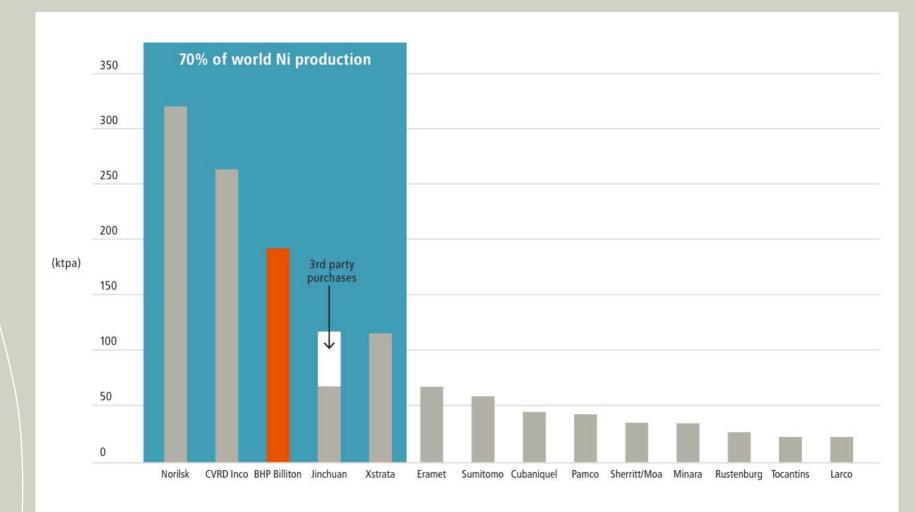
#### Stainless Steel Materials CSG Performance Summary

Description	Unit	FY03	FY04	FY05	FY06	FY07
EBIT ROC	%	9%	31%	31%	20%	63%
EBIT Margin	%	14%	32%	31%	31%	54%
EBIT	US\$m	150	561	712	901	3,697

Note: Nickel West is included in the reported results for the month of June 2005 in FY05, and FY06 includes a full year of results from Nickel West. Years prior to FY05 have not been restated for the impact of adopting International Financial Reporting Standards (IFRS).



# Stainless Steel Materials - – third largest nickel producer with 'lowest cost' aspirations

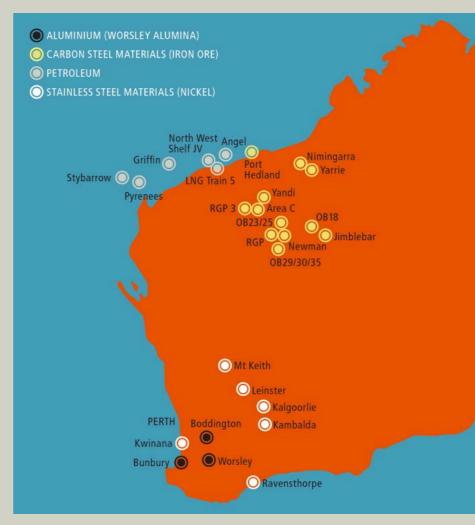




Source : SSM

## A Snapshot of BHP Billiton in WA

- More than 20% of BHP Billiton's Global Asset Base in WA
- Major Resource operations
  - Aluminium (Worsley Alumina)
  - Iron Ore
  - Petroleum
  - Stainless Steel Materials (Nickel)
- 6200 permanent employees
- 6000 contractors
- More than 2500 employees and contractors in Perth
- 600 Indigenous employees and contractors





## Nickel West – operations in world's premium nickel region

- World's third largest producer of nickel concentrate, providing 16% global nickel concentrate production
- Record production FY07 produced 103 Kt contained nickel in matte
- Nickel exports of US\$3.6B in FY07
- Approximately 3600 people employed in current operations
- Nickel West business in WA includes mining, concentrating, smelting, and refining operations. A major mining and processing operation is being commissioned at Ravensthorpe.





Vision: Passion, people, innovation and performance with Zero Harm – Nickel at its best

Mission:

We are passionate about zero harm, our people, and business excellence. We must be best in world at finding and acquiring resources, mining, concentrating and leveraging intermediates. Our business drivers are TRIFR and increasing enterprise value. Relentlessly pursuing the Basics starts with Zero Harm

Find, acquire and develop resources to fill downstream assets and go concentrate long

Downstream efficiency & innovation to maximise EBIT margin



## Zero Harm – integrated systems delivering results



Total Recordable Injury Rate (TRIFR)

BHP Billiton Nickel West's approach:

- Get it safe Zero Harm a key focus
- Get it stable Operational discipline
- Secure and grow the future







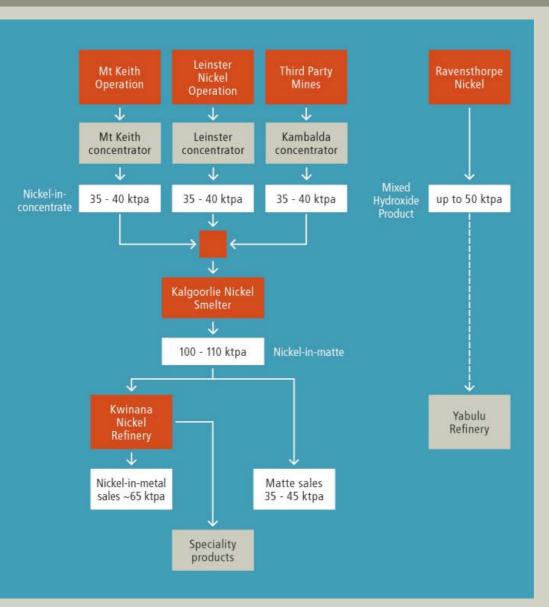
### Nickel West integrated operations

- Mt Keith Nickel Operation (mine and concentrator)
- Leinster Nickel Operation (mine and concentrator)
- Kambalda Nickel Concentrator
- Kalgoorlie Nickel Smelter
- Kwinana Nickel Refinery
- Ravensthorpe Nickel Operation





#### Nickel West flowchart





## Mt Keith Mine & Concentrator

#### Mine

- World's largest open pit nickel mine
- Reserves of 243 Mt @ 0.54% Ni (incl. stockpiles)
- Mining rate of ~40 Mbcm/a
- Mine life of over 20 years (incl. stockpiles)

#### Concentrator

- Ore throughput ~11.5 Mt/a
- Recovery of 60-70%

#### Production

• 35-40 Kt/a Ni in Conc. @ ~20% Ni grade





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## Leinster Mines & Concentrator

#### Mines

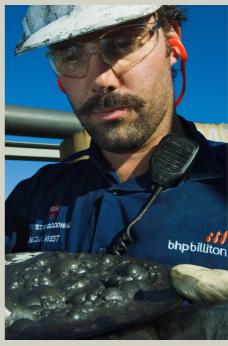
- Perseverance underground ore reserves of 14.5 Mt @ 1.9% Ni – life to ~2013
- Satellite operations planned at Cliffs & Rocky's Reward

#### Concentrator

- Mill throughput ~3 Mtpa
- Recovery of ~86% Ni in Conc. @~12% Ni grade (40-50 ktpa)



**bhp**billiton



## Kalgoorlie Nickel Smelter & Kambalda Nickel Concentrator

#### Smelter

- Outokumpu flash smelter
- 750 Ktpa throughput capacity
- 10 year+ furnace campaign life
- Furnace re-brick planned for ~2010
  - reviewing technology improvements
  - option to increase MgO tolerance

#### Concentrator

- Mill throughput ~1.6 Mtpa
- 35-40 ktpa Ni in Conc. @ ~13% Ni grade
- Output driven by nickel price & third party resource base





#### Kwinana Nickel Refinery

- Based on Sherritt-Gordon technology
- Efficient, low cost producer
- Premium briquette product
- Uses autoclave pressure leaching
- History of low-cost debottlenecking
- Competes with global refineries for matte supply from Smelter
- Production of ~65 Ktpa LME metal briquettes





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## Ravensthorpe Nickel Operation

- Mine, treatment plant and associated infrastructure
- Will produce a mixed nickel-cobalt hydroxide intermediate product for 25 years
- Product to be shipped to SSM's Yabulu refinery in Queensland
- Ore reserve of 238 Mt @ 0.68% Ni
- Expected capital cost US\$2.2 B
- First metal from Yabulu refinery Q1 CY 2008
- Capacity up to 50 Ktpa contained nickel in mixed hydroxide product and 1,400 tpa cobalt





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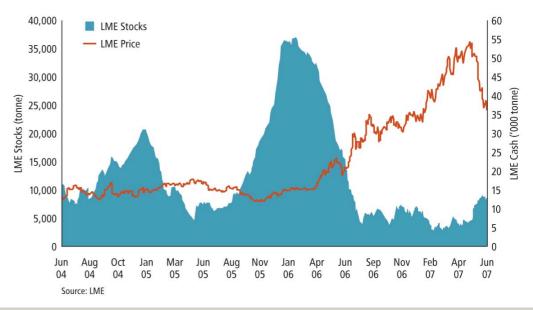
Downstream efficiency & innovation to maximise EBIT margin



## Total industry stocks at all time low

- LME price is a function of supply and demand
- LME stocks have continued to decline as demand has grown
- This has resulted in elevated prices over an extended period of time
- As stocks decrease to very low levels (6-8 weeks) nickel price escalates dramatically
- Currently in excellent position, but price can slip back very quickly

#### LME NICKEL CASH PRICE AND STOCKS

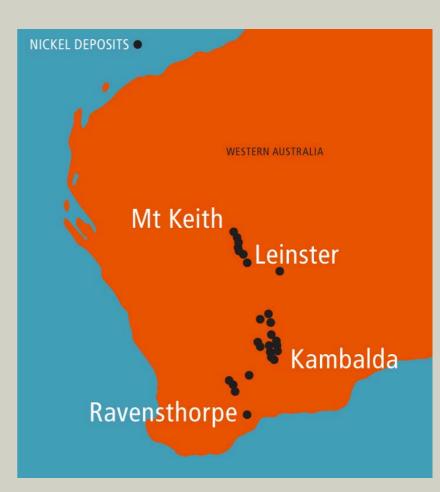


Source: SSM



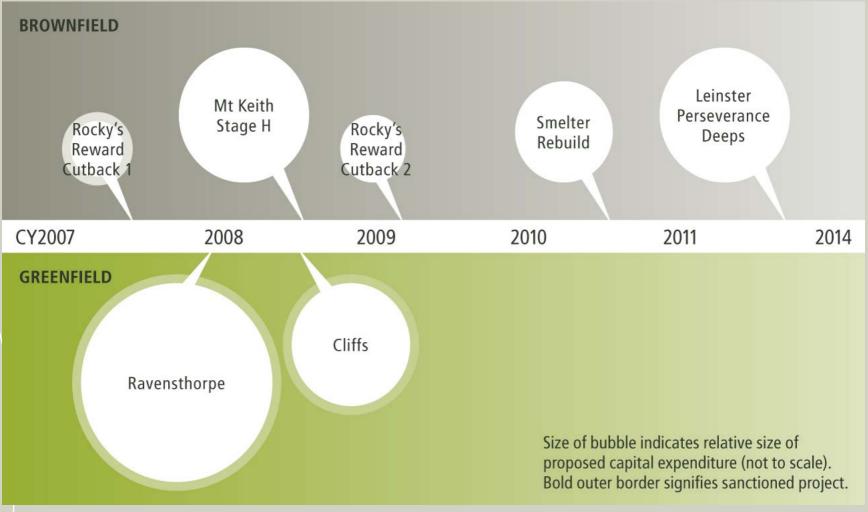
#### Exciting exploration opportunities

- We have accelerated our exploration focus to find new resources
- Target low cost near-mine 'Brownfields'
  opportunities near existing infrastructure
- 'Greenfields' opportunities also being explored
- We are making a significant investment in exploration activity





## Nickel West pipeline





## Cliffs Nickel Project – step to fulfill key growth objectives

- Reported mineral resource 2.5Mt@ 4.3% Ni
- Approved in July 2007
- Estimated capex US\$139m
- Initial production target date H1 CY08
- Maintain Nickel West system capacity





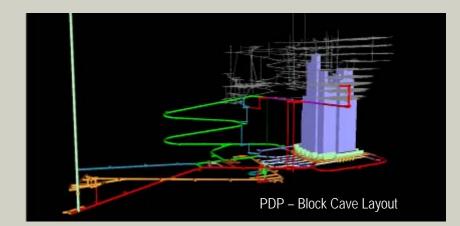
## Asset life extension opportunities – Leinster

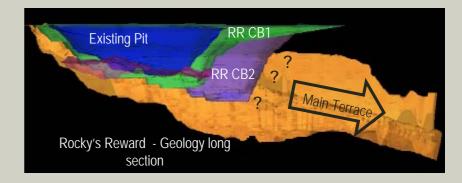
#### Perseverance Deeps

- Mineral resource of 12 Mt @ 2.2% Ni
- Pre-feasibility study to be completed in 2007
- Block Caving likely preferred mining method
- Potential to extend Leinster operations to ~2020

### Rocky's Reward

- Mineral resource of 6.4 Mt @ 1.4% Ni
- Cut back 1 commenced mining
- Cut back 2 commenced feasibility study







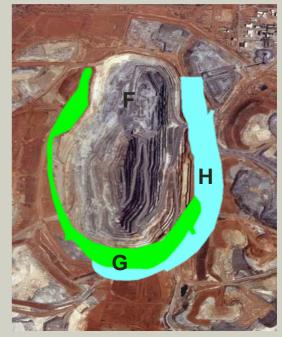
## Asset life extension opportunities – Mt Keith

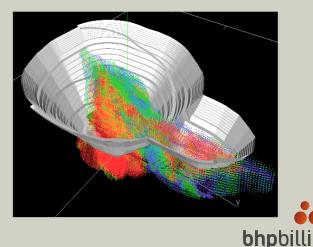
#### Mt Keith – Stage H

- Mt Keith operated since 1994
- Currently mining Stage F
- Commenced mining Stage G
- Stage H from 2008 2015
- Part of total Mt Keith ore reserve of 243 Mt @ 0.54% Ni (incl. stockpiles)

#### Yakabindie

- Pre-feasibility completed
- Mineral resource of 434 Mt @ 0.58% Ni
- Expected to contribute value in the long-term
- Deferred partly due to heated WA market





## Asset life extension opportunities - Kambalda

#### Objectives

- Extend life and output of the Kambalda region
- Targeted win-win partnerships
- Nickel West participates through concentrate purchase agreements

#### Mines

- Divested to smaller operators
- Exceeded expectations in resource conversion

#### Future Growth

 Third parties investing heavily in exploration and mine development





#### Nickel West strategy

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#### Go for Green

- Internal business performance monitoring and motivation program
- Aligns employees and contractors at all levels with the core business drivers of Zero Harm, Volume and Cost
- Dashboards visible at all sites

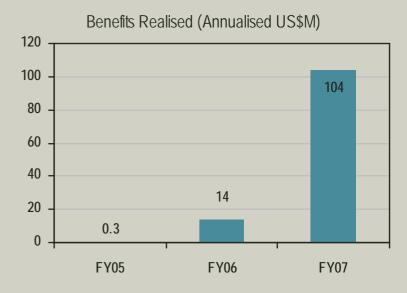


\* example only, not based on live data at date of presentation



### Business Excellence - gaining momentum

- Nickel West driving improvements using Six Sigma under the BHP Billiton Business Excellence (BE) banner
- BE culture implemented through appropriate structures, resourcing, metrics and KPIs
  - Benchmarked against best in class
- Rigorous application of measurement protocols
- Benefits realised cover ongoing cost and revenue benefits





#### Mt Keith BE = Increased tyre life, decreased cost

KPI R57 Tyres - Last 25 Average Scrap Hours: CI Project





- Tyre life more than doubled
- Average 6,000+ hours for tyres removed in last two months
- One tyre currently on a truck is over 9,000 hours old



## Supporting technological advancement

- Exploration
  - FALCON and Geoferret
- Supporting technology developments with key suppliers
  - Caterpillar<sup>®</sup> Work Area Vision System (WAVS)
  - world first fatigue monitoring trial of Optalert<sup>™</sup>
- Global Technology Centre
  - located in Perth, 40+ innovators
- Supporting local research
  - Curtin Uni Research Precinct Centre of Excellence for resources and chemistry research and education to industry, government and the public
  - Co-operative research projects between NGOs, government and industry alliances







## Nickel West – growing value – the BHP Billiton Way

- Management team rich in asset knowledge
  and industry expertise
- Organisational structure self-sufficient and accountable (EBIT model)
  - Clear strategy and direction aligned to business plans
  - Clear lines of accountability; business and personal metrics deployed
- Mine planning better, deeper, clearer understanding of resources
- Third parties better relationships with third party nickel providers; for the long term





### Nickel West summary

- Zero Harm is our core value
- Nickel West is a key asset for SSM and BHP Billiton
- We have an integrated suite of operations that maximises value
- We are building and retaining a talented workforce
- We are applying Business Excellence and Six Sigma as cornerstones for improvement
- We have exciting exploration and asset life extension opportunities
- We focus on margin maximisation at downstream operations
- We are focussing on creating a long term sustainable future







## Open discussion



