

## "Emerging natural graphite supplier to the hi-tech battery industry"

New York Investor Presentation July-August 2016

ASX: VRC

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Capital Structure				
Shares on Issue	913,807,038			
<b>Options and Rights</b>	327,517,082			
Share Price (26 July 2016)	A\$0.10			
52 week high / low	A\$0.145 / 0.011			
FD Market Cap	A\$124m			
<b>Cash</b> (30 June 2016) *	Est A\$7.7m			
Avg daily volume (shares)	4m (3 mths)			

\* Includes \$4m proceeds from strategic investor

#### **Substantial Shareholders**

Kabunga Holdings (vendor)16.3%

#### VRC Share Price Chart (12-months)





#### **Board and management**

#### Senior executive profiles

#### **Stephen Hunt**

B Bus (Marketing) Executive Chairman AICD

Alwyn Vorster

B Sc (Geology) MBA M Sc (Mineral Economics) AICD

Alan Armstrong B Bus (Acc & Finance) Non Executive Director CA AICD

Matt Bull B Sc (Hons ) (Geology Non-Executive Director /Geophysics)

- Minerals marketing specialist with 25 years experience in global roles: 15 yrs at BHP & 10 yrs at ASX listed companies
- Ex-founding director at graphite focused Magnis Resources
- Experienced securing offtake and financing agreements
- Experienced mining industry professional with 25 years in senior roles covering the total resources supply chain
  - Expertise in project development, complex corporate transactions and risk mitigation
  - Accounting & finance specialist with 10 years experience
  - Focus areas include taxation and project finance
  - Chief Geologist with a decade's experience in gold, iron ore and graphite (in Tanzania) mining / exploration
  - Ex-CEO & Chief Geologist at Baru Resources



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#### Spherical graphite demand drivers: the "Green effect"

Accelerating demand for electric
 vehicles - reaching 6m in 2020F
 (vs c. 800k in 2015)

Evolution of the utility power storage market



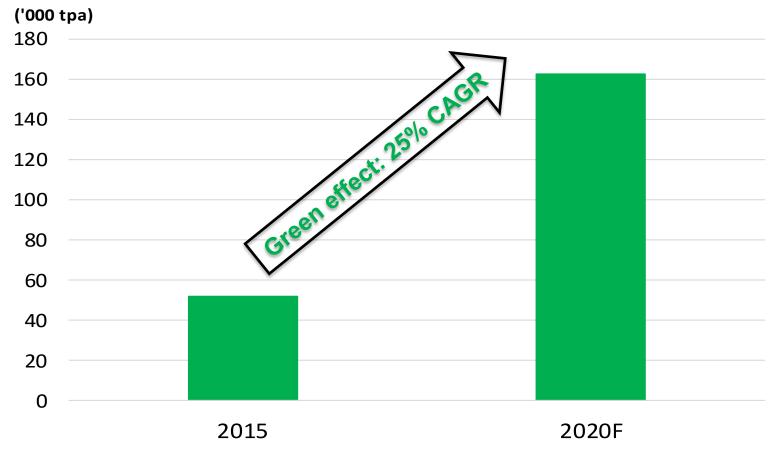
**Upstream impact (benefits VRC):** 

> Drives up demand for naturally sourced Super Jumbo /Jumbo graphite flakes



#### Quantifying the "Green effect" uplift

Battery sector's demand for "naturally" sourced spherical graphite: +200% by 2020



Source: Benchmark Mineral Intelligence (BMI)

Note: Naturally sourced spherical graphite represents 65% of the battery industry's requirements (reflected in chart above)

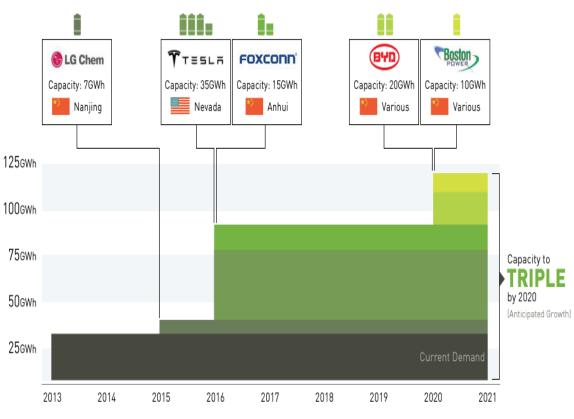


#### Battery manufacturers: gearing up production capacity

BMI estimates >US\$12bn capex on a dozen new facilities globally by 2020

 By then, Tesla's giga-factory (now being built) may use
 >90k tpa of spherical graphite





\*Benchmark estimates, not all data disclosed by companies \*\* Instant planned capacity stated for graphical purposes, slower ramp up expected



#### Naturally sourced graphite preferred feedstock over synthetic

- > Lower price as much cheaper to produce
- Lower impact on the environment
- Higher energy density and power output (applicable for EVs)



> Notably, Tesla has stated it prefers natural graphite (BMI)



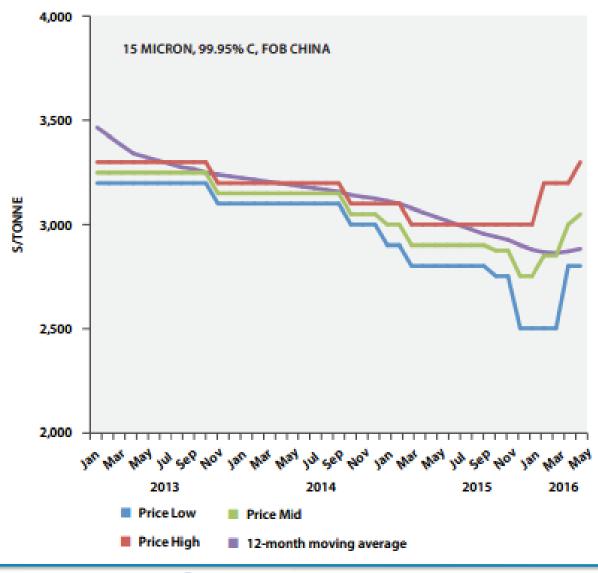
#### Tanzanian graphite suppliers now in play; China at capacity limit

- > China likely unable to meet internal spherical graphite requirements (BMI)
- > Substitution effect away from synthetic graphite starting in China
- Diversifying to natural graphite suppliers is now critical for structural reasons
- Otherwise, emerging players (Tesla) face a future graphite supply squeeze





#### An upcycle commencing: spherical graphite prices +10% (BMI)



#### Vision:

"To become the preferred supplier of high quality super jumbo/jumbo flake graphite to the emerging hi-tech battery industry."

**Core management objective:** 

"Generate the highest EBIT margins relative to peers (via...)"

- Achieving highest basket price; and
- Lowest forward opex / capex



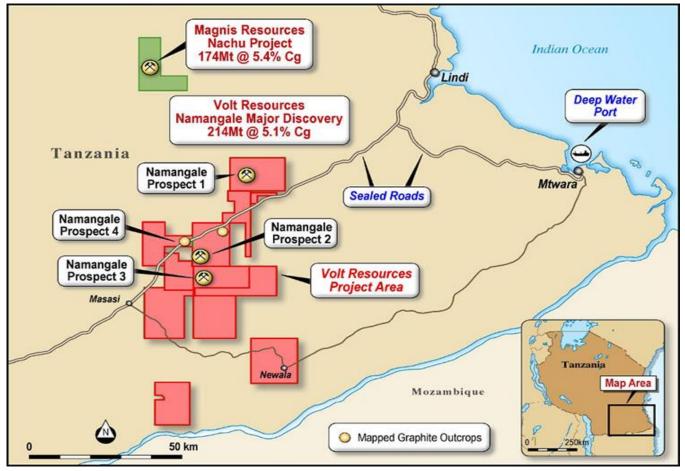
#### **PESTEL** analysis: Political stable and enjoying solid economic performance

Politics	<ul> <li>Relatively stable democracy since 1960s &amp; English speaking</li> <li>Strong and successful purge against corruption (IMF Apr 2016)</li> </ul>
Economics	<ul> <li>Economic performance (GDP +7% 2015) impressive (IMF Apr 2016)</li> <li>Top sectors construction, communication, finance and transportation</li> </ul>
Social	Mixture of Bantu, Arab and Western cultures
Technological	Undergoing a rapid change due to rise in GDP
Environmental	No mandatory comprehensive environmental laws
Legal	Common law system



#### The Resource: Namangale project in southern Tanzania

Located in Mozambican mobile belt: a band of highly metamorphosed rocks



Note: Magnis Resources Nachu project area identified in ASX media release 31 March 2016 (www.magnisresources.com)

The Company confirms that it is not aware of any new information or data that materially affects the information included in this document and that all material assumptions and technical parameters underpinning the estimates continue to apply and have not materially changed. (Volt JORC Resource 151.8Mt Inferred, 62.6Mt Indicated; Magnis JORC Resource 63.5Mt Measured, 61Mt Indicated, 49.6Mt Inferred.



#### Namangale has ready access to critical infrastructure

Close proximity to reliable power supply

Sealed roads through tenement





Deep water port at Mtwara is only 140km and heavily underutilised



#### Initial results from Namangale: premium graphite resource

- Substantial maiden total JORC compliant resource: indicated 62.6Mt @ 5.1% TGC and inferred 151.8Mt @ 5.1%\*\*
- > Very shallow resource (<100m); low cost deposit to explore and mine

Deposit	Tonnes (Mt)	Grade (% TGC)
INDICATED		
Namangale 1	62.6	5.1
INFERRED		
Namangale 1	133.4	5.1
Namangale 2	16.8	5.4
Namangale 3	1.6	5.3
Total	214.4	5.1

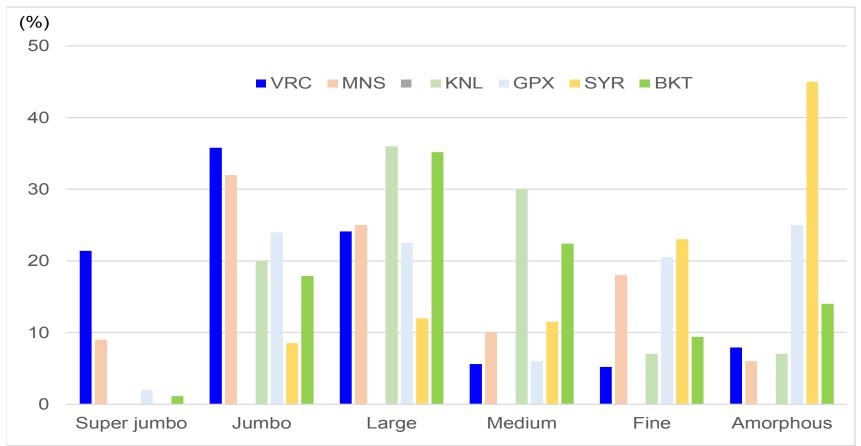
\*\* JORC Compliant Inferred Resource as described in ASX Announcement dated 13 May 2016, entitled "High Quality Concentrates Produced and JORC Resource Upgrade at the Namangale Project".

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#### Battery sector wants super jumbo flake graphite

> VRC delivering with leading super jumbo flake distribution among East African peers



## Flake distribution - East African natural graphite suppliers >\$20m mkt cap Source: Company data

Note: Refer to ASX Announcement dated 28 July 2016, entitled "Unprecedented graphite flake size distribution confirmed in super jumbo and jumbo categories at Namangale" for details on sampling technique



#### VRC's graphite meets `purity' grade for commercial applications

Recent graphite concentrate results from Namangale returned grades:

## "...up to 99.3% TGC with +500 micron flake\*\*"

> No industrial chemicals were used; just crushing and flotation process

Delivers VRC material comparative cost advantage relative to peers with deleterious elements in their product

\*\* As described in ASX Announcement dated 23 June 2016, entitled "Market leading graphite flake distribution at Namangale; exceptional purity concentrate up to 99.3% TGC."

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Phil Hearse, the MD of BatteryLimits, the consultant undertaking VRC's metallurgy and PFS stated:

"These results from Namangale show high grade coarse flake graphite that is amongst the best we have seen in our experience with graphite projects, especially since there is still considerable opportunity for further optimisation"



#### Vote of confidence: first four customers signed up

Off-take MOUs for 100,000 tpa locked in with leading Chinese end-users\*\*, while discussions with potential western off-take partners are gaining traction

Customer	Business description	Annual graphite required (t)		
Optimum Nano	China's second largest integrated lithium-ion battery producer	60,000		
Huzhou Chuangya	Large scale anode & electrolyte manufacturer	20,000		
Shenzhen Sinuo	Specialised anode & spherical graphite producer	20,000		

\*\* As disclosed in ASX Announcement dated 16 June 2016, entitled "Off-take MOUs signed with leading end-user groups; \$4m placement to strategic institutional investor"



### High super jumbo flake distribution and purity -> premium prices

VRC has >81%\*\* in super jumbo, jumbo and large flake size categories; this is what the battery sector wants and will pay top dollar to lock in supply

Graphite product	Purity (%)	Mesh size	Flake size	Est 12-18mth forward price (US\$/t)^
Super Jumbo Flake	>98%	<35	>500µm	>4,000
Jumbo Flake	96–98%	c.35	>300-500µm	>2,500
Large Flake	94–97%	c.50	>180-300µm	>1,600
Medium Flake	94–97%	c.80	>150-180µm	>1,250
Small Flake	94–97%	c.110	>75-150µm	>700
Amorphous	80-85%	>200	<75µm	>500
Synthetic	99.95%			7,000 – 20,000

\*\* As described in ASX Announcement dated 28 July 2016, entitled "Unprecedented graphite flake size distribution confirmed in super jumbo and jumbo categories at Namangale"

^Source: Pricing structures discussed with off-take partners disclosed in ASX Announcement dated 16<sup>th</sup> June 2016, entitled "Off-take MOUs signed with leading enduser groups; \$4m placement to strategic institutional investor" and specific input from US-based corporate advisor, EAS Advisors, Inc.



#### **Report card: management delivering to plan**

Milestone	1Q16	2Q16	3Q16	4Q16	1Q17	2Q17	3Q17	4Q17
PFS commenced								
Met results								
Marketing MOUs								
Ore reserves								
PFS complete								
Scoping & funding								
Offtake agreements								
BFS commences								
BFS complete								
Financial investment decision								
Construction starts								

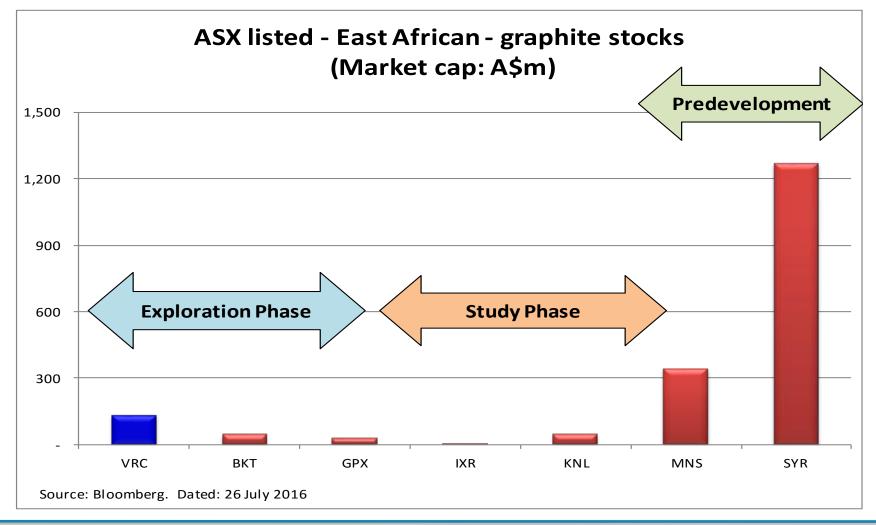
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To complete



#### Peer comparison and VRC's value proposition

> Material shareholder value created through exploration and PFS de-risking phases





#### Strategic competitive advantages facilitate value creation

- Super jumbo/jumbo flake graphite focused tenement (2,000skm) holder
- Super jumbo/jumbo flake, JORC compliant, graphite resource: 214mT @ 5.1%
- > Best positioned to maximize value across the supply chain for stakeholders:

1) Right product mix (purity up to 99.3% TGC, >81%\*\* super jumbo, jumbo and large flake distribution) to command premium prices

- 2) Low extraction costs (capex/opex), due to minimal down stream processing
- 3) Low transport costs thanks to ready access to efficient infrastructure
- > High calibre management team with hands on graphite sector experience

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<sup>\*\*</sup> As described in ASX Announcement dated 28 July 2016, entitled "Unprecedented graphite flake size distribution confirmed in super jumbo and jumbo categories at Namangale"

## "An upcycle is commencing for spherical graphite and VRC is well positioned to capitalise on this dynamic."





# RESOURCES

Volt Resources Telephone: + 61 3 9614 0600 EOZail: Info@voltresources.com Web: www.voltresources.com