

ABR Completes Process Optimisation Works to Deliver High Purity Boric Acid

HIGHLIGHTS

- **High purity +99.9% pure boric acid crystals produced**
- **Technical specifications have been met with minimal impurities which is expected to attract customers seeking a premium quality borate product**
- **Financing process in-progress with formal financing related engagements targeted to commence in Q2 CY2019**
- **All substantive permit applications now lodged for Fort Cady Borate Project**
- **Targeting the commencement of construction in Q4 CY2019 on a fully permitted basis subject to financing**

American Pacific Borate and Lithium Limited (ASX:ABR) ("ABR" or the "Company") is very pleased to announce it has delivered a high purity +99.9% pure boric acid crystal with minimal impurities from process optimisation works completed on 10 April 2019. The works were designed to ensure consistent delivery of a technical grade quality boric acid crystal from the Company's Fort Cady Borate Project ("Fort Cady" or "the Project"). Table 1 summarises the outstanding results.

American Pacific Borate and Lithium Ltd, CEO, Michael Schlumpberger commented,

"This is another hurdle completed in our aspiration to commence production of borates from our flagship Fort Cady Borate Project and ultimately to become a globally significant producer of high purity borate products."

COMPANY DIRECTORS

Harold (Roy) Shipes – Non-Executive Chairman
Michael X. Schlumpberger - Managing Director & CEO
Anthony Hall - Executive Director
Stephen Hunt - Non-Executive Director
John McKinney – Non-Executive Director



ISSUED CAPITAL

191.22 million shares
31.85 million options

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Our focus now turns to the completion of detailed engineering and securing the modest financing for the low capital starter project.

Importantly, we have delivered a very low capital starter project with brilliant financial metrics that sees us on the pathway to becoming a globally significant producer of borates targeting an EBITDA of over US\$340m per annum. When you consider borates are a vital input into new world technologies including electric vehicles, clean energy and food security related micro nutrients for optimal plant growth, we are sure the demand for borates will only continue to grow.”

Table 1: Fort Cady Boric Acid Assay Results, 8 April 2019

Component	Units	Boric Acid Solids
H₃BO₃ (boric acid)	%	+99.9%
Na	ppm	<10
K	ppm	<10
Mg	ppm	<10
Li	ppm	<10
Ca	ppm	2.85*
Fe	ppm	5.11*
Si	ppm	<10
F-	ppm	<5
Cl-	ppm	26.8
NO ₂ -	Ppm	32.5
SO ₄ -2	ppm	6.6*
Br-	Ppm	35.6
NO ₃	Ppm	29.4
* Estimated value below linear range		
Chlorine, Nitrite, Nitrate, & Sulfate analysed by IC – Dionex 2100 with AS11-HC Column (4/8/2019)		
Ca, Fe, Na, K, Si, B, & Mg analysed by ICP-OES – Leeman Profile Plus (4/8/2019)		
H ₃ BO ₃ of solids shown as calculated sum of impurities		
Analytical as of 8 April 2019		

Process Optimisation Works

Post the completion of the Definitive Feasibility Study for the Project, the Company has focused on completing process optimisation works to ensure it can consistently deliver a technical grade premium boric acid product. The results of these works have been very encouraging with a final process now designed to ensure a high-grade product with minimal impurities will be consistently delivered by the Project.



The optimisation works included:

1. Treating liquor ("Pregnant Leach Solution" or "PLS") that was retrieved on site from the Fort Cady orebody by solvent extraction ("SX") using isoctanol as the organic extractant;
2. Further treating the resulting liquor in a scrubbing stage (sulfuric acid and ion-exchange) to purify the liquor; and
3. Crystallising the final liquor via a crystalliser manufacturer where the liquor was sent for evaluation and testing of the crystallisation steps of the process.

This testing was successful as shown in the table of assay results above and the photos below.



Figure 1: Photos of Boric Acid Crystals Produced in Process Optimisation Works



Financing and Lodgement of Outstanding Operational Permits

The Company has commenced an informal process to secure funding for Phase 1A of the Fort Cady Borate Project. This process has tested lender appetite to substantially debt finance the initial operation. The Company has been pleased with the responses and is looking to commence a formal engagement process in the current quarter with a view to being full financed by Q4 CY2019 to enable construction to commence.

The financial metrics of the starter project and broader Project are presented below.

Table 2: Fort Cady Borate Project Financial Metrics (ASX release dated 31 January 2019)

Fort Cady Project (Boric Acid and SoP Production)	
Phase 1A Only	
NPV ₁₀	US\$224.7 million
IRR	58.3%
EBITDA in first full year of production	US\$26.7 million
Phase 1A & 1B Only	
NPV ₁₀	US\$385.3 million
IRR	36.4%
EBITDA in first full year of production	US\$60.3 million
Phase 1 & 2 Only	
NPV ₁₀	US\$853.5 million
IRR	40.0%
EBITDA in first full year of production	US\$192.3 million
Full Project (Phases 1, 2, & 3)	
NPV₁₀	US\$1.083 billion
IRR	40.5%
EBITDA in first full year of production	US\$345.4 million

The Company is also pleased to report that applications have been lodged for all substantive operational permits for the Project. The Company expects all permits to be awarded in a timeframe to enable it to confidently commence construction in Q4 CY2019 and production in Q4 CY2020.

ENDS



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About American Pacific Borate and Lithium Limited

American Pacific Borate and Lithium Limited is focused on advancing its 100% owned Fort Cady Borate Project located in Southern California, USA. Fort Cady is a highly rare and large colemanite deposit and is the largest known contained 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 is presented below. Importantly, it comprises 13.93Mt of contained boric acid.

In excess of US\$60m has been spent at Fort Cady, including resource drilling, metallurgical test works, well injection tests, permitting activities and substantial small-scale commercial operations and test works.

A Definitive Feasibility Study (“DFS”) was completed in December 2018 delivering compelling financial metrics including steady state production target of 410ktpa of boric acid and 110ktpa of SOP, delivering an unlevered post tax NPV₁₀ of US\$1.25bn (NPV₈ of US\$1.59bn) and an unlevered post tax IRR of 41% (refer to ASX Release dated 17 December 2018).

In January 2019 the DFS was enhanced to include a low capex starter project with an estimated capex of only US\$36.8m. This starter project delivers an EBITDA in the first year of operation of US\$26.7m and preserves the pathway to an EBITDA of over US\$340m in the first year of full production for the broader project (refer to ASX Release dated 22 January 2019).

JORC compliant Mineral Resource Estimate and Reserve

JORC compliant Mineral Resource Estimate and Reserve						
Reserves	MMT	B ₂ O ₃ %	H ₃ BO ₃ %	Li ppm	B ₂ O ₃ MT	H ₃ BO ₃ MT
Proven	27.21	6.70	11.91	379	1.82	3.24
Probable	13.80	6.40	11.36	343	0.88	1.57
Total Reserves	41.01	6.60	11.72	367	2.71	4.81
Resources						
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



In 1994 the Plan of Operations (mining permit) was authorised along with the Mining and Land Reclamation Plan. These permits are in good standing and contain a full Environmental Impact Report and water rights for initial operations of 82ktpa of boric acid. The Company is currently working through a permitting process to gain three additional permits required to commence operations.

In addition to the flagship Fort Cady Project, the Company also has an earn in agreement to acquire a 100% interest in the Salt Wells North and Salt Wells South Projects in Nevada, USA on the incurrence of US\$3m of Project expenditures. The Projects cover an area of 36km² and are considered prospective for borates and lithium in the sediments and lithium in the brines within the project area. Surface salt samples from the Salt Wells North project area were assayed in April 2018 and showed elevated levels of both lithium and boron with several results of over 500ppm lithium and over 1% boron.

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Figure 2: Location of the Fort Cady and Salt Wells Projects in the USA