Mining Discovery

FIRST PHOSPHATE

First Phosphate Corp

(CSE: PHOS) (FSE: KD0)

First phosphate Corp (CSE: PHOS) (FSE: KD0) is a company committed to processing the world's 1% purest igneous rock phosphate from Quebec, Canada for the production of copious amounts of purified phosphoric acid (PPA) which goes into making lithium iron phosphate (LFP) batteries. Due to its high purity, 90% of pure igenous rock phosphate can be converted into PPA while only a low percentage of traditional fertilizer-destined sedimentary phosphate can be converted to PPA.

John Passalacqua
CEO, First Phosphate Corp

1055 West Georgia Street
PO Box 11117
Vancouver, BC V6E 4N7
Canada

john@firstphosphate.com

www.firstphosphate.com

John Passalacqua

PROFILE OF THE WEEK

AUGUST 2023

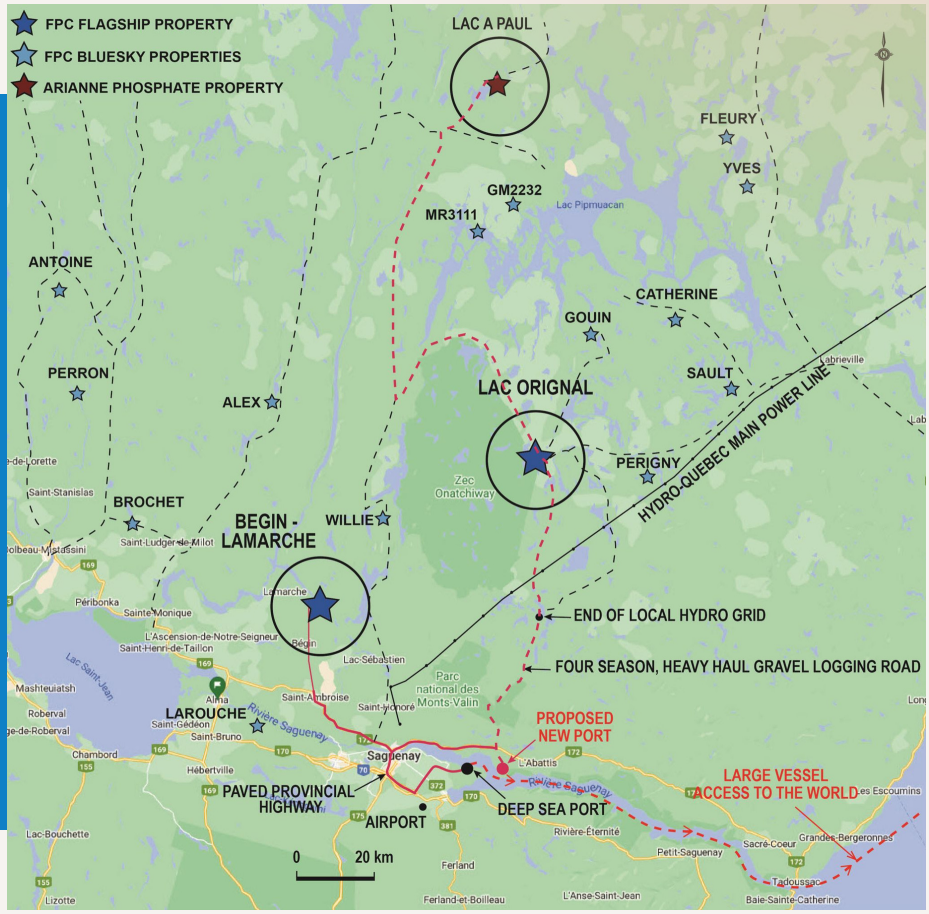
BUSINESS

NEWSLETTER

Lithium Iron Phosphate (LFP) batteries and First Phosphate

Lithium Iron Phosphate (LFP) batteries are becoming the battery of choice for mass adoption in EVs due to their low cost, fire safety and cycle life.

In the first half of 2023, LFP batteries accounted for 66% of total battery output in China displacing NMC batteries as the leading battery chemistry for the first time. Tesla has confirmed that nearly half of its vehicles are already using LFP (Model 2, 3, Y and new trucks). Ford has followed with the F150 and Mustang. Rivian with its R1S and R1T. LFP batteries are made using lithium, an iron source and purified phosphoric acid (PPA). PPA is in short supply in North America and currently all allocated to the food and industrial markets with little potential for capacity expansion.



Moreover, phosphate feedstock in North America is in short supply and currently dedicated to fertilizer production.

90% of Quebec igneous rock phosphate can be converted to PPA due to it's purity levels whereas only a small percentage of sedimentary phosphate rock can be converted to PPA. First Phosphate plans to mine and purify the world's 1% cleanest source of igneous rock phosphate found in the Saguenay-Lac-St-Jean region of Quebec and to produce the copious amounts of PPA required for the production of LFP batteries in North America. PPA demand in North America could double to triple in North America by 2030 and only igneous phosphate rock will be able to keep up to the demand.

PROFILE OF THE WEEK

AUGUST 2023

BUSINESS

NEWSLETTER

Igneous vs Sedimentary Phosphate Rock

- Up to 90% of igneous rock feedstock can be converted to PPA (vs 10%-20% generally for sedimentary rock)
- Igneous rock phosphate mine size can be 8-10x smaller or can produce 8-10x more PPA for the same mine size (vs sedimentary mine)
- Igneous rock producer can be fully focused on producing LFP grade PPA and not on the fertilizer markets
- CAPEX can be focused on value added production of PPA and not fertilizer
- Gypsum from igneous rock can be recycled into plaster and wallboard for circular economy while sedimentary phosphate gypsum slag gets piled up to perpetuity
- Igneous rock gets processed to PPA using the wet method which has 7x less carbon footprint than the thermal method used in China to process low grade sedimentary phosphate. Environmental footprint also largely reduced.

About First Phosphate

First Phosphate is a mineral development company fully dedicated to extracting and purifying phosphate for the production of cathode active material for the Lithium Iron Phosphate (“LFP”) battery industry. First Phosphate is committed to producing at high purity level, at full ESG standard and with low anticipated carbon footprint.First Phosphate plans to vertically integrate from mine source directly into the supply chains of major North American LFP battery producers that require battery grade LFP cathode active material emanating from a consistent and secure supply source. First Phosphate holds over 1,500 sq. km of royalty-free district-scale land claims in the Saguenay-Lac-St-Jean Region of Quebec, Canada that it is actively developing. First Phosphate properties consist of rare anorthosite igneous phosphate rock that generally yields high purity phosphate material devoid of high concentrations of harmful elements.

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