Pursuing the most attractive niche in iron ore

Southdown Magnetite and Kemaman Pellet Project

BBY Conference

5 May 2008

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Managing Director and CEO

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Pursuing the most attractive niche in iron ore

- The niche.....DR pellets
- Steelmaking 101: Integrated vs Electric Arc Furnace
- Supply & Demand
- DR pellet price and premium
- Grange - positioned to capture the DR Pellet opportunity
  - Southdown magnetite project in Australia
  - Kemaman pellet plant in Malaysia
- Project Status
The most attractive niche in the iron ore industry:

DR Pellets

- We all understand the China boom – massive, growing demand for iron ore to China.
- In Australia that demand is being met by Rio, BHP, FMG and some Juniors primarily with DSO.
- Less understood is an iron ore opportunity that Grange considers even more attractive:

  *the DR pellet opportunity, in the Middle East and Southeast Asia*

  - A niche, growing even faster on a percentage basis than iron ore to China
  - Undersupply set to increase for the foreseeable future
  - Higher prices, rising even faster than DS iron ore prices

To supply the rapidly growing DRI+EAF steelmakers

in the Middle East and Southeast Asia
Steelmaking 101

• As pricey as it’s become, iron ore has no inherent value: it is only valuable as a feedstock for steelmaking.

• So, the attractiveness of supplying iron feedstocks to the steel industry starts with the competitiveness of the steelmaking process to which they contribute.

• There are 2 steelmaking processes competing in the steel industry:
  1. The Integrated Steelmaking route
  2. The Electric Arc Furnace route
Integrated Steelmaking process

- **End-to-end**, the **Integrated Steelmaking** route (the traditional and still dominant route for steel) is both **capital intensive** and **environmentally unattractive**.

**Feeds for standard (carbon) steel:**

- **DSO**
  - Iron
    - Fines
    - Lump
  - Carbon
    - Coking
      - Coal

**Diagram:**
- **Mining**
- **Sintering**
- **Ironmaking**
- **Steelmaking**

- **Blast furnace**
- **Basic oxygen furnace (BOF)**

**Sources:**
- Mining
- Sinter plant
- Coke oven
- Coking

**Resources Limited**
Electric Arc Furnace process

- In contrast to integrated steelmaking, the **Electric Arc Furnace** steelmaking route is less capital-intensive and more environmentally attractive.

**Feeds for standard (carbon) steel:**

- **Mining/concentrating**
- **DR pellet production**
- **Ironmaking**
- **Steelmaking**

- **Grange**

  - **Direct-reduced iron process** (eg. Midrex)

- **Scrap Steel**

  * Surplus from integrated steelmaking or dedicated pig iron furnace
EAFs require suitable high grade pellets (pre-processed to DRI) or scrap steel as feedstock rather than lower grade pellets which together with Direct Ship Ore (DSO) supply Blast Furnaces.

*Basket tests indicate Grange will produce high grade pellets*
Scrap steel vs DRI for the EAF steelmaker

- The price of scrap steel has increased hugely, due to overwhelming steel demand from China and other emerging economies:

[Graph showing scrap steel price history]

- The demand and price implications of this ‘scrap squeeze’ for Grange’s alternative feed, DR pellets, are profound
Growing shortage of DR pellets

Credit Suisse Brazil—in the heartland of world DR pellet supply—sees DR pellet under-supply increasing for the foreseeable future.

Seaborne Pellet Supply and Supply/Demand balance

Source: Credit Suisse estimates and CRU
Demand for DR Pellets

DR pellet demand is projected to increase significantly in SE Asia and the Gulf Region.

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
- Proximity of steel plants to fast growing industrialisation and urbanisation in SE Asia and Middle East

SE Asia
- Perwaja Steel
- Mega Steel
- Krakatau Steel

Gulf
- Hadeed
- Qasco
- Shadeed
- Al-Tuwairqi
- Others
Prices…the Pellet opportunity is attractive…

With increasing demand, future price forecasts continue to look strong, with a good premium for BF pellets over DSO...

Source: Metalytics 2008, GRR
…but the **DR** Pellet opportunity is even **more** attractive

with a further 10% premium for DR pellets over BF pellets.

For DR pellets expect a premium of:

US$17/t over BF
US$20/t over Lump (DSO)
US$40/t over Fines (DSO)

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**Iron Ore and pellet Prices US$/t FOB Europe**

Source: Metalytics 2008, GRR
Price – this year’s result

* Benchmark prices in US¢/dmtu, translated to US$/tonne FOB @ 67% Fe for ease of understanding.
In Summary:

- Iron Ore consumption is increasing worldwide, particularly in China.
- With abundant gas and expanding infrastructure, demand for DR grade pellets is increasing exponentially in the Middle East and South East Asia.
- Supply is not matching demand in the DR market.
- Prices in the DR market reflect the increasing DSO price and attract a significant premium to it.
- Grange is excellently positioned for this market.
## Grange – Southdown/Kemaman overview

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Grange Overview

### Board of Directors

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<tr>
<th>Name</th>
<th>Position</th>
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<tbody>
<tr>
<td>Anthony Bohnenn</td>
<td>Non Executive Chairman</td>
</tr>
<tr>
<td>Russell Clark</td>
<td>Managing Director</td>
</tr>
<tr>
<td>Alex Nutter</td>
<td>Technical Director</td>
</tr>
<tr>
<td>Richard Krasnoff</td>
<td>Non Executive Director</td>
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<tr>
<td>David Macoboy</td>
<td>Non Executive Director</td>
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<tr>
<td>Douglas Stewart</td>
<td>Non Executive Director</td>
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### Major Shareholders

<table>
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<tr>
<th>Shareholder</th>
<th>Percentage</th>
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<tr>
<td>Management</td>
<td>12.5%</td>
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<tr>
<td>Rio Tinto Ltd</td>
<td>7.9%</td>
</tr>
<tr>
<td>Top 10 Shareholders</td>
<td>81.1%</td>
</tr>
<tr>
<td>After Exercise of Options:</td>
<td></td>
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<tr>
<td>Rio Tinto Ltd</td>
<td>19.9%</td>
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### Shares

- **ASX Code:** GRR
- **Current shares on Issue:** 115,201,099
- **Unlisted Options on Issue to Rio Tinto:** 17,500,000
- **Share price (29 April 2008):** ~A$1.75
- **Market Capitalisation (29 April 2008):** A$201.6 m

### Share Price

Bloomberg: 7 April 2008
### Grange – Southdown/Kemaman Overview

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Project Highlights

- Advanced Project
- Initial Feasibility Study Completed
- Infrastructure Solutions in Place
- Ability to produce High Quality (DR Grade) Pellets with very low Phosphorus content
- Growing DR Pellet Market in SE Asia & Middle East
- Pellet Plant Close to Key Markets
- Joint Venture with Sojitz – a leader in the world pellet market
Project Overview

**Dual Location**

**Southdown**
- Open pit mine operation
- Magnetite concentrate production 6.6mtpa @ 69% Fe
- Slurry pipeline to existing port
- Shipping in Capesize vessels

**Kemaman**
- Pellet production ~7mtpa
- Deep water, capesize port
- Availability of gas, power, water
- Proximity to markets (first in South East Asia)
- Investment incentives

1. **MINING AND CONCENTRATION OPERATIONS FOR 35 YEARS**
2. **100KM SLURRY PIPELINE TO ALBANY PORT**
3. **CONCENTRATE SHIPPED IN CAPESIZE VESSELS**
4. **PELLET PLANT PRODUCING DIRECT REDUCTION AND BLAST FURNACE PELLETS**
# Grange – Southdown/Kemaman overview

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</table>
Tenement & Deposit Location

70% Grange / 30% Sojitz JV

100% Grange Resources Ltd
Southdown Resource

Mining Leases (Western Area)
Over 230 drill holes to date
Indicated and inferred resources:
479 MT at 37.3 % magnetite

Exploration Licence (Eastern Area)
Only 23 drill holes to date
Target Potential Resources:
Approximately 500 MT (est)

Total Southdown open cut mineable resource potential ~ 0.7bn tonnes sufficient for a project life of +30 years (Total resource >1bn tonnes)
Comprehensive programme of metallurgical test work completed, culminating in the successful production of high quality DR and BF grade pellets from Kobelco (Japan) and Lurgi (Germany)

- Extremely low phosphorus <0.006%
- Initial Design parameters for concentrator and pellet plant completed
- Metso currently reviewing design and conducting testwork to provide Process Guarantees.
- Basket test underway to confirm performance and characteristics in the DRI process
### Grange – Southdown/Kemaman overview

1. **Grange Resources Limited**
2. The Southdown and Kemaman Project
3. The Southdown Magnetite Deposit
4. **Project Infrastructure**
5. Markets
6. Economics
7. Recent Developments and Current Status
Project Infrastructure – Southdown & Albany

All key infrastructure in place or well advanced

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<th>Infrastructure</th>
<th>Details</th>
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<tr>
<td>Water</td>
<td>Pit dewatering, site water harvesting, retreating Albany waste water, groundwater</td>
</tr>
<tr>
<td>Power</td>
<td>Premier Power (Wesfarmers) (coal and natural gas potentially augmented by wind power)</td>
</tr>
<tr>
<td>Power Transmission</td>
<td>Western Power Networks</td>
</tr>
<tr>
<td>Concentrate Transport</td>
<td>Slurry Pipeline (to date agreement on easements reached with most landowners)</td>
</tr>
<tr>
<td>Workforce</td>
<td>Local communities with skilled workforce</td>
</tr>
<tr>
<td>Deep Water Port</td>
<td>Albany Port to be dredged to 16m to take Capesize vessels</td>
</tr>
</tbody>
</table>
Project Infrastructure – Southdown & Albany

Slurry Pipeline
- Optimal transport method
- Finalising easements with landowners

Power
- Western Power Networks 220kv line from Muja (150MW capacity). No EPA Assessment
- Interconnected to SWIS\(^1\)
- Transmission line easement progressing

\(^1\) South West Interconnected System (Western Australia)
Project Infrastructure – Port of Albany

- Work advancing on port design and pre-development engineering
- Heads of Agreement signed with Albany Port Authority for Port development
### Project Infrastructure - Kemaman

**All key infrastructure in place**

- **Deep Water Port**
  - Existing Wharf at Kemaman (West Wharf)
  - Suitable for Capesize vessels

- **Transport**
  - Conveyor corridor between Port and pellet plant

- **Power, Gas & Water**
  - Power – TNB (substation adjacent to site)
  - Gas – Petronas, Water – mains supply

- **Workforce**
  - Local population – skilled and unskilled

- **Investment Incentives**
  - 15 Year Tax Holiday – granted by Malaysian Govt
  - Various other concessions granted

- **Markets**
  - Excellent proximity to key DR and BF markets
    (Perwaja DR Plant, on adjacent land)
Project Infrastructure – Kemaman Site

[Diagram showing various parcels and infrastructure around the Kemaman site, including Parcel A, Parcel B, Parcel C, Huntman Tioxide Malaysia SDN BHD, and the Kemaman Port.]
Project Infrastructure – Kemaman Port

KEMAMAN PORT

WEST WHARF
-18.0m CD

FUTURE WHARF

CONVEYOR ROUTE

DREDGING COMPLETED 2006
## Grange – Southdown/Kemaman overview

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Kemaman Pellet Plant – Strategic Position
Proximity to Customers

DR PELLET
CONSUMERS
COUNTRY
① Perwaja Steel
Malaysia
② Amsteel
Malaysia
③ Krakatau Steel
Indonesia
④ Megasteel
Malaysia
⑤ Qasco
Qatar
⑥ Hadeed
Saudi Arabia
⑦ Various
UAE
⑧ Various
India

BF PELLET
CONSUMERS
COUNTRY
A China Steel Corp.
Taiwan
B Bluescope Steel Ltd
Australia
G Posco
Sth Korea
D Japanese Steel Mills
Japan
E Chinese Steel Mills
China
Kemaman has distinct freight advantages over South American pellet producers

- Close to key markets hence reduced shipping costs
- Panamax size vessels can economically deliver smaller quantities to ports not able to handle capesize vessels
- The close proximity to key consumers reduces working capital costs for customers
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Operating and Capital Costs

Project costs are well understood and are the product of a detailed feasibility study (Note: Costs below are as at June 2007)

<table>
<thead>
<tr>
<th>Operating &amp; Capital Costs</th>
<th>US$</th>
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<tbody>
<tr>
<td><strong>Operating Costs</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Southdown Mining &amp; Processing$^1$</td>
<td>35.4</td>
</tr>
<tr>
<td>▪ Shipping to Malaysia (incl. handling)</td>
<td>10.6</td>
</tr>
<tr>
<td>▪ Pelletising</td>
<td>6.2</td>
</tr>
<tr>
<td><strong>Total Cost (FOB Kemaman)</strong></td>
<td><strong>52.2</strong></td>
</tr>
<tr>
<td><strong>Capital Costs</strong></td>
<td></td>
</tr>
<tr>
<td>▪ Southdown</td>
<td>839</td>
</tr>
<tr>
<td>▪ Kemaman</td>
<td>534</td>
</tr>
<tr>
<td><strong>Total Capital Cost</strong></td>
<td>US$1,373m</td>
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Note: Source currencies of €, AUD, MR all converted to US$ at A$/US$ 0.75

1. Includes WA State Royalties
Grange – Southdown/Kemaman overview

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

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<th>Item</th>
<th>Status</th>
<th>Expected Timing</th>
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<tbody>
<tr>
<td>Initial Feasibility Study</td>
<td>✔</td>
<td>Refinement of process flowsheet work underway with Metso Minerals (Q3 2008)</td>
</tr>
<tr>
<td>Kemaman Environmental Approval</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Kemaman Investment Incentives</td>
<td>✔</td>
<td></td>
</tr>
<tr>
<td>Southdown Environmental Approval</td>
<td>In progress</td>
<td>▪ Full Ministerial Approval expected Q3 2008 (mine &amp; pipeline) &amp; Q4 2008 (port)</td>
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<tr>
<td>Commence Construction</td>
<td></td>
<td>▪ 2009</td>
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<tr>
<td>First Production Year</td>
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<td>▪ 2012</td>
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Summary of Grange’s DR Pellet opportunity

An advanced Iron Ore Project for the Direct Reduction Pellet Market

- Grange has the ore, the land and access to infrastructure.
- Grange’s Pellets will be a premium Direct Reduction grade.
- Our pellets will be sold into a niche market:
  - Geographically advantageous location – Mid East
  - Targeting DR and Electric Arc Furnaces, not Blast Furnaces
  - Expanding faster than Direct Ship Iron Ore
  - Higher value product.
- Annual production 7 million tonnes potentially for > 35 years.
- US$1 billion revenue potential per annum.
- Annual EBIT potential US$400m to US$500m.
Key Contacts

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