

NEWS RELEASE  
10 October 2018

## VERMELHO OPERATIONAL UPDATE

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**Horizonte Minerals Plc, (AIM/TSX: HZM)** ('Horizonte' or 'the Company') the multi-asset nickel development company focused in Brazil, is pleased to provide an update on its 100% owned, Vermelho nickel-cobalt project ('Vermelho' or 'the Project'), located in the eastern part of the Carajás mining district.

### Highlights

- Test-work is underway at SGS Lakefield, Canada, on Vermelho limonite samples, with the objective of producing high purity nickel and cobalt sulphate suitable for the Electric Vehicle ('EV') battery market;
- Initial tests show high nickel and cobalt extraction rates achieved on limonite samples;
- In addition, batch smelting test-work is being conducted on samples of transition and saprolite material from Vermelho at the KPM laboratory, Canada. This work aims to confirm its suitability to produce high grade ferro-nickel, which could potentially be treated at the Araguaia plant or a new standalone facility at Vermelho; and
- Environmental baseline data collection has re-commenced at Vermelho as part of advancing the permitting process.

### Horizonte CEO, Jeremy Martin, commented:

*"Horizonte is advancing its recently acquired Vermelho project, a scalable high-grade nickel deposit which has the potential to supply raw materials into the battery industry. Two parallel streams of test-work are currently underway.*

*"The first, testing the limonite ore's suitability for production of high purity nickel and cobalt sulphate to supply EV markets. The second, testing the saprolite ore as a feed into the planned Rotary Kiln Electric Furnace ('RKEF') plant at Araguaia, or potentially into a standalone RKEF plant at Vermelho.*

*"This is an exciting time for Horizonte, as the Company aims to release its Feasibility Study results for Araguaia due imminently, and in parallel, advance its second asset, Vermelho. Horizonte is firmly on its pathway to become a multi-asset nickel development company. The nickel market remains strong, with robust demand and inventories continuing to fall."*

### **Vermelho nickel-cobalt project**

The Vermelho nickel-cobalt project is located in the eastern part of the Carajás mining district in the state of Pará, Brazil, approximately 85km north west from the northern part of Horizonte's Araguaia FeNi Project. The Carajás district is an established mining region with well-developed infrastructure, including: rail, roads and hydro-electric power. The Project was developed by Vale with the objective of becoming its principal nickel-cobalt operation. Extensive work was undertaken on the Project, which included drilling programmes totalling 152,000 metres, full scale pilot test work and detailed engineering studies. The Project was subsequently taken through a feasibility programme with Vale announcing a positive development decision in 2005. The Feasibility Study showed production capacity of 46,000 tons/annum ('tpa') of metallic nickel, and 2,500 tpa of metallic cobalt, with an expected commercial life of 40 years.

In May 2018, Horizonte announced an initial NI 43-101 Mineral Resource Estimate in the Measured and Indicated category which contained 167.8 million tonnes grading 1.01% nickel and 0.06% cobalt (at 0.9% nickel equivalent cut off). These resources categories are estimated to contain 1.68 million tonnes (3,700 million lbs) of nickel and 94,000 tonnes (207 million lbs) of cobalt.

The Mineral Resource Estimate places Vermelho as one of the largest, highest grade, undeveloped laterite nickel-cobalt resources globally.

### **SGS Lakefield leaching test-work**

Samples of wet Vermelho limonitic laterite material totalling 150 kg were shipped to the laboratories of SGS Canada Inc. for test-work using high pressure leaching. The leaching is being carried out in a number of batches with a 20 litre autoclave; this is after first establishing conditions in two litre samples. The resulting leach solution will be neutralised with limestone, followed by mixed hydroxide precipitation with magnesium-oxide. Following a re-leach, a series of solvent extraction and ion exchange steps will be carried out prior to crystallisation of pure cobalt sulphate heptahydrate. The nickel sulphate solution is to be processed separately.

### **Kingston Process Metallurgy (KPM) Inc smelting test-work**

Laboratory scale ferro-nickel smelting tests are being carried out on samples of Vermelho transition and saprolite material at the laboratories of KPM Inc. in Canada. Following the steps used in the standard RKEF process (same flow sheet as planned at Araguaia), the material will be dried and calcined prior to smelting in a laboratory furnace at approximately 1550°C. By adjustment of the coal amounts for reduction, a range of typical ferro-nickel grades will be produced and submitted for further analysis.

This announcement contains inside information for the purposes of Article 7 of EU Regulation 596/2014.

**\*\* ENDS \*\***

For further information visit [www.horizonteminerals.com](http://www.horizonteminerals.com) or contact:

**Horizonte Minerals plc**

Jeremy Martin (CEO) +44 (0) 20 7763 7157

**Numis Securities Ltd (NOMAD & Joint Broker)**

John Prior +44 (0) 207 260 1000

Paul Gillam

**Shard Capital (Joint Broker)**

Damon Heath +44 (0) 20 7186 9952

Erik Woolgar

**Tavistock (Financial PR)**

Emily Fenton +44 (0) 20 7920 3150

Gareth Tredway

**About Horizonte Minerals:**

Horizonte Minerals plc is an AIM and TSX-listed nickel development company focused in Brazil. The Company is developing the Araguaia project, as the next major ferro-nickel mine in Brazil, and the Vermelho nickel-cobalt project, with the aim of being able to supply nickel and cobalt to the EV battery market. Both projects are 100% owned.

Horizonte shareholders include: Teck Resources Limited, Canaccord Genuity Group, JP Morgan, Lombard Odier Asset Management (Europe) Limited, City Financial, Richard Griffiths and Glencore.

**CAUTIONARY STATEMENT REGARDING FORWARD LOOKING INFORMATION**

Except for statements of historical fact relating to the Company, certain information contained in this press release constitutes "forward-looking information" under Canadian securities legislation. Forward-looking information includes, but is not limited to, the ability of the Company to complete the Acquisition as described herein, statements with respect to the potential of the Company's current or future property mineral projects; the success of exploration and mining activities; cost and timing of future exploration, production and development; the estimation of mineral resources and reserves and the ability of the Company to achieve its goals in respect of growing its mineral resources; the ability of the Company to complete the Placing as described herein, and the realization of mineral resource and reserve estimates. Generally, forward-looking information can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or statements that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved". Forward-looking information is based on the reasonable assumptions, estimates, analysis and opinions of management made in light of its experience and its perception of trends, current conditions and expected developments, as well as other factors that management believes to be relevant and reasonable in the circumstances at the date that such statements are made, and are inherently subject to known and unknown risks, uncertainties and other factors that may cause the actual results, level of activity, performance or achievements of the Company to be materially different from those expressed or implied by such forward-looking information, including but not limited to risks related to: the inability of the Company to complete the Acquisition as described herein, exploration and mining risks, competition from competitors with greater capital; the Company's lack of experience with respect to development-

stage mining operations; fluctuations in metal prices; uninsured risks; environmental and other regulatory requirements; exploration, mining and other licences; the Company's future payment obligations; potential disputes with respect to the Company's title to, and the area of, its mining concessions; the Company's dependence on its ability to obtain sufficient financing in the future; the Company's dependence on its relationships with third parties; the Company's joint ventures; the potential of currency fluctuations and political or economic instability in countries in which the Company operates; currency exchange fluctuations; the Company's ability to manage its growth effectively; the trading market for the ordinary shares of the Company; uncertainty with respect to the Company's plans to continue to develop its operations and new projects; the Company's dependence on key personnel; possible conflicts of interest of directors and officers of the Company, the inability of the Company to complete the Placing on the terms as described herein, and various risks associated with the legal and regulatory framework within which the Company operates. Although management of the Company has attempted to identify important factors that could cause actual results to differ materially from those contained in forward-looking information, there may be other factors that cause results not to be as anticipated, estimated or intended. There can be no assurance that such statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements.