# **ASX RELEASE**



23 March 2017

# HIGH QUALITY COAL CONFIRMED AT RIVERSDALE ANTHRACITE COLLIERY

# Highlights:

- ✓ RAC's Gus Seam anthracite confirmed as premium quality
- ✓ Ideally suited for the production of Ferrochrome
- ✓ South Africa has the world's leading ferrochrome industry dominated by Glencore and Samancor
- ✓ Limited long term supply of suitable anthracite positions RAC as strategically important future source of anthracite

Acacia Coal Limited (**Acacia** or the **Company**) has confirmed that the anthracite quality from the Gus Seam at the RAC project is a premium product for supplying the world leading South African ferrochrome (FeCr) sector which underpins the global production of stainless steel. Technical studies have shown the anthracite from the Gus Seam is be very low in phosphorous and sulphur.

The Company is confident that the high quality and strategic nature of the RAC anthracite will support premium prices through the commodity cycle and importantly support higher practical yields of marketable product, significantly enhancing project economics.

# Why is Low Phosphorus Anthracite so Highly Valued?

Phosphorus causes a loss of ductility and embrittlement in ferrochrome and most ferrochrome plants have a tolerance of up to 0.02% phosphorus in coal, but prefer the levels to be as low as possible.

The RAC Gus Seam product is of premium quality with phosphorus content in coal typically ranging from 0.004% - 0.009%, placing it as the lowest phosphorus anthracite still available in South Africa. A growing scarcity of good quality anthracite in South Africa is exacerbated by rising phosphorus levels at other producers which increasingly struggle to meet the <0.02% threshold set by most ferrochrome producers.

## Why is Low Sulphur Anthracite So Highly Valued?

Ferrochrome plants insist on sulphur content being <1%. The RAC product reports typically at 0.62% sulphur, compared with levels of up to >2% in some remaining local suppliers.

In general, the majority of FeCr production in South Africa operates under metallurgical conditions that are not favourable to Sulphur removal, which in turn favours the use of low Sulphur reductants.



# High Quality Anthracite - Premium Pricing from the Ferrochrome Sector through the Commodity Cycle.

In general, the effects of sulphur and phosphorus on stainless steel are more acute than for mild steel and hence their relative intolerance in FeCr compared to steel production. Sulphur like phosphorus has a detrimental effect on the corrosion resistance and weldability of stainless steel.

This is reflected in the ferrochrome industry being willing to now accept 16-18% ash in anthracite provided the impurities are low, compared to the 13% threshold in 2006 when the Acacia team did the original feasibility study. It is more beneficial for the ferrochrome plants to slag off the ash in an Electric Arc Furnace, than accept damaging impurities.

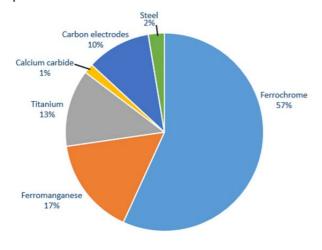
This has a profoundly helpful impact on the economics of the RAC Project:

- 1. Practical yields to a marketable product are higher the recently published Resource Statement<sup>1</sup> reported in accordance with the JORC 2012 code (see ASX announcement 1<sup>st</sup> February 2017) reported a practical yield of 74.03% to a 16% ash, and for some sized fractions, customers will accept 18% ash provided impurities are low.
- 2. Prices for a 16-18% ash anthracite in 2017, are approximately 60% higher in A\$ terms than a 13% ash product in 2006. Prices in 2017 for this quality product are in a range of A\$120-135/tonne<sup>2</sup> ex mine gate, and customers typically buy the product from mine gate on a Free on Truck basis, with payment 30 days after monthly statement.

It is telling that during the 2011-2015 commodity downturn, South African domestic low phosphorus/sulphur anthracite prices did not fall — the ferrochrome industry could not manage without this strategic raw material.

## Shortage of Domestic Anthracite in South Africa

South Africa has the world's leading ferrochrome sector (Glencore, Samancor), world's leading ferromanganese sector (South32, Assmang) and a globally significant mineral sand smelting sector (Rio Tinto, Anglo American, Exxarro/Tronox), all of which consume large qualities of Anthracite. Annual total demand is estimated at 2.1mtpa.



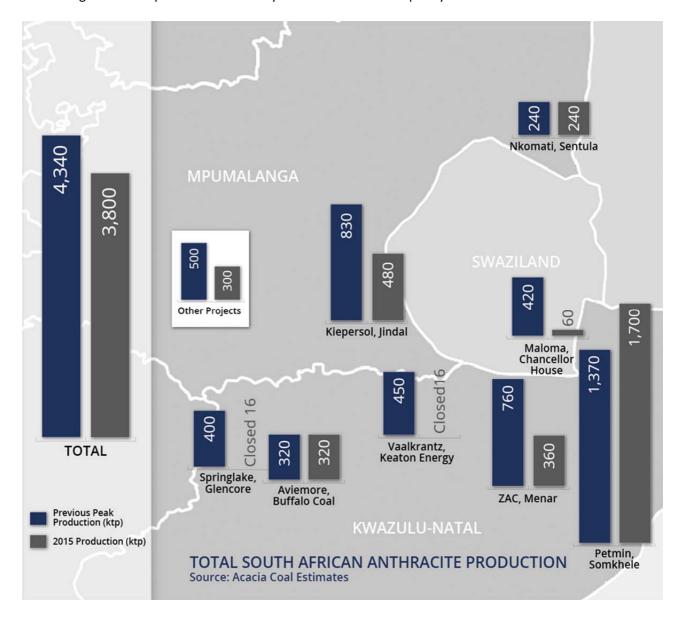
<sup>&</sup>lt;sup>1</sup> See Appendix

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<sup>&</sup>lt;sup>2</sup> Assumes an Exchange rate of ZAR10.00:A\$



In contrast, South Africa's anthracite production is declining rapidly through mine closure due to reserve depletion, and most remaining suppliers have declining quality suitable for ferromanganese or export markets as they exhaust their better-quality reserves.



It is in this context, and that of a robust world-leading ferrochrome sector, that RAC is well positioned.

# What is Ferrochrome (FeCr) and Why is it Important?

Chrome is the key ingredient in the production of stainless steel. Stainless steel is an alloy of three metals – Carbon steel, chrome and nickel (sometimes manganese is used in place of nickel). It is the chrome specifically which creates the corrosion resistance characteristics of stainless steel.

A stainless steel must have a minimum of 13% chrome in order to exhibit the most basic corrosion resistance. As the level of chrome increases up to 26% so the resistance to corrosion increases. Nickel and molybdenum are added in smaller quantities than chrome to reduce brittleness and improve corrosion resistance in specific environments respectively.



As societies develop they move from consuming predominantly low quality carbon steel for construction to more specialist steels for manufacturing. A good example is the evolution under way in China as Chinese industry moves away from building cities and infrastructure to manufacturing specialized industrial equipment, and consumer products. Manufacturing typically requires more specialist steels with increased corrosion resistance, which can only be met with chrome. All other alloying ingredients only affect the mechanical and electrical characteristics of steel. Chrome is the only metal that can significantly improve the corrosion resistance of steel.

The alternative to stainless steel is to paint or galvanize carbon steel. Both these corrosion resistance techniques involve covering the steel surface with a layer of paint or zinc respectively. These layers are never permanent and require constant re-treatment in order to maintain the corrosion resistance. A high chrome alloyed steel (stainless steel) never needs "re-treatment" even if the steel is scratched and why it is the preferred solution for ensuring the integrity of steel in any environment.

Ferrochrome prices remain at attractive levels for Q2 2017. By way of illustration, the average chrome price in 2016 was US\$0.95/lb. The Q2 2017 fix is US\$1.54/lb.

FeCr demand growth for 2017 is forecast at 3.5% and 2018 is even higher at 3.8%. There could not be a better time to enter the FeCr market with a new supply of low impurity anthracite.

#### **Next Steps**

Acacia will release an updated Resource and Reserve statement followed by the Pre-Feasibility Study during April and May 2017.

Hugh Callaghan Managing Director

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# **APPENDIX**

#### **Gus Seam Resources**

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Seam	Block	Classification	Area	Thick	RD	GTIS	TTIS	RCV	RA	RIM	RV	RFC	RS
Gus Seam	Central 1	Indicated	592180	0.93	1.47	809 500	688 100	29.09	14.90	1.94	7.58	75.58	0.84
	Central 2	Indicated	208350	1.13	1.47	346 000	294 100	27.61	17.17	1.87	10.63	70.33	0.63
	Central 3	Inferred	1699500	0.83	1.55	2 186 400	1 639 800	26.50	20.96	2.11	7.99	68.94	0.69
	Central 4	Indicated	292920	0.98	1.55	444 900	378 200	24.96	22.17	2.64	8.56	66.63	0.72
	South	Inferred	602870	0.89	1.61	863 800	647 900	23.66	26.90	2.37	8.02	62.71	0.82
	West	Indicated	1604690	1.03	1.60	2 644 500	2 247 800	23.69	26.01	2.62	8.38	62.99	1.15
	North-West	Inferred	165190	1.15	1.53	290 600	218 000	26.77	20.24	2.33	9.22	68.21	0.82
	North-East	Indicated	515760	0.95	1.51	739 800	628 800	27.54	15.89	2.53	6.14	75.44	0.77
	South-East	Indicated	404850	1.00	1.59	643 700	547 100	24.17	26.14	1.98	7.48	64.40	0.75
Total			6086310	0.95	1.56	8 969 200	7 289 800	25.53	22.32	2.32	8.05	67.31	0.87

#### Gus Seam: 16% Ash Product

Seam	Block	Classification	Area	Thick	RD	GTIS	TTIS	PY	PCV	PA	PIM	PV	PFC	PS
Gus Seam	Central 1	Indicated	592180	0.93	1.47	809 500	688 100	90.46	30.36	16.00	1.83	7.51	74.66	0.83
	Central 2	Indicated	208350	1.13	1.47	346 000	294 100	87.49	30.20	16.00	1.60	11.34	71.06	0.50
	Central 3	Inferred	1699500	0.83	1.55	2 186 400	1 639 800	79.15	30.39	16.00	1.79	8.35	73.86	0.61
	Central 4	Indicated	292920	0.98	1.55	444 900	378 200	70.00	29.19	16.00	3.10	9.56	71.34	0.65
	South	Inferred	602870	0.89	1.61	863 800	647 900	58.58	29.29	16.00	2.09	9.09	72.82	0.60
	West	Indicated	1604690	1.03	1.6	2 644 500	2 247 800	67.39	29.85	16.00	2.02	9.25	72.73	0.59
	North-West	Inferred	165190	1.15	1.53	290 600	218 000	84.76	30.21	16.00	1.68	10.73	71.59	0.51
	North-East	Indicated	515760	0.95	1.51	739 800	628 800	83.37	29.62	16.00	2.56	5.86	75.58	0.64
	South-East	Indicated	404850	1.00	1.59	643 700	547 100	63.93	30.60	16.00	1.88	7.90	74.22	0.59
Total			6086310	0.95	1.56	8 969 200	7 289 800	74.03	30.00	16.00	2.01	8.63	73.36	0.62

#### **Competent Person Statements**

The information in this presentation that relates to Exploration Results and Coal Resources for Riversdale Anthracite Colliery Project is based on and fairly represents information and supporting documentation prepared by Mr Peet Meyer who is a Fellow of South African Council for Natural Scientific Professions (Reg No 400025/03), a 'Recognised Professional Organisation' (RPO) included in a list promulgated by ASX from time to time.

Mr Peet Meyer is a consultant to Acacia and has more than 26 years' experience in the South African Coal Industry. He holds B.Sc. Hons. (Geology) and M.Sc. (Earth Science Practice and Management) degrees from the University of Pretoria and is an active member of the Geological Society of South Africa and the Fossil Fuel Foundation.

Through his work experience and registration with SACNASP, Peet Meyer is internationally recognised as a competent person. Peet Meyer has worked on all the coalfields of southern Africa which enables him to understand the physical and coal quality characteristics of the deposits. PC Meyer Consulting is an independent Geological Consultancy, advising several coal companies in southern Africa and abroad and will be paid a normal consulting fee for the generation of this report.

# **ACACIA at a GLANCE**

Acacia Coal Limited is involved in coal exploration and development. The Company identifies, acquires and takes advantage of opportunities in coal resources.

#### Schedule of Tenements as at 31 December 2016

The Company has a 100% interest in a coal exploration permit covering approximately 80 km² in Queensland's Bowen Basin, being EPC 1230 Comet Ridge.

Acacia has entered into a sale and purchase agreement to acquire the Riversdale Anthracite Colliery in South Africa.

# **ASX Listing Code: AJC**

#### **Directors**

Mr Adam Santa Maria Executive Chairman
Mr Hugh Callaghan Managing Director
Mr Rob Scott Executive Director
Mr Brett Lawrence Non-Executive Director
Mr Logan Robertson Non-Executive Director

#### **Registered and Principal Office**

Level 7, 1008 Hay Street, Perth Western Australia 6000

Telephone: +61 8 9320 4700

#### **Website and Email Address**

Please visit Acacia Coal's website for the Company's latest announcements and news: www.acaciacoal.com Email: info@acaciacoal.com

# **Issued Capital and Market Capitalisation**

At 31 December 2016 Acacia Coal's issued capital was 1,559,034,168 ordinary shares. Based on a share price of \$0.004 (22<sup>th</sup> March 2017), the undiluted market capitalisation was \$6.24 million.

### **Shareholder Enquiries**

Matters relating to shares held and changes of address should be directed to the Company's Share Registry:

Link Market Services Central Park Level 4, 152 St Georges Terrace Perth WA 6000

Telephone: 1300 554 474

Outside of Australia: +61 1300 554 474

Email: registrars@linkmarketservices.com.au Website: www.linkmarketservices.com.au