# BHP Billiton Iron Ore – Western Australia Port & Rail Operations



Mick Evans – Vice President Port & Rail

# **Iron Ore**



## BHP Billiton Iron Ore Railroad

- Safety focused
- Highest axle loads in the world
- Emphasis on research
- History of innovation





#### Operating Improvements Have Increased Axle Loads





#### Employee Productivity Tripled in the Past 10 Years

Million Tonnes Railed Per Employee





#### Increasing Operational Flexibility – Rail Sequencing Project

- Implemented in November 2005
- Sequentially-based dispatching method that allows trains to depart as soon as they are made up after dumping
- The sequence of destinations reflects the required blend ratio for the business (including satellite orebodies)
- Computer modeling indicated sequentially based dispatching increases productivity by around 3.5%
- Improvements have been consistently delivered around this mark



## **Environment & Efficiency Improvements**



**Contributing Factors** 

- ≻ Rail / Wheel profile
- Aerodynamic Ore Cars
- Efficient Locomotives
- Distributed Power
- Higher Axle Load
- ➤ Longer Trains
- Driver Strategy



#### World's Longest and Heaviest Train

682 wagons = 7.353kms
eight GE AC6000 locomotives
99,732 gross tonnes
82,262.5 tonnes of iron ore
distributed power / 5 locations
single driver

#### BHP Billiton Rail Lines - Among the Best in the World



Track Productivity

Wagon Productivity



Million Net Tonne-Kilometres / Wagon / Year

Source: BHP Billiton, P.L. Ross Consultants Ltd

Locomotive Productivity





Labour Productivity (Including Contractors)



Million Net Tonne-Kilometres / Person / Year



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#### **Current Train Operations**

#### Newman Line

- Up to 14 trains per day to port & same back to mines (pass via sidings)
- Flexibility of one / two / three Rake Trains
- Train configuration:

1 rake = 104 ore cars = 12,480 tonnes of ore 2 rakes = 208 ore cars = 24,960 tonnes of ore 3 rakes = 312 ore cars = 37,440 tonnes of ore

#### Goldsworthy Line

- 4 ore trains per day
- Train configuration:

90 ore cars = 7,650 tonnes of ore







## Infrastructure Access – Key Issue for Continued Growth

- The integrity of our rail network is vital to the efficient operation and expansion of one of the country's leading export industries;
- Track access (ie: Part IIIA imposed) is inefficient due to:
  - Loss of operational flexibility
  - Decreased rail & system capacity
  - Delays to future expansions
- And will result in:
  - Very high access charges
  - Subsidies from BHP Billiton
  - Reduced investment incentives
- Better solutions exist (safer & far more efficient):
  - Haulage agreements (ie: State Based RTA)
  - Mine gate sales





We strongly believe in our position and will continue to vigorously defend it.

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