### Media Tour to Nickel West

Kwinana Nickel Refinery (KNR)

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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 – KNR overview

- Safety contacts group to reflect on recent safety learning
- Visitor safety
- Zero Harm Health, Safety, Environment, Community & People
- Kwinana Nickel Refinery Business, Products and Operations
- KNR strategy
- Business Excellence
- Cost structure
- Open Discussion

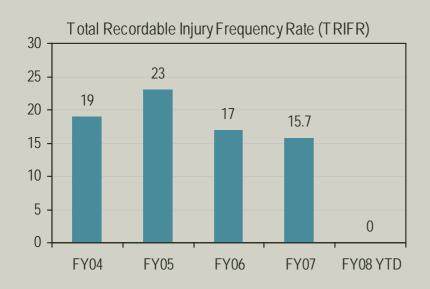


# Visitor safety

- Stay with and follow the instruction of your guide at all times
- Wear the appropriate PPE as directed by your guide
- Carry your swipe card with you at all times
- Take care on uneven ground and stairs
- Emergency telephone "45", radio channel "1"
- Report all injuries
- Have your mini-scape pack with you at all times



## KNR performance - Zero Harm





- Field Leadership / Hazard Reporting
   & Closeout
- BHP Billiton HSEC Management Standards & ISO 14001
- Fatal Risk Control Protocols
- Process Safety Risk Management



# KNR performance - Zero Harm

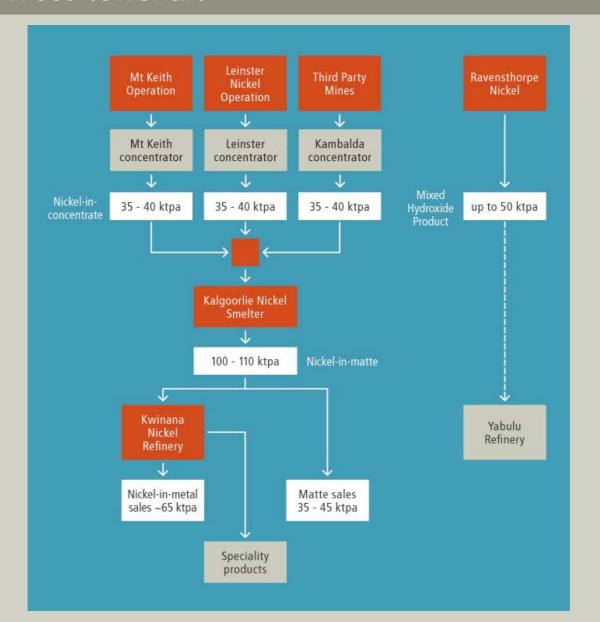
### Nickel Hygiene Study

- Committed to providing a safe place of work and take our responsibility to employee health seriously
- Voluntary nickel hygiene study to determine baseline levels for nickel exposure in site personnel
- 12 weeks and 405 employees and contractors participated
- Average result within exposure range for general population





### Nickel West flowchart





## Kwinana Nickel Refinery

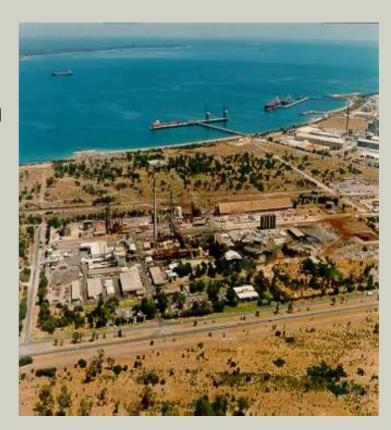
- World's third largest producer of refined nickel
- Products highly sought on world markets
- Located on "Kwinana Strip", 30 kms from Perth in Town of Kwinana
- Kwinana industrial strip synergies
  - Proximity to key reagents/inputs
- Product exported via Fremantle Port





## Kwinana Nickel Refinery

- Receives reliable feed source from Nickel West Smelter in Kalgoorlie
- World scale production facility using proven technology, the Sherritt-Gordon process
- Excellent infrastructure, access to gas/power
- Labour
  - Close to metropolitan area for supply
  - Residential workforce
- Strong community reputation
- No solid/liquid waste
  - Markets developed for all intermediate and waste products





## KNR products

#### Nickel metal

- ~ 65,000 t/a
- LME briquettes and nickel powder
- 26 customers in Europe, Asia, North America

#### Copper sulphide

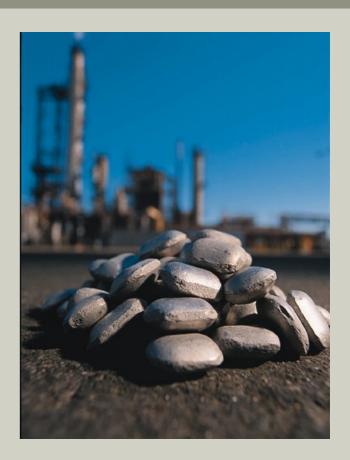
- ~ 4,500 t/a
- 60% copper, 35% sulphur
- sold to Japanese refinery

#### Mixed sulphides

- ~ 3,500 t/a
- 24% nickel, 30% cobalt, 32% sulphur
- toll refined in Europe, sold by BHP Billiton

#### Ammonium sulphate

- ~ 180,000 t/a
- 21% nitrogen
- sold to fertiliser manufacturers





# KNR Strategy – Three Horizons

Relentlessly pursue the basics (Reduce Injuries & Increase asset utilisation)	Built to Last Safe, low cost operation	Create the future Low cost de-bottlenecking
Zero Harm	Zero Harm	Low cost capacity increase
Engaged workforce Producing premium LME product Increased reliability Targeted capital investment	Every injury is preventable Leader in risk management Building long term win-win contractor relationships World class costs ¢/lb Intermediate product margin improvement	SSM synergies



## KNR performance - Business Excellence

"Go for Green" initiative in place, focus on

- Zero Harm
- Volume
- Costs

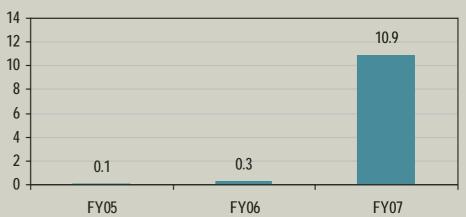
### Case Study

- The KNR Residue Larox Filter Optimisation project
- Optimising filtration cycle times to enable the refinery to process increased levels of iron in matte feed.
- Increased average utilisation for filters from 67% to 89%, prevented loss of 550 Ni tonnes.

### Margin Improvement

- Metal premiums remain strong
- Intermediate products maximising production of valuable commodities

#### Benefits Realised (Annualised US\$M)







# KNR performance - Zero Harm – Amsul Unit

### **Before**



## After improvement





# KNR summary

- Zero Harm is our core value
- We operate a world class asset and a world class process
- We are building and retaining a talented workforce
- We are applying Business
   Excellence to our operations
- We focus on margin maximisation





# Open discussion

