

Baird 2022 Vehicle Technology & Mobility Conference

Enabling Global Decarbonization with **BORON**+

January 25, 2022

Cautionary Statements

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JORC CODE AND REGULATION S-K 1300 MINERAL RESOURCES

In this Presentation, some references to estimated mineral resources are compliant with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the "JORC Code") and other references to estimated mineral resources are compliant with the west SEC mining property disclosure requirements contained in Subpart 1300 of Regulation S-K 1300", there are compliant with the rew SEC mining property disclosure requirements contained in Subpart 1300 of Regulation S-K 1300", there are compliant with the Evant guidelines in other countries. Mining disclosure in the United States was previously required to comply with SEC Industry Guide 7 under the Exchange Act ("SEC Industry Guide 7"). In accordance with the SEC's Final Rule 13-10570, Modernization of Property Disclosure for Mining Registrant, the SEC has adopted final rules, effective February 25, 2019, to replace SEC Industry Guide 7". Regulation S-K 1300 replaces the historical property disclosure rules (the "Mining Disclosure rules (the "Mining Disclosure Rules") under Regulation S-K 1300. The SEC Industry Guide 7". Regulation S-K 1300 replaces the historical property disclosure rules (the "Mining Disclosure Rules") under Regulation S-K 1300. Regulation S-K 1300 replaces SEC Industry Guide 7". Regulation S-K 1300 replaces SEC Industry Guide 7". Regulation S-K 1300 replaces the historical property disclosure rules (the "Mining Disclosure Rules") under Regulation S-K 1300. Regulation S-K 1300 replaces SEC Industry Guide 7". Regulation S-K 1300 replaces the historical property disclosure requirements and increate resources, and require Secures and cordingly, under Regulation S-K 1300 replaces the historical property disclosure requirements and resources, and require Secure divide 3". Tode advected final resources and the references to estimated of "neasured mineral resources, and require Secure divide 3". Teges advected final rules, references to estimated on the references to estimated on the references to estimated on the references to

COMPETENT PERSON STATEMENT (JORC) and TECHNICAL REPORT SUMMARY (REGULATION S-K 1300)

The information in this presentation that relates to exploration targets, exploration results and mineral resources reported under the JORC Code is based on information prepared by Mr Louis Fourie, P.Geo of Terra Modelling Services. Refer to the announcement made by American Pacific Borates Limited dated 3 December 2018 for full details of the JORC Compliant Resource Estimate and Reserve for the Ford Cady Project. The 5E Group confirms that it is not aware of any new information or data that materially affects the Resource Estimate and Reserve and that all material assumptions and technical parameters underpinning the Resource Estimate and Reserve continue to apply and have not materially affects the Resource estimates of Millcreek Mining Group to prepare an independent technical report summary (and "Report") on the Project. The purpose of the technical report summary was to support the disclosure of Mineral Resource estimates for the Project. The Support the Reputation S-K 1300. The summary was prepared in accordance with Regulation S-K. The Mineral Resource estimates reported in compliance with Regulation S-K. The Mineral Resource estimates reported in compliance with Regulation S-K. The Mineral Resource estimates reported in compliance with Regulation S-K. The Mineral Resource estimates reported in compliance with Regulation S-K. The Mineral Resource estimates reported in compliance with Regulation S-K. The Mineral Resource estimates report.

BORON⁺ Coming Into Focus; 5E Positioned to Become an Advanced Materials Leader



Why BORON⁺



Critical Material, Essential to Everyday Life

Advantaged elemental properties; essential across a wide range of applications with limited substitution



Enabler of Future ESG-centric Industries

Powering industries of the future with high end use applications including batteries, EVs and renewable energy infrastructure



Scarce Resource & Duopolistic Supply

85% of global supply controlled by two companies; downstream supply concentrated in China; governments taking notice

Accelerating Demand Growth

Traditional and decarbonization-focused applications driving 10x consumption growth by 2050E creating undersupply scenario⁽¹⁾

Relatively Unknown, Next Energy Material That Deserves Attention

Why 5E Advanced Materials



World Class Resource and Asset

Access to a rare, low cost resource; advantaged U.S. location; substantially permitted with advantageous infrastructure



Vertically Integrated Model

Differentiated model with control over inputs, intellectual property and processes, and downstream partnerships



Foundations In Place & Clear Vision

Strong momentum into U.S. listing with milestones completed; clear path to building a BORON⁺ advanced materials business



Leadership Team to Deliver

Track record of building advanced material powerhouses; capable oversight and strategic support in place

Unique Platform and Opportunity at Attractive Valuation



BORON+

Why BORON+

Superior Physical Properties; Wide Application Set and Essential to Everyday Life

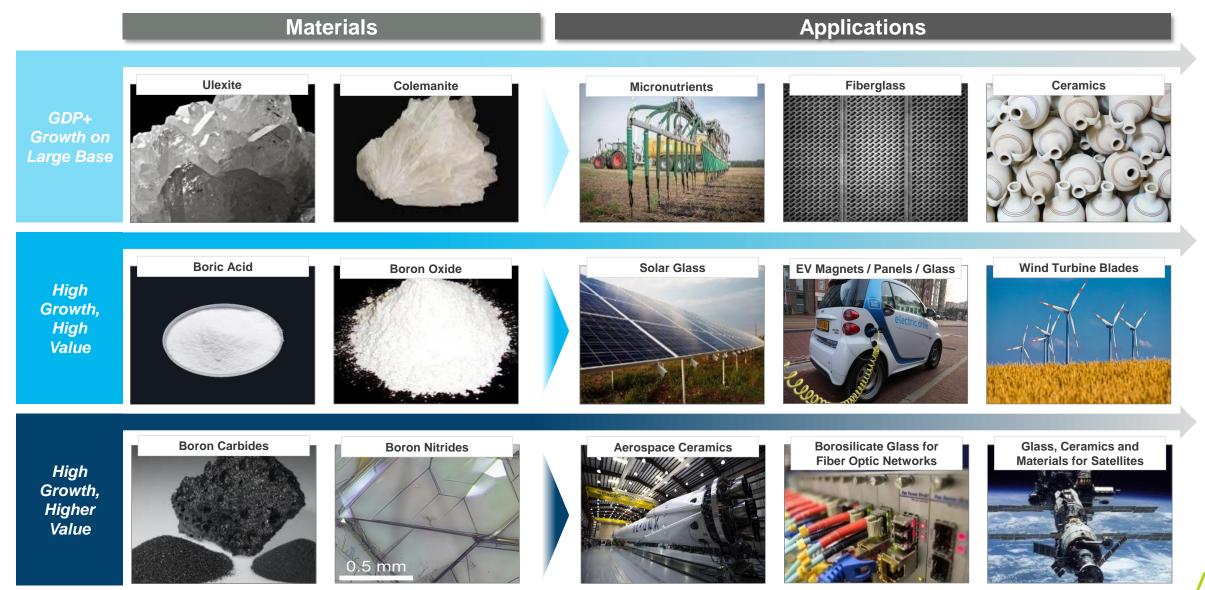


Superior Physical Properties					Current Usage
	2	Hardness	Only Carbon (diamond) is harder than Boron composites		20% Other (Clean Energy, Nuclear, Defense, Pharma)
5 B Boron Metalloid	Æ	Light Weight	5 th lightest of all elements after Lithium and Beryllium	_	3% Detergents 12% Ceramics
		Heat Resistant	Only 11 elements have higher melting points (3,771°F)		13% Micronutrient
	E	Anti- Microbial	Boron clusters have anti- biofilm activity and are less prone to drug resistance		52% Glass
		Corrosion Resistant	Boron-infused metals and specialty ceramics reduce corrosion propensity		(Borosilicate Glass, Fiberglass Composites) Wide Range of

Wide Range of Traditional Applications, with Limited Substitutability

Usage and Value in Use Shifting Towards Future Facing Applications

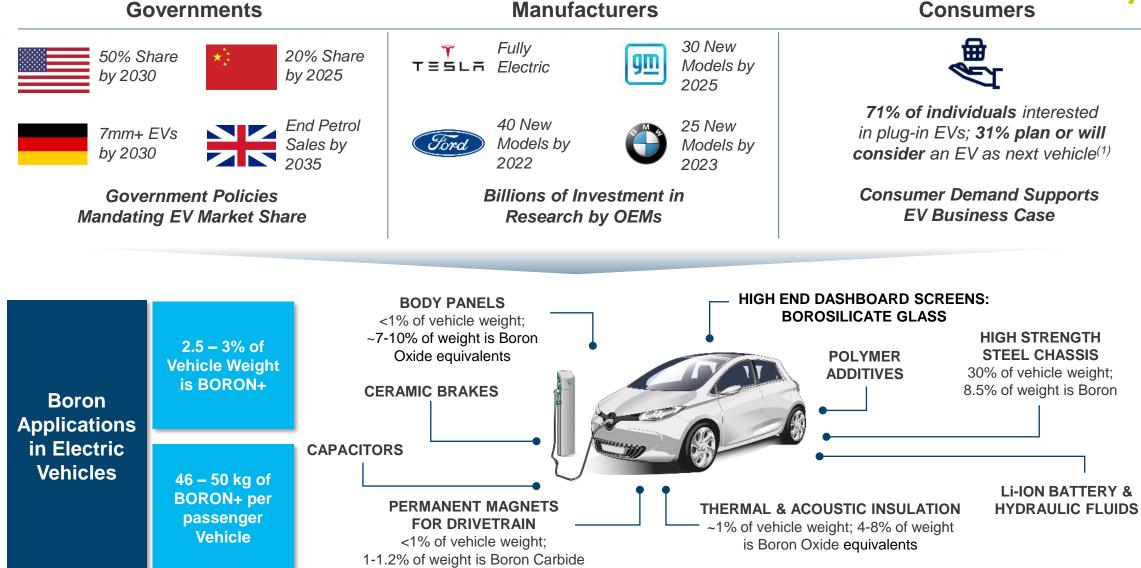




Images courtesy of Pixabay.

BORON+ is an Essential Input in the Electrification of Transport





Source: SAI Industrial LLC, CNN and GlobalData Power Intelligence Center. EIA and U.S. government. (1) Per Consumer Reports. Based on percentage of American public surveyed.

BORON⁺ a Critical Building Block in Enabling Decarbonization & Security



3.3% CAGR Growth in Global Military Spending (2000-2020)

~\$2.0 Trillion Global Spending on Defense (2020)

Electric Vehicles

~30% CAGR Global Electric Vehicle Stock Growth (2020-2030)

⇒hl

~145m Global Electric Vehicle Stock by 2030

Green Energy

5.8% CAGR Global Installed Wind & Solar Capacity (2019-2050)

~\$55 Trillion Global "Green" Energy Infrastructure Investment (2016-2050)1

BORON⁺ the "Enabler Mineral"



Boron Magnets for Drivetrains

High-Strength Boron-Infused Steel



Borosilicate Glass & Coatings Light-Weight Boron fiberglass



Food Security

+1.9 Billion

Increase in Global

Population by 2050

>40%

Lands Experiencing Severe

Yield Reductions by 2050

Boron Micronutrients Super Fertilizers



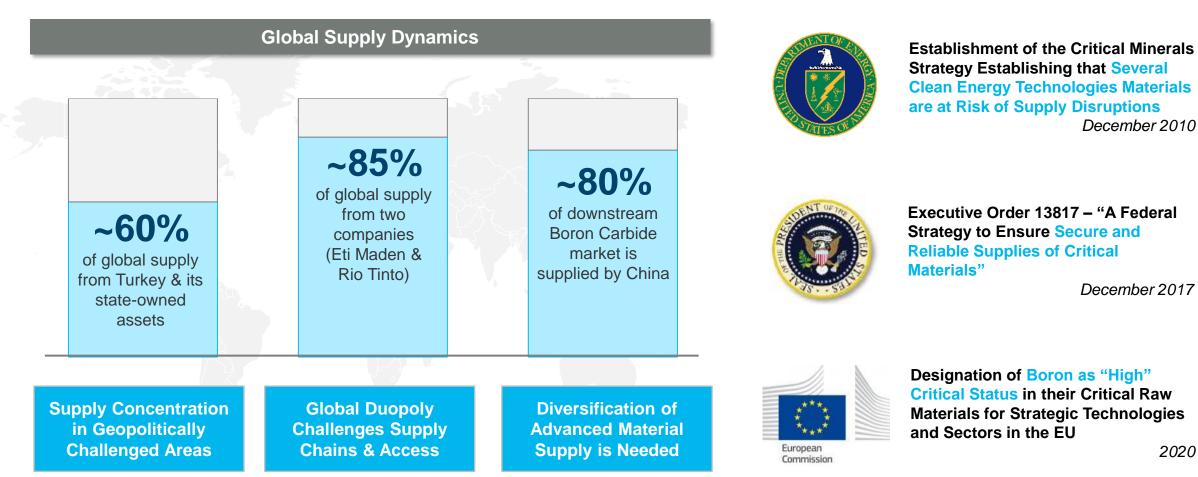
Boron-Infused Tank Armor Plating Boron Rods for Nuclear Reactors

Source: EIA, IEA, United Nations, and PGFP. Images courtesy of Pixabay.

Reflects cumulative global renewable, electrification and infrastructure, and energy efficiency investment under the International Renewable Energy Agency's Planned Energy Scenario.

Global Supply Duopoly and Downstream Concentration; Governments Taking Notice





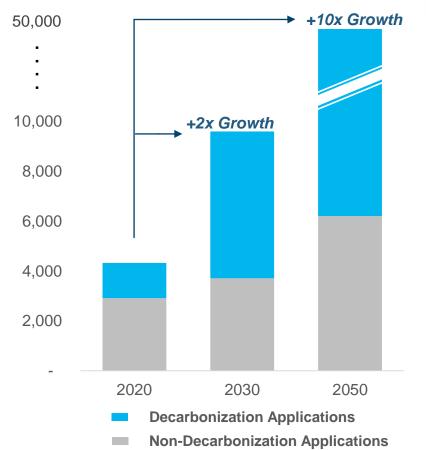
The Global Supply Chain Demands a New, Stable Source to Deliver Critical BORON⁺ Advanced Materials

Confluence of Explosive Demand Growth and Growing Supply Shortfall



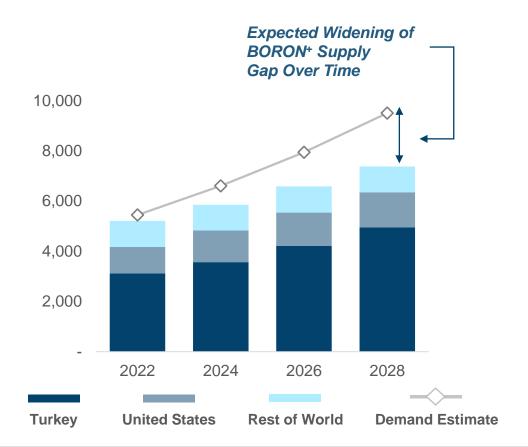
Boron Demand Growth⁽¹⁾

(k tonnes; boric acid equivalent)



Explosive Demand Growth Driven by Key Decarbonization Sectors

Supply / Demand Imbalance⁽¹⁾ (*k tonnes; boric acid equivalent*)



Continued Supply Pressures Bringing the BORON⁺ Supply Gap into Focus

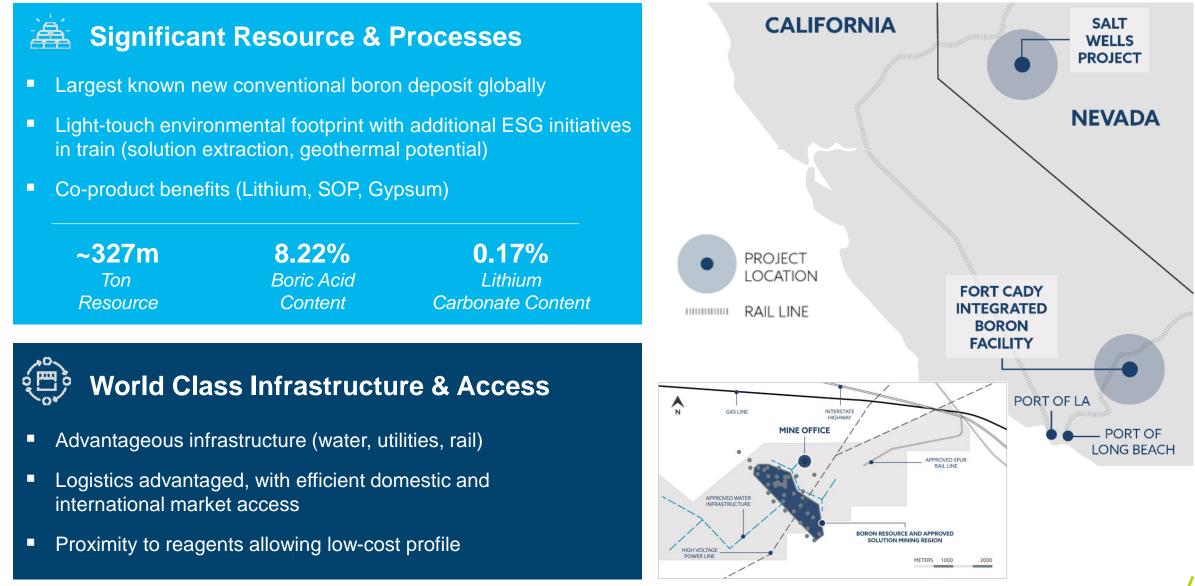


BORON⁺

Why 5E Advanced Materials

Significant Resource in Strategic Location with Advantageous Infrastructure





Building a Fully Integrated BORON⁺ Advanced Materials Business



1 Extraction	2 Process	3 Value-Add						
 Backwards integration Access to low cost supply 400ktpa+ target run-rate production* 5.1% boric acid in solution 	 Low carbon footprint Attractive cost profile via by-product sales Build or buy advanced material capabilities 	 Enter agreements to deliver BORON⁺ advanced materials Go-to-market strategy underpinned by long-term partnerships R&D to innovate new decarbonization- enabling applications 						
5E as Leader Across the BORON ⁺ Advanced Materials Supply Chain								



*Subject to completion of a bankable feasibility study, detailed engineering and financing (post 2023).

Source: Worldometers and IEA.

Building Our Competitive Strategic Advantage



- Focus on green end uses that enable decarbonization
- Build diversified portfolio of leading, value-add BORON⁺ products
- Positioning 5E as thought leader in BORON⁺



- Build proprietary processes and capabilities
- Continuous focus on R&D to address emerging trends, identify new market opportunities and develop IP portfolio
- Leverage partnerships with research institutions



- Delivering product via mutually beneficial commercial agreements
- Embedding 5E in supply chains to drive earnings durability
- Partnership feedback to drive product development & innovation

Platform and Foundations In-Place to Enable Strategic Execution





Assembled management team

- Continue Salt Wells exploration
- Achieve target run rate production (module staging optionality)

5E is On Track to Becoming a Global Leader in BORON⁺ Advanced Materials

supply agreements

* Refer to Company ASX announcements (ASX: ABR)

Leadership Team Ready to Deliver the Business, With Deep Board & Advisors Bench Strength





BORON⁺

Appendix

Fort Cady Mineral Resource Estimate and Reserves



S-K 1300 Compliant Mineral Resource Estimate						
Resources	MsT	B ₂ O ₃ %	H ₃ BO ₃ %	Li ppm	B ₂ O ₃ MsT	H ₃ BO ₃ MsT
Measured	35.96	6.57	11.67	330	2.36	4.2
Indicated	61.59	6.51	11.55	318	4.01	7.12
Total M&I	97.55	6.53	11.61	324	6.37	11.31
Inferred	11.43	6.40	11.37	324	0.74	1.31
Total M, I&I	108.98	6.52	11.60	324	7.11	12.62

JORC Code Compliant Mineral Resource Estimate						
Resources	MMT	B ₂ O ₃ %	H ₃ BO ₃ %	Li ppm	B ₂ O ₃ MMT	H ₃ BO ₃ MMT
Measured	38.87	6.70	11.91	379	2.61	4.63
Indicated	19.72	6.40	11.36	343	1.26	2.24
Total M&I	58.59	6.60	11.72	367	3.87	6.87
Inferred	61.85	6.43	11.42	322	3.98	7.07
Total M, I&I	120.44	6.51	11.57	344	7.84	13.93

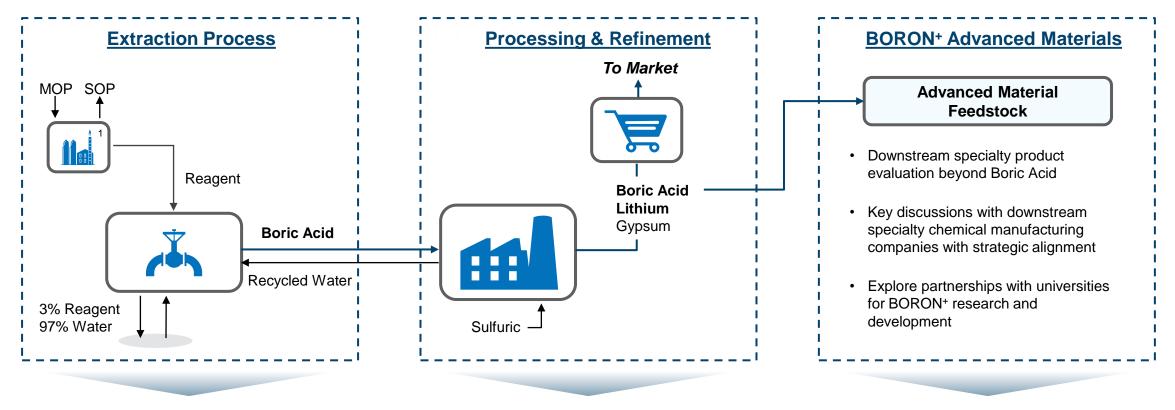
Total S-K 1300 and Uncontrolled Mineral Resource Estimate at 2% cut-Off Grade						
Resources	MsT	B ₂ O ₃ %	$H_3BO_3 \%$	Li ppm	B ₂ O ₃ MsT	H ₃ BO ₃ MsT
Total M, I&I	326.55	4.62	8.22	323	15.09	26.85

Source: Company materials.

5E Advanced Materials confirms all material assumptions and technical parameters underpinning the Mineral Resource Estimates and Reserves continues to apply and have not materially changed as per Listing Rule 5.23.2.

Integrated Processes to Maximize Clean BORON⁺ Extraction & Processing



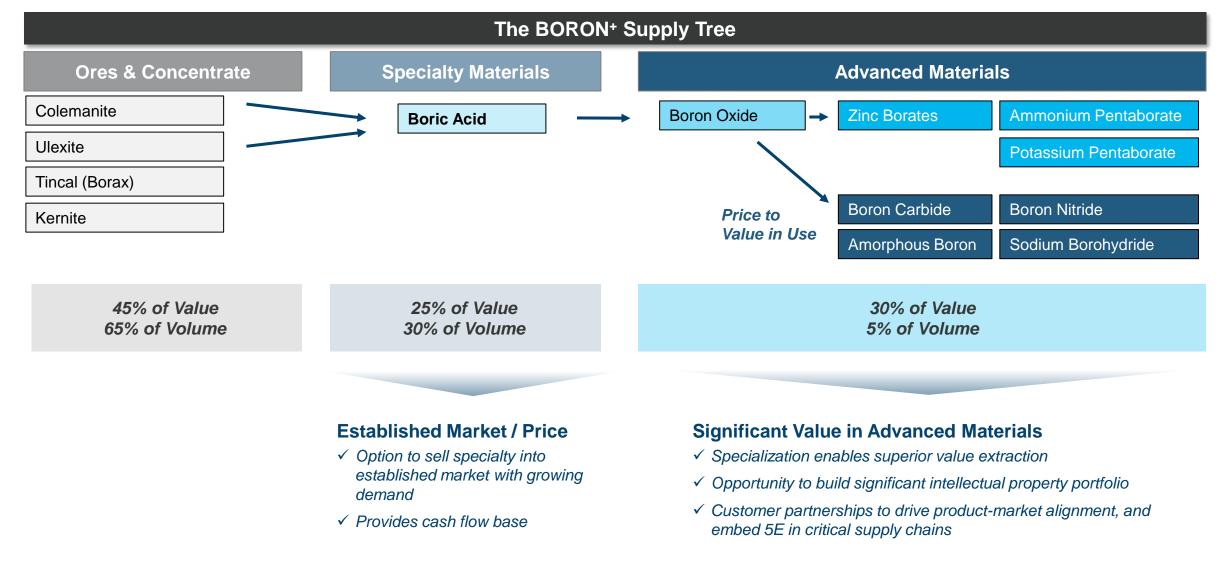


Environmentally-Friendly Extraction Process Ability to Sell Boric Acid Direct into Established Markets; Feed for Downstream Business Developing Downstream BORON⁺ Specialty Capabilities for Higher-Value Applications

Processing and Extraction Centered Around Recyclability ('Closed Loop'), Low Carbon Intensity, and Integration to Maximize Extraction of Co-Products

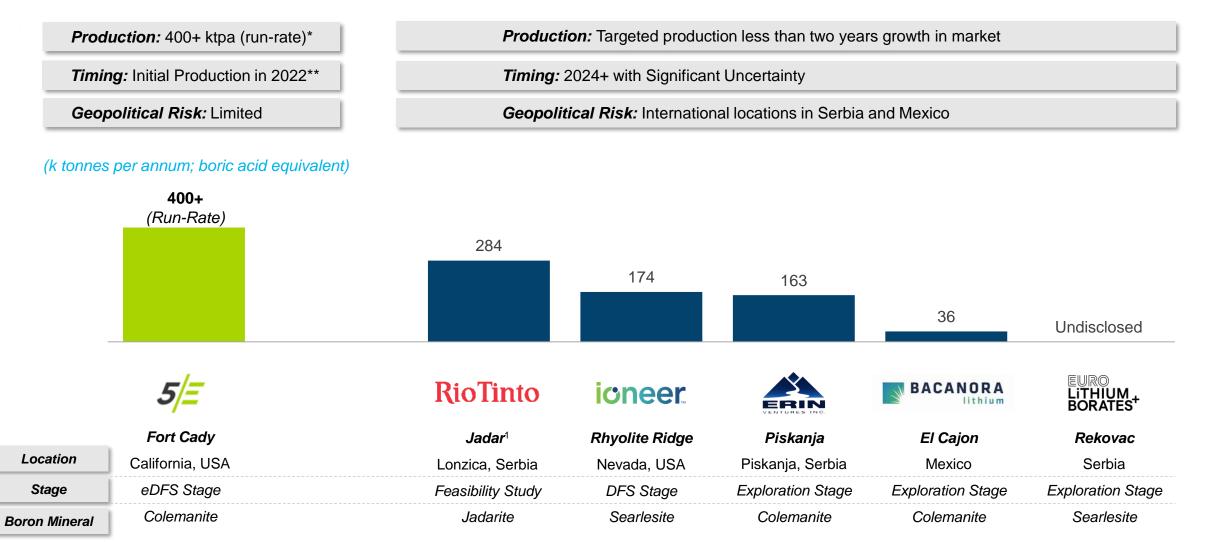
Generating Superior Value in Downstream Advanced and Specialty Materials





Few Near-Term Supply Alternatives Potentially Entering Service





*Subject to completion of a bankable feasibility study, detailed engineering and financing (post 2023).

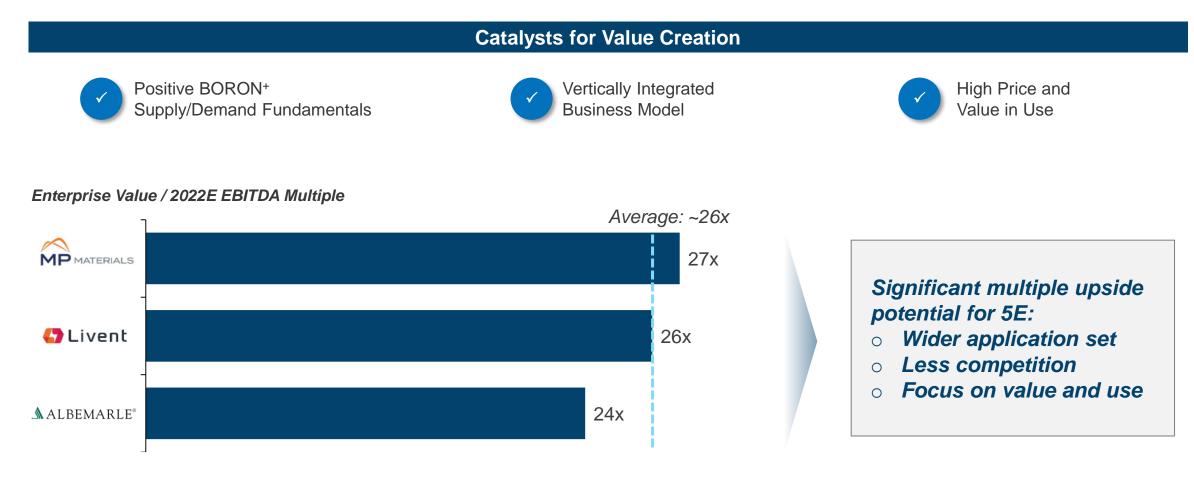
** Initial production from Fort Cady small scale boron facility. Refer to Company ASX announcements (ASX: ABR).

Source: Company materials and publicly available information.

1) Project reportedly on hold after Serbian government opposition based on news release from December 23, 2021.

Significant Rerating Potential to Enhance Shareholder Returns





Capital Markets Platform



Capital Structure

(As of January 14, 2022)



Share Price & Trading Volume

(A\$/share; 000s)



- Share Price

Volume



For Additional Information Please Contact:

Henri Tausch Chief Executive Officer htausch@5eadvancedmaterials.com Chance Pipitone Investor Relations – U.S. cpipitone@5eadvancedmaterials.com Elvis Jurcevic Investor Relations – Australia ej@irxadvisors.com

