



VOLT

RESOURCES

ASX ANNOUNCEMENT

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NAMANGALE CONCENTRATE HIGHLY SUITABLE FOR PRODUCTION OF COMMERCIAL GRADE EXPANDABLE GRAPHITE

HIGHLIGHTS

- German metallurgical laboratory tests show Namangale concentrate is highly suitable for producing commercial grade expandable graphite for flame retardant foam and graphite foil – two key growth markets
- Excellent expansion volumes achieved for large to super jumbo flake sizes compared with product from other origins
- Expansion tests used the simplest, cheapest and most common method
- Provides Volt with strong product diversity to target customers across varying market segments
- German laboratory test work continues to demonstrate outstanding properties of Volt's graphite

INTRODUCTION

Volt Resources Limited (ASX: VRC), ("Volt" or the "Company") is pleased to announce further testing on Namangale concentrate by a German metallurgical laboratory. The results outline that Namangale's concentrate is highly suitable for producing commercial grade expandable graphite for use in flame retardant foam, graphite foil and other applications. More significantly, the report stated "expansion tests of expandable graphite made of flake graphite concentrate from Namangale were very successful compared with product from other origins." The testwork was completed by a German group which is a global specialist in graphite testing and analysis.

This is highly encouraging news flow for Volt, as proposed regulatory changes in China and Europe for the mandatory use of non-toxic substances in flame retardant building materials could result in substantial future demand for expandable graphite. Having independent test work confirm the suitability of Volt's graphite product in the flame retardant building materials market is a key differentiating feature from rivals. The German laboratory test work continues to demonstrate the outstanding properties of Volt's

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graphite concentrate having previously confirmed battery grade results of 99.99% TGC (refer to announcement on the 17 November 2016).

Furthermore, given the size of the Namangale resource, the Board believes it is of great benefit that Volt's graphite concentrate product is suitable for a variety of commercial applications, including spherical graphite for the lithium-ion battery sector. This is one of the key reasons Volt's global marketing team are meeting with prospective customers from a range of end-user industries to facilitate product market diversification.

INDEPENDENT TESTING FOR EXPANDABLE GRAPHITE APPLICATIONS

The German metallurgical laboratory was sent a graphite sample from the Namangale deposit that had "a very clean flotation concentrate, with high grade carbon content and a high portion of jumbo flake."

The test conducted using the simplest, cheapest and most common method of preparation of expandable graphite yielded the following results.

Expansion volume after cold treatment and short retention time						
Flake size	> 500 µm	> 300 µm	> 180 µm	> 106 µm	> 75 µm	<75µm
Room Temp.	2 cm ³ /g					
180 °C	2 cm ³ /g	3 cm ³ /g	5 cm ³ /g	3 cm ³ /g		
200 °C	2 cm ³ /g	5 cm ³ /g	7 cm ³ /g	5 cm ³ /g		
220 °C	36 cm ³ /g	16 cm ³ /g	10 cm ³ /g	6 cm ³ /g		
250 °C		197 cm ³ /g				
800 °C	430 cm ³ /g	430 cm ³ /g	380cm ³ /g			
1000 °C	<u>500 cm³/g</u>	<u>490 cm³/g</u>	<u>480 cm³/g</u>	<u>400 cm³/g</u>	<u>195 cm³/g</u>	<u>25cm³/g</u>

The key findings from the testing were:

- The sample from Namangale provided a solid basis for the preparation of expandable graphite with a large expansion volume.
- No deleterious elements were visible and tests for Calcium Carbonate were negative which is crucially important for numerous graphite applications.
- The maximum expansion volumes were achieved with flake sizes from 180 µm to >500 µm.
- The expansion volume results were extremely large for the mix of flake sizes and powders and exceed current market requirements.
- Notably, the expandability results were far larger than those achieved with flake graphite of Chinese origin which on average measure 250 cm³/g.
- The flake graphite sample from Namangale is very suitable for the production of expandable graphite as a flame retardant, graphite foil and other applications.

Chief Executive Officer, Trevor Matthews commented: "With recent initial tests in the U.S. confirming the high quality of Volt's concentrate to be used in lithium-ion batteries, it is very encouraging to have independent confirmation that Namangale graphite concentrate is highly suitable for expandable graphite too. The sales and marketing team will be targeting prospective end-user customers globally across a range of graphite end-user markets. At this point in Volt's development, it is a significant differentiating feature and competitive edge to be able to deliver concentrate that can make high quality spherical and expandable graphite for various downstream applications."

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Conclusion

The Board is pleased with the very positive results from the German laboratory which has confirmed that Volt's graphite concentrate product is suitable across many product applications. These test results are being supplied to end user groups to assist with their product evaluations. Positive commercial discussions continue to progress with end user groups in the United States, Europe and China.

For and on behalf of Volt Resources Limited

Trevor Matthews
Chief Executive Officer

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