



# Developing an Advanced Stage Lithium Project in Canada

Well-funded and nearing completion  
of Authier Definitive Feasibility Study

MAY 2018

ASX: **SYA**

## Forward Looking Statements

This presentation may contain certain forward looking statements. Such statements are only predictions, based on certain assumptions and involve known and unknown risks, uncertainties and other factors, many of which are beyond Sayona Limited's control. Actual events or results may differ materially from the events or results expected or implied in any forward looking statement. The inclusion of such statements should not be regarded as a representation, warranty or prediction with respect to the accuracy of the underlying assumptions or that any forward looking statements will be or are likely to be fulfilled. Sayona Limited undertakes no obligation to update any forward-looking statement to reflect events or circumstances after the date of this presentation (subject to securities exchange disclosure requirements). The information in this presentation does not take into account the objectives, financial situation or particular needs of any person. Nothing contained in this presentation constitutes investment, legal, tax or other advice.

## Reference To Previous ASX Releases

This presentation refers to the following previous ASX releases:

- Authier JORC Resource Expanded , 12 April 2018
- Authier Maiden JORC Ore Reserve, 11 December 2017
- Authier PFS, 11 December 2017
- Authier Downstream Concept Study Demonstrates Positive Economics, 30 August 2017
- Completion of Authier Pilot Program, 21 May 2018

The Company confirms that it is not aware of any new information or data that materially affects the information included in the original market announcement and all material assumptions and technical parameters continue to apply and have not materially changed. The Company confirms that the form and context in which the Competent Person's findings are presented have not been materially modified from the original market announcements.

## Downstream Concept Study

The Concept Study referred to in this announcement has been undertaken to determine the potential viability of downstream processing Authier concentrates into lithium carbonate and/or hydroxide. It is based on a low level technical and economic assessment and was based on the AACE International Recommended Practice No. 18R-97, as a Class 4 estimate. The study has not been used as the basis for the estimation of Ore Reserves. Further technical and economic assessment including, metallurgical testing, Feasibility Study and permitting will be required to provide any assurance or certainty of an economic development case.

The Concept Study is based on the mine and concentrator assumptions (includes Ore Reserves) outlined in the February 2017 Authier Pre-Feasibility Study, Authier Updated JORC Resource report (14 June 2017), a report prepared by Wave International on the downstream capital and operating costs, Appendix – Project Design Criteria, and other material assumptions outlined elsewhere in this document. Whilst the Company considers all the material assumptions to be based on reasonable grounds, there is no certainty that they will prove to be correct or that the outcomes indicated in the Concept Study will be achieved.

To achieve the potential downstream process plant development outcomes indicated in this Concept Study, additional funding will be required. Funding will be required to complete metallurgical testing (\$100,000), feasibility studies and permitting (approximately \$1,000,000) and development (approximately \$223 to \$240 million depending on whether it is a lithium carbonate or lithium hydroxide plant). Investors should note that there is no certainty that the Company will be able to raise the funding when needed. It is also possible that such funding may only be available at terms that may be too dilutive to or otherwise affect the value of Sayona shares. It is also possible that Sayona could pursue other 'value realisation strategies such as sale, partial sale or joint venture of the project. If it does, this could materially reduce Sayona's proportionate ownership of the project. Given the uncertainties involved, investors should not make any investment decisions based solely on the results of the Concept Study.

The Company has concluded it has reasonable basis for providing forward looking statements included in this announcement and believes that it has a reasonable basis to expect it will be able to continue funding the feasibility activities for the project.

The Lithium-ion battery is changing the way we generate, use, distribute and store energy



**Renewable**  
grid storage

>30%\*



**Transportation**  
electric and  
hybrid vehicles

25-30%\*



Consumer  
**electronics**

8-10%\*

**Battery and energy storage**  
for high technology industries



**driving unprecedented demand**

\* Projected compound annual growth rate until 2025



- **Slow ramp-up** of new projects
- **Funding constraints** – capex typically higher than market cap **for most new entrants**
- **Environmental & permitting constraints**
- New technology – **longer-lead times and higher capex** than PFS studies forecast. **High-risk, difficult to fund**



Supply of Lithium is under pressure to keep up with robust demand

Funding constraints

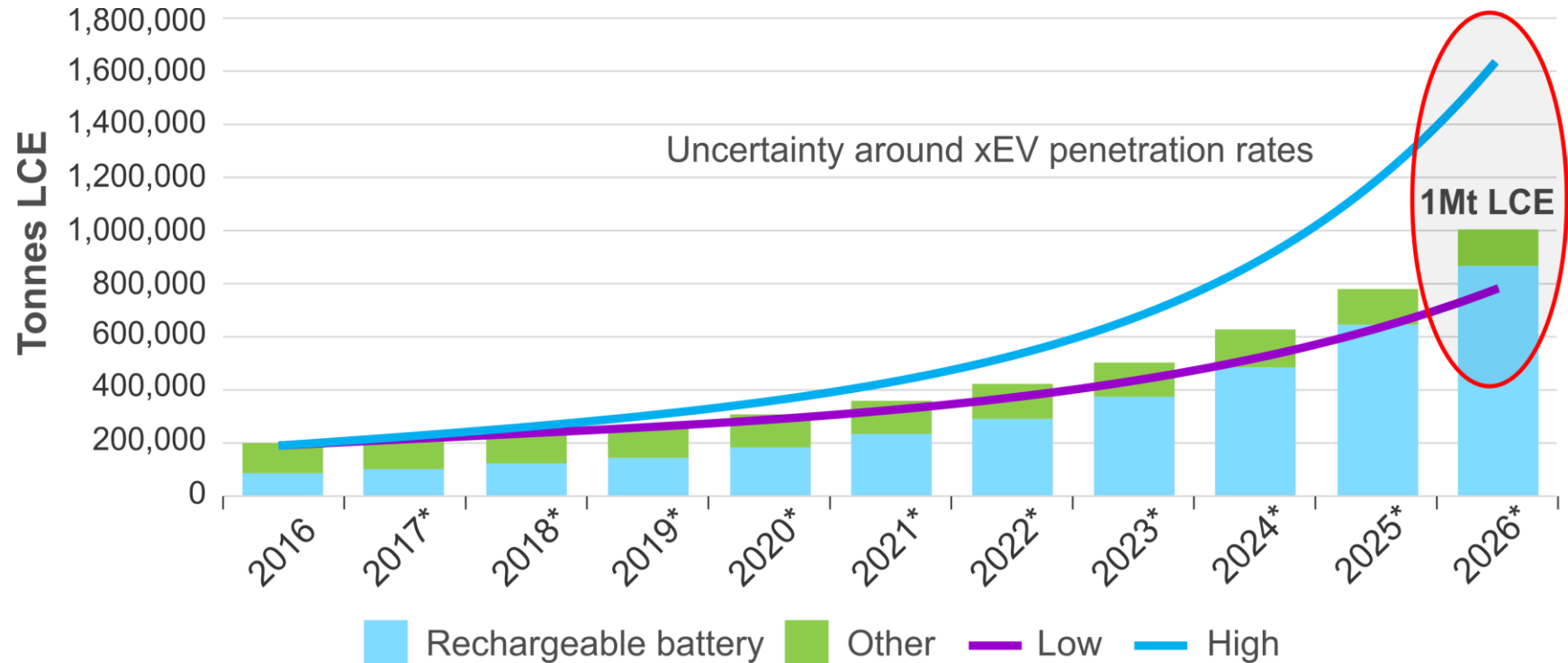
Technical expertise

Long lead times

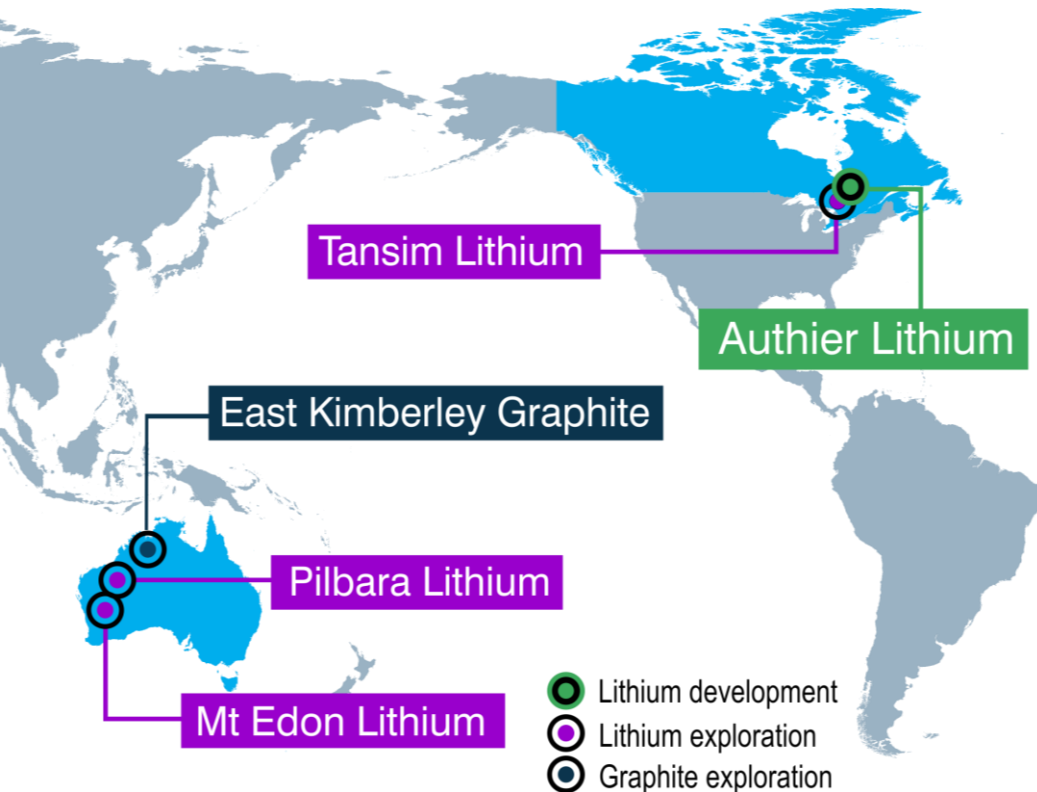
Environmental constraints

# Significant Supply Side Investment Needed

## Forecast Demand for Lithium by Use to 2026 (t LCE)



**“The impact of automotive electrification on lithium:  
1TWh and 1Mt LCE in 10 years”**



- ASX-listed, lithium exploration and development company
- Primary objective is to develop the Authier Lithium project concentrate sales, targeting first production in early 2020
- Authier second-phase, the downstream project, significantly enhances the project value
- Significant portfolio of lithium exploration properties in Australia and Canada

## Share Structure

Trading Exchange	<b>ASX: SYA/SYAO#</b>
Shares	1,693,046,728*
Options	147,478,335# 7.8¢ exercise, expiry 30 April 2020
Shareholders	17% Directors 46% Top 20

## Capitalisation

Price As at 21 May 2018	<b>4.6¢</b>
Market cap	<b>AUD\$78m</b>
Cash As at May 2018	<b>AUD\$12.8m*</b>
Debt	<b>Nil</b>
Enterprise value	<b>\$65m</b>

### NOTES:

- \*The Company is currently completing a 1:22 rights issue priced at 5.1c with a 1:2 free attaching option priced at 7.8c, expiring 30 April 2020. If fully subscribed, the rights offering would raise \$3.9m
- # The options will be issued and start trading at the end of the rights offering period on 1<sup>st</sup> June 2018



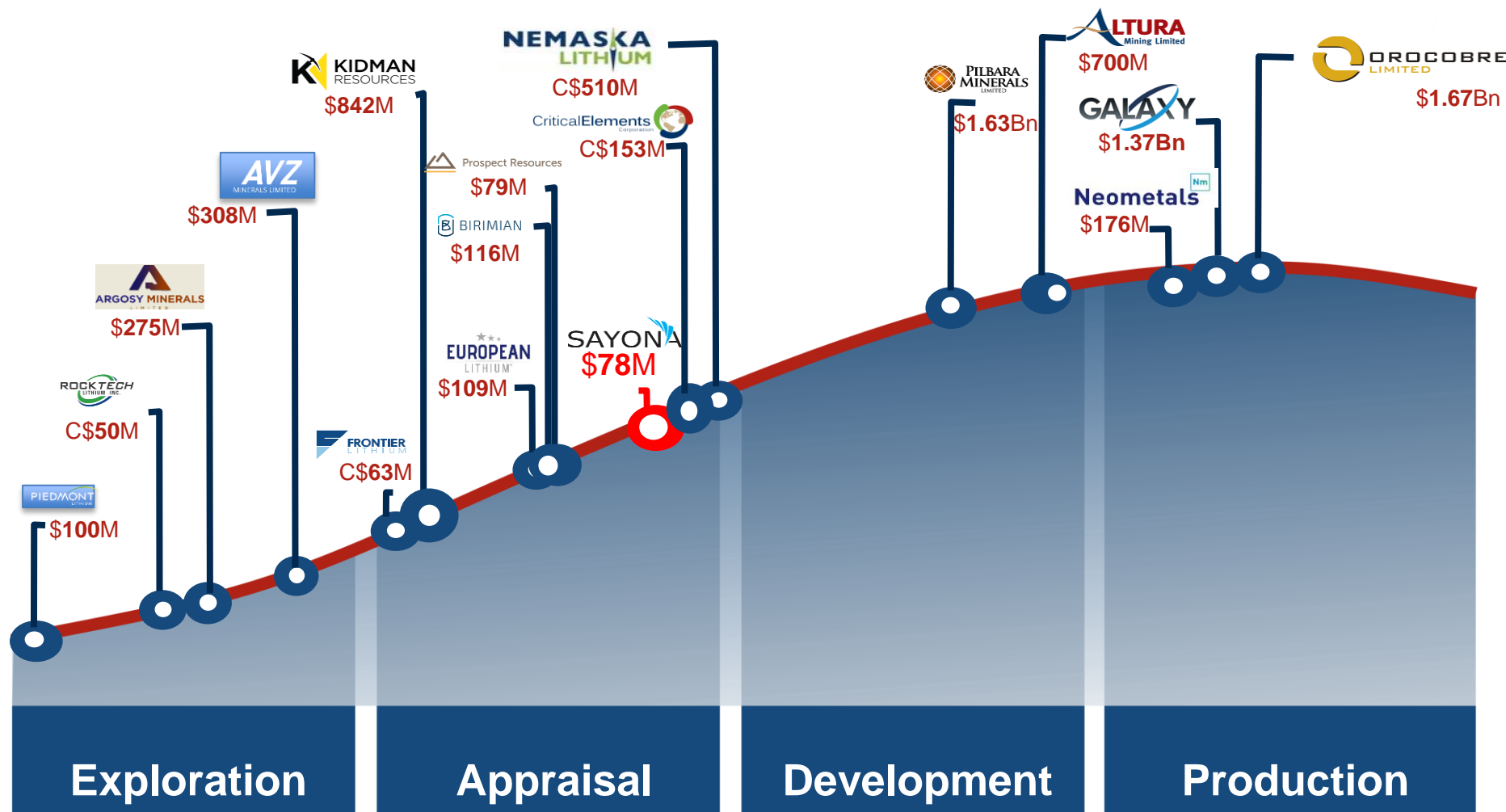
# Pro-rata Renounceable Entitlement Offer

**SYA is undertaking \$3.92 million renounceable entitlement offer on a 1:22 basis at \$0.051 per share, plus 1:2 free attaching option**

<b>Equity Raising</b>	<ul style="list-style-type: none"><li>• Entitlement offer to raise \$3.92m, resulting in 79.95m new ordinary shares being issued</li><li>• Investors can apply for one share for every twenty-two shares held at the record date</li><li>• Investors will receive a 1:2 free attaching option resulting in additional 38.47m options being issues</li></ul>
<b>Offer</b>	<ul style="list-style-type: none"><li>• \$0.051 per share</li><li>• 1:2 free attaching option priced at 7.8c, expiring 30 April 2020</li></ul>
<b>Use of Proceeds</b>	<ul style="list-style-type: none"><li>• Authier project expenditure</li><li>• Authier downstream processing feasibility study</li><li>• Exploration expenses in Western Australia and Tansim</li><li>• Administration expenses, working capital and expenses of the offer</li></ul>
<b>Key Offer Dates</b>	<ul style="list-style-type: none"><li>• 10 May 2018 - Record date for entitlement</li><li>• 17 May 2018 – Entitlement trading ends</li><li>• 24 May 2018 – Closing date of offer</li><li>• 1 June 2018 – Normal trading and quotation of new securities and options</li></ul>
<b>Ranking</b>	<ul style="list-style-type: none"><li>• Shares will rank equally with existing shares</li></ul>



# Attractively Valued vs Peers



Dedicated to generating shareholder value by replicating past success

## James Brown

- 35 year's experience including, 22 years with New Hope Corporation. Extensive mine development & operational experience
- Managing Director of Altura Mining - >\$650m market cap

## Allan Buckler

- 40 year's experience building mining operations in Australia and Indonesia. Former Director and Chief Operations Officer for New Hope Corporation
- Director of Altura Mining

## Dan O'Neill

- Geologist with 35 year's experience in technical and corporate roles
- Founding director of Orocobre Ltd. Director of Altura Mining

## Paul Crawford

- CPA with 35 years public company experience
- Previously Company Secretary of companies including, Orocobre Ltd (founding director), Elementos and ActivEx

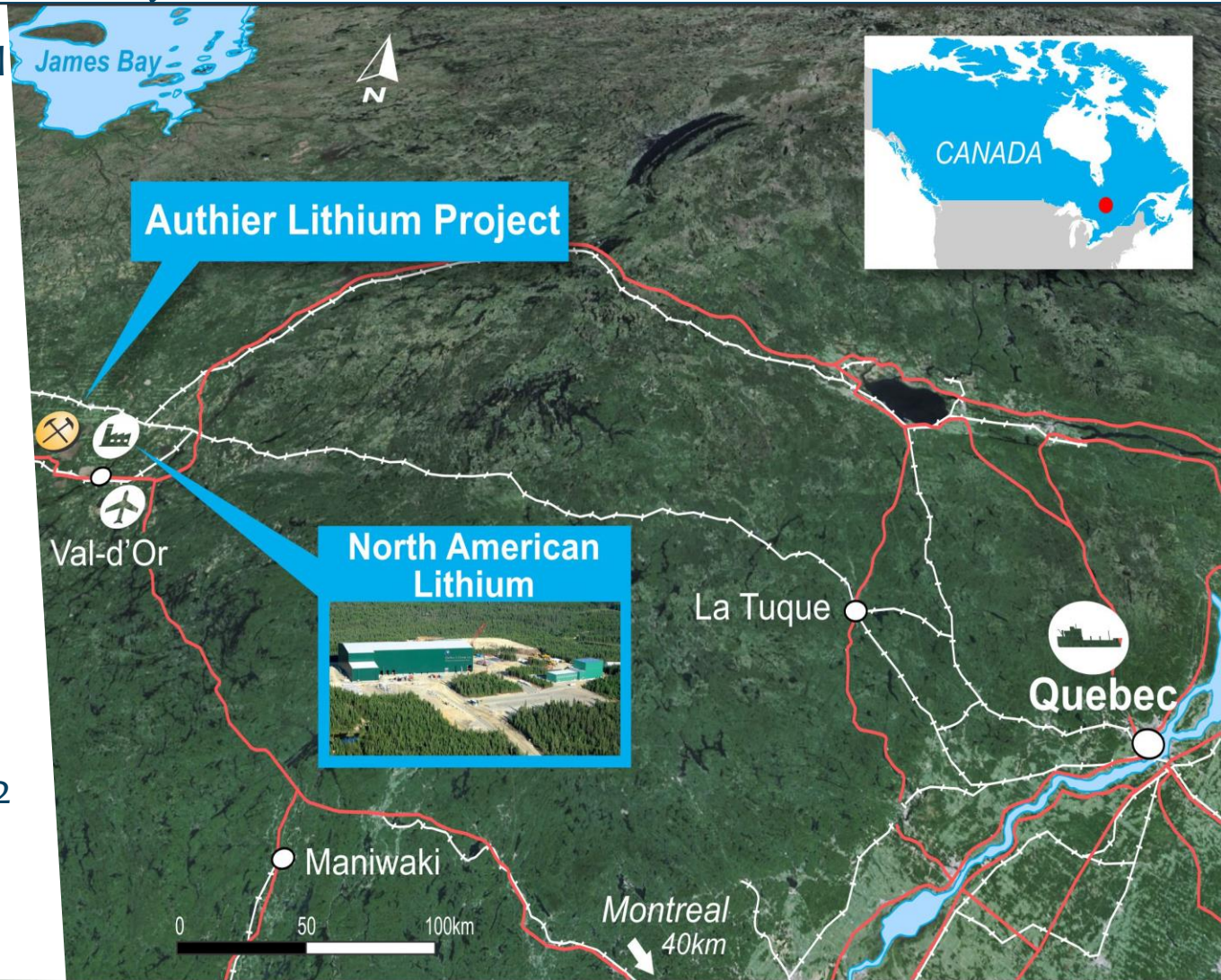
## Building in-house capability across all technical disciplines

<b>Corey Nolan*</b> Chief Executive Officer	<ul style="list-style-type: none"><li>• 24 years experience in exploration, development, operations and corporate finance</li><li>• Started and managed a number of resource companies with projects in a range of commodities and countries</li></ul>
<b>Jonathan Gagne</b> Canada Manager	<ul style="list-style-type: none"><li>• Mining Engineer with MBA and more than 10 years experience in operations and mine planning</li><li>• Joined from Glencore Zinc's open-cut mine planning division</li></ul>
<b>Jarrett Quinn</b> Processing Engineer	<ul style="list-style-type: none"><li>• Mineral processing and hydrometallurgical specialist</li><li>• Experienced in lithium processing within Canada</li></ul>
<b>Jean-Pierre Landry</b> Authier Project Manager	<ul style="list-style-type: none"><li>• More than 25 years experience in the construction industry, including 17 years in the mining industry</li><li>• Extensive experience in feasibility studies and construction</li></ul>
<b>Ann Lamontagne</b> Environmental Manager	<ul style="list-style-type: none"><li>• 20 years experience in the mining industry focused on permitting, environmental, First Nations and community aspects of project developments</li></ul>
<b>Mark Parson</b> Sustainable Development	<ul style="list-style-type: none"><li>• More than 40 years of experience in the Energy and Environmental sector, as communications team leader in Federal and Provincial public hearings processes, as well as in designing and delivery of Community relations programs</li></ul>

\*Corey Nolan resigned on 5 May 2018 and will leave on completion of the Definitive Feasibility Study

# Authier Lithium Project

- Located 45km from Val d'Or in Quebec, Montreal (500km SE)
- Located in established mining district
- 100% owned
- Simple deposit - 26,000m of drilling
- Environmental studies completed. Permitting advanced
- Well studied – PEA 2012 and PFS 2017
- DFS underway





## Stage 1

Sell concentrates in export market

**Low-cost, truck and shovel, open-cut mining** operation

**Conventional concentrator** producing 96kt/yr of 6% Li<sub>2</sub>O concentrate sold into export markets

**Definitive Feasibility Study commenced.**  
Targeting completion Q2 2018

**Permitting** and **environmental** to be completed by end of 2018

**Lower risk profile** – low capital cost, simple operation, proven management team & capitalises on **high-prices for concentrates** in near-term

## Stage 2

Sell value-added premium products

**Significant price premium** paid for value-added products

**Conventional sulphate process route** to produce ~13Kt LCE for batteries

**Pre-Feasibility Study and pilot program** to commence Q2 2018

**Site location, permitting** and **environmental programs** to commence

Capitalises on **very low energy costs** and world-class infrastructure in Quebec

**Significantly enhances value of the resource** – Pre-tax NPV for lithium hydroxide route C\$798 million



Start-up capex of  
**AUD\$65** million  
and  
and opex of  
**US\$327/t**

Pre-Tax NPV (8% real)	AUD\$227m
Pre-Tax IRR	56%
Capital Payback	2.5 years
Ave Annual EBITDA	AUD\$38m
Ave Operating Margin	US\$287/t
Price Forecast	US\$614/t

**Deposit well understood** – 23,000 metres of drilling in 176 holes

Majority of **Ore Reserve** hosted in **one large pegmatite** – 1.1km long, 200m deep and 35m wide – outcropping from surface

Lithium mineralisation **spodumene**

Base case mine Life – **17 years**

Deposit remains open in all **directions**

## JORC Ore Reserve\* (0.45% cut-off)

Tonnes (Mt)	Grades (Li2O)	Contained (Li2O)
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5.59	0.99%	55,341
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6.07	1.06%	64,363
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<b>11.66</b>	<b>1.03%</b>	<b>119,704</b>
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## JORC Mineral Resource (0.45% cut-off)

Tonnes (Mt)	Grades (Li2O)	Contained (Li2O)
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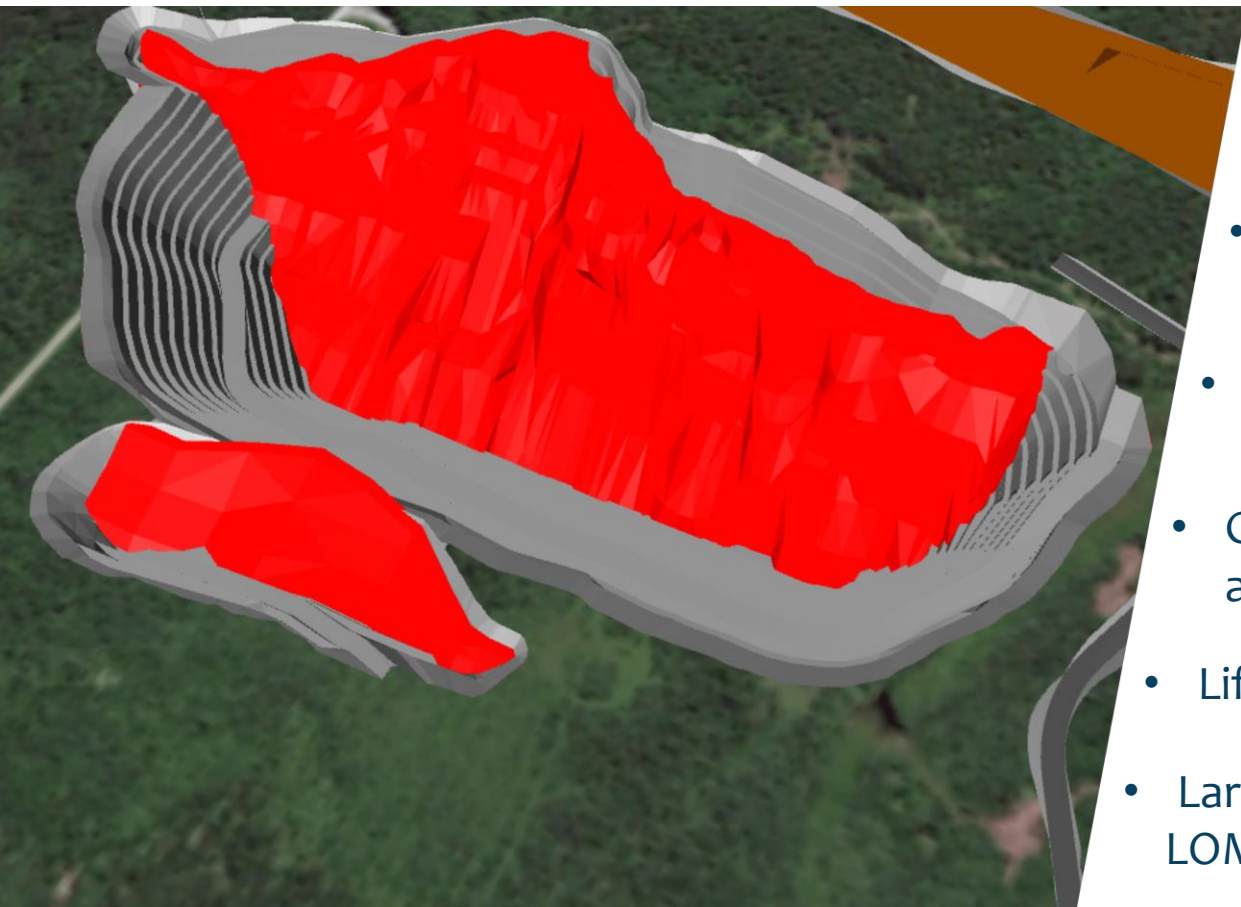
6.09	1.01%	61,509
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11.55	1.04%	120,120
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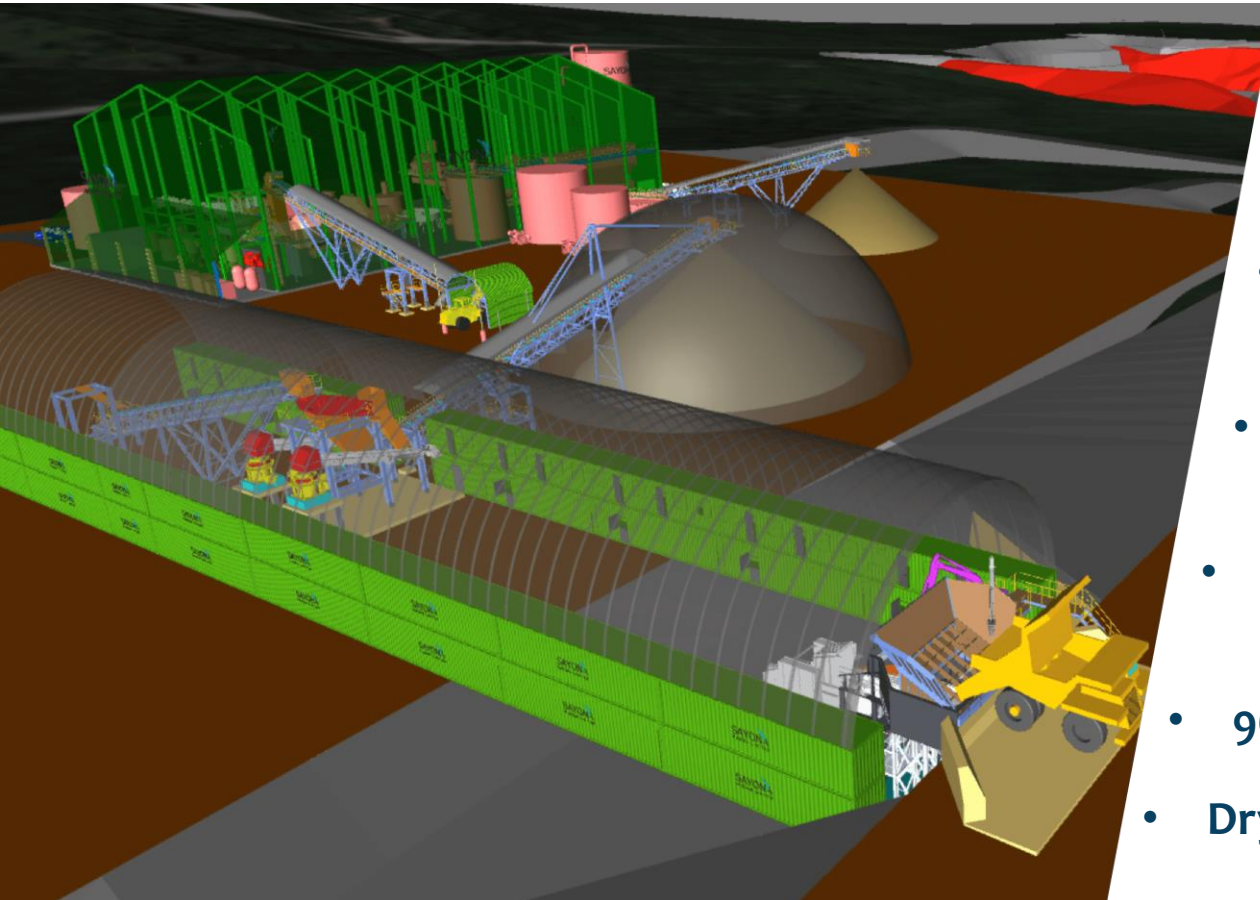
2.82	0.98%	27,636
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<b>20.46</b>	<b>1.02%</b>	<b>209,265</b>
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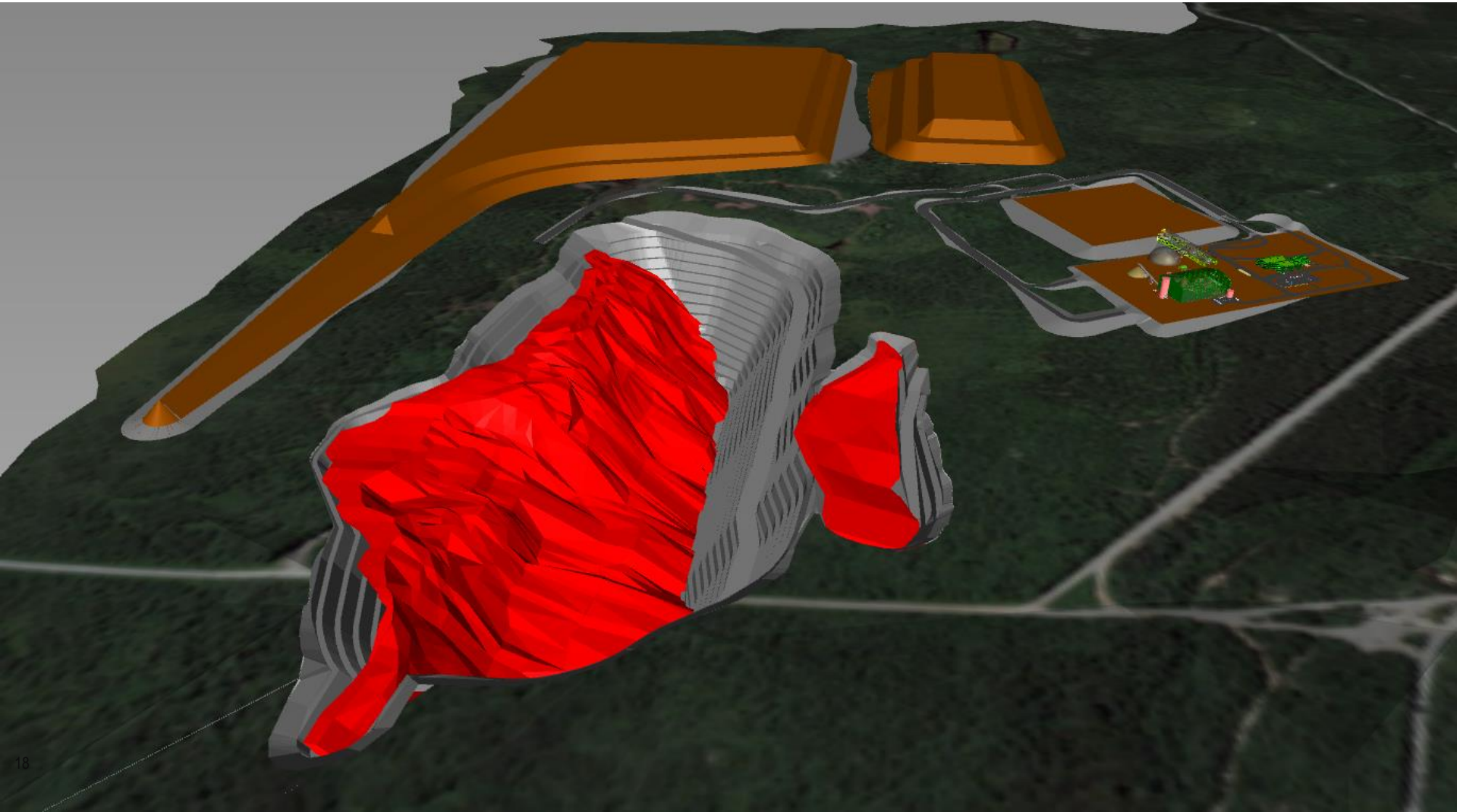


- Simple Mining Method  
**Truck and shovel** operation
- Competitive Mining Costs  
**A\$3.23/tonne** average LOM
- Low Capex  
Mining Fleet **Leased**
- Conservative geotechnical assumptions – **55°** pit slope
- Life-of-Mine - **17** years
- Large, thick tabular body  
LOM waste to ore ratio **6.95:1**



- Conventional process flow-sheet - **crush, grind and flotation**
- Cash Operating Costs **A\$19.40/t ore life-of-mine**
- **82%** recovery to a **6.00%** Li<sub>2</sub>O concentrate
- **700,000 tpa** processing capacity
- **96 Kt/yr** Li<sub>2</sub>O concentrate
- **Dry Tailings** simplifies approvals







# Pilot Plant Program

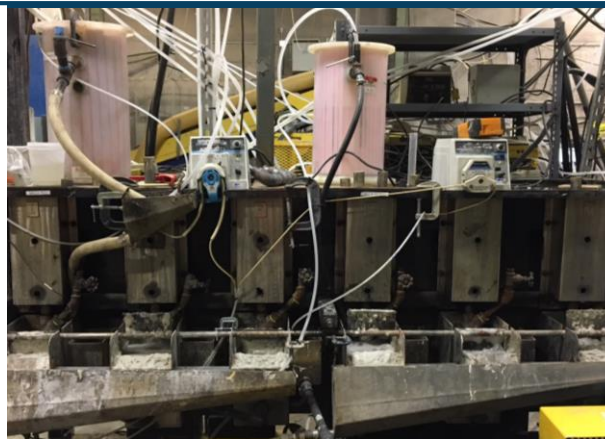
5 tonnes of sample **collected from drill core representative of the deposit**

Initial batch testing achieves **80% recovery to a 6% Li<sub>2</sub>O concentrate**

Locked cycle testing of two composites achieves:

1. **5.85% concentrate at 84% recovery**
2. **5.86% concentrate at 83% recovery**

Pilot plant operating at **50kg/hr** achieves **6% concentrate at 79% recovery** with one composite sample



**Mica Flotation**



**Spodumene Flotation**

Pilot plant confirms **final flow sheet** and **operating parameters** for DFS

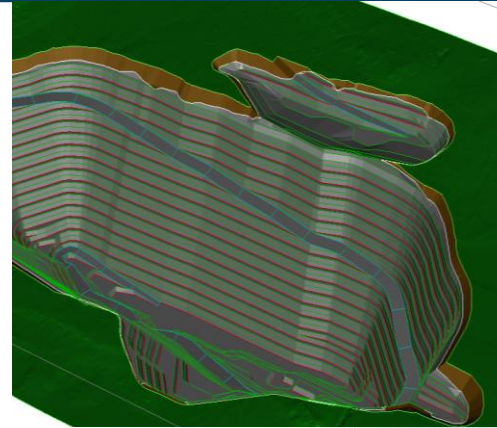
Further testing to **improve outcomes** to continue throughout **2018**

# DFS Nearing Completion

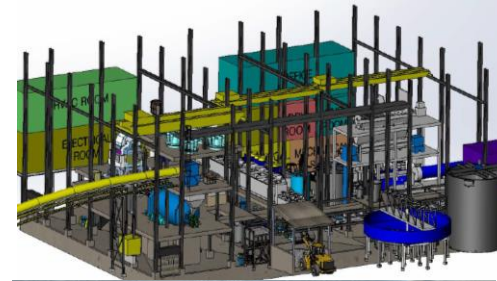
DFS mining, processing and infrastructure components awarded to **Canadian consulting engineering groups**



DFS work programs including geotechnical, transport and environmental have been **outsourced to specialist contractors**



DFS to incorporate **larger resource** following Phase 3 drilling and pilot metallurgy results



**DFS Paves Way to Complete Permitting and Financing**

**DFS**

**~75% complete**

and scheduled for **completion in**

**June 2018**





5km

Low cost **hydro power & gas**

5km

**Sealed road access**

20km

**Rail access to export port**

**Experienced local mining workforce**

**Major new hub of lithium carbonate production**

Electricity 5¢ kWh and Gas  
\$3 /GJ

MOU signed with **Hunan Changyuan Lico Co Ltd** - a subsidiary of Fortune 500 company, Minmetals Group – a battery materials manufacturer

Strategic alliance to explore **marketing, technical, and financial development** options for the Authier lithium project

MOU contemplates Hunan Changyuan purchasing all the Authier concentrates and assessing potential for downstream processing





## Integrated Refinery Model

- Convert concentrates into lithium hydroxide or carbonate - significant price premium paid for value-added products
- Scoping study completed – attractive economics – Pre-Tax NPV \$795m
- Leverages world-class infrastructure, low energy costs and access to acid in Quebec
- Favourable taxation regime for value-adding in Quebec
- Hydroxide key feed-stock to new revolution lithium-ion batteries
- Close to the US battery markets (e.g. Tesla Giga factory)
- PFS and metallurgical test work planning underway
- Project site selection underway

**Growth Options Funded from Phase 1 Concentrate Sales**



# Integrated Refinery Model

Authier Downstream Processing Financial Highlights\*  
(Approximate Values Derived from the Scoping Study)

Description	Unit	Lithium Carbonate	Lithium Hydroxide
Annual Production Capacity	Tonnes	13,000	14,000
Ave Cash operating Costs*	C\$ per tonne	6,331	6,032
Ave Cash Operating Costs*	US\$ per tonne	4,812	4,585
Price forecast	US\$ per tonne	10,200	12,000
Initial Capital#	C\$ million	223	240
Total Capital#	C\$ million	284	301
Pre-tax NPV @ 9%DR	C\$ million	426	794
Pre-Tax IRR	%	31	44
Exchange rate	CAD\$:US\$	0.76	0.76

\* Cash Operating Costs includes mining, processing, administration, royalties, transport, and downstream processing

# Capital expenditure includes all mine, concentrator and downstream process plant

\* Please see Scoping Study disclaimer on page 2 and ASX release, "Downstream Study Demonstrates Positive Economics", 30 August 2017

# Authier Development Timetable

Milestones	2017		2018				2019				2020	
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Pre-Feasibility Study												
Environmental & Permitting												
Mining Lease												
Pilot Metallurgy												
Definitive Feasibility Study												
Engineering & Design												
Off-take												
Finance												
Construction												
Commission & Operation												
Downstream Concept study												
Downstream Testing												
Downstream Studies												

## Environment



No toxic chemicals

No tailings dam

Water contained on site

Small project footprint

## First Nations



First Nations policy developed – engages & supports the First Nations community

## Community



Local community engagement, consultation and support  
**Job** creation

## Innovation



**Exploring** innovative mining, processing and exploration solutions  
**Sustainable** development  
**Downstream** value-adding



**Authier is an advanced, de-risked project.** DFS underway



Executing a plan to get into **production and generate cash flow** – low capital hurdle & competitive operating costs



Located in a **first world country** with **access to world-class, low-cost infrastructure**



**Base case pre-tax NPV of A\$227 million** and **low enterprise value per tonne of resources** compared to industry peers



Opportunity to **value-add Authier concentrates** and create **significant shareholder value** - \$794m pre-tax NPV



Board and management team have **track record of delivering projects**





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