

**INVESTOR PRESENTATION**  
BMO 2024 Global Metals, Mining & Critical Minerals Conference  
Florida, USA

25-28 February 2024

# ioneer

Providing Material in the U.S.  
for a Sustainable Planet

**ioneer**

 Nasdaq : IONR

 ASX : INR

[www.ioneer.com](http://www.ioneer.com)

**B**

**Li**

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## Competent Persons Statement

In respect of Mineral Resources and Ore Reserves referred to in this presentation and previously reported by the Company in accordance with JORC Code 2012, the Company confirms that it is not aware of any new information or data that materially affects the information included in the public reports titled "Rhyolite Ridge Ore Reserve Increased 280% to 60 million tonnes" dated 30 April 2020 and "Mineral Resource increases by 168% to 3.4 Mt lithium carbonate Underscores growth potential for U.S. supply chain" dated 26 April 2023, released on ASX. Further information regarding the Mineral Resource estimate can be found in that report. All material assumptions and technical parameters underpinning the estimates in the report continue to apply and have not materially changed.

In respect of production targets referred to in this presentation, the Company confirms that it is not aware of any new information or data that materially affects the information included in the public report titled "Ioneer Delivers Definitive Feasibility that Confirms Rhyolite Ridge as a World-Class Lithium and Boron Project" dated 30 April 2020. Further information regarding the production estimates can be found in that report. All material assumptions and technical parameters underpinning the estimates in the report continue to apply and have not materially changed.

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## Lithium Carbonate Equivalent

The formula used for the Lithium Carbonate Equivalent (LCE) values quoted in this presentation is:  
 $LCE = (\text{lithium carbonate tonnes produced} + \text{lithium hydroxide tonnes produced} * 0.880)$

## Note

All \$'s in this presentation are US\$'s except where otherwise noted.

# Corporate snapshot

## Capital Structure

(As at 14 February 2024)

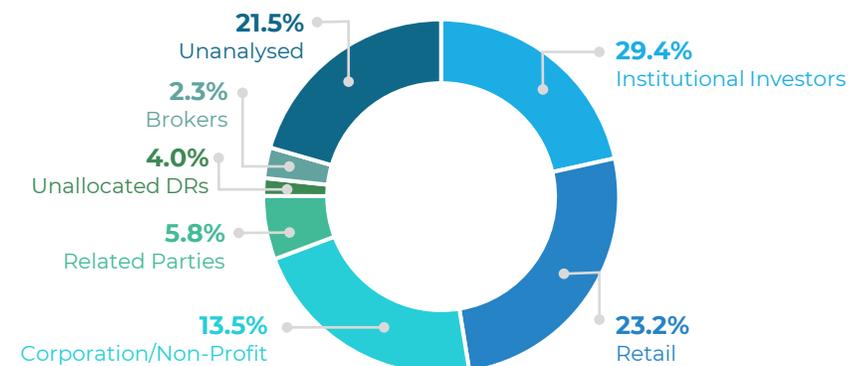
Shares Outstanding	<b>2.1b</b>
Performance Rights And Options Outstanding	<b>37.4m</b>
Cash Balance – 1 Jan 2024	<b>US\$28m</b>
Share Price ASX – 14 Feb 2024	<b>A\$0.125</b>
ADR Price NASDAQ (1 ADR = 40 ASX Shares)	<b>US\$3.23</b>
Market Capitalisation	<b>A\$264m</b>

## Research Coverage



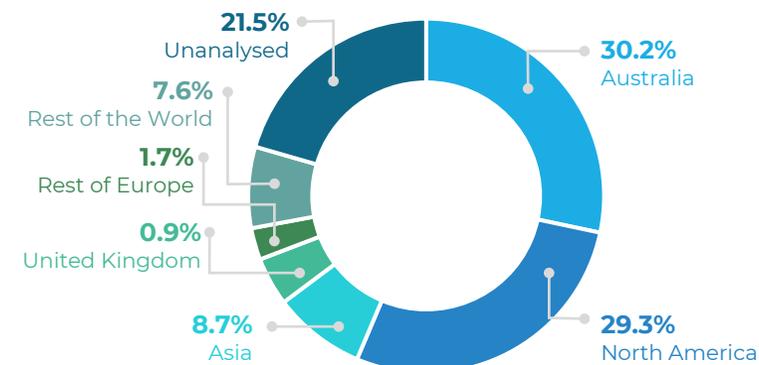
## Total Shareholder Composition

at 31 December 2023



## Total Shares by Geography

at 31 December 2023



# Proven & Experienced Team

## BOARD OF DIRECTORS



**JAMES D. CALAWAY**  
Executive Chair  
Former Non-executive  
chair of Orocobre Ltd



**BERNARD ROWE**  
Managing Director  
CEO & Founder



**ALAN DAVIES**  
Non-executive Director  
Former Chief Executive,  
Energy & Minerals of Rio Tinto



**ROSE MCKINNEY-JAMES**  
Non-executive Director  
Former President and CEO  
of Corporation for Solar Tech  
& Renewable Resources



**MARGARET WALKER**  
Non-executive Director  
Former VP Engineering and  
Technology Centers, Dow  
Chemical



**STEPHEN GARDINER**  
Non-executive Director  
Former CFO Oil Search

## EXECUTIVE TEAM



**IAN BUCKNELL**  
CFO & Company Secretary



**MATT WEAVER**  
Snr VP Engineering &  
Operations



**CHAD YEFTICH**  
VP Corporate Development  
& External Affairs



**KEN COON**  
VP Human Resources



**YOSHIO NAGAI**  
VP Commercial Sales  
& Marketing

# What Differentiates **ioneer** from other emerging lithium companies

## Permitting

In final stage of federal permitting process

## Partnerships

Binding agreements with Ford (SK), Toyota (Panasonic) and EcoPro

## Funding

US\$490 million conditional financing from Sibanye-Stillwater

## Debt

US\$700 million conditional loan from U.S. Dept of Energy Loan Programs Office

## Engineering

State of the art facility with construction set to commence upon permitting approval

## Growth

Multi-generational scale potential with 3.4Mt LCE Mineral Resource Estimate

FACT SHEET

# Rhyolite ridge lithium-boron project economics

**A UNIQUE WORLD CLASS DEPOSIT  
WITH MULTI-GENERATIONAL  
SCALE POTENTIAL AND  
COMPELLING ECONOMICS**

Location	Nevada, USA
Project Stage	Bankable Feasibility Study (April, 2020)
Products	Lithium Carbonate, Boric Acid
Mine Plan	64Mt (2.5Mtpa x 26 years)
Production	Li 22,000 tpa B 174,400 tpa
Binding Offtakes	80% of Li production
All in sustaining cash cost	US\$2,510/t of LCE
EBITDA	US\$288M (LOM)
After-tax NPV <sub>8</sub>	US\$1.265B
After-tax IRR	20.8%
Price assumptions	Li Carb – US\$11,740/t Boric Acid – US\$710/t
Mine Life	26 years

## Nevada Lithium for the U.S EV Supply Chain

B

Li

### Current Project

South Basin – still only partially drilled

- Producing enough lithium to power ~400,000 EVs per year
  - >20 ktpa of lithium carbonate and 174 ktpa of boric acid

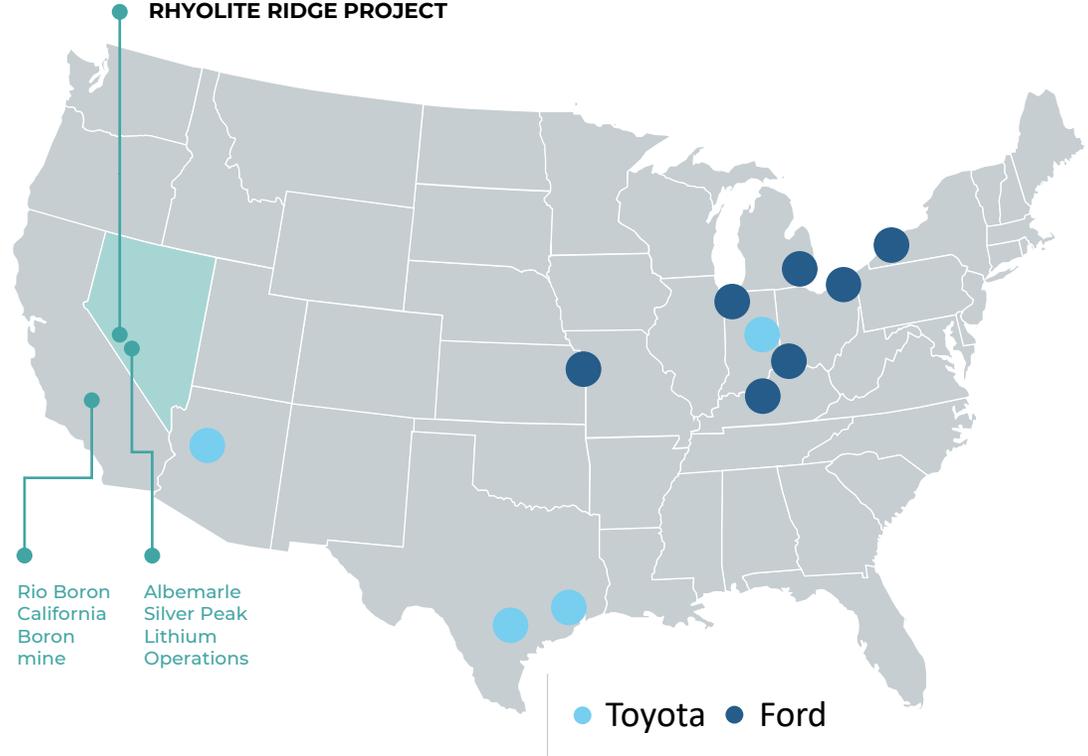
### Multiple organic expansion opportunities

- Resource update<sup>3</sup> estimates Rhyolite Ridge holds enough lithium carbonate to power over 50 million EVs
- Further expansion potential pending additional exploration – North and South Basins

1. See Company announcement titled "ioneer delivers DFS that confirms Rhyolite Ridge as a world-class lithium-boron Project" dated 30 April 2020  
2. See Company announcement titled "Rhyolite Ridge Ore Reserve Increased 280% to 60 million tonnes" dated 30 April 2020.  
3. See Company announcement titled "Mineral Resource increases by 168% to 3.4Mt lithium carbonate" dated 26 April 2023

# Rhyolite Ridge Lithium-Boron Project

**CURRENT LITHIUM & BORON PRODUCTION**  
with Ford & Toyota production facilities shown



**IDEALLY POSITIONED TO SERVE THE U.S. EV MARKET**

**Only known large lithium-boron deposit in North America.**  
Combination of lithium and boron reduces price volatility

**Binding offtake agreements** with Ford, Toyota/Samsung & EcoPro

Two of three key permits. **Final permit in NEPA process**

Conditional **funding of up to ~US\$1.2B** from Sibanye-Stillwater and DOE Loan Program Office

**Multiple organic expansion opportunities**

**Nevada Lithium** for the U.S EV Supply Chain

# U.S. Government Support

**REFLECTS STRONG GOVERNMENT  
SUPPORT TO DEVELOP A U.S.  
DOMESTIC EV SUPPLY CHAIN**

**U.S. Department of Energy  
Loan Programs Office  
(DOE LPO)**

**Conditional Term  
Sheet signed**

**Amount**

Conditional loan of up to **US\$700 million**

**Term**

Approximately **10 years**

**Interest rate**

Applicable **U.S. Treasury rates**

**Rate Type**

Fixed from the date of each advance for the term of the loan at applicable U.S. Treasury rates

**Purpose**

Develop the **Rhyolite Ridge Lithium-Boron Project**

**Conditions**

Include a positive Record of Decision and Final Investment Decision

**Inflation Reduction Act  
(IRA)**

**IRA advantage**

Source for U.S domestic lithium supply

**Potential benefits under the Act**

Advanced Manufacturing

Production Credit (45X)

Clean Vehicle Credit (30D)

- \$7,500 credit for qualifying light vehicle purchases
- Credit requires increasing use of domestically sourced lithium

**Close to customer  
markets**

World's 2nd **largest car market**

# Best in Class Partners



## Technically led approach

>US\$150m invested to date	PFS, Pilot Plant, DFS completed, Engineering ready. Fluor is EPCM
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## Signed binding lithium offtake agreements

Ford Motor	PPES (Toyota - Panasonic)	EcoPro Innovation
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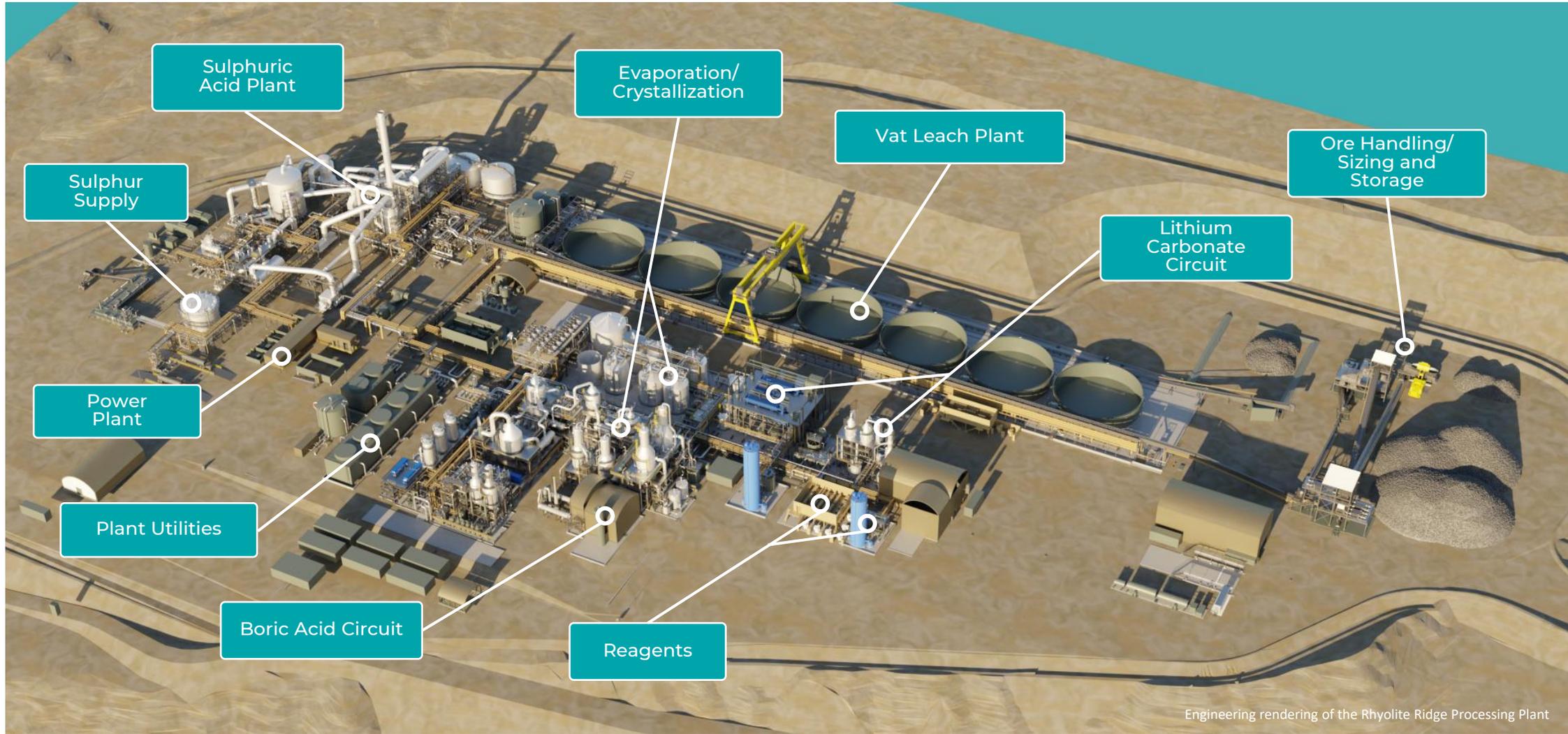
## Funding

Sibanye-Stillwater to be a 50% JV partner for US\$490m <sup>1</sup>	U.S. Dept of Energy Loan Programs Office Conditional Commitment offer for a loan of up to US\$700m <sup>2</sup>
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# Detailed Engineering is ready



# Proposed Rhyolite Ridge Process Plant



# Commitment to Sustainability

**DESIGNED TO MINIMISE IMPACT ON THE ENVIRONMENT**

## Low Emissions



- Majority of on-site power from CO<sup>2</sup>-free energy production, low greenhouse gas emissions.
- Mobile equipment meets Tier 4 EPA standards

## Low Water Usage



- Project design implements best-in-class water utilization while recycling the majority of water usage.
- Expected to use 30x less water per tonne than existing U.S. production

## Small Mine Footprint



- No evaporation ponds or tailings dam

## Efficient Equipment



- Generating all power on-site.
- Automation of mine haulage equipment

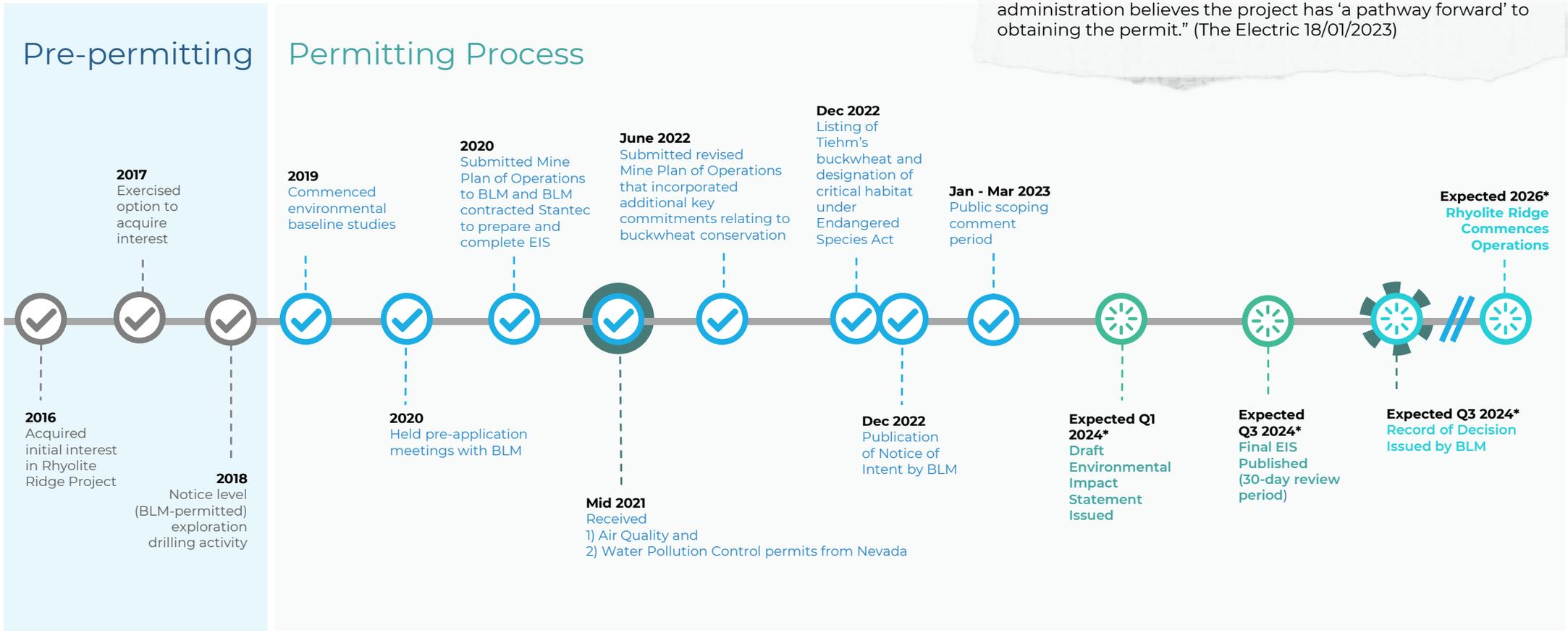
## Commitment to Sustainability



- All baseline studies for EIS completed over 2 years.
- Ongoing commitment to the environment and the protection and conservation of Tiehm's buckwheat
- Implementation of TSM<sup>1</sup> ESG program

# Permitting (NEPA) Process

Director of the DOE Loan Programs Office Jigar Shah “said the loan is intended to ‘provide assurances to equity investors’ that the administration believes the project has ‘a pathway forward’ to obtaining the permit.” (The Electric 18/01/2023)



NEXT KEY PERMITTING MILESTONE IS THE PUBLISHING OF THE DRAFT ENVIRONMENTAL IMPACT STATEMENT

# Key Growth Opportunities

Four areas aimed at increasing lithium production:

WITHIN INITIAL MINE PLAN FOOTPRINT

1

## High boron-lithium

- Current 26-year mine plan based on only 41% of Hi-B Resource
- B5 and L6 zones

2

## Low boron-lithium

- M5, S5 and L6 zones
- Already in mine plan for stockpiling
- Evaluation of processing options is underway

3

## North Basin

- 4x larger than South Basin footprint
- Leach tests in progress
- Well defined by gravity and historic drilling

4

## Other Projects

- Non-Rhyolite Ridge
- Existing tenements
- Lithium and Boron

Near Term

Medium Term

Long Term

# Recent Activities



# Why Ioneer



## The Right Products

Lithium carbonate and boric acid



## The Right Location

Positioned to serve the U.S. EV battery supply chain



## An Experienced Team

With a proven track record



## Expansion Potential

With significant organic growth potential



## Third Party Validation

U.S. DOE, Sibanye-Stillwater, Ford Motor, PPES, EcoPro



## Clear Path to Production

Engineering 70% Complete, Conditional funding, 2 of 3 permits



Plug in to the Future

# 2024 Catalysts

 Updated Resource and Reserves

 Updated Mine Plan

 Updated Capex / Opex Estimate

 Final Environmental Impact Statement

 Federal Record of Decision

 Final Investment Decision

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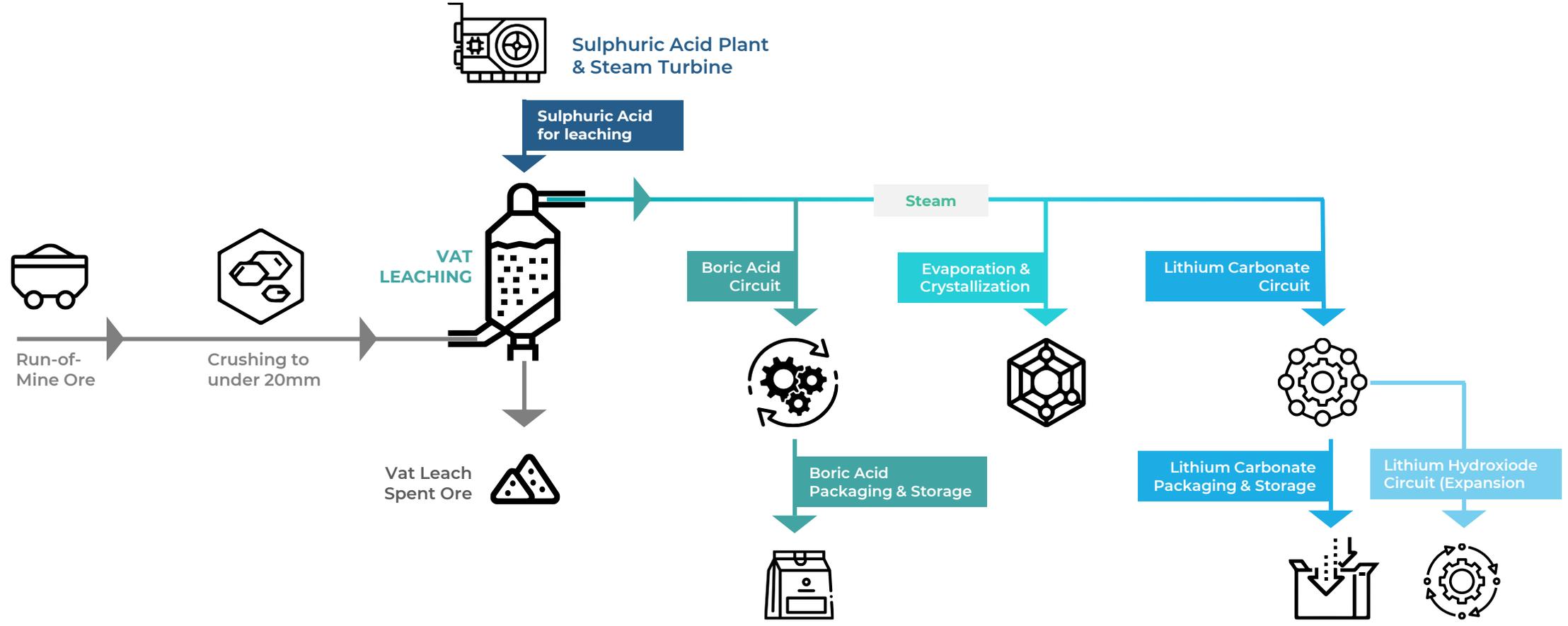
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# Rhyolite Ridge – High Level Chemical Process Flow Diagram



# South Basin Resource

DOES NOT INCLUDE 2022-23 DRILLING

	Ore Unit	Ore Tonnes (mT)	Lithium Grade (ppm)	Contained LCE (kT)	Boron Grade (ppm)	Contained Boric Acid (kT)
High Boron ▲	B5	79	1,800	770	17,200	7,790
	L6	73	1,350	530	10,900	4,520
▼ Low Boron	M5 (clay)	75	2,450	990	1,200	510
	S5	20	1,650	200	1,200	140
	L6	108	1,500	870	1,450	910
	<b>TOTAL</b>	<b>360</b>	<b>1,750</b>	<b>3,350</b>	<b>6,850</b>	<b>14,060</b>

# South Basin Reserves

## Ore Reserves – High Boron Only Per 2020 Resource & Reserve Report)

Classification	Tonnage (Mt)	Li (ppm)	B (ppm)
Proved Reserves	29.0	1,900	16,250
Probable Reserves	31.5	1,700	14,650
<b>Total Ore Reserves</b>	<b>60.0</b>	<b>1,800</b>	<b>15,400</b>

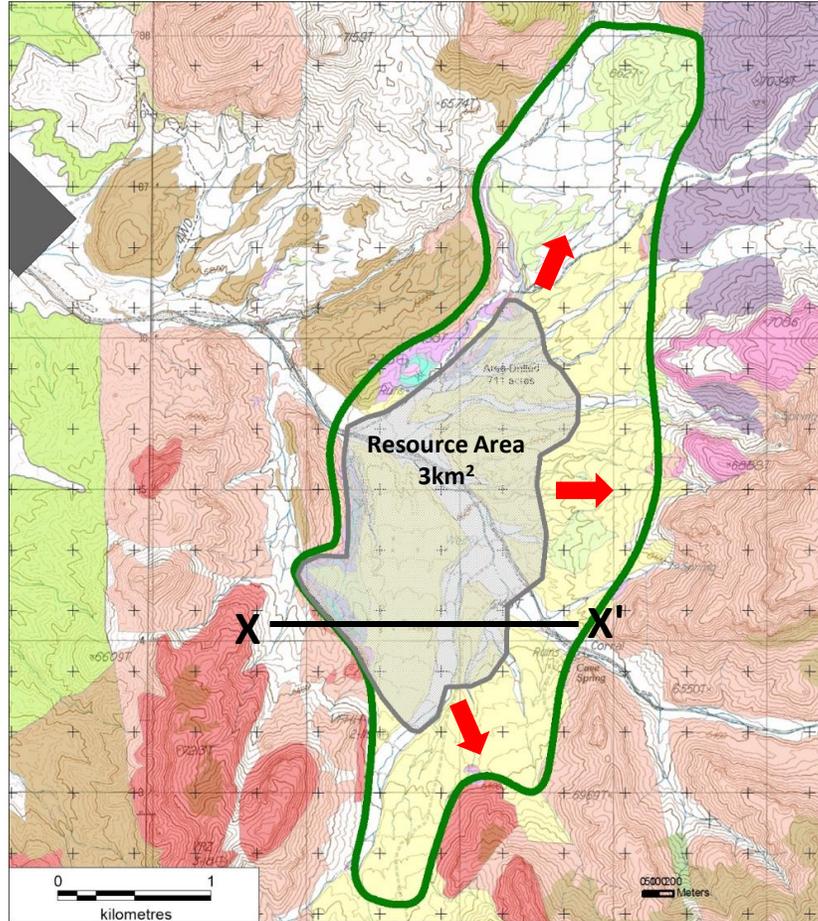
Approximately half of the Ore Reserve is classified as Proved

Ore Reserve provides 94% of tonnes in current 26-year mine plan

Source: For further information on Resources and Reserves see 1) ASX release titled "Mineral Resource increases by 168% to 3.4 Mt lithium carbonate Underscores growth potential for U.S. supply chain" dated 26 April 2023 and 2) ASX release titled "Rhyolite Ridge Ore Reserve Increased 280% to 60 million tonnes" dated 30 April 2020. Note, totals may differ due to rounding..

# Significant growth opportunities

## South Basin



### ● South Basin

2x larger than footprint of current **360Mt Mineral Resource containing 3.4Mt LCE**

Mineralisation is open to north, south and east

Mineral Resource updated April 2023

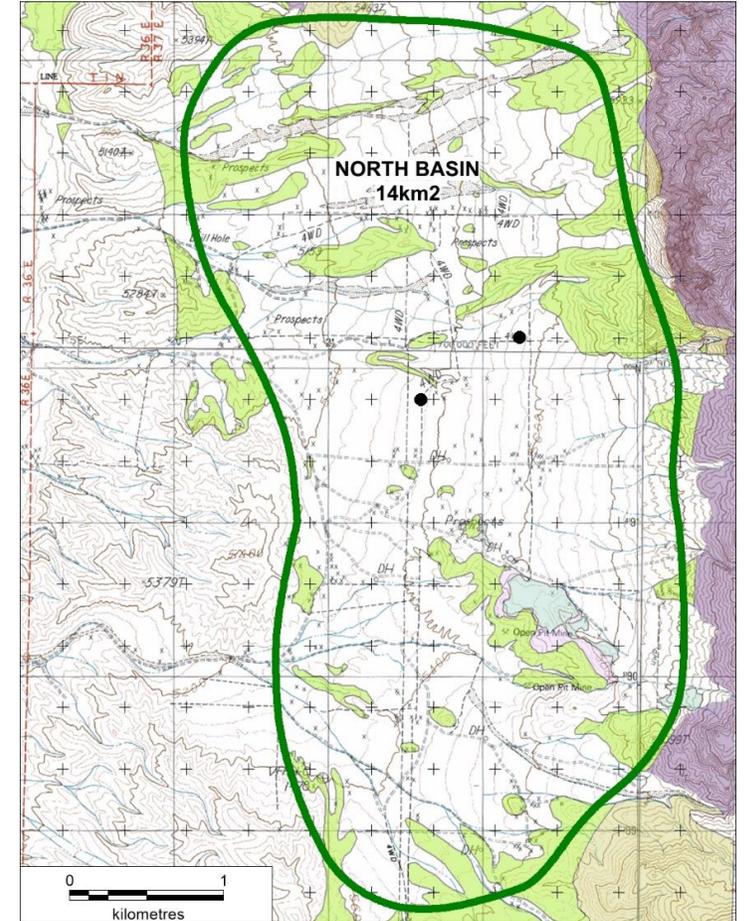
### North Basin ●

Over 4x larger footprint than South Basin Resource

US Borax (Rio) drilled >50 holes 1980-90s

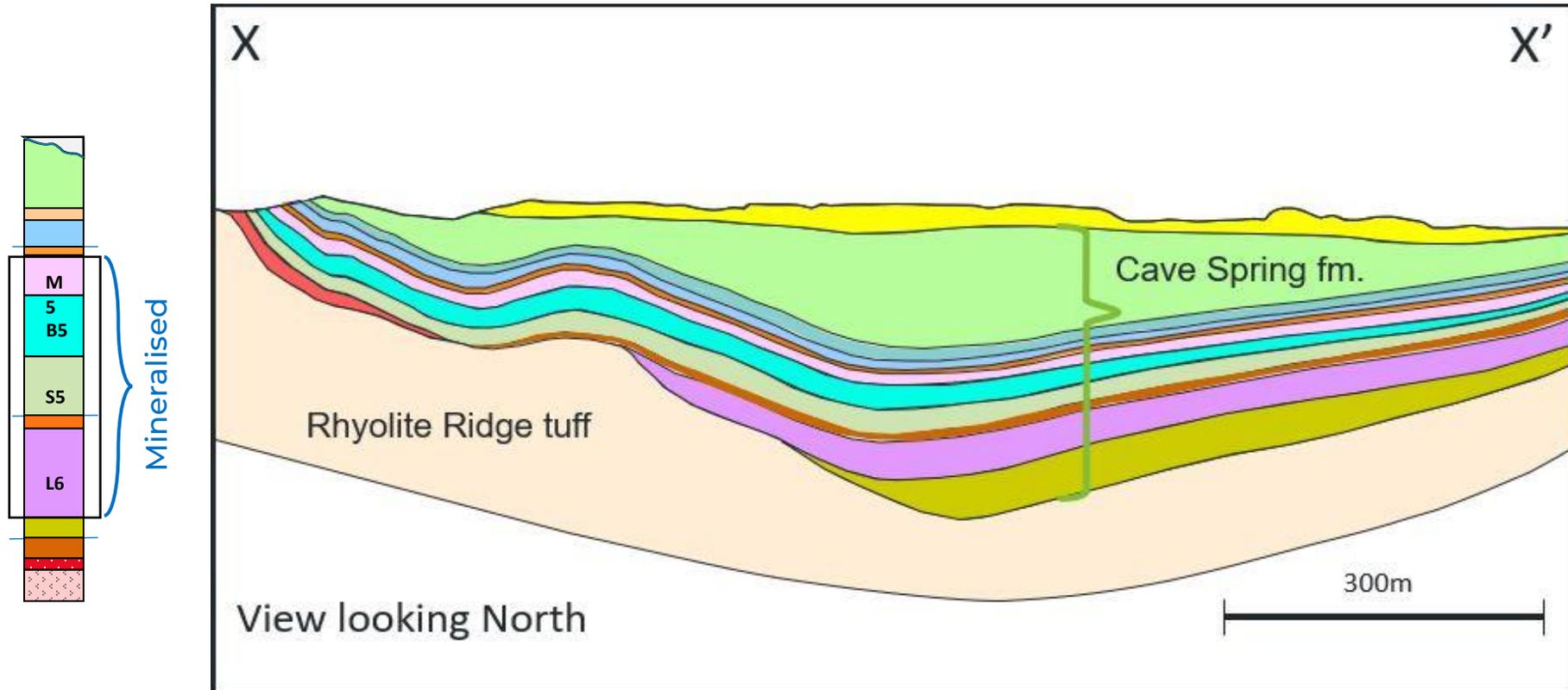
2 holes drilled by INR in 2016<sup>1</sup>

## North Basin



# Growth Opportunity in Proposed Permitting Footprint

ALL FOUR MINERALISED LAYERS PROVIDE UPSIDE AND OPTIONALITY



# South Basin Mineralisation Types

**Type 1**  
**High Boron-Lithium**  
**SEARLESITE**

157Mt Resource  
 60Mt Ore Reserve

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Acid Leachable  
 Metallurgical tests and Pilot Plant

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Supports DFS and phase one processing facility design

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26 years initial mine life  
 22Kt Li Carb, 174Kt boric acid p.a.

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Binding Offtakes - Ford, Toyota/Panasonic (PPES), EcoPro

**Type 2**  
**Low Boron-Lithium**  
**HIGH-CLAY**

75Mt Resource

---

Acid Leachable  
 Metallurgical tests

---

Stockpiled in phase one mine plan  
 Treated as waste in DFS

---

Potential lithium output increase  
 Existing offtake partner demand

---

Flow sheet to be finalised – MOU with EcoPro

**Type 3**  
**Low Boron-Lithium**  
**LOW-CLAY**

128Mt Resource

---

Acid Leachable  
 Metallurgical tests

---

Stockpiled in phase one mine plan  
 Treated as waste in DFS

---

Potential lithium output increase with low capex via phase one process plant

---

Flow sheet to be finalised  
 Similar to Type 1

**TOTAL MINERAL RESOURCE – 360MT CONTAINING 3.4MT OF LITHIUM CARBONATE AND 14.1MT OF BORIC ACID**

# Acid Leach Results – Average recoveries >89%

	SOUTH BASIN				NORTH BASIN
	Type 1 B5 (Vat)	Type 2 M5 (Agitated)	Type 3 S5 (Vat or Heap)	Type 3 L6 (Vat or Heap)	Type 3 NLB (Vat or Heap)
Li	770 kMT LCE	990 kMT LCE	200 kMT LCE	1,400 kMT LCE	1000 – 3000 kMT LCE
Gr	1,800 ppm	2,450 ppm	1,650 ppm	1,500 ppm	1000 – 1700 ppm
R	94% Li	89% Li	90 – 94% Li	89 – 91% Li	91% Li
#TEST	300 +	45	20	20	35
LEACH HEAD					
LEACH TAILS					

# History of Ioneer's Ownership of Rhyolite & Development Schedule

## TIMING OF PERMITTING KEY DRIVER TO DEVELOPMENT TIMELINE

2016	2017	2018	2019	2020	2021	2022	2023	2024
<ul style="list-style-type: none"> <li>❖ Acquired initial interest in Project</li> </ul>	<ul style="list-style-type: none"> <li>❖ Maiden Resource</li> <li>❖ Start drilling campaign</li> <li>❖ Procure water rights</li> <li>❖ Double Mineral Resource</li> <li>❖ Discovery of heap leach Li-B extraction</li> <li>❖ Completion of mining study</li> </ul>	<ul style="list-style-type: none"> <li>❖ First production of Boric Acid</li> <li>❖ Release of PFS</li> <li>❖ Complete exploration drilling</li> <li>❖ Maiden Reserve</li> <li>❖ Start Pilot Plant</li> </ul>	<ul style="list-style-type: none"> <li>❖ LiCO produced at Pilot Plant</li> <li>❖ BA – Binding offtake</li> </ul>	<ul style="list-style-type: none"> <li>❖ Reserves &amp; Resources upgrade</li> <li>❖ Complete DFS</li> <li>❖ Complete BA Sales &amp; Distribution</li> <li>❖ Final Plan of Operation deemed complete by BLM</li> </ul>	<ul style="list-style-type: none"> <li>❖ Production of battery grade LiOH</li> <li>❖ Air Permit issued</li> <li>❖ First Li offtake signed with EcoPro Innovation</li> <li>❖ Water Control Permit issued</li> <li>❖ JV with Sibanye-Stillwater</li> <li>❖ DOE Loan submission accepted as complete</li> </ul>	<ul style="list-style-type: none"> <li>❖ US Listing on Nasdaq</li> <li>❖ Li offtakes signed with Ford Motor and PPES (Toyota/Panasonic JV)</li> </ul>	<ul style="list-style-type: none"> <li>❖ Receipt of conditional loan commitment from US Department of Energy</li> <li>❖ NOI Published</li> <li>❖ Mineral Resource update</li> </ul>	<ul style="list-style-type: none"> <li>❖ Anticipated Record of Decision (ROD)</li> <li>❖ Construction ready</li> <li>❖ FID</li> </ul>

# Sedimentary deposit examples



## ● Ioneer Rhyolite Ridge Li-B (Searlesite) Resource\*

Rhyolite Ridge is **only known occurrence** of Searlesite

**170M tons** at:  
1,650 ppm Li,  
14,100 ppm B

**Including 90M tons** at:  
1,850ppm Li,  
17,050 ppm B

BLM submitted mine plan of operations contemplates mine 25m tonnes of Li-B material which will be processed

## ● Li-only (clay)

Most common type of sedimentary deposit in North America

BLM submitted mine plan of operations contemplates mine 23m tonnes of Li-Clay material which will be stockpiled

# Li-B (Searlesite) Before and After Acid Leaching

SEARLESITE ORE EASY AND LESS EXPENSIVE TO WASH, DE-WATER AND DISPOSE OF LEACH RESIDUE

Li-B (Searlesite) mineralisation before acid leach



Li-B (Searlesite) mineralisation after acid leach



# Li-only (Clay) Mineralisation Before and After Acid Leaching

CLAY ORE IS DIFFICULT AND MORE EXPENSIVE TO WASH, DE-WATER AND DISPOSE OF LEACH RESIDUE

Li-only (Clay) mineralisation before acid leach



Li-only (Clay) mineralisation after acid leach

