

### Southdown Magnetite and Kemaman Pellet Project

An advanced Iron Ore Project for the Direct Reduction Pellet Market



# AUSTRALIAN RESOURCES CONFERENCE

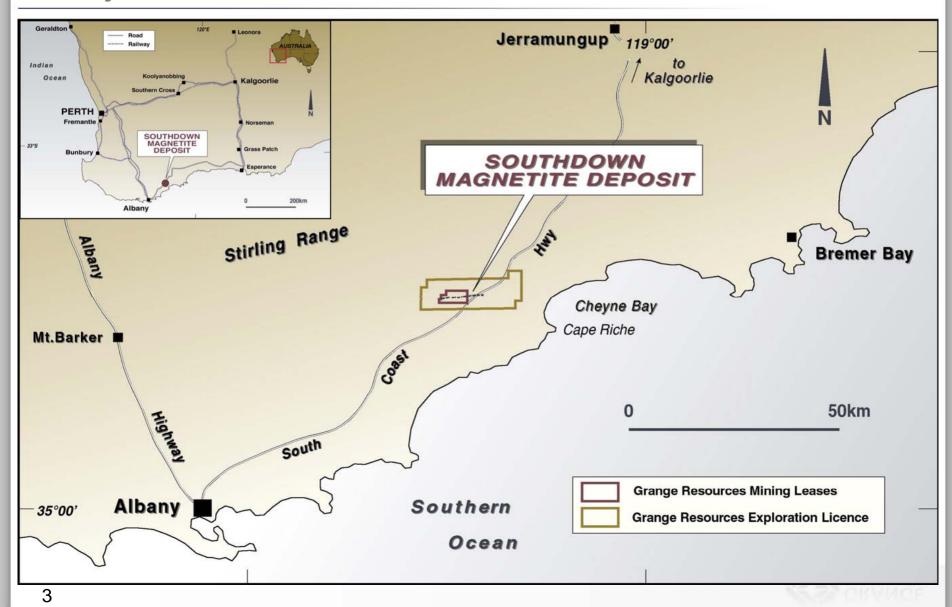
Dubai, 10 February 2008

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  developments may differ materially from those expressed or implied by
  these forward looking statements depending on a variety of factors.

### Project Location - Southdown

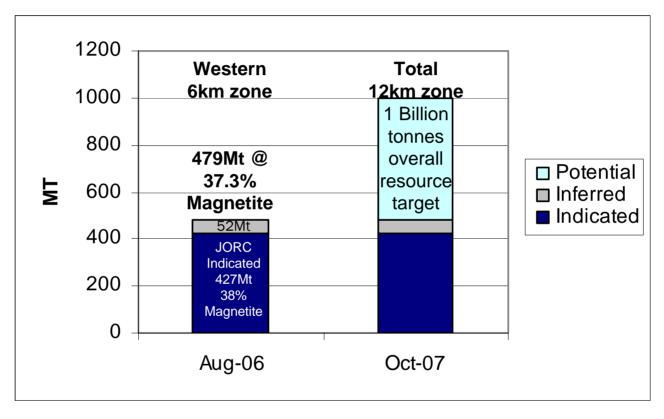


### RIO TINTO AEROMAGNETIC SURVEY

- Rio Tinto's aeromagnetic survey indicates that the Southdown deposit is closest to the surface within Grange's mining leases
- After 3½ years of negotiations with Rio Tinto, Grange acquired the 6km eastern section. Rio Tinto took a stake in Grange (shares plus options, 19.9%) to keep an interest in the project. Grange expect to double the resource and increase the mine life from 22years to 35 years.



### Southdown Resource



- Grange now controls total deposit length of 12km
- Total Southdown resource target of 1 billion tonnes potentially sufficient for a project life of +35 years

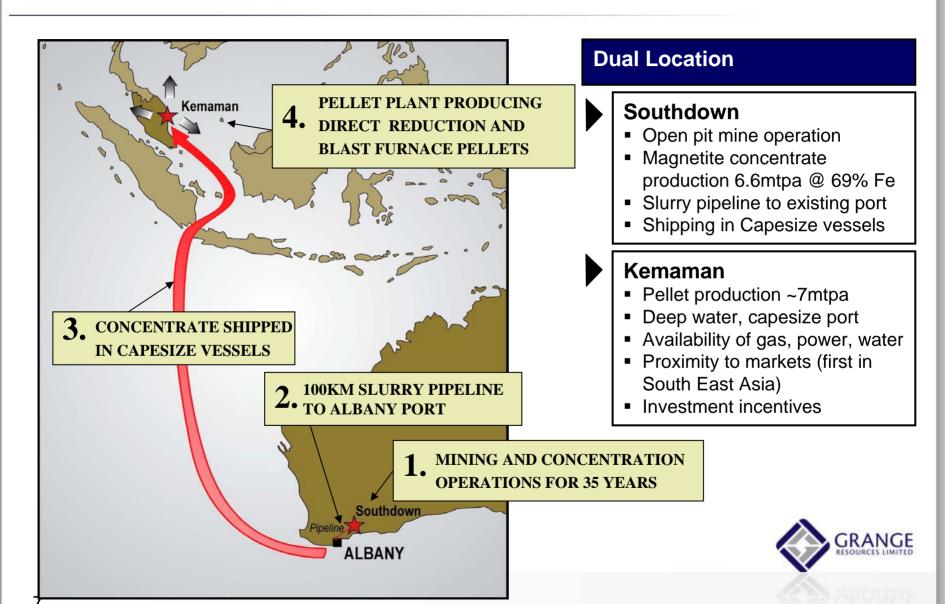


# **Project Highlights**

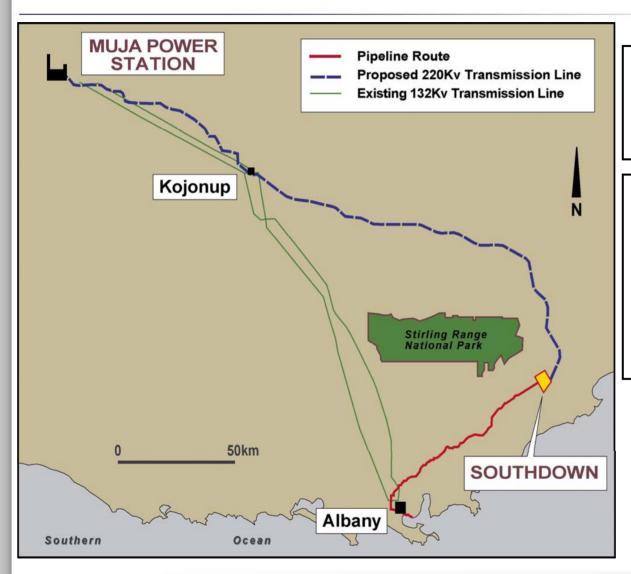
Advanced Project – All approvals should be in place by 2008 **Growing Demand in Key Markets Feasibility Study Completed** Infrastructure in Place **Ability to produce High Quality (DR Grade) Pellets Pellet Plant – First for SE Asia means close to Key Markets** Joint Venture with Sojitz – world pellet market leader



# **Project Overview**



### Project Infrastructure - Southdown & Albany



#### **Slurry Pipeline**

- Optimal transport method
- Finalising easements with landowners

#### **Power**

- Western Power Networks 220kv line from Muja (150MW capacity).
- EPA Assessed
- Interconnected to SWIS¹
- Transmission line easement progressing



<sup>&</sup>lt;sup>1</sup> South West Interconnected System (Western Australia)

# Project Infrastructure – Southdown & Albany

### All key infrastructure in place or well advanced

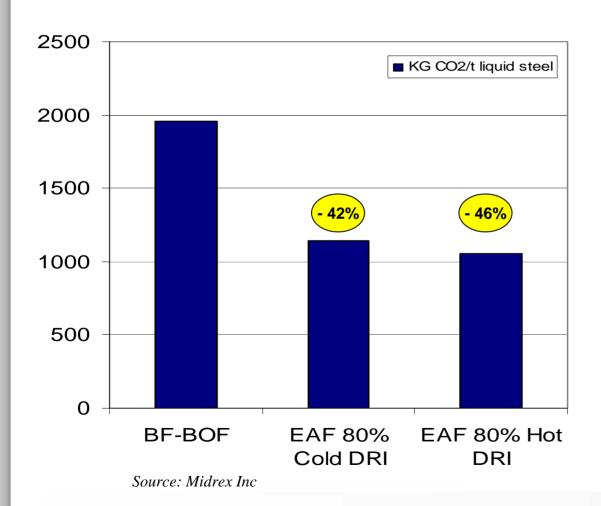
V	Water	Pit dewatering, site water harvesting, retreating Albany town waste water & groundwater
V	Power	Base load power supply potentially augmented by renewable power
V	Power Transmission	220kV transmission line approved by EPA
	Concentrate Transport	Slurry Pipeline (easements on freehold rural land)
	Workforce	Local communities means no need for Fly-in/Fly-out workforce
$\overline{\mathbf{V}}$	Deep Water Port	Existing Albany Port to be dredged to take 170,000 DWT (Capesize) vessels

# Albany Port



### Environmental Benefits of DR/EAF Steelmaking

#### **Carbon Emissions for Steelmaking Routes**



- Global Steel industry accounts for 5% of worldwide CO<sub>2</sub> emissions
- Steel makers using natural gas and DR/EAF method (feed 80% DRI, 20% scrap) reduce CO<sub>2</sub> emissions by up to 46% of BF/BOF method



### Environmental Benefits – Southdown Project

#### **WATER RECYCLING**

- Most of the project's process water supply will come from recycled waste water from the city of Albany.
- At least 5,000kl of water per day will be used growing to 7,700kl (100% of total requirements) by 2018.
- This project will probably be the largest single industrial user water recycling project in Western Australia.



Existing Albany Waste Water Storage Dam



### Environmental Benefits – Southdown Project

### **WIND POWER**

- The Southdown Project will involve the construction of a new 220kV transmission line ~250km to the mine from the local power grid.
- 2 wind power companies are seeking to set up +100MW wind farms near the mine to supply renewable energy not only to the mine but also to other grid customers via the new line.
- These could be the largest wind farms in Western Australia.

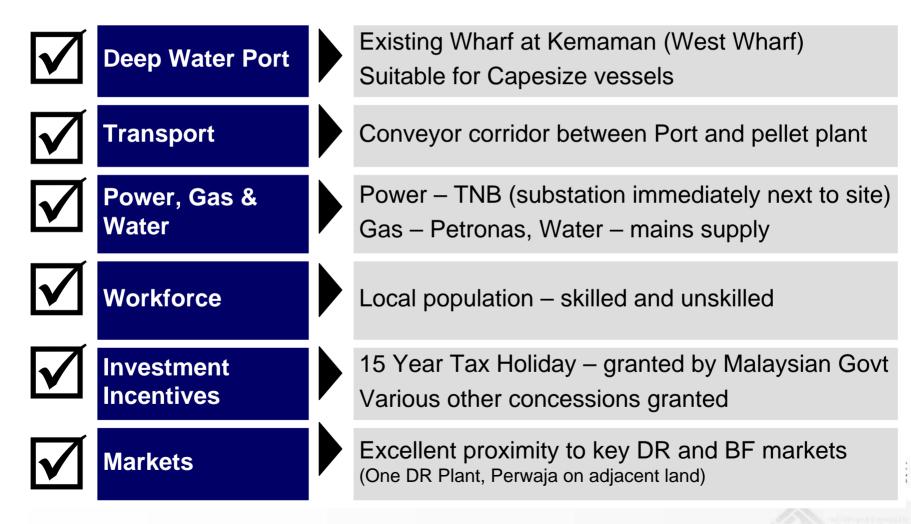


Existing Albany Wind Farm (12 x 1.8MW turbines) Image courtesy of Verve Energy

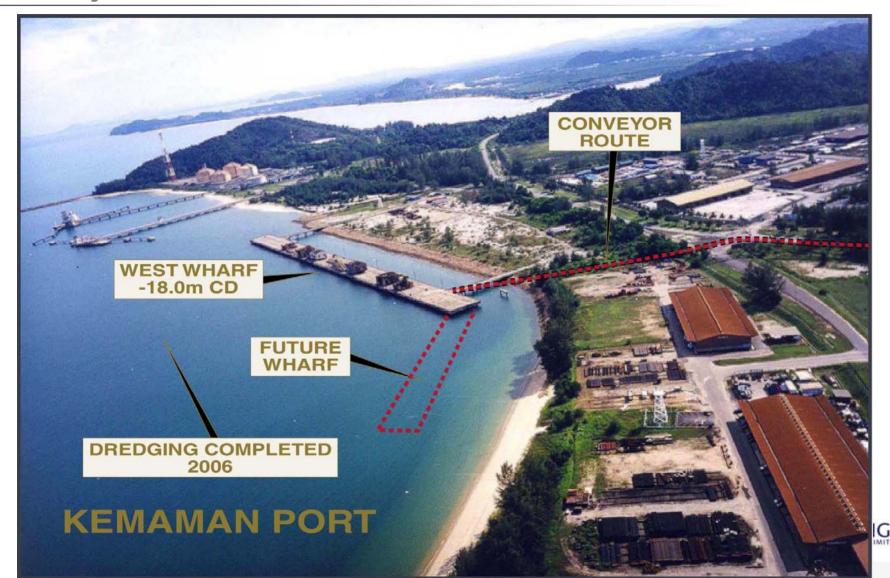


# Project Infrastructure - Kemaman

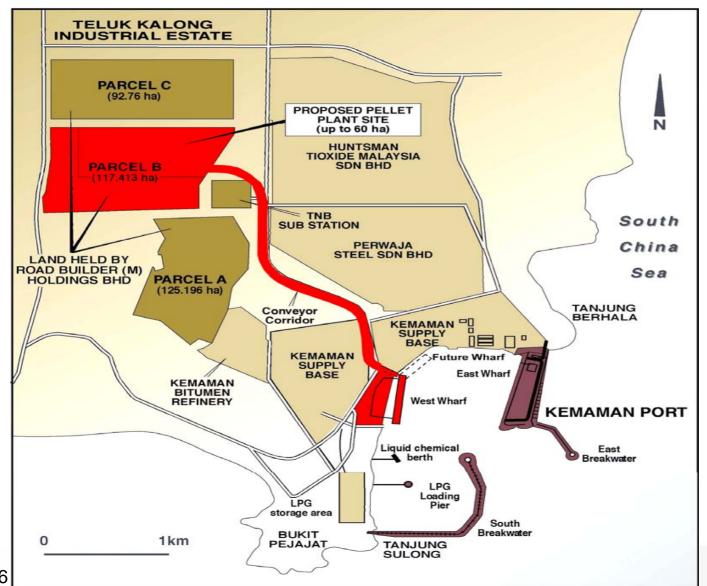
### All key infrastructure in place



# Project Infrastructure – Kemaman Port



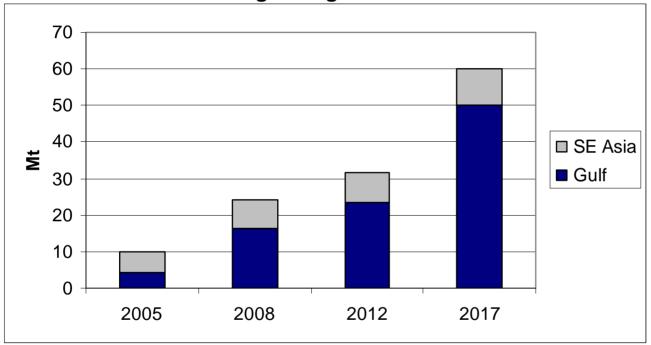
# Project Infrastructure - Kemaman Site





### Demand for DR Pellets

DR pellet demand is projected to increase significantly in SE Asia and the Gulf Region. Demand in this market is growing much faster than the China iron ore market



#### SE Asia

- Perwaja Steel
- Amsteel
- Krakatau Steel
- Lion Group Banting
- Maegma Steel

#### Gulf

- Hadeed
- Qasco
- Shadeed
- Al-Tuwairgi
- Others

#### **Drivers of increasing DR Pellet Demand**

- Capital cost of traditional integrated steel plants availability / cost of coking coal
- Environmental issues of sinter plants intensifying over time
- Abundant and cheap natural gas availability in SE Asia and Gulf Region
- Flexible steel production
- Compatibility with increased steel scrap recycling
- Proximity of steel plants to fast growing markets in SE Asia and Middle East



### Iron Ore Pellet Market Outlook

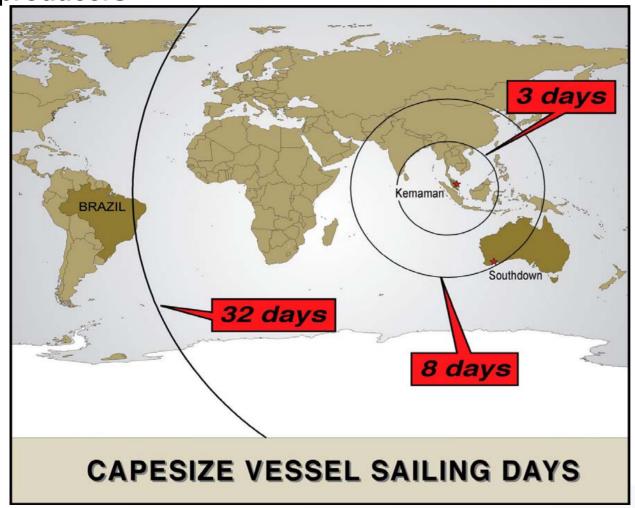
- Brazilian producer SAMARCO, of which CVRD owns 50% is building their 3<sup>rd</sup> pellet plant in Brazil.
- SAMARCO says that all the supply from their new pellet plant (planned to be in operation in March 2008, which has the same investment cost as Grange's project), is already 100 % sold. Total production of the pellet plant is between 7 to 8 mtpa.
- The company states that they expect to reach a turnover of US\$ 3 billion in 2020, against US\$ 1.2 billion in 2006
- Samarco expects that the pellet market to remain tight <u>at least until</u> 2015. By then the company expects seaborne pellet demand will have doubled to just under 200 m tonnes.
- CVRD and SAMARCO dominate the pellet market to an even greater extent than the Big 3\* dominate iron ore, giving them tremendous market power

<sup>\*</sup> CVRD, BHPP and Rio Tinto, which together account for 75% of seaborne iron ore trade; in pellets, CVRD alone represents 90% of seaborne trade



# Kemaman Pellet Plant – Strategic Position Kemaman Freight Advantage

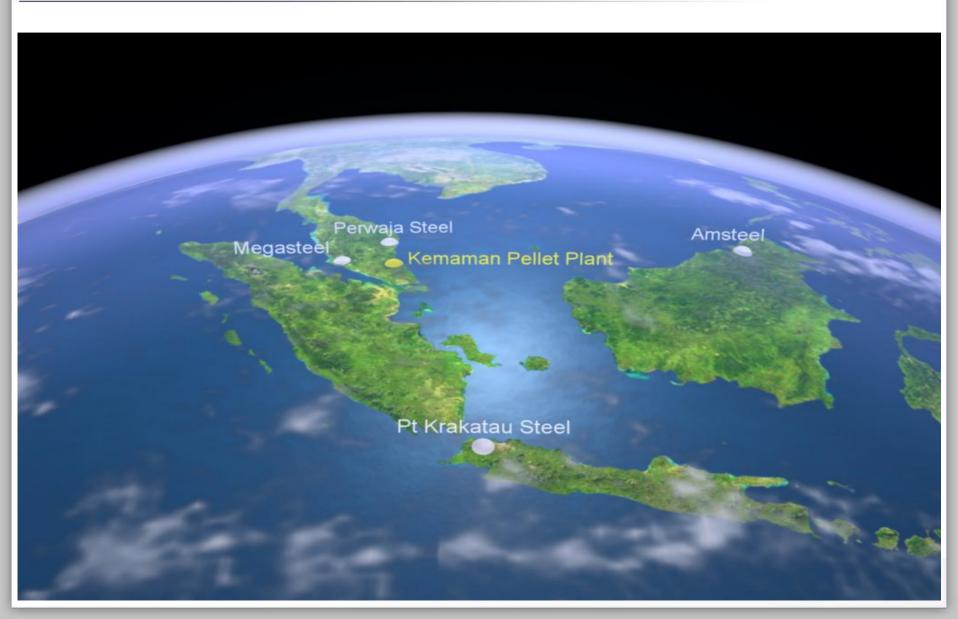
Kemaman has distinct freight advantages over South American pellet producers



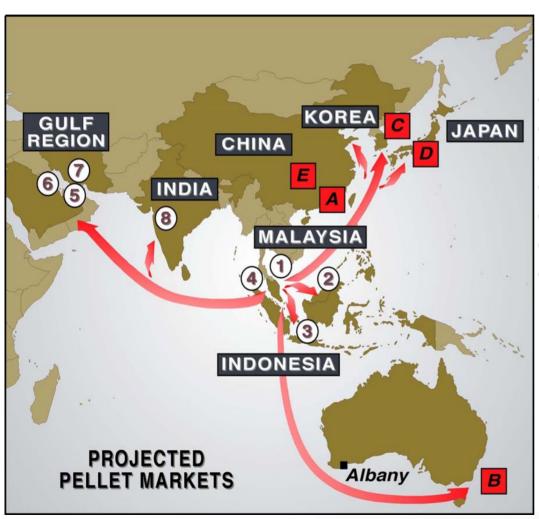
- Close to key markets hence much lower shipping costs
- Current spot market freight Brazil to China is >US\$100/tonne
- Grange shipping costs will be <US\$15/tonne</li>



### Centre of the Market



# Kemaman Pellet Plant – Strategic Position Proximity to Customers



### DR PELLET CONSUMERS

1 Perwaja Steel

2 Amsteel

Maegma Steel

4 Lion Group Banting

(5) Krakatau Steel

Quasco

7 Hadeed

(8) Various

Various

BF PELLET CONSUMERS

### **COUNTRY**

Malaysia

Malaysia

Malaysia

Malaysia

Indonesia

**Qatar** 

Saudi Arabia

UAE

India

### **COUNTRY**

China Steel Corp.

**B** Bluescope Steel Ltd

Posco

Japanese Steel Mills

**E** Chinese Steel Mills

Taiwan

Australia

Sth Korea

Japan

China

# Kemaman Pellets – Strong Returns

Capital Costs	US\$ million
Southdown	839
Kemaman	534
Total Capital Cost	1,373

Potential Gross Margins (Pre-Capex): >US\$500m per year



# Partners - Sojitz

- Sojitz to become a 30% partner in the project.
- Sojitz will pay a royalty to Grange of up to 3.5% on their 30% of production
- Sojitz is a recognised leader in the iron ore pellet sector and is the No 1 trading firm in Japan for pellets and pellet feed.
- Sojitz has expert knowledge in management of pellet plants and has been the manager of the Nibrasco JV in Brazil between CVRD and the Japanese steel mills since 1974.
- Sojitz has excellent long term relationships with pellet consumers in Asia and the Middle East.
- Sojitz heavy machinery department have experience in delivering turnkey heavy plant and eqipment solutions for numerous projects in the iron ore and steel sector in Asia and the Middle East.
- Grange and Sojitz are now working together to complete pre-commitment development activities and complete project funding and ownership arrangements.



# **Project Status**

The Southdown & Kemaman projects are well advanced with feasibility complete, most infrastructure in place and approvals in progress.

Item	Status	Expected Timing
Feasibility Study	V	
Kemaman Environmental Approval	V	
Kemaman Investment Incentives	V	
Southdown Environmental Approval	In progress	<ul> <li>Full Ministerial Approval expected Q2 2008 (mine &amp; pipeline) &amp; Q3 2008 (port)</li> </ul>
Project Structure / Finance	In progress	<ul> <li>Negotiations underway</li> </ul>
Commence Construction		■ Late 2008
First Production Year		■ Late 2010



# Grange Overview

### **Board of Directors**

Anthony Bohnenn Non Executive Chairman

Russell Clark Managing Director

Alex Nutter Technical Director

Richard Krasnoff Non Executive Director

David Macoboy Non Executive Director

Douglas Stewart Non Executive Director

#### Shares

ASX Code: GRR

Current shares on Issue: 115,201,099

Unlisted Options on Issue to Rio Tinto: 17,500,000

Share price (29th January 2008): A\$2.00

Market Capitalisation (29th January 2008): A\$230.0 m

### Major Shareholders

Management 12.5%

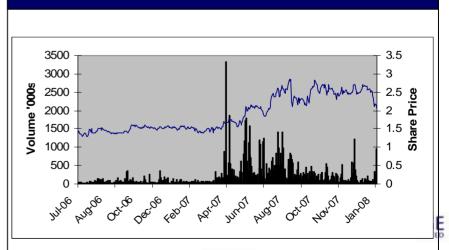
Rio Tinto Ltd 7.9%

Top 10 Shareholders 81.1%

**After Exercise of Options:** 

Rio Tinto Ltd 19.9%

#### **Share Price**



### WHY AUSTRALIA? - THE SOUTHDOWN MINE

- Large DR grade quality magnetite ore body in Australia
- Australia is one of the safest places in the world and a reliable business environment
- Solid political situation
- Very good infrastructure, mine only 100km from existing port
- No labour shortage, already 350 unsolicited job applicants
- No future port congestion or port delays
- Very environmentally friendly operation incl. recycled waste water and future wind energy



### WHY MALAYSIA? - THE KEMAMAN PELLET PLANT

- Kemaman Port: Deep water port with existing infrastructure
- Grange has secured the rights for +50 years to use the port and the West Wharf
- Possibility to build a second pellet plant, 60 ha. Land available
- 15 years tax holiday granted by the Malaysian Government
- Close proximity to major clients in Malaysia and Indonesia and close to India and the Gulf Region
- Low inventory holding costs for nearby consumers



### SOUTHDOWN – summary...

- Poised for iron ore pellet production for 35 years.
- Niche Market, premium quality, high value product.
- Supply/Demand relationship very favourable.
- The market in starved for our product sellers' market.



### **Key Contacts**

# Thank you...

Also look at our website www.grangeresources.com.au

### **Anthony Bohnenn**



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