



# Australia's leading magnetite producer

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# Company Overview

Grange remains Australia's leading magnetite producer. An ASX 300 company, with a large well managed long term cash producing mining operation, a strong balance sheet, no net debt, and paying dividends - and a larger magnetite project at DFS offering even more value in the future.



# Grange 2011 Highlights

- Record safety achievement – zero LTI
- Record cashflow - \$210.4m
- Record profit - \$216.6m
- Record dividends – 5c/share (8% yield)
- East wall recovery
- Southdown project DFS completed
- Southdown Mineral Resources increased

The business is set for a great 2012 with Q1 meeting expectations.

# Grange Assets

*Australia's Leading Magnetite Producer*

Savage River (100%)



Southdown Project (70%)

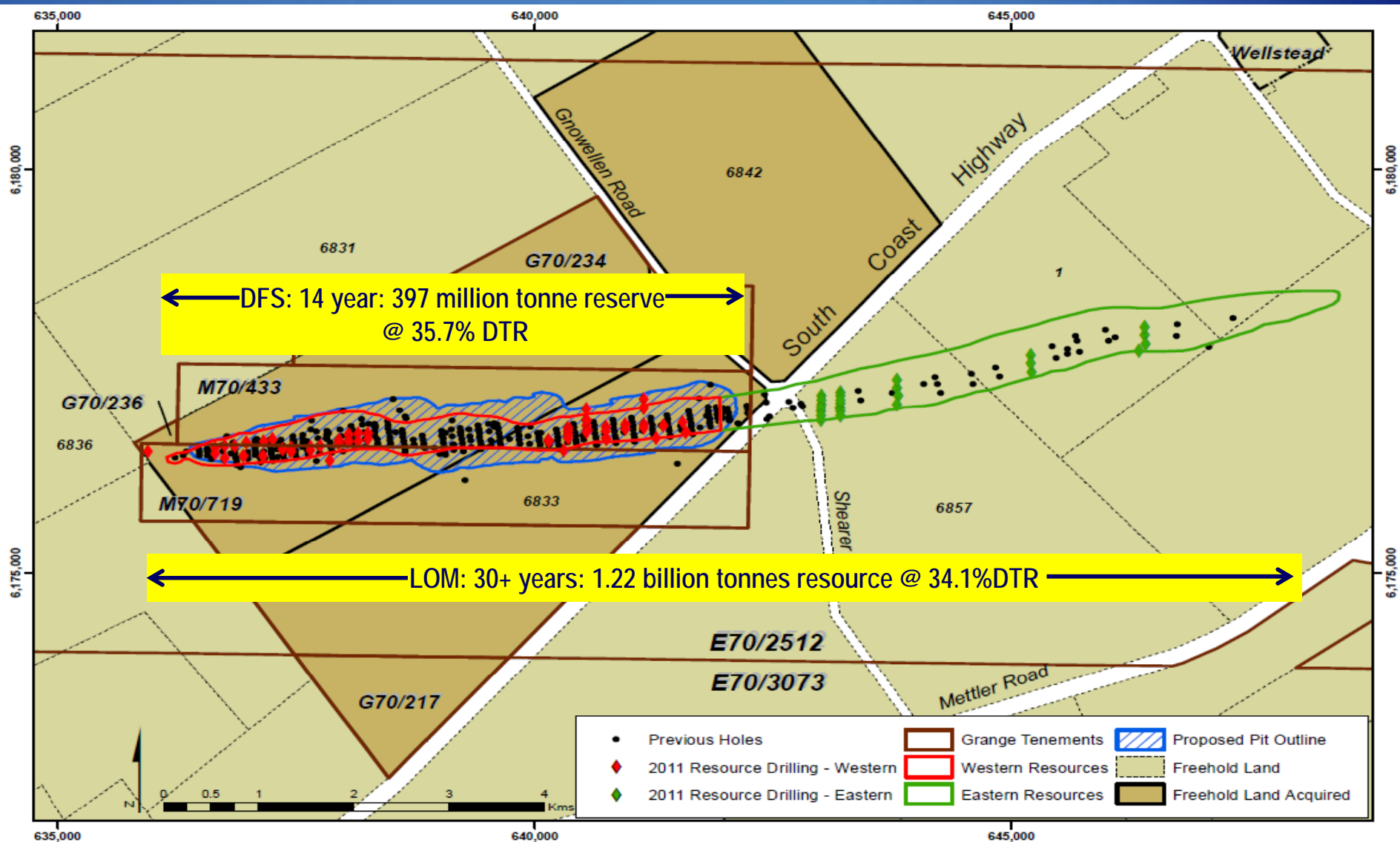


*Quality assets in Tasmania and Western Australia.*

## The Southdown Project *DFS Highlights*

- \$150 million spent to date - an advanced project!!
- JORC mineral resources >1.2 billion tonnes at 34.1% DTR
- Ore reserves of 397 million tonnes at 35.69% DTR.
- DFS mine life of 14 years within the current permitted area and total resource indicates a potential mine life >30 years.
- NPV10% of A\$1,008 million and IRR of 16.6%.
- Capex estimate A\$2.885 billion including EPCM, owners' costs and contingency of A\$0.535 billion.
- Operating costs estimate of A\$58.5 per tonne of concentrate
- Initial production forecast for 2015;

# The Southdown Project *The Resource*



16 May 2012

Slide 7

## The Southdown Project **Mineral Resources & Reserves**

Southdown mineral resource estimate as at February 2012

	Tonnes (Mt)	Grade (% DTR)
Measured	423.0	37.6
Indicated	87.4	38.4
Inferred	710.6	31.5
Total	1,221	34.1

Southdown ore reserves as at February 2012

	Tonnes (Mt)	Grade (%DTR)	Concentrate Fe (%)
Proven ore	221	35.5	68.5
Probable ore	176	35.9	68.6
Total	397	35.7	68.6





16 May 2012

Slide 9

**Final**

The diagram illustrates a complex mineral processing workflow. Key stages include:

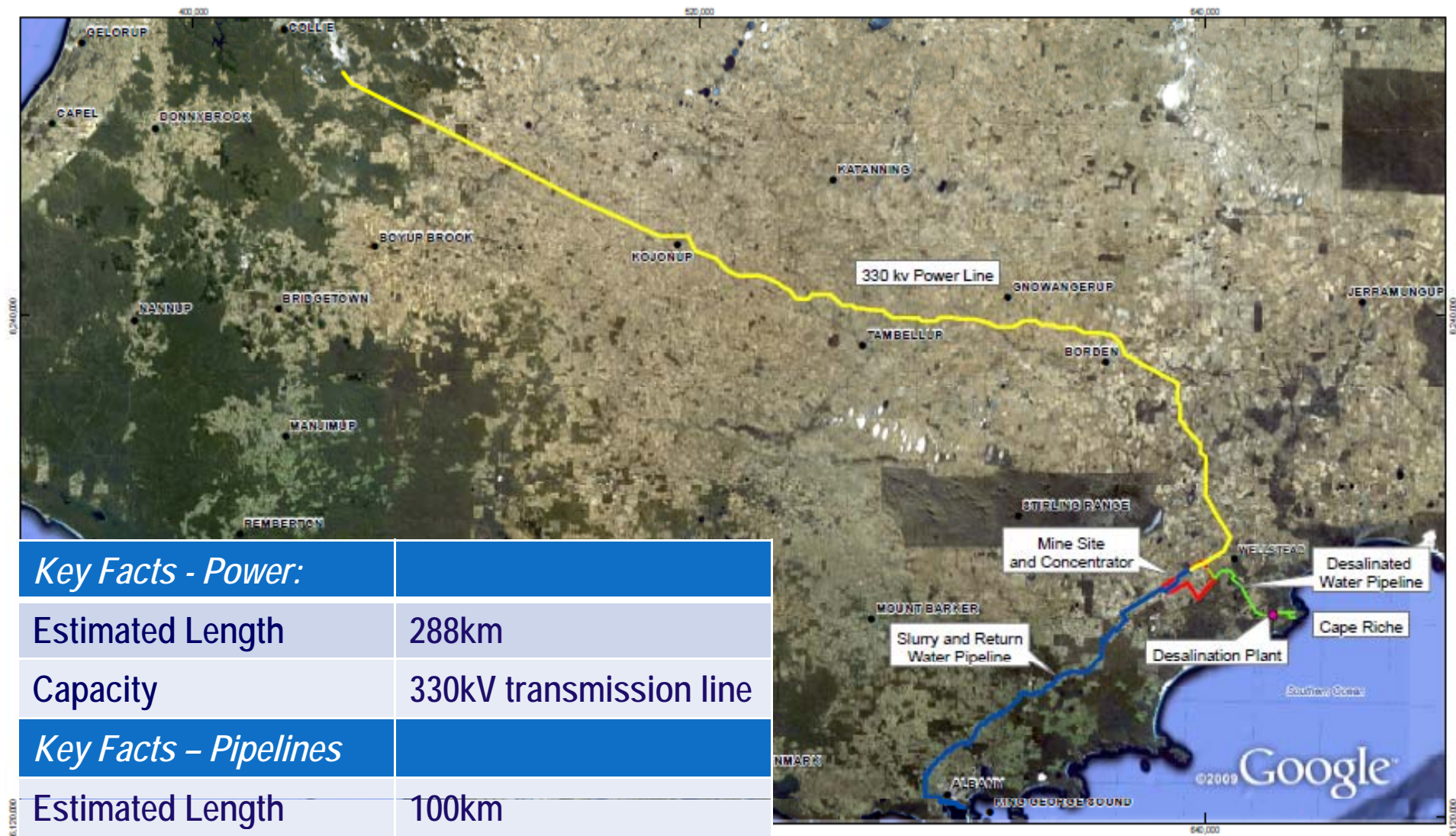
- Primary Processing:** Material enters via a truck to a Primary Crusher (x1), moving to a Coarse Ore Stockpile (x1).
- Grinding & Separation:** Material flows through AG Mill Feed Conveyors (x2) into AG Mills (x2) P80 500µm. This is followed by Intermediate Magnetic Separation (x2B), Ball Mill Cyclone Cluster (x2), Ball Mills (x2) P80 150µm, Fine Screens (x2), and Rougher Magnetic Separation (x2C9). Non-magnetic (NON-MAGS) streams are recycled, while magnetic (MAGS) streams proceed to Isamills (x2F) P80 34µm.
- Froth Flotation:** The stream enters Hydroseparation (x2), Cleaner Magnetic Separation (x2I), and Sulphide Flotation (x2). Reagents like H<sub>2</sub>SO<sub>4</sub>, PAX, and Frother are added. Lime is also introduced before the thickening stage.
- Concentrate Handling:** Concentrate passes through a thickener, header tanks (x2), storage tanks (x2), a port thickener, filter feed tank, filters (x9), and a stacker to a concentrate stockpile. A reclaim system returns material to the stockpile.
- Tailings & Water Management:** Tailings are thickened and dammed. A desalination plant processes brine into potable water (for direct sales) and process water make-up. Sea water is also used for desalination.
- Alternate Flow:** A dashed line indicates an alternate flow path for the concentrate stream.

# Southdown Magnetite Project *Product Quality* (Process Design Criteria)

Southdown Magnetite Concentrate	%
Total Fe	69.5
SiO <sub>2</sub>	1.50
Al <sub>2</sub> O <sub>3</sub>	1.48
TiO <sub>2</sub>	0.38
P	0.04
S	0.08
LOI (Loss of ignition)	-3.15



# Southdown Magnetite Project *Power and Pipelines*



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Slide 12



## Southdown Magnetite Project *Water Supply*



Source	Seawater reverse osmosis desalination plant
Capacity	11 GL/a
Location	Coastal location 25km from mine

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Slide 13

# Southdown Magnetite Project *Port Infrastructure*

	Vessels	Cape size (18m draft)
	Activities	<ul style="list-style-type: none"><li>▪ Deepen, widen and extend existing shipping channel</li><li>▪ New wharf</li><li>▪ Dewatering plant and storage shed</li></ul>
	Area Reclaimed	<ul style="list-style-type: none"><li>▪ 9ha</li><li>▪ Increases port capacity from 2.5Mt to 14Mt</li></ul>



# Southdown Magnetite Project *Permitting*



Mine environmental permit



Granted November 2009, amendment required in 2011 for 10mtpa



Port permits



Granted November 2010



Water permit



Desalination permit targeted Q2 2012



## Southdown Project *DFS Capital Expenditure*

Description	Total Cost (A\$ M)
Mine & Concentrator	1,330
Desalination Plant, Pipelines and Transmission Line	640
Albany Port Works, Berth, Storage Facilities	380
Sub-total	2,350
Owners Costs, EPCM and Contingency	535
Total Estimate Project Costs	2,885

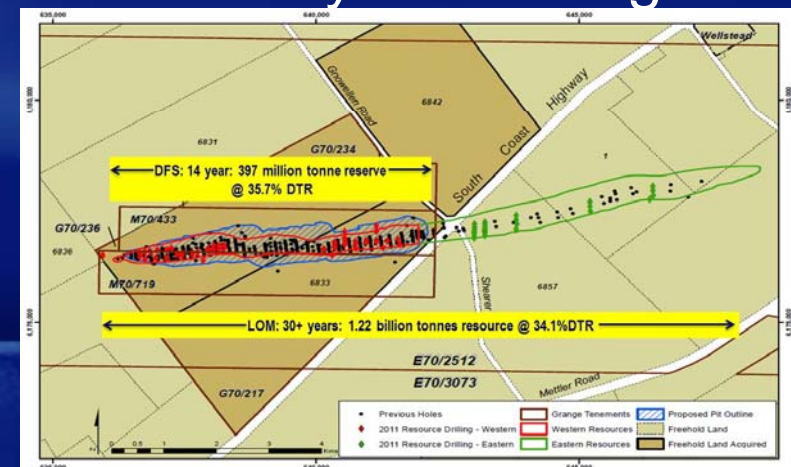


## Southdown Project *DFS Operating Cost Summary*






Operating Costs	A\$/t Concentrate
Mining	24.4
Concentrator	24.6
Pipeline, Filtration and Port	5.7
Overheads	3.8
Total Operating Costs	58.5

## Southdown Project *Extended mine life case*

- Mining eastern extent of the orebody, in addition to western side
- Total resource of 1.2 billion tonnes @ 34.1% DTR.
- Potential life > 30 years
- NPV ~\$1.8 billion, IRR ~20%
- Will use existing infrastructure associated - only sustaining capex required.
- Additional work required



## Southdown Magnetite Project *Target Time Line*

	2011	2012	2013	2014	2015
Pre-feasibility					
Definitive Feasibility					
Financing					
Construction					
Production					

# Key Contacts

Primary contacts:

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# Competent Person Statement

## Southdown Project

- *The information in this report which relates to the Mineral Resources of the Southdown Project is based on information compiled by Mr Michael Everitt who is a full-time employee of Grange Resources Limited and a Member of the Australasian Institute of Mining and Metallurgy. Michael Everitt has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2004). Michael Everitt consents to the inclusion of this information in this statement of Mineral Resources in the form and context in which it appears.*
- *The information in this report which relates to the Ore Reserves of the Southdown Project is based on information compiled by Mr Ross Carpenter who is a full-time employee of Grange Resources Limited and a Member of the Australasian Institute of Mining and Metallurgy. Ross Carpenter has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity for which he is undertaking to qualify as a Competent Person as defined in the JORC Code (2004). Ross Carpenter consents to the inclusion of this information in this statement of Ore Reserves in the form and context in which it appears.*