

ABR CONFIRMS NEW MINE PLAN WITH INCREASED HEAD-GRADE LIKELY TO DELIVER SUBSTANTIAL BORON UPSIDE

HIGHLIGHTS

- Boric acid head-grade assumption for BFS increased to 5.1% from 3.7% (38% increase)
- New mine plan to mine entirety of ore body (zero % cut-off grade)
- Extraction ratio increased from 70% to 80% under the new mine plan
- Boron production at Fort Cady now potentially triple that in eDFS given reduction in cut-off grade, increase in extraction ratio, incremental access to ore body under electricity corridor and Exploration Target¹
- Positive discussions progressing with potential boron specialty advanced material partners

American Pacific Borates Limited (ASX:ABR) (**ABR** or the **Company**) is pleased to announce the results of core dissolution test-works that have resulted in a higher head-grade assumption and a new mine plan that sees the entire ore body mined with a zero % cut-off grade.

Commenting on the new mine plan, ABR CEO, Henri Tausch, said:

"The Company has delivered another very important milestone on our path to becoming a globally significant producer of boron and boron specialty advanced materials in the US. Our new mine plan has confirmed—an increase in boric acid head-grade and the ability to mine the entire the ore body, resulting in over 2.5 times the amount of boron production contemplated in the eDFS.

This is a stunning result, considering that we have further opportunity to increase this with modest success across our Exploration Target to the South and East of the existing ore body. Couple this with the recent 85% increase in the Measured and Indicated category for the Resource, we enter our upcoming US Listing with high confidence on delivering a very successful outcome for all shareholders."

¹ Important Note: An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.

COMPANY DIRECTORS

David Salisbury – Non-Executive Chairman
Anthony Hall – Executive Director
Stephen Hunt – Non-Executive Director
Jimmy Lim – Non-Executive Director



ISSUED CAPTIAL

389.9 million shares
61.8 million options

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American Pacific Borates Limited to be renamed
"5E Advanced Materials, Inc."



Head-Grade Test Works

US based mining engineers Agapito Associates, Inc were commissioned to prepare a solution mining methodology report for the Company for its Fort Cady Integrated Boron Facility Project. In preparing the report, Agapito completed dissolution test-works on existing core from the ore body from the 2017 Resource drilling program and then considered how best to extract boron and lithium mineralisation.

In summary, Agapito concluded:

1. The optimum injection fluid temperature was 50 degrees Celsius;
2. HCl content should be 5% of total injection fluid by weight;
3. These parameters would deliver an average head-grade of 5.11% boric acid in solution;
4. The resulting mine plan should be based on mining the entirety of the ore body with no cut-off grade; and
5. The ore body and surrounding sub surface mineralogy would support an extraction ratio of 80%.

The head-grade assumption of 5.11% is 38% higher than the 3.7% head-grade assumption used in the eDFS (refer ASX Announcement dated 16 April 2020). Similarly, the extraction ratio is also higher moving from 70% to 80%, meaning more of the ore body can be mined.

Importantly, this assumption is now being used to progress the updated BFS that is scheduled for completion in Q2 CY22.

Mine Plan

The reduction in cut-off grade from 5% B₂O₃ for the mine plan, to zero % cut-off grade, has a significant effect on the total quantum of boron and lithium that are able to be produced from the ore body. Production potential is further increased by the ability to mine mineralisation from under the electricity corridor.

The reconciliation below establishes a potential increase of 2.54 times across the life of the mine.

Table 1: Reconciliation of S-K 1300 to JORC Code Compliant Mineral Resource Estimate

Revised JORC Mineral Resource Estimate Excluding Electricity Corridor ²						
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	2.60	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	6.88
- Inferred	36.05	6.40	11.36	331	2.31	4.10
Total M,I&I	94.64	6.52	11.58	353	6.17	10.97

Convert Metric Tonnes to Short Tons						
Resources	MsT	B ₂ O ₃ %	H ₃ BO ₃ %	Li ppm	B ₂ O ₃ MsT	H ₃ BO ₃ MsT
Total M,I&I	104.32	6.52	11.58	366	6.80	12.09

Apply Extraction Ratio For Total Available Boron			
Resources	H ₃ BO ₃ MsT	Extraction Ratio	Available MsT BA
Total Boric Acid	12.09	70%	8.46



Total S-K 1300 and Uncontrolled Mineral Resource Estimate at 2% Cut-Off Grade ³						
Resources	MsT	B ₂ O ₃ %	H ₃ BO 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

Apply Extraction Ratio For Total Available Boron			
Resources	H ₃ BO ₃ MsT	Extraction Ratio	Available MsT BA
Total Boric Acid	26.85	80%	21.48

Calculate Difference			
Resources	eDFS	Revised Mine Plan	Difference
Total Boric Acid	8.46	21.48	154% increase (2.54 times)

- 2 Refer ASX Announcement 24 April 2020
 3 Refer ASX Announcement 11 November 2021

The 254% increase does not include any potential upside from the substantial Exploration Target prepared in August 2021 (refer ASX Announcement dated 4 August 2021). The Exploration Target has the potential to further extend mine life and / or scale. The Exploration Target is presented below.

Table 2: Exploration Target for the Fort Cady Boron Project

Area	Thickness metres	Tonnage Range MMt	Grade Range		Boric Acid Range MMt
			B ₂ O ₃ %	H ₃ BO ₃ %	
Land Parcel A	20.39 - 28.91	5.97 - 35.39	5.53 - 7.15	9.84 - 12.73	0.59 - 4.50
Land Parcel B	29.05 - 38.08	3.32 - 13.06	5.08 - 7.15	9.04 - 12.73	0.30 - 1.66
Land Parcel C	27.94 - 31.48	6.41 - 21.66	4.93 - 7.15	8.78 - 12.73	0.56 - 2.76
Land Parcel D	24.00 - 30.57	4.94 - 18.88	5.72 - 7.22	10.18 - 12.85	0.50 - 2.43
Total		20.64 - 88.99	5.32 - 7.17	9.47 - 12.76	1.95 - 10.08

Important Note: An Exploration Target is a statement or estimate of the exploration potential of a mineral deposit in a defined geological setting where the statement or estimate, quoted as a range of tonnes and a range of grade (or quality), relates to mineralisation for which there has been insufficient exploration to estimate a Mineral Resource.

Based on the above, the Company believes its ultimate mine plan has the potential to produce more than 2.5 times the boron contemplated in the eDFS which delivered a 23 year mine life at 450kstp/a of boric acid in full production.

Boron Specialty Advanced Material Partner Discussions

The Company is pleased to confirm it continues to have positive discussions with potential US based partners with respect to boron speciality advanced materials.

US Listing

The Company's targeted listing on Nasdaq is progressing well with the shareholder vote for the Scheme of Arrangement scheduled for 3 December 2021.

- ENDS -



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Competent Person Statement

The Competent Person confirms the information in the announcement provided under ASX Listing Rules 5.12.2 to 5.12.7 is an accurate representation of the available data and studies for the Project.

The information in this release that relates to Exploration Targets, Exploration Results, Mineral Resources or Ore Reserves is based on information prepared by Mr Louis Fourie, P.Geo of Terra Modelling Services. Mr Fourie is a licensed Professional Geoscientist registered with APEGS (Association of Professional Engineers and Geoscientists of Saskatchewan) in the Province of Saskatchewan, Canada and a Professional Natural Scientist (Geological Science) with SACNASP (South African Council for Natural Scientific Professions). APEGS and SACNASP are a Joint Ore Reserves Committee (JORC) Code 'Recognized Professional Organization' (RPO). An RPO is an accredited organization to which the Competent Person (CP) under JORC Code Reporting Standards must belong in order to report Exploration Results, Mineral Resources, or Ore Reserves through the ASX. Mr Fourie has sufficient experience which is relevant to the style of mineralisation and type of deposit under consideration and to the activity which they are undertaking to qualify as a CP as defined in the 2012 Edition of the JORC Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Mr Fourie consents to the inclusion in the release of the matters based on their information in the form and context in which it appears. This report contains historical exploration results from exploration activities conducted by Duval Corp ("historical estimates"). The historical estimates and are not reported in accordance with the JORC Code. A competent person has not done sufficient work to classify the historical estimates as mineral resources or ore reserves in accordance with the JORC Code. It is uncertain that following evaluation and/or further exploration work that the historical estimates will be able to be reported as mineral resources or ore reserves in accordance with the JORC Code. The Company confirms it is not in possession of any new information or data relating to the historical estimates that materially impacts on the reliability of the historical estimates or the Company's ability to verify the historical estimates.

Forward Looking Statements

This announcement contains 'forward-looking information' that is based on the Company's expectations, estimates and projections as of the date on which the statements were made. This forward-looking information includes, among other things, statements with respect to the Company's business strategy, plans, development, objectives, performance, outlook, growth, cash flow, projections, targets and expectations, mineral reserves and resources, results of exploration and related expenses. Generally, this forward-looking information can be identified by the use of forward-looking terminology such as 'outlook', 'anticipate', 'project', 'target', 'potential', 'likely', 'believe', 'estimate', 'expect', 'intend', 'may', 'would', 'could', 'should', 'scheduled', 'will', 'plan', 'forecast', 'evolve' and similar expressions. Persons reading this announcement are cautioned that such statements are only predictions, and that the Company's actual future results or performance may be materially different. Forward-looking information is subject to known and unknown risks, uncertainties and other factors that may cause the Company's actual results, level of activity, performance or achievements to be materially different from those expressed or implied by such forward-looking information.



About American Pacific Borates Limited (to be renamed 5E Advanced Materials, Inc.)

American Pacific Borates Limited is an ASX listed company focused on advancing its 100% owned Fort Cady Integrated Boron Facility located in Southern California, USA.

The Company is seeking to become a fully integrated producer of Boron specialty products and advanced materials. It is targeting Boron applications in the field of clean energy transition, electric transportation and food security amongst other high-performance, high-tech and high-margin applications.

The global shift from fossil based systems of energy production to renewable energy is increasingly important to investors, consumers and governments. The emergence of renewable energy, the onset of electrification and improvements in energy storage are all key drivers of clean energy transition. Boron is a key component in energy transition because it is highly versatile in chemical reactions and can be applied in processes for storing chemical and electrical energy, amongst other applications.

Global access to mined Boron is rare and the Company's production is underpinned by an even more rare and large colemanite deposit. Colemanite is a conventional Boron mineral that has been used to commercially produce Boron for broad applications for centuries. The Fort Cady colemanite ore deposit is the largest known contained traditional Borate occurrence in the world not owned by the two major Borate producers Rio Tinto and Eti Maden. The JORC compliant Mineral Resource Estimate and Reserve comprises 13.93Mt of contained Boric Acid.

As part of the commercialisation strategy, the Company will produce Boric Acid, Boron specialty products and advanced materials (and SOP as a by-product credit) from Mannheim furnaces. SOP is a high value specialty fertiliser prized for its low chloride potassium and sulfur content. Large target markets exist on ABR's doorstep in California and Arizona (collectively known as the bread basket of the United States)

The Company is currently working through a process to ensure a strong listing on Nasdaq having appointed a US Advisory Board and completing various activities including strengthening its executive management team, focusing on a larger initial mining operation to deliver stronger earlier EBITDA and progressing discussions with US based investment banks, potential US partners and debt capital markets advisors.

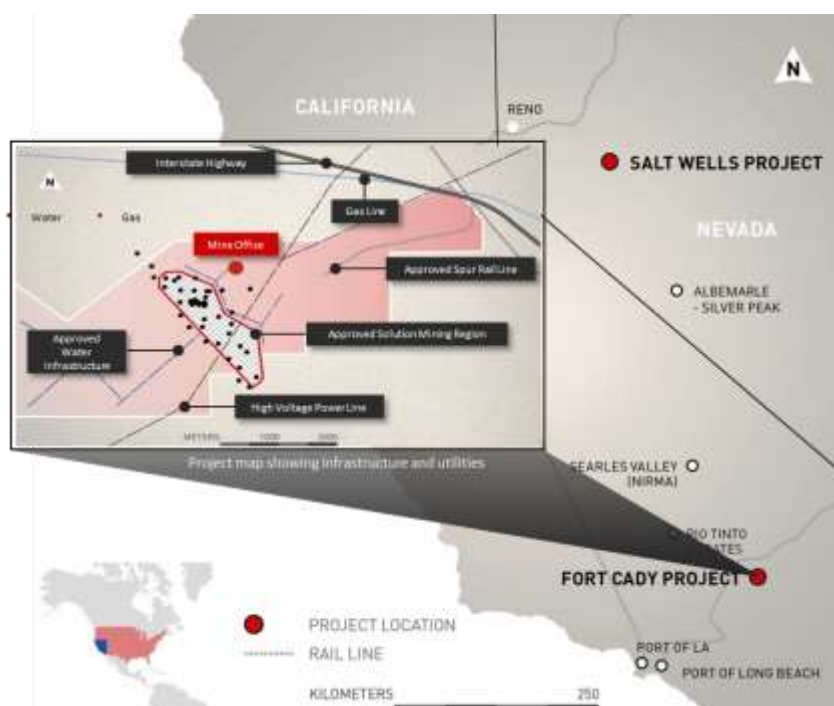


Figure 1: Location of the Fort Cady and Salt Wells Projects in the USA