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## NEWS RELEASE

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### **GB MINERALS LTD. UPDATE ON THE FARIM PHOSPHATE PROJECT**

**November 28, 2017 – Vancouver, British Columbia:** GB Minerals Ltd. (the “Company”) (TSX - V: GBL) is pleased to provide an update on the advancement of its wholly owned Farim Phosphate Project (the “**Farim Project**”) located in Guinea-Bissau, West Africa.

#### ***Key Highlights***

- Shipping navigational route defined by hydrographic survey confirms suitable water depth for 35,000 dead weight tonne (“**DWT**”) vessels
- Offshore geophysical survey and geotechnical drilling completed in the Geba River for preparation of marine structures
- Onshore geotechnical drilling completed for all buildings and structures
- Bench scale tests including material from the North Pit further validate the Feasibility Study
- Further geochemical, geotechnical and hydrogeological site investigations narrow risks and provide opportunities
- Additional pilot plant tests undertaken for 4,000 (wet) kg of material
- Significant increases to process recovery with mass recovery at 77% and P<sub>2</sub>O<sub>5</sub> recovery at 80%
- Finalization of specification sheets for customers
- Additional samples already with potential off-takers
- Over 2,000 kg of final product available for new customers’ samples
- Low cadmium levels in final product that can meet regulatory changes among some target markets
- Resettlement Action Plan completed along with asset survey, conceptual town plan and replacement housing
- Testing of local construction materials
- Pre-screening of local contractors
- Country and regional logistics study for most efficient transportation of equipment to site

#### **Luis da Silva, President and Chief Executive Officer of the Company, comments:**

“We have been active in moving the Farim Project forward by providing product samples to potential customers, advancing design work for detailed engineering, and de-risking the project by executing investigative work on many fronts. We believe these efforts further evidence that the Farim Project is a robust and highly competitive project, with strong economic returns, even at 10-year low pricing, that will benefit all stakeholders.”

#### ***Port Design at Ponta Chugue***

A hydrographic survey of potential marine shipping routes by EGS (International) Ltd. (UK) (“**EGS**”) confirms that a proposed route is available from the ocean to Ponte Chugue having suitable depth for

35,000 DWT ships. EGS also collected sediment grab samples and turbidity measurements, which will be used for morphological and sediment analysis and deployed and recovered tide gauges and Acoustic Doppler Current Profilers (“ADCPS”) to obtain tidal and hydrodynamic data for navigational simulation.

Marine geophysical surveys by EGS and geotechnical drilling by Igeotest Geoscience Group (Spain) were undertaken at the proposed wharf and shiploader locations for the port at Ponta Chugue in the Geba River. A total of 11 marine drill locations were investigated as required for the detailed design of the jetty and ship loading dock at Ponta Chugue. In 2016, geotechnical work was completed for all shore side structures associated with the port infrastructure

The geophysical, meta-ocean and geotechnical work performed in the Geba River was supervised by W.F Baird and Associates Ltd. (Madison, USA) (“Baird”). Baird will use the data to update and complete several aspects of the port design including:

- Morphological and sedimentation analysis including updating the 3-dimensional hydrodynamic model and wave climate analysis
- Vessel berthing and mooring analysis
- Assessment of vessel operations and navigational simulations
- Marine terminal design adjustments as required

***Pilot Plant Testing***

In January 2017, a 750 (wet) kg sample from 13 drill holes located in the South Pit of the Farim deposit was tested through a pilot plant at the laboratory of SGS Canada Inc. (Lakefield, Ontario). Samples were taken throughout the process and test work was completed on rheology, tailings properties, tailings thickening, tailings geochemistry and vacuum filtration. The results of this pilot plant test are shown in Table 1 below:

**Table 1: Pilot plant test results (January 2017)**

<b>P<sub>2</sub>O<sub>5</sub></b>	<b>CaO</b>	<b>MgO</b>	<b>Al<sub>2</sub>O<sub>3</sub></b>	<b>Fe<sub>2</sub>O<sub>3</sub></b>	<b>C<sub>organic</sub></b>	<b>S<sub>pyritic</sub></b>	<b>Insol</b>	<b>Cd</b>	<b>Adjusted MER*</b>
33.98%	49.03%	0.15%	0.36%	3.58%	0.45%	0.45%	2.59%	9.9ppm	0.10

\* MER (minor element ratio) is defined as (%Fe<sub>2</sub>O<sub>3</sub> + %Al<sub>2</sub>O<sub>3</sub> + %MgO) / %P<sub>2</sub>O<sub>5</sub> and is a measure of the impurity level. Adjusted MER accounts for pyritic iron that is inferred through analyzed pyritic sulfur.

In April 2017, a larger 3,600 (wet) kg sample taken from 60 drill holes in the South Pit was pilot plant tested at ALS Metallurgy Kamloops (British Columbia, Canada). Tailings samples from the pilot plant were then sent for analysis. Samples were also taken for the upcoming bulk flowability test work required for bin angle design during the detailed engineering phase. The results for this test show a significant increase in recovery and are as follows:

- 77 % mass recovery
- 79.9 % P<sub>2</sub>O<sub>5</sub> recovery

**Table 2: Pilot plant test results (April 2017)**

<b>P<sub>2</sub>O<sub>5</sub></b>	<b>CaO</b>	<b>MgO</b>	<b>Al<sub>2</sub>O<sub>3</sub></b>	<b>Fe<sub>2</sub>O<sub>3</sub></b>	<b>C<sub>organic</sub></b>	<b>S<sub>pyritic</sub></b>	<b>Insol</b>	<b>Cd</b>	<b>Adjusted MER*</b>
33.21%	47.98%	0.14%	0.47%	2.36%	0.34%	0.73%	4.30%	6.9ppm	0.06

\* MER (minor element ratio) is defined as (%Fe<sub>2</sub>O<sub>3</sub> + %Al<sub>2</sub>O<sub>3</sub> + %MgO) / %P<sub>2</sub>O<sub>5</sub> and is a measure of the impurity level. Adjusted MER accounts for pyritic iron that is inferred through analyzed pyritic sulfur.

Three pilot plant tests have been performed by GB Minerals to date – the first one having been completed in 2015 at ALS Metallurgy Kamloops for the report entitled “NI 43-101 Technical Report on the Farim Phosphate Project, Guinea-Bissau” (the “**Feasibility Study**”) – and approximately 5,000 (wet) kg of material have been tested. All three pilot plant tests have shown similar results, producing a high-grade phosphate rock with low adjusted minor element ratio. The data collected from these tests will be invaluable for the design of the process plant and tailings facilities during the detailed engineering phase, and serves to significantly de-risk the Farim Project by further confirming that the process flow sheet is robust.

### ***Off-take Agreements***

In addition to the phosphate rock concentrate that was used for acidulation test work, more than 2,000 (dry) kg of phosphate rock concentrate (P<sub>2</sub>O<sub>5</sub>) were produced and these will be provided to potential customers for their test work.

### ***Process Design – North Pit***

The future mining operations contemplate two pits: the South Pit (to be mined in year 0 to year 7) and the North Pit (to be mined in year 8 to year 25). Bench scale tests were initially performed from composite material from the South Pit only. Representative material drawn from the North Pit was used for the additional bench scale tests performed by KEMWorks Technologies, Inc. (Lakeland, USA) in September and October 2016, which confirmed the assumptions in the Feasibility Study, indicating that the process design is robust. The results of the bench scale tests are outlined in Table 3 below:

**Table 3: Assay results of North Pit bench scale tests**

<b>P<sub>2</sub>O<sub>5</sub></b>	<b>CaO</b>	<b>MgO</b>	<b>Al<sub>2</sub>O<sub>3</sub></b>	<b>Fe<sub>2</sub>O<sub>3</sub></b>	<b>C<sub>organic</sub></b>	<b>S<sub>pyritic</sub></b>	<b>Insol</b>	<b>Adjusted MER*</b>
32.29%	45.01%	0.09%	0.89%	2.76%	0.44%	0.97%	9.21%	0.08

\* MER (minor element ratio) is defined as (%Fe<sub>2</sub>O<sub>3</sub> + %Al<sub>2</sub>O<sub>3</sub> + %MgO) / %P<sub>2</sub>O<sub>5</sub> and is a measure of the impurity level. Adjusted MER accounts for pyritic iron that is inferred through analyzed pyritic sulfur.

The Company believes further test work could optimize the North Pit final phosphate rock concentrate and may include:

- Further attrition scrubbing studies to potentially reduce Al<sub>2</sub>O<sub>3</sub>, Fe<sub>2</sub>O<sub>3</sub> and associated C<sub>organic</sub>
- Flotation tests and associated trade-off studies to reduce Insolubles (“**Insol.**”) and increase P<sub>2</sub>O<sub>5</sub> grade.

### ***Resettlement***

Nomad Socio-Economic Management and Consulting (South Africa) was appointed to develop a comprehensive Resettlement Action Plan (“**RAP**”) which was completed earlier this year. Multiple top tier consultants were used in producing the RAP including:

- Stakeholder engagement completed by Nomad
- Asset surveys performed by Survesis (Kampala, Uganda) and AfricaWide Consulting (Durban, South Africa)
- Compensation scheme, host site selection, and livelihood restoration and improvement programs, all performed by AfricaWide Consulting
- Conceptual designs for replacement housing prepared by ERM (Toronto, Canada)

### ***Hydrogeological, Geotechnical and Geochemical Site Investigations in Farim***

As per the recommendations in the Feasibility Study, further hydrogeological, geotechnical and geochemical site investigations were undertaken and field work performed in 2016 and 2017 has allowed the Company to gain a more complete understanding of:

- Geochemical characteristics of the overburden waste material and its potential to generate acid rock drainage
- Geotechnical information required for construction of the plant and administrative buildings, the tailings facility, overburden waste dumps and water management structures
- The hydraulic connectivity between the Cacheu River and the South Pit’s southern perimeter
- Details on how pumping wells could be employed to dewater key aquifer units along the Cacheu River and the South Pit perimeter
- The physical characteristics of the tailings for the design of the tailings storage facility
- Design parameters for the overburden waste dumps
- Availability of on-site construction materials for tailings and water management facilities

GB Minerals is confident it has completed most of the geotechnical drilling required for the construction of administrative buildings and the conveyor system over the Cacheu River.

### ***Quality Testing of Locally Available Materials***

Test work was completed by Amec Foster Wheeler (Environment and Infrastructure Division) (Hamilton, Canada) on cement samples from three local cement suppliers in Guinea-Bissau. The results will be relied upon for future concrete design and will also be made available to the EPCM contractor for the detailed engineering.

### ***Pre-Screening of Local Contractors***

The Company has visited and vetted the facilities, equipment and capabilities of several local contractors in Guinea-Bissau that may be suitable for the construction of the process plant and the infrastructure for the Farim Project. Contractors have also been vetted in regional countries, including Senegal, Togo and Ghana.

## ***Logistics Study***

GB Minerals commissioned a logistics study by Bolloré Logistics Canada, Inc. (Montréal, Canada) to examine the various transportation options to bring equipment and supplies to the Farim Project site and identify any major constraints at the various ports in the region (e.g. loading ability, storage), and to assess the condition of roads, bridges (especially loading capacity) and pinch points (tight turns, trees or electrical lines that may need to be addressed). The Company expects this study will provide invaluable information for the construction and operating portion of the mine life.

## ***Conclusion***

A significant amount of work has been done on the Farim Project over the last 24 months, which has de-risked both the technical aspects and the schedule aspects of the construction process. This work has also further evidenced that the Farim Project will be a comparatively low-cost operation with a high quality final product.

## **ON BEHALF OF THE BOARD**

Luis da Silva  
President and Chief Executive Officer

## **For further information please contact**

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## **QUALIFIED PERSON**

The following, who are qualified persons as defined in NI 43-101, prepared and are responsible for the technical information as disclosed in this news release:

<b>Qualified Person</b>	<b>Consulting Firm</b>	<b>Scope of Responsibility</b>
Ed Liegel	W.F Baird and Associates Ltd.	Port design
Dr Reagan McIsaac	Knight Piésold Ltd.	Hydrogeological, Geotechnical and Geochemical site investigation
Dr Francisco Sotillo	KEMWorks Technologies, Inc.	Mineral Processing and Metallurgical Testing

## **ABOUT GB MINERALS LTD.**

On September 14, 2015, the Company announced the results of, and filing on SEDAR, of a new feasibility study on its Farim phosphate project entitled “NI 43-101 Technical Report On the Farim Phosphate Project” (the “**2015 Feasibility Study**”).

The Farim phosphate project is located in the northern part of central Guinea-Bissau, West Africa, approximately 25 kilometres south of the Senegal border, approximately 5 kilometres west of the town of Farim and some 120 kilometres northeast of Bissau, the capital of Guinea-Bissau, on a 30.6 km<sup>2</sup> mining lease license granted by the Government of Guinea-Bissau to the Company’s wholly owned subsidiary, GB Minerals AG, in May 2009. The Company also holds a mining license in relation to the Farim phosphate project.

The Farim phosphate project consists of a high grade sedimentary phosphate deposit of one continuous phosphate bed which extends over a known surface area of approximately 40 km<sup>2</sup>. It is estimated to contain measured and indicated resources of 105.6 million dry tonnes at a grade of 28.4% P<sub>2</sub>O<sub>5</sub> and additional inferred resources of 37.6 million dry tonnes at 27.7% P<sub>2</sub>O<sub>5</sub>. The measured and indicated resources include 44.0 million dry tonnes of reserves based on a 25 year mine plan at 1.75 million tonnes per annum (“**mtpa**”) of mine production at the following run of mine grades: 30.0% P<sub>2</sub>O<sub>5</sub>, 2.6% Al<sub>2</sub>O<sub>3</sub>, 41.0% CaO, 4.7% Fe<sub>2</sub>O<sub>3</sub>, and 10.6% SiO<sub>2</sub>. The phosphate ore will be beneficiated for a final phosphate rock concentrate production of 1.32 mtpa at a 34.0% P<sub>2</sub>O<sub>5</sub> grade at 3% moisture.

The 25 year mine plan also assumes a beneficiation process that involves scrubbing (both drum and attrition) followed by particle sizing to remove the fraction under 20 µm. This new beneficiation process will result in a 34.0% P<sub>2</sub>O<sub>5</sub> product grade, mass recovery of 75.5% and 78.4% P<sub>2</sub>O<sub>5</sub> recovery confirmed by a pilot scale test on a one tonne sample that took place in May 2015. After passing through the process plant, the final production of phosphate concentrate, based on 1.75 mtpa of run of mine feed, will be 1.32 mtpa. The life of mine operating costs are approximately US\$52.13 per tonne of final concentrate. The initial capital cost for the project is estimated at US\$193.8 million and does not include owner’s costs which amount to US\$11 million and include items such as project insurance, resettlement and owner’s team costs. Owner’s costs have been included in the financial analysis.

For additional information, please visit us at [www.gbminerals.com](http://www.gbminerals.com).

## **FORWARD LOOKING STATEMENTS**

Certain information in this news release relating to the Company is forward-looking and related to anticipated events and strategies. When used in this context, words such as “will”, “anticipate”, “believe”, “plan”, “intend”, “target” and “expect” or similar words suggest future outcomes. Forward-looking information contained in this press release includes, but may not be limited to the business plans, statements or information relating to the anticipated development activities of the Company, the port and process design, the pilot plant testing, the site investigations, logistics, resettlement, the Farim Project (including the quantity and quality of mineral resource and mineral reserve estimates), the potential to upgrade inferred mineral resources, the ability of the Company to develop the Farim Project into a commercially viable mine and the proposed plans relating thereto regarding operations, mine design, estimates relating to tonnage, grades, recovery rates, future phosphate production, future cash flows, life of mine estimates, expectations regarding production and estimates of capital and operating costs. By their nature, such statements are subject to significant risks and uncertainties that may cause actual results or events to differ materially from current expectations. Such risks and uncertainties include, but are not limited to, the ability to obtain adequate financing, political, social and other risks inherent in daily operations, industry risks such as commodity prices, interest rate and exchange rate fluctuations, health, safety and environmental risks and competition. Readers are cautioned not to place undue reliance on forward-looking information as actual results could differ materially from the plans, expectations, estimates or intentions expressed in the forward-looking information. Forward-looking information speaks only as of the date on which it is made and, except as may be required by applicable law, the Company disclaims any obligation to update or modify such forward-looking information, either as a result of new information, future events or for any other reason.

Disclosure herein of exploration information and of mineral resources and mineral reserves is derived from the 2015 Feasibility Study. Information relating to “mineral resources” and “mineral reserves” is deemed to be forward-looking information as it involves the implied assessment based on certain estimates and assumptions that the mineral resources and mineral reserves can be profitable in the future. Such estimates are expressions of judgment based on knowledge, mining experience, analysis of drilling

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