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## NEWS RELEASE

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### **GB Minerals Ltd. Feasibility Study confirms high margin, low capex potential for Farim Mine**

**September 14<sup>th</sup>, 2015 – Vancouver, British Columbia:** GB Minerals Ltd. (the “Company”) (TSX - V: GBL) is pleased to announce the completion of a new Feasibility Study for its Farim phosphate project (the “**Farim Project**”) located in Guinea Bissau which has been managed by Lycopodium Minerals Canada Ltd. (“Lycopodium”). The new National Instrument 43-101 – *Standards of Disclosure for Mineral Projects* (“**NI 43-101**”) report will be entitled “NI 43-101 Technical Report on the Farim Phosphate Project”. The Company anticipates filing the NI 43-101 Report on or about September 14th, 2015 on its SEDAR profile at [www.sedar.com](http://www.sedar.com).

#### **Key Highlights**

- Process improvements resulted in reduced process plant operating and capital costs
  - Final product grade of 34.0%<sup>1</sup>
  - Overall mass recovery of 75.5%<sup>1</sup>
  - Final P<sub>2</sub>O<sub>5</sub> recovery of 78.5%<sup>1</sup>
- Pilot plant test performed on 1 tonne sample, representative for the first 7 years of mining
- Initial 25 year mine life based solely on reserves
- Mine production of 1.75 million tonnes per annum<sup>1</sup> (“**mtpa**”)
- Final phosphate rock production of 1.32 mtpa<sup>1</sup>
- Initial capital costs of US\$193.8m
- Cumulative net cashflow, post tax, US\$1.9 billion
- Net Present Value<sub>10</sub>, post tax, US\$437 million
- Tax effected Internal rate of return of 34.5% based on long term phosphate rock price of \$123/tonne with a 4.3 year pay-back period
- Low cost position with an average life of mine cash operating costs of \$52/tonne<sup>1</sup> of final concentrate
- Average cash cost for first seven years of production of US\$46/tonne<sup>1</sup> of final concentrate
- Average EBITDA for first seven years of production of US\$110 million per year
- Royalties and income taxes to the Government of Guinea Bissau exceeding US\$550M
- Improved logistics including the construction of a new port and use of existing local highway
- 19 months from the start of detailed engineering to production; longest lead item of 11 months from ordering

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<sup>1</sup> All tonnages and quality data in this report refer to dry tonnes. Per tonne data refers to final concentrate tonnage.

- New IFC Performance Standards / Equator Principles Environmental and Social Impact Assessment (“ESIA”) to be completed during September 2015

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

“This feasibility study confirms our belief that the Farim Phosphate Mine is a compelling project and the detailed study will better unlock its full potential whilst creating a new mining industry in Guinea Bissau with its first commercial mine. This technically simple project will be accelerated to production within 19 months of commencing detailed engineering and create 770 direct jobs at its peak.

The advantages to this world class asset are numerous; to name a few such as high quality resources with expansion potential, ability to produce a superior quality product, low capital intensity, and lowest quartile operating costs well positioned for the Atlantic Basin and Africa and beyond with its low cost base. This asset will be resilient and generate free cashflow under low phosphate rock prices. In creating a new industry in the country, the Company will also be a significant contributor to Guinea Bissau’s GDP generated by royalties and taxes. The local communities will be transformed by the mine’s development.

The Company is progressing discussions for offtake agreements in its chosen markets as well as debt financing that will de-risk the project even further. We look forward to updating stakeholders in the near future. ”

*Mineral Reserves and Resources*

The current reserves outlined in the new NI 43-101 Report have increased to 44 million tonnes (**mt**) at an average grade Run Of Mine (“**ROM**”) of 30.0% P<sub>2</sub>O<sub>5</sub> based on the 25 year mine plan. Resources outside the pit shell were not considered. As per the Mineral Resource Estimation Methodology, a cut-off grade was not applied, but a penalty was added to blocks under 29.0% P<sub>2</sub>O<sub>5</sub>.

*Mineral Reserves*

Category (Dry Basis)	Units	Phosphate Matrix Reserves		
		Proven	Probable	Total/Average
ROM FPA Tonnes	mt	44.0	-	44.0
ROM %P <sub>2</sub> O <sub>5</sub>	%	30.0	-	30.0
ROM %Al <sub>2</sub> O <sub>3</sub>	%	2.6	-	2.6
ROM %CaO	%	41.0	-	41.0
ROM %Fe <sub>2</sub> O <sub>3</sub>	%	4.7	-	4.7
ROM %SiO <sub>2</sub>	%	10.6	-	10.6

Total measured and indicated resources (including reserves), outlined in the table below, are 105.6 mt at 28.4% P<sub>2</sub>O<sub>5</sub> grade due to revised resource classification criteria and cut-off assumptions. The inferred resource base is at 37.6 mt at 27.7% P<sub>2</sub>O<sub>5</sub> grade.

*Mineral Resources\**

Category (Dry Basis)	Units	Phosphate Matrix Resources	
		Measured & Indicated	Inferred
ROM FPA Tonnes	mt	105.6	37.6
ROM %P <sub>2</sub> O <sub>5</sub>	%	28.4	27.7
ROM %Al <sub>2</sub> O <sub>3</sub>	%	2.7	4.6
ROM %CaO	%	39.7	37.0
ROM %Fe <sub>2</sub> O <sub>3</sub>	%	5.7	5.0
ROM %SiO <sub>2</sub>	%	11.2	11.3

*\*The Company has not performed an analysis on the Mineral Resources that are not Mineral Reserves to demonstrate economic viability.*

*Mine Design*

The current mine plan will excavate 1.75 mtpa of phosphate ore for 25 years increasing annual production rates by 35% from the 1.3 mtpa that was envisioned in the previous mine plan. Two pits will be mined – the South Pit which will be operating up to year eight and the North Pit which will be mined thereafter. As a result of increased production, the pit shells will cover a larger area. The study also assumes production occurs 12 months per annum.

The mine sequence includes pre-stripping in “Year 0” to allow for immediate production in Year 1. The mine was sequenced, to the extent possible, with an increasing stripping ratio from low-to-high to defer capital and operating costs and minimize investment risk. However, with a view to removing potential operating risks, mining will now begin in the northern part of the South Pit. The mine plan sequence increases strip ratio in the initial years but allows mine operations to gain experience in groundwater and geotechnical conditions as mining approaches the River Cacheu. Haul distances to the processing plant have been minimised resulting in a pit geometry that is conducive to in-pit backfilling in the initial years, thus minimizing haul cycle times and haul truck fleet requirements to the extent practical.

Both the ore and waste can be easily dug without any drilling and blasting. Based on these conditions, 5 m<sup>3</sup> bucket-class hydraulic backhoes were selected as the primary loading fleet for the phosphate ore. These machines are large enough to produce the annual tonnages required and are able to efficiently load the 36 tonne class of trucks selected for the Project.

Primary overburden stripping will be performed with 12.2-m<sup>3</sup> bucket-class front end loaders (“**FELs**”) matched with 97-tonne haul trucks. The average stripping ratio in the South Pit is 7.62 bank cubic meters per tonne (“**bcm/t**”) and 10.56 bcm/t for the North Pit resulting in an overall life of mine stripping ratio of 9.65 bcm/t.

*Product Beneficiation Process and Pilot Plant Test*

The phosphate ore will be beneficiated before sale to customers. The final process that has been selected will consist of horizontal and attrition scrubbing followed by particle sizing to remove the fraction under 20µm. Note that no crushing is required. This new beneficiation process will result in a final product of 34.0% P<sub>2</sub>O<sub>5</sub> grade, adjusted MER of 0.04, with final recoveries of 75.5% for mass and 78.5% for P<sub>2</sub>O<sub>5</sub>. A pilot plant test was performed at ALS Metallurgy (“ALS”) in Kamloops, BC. Results from the pilot plant test that replicated this process can be found in the table below.

<b>Item</b>	<b>Mass (%)</b>	<b>P<sub>2</sub>O<sub>5</sub> (%)</b>	<b>CaO (%)</b>	<b>Fe<sub>2</sub>O<sub>3</sub> (%)</b>	<b>Al<sub>2</sub>O<sub>3</sub> (%)</b>	<b>MgO (%)</b>	<b>S total (%)</b>
Scrubber feed	100.0	32.8	45.3	3.1	1.4	0.2	1.4
+5 mm tail	6.5	25.9	36.8	12.9	1.6	0.3	3.4
+1.18 mm tail	3.1	31.4	42.5	8.8	0.6	0.1	3.0
<b>Coarse P<sub>2</sub>O<sub>5</sub> concentrate (1)</b>	<b>53.8</b>	<b>34.2</b>	<b>46.8</b>	<b>1.7</b>	<b>0.4</b>	<b>0.1</b>	<b>1.0</b>
<b>Cyclone U/F Fine P<sub>2</sub>O<sub>5</sub> con (2)</b>	<b>21.7</b>	<b>33.7</b>	<b>47.2</b>	<b>3.1</b>	<b>1.2</b>	<b>0.2</b>	<b>1.8</b>
Cyclone O/F -20µm Fines	14.9	29.6	41.2	2.2	5.4	0.5	0.8
<b>Combined final P<sub>2</sub>O<sub>5</sub> concentrate (1) + (2)</b>	<b>75.5</b>	<b>34.0</b>	<b>46.9</b>	<b>2.1</b>	<b>0.6</b>	<b>0.1</b>	<b>1.2</b>

The final concentrate characteristics are as follows:

<b>P<sub>2</sub>O<sub>5</sub> (%)</b>	<b>CaO/ P<sub>2</sub>O<sub>5</sub></b>	<b>MER</b>	<b>Adjusted MER*</b>
34.0	1.38	0.08	0.04

\* *Adjusted MER is a minor element ratio calculation which accounts for Pyritic Iron that is inferred through analyzed pyritic sulfur*

Several other options were tested and considered, most notably amine reverse flotation after the scrubbing circuit. The bench scale test indicated that this process could achieve a 35.9% product at 65.8% mass recovery and 73.0% P<sub>2</sub>O<sub>5</sub> recovery. However, the current, lower grade product, obtained in the pilot plant test without amine reverse flotation, was selected because it provided the highest financial returns as it has higher recovery and lower operating costs which more than off-set the reduction premium due to lower grade.

*Logistics*

The processed phosphate rock will be dewatered to up to 8% moisture using a vacuum belt filter and transported over the River Cacheu by an enclosed conveyer belt to a truck load-out facility. The product will then be trucked 75 km to a new port at Ponta Chugue, where it will be unloaded, conveyed through a rotary dryer, stockpiled, and conveyed via a shiploader to load 35,000 dead weight tonnes (“DWT”) ships. Based on the available hydrographic information, no tidal assistance will be required for this size vessel to maneuver in and out of the port area and the Geba river estuary. The port is part of the project scope and will be constructed and wholly owned by the Company. The shiploader will operate at 750 tonnes per hour (“t/hr”) with a maximum load rate of 1,200 t/hr. The average duration from vessel arrival at port to departure will be 3.5 days.

### Capital Costs

The initial capital cost for the current project scenario, summarized in the table below, is estimated at US\$193.8 million and does not include owner's costs.

Category	Amount (US\$ in millions)
Mine	50.14
Pre-strip	15.10
Tailings and Hydrology	10.23
Farim Plant & Infrastructure	42.32
Port at Ponta Chugue Infrastructure	44.99
EPCM	8.36
Indirects	9.08
Contingency	13.63
Total	193.84

Owner's costs amount to \$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.

### Operating Costs

The Life of Mine ("LOM") operating costs are approximately \$52.13/t and outlined in the table below. Non-mining costs amount to \$27.12 per tonne and are constant throughout the LOM. Because the yearly overburden removal and haul distance change from year to year, mining costs range from \$34.86/t in Year 15 to \$16.51/t in Year 6. The average total cash costs for the first seven years of mining at \$46.43/t is lower than the LOM average annual costs. The LOM cash costs are well within the first quartile of the 2018 CRU Business Cost Curve for Phosphate Rock.

Cost Center	US\$/year	US\$ / tonne of concentrate
Process & Admin. Labour	\$ 6,626,034	\$ 5.02
Operating Consumables	\$ 11,269,791	\$ 8.53
Power	\$ 6,995,841	\$ 5.30
Maintenance	\$ 1,360,007	\$ 1.03
Shiploading	\$ 3,127,351	\$ 2.37
G&A Expenses	\$ 3,535,000	\$ 2.67
Corporate Costs	\$ 2,912,500	\$ 2.20
Mining Total	\$ 33,044,463	\$ 25.01
<b>TOTAL</b>	<b>\$ 66,870,097</b>	<b>\$ 52.13</b>

The operating costs in the model were calculated based on a diesel price assumption of US\$0.80 per litre. Diesel accounts for 40% of the LOM operating cost.

## Financial Analysis

A detailed financial model has been created for the updated project scenario including items such as initial and sustaining capital, operating costs, owner's costs during construction, project financing costs, resettlement costs, start-up and closure costs. The phosphate rock price assumptions have been provided by CRU with a long-term price of \$123/t for Moroccan FOB K10 phosphate rock concentrate from 2019 onward. The Company has assumed a premium over Morocco FOB K10 of 9.7% for the first eight years of production and a premium of 4.7% thereafter. The lower premium will be used until bench scale tests for the material from year 8 onward have been completed and confirm that a higher premium is achievable. These bench scale tests have been scheduled for the fourth quarter of 2015.

The financial analysis can be summarized as follows:

<b>FINANCIAL DATA (US \$ Millions)</b>	
Life of Mine Revenue	5,477
Total Pre-Production Capital	205
Life of Mine Operating Cost	2,410
Total Sustaining Capital	367
Operating Margin Ratio (Op. Revenue / OpEx)	2.3
Cumulative Royalties	110
Cumulative Income Taxes	444
Pre-Tax Cumulative Cash flow	2,358,
After-Tax Cumulative Cash flow	1,915

The resulting NPV<sub>10%</sub> for the project is estimated at US437 million after tax and the after tax internal project rate of return is estimated at 34.5%. The current projected payback period has been estimated at 4.3 years.

	<b>After Tax</b>	<b>Pre-tax</b>
<b>Net present value (US \$ Millions)</b>		
Discounted at 5%	870	1,026
Discounted at 8%	570	658
Discounted at 10%	437	497
Discounted at 15%	231	257
<b>Internal rate of return</b>	34.5%	34.9%
<b>Payback period (Years)</b>	4.3	4.3

## Conclusion

The new Feasibility Study has resulted in a more robust project with lower costs, reduced operational risk, better logistics, increased output and a higher quality product. This work better positions the project for the next phase of detailed engineering and construction.

## ON BEHALF OF THE BOARD

Luis da Silva  
President and Chief Executive Officer

### For further information please contact

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## NI 43-101 Compliance:

The following Qualified Persons as defined under NI 43-101 are independent of the Company and responsible for the NI 43-101 Report and feasibility study for the Farim Phosphate Project:

Name	Firm	Scope of Responsibility
Dan Markovic	Lycopodium Minerals Canada Ltd.	Infrastructure and Process Plant design
Jerry DeWolfe	Golder Associates Ltd.	Geology and Mineral Resources
Ted Minnes	Golder Associates Inc.	Mining, Mine Planning & Design. Mining capital and operating costs
George Lightwood	Golder Associates Inc.	In-pit Geotechnical assessment
Ed Liegel	W.F Baird and Associates Coastal Engineers Ltd.	Port design
Alex Duggan	Kristal Font Inc.	Capital Cost Estimate, Economic Analysis
Dave Morgan	Knight Piésold Pty Ltd.	Geotechnical Analysis (excluding mine), Tailings Management & Design, Hydrology , Hydrogeology and Geochemistry
Richard Cook	Knight Piésold Ltd.	Environmental Studies, Permitting and Social or Community Impact
Dr. Francisco Sotillo	KEMWorks Technologies, Inc.	Mineral Processing and Metallurgical Testing

## **ABOUT GB MINERALS LTD.**

The Company is a Canadian mining exploration and development company focused on advancing its world class, high quality Farim Project. The Company has already been granted a production license in relation to the Farim Project. All technical reports are filed under the Company's profile on SEDAR at [www.sedar.com](http://www.sedar.com).

The Company's shares are listed on the TSX Venture Exchange under the trading symbol "GBL". For additional information, please visit us at [www.gbminerals.com](http://www.gbminerals.com).

## **FORWARD LOOKING INFORMATION**

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, mineral reserve and mineral resource estimates, the expected mine life and production of the Farim Project, the anticipated exploration and development activities of the Company, production timelines and annual production rates, product beneficiation and pilot plant test logistics, capital and operating costs, financial projections including, but not limited to, initial and sustaining capital, owner's costs during construction, project financing costs, resettlement costs, start-up and closure costs and Company business plans. 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 and 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.

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