### SIMEC MINING



A new beginning for the longest established iron ore mines in Australia

30<sup>th</sup> January 2018



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### **SIMEC Mining** is part of the GFG Alliance.

The Alliance's integrated business model encompasses mining, energy, metals, engineering and services at it's core.



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www.gfgalliance.com

# 4 Pillars of GFG Alliance







- With a range of physical assets and human resources spanning over 30 countries, 58 sites and 300 offices worldwide.
- Our business is constantly growing and evolving in pursuit of our corporate vision



# **De-coupled integration**

GFG Alliance business model creates value through decoupled integration of natural resources, industry and financial services

- Common purpose is re-growth of industry
- GFG Alliance businesses deliver growth to stakeholders through products, services and value which few others can
- Each of the businesses is integrated to service other parts of the GFG Group and to service external customers
- The model enables economic value creation for the core industrial group with full benefits of integration; while each of the individual businesses operate in an agile way allowing them to grow independently











- SIMEC is an international energy and natural resources business focused on building a dynamic portfolio of extraction resources, sustainable power and supporting GFG Alliance with an infrastructure and trading platform
- SIMEC Mining operates mainly in Australia's Middleback ranges and supplies raw material for both the GFG Alliance businesses and third parties
- SIMEC Mining also has signed a binding agreement to purchase the Tahmoor coking coal mine in New South Wales, Australia
- SIMEC Energy part of the GFG Alliance, is developing a wide portfolio of renewable assets in the UK and Australia including hydro-electric, bio liquid fuel, hydro, solar, oil and waste, as well as power trading



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## Mining underpins the integrated value chain

SIMEC Mining iron ore operates in the Middleback Ranges, approximately 60km from Whyalla, South Australia

- Combinations of mining, crushing, beneficiation, and magnetite concentration.
- Railing on our owned rail network.
- Supports 1.2mt Liberty Group hot metal production and
- ~10mtpa export hematite plus small volumes of magnetite concentrate and pellets.

#### SIMEC Mining operates a pellet plant in Whyalla

• Produces 1.4Mtpa of pellets, primarily for group steel making

#### SIMEC Mining also operates a strategic port in Whyalla

- Port exports iron ore and steel products
- Capable of handling ~ 20mtpa
- Plans to develop into world class multi-purpose, multi-user facility



## **SIMEC Mining Assets**

The Middleback Ranges has 3 main sites:

Iron Knob Mining Area (IKMA), incorporating the Iron Monarch, Iron Princess Pits and the adjacent Monarch Scree Deposit

**Iron Baron** Mining Area which incorporates Iron Baron (Little Baron, Iron Wizard), Iron Prince, Prince North, Iron Queen, Iron Cavalier, Camel Hills and adjacent scree ore resources of the Baroness and Empress

**South Middleback Range** (S-**SMR** and N-SMR), incorporating Iron Duke, Iron Magnet, Iron Duchess pits, Iron Knight Pits, and Iron Chieftain pits.

- Mines are 50km by rail to the port
- Ore from the 3 sites (direct shipping ore (DSO) and processed ores are railed to the port on SIMECS's own railroad where they are blended in sheds along with magnetite concentrate
- Magnetite ore is shipped via slurry pipe line to the pellet plant in Whyalla & for blending in the sheds





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### Improved Product



#### SIMEC Mining has introduced an improved grade of fines

SIMEC Mining has listened to customer requests and will provide a higher grade product with greater consistency in ship-to-ship quality. As part of the grade improvement we will incorporate

- higher proportion of higher grade into the blend;
- better blending practices;
- more consistent Processed Ore into the blend;

SIMEC Mining has invested \$50m in 2 new wash plants to add processing capacity to our existing 2 plants

• Iron ore beneficiation will be the key source of fines in 2018

SIMEC Mining is one of the few suppliers to blend magnetite concentrate in its blend. We intend to blend approx. 10-15% of magnetite concentrate in the blend in 2017-2018. The higher percentage of FeO in the blend results in more heat released in the oxidation process, which reduces fuel consumption and CO<sub>2</sub> emission. Magnetite addition decreases sintering time and increase productivity.

SIMEC Operations will concentrate on mining and processing :

- Higher grade mining pits
- 3 ore processing sites
- Magnetite concentrate in blend



## Improved Product Specifications



SIMEC Mining's improved products Offer – SIMEC Mining Fines (SMF)

#### **Product Development**

A change in marketing focus to higher grade ores and the introduction of new processing facilities has motivated SIMEC to develop an improved product (SIMEC Mining Fines & SIMEC Mining Lump = SMF & SML).

As part of the grade improvement we will incorporate;

- higher proportion of higher grade into the blend
- more consistent processed ore (≈ 60%) into the blend
- greater consistency in ship-to-ship quality

Specifications		SMF	SML
		Typical (%)	Typical (%)
Iron	Fe	60.5	59.5
Silica	SiO <sub>2</sub>	6.3	6.2
Alumina	$Al_2O_3$	2.3	1.3
Phosphorous	Р	0.06	0.06
Sulphur	S	0.04	0.04
Loss on Ignition	LOI	4.0	3.5
Moisture		8.0	Chemical Specifications (on dry basis)

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### **Production Process**



#### HEMATITE



#### 60% of SIMEC Fines in 2018 will be processed ore

#### MAGNETITE





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## Value in use - SMF



Based on value in use (VIU) modeling SMF value is theoretically between 95% and 99% of the 62% Fe Index (\$/dmtu basis), depending on the mill type and operational mode.

Assuming a 5% sinter productivity improvement lifts the VIU well above parity to Platts under Cost Cutting (fixed production) mode, ranging from 105% to 107% of the Platts 62 Index.



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# Thank You





### **SMF INPUTS**

#### Mining (DSO)

- Direct ship ore from 2 mining areas (2018)
  - Iron Knob (Princess East) opened 2017
  - Iron Baron (Little Baron) opened 2017

#### **Beneficiation Plants**

- Iron ore beneficiation from our 3 mining areas will be the key source of fines in 2018
  - Iron Baron Beneficiation plant with expanded capacity of 2.5Mtpa.
  - Iron Knob a new wash and beneficiation plant with a production capacity of 0.9Mtpa.
  - South Middleback Ranges (SMR) existing beneficiation plant capacity 0.9Mtpa, (+ magnetite concentrator capacity 2.2Mtpa, slurry pipeline, and rail loading facilities.)

#### **Magnetite Concentrate**

• Magnetite Concentrate will form 10-15% of SMF blend



