Providing Tomorrow’s Necessities
Corporate Presentation

ARIANNE Phosphate

June 2023
Cautionary Statement

This presentation contains forward looking statements. All statements, other than statements of historical fact, included herein, including without limitation, statements regarding potential mineralisation and reserves, exploration results and future plans and objectives of Arianne Phosphate Inc, are forward-looking statements that involve various risks and uncertainties. There can be no assurance that such statements will prove to be accurate and actual results and future events could differ materially from those anticipated in such statements. Important factors that could cause actual results to differ materially from Arianne Phosphate Inc’s (“Arianne Phosphate” or the “Company”) expectations are disclosed under the heading "Risk Factors" and elsewhere in Arianne Phosphate Inc’s documents filed from time-to-time with the TSX Venture and other regulatory authorities.

Total resources include only measured and indicated resources. Mineral resources that are not mineral reserves do not have demonstrated economic viability. There is no certainty that further exploration will result in upgrading this inferred resources in indicated and/or measured resources.

All currency are in US $ unless otherwise stated.
Phosphate Beyond Fertilizer

- A macro nutrient in Fertilizer (85%)
- Not all phosphate is the same (igneous vs sedimentary)
  - Arianne Phosphate:
    - Has an igneous rock deposit
    - Makes a high-purity (40%) low-contaminant concentrate
    - Can meet consumer & technical grade phosphate requirements including LFP batteries
- Growing concerns regarding sedimentary rock quality
  - Not all phosphate can be used for specialty applications

![Graph showing Morocco and Russia Phosphate Rock FOB prices](chart.png)
Phosphate Rock – Igneous v. Sedimentary

- Under 10% of global phosphate is igneous
- Arianne’s Phosphate rock is igneous
- Arianne’s recovery is over 90%
- Arianne’s igneous ore will produce phosphate rock concentrate at 40% P$_2$O$_5$
- High ratio of P$_2$O$_5$/CaO means low acid consumption in phosphoric acid production
- Heavy metal content in Arianne product near or below detection limits

<table>
<thead>
<tr>
<th></th>
<th>Igneous Deposits</th>
<th>Sedimentary Deposits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade of ore (nutrient)</td>
<td>4-15% P$_2$O$_5$</td>
<td>10-30% P$_2$O$_5$</td>
</tr>
<tr>
<td>Crushing</td>
<td>Consolidated rocks</td>
<td>Very easy if the rocks are unconsolidated</td>
</tr>
<tr>
<td>Beneficiation (recovery of nutrient content)</td>
<td>Efficient processing Recovery can be &gt;90%</td>
<td>Less efficient processing Recovery 75 to 85%</td>
</tr>
<tr>
<td>Nutrient Content of Concentrate</td>
<td>35-41% P$_2$O$_5$</td>
<td>Average grade 29% P$_2$O$_5$ (can reach 35% P$_2$O$_5$)</td>
</tr>
<tr>
<td>Environmental Impact</td>
<td>Contains few or no contaminants</td>
<td>Usually contains some contaminants (heavy metals, uranium and cadmium)</td>
</tr>
</tbody>
</table>
Other Uses of Phosphate

Growing Demand From Specialty Applications

• Consumer Products
  • Food preservatives
  • Animal feeds
  • Cosmetics
  • Detergents

• Industrial processes
  • Semiconductors
  • Lithium-Iron-Phosphate batteries (LFP)
The LFP Battery-Benefits

Benefits of the LFP

- Safety
- High charging/discharging efficiency
- Energy density versus weight
- Lifespan (many charging cycles)
- Cost
- Easier access to materials
- Environmentally friendly

Metal Mixture
Lithium-iron-phosphate battery cathodes don’t contain expensive raw materials like nickel and cobalt

Source: BloombergNEF
The LFP Battery-Market Penetration

LFP chemistry projected to be the most common of the Lithium-ion batteries in the US

LFP market set to exceed $50 Billion by 2030
The LFP Battery—Beyond Automotive Market

ENERGY STORAGE SYSTEMS & POWERWALLS

PORTABLE V. STATIONARY

Lithium Iron Phosphate Battery Market
size by application, 2017 - 2027 (USD Billion)

Tesla Hints At Transition Of All Energy Storage To LFP Batteries
Powerwalls, Powerpacks and Megapacks all will use iron-based batteries, aka Lithium Iron Phosphate (LFP)
The LFP Battery-Security of Supply

US Legislation to Secure Critical Materials

**Biden-Harris Administration, Companies Announce Major Investments to Expand Domestic Critical Minerals Supply Chain**
Breaking Dependence on China and Boosting Sustainable Practices
-White House February 22, 2022

**Department of Energy Awarding $2.8 Billion from Bipartisan Infrastructure Law to Boost Domestic Manufacturing**
Administration Launching “American Battery Materials Initiative” to Strengthen Critical Mineral Supply Chains
-White House October 19, 2022

**Biden Invokes Cold War Statute to Boost Critical Mineral Supply**
The action aims to enhance American production of crucial materials for electric vehicles, defense systems and other technologies
-NY Times March 31, 2022

**Biden to use Defense Production Act for U.S. critical-minerals supply**
The move is intended to boost the U.S. output of materials needed for electric vehicles and other uses, reduce reliance on foreign supply chains
-Washington Post March 2022

Quebec Actively Pursuing Battery Production

**Quebec Actively Pursuing Battery Production**

**BASF announces Quebec site acquisition for a major battery cathode facility**

**GM to build new US$400-million battery plant in Quebec**
The facility in Bécancour, Quebec would produce not batteries but the cathode active materials inside them

**Lithium Battery Valley emerges in Quebec**
GM, BASF, POSCO, and Nouveau Monde set up in Becancour
-Metal Tech News – March 16, 2022
Phosphate Use in the LFP

Total Battery GWh Demand by 2030

International Energy Agency 3500 GWh
McKinsey & Company 4300 GWh
Wood Mackenzie 5500 GWh
Benchmark Mineral Intelligence 6000 GWh

Average 4825 GWh

*LFP Projected at 30%-40% of all battery demand

1 GWh of LFP requires:

2222 T LiFePO4
97.7 T Li
786.6 T Fe
436.2 T P
901.4 T O

1841 T of H3PO4 @75%
4281 T* of Arianne P2O5 (40%)

*accounts for grade and PPA/MGA split
## Additional Phosphate Demand For The LFP

<table>
<thead>
<tr>
<th>Source</th>
<th>Total GWh</th>
<th>30% LFP Penetration</th>
<th>35% LFP Penetration</th>
<th>40% LFP Penetration</th>
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</thead>
<tbody>
<tr>
<td>Internation Energy Agency</td>
<td>3500</td>
<td>4,495,050</td>
<td>5,244,225</td>
<td>5,993,400</td>
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<tr>
<td>McKinsey &amp; Co.</td>
<td>4300</td>
<td>5,522,490</td>
<td>6,442,905</td>
<td>7,363,320</td>
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<td>Wood Mackenzie</td>
<td>5500</td>
<td>7,063,650</td>
<td>8,240,925</td>
<td>9,418,200</td>
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<tr>
<td>Benchmark Mineral Intelligence</td>
<td>6000</td>
<td>7,705,800</td>
<td>8,990,100</td>
<td>10,274,400</td>
</tr>
</tbody>
</table>

*Projected by 2030*
Global Phosphate Rock Market

Demand: Major Importers of Phosphate Rock
- India: continued growth anticipated over near-medium term
- Western Europe: demand for low cadmium material (igneous advantage)
- SE Asia: strong growth with continued ramp up of Phos Acid production
- Latin America: forecast to increase in domestic MAP/SSP production
- North America: declining quality + environment concern of existing supply

Demand for phosphate grows approximately 1.5%-2% per year (before the LFP)
- We need an additional 3-4M tonnes/year
- New supply will be required within the next few years

China: projected to move into deficit from their historic position of equilibrium

Supply is dominated by the Middle East & North Africa
- Morocco is the world’s largest
- Tunisia and Syria: unrest has severely curtailed/ended production
- Jordan, Algeria, Egypt have been filling the void
- Saudi Arabia only sells downstream products (MAP & DAP)
- Russia is the only producer of high-purity (39%) rock

70% of traded phosphate rock is sourced from the Middle East and Northern Africa
Lac à Paul: a World Class Project

- Fully permitted and construction ready
- Tier 1 mining jurisdiction
- Excellent access to infrastructure
- Significant improvements since 2013 FS
- Premium (up to 40%) P₂O₅ concentrate
- Offtake and marketing agreements in place

+26 YEARS
of mine life

472 MILLION TONNES
reserve at 6.9% P₂O₅
(cut-off grade: 3.5% P₂O₅)

78 MILLION TONNES
of high-grade concentrate
(up to 40% P₂O₅)

1,000 JOBS CREATED
during the operation of the mine

C$12B ECONOMIC BENEFIT
to the Saguenay-Lac-Saint-Jean region in Quebec
Strategically Located

Mining and investment-friendly jurisdiction with well developed infrastructure in a stable and supportive environment

- CLEAN ENERGY
- HEAVY HAUL ROADS
- DEEP WATER PORT
- SKILLED LOCAL LABOUR

Access to Global Markets

Confirmed access to 129 MW of low-cost hydro power from Chute-des-Passes Power Dam

Distance from mine to port: ~240 km

TSX-V:DAN
Large Resource Base

- 27,617 ha land package covers the world’s largest anorthositic complex
- Identified 9 large-scale igneous phosphate rock zones
- Zones remain open in multiple directions and at depth
- Resource base capable of supporting a +50-year mining operation

### NI 43-101 Resource and Reserves Estimate

<table>
<thead>
<tr>
<th>Zone</th>
<th>Cut-off (% P₂O₅)</th>
<th>Category</th>
<th>Tonnage (millions)</th>
<th>Grade (% P₂O₅)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paul + Extensions</td>
<td>3.5</td>
<td>P&amp;P</td>
<td>472.1*</td>
<td>6.88</td>
</tr>
<tr>
<td></td>
<td>4.0</td>
<td>M&amp;I</td>
<td>702.7**</td>
<td>7.16</td>
</tr>
<tr>
<td></td>
<td>4.0</td>
<td>Inferred</td>
<td>26.0</td>
<td>6.58</td>
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<tr>
<td>Manouane</td>
<td>2.43</td>
<td>M&amp;I</td>
<td>163.8</td>
<td>5.90</td>
</tr>
<tr>
<td>Nicole</td>
<td>3.5</td>
<td>Inferred</td>
<td>78.2</td>
<td>5.34</td>
</tr>
<tr>
<td>Traverse</td>
<td>3.5</td>
<td>Inferred</td>
<td>17.0</td>
<td>5.98</td>
</tr>
<tr>
<td>South TraMan</td>
<td>3.5</td>
<td>Inferred</td>
<td>146.0</td>
<td>5.30</td>
</tr>
</tbody>
</table>

*P&P Reserves presented were estimated in the Feasability study published in October 2013.

**Paul + Extensions Zone: M+I Resources are inclusive of P&P reserves

Resources presented were published in press releases from February 18, 2015, July 16, 2014, May 15, 2014 and November 8, 2011.
Lac à Paul is Amongst the Largest Undeveloped Phosphate Projects in the World

1st in M&I resource tonnage

1st in concentrate grade

Largest Undeveloped Phosphate Projects Not Owned by a Major Fertilizer Producer

Source: company reports

arianne-inc.com

TSX-V:DAN
**Fully Permitted and Construction-Ready**

**Received all Major Permits to Commence Construction**
- December 22, 2015: granted Ministerial Decree and final approval from the Cabinet of the Government of Quebec
- May 2019: received permits for construction of a 46 km long, 161 kV power line and substation to the Chute-des-passes power dam
- Received timber cutting permits at the mine site

**Social License to Operate**
- June 2015: signed Cooperation Agreement with Innu First Nations from Pessamit, Essipit and Mashteuiatsh
  - Provides structure for a future Impact and Benefits Agreement
- Agreement with residents of Zec Martin-Valin and Lake Neil to offset the impact of future transport of concentrate
- Maintained an open dialogue with all key stakeholders in the region

**Long-Standing Commitment to Environmental Best Practices**
- Successfully remained carbon-neutral throughout its exploration phase
- We regularly offset our greenhouse gas emissions by investing in sustainable development and innovation projects
- In 2015, established an independent Monitoring Committee in compliance with the Quebec Government’s Mining Law
Initiatives Underway

ONGOING DISCUSSIONS WITH POTENTIAL OFFTAKERS & PARTNERS

**AGRICULTURAL**
- Direct-Application
- Alternatively derived fertilizers
  - Remove the need for acidulation
  - Remove the need for ammonia
  - Ease logistics

**SPECIALTY APPLICATIONS**
- Purified Phosphoric Acid
  - Battery Grade (LFPs)
  - Food Grade
- Hydrogen Fuel Cells
  - Electrolyser

ARIOINE Phosphate
arianne-inc.com
TSX-V:DAN
High-Purity Rock Opens Advanced Markets

Lithium-Iron-Phosphate

ARIANNE PHOSPHATE FURTHERS ITS WORK ON ADVANCED BATTERY TECHNOLOGIES
-Lithium-Iron-Phosphate batteries projected to be a leader in next generation cars
SAGUENAY, QUEBEC.–(November 3, 2021)

ARIANNE PHOSPHATE RECEIVES POSITIVE RESULTS FROM TESTS SURROUNDING THE USE OF ITS CONCENTRATE IN ADVANCED BATTERY APPLICATIONS
-Successful results will allow the Company to target markets beyond fertilizer
SAGUENAY, QUEBEC.–(June 21, 2022)

Metallurgical Advancements

ARIANNE PHOSPHATE OPTIMIZES THE PRODUCTION OF ITS PHOSPHATE CONCENTRATE FOR SPECIALTY MARKETS
-process will allow for concentrate to specifically target agricultural and specialty applications
SAGUENAY, QUEBEC – (May 18, 2022)

Hydrogen?

ARIANNE PHOSPHATE EXPLORING THE USE OF PHOSPHATE IN HYDROGEN-BASED TECHNOLOGIES
-Company is working with the University of Quebec at Three-Rivers in the use of phosphate in electrolyzers and energy cells
SAGUENAY, QUEBEC, Dec. 15, 2021
Downstream Opportunity: Belledune Project

- In October 2019, received a final report demonstrating the value-added processing potential of Lac à Paul’s concentrates
  - Production of 60% P$_2$O$_5$ merchant-grade acid (MGA), compared to the typical 52% MGA (higher margin product)
  - Production of commercially valuable gypsum by-product
- Ongoing discussion with many potential partners regarding a future potential phosphoric acid plant
- Arianne has partnered with the Province of New Brunswick for the review of constructing a phosphoric acid plant in Belledune
### Capital Markets Profile

#### Capital Structure

<table>
<thead>
<tr>
<th>Ticker</th>
<th>TSX-V: DAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Share Price (June 2, 2023)</td>
<td>C$0.38</td>
</tr>
<tr>
<td>52-Week Trading Range</td>
<td>C$0.31 – C$0.62</td>
</tr>
<tr>
<td>Basic Shares Outstanding</td>
<td>194.6M</td>
</tr>
<tr>
<td>Options</td>
<td>7.6M&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Warrants</td>
<td>41.4M&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
<tr>
<td>FD Shares Outstanding</td>
<td>243.6M&lt;sup&gt;1&lt;/sup&gt;</td>
</tr>
<tr>
<td>Market Capitalization (Basic)</td>
<td>C$73.96M</td>
</tr>
<tr>
<td>Cash (as of March 31, 2023)</td>
<td>C$5.1M</td>
</tr>
<tr>
<td>Debt (as of March 31, 2023)</td>
<td>C$25.9M&lt;sup&gt;3&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

#### Share Ownership

- Windermere Family of Funds: 7.72%
- Investissement Quebec: 5.77%
- Mercury: 2.94%
- Management & Directors: 6.29%
- Retail & Other Institutions: 77.80%
- 32M of those warrants are subject to a warrant blocker provision

#### Share Price and Volume (Last 12 Months)

1. 7.6M options outstanding with a weighted average exercise price of C$0.57 and a weighted average life of 5.2 years
2. 41.4M warrants outstanding with a weighted average exercise price of C$0.38 and a weighted average life of 2.2 years
   - 32M of those warrants are subject to a warrant blocker provision
3. Debt outstanding includes the following:
   - C$25.9M outstanding from a secured credit line with Mercury Financing Corp. that bears interest at 8% p.a. and matures in March 2026. Capital repayment of $1M was completed in April 2023.
Proven & Experienced Leadership

+200 years of combined experience

Marco Gagnon | Chairman
- 20+ years in Quebec mining exploration/development
- Former CEO of Adventure Gold and current VP of Probe Metals

Dominique Bouchard | Director
- 33-year veteran of Alcan and Rio Tinto, having most recently served as President of Rio Tinto Iron & Titanium until his retirement in May 2013
- Responsible for the operations and implementation of the strategy development for Primary Metal Saguenay-Lac-Saint-Jean
- Native of the Chicoutimi area and expert of the local community

James Cowley | Director
- Experienced metallurgical engineer with over 30 years of experience; held positions with many international resource companies including Exxon, Climax Molybdenum, Bond International Gold and Rio Tinto

Steven Pinney | Director
- 30+ year veteran (retired) of Cargill and Mosaic, most recently as Senior VP in the Phosphates division

Raef Sully | Director
- Former Executive VP of Nutrien and CEO of Phosphate & Nitrogen
- Ex Bain & Company

Siva Pillay | Director
- 20+ years in accounting, law, trade and project and off-take finance
- CEO of Ocean Partners

Claude Lafleur | Director
- 30+ years in agribusiness, including roles as CEO of Coop federee ($9B agri-food organization), IFFCO Canada (India’s largest fertilizer company) and Angels Quebec

Jeffrey Beck | CEO and Director
- 40+ years experience in mining and trading industries
- Founding Managing Partner of Ocean Partners Holding Limited

Brian Ostroff | President and Director
- 30+ years experience in capital markets
- Held numerous roles at RBC Dominion, Goodrich Capital, Partner at Windermere Capital

Geneviève Ayotte CPA | CFO
- 14 years with Pricewaterhouse Coopers LLP
- Specialized in financial reporting and audit for mining companies

Raphael Gaudreault | COO
- Over 15 years of experience in mining engineer. Held positions with ArcelorMittal and IAMGOLD focused on mine development and optimization
- Extensive knowledge of the Lac a Paul Project, previous Mining Director at Arianne
Developing the Next Major Phosphate Mine

"The Lac à Paul project will be the lowest cost igneous producer when it comes on stream..."

"Considering the high $P_2O_5$ content and other desirable qualities of the Lac à Paul rock, it appears that the project will be highly competitive in the traded rock market”

~ from a market review by CRU Fertilizers, a leader in global fertilizer market analysis
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