ASX Announcement

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11 November 2021

SEC COMPLIANT MINERAL RESOURCE ESTIMATE PREPARED FOR US LISTING

HIGHLIGHTS

- **SEC compliant, S-K 1300 Mineral Resource Estimate (MRE) prepared to support US listing**
- **S-K 1300 MRE based on existing geologic model used in 2018 JORC code compliant MRE.**
- **Further review of 2017 drilling data along with changes in mineral tenure have led to the QP for the S-K 1300 to prepare a new MRE that increases the Measured and Indicated resources**
- **Grade / tonnage table prepared as part of S-K 1300 MRE demonstrates potential for significant boron and lithium upside if entirety of ore body can be mined**
- **Work-stream designed to optimise head-grade assumption and mining parameters progressing well**

American Pacific Borates Limited (ASX:ABR) (**ABR** or the **Company**) is pleased to announce an SEC compliant, S-K 1300 Mineral Resource Estimate (**MRE**) has been prepared to support the US listing.

The S-K 1300 MRE report is attached.

Please Note: The S-K 1300 MRE (foreign estimate) is not reported in accordance with the JORC Code. The Qualified Person for the S-K 1300 used the JORC Code compliant MRE as the basis for the S-K 1300. A full reconciliation between the two estimates is provided below.

ABR CEO, Henri Tausch commented:

"This is another important milestone completed in our process to become US listed. Importantly we have also established three additional benefits as part of the S-K 1300 conversion process:

1. *We now have a grade / tonnage table that shows the size of the opportunity if we can optimise our mine plan to mine the entirety of the ore body; our contained boric acid across the ore body would go from 15.5mst to close to 27mst and increase in over 70%;*
2. *We now have an increased confidence in the estimate resulting in an 85% increase in Measured and Indicated Mineral Resource Estimate from 59m tonnes to 108m tonnes; and*
3. *We have established we own the mineral rights under the electricity corridor which is likely to significantly increase mine life.*

Our focus remains on delivering a very positive US listing to our shareholders and ensuring we continue to support our ASX listing on an ongoing basis."

COMPANY DIRECTORS

David Salisbury – Non-Executive Chairman

Anthony Hall – Executive Director

Stephen Hunt – Non-Executive Director

Jimmy Lim – Non-Executive Director

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

ISSUED CAPTIAL

389.9 million shares

61.8 million options

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S-K 1300 Mineral Resource Estimate

The SEC compliant, S-K 1300 Mineral Resource Estimate was prepared by Steven Kerr, CPG, Principal Geologist, Millcreek Mining Group (the Qualified Person). Mr Kerr is a Certified Professional Geologist with the American Institute of Professional Geologists (CPG-10352), a recognised professional organisation of the Committee for Mineral Reserves International Reporting Standards (CRIRSCO). Mr Kerr has over 36 years experience in exploration and resource evaluation.

Following a detailed review of the drilling and analytical data from the 2017 drilling campaign completed by ABR, the QP considers the 2017 drilling program adequately validated the historic drilling completed by Duval. In addition, changes to mineral tenure led to the QP preparing a new mineral resource estimate for the Fort Cady Deposit. The new MRE has used the same geologic model used in the previous 2018 JORC MRE. Further review of the drilling data, the validation of historic data coupled with changes mineral tenure have led to an increase in reported Measured and Indicated resources.

Reconciliation Between S-K 1300 MRE and JORC code compliant MRE

A full reconciliation between the S-K 1300 and JORC code compliant Mineral Resource Estimates is presented below.

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

S-K 1300 compliant Mineral Resource Estimate						
Resources	MsT	B_2O_3 %	H_3BO_3 %	Li ppm	B_2O_3 MsT	H_3BO_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**

Uncontrolled Mineral Resource Estimate						
Resources	MsT	B_2O_3 %	H_3BO_3 %	Li ppm	B_2O_3 MsT	H_3BO_3 MsT
- **Measured**	3.34	6.19	11.01	344	0.21	0.37
- **Indicated**	18.52	7.00	12.46	371	1.30	2.31
Total M&I	**21.86**	**6.88**	**11.61**	**367**	**1.51**	**2.69**
- **Inferred**	1.34	5.75	10.23	345	0.07	0.12
Total M,I&I	**23.18**	**6.82**	**12.10**	**366**	**1.58**	**2.81**

Total S-K 1300 and Uncontrolled Mineral Resource Estimate						
Resources	MsT	B_2O_3 %	H_3BO_3 %	Li ppm	B_2O_3 MsT	H_3BO_3 MsT
Total M,I&I	**132.16**	**6.57**	**11.70**	**331**	**8.69**	**15.43**

Convert Short Tons to Metric Tonnes						
Resources	**MMT**	**B_2O_3 %**	**H_3BO_3 %**	**Li ppm**	**B_2O_3 MMT**	**H_3BO_3 MMT**
- **Measured**	35.65	6.54	11.64	331	2.33	4.15
- **Indicated**	72.68	6.62	11.79	330	4.82	8.56
Total M&I	**108.33**	**6.59**	**11.74**	**330**	**7.15**	**12.71**
- **Inferred**	11.58	6.33	11.27	326	0.73	1.30
Total M,I&I	**119.91**	**6.56**	**11.69**	**330**	**7.88**	**14.01**

JORC Code Compliant Mineral Resource Estimate						
Resources	**MMT**	**B_2O_3 %**	**H_3BO_3 %**	**Li ppm**	**B_2O_3 MMT**	**H_3BO_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**

Difference - Global Mineral Resource Estimated JORC v S-K 1300 / Uncontrolled						
Resources	**MMT**	**B_2O_3 %**	**H_3BO_3 %**	**Li ppm**	**B_2O_3 MMT**	**H_3BO_3 MMT**
Total M,I&I	**-0.53**	**0.05**	**0.12**	**-14**	**0.04**	**0.08**

Difference - Confidence JORC v S-K 1300 / Uncontrolled		
Resources	**MMT**	**% Increase**
Measured	-3.22	-8%
- **Indicated**	52.96	269%
Total M&I	**49.74**	**85%**
- **Inferred**	-50.27	-81%

Information Required Under ASX Listing Rule 5.12

5.12.1: The foreign MRE is dated 15 October 2021 and is based on the JORC Code compliant MRE that was dated December 2018 (refer to ASX Release dated 3 December 2018)

5.12.2: The foreign MRE uses the same categories as the JORC Code

5.12.3: The foreign MRE is necessary for any US listing under SEC guidelines

5.12.4: The foreign MRE is based on the JORC Code compliant MRE with a full reconciliation provided above. Importantly the QP for the S-K 1300 considers ABR's 2017 drilling campaign adequately validated historical drilling completed by Duval to have sufficient confidence to move areas associated with this drilling into a Measured and Indicated category where possible. This was further strengthened by the Company's recent acquisition of land and mineral rights in this area.

5.12.5: Refer JORC Code compliant MRE ASX release dated 3 December 2018

5.12.6: No more recent information available

5.12.7: Refer 5.12.5

5.12.8: The Company expects to receive a report shortly that may enable a reduction in the cut-off grade to support a significantly larger MRE. The Company also expects to test a JORC Code compliant Exploration Target over the coming months. Refer below.

5.12.9: Please refer to the bold statement on the first page with respect to the foreign MRE not being reported consistent with the JORC Code.

5.12.10: Please refer to the Competent Person statement at the end of this release.

Grade / Tonnage Table

As part of S-K 1300 report, the Qualified Person prepared a grade / tonnage table to enable the Company to place some parameters around the potential upside associated with mining the entire ore body. The Company is currently working on a mine plan to enable the entirety of the ore body to be mine.

The cut-off grade assumed for the Company's existing Mineral Resource Estimate and associated mine plan is 5% B_2O_3 (8.9% H_3BO_3). Reducing the cut-off grade to 3% B_2O_3 results in a marginal decrease of average grade from 6.57% to 5.64%, but results in a significant increase in contained boric acid from 15.46mst to 24.36mst. The grade / tonnage table presented.

Table 2: Grade / Tonnage for S-K 1300 Mineral Resource Estimate

Grade / Tonnage Table for S-K 1300 Controlled and Uncontrolled Areas							
Grade	**MsT**	**B_2O_3 %**	**H_3BO_3 %**	**Li ppm**	**B_2O_3 MsT**	**H_3BO_3 MsT**	**Li_2CO_3 MsT**
8%	6.15	9.00	16.03	339	0.55	0.99	0.01
7%	33.16	7.69	13.69	355	2.55	4.54	0.06
6%	98.61	6.87	12.23	332	6.77	12.06	0.17
5%	132.16	6.57	11.70	331	8.68	15.46	0.23
4%	175.17	6.04	10.76	333	10.58	18.83	0.31
3%	242.66	5.64	10.04	332	13.69	24.36	0.43
2%	326.55	4.62	8.22	323	15.09	26.85	0.56

Work streams are progressing to optimise mining recoveries and mining parameters. The Company is expecting these work streams to demonstrate the following:

1. A higher head-grade is likely for contained boric acid in the solution that is retrieved from the ore body; and
2. A likely ability to mine the entire ore body resulting in substantially more contained boric acid and a longer mine life or greater scale or both.

Exploration Target

The Company is preparing to test the substantial Exploration Target that was prepared in August 2021 (refer ASX release dated 4 August 2021). The Exploration Target has the potential to further extend mine life or scale or both. The Exploration Target is presented below.

Table 3: Exploration Target for the Fort Cady Boron Project (dated 3 August 2021)

Area	Thickness	Tonnage Range	Grade Range		Boric Acid Range
	metres	MMt	B_2O_3 %	H_3BO_3 %	MMt
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**

<u>Important Note:</u> 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.

- ENDS -

Authorised for release by: Henri Tausch, Chief Executive Officer

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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.

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.

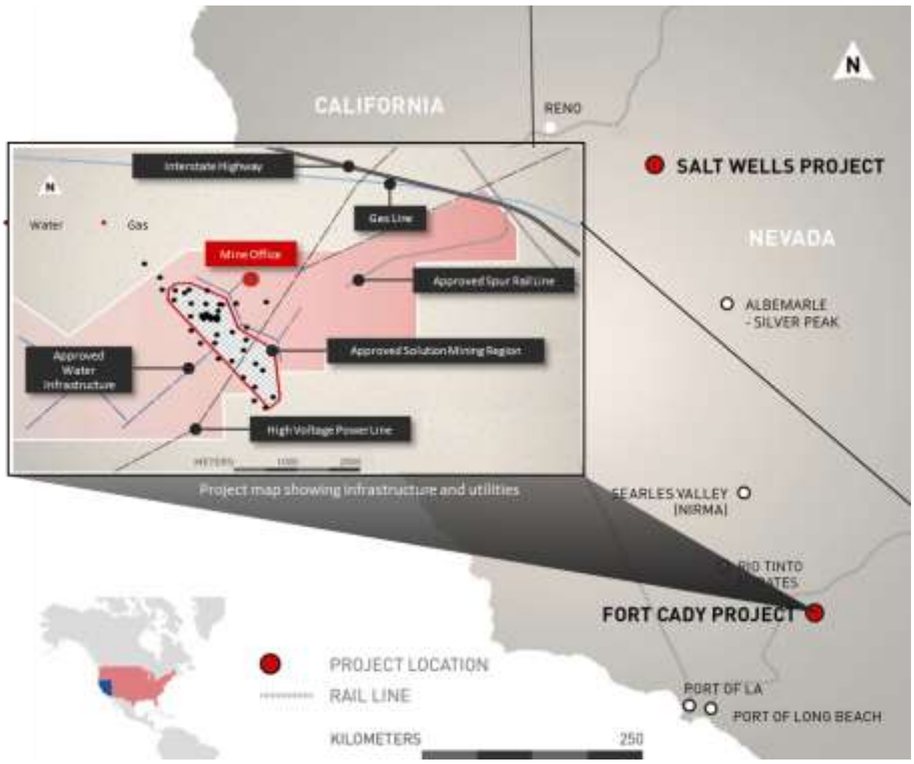


Figure 1: Location of the Fort Cady and Salt Wells Projects in the USA

Initial Assessment Report
Fort Cady Borate Project
San Bernardino County, California

PREPARED FOR:

AmericanPacific

BORATES LIMITED

PREPARED By:

Steven Kerr, CPG, Principal Geologist, Millcreek Mining Group

Report Date:	October 18, 2021
Effective Date:	October 15, 2021
Project Number:	210096

Millcreek Mining GROUP

DATE AND SIGNATURE PAGE

This report titled "Initial Assessment Report, Fort Cady Borate Project, San Bernardino California" and dated October 18, 2021, was prepared and signed by:

(Signed & Sealed)

Steven B. Kerr CPG
Principal Consultant – Geology
Millcreek Mining Group

Dated at Bountiful, Utah
October 18, 2021

TABLE OF CONTENTS

List of Tables

List of Figures

1 EXECUTIVE SUMMARY

American Pacific Borates Limited (APBL) Is a publicly traded company listed on the Australian Securities Exchange under the symbol ABR. Through its wholly owned U.S. subsidiary, Fort Cady (California) Corporation (FCCC), the company is developing the Fort Cady Borate Project (the Project). The Project contains the largest known global deposit of colemanite not owned by the Turkish Government controlled entity, Eti Maden. Colemanite is a hydrated calcium borate mineral ($2CaO \cdot 3B_2O_3 \cdot 5H_2O$) found in evaporite deposits. Through in-situ leaching (ISL), FCCC will recover borates (boron-oxygen compounds), boric acid (H_3BO_3), lithium (Li), and other potential commodities.

This report presents the resources at the Fort Cady Borate Project. Reserves are not presented in this report since new dissolution tests are ongoing and work for a small-scale boron facility (SSBF) work is proceeding, both of which provide key inputs to the economic recoverability of the resources. This report has been prepared under the S-K 1300 rules and guidelines of the U.S. Securities and Exchange Commission (SEC) and will be used in supporting a listing on NASDAQ, under the name '5E Advanced Materials Inc.'.

The Fort Cady Borate deposit was first discovered in 1964. From 1977 through the early 2000s, the deposit has undergone exploration, pilot ISL testing, feasibility studies and limited production. APBL purchased a 100% interest in the Project in in May 2017 from Atlas Precious Metals Inc. Since that time, the Project has undergone additional exploration, permitting and development activities. APBL completed an exploration drilling program to validate previous exploration efforts and expand mineral resources. Following the drilling program, a JORC mineral resource estimate was prepared by Terra Modelling Services for the Project (December 2017). TMS later updated the JORC mineral resource estimate in December 2018.

In 2018, a definitive feasibility study (DFS) for the Project was completed by APBL and reviewed by RESPEC Company LLC (RESPEC). The Project contemplated a three-phase project which, in full production, would produce 450 kstpa boric acid (BA) and 20 kstpa sulphate of potash (SOP). Based on further engineering work, an enhanced definitive feasibility study (eDFS) was released in February 2021, making a substantial increase in proposed production of SOP,

The Project is located in the Mojave Desert region in eastern San Bernardino County, California. The project lies approximately 118 mi. northeast of Los Angeles near the town of Newberry Springs and is approximately 36 mi. east of the city of Barstow. Fort Cady resides in a highly prospective area for borate and Li mineralization and has a similar geological setting as Rio Tinto Borates' Boron operations and Nirma Limited's Searles Lake (Trona) operations, situated approximately 75 mi. west-northwest and 90 mi. northwest of the Project, respectively.

Mineral tenure for the Project is through a combination of federal mining claims, a mineral lease, and private fee simple lands. These include 1,010 acres of fee simple patented or privately held land; 2,380 acres of unpatented claims held by FCCC; and 1,520 acres of unpatented claims leased by FCCC from the adjacent Elementis Hectorite Mine.

The Project is located in the western Mojave Desert with arid, hot, dry sunny summers of low humidity and temperate winters. Elevation ranges from approximate 1,970 ft. to approximately 2,185 ft. above sea level. Basalt lava flows cover most of the higher elevations or hilltops with flat ground and drainages covered in pale, gray-brown, silty soils.

Access to the Project is via U.S. Interstate 40 (I-40), eastbound from Barstow to the exit for Newberry Springs. From the exit, travel continues eastward for 14.4 mi. on the National Trails Highway to County Road 20796 (CR20796). Travel continues south on CR20796 for 2.2 mi. to an unnamed dirt road bearing east for another 1.1 mi. to the mine office and plant site at the Project. Several other dirt roads connect to the dirt road leading to the mine office and to CR20796 that provide good access throughout the project area.

The Union Pacific Railroad runs subparallel to I-40 with a rail loadout located approximately 0.4 mi. west of CR20796. San Bernardino County operates six general aviation airports and commercial flight service is available through five airports in the greater Los Angeles area and in Los Vegas, NV. A dedicated cargo service airport, San Bernardino International Airport, is located approximately 65 mi. southwest of the Project.

Construction of an ISL mining operation and processing plant at the Project will require local resources of contractors, construction materials, employees and housing for employees, and energy resources. The Project has good access to numerous sizable communities between Barstow and the greater Los Angeles area offering excellent access to transportation, construction materials, labor, and housing.

Discovery of the Fort Cady borate deposit occurred in 1964 when Congdon and Carey Minerals Exploration Company found several zones of colemanite between the depths of 1,330 ft to 1,570 ft. below ground. In September 1977, Duval Corporation ("Duval") initiated land acquisition and exploration activities near Hector, California, Duval commenced limited-scale solution mining in June 1981. An additional 17 production wells were completed between 1981 and 2001 which were used for injection testing and pilot-scale operations. FCMC became involved with the project with the view of commencing pilot-scale testing. The first phase of pilot plant operations was conducted between 1987 and 1988. Approximately 450 tonnes of boric acid were produced during this time. Given the promising results of the pilot-scale tests the project was viewed to be commercially viable. Concentrated permitting efforts for commercial-scale operations began in early 1990. Final approval for commercial-scale solution mining and processing was attained in 1994.

Extensive feasibility studies, detailed engineering and test works were subsequently undertaken in the late 1990's and early 2000's. This included a second phase of pilot plant operations between 1996 and 2001 during which approximately 1,800 tonnes of a synthetic colemanite product (marketed as CadyCal 100) were produced. Commercial-scale operations were not commissioned due to low product prices and other priorities of the controlling entity.

Over US$80 million has been spent on the Fort Cady Project, including license acquisition, drilling and mineral resource estimation, well testing, metallurgical testing, feasibility studies and pilot plant testing test work. In addition, the project has previously obtained all operating and environmental permits required for commercial solution mining operations to produce 90,000 short tons per annum of boric acid.

The project area is characterized by narrow faulted mountain ranges and flat valleys and basins, the result of tectonic extension that began approximate 17 million years ago. The Project lies within the Hector Basin of the Barstow Trough. The Barstow Trough, which is a structural depression is characterized by thick successions of Cenozoic sediments, including borate-bearing lacustrine deposits, with abundant volcanism along the trough flanks. As the basin was filled with sediments and the adjacent highland areas were reduced by erosion, the areas receiving sediments expanded, and playa lakes, characterized by fine-grained clastic and evaporitic chemical deposition, formed in the low areas at the center of the basins.

Mineralization occurs in the subsurface in a sequence of lacustrine sediments ranging in depths from 1,135 to 1,872 ft. below the surface. The mineralization is hosted by a sequence of mudstones and tuffs, consisting of variable amounts of colemanite, a calcium borate ($2CaO \cdot 3B_2O_3 \cdot 5H_2O$). Colemanite is the target mineral for this deposit and is found in evaporite deposits of alkaline lacustrine environments. Colemanite is a secondary alteration mineral formed from borax and ulexite. The colemanite is associated with thinly laminated siltstone, clay and gypsum beds containing an average of 9% calcite, 35% anhydrite plus 10% celestite ($SrSO_4$). In addition to colemanite and celestite, elevated levels of Li have been found through chemical analyses of drill samples.

Boron is believed to have been sourced from thermal waters that flowed from hot springs in the region during times of active volcanism. These hot springs vented into the Hector Basin that contained a large desert lake. Borates were precipitated as the thermal waters entered the lake and cooled or as the lake waters evaporated and became saturated with boron. Colemanite being the least soluble mineral, would evaporate on the receding margins of the lake. The evaporite-rich sequence forms a consistent zone in which the borate-rich colemanite zone transgresses higher in the section relative to stratigraphic marker beds.

Based on drilling results, the deposit is elongate in shape and trends northwesterly, extending over an area of about 606 acres at an average depth of approximately 1,150 ft. to 1,312 ft. below surface. In plan view, the concentration of boron-rich evaporites is roughly ellipsoidal with the long axis trending N40°W to N50°W. Beds within the colemanite deposit strike roughly N45°W and dip about 10° or less to the southwest. Using an isoline of 5% B_2O_3, mineralization has an approximate width of 2,800 ft. and a length of 11,150 ft. with thickness ranging from 70 to 262 ft. (exclusive of barren interbeds).

Duval completed 35 drill holes (DHB Series) between 1979 and 1981 as part of their exploration efforts. With the exception on one hole, holes were drilled using a combination of rotary drilling through the overburden followed by core drilling through the evaporite sequence. Geologic logs of rotary cuttings and core were completed for all holes followed by geochemical analyses of the core.

In 1981 and 1982, Duval drilled five wells to be used in injection/recovery tests. Like previous drilling, the wells were rotary drilled through the overburden and cored through the evaporite sequence. Following coring, 5.5-inch casing was set through the cored interval. Duval drilled three more wells in 1992 and 1993. FCMC completed two drilling campaigns during their participation on the project between 1987 and 1996 as rotary holes for injection/recovery wells. Cuttings samples were collected for analysis on 5-foot intervals for holes three of the wells.

In May 2017, APBL completed 14 drill holes, confirmed previous drilling results, and expanded the mineral resource estimate at Fort Cady. Drilling through the overburden sequence was completed using rotary air blast drilling, followed by drilling HQ (2.5-inch) core through the evaporite sequence. The core was logged and evaluated using industry standard techniques. All drill holes were completed vertically with no greater than five degrees of deviation.

Core logging was completed on all drill holes and included lithological and geotechnical logging. Downhole geophysical logs, including Gamma Ray, Induction and standard caliper were completed on all drill holes from surface to TD, with the exception of 17FTCBL009 where adverse hole conditions resulted in only partial geophysical logging. All core is logged and photographed according to industry standard procedures. A geotechnical drill hole, APBL023, was also completed in 2017. This well was cored its entire length and a geologic log was completed to define mineralized horizons.

There are 2,113 samples from the 2017 drilling program representing 1,713 ft. of core. In conjunction with the 2017 drilling program, 29 historical drill holes completed by Duval and four holes completed by FCMC have been utilized in the mineral resource estimate. There are 3,672 samples from the historic drilling representing a cumulative total 10,831.3 ft. of core. The QA/QC procedures for the historic drilling are unknown though the work products compiled during the historic drilling suggests it was carried out by competent geologists following procedures considered standard practice at that time.

For the 2017 drilling program, entire core sequences were sampled. Sample intervals were determined at the time of logging are based on changes in lithology, mineralogy, and bedding. Sample intervals range from 0.2 to 6.6 ft. with an overall average sample length of 2.66 ft. Following determination of sampling intervals, core was split in half using a core splitter. One half of the core is used for the analytical sample with the remaining half core being returned to the core box for archiving. Samples were dispatched by commercial carrier to the Saskatchewan Research Council (SRC) for geochemical analysis. All samples underwent a multi-element Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES), using a multi-acid digestion. Boron undergoes a separate digestion where an aliquot of the sample is fused in a mixture of $NaO_2/NaCO_3$ in a muffle oven, then dissolved in deionized water, prior to analysis.

APBL submitted 415 control samples, in the form of certified standards, blanks and coarse duplicates. SRC also submitted 233 of their own internal control samples in the form of standards and pulp duplicates. The QA/QC program has shown the analyses are viable with a minimum of dispersion or contamination errors.

During the site visit, the QP examined the core for five of the 2017 drill holes completed by ABL. Core has been safely stored in a designated storage building nearby the mine site office and is in good condition. The QP examined the core and compared the core to the geologic logs and sample interval records and found good agreement with the log descriptions and with no discrepancies with sample intervals.

The QP has done a visual check of drilling locations through Google Earth. Drill sites from the 2017 drilling program are still visible on imagery. Older sites completed by Duval and FCMC are not discernible on imagery. The QP checked historic drilling location data to ensure these records had been properly converted to UTM coordinates.

The QP was provided drilling records, sample intervals, and assay results in Excel Workbook files used as input for the drill hole database. Through a variety of data checks drill hole information was evaluated for duplicate entries, incorrect intervals, lengths, or distance values less than or equal to zero, out-of-sequence intervals and intervals or distances greater than the reported drill hole length. A review comparing original field logs and assay reports showed the data to have been transcribed accurately into the Excel files.

In-situ solution mining depends on void spaces and porosity, permeability, ore zone thickness, transmissivity, storage coefficient, piezometric surface, and hydraulic gradient as well as reaction and extraction method efficiencies. APBL intends to use solution mining by injecting an acid solution via a series of wells into the mineralized horizons. The acid solution reacts with the colemanite forming a pregnant leach solution (PLS) containing boric acid (H_3BO_3). There are various ways of developing the well field for in-situ leaching, including “push-pull” where wells function as both as injection and recovery well; line drive; and multiple spot patterns. In addition to the vertical wells, horizontal drilling for well development is also being evaluated as a potential option for the Project. The mine wellfield development and the pattern will ultimately depend on the hydrogeologic model and the cost benefit analysis of various patterns and options.

The leaching of the colemanite will occur via the injection of a heated HCl injection fluid into the deposit through the wells. The injection fluid will remain in the formation and extracted after sufficient contact time with the colemanite. The concentration of HCl in the injection solution is one of the key control variables for the mining process to optimize the reaction with the colemanite, while not being excessive to minimize the reaction with minor impurities such as aluminum, magnesium, iron, anhydrides, and calcite.

PLS from the wells will be recovered and piped to the boric acid processing facility. The PLS will contain primarily boric acid and calcium chloride along with minor quantities of other chlorides such as strontium, lithium, potassium, sodium, aluminum, and magnesium. Evaporative crystallization will be used to extract the boric acid from the PLS. The crystals are dewatered and then dried to make the final boric acid product.

The database used for resource estimate includes 51 drill holes and a cumulative sampled length of 81,421.4 ft. (24,823.6 m.). The database was provided to Millcreek in a digital format and represents the Project's exploration dataset as of (July 19, 2021). Borate is listed as weight percent (%) B_2O_3 and Li as ppm. The drilling database contains 5,775 analytical values for B_2O_3 and 5,193 analytical values for Li.

TMS developed a gridded geologic model of the Project using Vulcan™ software. The mineralization does not correlate to lithological markers as the entire sequence is predominantly lacustrine mudstone. However, detailed examination of the analytical results reveals distinct mineralized horizons. The deposit was delineated based on these patterns of mineralization into four mineralized horizons, two non- to weakly mineralized interbeds and two non-mineralized horizons bounding the deposit. Grids represent the bounding elevation surfaces of key horizons, thicknesses, and analytical grades. Mineral horizon grids were interpolated using an Inverse Distance Squared (ID2) algorithm. Mineralization is spatially defined by a resource boundary using a distance of 150 m, from the last intersection of mineralization in a drill hole.

Variogram modelling was successful for B_2O_3 grades for three of the horizons and subsequent interpolation by ordinary kriging. ID2 interpolation was used with the uppermost mineralized horizon and for Li in all horizons using the same spatial limits established with the horizon grids.

The QP has conducted an audit of the gridded model prepared by TMS. The QP loaded the resource database and grids provided by TMS into Carlson Mining®, a geology and mine planning software that competes directly with Vulcan. The audit and validation of the gridded model consisted of the following steps: 1) Comparison of drill hole postings for intercepts and composite grades with corresponding grid values; 2) Swath plots comparing kriging to nearest neighbor searches to evaluate grade distribution and bias; and 3) the QP completed a separate estimate in Carlson Mining following the parameters used by TM to the defined resource boundary. This separate resource estimate was within 3.6% of the TMS estimate.

Results of the mineral resource estimation are shown in Table 1.1. The resource estimate contains a combined 97.55 million tonnes (Mt) of Measured plus Indicated resources with an average grade of 6.53% B_2O_3 and 324 ppm Li, using a 5% cut-off grade for B_2O_3. The mineral resource estimate also identifies 11.43 Mt of Inferred resources under mineral control by FCCC. Approximately 91.21 Mt or 94% of the mineral resources controlled by FCCC occurs within the approved Operating Permit region approved for commercial-scale operations which was awarded to FCCC in 1995. The resource boundary also contains 23.18 Mt of Uncontrolled Resources, resources APBL does not have mineral rights to exploit.

The accuracy of resource and reserve estimates is, in part, a function of the quality and quantity of available data and of engineering and geological interpretation and judgment. Given the data available at the time this report was prepared, the estimates presented herein are considered reasonable. However, they should be accepted with the understanding that additional data and analysis available subsequent to the date of the estimates may necessitate revision. These revisions may be material. There is no guarantee that all or any part of the estimated resources or reserves will be recoverable.

Table 1.1 Fort Cady Project Mineral Resource Estimate, October 15, 2021

Measured Resource	Horizon	Tonnage (Mt)	B_2O_3 (wt. %)	H_3BO_3 (wt %)	Lithium (ppm)	B_2O_3 (Mt)	H_3BO_3 (Mt)
FCCC Fee Lands	UMH	0.03	5.73	10.17	259	0.00	0.00
	MMH	7.01	6.31	11.20	317	0.44	0.79
FCCC Fee Lands - Transmission Corridor	MMH	5.24	6.51	11.55	293	0.34	0.61
FCCC-Elementis Leased Lands	UMH	0.75	6.64	11.79	264	0.05	0.09
	MMH	18.59	6.74	11.98	349	1.25	2.23
	IMH	4.34	6.35	11.27	324	0.28	0.49
Total Measured Resource		**35.96**	**6.57**	**11.67**	**330**	**2.36**	**4.20**
Indicated Resource	**Horizon**	**Tonnage (Mt)**	**B_2O_3 (wt. %)**	**H_3BO_3 (wt %)**	**Lithium (ppm)**	**B_2O_3 (Mt)**	**H_3BO_3 (Mt)**
FCCC Fee Lands	UMH	0.87	5.73	10.17	259	0.05	0.09
	MMH	29.00	6.47	11.50	329	1.88	3.33
FCCC Fee Lands - Transmission Corridor	MMH	20.41	6.51	11.55	293	1.33	2.36
FCCC-Elementis Leased Lands	UMH	0.31	6.68	11.87	251	0.02	0.04
	MMH	7.70	6.74	11.98	349	0.52	0.92
	IMH	3.29	6.40	11.37	324	0.21	0.37
Total Indicated Resource		**61.59**	**6.51**	**11.55**	**318**	**4.01**	**7.12**
Total Measured + Indicated Resource		**97.55**	**6.53**	**11.61**	**324**	**6.37**	**11.31**

Inferred Resource	Horizon	Tonnage (Mt)	B_2O_3 (wt. %)	H_3BO_3 (wt %)	Lithium (ppm)	B_2O_3 (Mt)	H_3BO_3 (Mt)
FCCC Fee Lands	UMH	0.03	5.73	10.17	259	0.00	0.00
	MMH	6.46	6.55	11.42	334	0.42	0.75
	IMH	0.59	5.64	10.01	330	0.03	0.06
FCCC Fee Lands - Transmission Corridor	MMH	1.93	6.51	11.55	293	0.13	0.22
FCCC-Elementis Leased Lands	MMH	0.27	6.74	11.98	349	0.02	0.03
	IMH	2.14	6.32	10.48	330	0.14	0.24
Total Inferred Resource		**11.43**	**6.40**	**11.37**	**324**	**0.74**	**1.31**

*** Using a 5% B_2O_3 cut-off grade.**

The global boron market is currently estimated to be valued at US$ 3.2 billion at approximately 4.5Mtpa. Borates demand growth has had reasonably consistent compound annual growth rate (CAGR) at circa 4% from 2013 through 2020. Traditional demand growth coupled with new applications are forecasted to increase demand growth to circa 6% CAGR from 2021 through 2028.

Traditional applications for boron include glass manufacturing (borosilicate glass and textile fiberglass), insulation, ceramics, specialty fertilizers and biocides for the agricultural industry, detergents, fire retardants, and wood preservatives. New applications include permanent magnets for electrical vehicles, rechargeable batteries, and electronics.

The global boron market is dominated by two companies: Eti Maden (Turkish Government-Owned); and Rio Tinto Borates (a subsidiary of Rio Tinto). Together, they supply approximately 80% of global boron market. Eti Maden alone supplies over 60% of the world market. Eti Maden appears to be the only producer with meaningful additional supply capacity. Production from Rio Tinto Borates decreased 7.7% in 2020 and is forecasted to decline 4.0% in 2021. Rio Tinto Borates supplies approximately 70% of the US boron demand and this reduction in supply is resulting in higher prices and supply shortfalls. The US market is APBL's target market.

In 2020, Rio Tinto received an average price of US$750/ton on a boric acid equivalent basis. Eti Maden average boric acid pricing is US$815/ton in 2021 and has recently announced price increases of between 3% and 4%. Prices have steadily increased by 10% from 2019 through 2021 through to an average price of US$830/ton. Actual prices for boric acid are typically negotiated on short-term & long-term contracts between buyers and sellers.

Global end-use markets for Li are estimated as follows: batteries, 65%; ceramics and glass, 18%; lubricating greases, 5%; polymer production, 3%; continuous casting mold flux powders, 3%; air treatment, 1%; and other uses, 5%. Lithium consumption significantly increased between 2014 and 2017 due to a strong demand for rechargeable lithium batteries used extensively in portable electronic devices, electric tools, electric vehicles, and grid storage applications.

At the start of 2021, Lithium Carbonate (Li_2CO_3) spot prices were at US$4,786 and steadily increased to US$13,815 in July. At the end of July 2021 Lithium Carbonate prices sharply increased with an average spot price for October 2021 at US$25,396 and that has peaked as high as US$28,688.

FCCC currently has the following permits in place:

1. Air Permit for all processes currently identified up to 270,000 tons per year (tpy) Boric Acid and 80,000 tpy SOP.
2. Water Quality Permit includes all surface impoundments associated with the boric acid pilot plant and requires post mining rinsing and monitoring. FCCC remains compliant with the permit by sampling water well DHB-1 quarterly and submitting quarterly reports
3. Stormwater - The project has received a Notice of Non-applicability (NONA), documenting that the project does not require a stormwater permit.
4. Mining and Reclamation Permit issued in 1994 and was amended and the permit modified in 2019.
5. The BLM issued a Record of Decision (ROD) in 1994 and approved the EIS/EIR boundary. The ROD authorizes mining borates at a rate of 90,000 tpy.
6. The Underground Injection Control (UIC) permit administered by the U.S. Environmental Protection Agency (EPA). FCCC is currently modifying this permit and adding additional monitor wells that demonstrate that U.S. drinking water aquifers (USDW) are not degraded by ISL activities.

Additional permitting that will likely be required for the project includes:

1. A financial assurance cost estimate, a surface disturbance bond, will need to be updated for all new equipment, buildings, and ground disturbance.
2. Filing and identification of the chemical inventory, filed online.
3. An EPA ID will be requested when waste streams have been finalized.
4. FCCC will need to obtain building permits from San Bernardino County prior to construction.

An economic analysis of the Project is not available at this time. Though APBL completed an economic analysis in the DFS and eDFS, several parameters that directly reflect on an economic analysis are being re-evaluated. Current and previous evaluations of mining methods indicate a deposit well suited for solution mining as a potential method for economic extraction. Metallurgical testing and process engineering indicate economic potential as well. APBL is currently having additional engineering and testing work taking place to refine dissolution/recovery rates, well field design and the SSBF will provide parameters leading toward designing a processing facility. Additional studies that include detailed mine planning, geotechnical and hydrologic evaluations, full market studies and economic evaluations need to be performed. As this is the case, the viability of the deposit for demonstrated economic feasibility has yet to be determined. APBL has announced in a press release (October 13,2021) of advancing and targeting a BFS in the second quarter 2022.

Exploration to date, has focused on an approximate 1,000 acres located in the east-central portion of FCCC's mineral holding. Future exploration efforts should address mineral potential across other portions of the Project area. In particular, the QP believes there is potential upside to conducting additional drilling to the southeast in Section 36, along trend with resources identified in this report.

The QP makes the following recommendations to advance the geology and resource characteristics for the Project that includes: 1) Additional delineation drilling of 15 drill holes to further refine resource classification and to further test resource potential on the southern land holdings held by APBL; 2) standardizing sample lengths in future drilling to reduce sampling an analytical costs; 3) Mineralogical testing to identify the source of Li mineralization along with testing of PLS to help determine recovery and what processes might be required to extract Li and steps to produce lithium carbonate $LiCO_3$ and/or lithium hydroxide ($LiOH.(H_2O)n$); 4) consider using seismic and electromagnetic surveying to assist in understanding structural setting a facies in the project area; and 5) further analysis should be completed to determine if economics will support a lower cut-off grade for B_2O_3.

2 INTRODUCTION

American Pacific Borates Limited (APBL) Is a publicly traded company listed on the Australian Securities Exchange under the symbol ABR. Through its wholly owned U.S. subsidiary, Fort Cady (California) Corporation (FCCC), the company is developing the Fort Cady Borate Project (Project). The Project contains the largest known global deposit of colemanite, not owned by the Turkish Government controlled entity, Eti Maden. Colemanite is a hydrated calcium borate mineral ($2CaO \cdot 3B_2O_3 \cdot 5H_2O$) found in evaporite deposits. The region surrounding the Project has a long history of borate mining including Boron, Calico Mountain, Searles Lake, and Lila C Mine. Through in-situ leaching (ISL), FCCC will recover borates (boron-oxygen compounds), boric acid (H_3BO_3), Li, and other potential commodities.

The Fort Cady Borate deposit was first discovered in 1964. From 1977 through the early 2000s, the deposit has undergone exploration, pilot ISL testing, feasibility studies and limited production. APBL purchased a 100% interest in the Project in May 2017 from Atlas Precious Metals Inc. Since that time, the Project has undergone additional exploration, permitting and development activities.

Millcreek Mining Group (Millcreek) has prepared this Assessment Report on the Project to evaluate the resources and development activities performed by FCCC to advance this project to a viable ISL operation. This report has been prepared under the S-K 1300 rules and guidelines of the U.S. Securities and Exchange Commission (SEC) and will be used in supporting a listing on the NASDAQ stock exchange, under the name '5E Advanced Materials, Inc.'. The Qualified Person (QP) for this report is Mr. Steven Kerr, CPG. Mr. Kerr is the Principal Consultant – Geology at Millcreek, with over 36 years experience in exploration and resource evaluation. Mr. Kerr is a Certified Professional Geologist with the American Institute of Professional Geologists (CPG-10352), a recognized professional organization of the Committee for Mineral Reserves International Reporting Standards (CRIRSCO).

This Assessment Report primarily utilizes data collected on the Project by Millcreek from FCCC and on interviews, work sessions, and meetings at their offices in Hesperia, California. Some publicly available data and information has been used as well in the preparation of this Assessment Report, but this data and information are regional in nature, not specific to the Fort Cady Borate Deposit. The QP conducted a site visit to the Project on July 20 and 21, 2021. During the site visit, the QP toured the property, observed drilling operations for a water monitor well program, met with mine personnel, and examined the core from several of the exploration holes completed in 2017.

The effective date of this report is considered October 15, 2021. With reference to this report, the "Effective Date" means the date of the most recent scientific or technical information included in the Assessment Report.

Soon after acquiring the Fort Cady Borate Project in 2017, APBL completed an exploration drilling program to validate previous exploration efforts and expand mineral resources. Following the drilling program, a JORC mineral resource estimate was prepared by Terra Modelling Services (TMS) for the Project (December 2017). TMS later updated the JORC mineral resource estimate in December 2018.

In 2018, a definitive feasibility study (DFS) of the Project was completed by APBL and reviewed by RESPEC Company LLC (RESPEC). The Project contemplated a three phase Project which, in full production, would produce 450 kstpa boric acid (BA) and 20 kstpa sulphate of potash (SOP). APBL subsequently modified the Project in January 2019 by allowing for a low capex starter project, that split the first phase, Phase 1 into Phase 1A and Phase 1B, which provided a lower upfront capital requirement to assist financing flexibility.

Based on further engineering work, an enhanced definitive feasibility study (eDFS) was released in February 2021, making a substantial increase in proposed SOP production, and increasing BA production by 50% in Phase 1A. A third subphase, Phase 1C was added to decouple BA and SOP production in Phase 1B resulting in:

- **Phase 1A** targeting production of 20 kstpa of SOP (K_2SO_4) and 9 kstpa of BA (H_3BO_3)
- **Phase 1B** targeting SOP production at a rate of 60 kstpa
- **Phase 1C** targeting BA production at a rate of 81 kstpa.

In June 2020, APBL secured financing of A$77M to fully finance Phase 1A and was subsequently awarded its final operational permit in August 2020.

In May 2021, APBL announced the deferral of the approach that saw Phase 1 delivered in three sections. It is now focused on delivering Phase 1 in its entirety. It is also considering an option that brings forward the construction of Phase 2. The two base case mine options under consideration are:

- **Option 1** – Combining all planned Phase 1 operations into a 90 kstpa BA and 80kstpa SOP operation; and

- **Option 2** – Larger operation combining option 1 above with planned Phase 2 operation to deliver 270 kstpa BA and 240 kstpa SOP operation.

APBL continues to make further refinements with the Project progressing towards development and production. APBL has retained Agapito Associates (Agapito) to perform additional dissolution tests on the injection solution that will further test acid concentration and whether further enhancements can be gained with elevated temperatures, pressures, and with adding varying amounts of calcium chloride ($CaCl_2$) to retard calcite dissolution in favor of borate dissolution. Results of dissolution testing will provide input to a wellfield design study by Agapito. APBL has also initiated engineering and design for a small-scale boron facility (SSBF). Once the SSBF is operational, it will provide refined inputs for capital and operational expenditures.

This report presents the resources at the Fort Cady Borate Project. Reserves are not presented in this report since new dissolution tests are ongoing and SSBF work is proceeding, both of which provide key inputs to the economic recoverability of the resources.

The accuracy of resource and reserve estimates is, in part, a function of the quality and quantity of available data and of engineering and geological interpretation and judgment. Given the data available at the time this report was prepared, the estimates presented herein are considered reasonable. However, they should be accepted with the understanding that additional data and analysis available subsequent to the date of the estimates may necessitate revision. These revisions may be material. There is no guarantee that all or any part of the estimated resources or reserves will be recoverable.

3 PROPERTY DESCRIPTION

The Project is located in the Mojave Desert region in eastern San Bernardino County, California. The project lies approximately 118 mi. northeast of Los Angeles near the town of Newberry Springs and is approximately 36 mi. east of the city of Barstow (Figure 3.1). Central location for the project area is N34°45'25.20", W116°25'02.02". Fort Cady resides in a highly prospective area for borate and Li mineralization, and the deposit is situated in the Hector evaporite basin within close proximity to the Elementis Specialties PLC ("Elementis") Hectorite mine. The Project has a similar geological setting as Rio Tinto Borates' Boron operations and Nirma Limited's Searles Lake (Trona) operations, situated approximately 75 mi. west-northwest and 90 mi. northwest of the Project, respectively.

Figure 3.1 General Location Map

3.1 MINERAL TENURE

Mineral tenure for the Project is through a combination of federal mining claims, a mineral lease, and private fee simple lands. These include 1,010 acres of fee simple patented or privately held land; 2,380 acres of unpatented claims held by FCCC; and 1,520 acres of unpatented claims leased by FCCC from Elementis. Mineral holdings occupy portions of sections 22, 23, 24, 25, 26, 27, and 36, Township 8 North, Range 5 East, San Bernardino Meridian (SBM) and section 19, 20, 29, 30, and 31, Township 8 North, Range 6 East, SBM.

Other areas surrounding the project area include patented and unpatented lands of the Elementis Hectorite Mine directly west of the Project and unclaimed public lands managed by the U.S. Department of Interior, Bureau of Land Management (BLM) to the north and east. Land south of the project area are part of the U.S. Marine Corps Twentynine Palms Base. Figure 3.2 shows the mineral tenure for the project.

FCCC owns two parcels of fee simple lands in Sections 25 and 36, Township 8 North, Range 5 East, SBM. An electrical transmission corridor operated by Southern California Edison (SCE) tracts northeastward through the fee lands with SCE having surface and subsurface control to a depth of 500 ft. and affecting approximately 91 acres of land owned by FCCC. While this limits access to the land, mineralization occurs at depths in excess of 1,000 ft. which is still accessible to solution mining.

FCCC currently holds two unpatented lode 117 unpatented placer claims. Both lode claims were originally filed by Duval in 1978. Placer claims were filed between October 29, 2016, and February 24, 2017. A review of the BLM MLRS database shows claim status as filed with next assessment fees due 9/1/2022.

FCCC entered into a Mineral Lease Agreement with Elementis Specialties, Inc. to examine the mineral potential and develop commercial mining operations for a group of mining claims that are adjacent to the Hectorite Mine. The lease covers 36 unpatented placer claims, 15 unpatented lode claims, a diagonal swath of two unpatented placer claims, and excludes any and all patented claims. The lease carries a 3% royalty on net returns from all ores, minerals, or other products produced from the leased lands. The lease became effective on October 1, 2011, with a duration of 10 years with certain provisions to extend the lease. FCCC and Elementis executed a lease extension to the duration to July 1, 2022, while the parties continue to negotiate terms and conditions for a new mining lease.

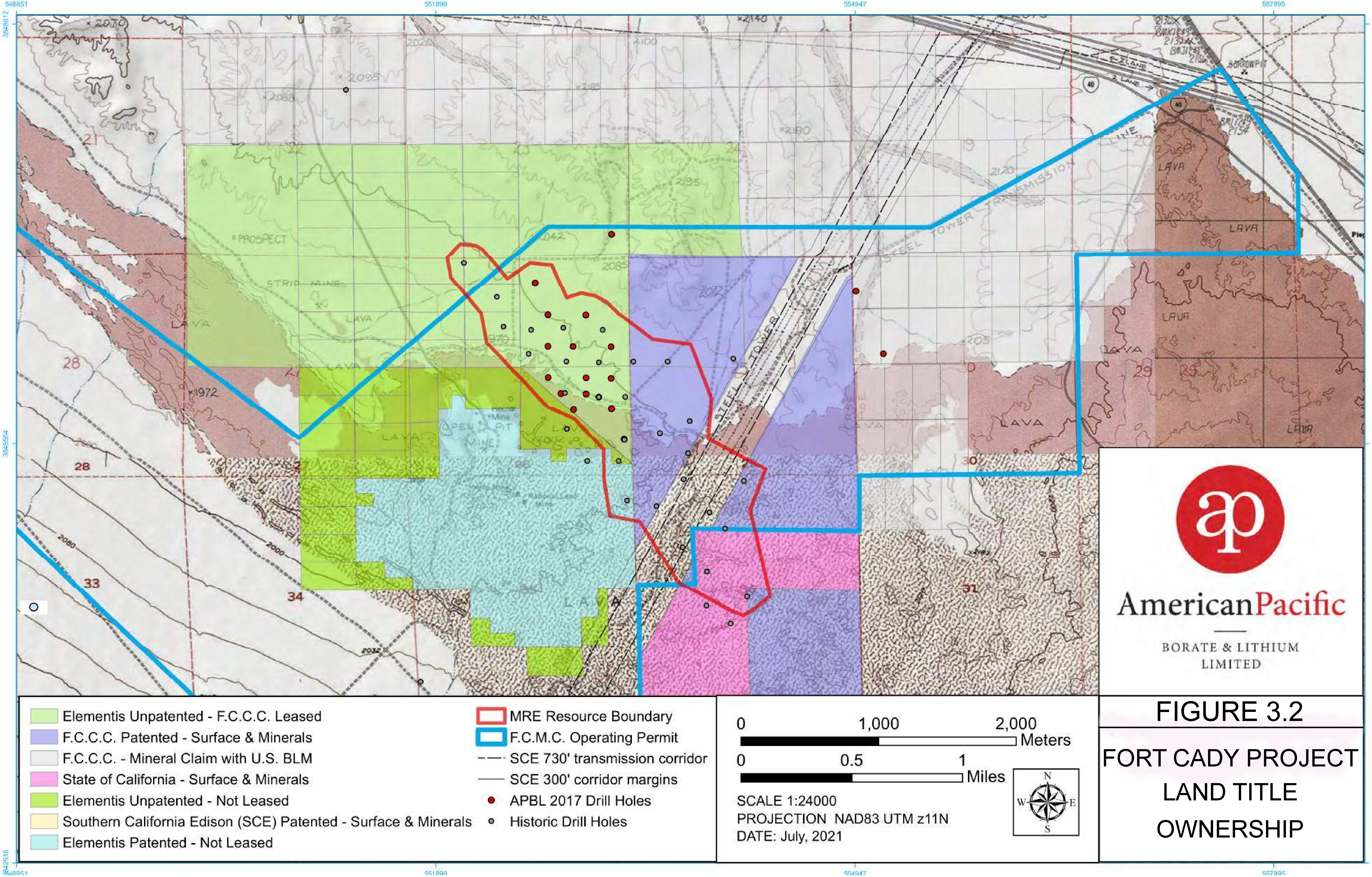


FIGURE 3.2
FORT CADY PROJECT LAND TITLE OWNERSHIP

Lastly, the State of California owns approximately 272 acres of land in Section 36, Township 8 North, Range 5 East, SBM. This land is potentially available to FCCC through a mineral lease from the California State Lands Commission.

4 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE AND PHYSIOGRAPHY

The Project is located in the western Mojave Desert with arid, hot, dry, and sunny summers of low humidity and temperate winters. Based on climate data from the nearby town of Newberry Springs, the climate over the past 30 years indicates average monthly high temperatures ranging from 55°F in December to 98.2°F in July. Monthly low temperatures range from 40.1° in December to 74.3° in August. Extremes range from a record low of 7°F to a record high of 117°F. Maximum temperatures in summer frequently exceed 100°F while cold spells in winter with temperatures below 20°F occur from time to time but seldom last for more than a few days. Average rainfall is generally less than 10 inches per year with most precipitation occurring in the winter and spring.

The project area is located on a gentle pediment with elevation ranging from approximately 1,970 ft. to approximately 2,185 ft. above sea level. Basalt lava flows cover most of the higher elevations or hilltops with flat ground and drainages covered in pale, gray-brown, silty soils. Basalt lava flows become more dominant south of the project area with the Lava Bed Mountains located a few miles south of the Project area. The Project area's vegetation is dominated by burro weed, creosote, cactus, and scattered grasses.

Access to the Project is via U.S. Interstate 40 (I-40), eastbound from Barstow to the exit for Newberry Springs. From the exit, travel continues eastward for 14.4 mi. on the National Trails Highway to County Road 20796 (CR20796). Travel continues south on CR20796 for 2.2 mi. to an unnamed dirt road bearing east for another 1.1 mi. to the mine office and plant site at the Project. Several other dirt roads connect to the dirt road leading to the mine office and to CR20796 that provide good access throughout the Project area.

The Union Pacific Railroad main line from Las Vegas to Los Angeles runs subparallel to I-40. A rail loadout is located approximately 1.2 mi. north of the National Trails Highway on a road that bears north and located 0.4 mi. west of CR20796. San Bernardino County operates six general aviation airports with the closest airport to the project being the Barstow-Daggett Airport located approximately 23 mi. west of the Project on the National Trails Highway. Commercial flight service is available through five airports in the greater Los Angeles area and in Los Vegas, NV. A dedicated cargo service airport is located approximately 65 mi. southwest of the Project.

Construction of an ISL mining operation and processing plant at the Project will require local resources of contractors, construction materials, energy resources, employees, and housing for employees. The Project has good access to I-40 which connects it to numerous sizable communities between Barstow and the greater Los Angeles area offering excellent access to transportation, construction materials, labor, and housing. The Project currently has limited electrical service that is sufficient for mine office and storage facilities on site but will require an upgrade for plant and wellfield facilities. FCCC is currently exploring options for upgrading electrical services to the Project. An electrical transmission corridor operated by Southern California Edison extends northeastward through the eastern part of the project. The project has two water wells located nearby to support ISL operations. Currently no natural gas connects to the project, but FCCC is negotiating services with two suppliers in the region with a gas transmission pipeline located proximal to the Project.

The plant site currently has a 1,600 ft^2 mine office building, storage buildings, a prepared level pad for the SSBF (20 acres), and a gypsum storage area occupying 17 acres. Gypsum is a byproduct of past pilot plant production and may be a future byproduct that can be sold to the regional market.

5 HISTORY

Several borate-bearing deposits are known in the region, including Calico Mountain, Boron, and Searles Lake. Discovery of the Fort Cady borate deposit occurred in 1964 when Congdon and Carey Minerals Exploration Company found several zones of colemanite, a calcium borate mineral, between the depths of 405m to 497m (1,330 ft. to 1,570 ft.) below ground surface in Section 26, TSN, R5E (Simon Hydro-Search, 1993).

In September 1977, Duval Corporation ("Duval") initiated land acquisition and exploration activities near Hector, California, and by March 1981, completed 33 exploration holes. In 1981, Duval began considering conventional underground extraction of the ore body. Because of the depth, conventional underground mining was determined not to be economically feasible and subsequent studies and tests performed by Duval indicated that in-situ mining technology was feasible (Simon Hydro-Search, 1993).

Duval commenced limited-scale solution mining in June 1981 and an additional 17 production wells were completed between 1981 and 2001 which were used for injection testing and pilot-scale operations. In July 1986, a series of tests were conducted by Mountain States Mineral Enterprises Inc. (FCMC) In these tests, a dilute hydrochloric acid solution was injected through a well into the ore body and a boron-rich solution was withdrawn from the same well. In July 1986, FCMC became involved with the project with the view of commencing pilot-scale testing. The first phase of pilot plant operations was conducted between 1987 and 1988. Approximately 500 tonnes of boric acid were produced during this time. Given the promising results of the pilot-scale tests the project was viewed to be commercially viable (Dames & Moore, 1993) and concentrated permitting efforts for commercial-scale operations began in early 1990. Final approval for commercial-scale solution mining and processing was attained in 1994.

Extensive feasibility studies, detailed engineering and test works were subsequently undertaken in the late 1990's and early 2000's. This included a second phase of pilot plant operations between 1996 and 2001 during which approximately 2,000 tonnes of a synthetic colemanite product (marketed as CadyCal 100) were produced. Commercial-scale operations were not commissioned due to low product prices and other priorities of the controlling entity.

Production data for these projects were recently obtained by FCCC and a summary of this data is provided in Tables 5.1 through 5.4. Little other information is available for these tests, and the results could not be independently verified. These results should be considered historical in nature.

Table 5.1 Duval Testing Results

Test No.	Volume Injected (Gal)	Injection Rate (Gal/min)	Pump Pressure (PSI)	Acid (%)	Volume Recovered (Gal)	Recovery Rate (Gal/min)	Average Concentration HBO_3 (%)	Maximum Concentration HBO_3 (%)
1	680	1.5	150	16% HCl	700	1.0-2.0	0.3	
	1,500	2.0	275	5% H_2SO_4	1,500	1.0-2.0	0.5	1.5
	1,400	1.5-2.0	150	5% H_2SO_4	2,000	1.0-2.0	1.5	4.6
	1,500	2.0	275	23% H_2SO_4	1,500	1.0-2.0	1.0	4.0
2	2,250	2.0	300	8% H_2SO_4	2,000	1.5-2.0	1.5	4.0
3	5,358	2-2.5	275	6.9% H_2SO_4		1.0-1.5	3.0	6.9
	6,597	2-2.5	275	17.5% HCl	28,927		3.0	6.9
4	19,311	2-2.5	230-275	6.2% HCl & 2.4% H_2SO_4	67,995	1.0-1.5	3.0	6.5
5	20,615	2.0	290	16% HCL	112,637	1.0-1.5	2.5	5.2
6	21,569	20.0	275	1.6% HCl	63,460	1.0-1.5	1.1	1.7

Table 5.2 Mountain States Testing Injection Summary

Date					Gallons		Pounds	Theoretical HBO_3		
Series	From	To	Test Nos.	Wells (SMT)	Series	Cumulative	HCl	CO_2	Series	Cumulative
1	8/4/1986	8/23/1986	1 - 3	6 & 9	67,972	67,972	23,286		59,540	59,540
2	11/4/1986	11/10/1986	4 - 7	6	45,489	113,461	15,500		39,431	98,971
3	12/9/1986	12/18/1986	8 - 11	6	53,023	166,484	15,398		39,173	138,144
4	6/18/1986	6/27/1987	12 - 15	9	47,640	214,124		4,313	18,184	156,328
Total					**214,124**	**214,124**	**54,184**	**4,313**	**156,328**	**156,328**

Table 5.3 Mountain States Testing Recovery Summary

Date					Gallons		Pounds BA		% BA in Solution, by Surge Tank			Theoretical BA	
Series	From	To	Test Nos.	Wells (SMT)	Series	Cumulative	Series	Cumulative	High	End	Average	Series	Cumulative
1	8/7/1986	10/17/1986	1 - 3	6 & 9	128,438	128,438	32,608	32,608	3.84	1.56	2.5	54.77	54.77
2	11/5/1986	11/13/1986	4 - 7	6	51,636	180,074	21,223	53,831	5.74	4.05	4.68	53.83	54.39
3	12/10/1986	1/13/1987	8 - 11	6	99,889	279,963	33,386	87,217	5.59	1.93	4.18	85.23	63.14
4	6/9/1987	7/0/1987	12 - 15	9	86,595	366,558	18,973	106,190	3.55	1.81	2.6	104.34	67.93
				Total	**366,558**	**366,558**	**106,190**	**106,190**			**3.79**		**67.93**

Over US$80 million has been spent on the Fort Cady Project, including license acquisition, drilling, mineral resource estimation, well testing, metallurgical testing, feasibility studies and pilot plant test work. In addition, the Project has previously obtained all operating and environmental permits required for commercial solution mining operations to produce 90,000 short tons per annum of boric acid.

In May 2017, FCCC's parent company, APBL executed a Share Purchase Agreement with the project vendors (Atlas Precious Metals Inc.) to purchase 100% of the Project and listed APBL on the Australian Securities Exchange (ASX) by way of an Initial Public Offering (IPO). The IPO was completed in July 2017.

Soon after acquiring the Fort Cady Borate Project, FCCC completed an exploration drilling program to validate previous exploration efforts and expand mineral resources. Following the drilling program, a JORC mineral resource estimate was prepared by Terra Modelling Services (TMS) for the Project (February 1, 2018). TMS later updated the JORC mineral resource estimate in December 2018. The 2018 JORC mineral resource estimate identified 38.87 million tonnes (Mt) of measured resources, 19.72 Mt of indicated resources, and 61.85 Mt of inferred resources using a B_2O_3 cut-off grade of 5%.

Table 5.4 Fort Cady Mineral Corporation Production Summary

Date	Total Minutes	Flow to Plant		pH	Free Acid (g/l)	Boric Acid (%)	Chloride (g/l)	Sulfate (g/l)	Boric Acid (tons**)	B2O3 (tons**)	CadyCal 100* (tons**)
		Gallons	Gal/min								
Jan-01	7,215	258,556	35.80	5.83		2.33	12.54	3.76	15	9	20
Feb-01	7,785	331,886	42.60	2.54	0.35	2.36	12.13	4.94	25	14	33
Mar-01	10,470	422,922	40.40	2.41	0.23	1.90	15.84	3.23	34	19	45
Apr-01	10,290	393,824	38.30	1.86	2.60	5.43	42.11	8.18	41	23	53
May-01	7,560	296,000	39.20	2.02	2.67	5.77	44.77	8.70	31	17	40
Jun-01	3,375	120,928	35.80	0.67	1.35	3.12	27.84	5.30	12	7	16
Jul-01	2,385	77,157	32.40	1.19	0.31	2.00	12.74	2.60	7	4	9
Aug-01	3,300	142,207	43.10	4.04	0.07	3.84	19.60	3.08	15	8	19
Sep-01	4,875	247,901	50.90	2.77	0.12	3.44	23.21	3.68	21	12	28
Oct-01	10,035	478,723	47.70	2.03	0.35	3.00	15.54	4.60	37	1	49
Nov-01	9,270	371,171	40.00	1.99	0.16	2.39	14.15	4.02	23	13	30
Dec-01	12,525	353,885	28.30	1.83	0.17	2.52	14.94	2.58	29	16	38
01-Total	89,085	3,495,160	39.20	2.44	0.73	3.19	21.37	4.74	291	164	381
00-Total	87,255	3,142,413	36.00	2.14	0.25	2.70	12.42	2.54	279	157	366
99-Total	92,820	2,475,770	26.70	1.59	0.48	2.82	10.13	6.84	201	113	263
98-Total	111,468	2,715,319	24.40	1.24	0.91	2.85	7.78	10.19	217	122	284
97-Total	109,040	2,692,940	24.70	0.99	1.84	3.10	3.52	13.00	252	142	329
96-Total	101,212	2,711,044	26.80	1.33	1.32	3.01	2.96	5.76	244	137	319

In 2018, a definitive feasibility study (DFS) for the Project was completed by RESPEC for APBL. At the time, the Project contemplated a three-phase project which, in full production, would produce 450 kstpa BA and 20 kstpa sulphate of SOP. APBL subsequently modified the Project in January 2019 by allowing for a low capex starter project, that split the first phase, Phase 1 into Phase 1A and Phase 1B, which provided a lower upfront capital requirement to assist financing flexibility.

Based on further engineering work, an enhanced definitive feasibility study (eDFS) was released in February 2021, making a substantial increase in proposed SOP production, and increasing BA production by 50% in Phase 1A. and a third subphase, Phase 1C was added to decouple BA and SOP production in Phase 1B resulting in:

- Phase 1A targeting production of 20kstpa of SOP (K_2SO_4) and 9kstpa of BA (H_3BO_3)
- Phase 1B targeting SOP production at a rate of 60 kstpa
- Phase 1C targeting BA production at a rate of 81 kstpa.

The eDFS for the full project (Phases 1, 2, & 3) carries a capital expenditure (CAPEX) of US$842.6 million, a net present value (NPV) of US$2.021 billion, an investment rate of return IRR) of 40.6%, and earnings before interest, taxes, depreciation, and amortization of US$452.7 in the first full year of production.

In June 2020, APBL secured financing of A$77M to fully finance Phase 1A and was subsequently awarded its final operational permit in August 2020.

In May 2021, APBL announced the deferral of the approach that saw Phase 1 delivered in three sections and the company is now focused on delivering Phase 1 in its entirety. The company is also considering an option that brings forward the construction of Phase 2. The two base case mine options under consideration are:

- Option 1 – Combining all planned Phase 1 operations into a 90 kstpa boric acid and 80 kstpa SOP operation; and
- Option 2 – Larger operation combining option 1 above with planned Phase 2 operation to deliver 270 kstpa boric acid and 240 kstpa SOP operation.

6 GEOLOGICAL SETTING, MINERALIZATION AND DEPOSIT

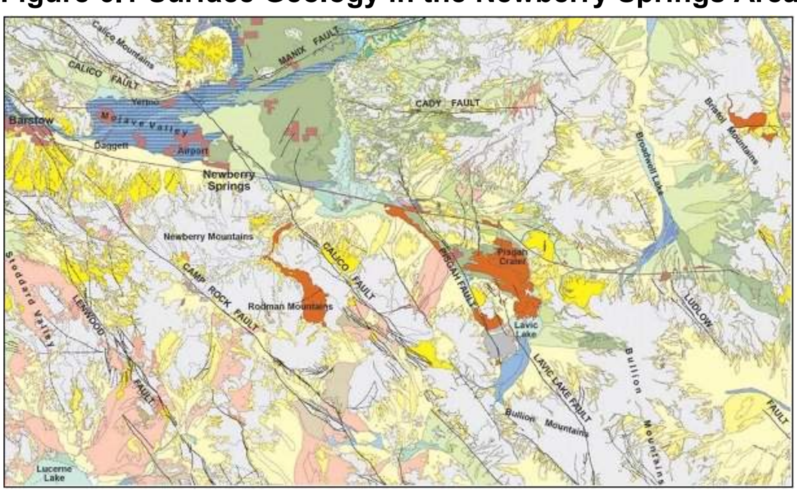
6.1 REGIONAL SETTING

The Project area is located in the western Mojave Desert and is part of the Basin and Range Physiographic Province. The region is characterized by narrow faulted mountain ranges and flat valleys and basins, the result of tectonic extension that began approximate 17 million years ago. The Project lies within the Hector Basin of the Barstow Trough and is bounded on the southwest by the San Andreas fault zone and the Transverse Ranges, on the north by the Garlock fault zone, and on the east by the Death Valley and Granite Mountain faults. Numerous faults of various orientations are found within the area with various orientations though the predominant trend is to the northwest.

The Barstow Trough, which is a structural depression, extends northwesterly from Barstow toward Randsburg and in an east-southeast trend toward Bristol. It is characterized by thick successions of Cenozoic sediments, including borate-bearing lacustrine deposits, with abundant volcanism along the trough flanks. The northwest-southeast trending trough initially formed during Oligocene through Miocene times. As the basin was filled with sediments and the adjacent highland areas were reduced by erosion, the areas receiving sediments expanded, and playa lakes, characterized by fine-grained clastic and evaporitic chemical deposition, formed in the low areas at the center of the basins.

Exposures of fine-grained lacustrine sediments and tuffs, possibly Pliocene in age, are found throughout the project area. Younger alluvium occurs in washes and overlying the older lacustrine sediments. Much of the project area is covered by Recent olivine basalt flows from Pisgah Crater, which is located approximately two mi. east of the site (Figures 6.1 and 6.2). Thick fine-grained, predominantly lacustrine mudstones appear to have been uplifted, forming a block of lacustrine sediments interpreted to be floored by an andesitic lava flow.

Figure 6.1 Surface Geology in the Newberry Springs Area



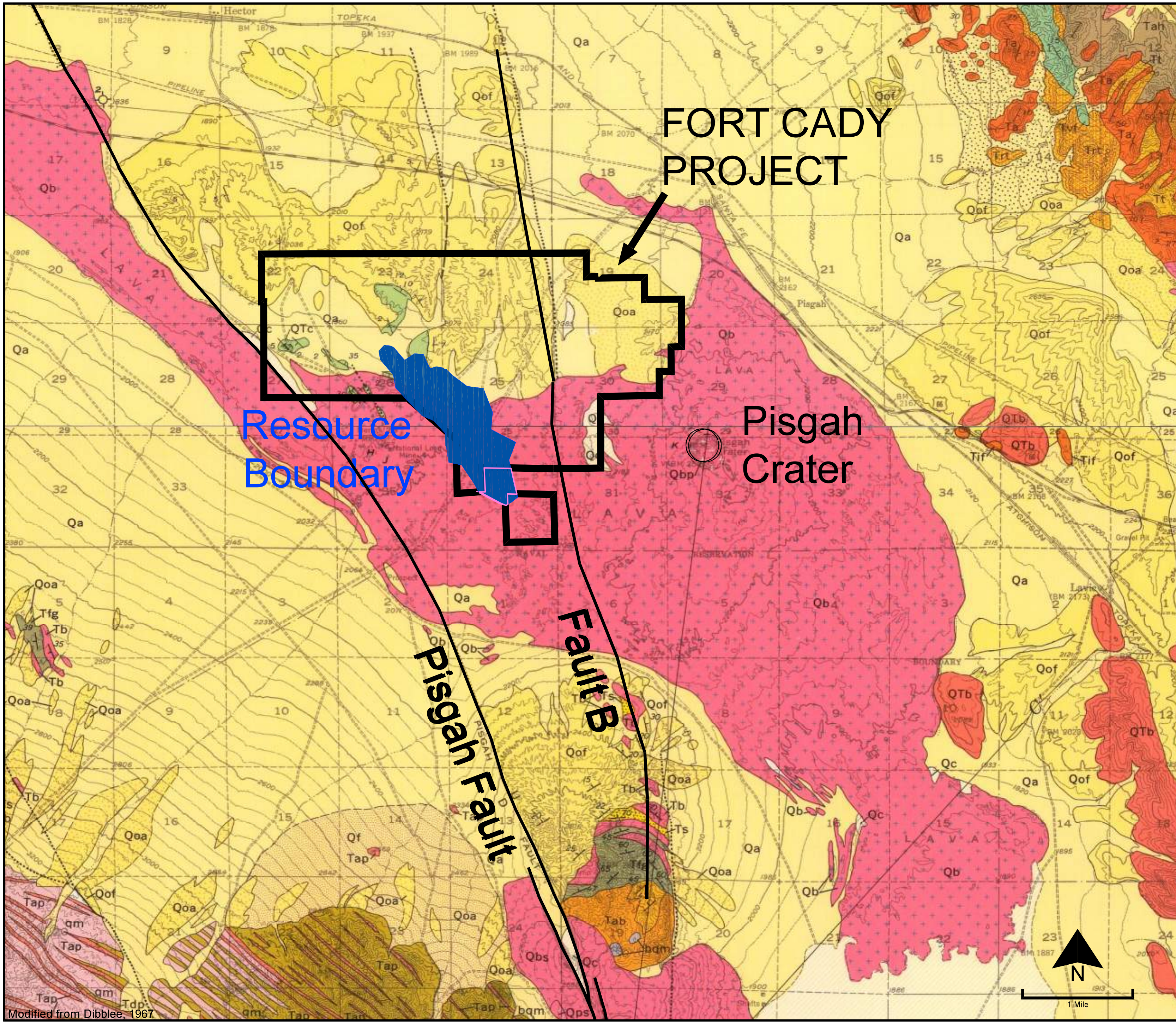


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FIGURE 6.2

FORT CADY PROJECT

SURFACE GEOLOGY

DATE: 09/27/2021
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There are three prominent geologic features in the project area:

- Pisgah Fault, which transects the southwest portion of the project area west of the ore body.
- Pisgah Crater lava flow located 3.2 km east of the site: and
- Fault B, an unnamed fault, located east of the deposit.

The Pisgah Fault is a right-lateral slip fault that exhibits at least 200 m. of vertical separation in the project area. The east side of the fault is up thrown relative to the west side. Fault B is located east of the ore body and also exhibits at least 200 m. of vertical separation. The borate ore body is situated within a thick area of fine-grained, predominantly lacustrine (lakebed) mudstones, east of the Pisgah Fault and west of Fault B. The central project area has been uplifted along both faults, forming an uplifted block. Test borings emplaced through the ore body reportedly show the presence of claystone at the base and around the evaporite/mudstone ore body. Exploration drilling in the project area indicate that the deposit lies between approximately 400 m. and 550 m. below ground level. The ore body consists of variable amounts of calcium borate (colemanite) within a mudstone matrix (Simon Hydro-Search, 1993).

6.2 MINERALIZATION

Mineralization occurs in the subsurface in a sequence of lacustrine sediments ranging in depths from 1,135 to 1,872 ft. below the surface. The mineralization is hosted by a sequence of mudstones and tuffs, consisting of variable amounts of colemanite, a calcium borate ($2CaO \cdot 3B_2O_3 \cdot 5H_2O$). Colemanite is the target mineral for this deposit and is found in evaporite deposits of alkaline lacustrine environments. Colemanite is a secondary alteration mineral formed from borax and ulexite. The colemanite is associated with thinly laminated siltstone, clay and gypsum beds containing an average of 9% calcite, 35% anhydrite plus 10% celestite ($SrSO_4$) (Wilkinson & Krier, 1985). In addition to colemanite and celestite, elevated levels of Li have been found through chemical analyses of drill samples.

X-ray diffraction (XRD) analysis of core samples from the deposit indicate the presence of the evaporite minerals anhydrite, colemanite, celestite, and calcite. The mineralogy of the detrital sediments include quartz, illite, feldspars, and clinoptilolite, a zeolite. The deposit underlies massive clay beds which appear to encapsulate the evaporite ore body on all sides as well as above and below the deposit. This enclosed setting makes the deposit an ideal candidate for in-situ mining technology affording excellent containment of the leachate solution.

6.3 MINERAL DEPOSIT

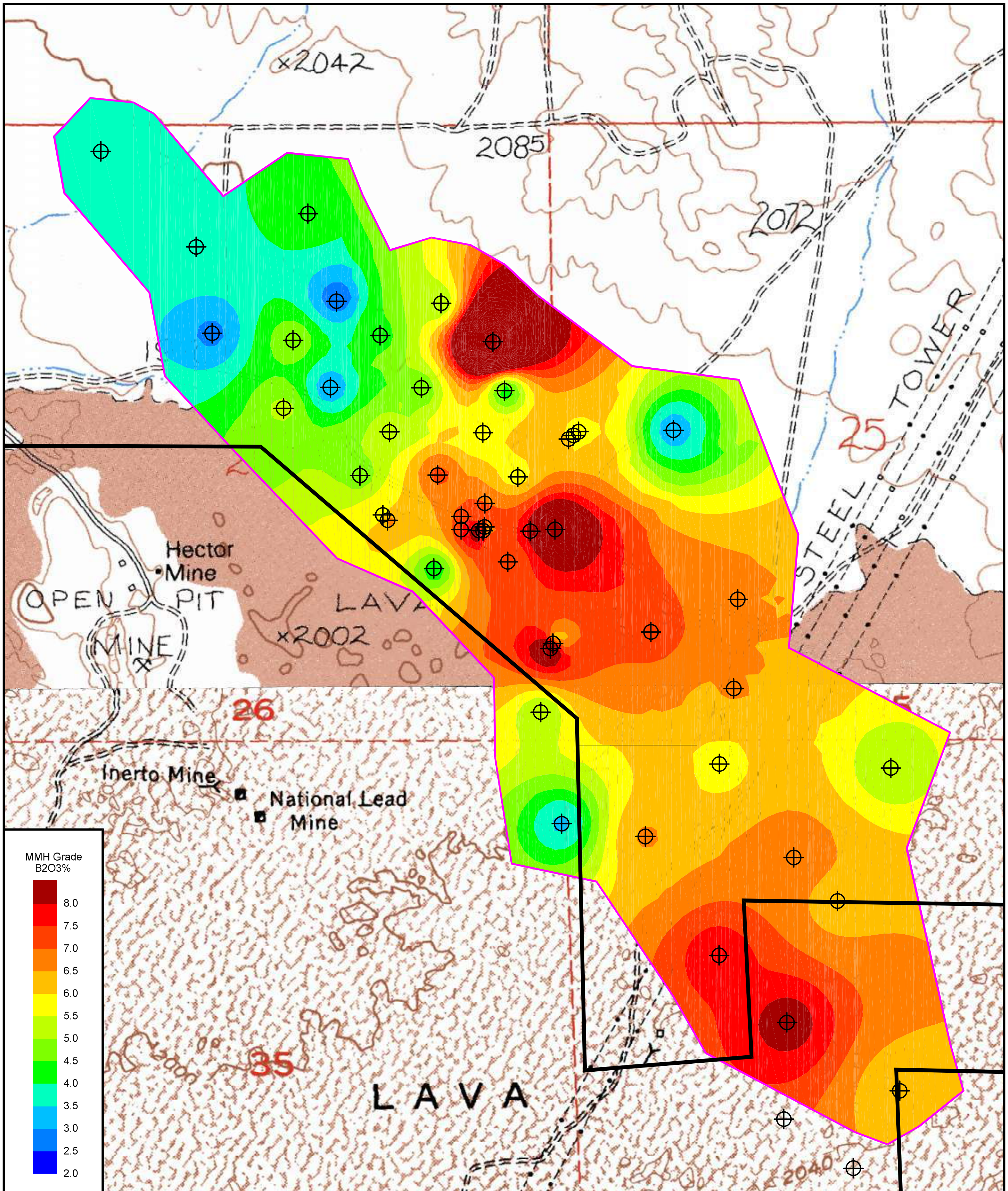
Boron is believed to have been sourced from thermal waters that flowed from hot springs in the region during times of active volcanism. These hot springs vented into the Hector Basin that contained a large desert lake. Borates were precipitated as the thermal waters entered the lake and cooled or as the lake waters evaporated and became saturated with boron. Colemanite being the least soluble mineral, would evaporate on the receding margins of the lake. The evaporite-rich sequence forms a consistent zone in which the borate-rich colemanite zone transgresses higher in the section relative to stratigraphic marker beds.

Based on drilling results, the deposit is elongate in shape and trends northwesterly, extending over an area of about 606 acres at an average depth of approximately 1,150 ft. to 1,312 ft. below surface. In plan view, the concentration of boron-rich evaporites is roughly ellipsoidal with the long axis trending N40°W to N50°W. Beds within the colemanite deposit strike roughly N45°W and dip about 10° or less to the southwest. Using an isoline of 5% B_2O_3, mineralization has an approximate width of 2,800 ft. and a length of 11,150 ft. with thickness ranging from 70 to 262 ft. (exclusive of barren interbeds),

The eastern margin of mineralization appears to be roughly linear, paralleling the Pisgah Fault which lies approximately 1 mi. to the west (Figures 6.3 and 6.4). This boundary was considered by Duval geologists to be controlled by a facies change from evaporite rich mudstones to carbonate-rich lake beds, as a result of syn-depositional faulting. The northeast and northwest boundaries of the deposit are controlled by facies changes to more clastic material, reducing both the overall evaporite content and the concentration of colemanite within the evaporites. The southeast end of the deposit is open-ended and additional drilling is necessary to define the southeastern limits of borate deposition (Wilkinson & Krier, 1985).

Drilling of the deposit by Duval Corp. in the late 1970's and early 1980's has defined the following lithological sequence (Figure 6.5). Four major units have been identified:

> Unit 1: is characterized by a 490 to 655 ft thick sequence of red-brown mudstones with minor sandstone, zeolitized tuff, limestone, and rarely hectorite clay beds. Unit 1 is intersected immediately below the alluvium and surface basaltic lavas.



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Resource Boundary
Project Area Boundary
Drill Hole Location

N
1,000 Feet

FIGURE 6.3

FORT CADY PROJECT
RESOURCE BOUNDARY AND
MAIN MINERALIZED HORIZON
(MMH) B2O3 GRADE

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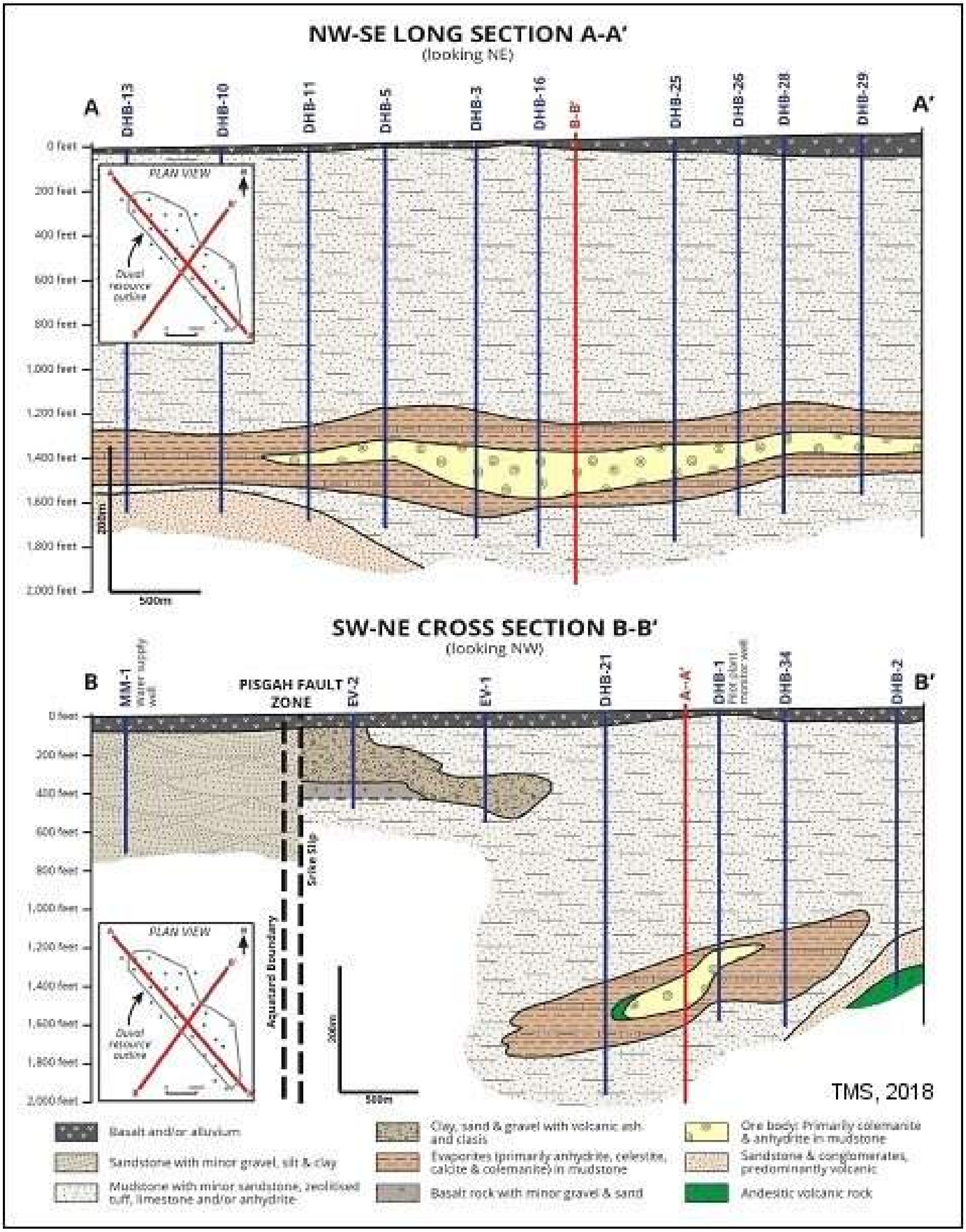
Figure 6.4 Long-section and Cross-section through the Fort Cady Deposit

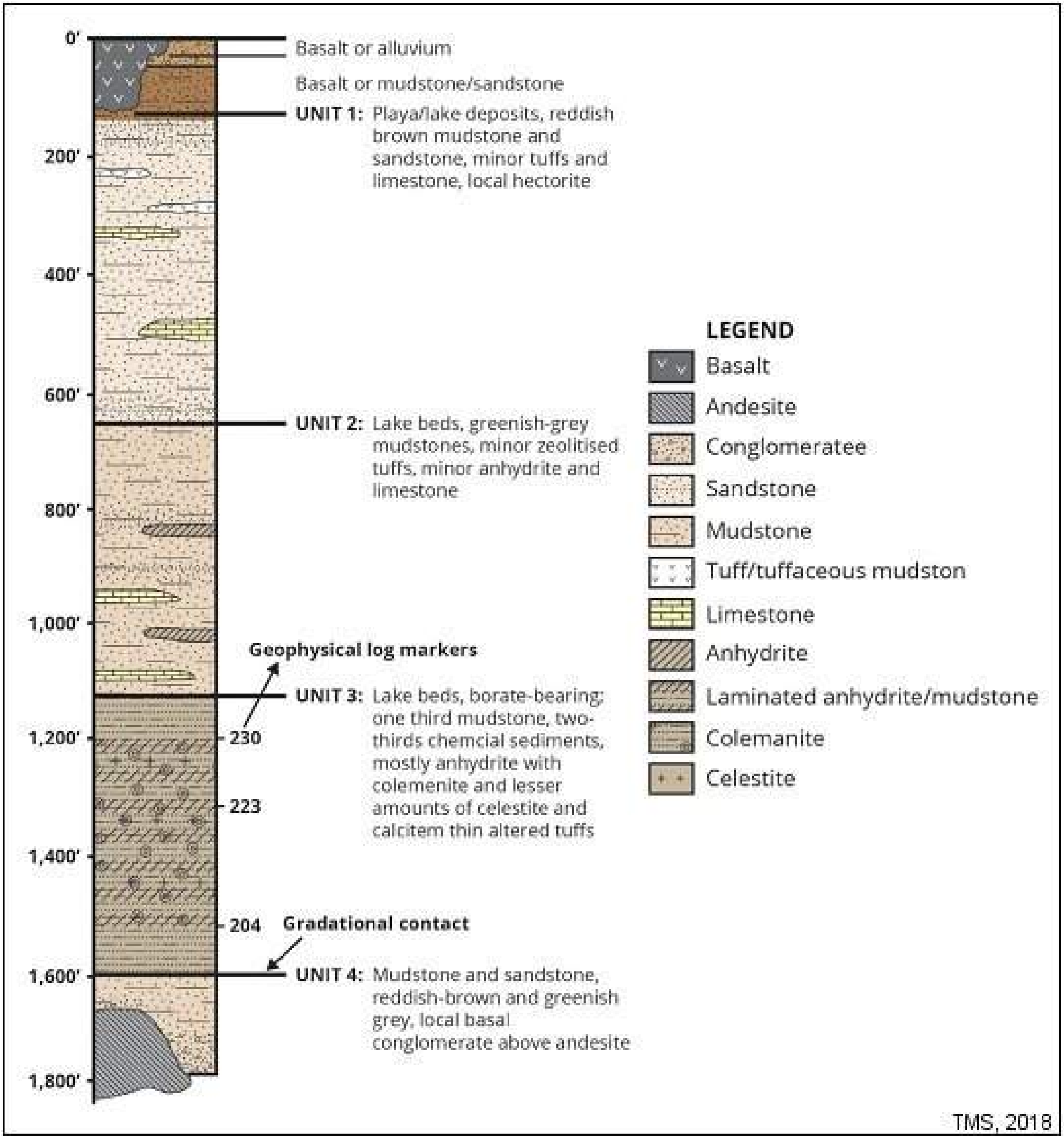


Unit 2: is a green-grey mudstone that contains minor anhydrite, limestone, and zeolitized tuffs. Unit 2 has a thickness ranging from 330 to 490 ft. and is interpreted as lacustrine beds.

Unit 3: is a 245-to-490-foot thick evaporite section which consists of rhythmic laminations of anhydrite, clay, calcite, and gypsum. Unit 3 contains the colemanite mineralization. Thin beds of air fall tuff are found in the unit which provide time continuous markers for interpretation of the sedimentation history. These tuffs have variably been altered to zeolites or clays. Anhydrite is the dominant evaporite mineral, and the ore deposit itself is made up mostly of an intergrowth of anhydrite, colemanite, celestite, and calcite with minor amounts of gypsum and howlite.

Unit 4: is characterized by clastic sediments made up of red and grey-green mudstones and siltstones, with locally abundant anhydrite and limestone. The unit is approximately 160 ft. thick and rests directly on an irregular surface of andesitic lava flows. Where drilling has intersected this boundary, it has been noted that an intervening sandstone or conglomerate composed mostly of coarse volcanic debris is usually present.

Figure 6.5 Generalized Lithological Column for the Fort Cady Deposit



7 EXPLORATION

7.1 HISTORIC DRILLING

Duval completed 35 drill holes (DHB Series) between 1979 and 1981 as part of their exploration efforts. With the exception on one hole, holes were drilled using a combination of rotary drilling through the overburden followed by core drilling through the evaporite sequence. DHB-32 was drilled as a water well southeast of the Project. Geologic logs of rotary cuttings and core were completed for all holes followed by geochemical analyses of the core. Duvall paid particular attention in logging to identifying marker beds (ash tuffs) for correlation. In addition to geologic logging, down-hole geophysics were completed on 25 holes for gamma ray and neutron. A few holes had additional geophysical logs completed for compensated density, deviation, induction, elastic properties, and caliper.

In 1981 and 1982, Duval drilled five wells to be used in injection/recovery tests (SMT Holes). Like previous drilling, the wells were rotary drilled through the overburden and cored through the evaporite sequence. Following coring, 5.5-inch casing was set through the cored interval. All five wells were logged, and analytical samples collected from the cored intervals are available for SMT-1, SMT-3, and SMT-3. Gamma ray and neutron logs were collected from all five wells, along with caliper, compensated density, and induction on a few of the other wells.

Duval drilled three more wells in 1992 and 1993 (SMT-92 & 93 Holes). These three wells were rotary drilled to full depth and no geologic samples were collected.

FCMC completed two drilling campaigns during their participation on the project. The P Series holes were completed between 1987 and 1996 as rotary holes for injection/recovery wells. Cuttings samples were collected for analysis on 5-foot intervals for holes P-1, P-2, and P-3. A ten-foot sampling interval was used for sampling on P-4. No geologic samples were collected for holes P-5, P-6, and P-7. FCMC completed three S Series wells in 1990. All three wells were rotary drilled and no geologic sampling was performed. FCMC completed down-hole geophysics on all the P and S-series wells. Historic drilling completed by Duvall and FCMC is summarized in Table 7.1.

Table 7.1 Historic Drilling Summary

Drill Hole ID	UTM 83-11 (m)		Collar Elev. (ft.)	Depth (ft.)	Rotary Interval (ft.)		Cored Interval (ft.)		No. of Samples
	Easting	Northing			From	To	From	To	
DHB-01	553,336	3,846,154	2,003.7	1,623	0	1,090	1,090	1,623	187
DHB-02	554,062	3,846,179	2,032.6	1,679	0	955	955	1,443	
DHB-03	553,089	3,845,899	1,979.7	1,773	0	940	940	1,773	214
DHB-04	552,855	3,845,669	1,980.6	1,708	0	1,194	1,194	1,708	178
DHB-05	552,848	3,846,153	1,977.7	1,730	0	1,043	1,043	1,730	179
DHB-06	553,115	3,846,386	2,008.2	1,616	0	1,040	1,040	1,616	125
DHB-07	553,736	3,845,492	2,000.1	1,735	0	1,063	1,063	1,735	181
DHB-08	552,575	3,846,214	1,966.0	1,809	0	1,072	1,072	1,809	186
DHB-09	552,391	3,846,408	1,966.6	1,750	0	1,137	1,137	1,750	138
DHB-10	552,349	3,846,631	1,980.3	1,655	0	1,148	1,148	1,655	86
DHB-11	552,599	3,846,390	1,976.2	1,671	0	1,150	1,150	1,671	86
DHB-12	552,824	3,846,402	1,992.5	1,625	0	1,130	1,130	1,625	85
DHB-13	552,104	3,846,877	1,978.0	1,661	0	1,140	1,140	1,661	70
DHB-14	553,089	3,846,151	1,987.4	1,631	0	1,105	1,105	1,631	80
DHB-15	553,580	3,846,158	2,012.5	1,609	0	1,177	1,177	1,609	51
DHB-16	553,263	3,845,595	1,984.9	1,845	0	1,193	1,193	1,845	138
DHB-17	552,843	3,845,925	1,982.3	1,804	0	1,178	1,178	1,804	151
DHB-18	553,238	3,845,431	1,977.8	1,880	0	1,212	1,212	1,878	106
DHB-19	554,141	3,845,287	2,033.6	1,460	0	1,060	1,060	1,460	74
DHB-20	553,006	3,845,437	1,997.5	1,671	0	1,207	1,207	1,671	
DHB-21	553,292	3,845,143	2,010.6	1,752	0	1,118	1,118	1,828	39
DHB-22	553,275	3,845,902	1,987.7	1,711	0	1,196	1,196	1,711	135
DHB-23	553,508	3,845,110	2,020.5	1,857	0	1,208	1,208	1,857	114
DHB-24	553,523	3,845,637	1,994.2	1,780	0	1,202	1,202	1,780	119
DHB-25	553,699	3,845,297	2,020.5	1,818	0	1,248	1,248	1,818	152
DHB-26	553,891	3,845,056	2,050.0	1,702	0	1,106	1,106	1,702	106
DHB-27	553,698	3,844,803	2,043.4	1,795	0	1,228	1,228	1,795	95
DHB-28	554,004	3,844,943	2,053.3	1,690	0	1,185	1,185	1,690	115
DHB-29	554,164	3,844,454	2,040.2	1,610	0	1,203	1,203	1,610	101
DHB-30	553,873	3,844,630	2,050.0	1,720	0	1,250	1,250	1,720	83
DHB-31	553,865	3,844,381	2,036.9	1,460	0	1,195	1,195	1,625	41
DHB-32	551,770	3,843,845	2,045.0	870	0	870			
DHB-33	554,045	3,844,254	2,043.4	1,601	0	1,124	1,124	1,860	80
DHB-34	553,746	3,845,722	2,115.6	1,525	0	1,150	1,150	1,620	79
DHB-35	551,249	3,848,166	2,068.0	1,449	0	1,194	1,194	1,459	
P1	553,093	3,845,908	1,984.4	1,500	0	1,500			20
P2	553,094	3,845,969	1,984.4	1,510	0	1,510			21
P3	553,033	3,845,902	1,981.1	1,510	0	1,510			18
P4	553,033	3,845,935	1,977.3	1,510	0	1,510			34
P5	553,193	3,845,874	1,985.0	1,547	0	1,547			0
P6	553,209	3,845,946	1,989.0	1,525	0	1,525			0
P7	553,217	3,846,023	1,992.0	1,475	0	1,475			0
SMT-1	553,323	3,846,144	2,004.1	1,315	0	1,235	1,235	1,315	59
SMT-2	553,310	3,846,135	2,004.1	1,679	0	1,234	1,234	1,316	55
SMT-3	553,211	3,845,897	1,987.7	1,679	0	1,325	1,325	1,518	69
SMT-6	553210	3845934	1,988.0	1,450	0	1,341	1,341	1,450	0
SMT-9	553194	3845837	1,985.0	1,497	0	1,341	1,341	1,497	0

7.2 APBL DRILLING

Since acquisition of the Project in May 2017, APBL has completed 14 drill holes, which confirmed previous drilling results and expanded the Mineral Resource Estimate at Fort Cady. Table 7.2 provides a summary of the 2017 drilling program and Figure 7.1 shows drilling locations. A cross-section through the deposit is also displayed in 7.2. Drilling through the overburden sequence was completed using rotary air blast drilling. This was followed by drilling HQ (2.5-inch) core through the evaporite sequence. The core was logged and evaluated using industry standard techniques. All drill holes were completed vertically with no greater than five degrees of deviation.

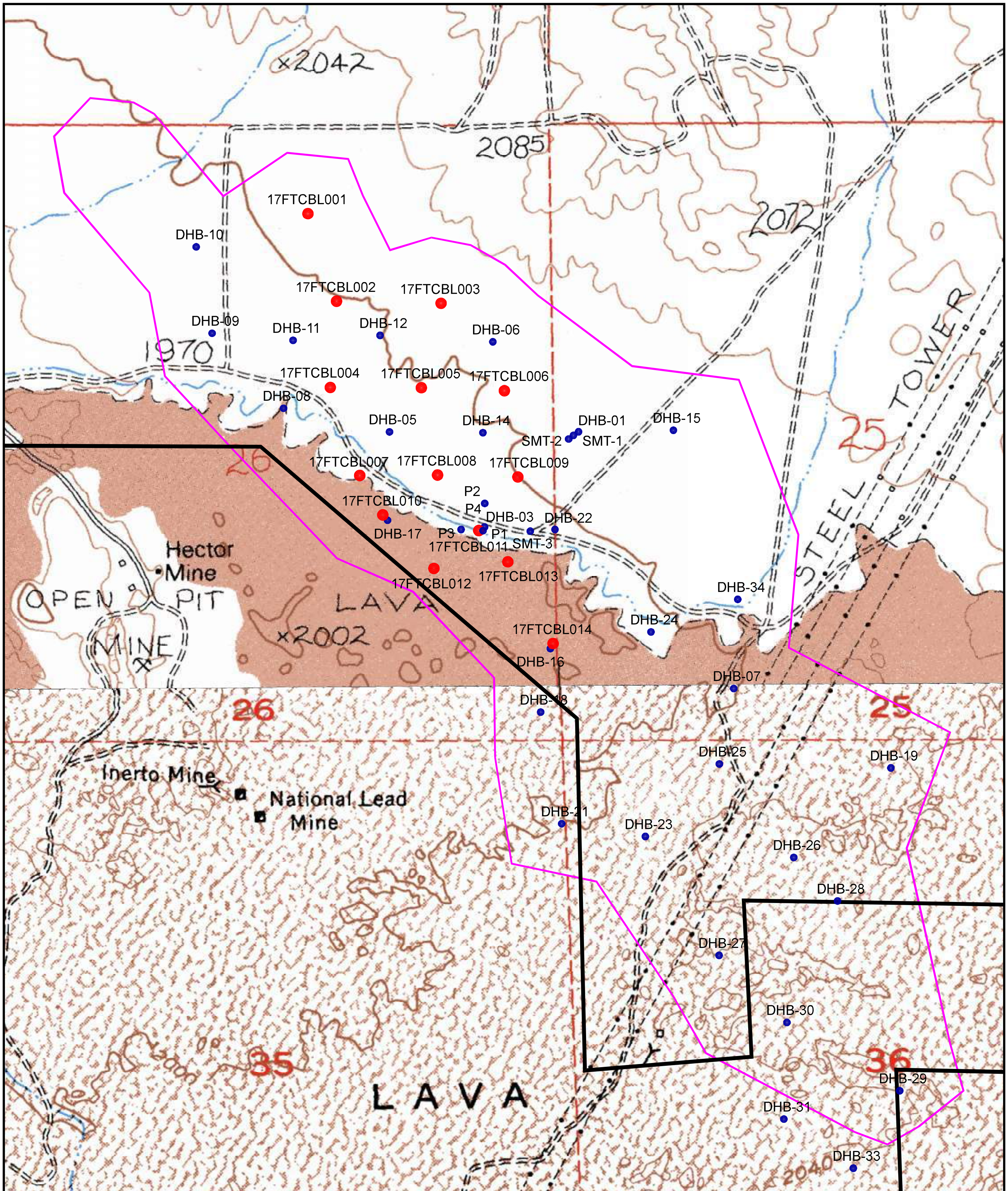
Table 7.2 2017 APBL Drilling Summary

Drill Hole ID	UTM 83-11 (m)		Collar Elev. (ft.)	Depth (ft.)	Rotary Interval (ft.)		Cored Interval (ft.)		No. of Samples
	Easting	Northing			From	To	From	To	
17FTCBL-01	552,638	3,846,716	2006.02	1568.59	0	1204	1204	1568.59	82
17FTCBL-02	552,711	3,846,490	1996.73	1508.6	0	1208	1208	1508.6	107
17FTCBL-03	552,981	3,846,485	2019.1	1458.62	0	1153	1153	1458.62	91
17FTCBL-04	552,695	3,846,268	1977.87	1738.04	0	1266	1266	1738.04	162
17FTCBL-05	552,930	3,846,267	1995.36	1588.9	0	1237	1237	1588.9	150
17FTCBL-06	553,145	3,846,260	2001.55	1502.11	0	1189	1189	1502.11	83
17FTCBL-07	552,772	3,846,041	1977.41	1774.55	0	1196	1196	1774.55	207
17FTCBL-08	552,972	3,846,042	1983.61	1625.08	0	1202	1202	1625.08	153
17FTCBL-09	553,179	3,846,037	1992.3	1560.1	0	1169	1169	1560.1	120
17FTCBL-10	552,831	3,845,939	1989.29	1646.59	0	1208	1208	1646.59	176
17FTCBL-11	553,078	3,845,899	1983.22	1777.53	0	1332	1332	1777.53	155
17FTCBL-12	552,963	3,845,801	1973.35	1749.55	0	1281	1281	1749.55	212
17FTCBL-13	553,153	3,845,818	1992.3	1768.54	0	1313	1313	1768.54	155
17FTCBL-14	553,270	3,845,608	1986.53	1844.54	0	1328	1328	1844.54	260

Core logging was completed on all drill holes and included lithological and geotechnical logging. Downhole geophysical logs, including Gamma Ray, Induction and standard caliper were completed on all drill holes from surface to total depth (TD) with the exception of 17FTCBL009 where adverse hole conditions resulted in only partial geophysical logging. All core is logged and photographed according to industry standard procedures. An example of core photos is shown in Figure 7.3.

A geotechnical drill hole, APBL023, was also completed in 2017. This well was cored its entire length and a geologic log was completed to define mineralized horizons. No splitting or analytical samples were collected from this hole to preserve core for subsequent geotechnical testing. This hole was subsequentially used as an in-situ leaching well.

The QP considers the drilling program by APBL to be of sufficient quality to support a Mineral Resource Estimate.



Resource Boundary
Project Area Boundary
2017 APBL Drill Hole Location
Historic Drill Hole Location

N

1,000 Feet

American Pacific
BORATES LIMITED

FIGURE 7.1

FORT CADY PROJECT

DRILLING LOCATIONS

DATE: 09/28/2021
FILE: Figure 7.1.dwg

Millcreek Mining GROUP

Figure 7.2 Cross-section Through the Fort Cady Deposit

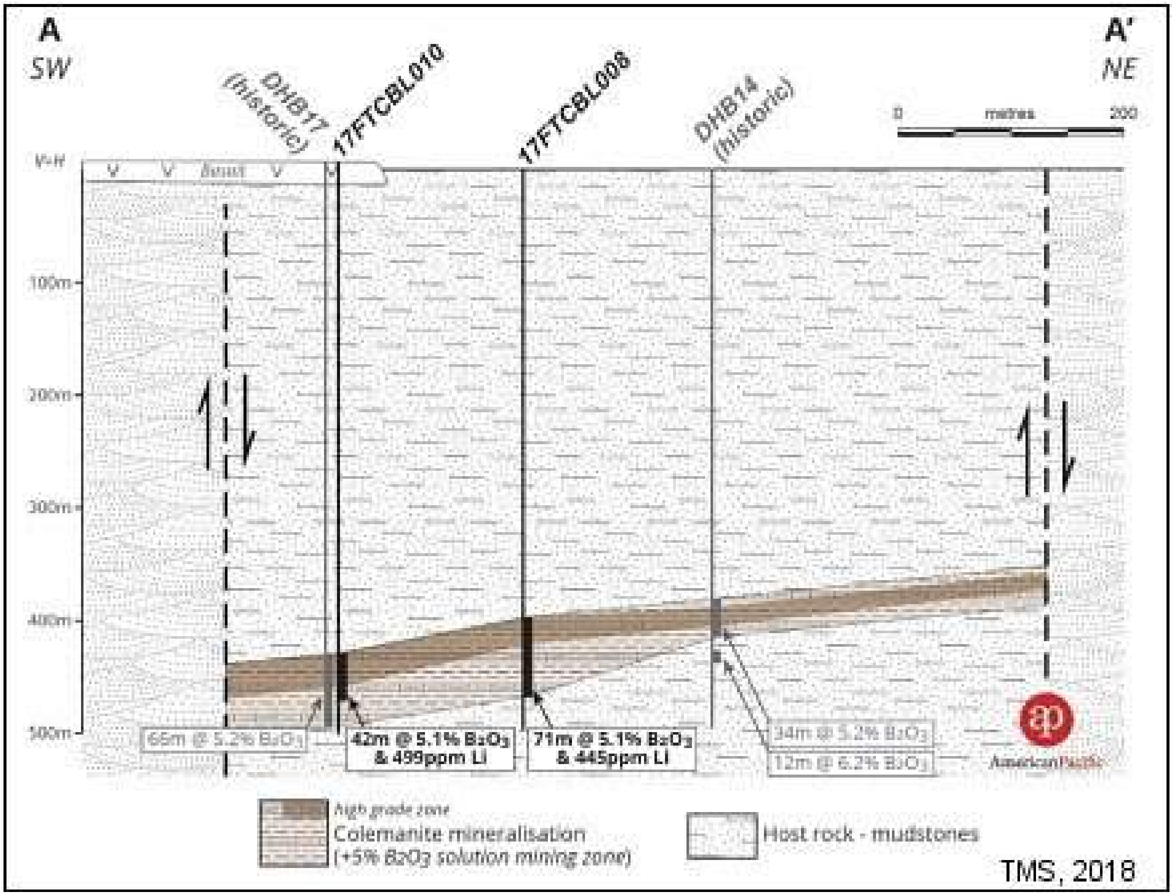


Figure 7.3 Core Photo, 17FTCBL-014

8 SAMPLE PREPARATION, ANALYSES AND SECURITY

Between September 2017 and October 2017, APBL completed 14 holes for 23,111 ft. as part of a confirmatory resource drilling program. Assay results from all 14 drill holes were used in the mineral resource estimate. There are 2,113 samples from the 2017 drilling program representing 1,713 ft. of core. In conjunction with the 2017 drilling program, 29 historical drill holes completed by Duval and four holes completed by FCMC have been utilized in the mineral resource estimate. There are 3,672 samples from the historic drilling representing a cumulative total 10,831.3 ft. of core. The QA/QC procedures for the historic drilling are unknown though the work products compiled during the historic drilling suggests it was carried out by competent geologists following procedures considered standard practice at that time.

Discussions held with Pamela A.K. Wilkinson, who was an exploration geologist for Duval at the time of drilling and sampling, indicate that Duval had internal quality control and quality assurance procedures in place to ensure that assay results were accurate by Duval utilized their Tucson, West Texas (Culberson Mine) or New Mexico (Duval Potash mine) laboratories for analytical work carried out at Fort Cady. Geochemical analyses were carried out using X-Ray Fluorescence Spectrometry (XRF). XRF results were reportedly checked against logging and assay data.

8.1 SAMPLING METHOD AND APPROACH

Entire core sequences were sampled. Sample intervals were determined at the time of logging are based on changes in lithology, mineralogy, and bedding. Sample intervals range from 0.2 to 6.6 ft. with an overall average sample length of 2.66 ft. Following determination of sampling intervals, core was split in half using a core splitter. One half of the core is used for the analytical sample with the remaining half core being returned to the core box for archiving. Samples are then placed into labeled plastic sample bags along with a pre-numbered sample tag. A companion sample tag is placed back in the core box marking the interval sampled. Samples were dispatched by commercial carrier to the Saskatchewan Research Council (SRC) for geochemical analysis. SRC has been accredited by the Standards Council of Canada and conforms with the requirements of ISO/IEC 17025.2005

8.2 SAMPLE PREPARATION, ANALYSES AND SECURITY

Upon receipt of samples from APBL, SRC would complete an inventory of samples received, completing chain of custody documentation, and providing a ledger system to APBL tracking samples received and steps in process for sample preparation and analysis. Core samples are dried in their original sample bags, then jaw crushed. A subsample is split out using a sample riffler. The subsample is then pulverized with a jaw and ring grinding mill. The grinding mill is cleaned between each sample using steel wool and compressed air or by silica sand. The resulting pulp sample is then transferred to a barcode labeled plastic vial for analysis.

All samples underwent a multi-element Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES), using a multi-acid digestion for Ag, Al_2O_3, Ba, Be, CaO, Cd, Ce, Cr, Cu, Dy, Er, Eu, Fe_2O_3, Ga, Gd, Hf, Ho, K2O, La, Li, MgO, MnO, Mo, Na_2O, Nb, Nd, Ni, P_2O_5, Pb, Pr, Sc, Sm, Sn, Sr, Ta, Tb, Th, TiO_2, U, V, W, Y, Yb, Zn, and Zr. Boron was also analyzed by ICP-OES but undergoes a separate digestion where an aliquot of the sample is fused in a mixture of $NaO_2/NaCO_3$ in a muffle oven, then dissolved in deionized water, prior to analysis. Major oxides (Al_2O_3, CaO, Fe_2O_3, K_2O, MgO, MnO, Na_2O, P_2O_5 and TiO_2) are reported in weight percent. Minor, trace, and rare earth elements are reported in ppm. The detection limit for B is 2 ppm and 1 ppm for Li.

For the 2017 drilling program, a total of 2,118 core samples and 415 control samples were submitted for multi-element analysis to SRC. APBL submitted control samples, in the form of certified standards, blanks and coarse duplicates (bags with sample identification supplied by APBL for SRC to make duplicate samples). In addition to these control samples, SRC also submitted their own internal control samples in the form of standards and pulp duplicates. A summary of all the QAQC control samples submitted to SRC is shown in Table 8.1.

Table 8.1 Summary of QA/QC Control Samples

Submitted By	Drilling Type	Number of Holes	Meters Drilled	Standards	Blanks	Coarse Duplicates	Pulp Duplicates	Total Frequency	Primary Samples	Total
APBL	Rotary	14	4,692.10	0	0	0	0		0	0
	Diamond Tail	14	2,353.70	144	135	136	0		2,118	2,533
	Total	14	7,045.80	144	135	136	0		2,118	2,533
	Frequency			6.80%	6.40%	6.40%		19.60%	83.60%	100%
SRC	SRC Internal QAQC			151			82			
	Frequency			7.10%			3.90%	11.00%		

Certified standards SRM 1835 and SRM 97b, prepared by the National Institute of Standards and Technology, were submitted as part of the APBL QA/QC procedures, the results of which are shown graphically on Figures 8.1 and 8.2. Standard deviations shown are for the SRC assays. No two standards in any single batch submission were more than two standard deviations from the analyzed mean, implying an acceptable level of precision of SRC instrumentation.

Figure 8.1 Assay Results of Standard SRM1835

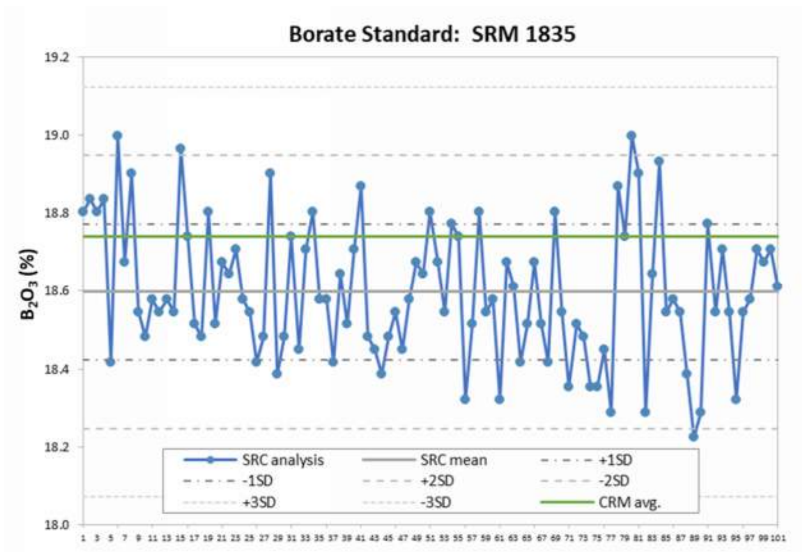
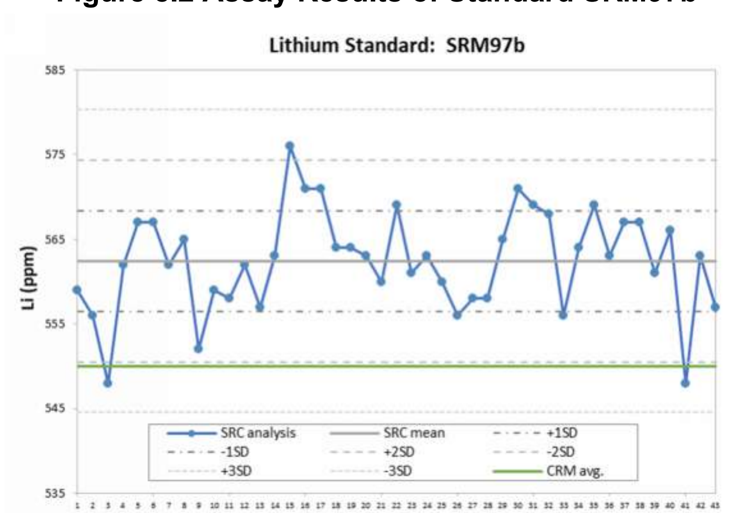


Figure 8.2 Assay Results of Standard SRM97b



SRC assayed two different standards, CAR110/BSM and CAR110/BSH, for its own QC protocol. CAR110/BSM is designated as a "medium boron standard". CAR110/BSH is designated as a "high boron standard". Figures 8.3 and 8.4 display the analytical results for the certified standards. The analytical precision for analysis of both CAR110/BSM and CAR110/BSH is also reasonable, with no two standards in any single batch submission being more than two standard deviations from the analyzed mean.

Figure 8.3 Assay Results for SRC Standard CAR110/BSM

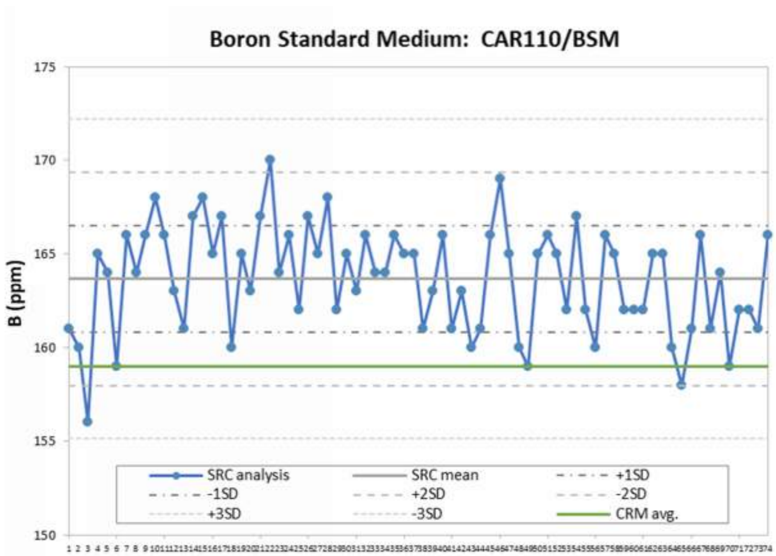
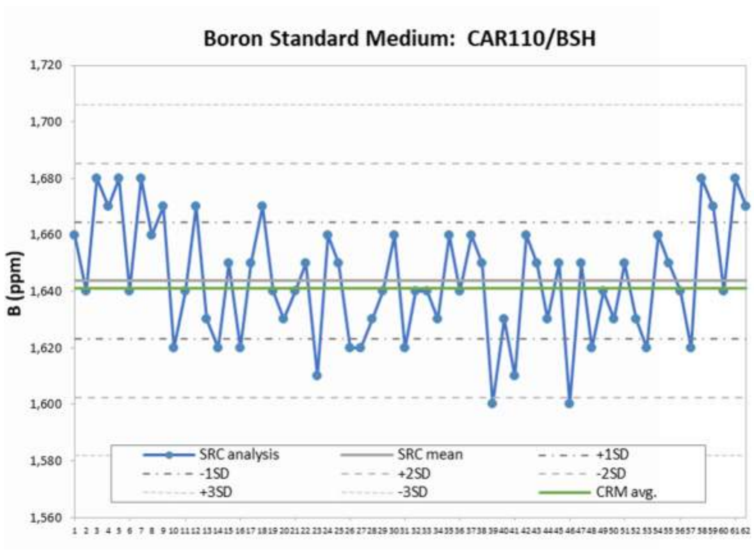


Figure 8.4 Assay Results for SRC Standard CAR110/BSH



Blank samples inserted by APBL consisted of non-mineralized marble. One hundred and thirty-five blank samples were submitted, all of which had assay results of less than 73 ppm B. The level of boron detected in the blanks is likely sourced from pharmaceutical (borosilicate) glass used during sample digestion. These boron concentrations are considered immaterial in relation to the boron levels detected in the colemanite mineralization and do not appear to represent carryover contamination from sample preparation. Lithium levels in the blank samples are also at acceptable levels with the majority of assays <15 ppm Li. The four highest Li levels in the blanks immediately followed samples that contained relatively high Li concentrations. Overall, the concentration of the primary elements of interest (B and Li) in the blanks are at levels considered to be acceptable, implying a reasonable performance for sample preparation. The results of the blanks for B and Li are plotted in Figures 8.5 and 8.6.

Figure 8.5 Sample Blank Assay Results for Boron

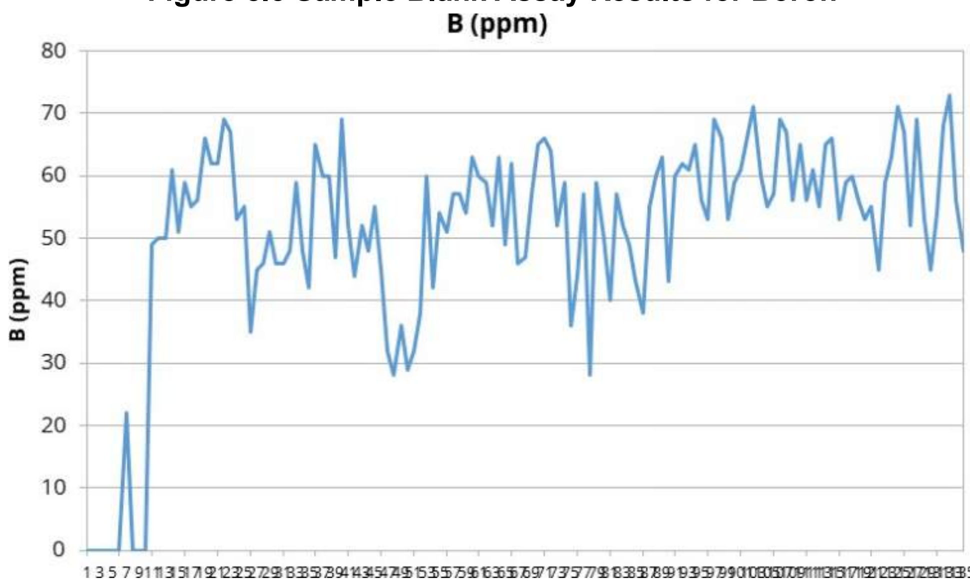
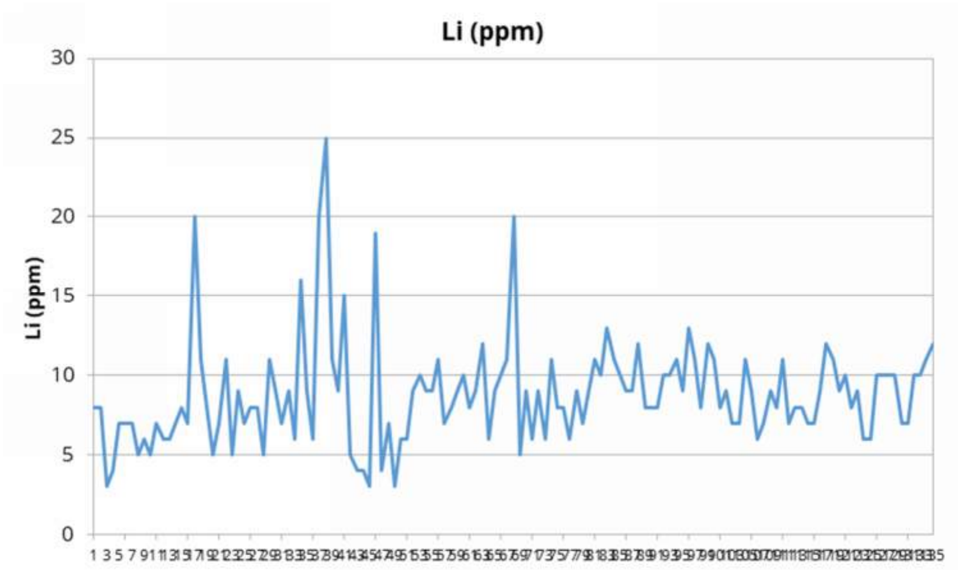


Figure 8.6 Sample Blank Assay Results for Lithium



A total of 136 duplicate samples were submitted to the SRC. APBL commissioned SRC to compose coarse duplicate samples using a Boyd rotary splitter. Figures 8.7 and 8.8 show the assay results of duplicate samples for B and Li. As can be seen from the regressions, there is a good correlation between original and duplicate samples.

Figure 8.7 Duplicate Sample Results for Boron

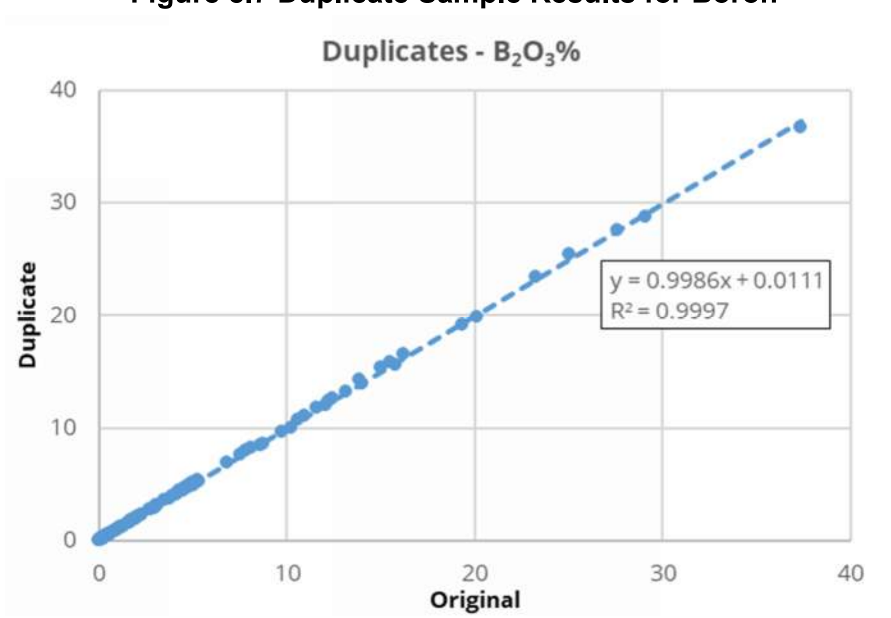


Figure 8.8 Duplicate Sample Results for Lithium

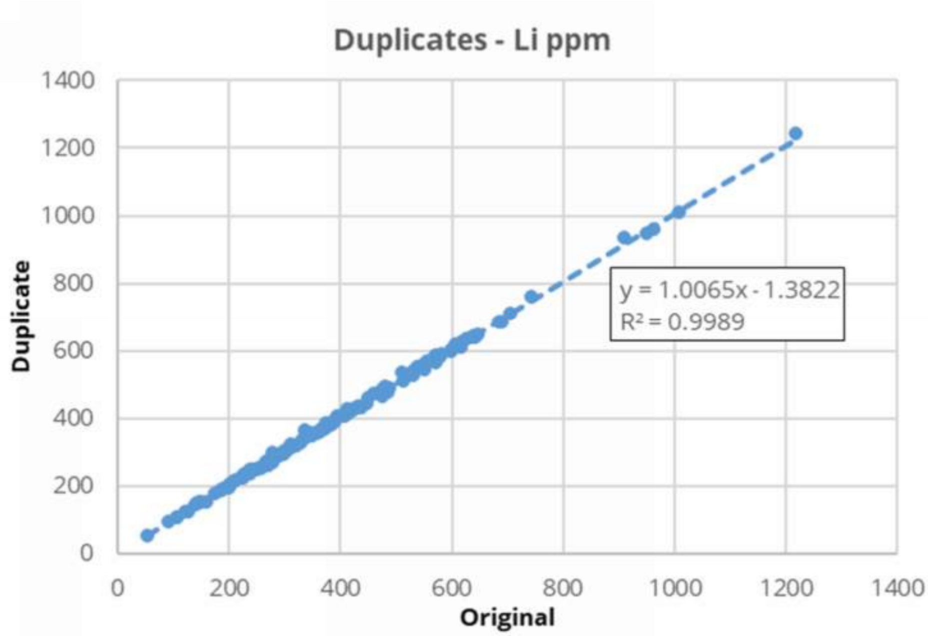


Figure 8.9 displays a HARD (half absolute relative difference) plot for the duplicates. This highlights reasonable precision for the duplicates. Regression and HARD results were also plotted for pulp duplicates assayed in SRC's own QC protocol shown in Figures 8.10 and 8.11. These also show a reasonable level of precision.

Figure 8.9 HARD Diagram for APBL Duplicate Samples.

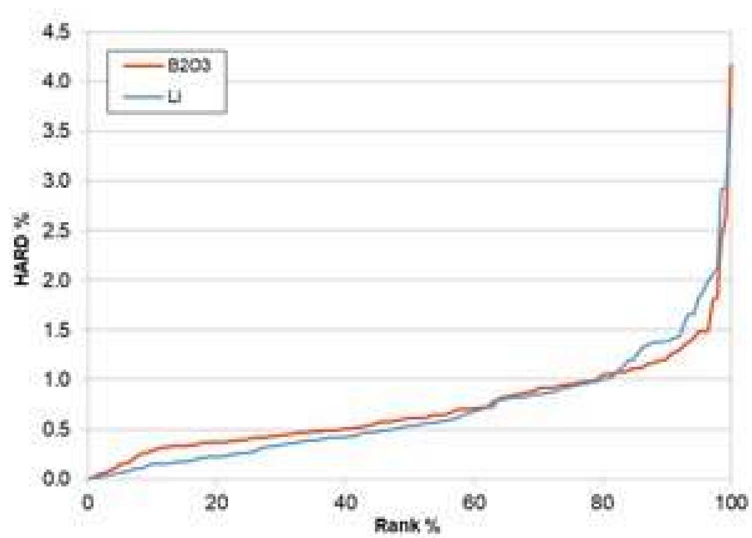


Figure 8.10 SRC Duplicate Results

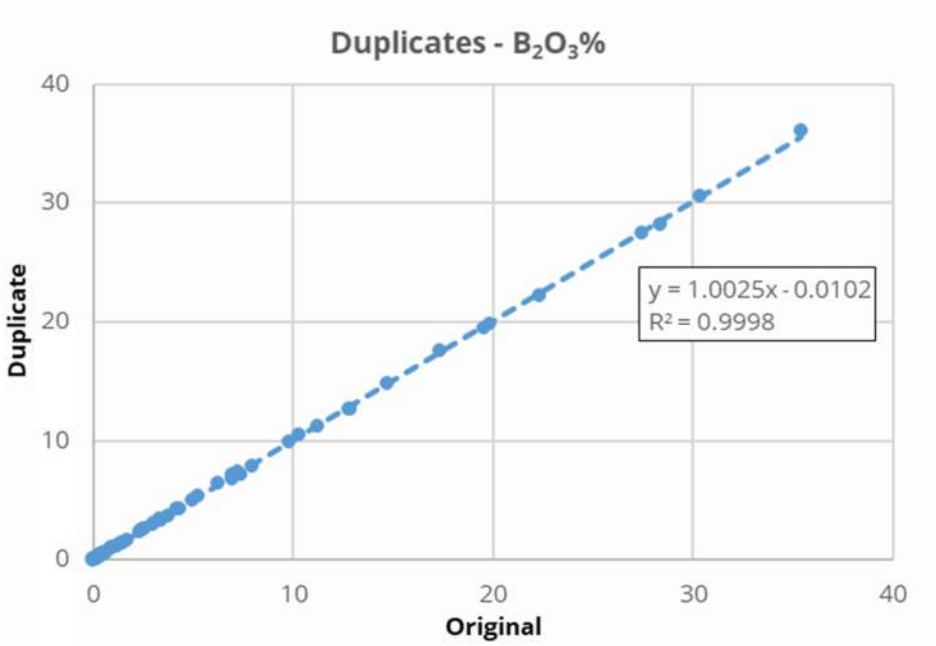
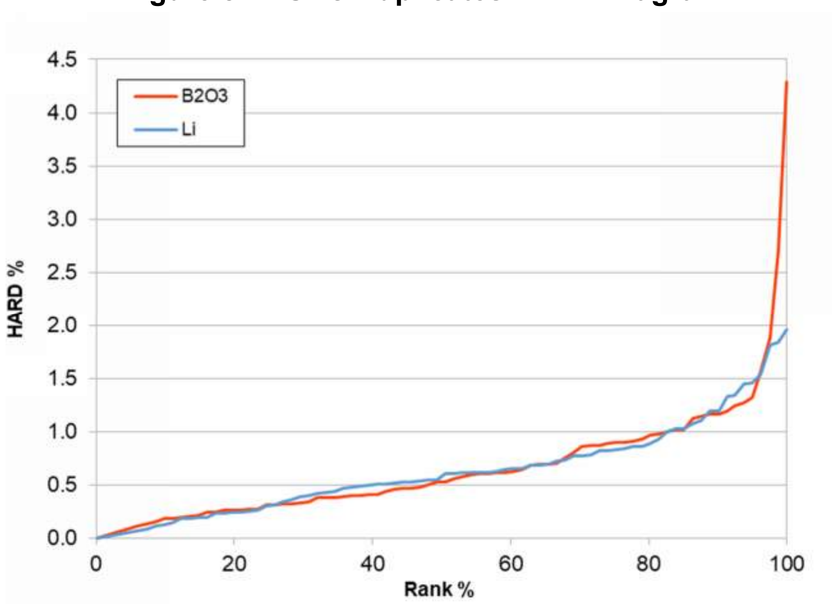


Figure 8.11 SRC Duplicates HARD Diagram



The QP believes reasonable care has been taken to collect and dispatch sample samples for analysis. The QA/QC program has shown the analyses are viable with a minimum of dispersion or contamination errors. The QP considers the sampling program to be of sufficient quality to support a mineral resource estimate.

9 DATA VERIFICATION

During the site visit, the QP examined the core for five of the 2017 drill holes completed by FCCC. Core has been safely stored in a designated storage building nearby the mine site office and is in good condition. The QP examined the core and compared the core to the geologic logs and sample interval records and found good agreement with the log descriptions and with no discrepancies with sample intervals.

The QP has done a visual check of drilling locations through Google Earth. Drill sites from the 2017 drilling program are still visible on imagery. Older sites completed by Duval and FCMC are not discernible on imagery.

Historic drilling location records were originally recorded in California State Plane coordinates or in metes and bounds. The QP checked historic drilling location data to ensure these records had been properly converted to UTM coordinates, the coordinate system used in the 2017 drilling program. All historic location data has been properly converted to the current UTM coordinate system.

The QP was provided drilling records, sample intervals, and assay results in Excel Workbook files that were used as input for the drill hole database. Through a variety of data checks drill hole information was evaluated for duplicate entries, incorrect intervals, lengths, or distance values less than or equal to zero, out-of-sequence intervals and intervals or distances greater than the reported drill hole length. Historical drill hole records were also checked against relevant Duval and FCMC data sets. A review comparing original field logs and assay reports showed the data to have been transcribed accurately into the Excel files.

The QP believes adequate care has been taken in preserving and transcribing the historic data to digital format and 2017 drill hole data accurately corresponds back to the sample ledger and assay certificates. The QP believes that the data as used are adequate and suitable for a mineral resource estimate.

10 MINERAL PROCESSING AND METALLURGICAL TESTING

10.1 MINERAL CHARACTERISTICS

Colemanite ($2CaO \cdot 3B_2O_3 \cdot 5H_2O$) is a hydrated, calcium borate mineral with 50% B_2O_3 and is found in evaporite deposits of alkaline lacustrine environments. The mineral is semi-hard with a Mohs hardness of 4.5 and forms as discreet monoclinic, prismatic crystals or masses. Colemanite typically forms as translucent colorless, white or gray crystals with a vitreous luster. Colemanite is insoluble in water but soluble to hydrochloric acid (HCl) and sulfuric acid (H_2SO_4).

In-situ solution mining is the proposed extraction technique for the Fort Cady deposit. In-situ solution mining depends on the following hydrologic characteristics: void spaces and porosity, permeability, ore zone thickness, transmissivity, storage coefficient, water table or piezometric surface, and hydraulic gradient (Bartlett, Solution Mining,1998) as well as reaction and extraction method efficiencies.

10.2 SOLUTION MINING

APBL intends to use solution mining by injecting an acid solution via a series of wells (well field) into the mineralized horizons. The acid solution reacts with the colemanite forming a pregnant leach solution (PLS) containing boric acid (H_3BO_3). There are various ways of developing the well field for in-situ leaching, including “push-pull” where wells function as both as injection and recovery well; line drive; and multiple spot patterns. In addition to the vertical wells, horizontal drilling for well development is also being evaluated as a potential option for the Project. The mine wellfield development and the pattern will ultimately depend on the hydrogeologic model and the cost benefit analysis of various patterns and options.

The leaching of the colemanite will occur via the injection of a solution with a dilute concentration of HCl into the deposit through the wells. The injection fluid will remain in the formation and extracted after sufficient contact time with the colemanite. The concentration of HCl in the injection solution is one of the key control variables for the mining process. Higher concentrations of HCl promote reaction with the colemanite, while excessive HCl will increase the reaction with minor impurities such as aluminum, magnesium, iron, anhydrides, and calcite.

10.3 PROCESSING

PLS from the wells will be recovered using artificial lifting techniques and piped to the boric acid processing facility. The PLS will contain primarily boric acid and calcium chloride along with minor quantities of other chlorides such as strontium, lithium, potassium, sodium, aluminum, and magnesium.

Evaporative crystallization will be used to extract the boric acid from the PLS. The crystals are dewatered and then dried to make the final boric acid product. Process water impurities pass through an evaporative zero liquid discharge (ZLD) system.

The crystallized purge is cooled to recover the BA. The liquor is neutralized to drop out metal-hydroxides and then sent to a sulfuric acid circuit to precipitate calcium (gypsum) and produce hydrochloric acid. This acid is combined with water, heated, and returned to the well field as the injection fluid. The gypsum by-product is dewatered and sent to the gypsum stockpile.

11 MINERAL RESOURCE ESTIMATES

11.1 INTRODUCTION

In December of 2018, Mr. Louis Fourie of Terra Modelling Services (TMS) completed an updated JORC resource report for APBL's Fort Cady Project. That report identified a Measured plus Indicated mineral resource estimate of 52.7 million tonnes (Mt) containing an average grade of 6.02% B_2O_3 and 367 ppm of Li. There have been no additional exploration activities on the Project since that time though there have been some changes in the mineral holdings. The QP has conducted an audit of the geologic model completed by TMS and has used that model to update the mineral resource estimate.

11.2 RESOURCE DATABASE

The database used for resource estimate includes 34 holes completed by Duval, 3 holes completed by FCMC, and 14 holes completed by APBL for a cumulative total of 51 drill holes and a cumulative sampled length of 24,823.6 m. (81,421.4 ft.). Table 11.1 summarizes the drilling database. The database was provided to Millcreek in a digital format and represents the Project's exploration dataset as of (July 19, 2021). Drilling coordinates in the database are in UTM NAD 83-11, and depths and elevations are reported in meters. Borate is listed as weight percent (%) B_2O_3 and Li as ppm. The drilling database contains 5,775 analytical values for B_2O_3 and 5,193 analytical values for Li.

Core recovery for the 2017 drilling program ranged from 93% to 100% with an overall average of 97.60%. Core recovery records for earlier drilling conducted by Duval and FCMC are not available, but based on missing intervals in the drilling database, core recovery likely exceeded 90% in the core drilling.

The QP has completed a thorough review and verification of the drilling database and found the database to be sufficient for resource modeling.

11.3 GEOLOGIC MODEL

TMS developed a gridded geologic model of the Project using Vulcan™ software. The mineralization does not correlate to lithological markers as the entire sequence is predominantly lacustrine mudstone. However, detailed examination of the analytical results reveals distinct mineralized horizons. The deposit was delineated based on these

Table 11.1 Summary of Drilling Database

HoleID	Cumulative Core Length (m)	Cumulative Sample Length (m)	B_2O_3 Analyses	Li Analyses
17FTCBL001	111.13	88.90	82	82
17FTCBL002	91.74	87.74	107	107
17FTCBL003	93.11	92.80	91	91
17FTCBL004	143.77	142.71	162	162
17FTCBL005	107.35	104.76	150	150
17FTCBL006	95.34	90.47	83	83
17FTCBL007	176.27	166.09	207	207
17FTCBL008	128.96	127.20	153	153
17FTCBL009	119.33	118.51	120	120
17FTCBL010	133.81	126.50	176	176
17FTCBL011	135.72	134.79	155	155
17FTCBL012	142.77	138.42	212	212
17FTCBL013	138.99	136.75	155	155
17FTCBL014	157.43	156.99	260	260
DHB-01	162.49	158.41	184	184
DHB-03	212.90	212.12	213	213
DHB-05	207.26	207.26	179	179
DHB-06	175.57	155.42	124	124
DHB-07	204.83	204.06	179	179
DHB-08	224.63	224.63	186	186
DHB-09	170.69	170.69	138	138
DHB-10	139.08	81.79	86	86
DHB-11	112.90	73.28	86	86
DHB-12	120.67	74.04	85	0
DHB-13	102.57	61.17	70	70
DHB-14	117.63	75.71	80	0
DHB-15	125.70	56.18	51	51
DHB-16	145.48	122.62	138	138
DHB-17	141.25	104.49	151	151
DHB-18	139.48	92.32	105	105
DHB-19	106.68	59.40	74	74
DHB-21	26.33	25.93	39	39
DHB-22	135.94	101.81	135	135
DHB-23	136.24	100.80	114	114
DHB-24	146.00	120.00	119	119
DHB-25	173.74	134.87	152	152
DHB-26	121.37	81.99	106	106
DHB-27	132.71	67.07	95	95
DHB-28	128.62	80.07	115	115
DHB-29	120.64	75.28	101	101
DHB-30	137.53	68.49	83	83
DHB-31	49.00	57.36	41	0
DHB-33	111.19	92.17	80	0
DHB-34	68.76	87.47	79	0
P1	60.96	60.96	20	0
P2	54.87	64.01	21	0
P3	54.87	54.87	18	0
P4	83.82	54.87	34	0
SMT-1	23.77	23.25	57	57
SMT-2	103.57	24.14	55	0
SMT-3	512.00	24.35	69	0
Total	**6767.46**	**5245.98**	**5775**	**5193**

patterns of mineralization into four mineralized horizons, two non- mineralized or weakly mineralized interbeds and two non-mineralized horizons bounding the deposit. These horizons are listed in Table 11.2

Table 11.2 Modelled Horizons

Horizon	Abbreviation	Thicknes Range (m)	Average Thickness (m)	Composite B2O3 Range (wt.%)	Composite Li Range (ppm)
Overburden	OBN	317.0 - 507.7	381.8	NA	NA
Upper Mineralised Horizon	UMH	0.1 - 12.5	4.3	0.87 - 14.45	99 - 588
Upper Interbed	UI	0.1 - 16.7	6.7	0.5 - 4.1	108 - 623
Major Mineralised Horizon	MMH	0.7 - 69.4	27.4	2.6 - 17.6	98 - 550
Medial Interbed*	MIB	6.5 - 5.2	9.7	0.3 - 1.9	386 - 492
Intermediate Mineralised Horizon	IMH	1.8 - 58.3	22.5	0.7 - 12.0	23 - 534
Lower Mineralised Horizon	LMH	0.0 -53.9	19.7	0.2 - 5.7	91 - 534
Lower Sandstone*	LSS	0.1 - 58.6	15.6	NA	NA

* Horizon not fully penetrated. NA: Not Applicable

The grid model was constructed across the deposit area, with a grid cell size of 25 m. x 25 m. Grids represent the bounding elevation surfaces of key horizons, thicknesses, and analytical grades. Mineral horizon grids were interpolated using an Inverse Distance Squared (ID2) algorithm. Mineralization is spatially defined by a resource boundary using a distance of 150 m. from the last intersection of mineralization in a drill hole. Grids are masked to the outside of the resource boundary.

11.4 GRADE ESTIMATION & RESOURCE CLASSIFICATION

Using composites for each mineralized horizon, variography was successful for B_2O_3 grades for the Major Mineralized Horizon (MMH), Intermediate Mineralized Horizon (IMH), and the Lower Mineralized Horizon (LMH) and are summarized in Table 11.3. Variogram modelling was unsuccessful for the Upper Mineralized Horizon and with Li in all horizons. Grids representing B_2O_3 grades for the MMH, IMH, and LMH were constructed using Ordinary Kriging using the constructed variograms. ID2 interpolation was used with all remaining grade grids using the same spatial limits established with the horizon grids.

Table 11.3 Modelled Variograms

Horizon	Type	Nugget	First Structure	Second Structure
MMH	Spherical, omnidirectional	0	200	400
IMH	Spherical, omnidirectional	0.2	180	450
LMH	Spherical, omnidirectional	0.2	530	-

Based on the variography above, the deposit was classified as follows:

- Measured Resource Category: based on a maximum spacing between mineralized drill holes for each horizon of 200m.
- Indicated Resources Category: based on a maximum spacing between mineralized drill holes for each horizon of 400m.
- Inferred Resources Category: based on a maximum spacing between mineralized drill holes for each horizon of 800m.

Drilling and sampling density is sufficient that no further limits on classification are required.

11.5 MODEL VALIDATION

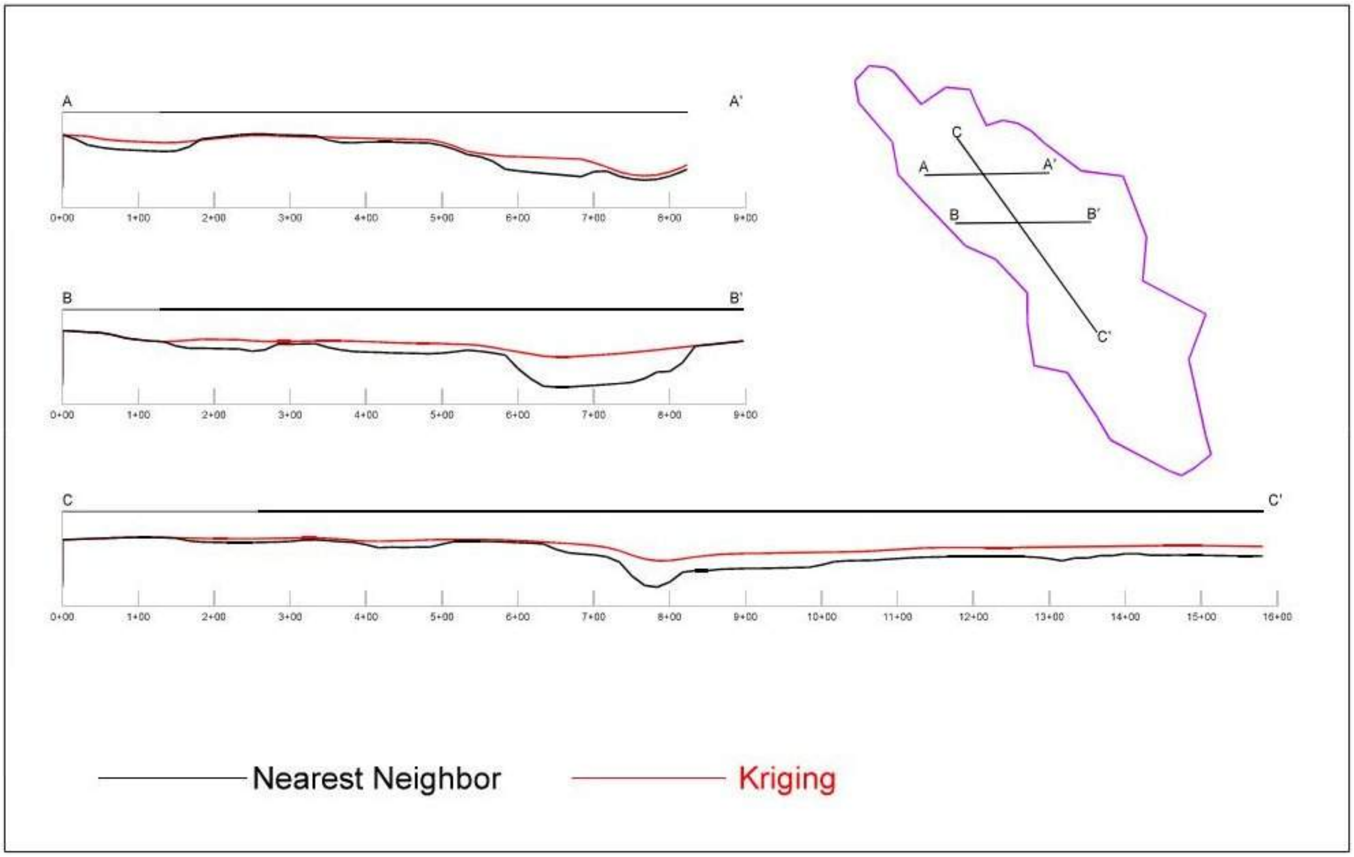
The QP has conducted an audit of the gridded model prepared by TMS. The QP loaded the resource database and grids provided by TMS into Carlson Mining®, a geology and mine planning software that competes directly with Vulcan. The audit and validation of the gridded model consisted of the following steps:

1. Drilling data was loaded into Carlson Mining to compare drill hole postings with the provided grids representing the top and bottom surfaces for each mineralized horizon. This comparison was done using a grid inspector tool in Carlson Mining that enables simultaneous viewing of drill hole data along with grid values at each drilling location. The QP found the resulting comparisons to be satisfactory. This step was repeated comparing drill hole composite grades from drill hole data with grids representing the grades of B_2O_3 and Li for each mineralized horizon. While there are some fluctuations with grid values generated by kriging and ID2, these fluctuations are small and within expected ranges.
2. The gridded model was evaluated using a series of swath plots. A swath plot is a graphical display of the grade distribution derived from a series of bands, or swaths, generated as sections through the deposit. Grade variations from the ordinary kriging model are compared to nearest neighbor (NN) searches on drill hole composites.

On a local scale, the NN search does not provide reliable estimations of grade but, on a much larger scale, it represents an unbiased estimation of the grade distribution based on the underlying data. If the model estimation completed by ordinary kriging is unbiased, the grade trends may show local fluctuations on a swath plot, but the overall trend should be similar to the NN distribution of grade. Three swath plots are shown in Figure 11.1

3. Finally, the QP completed a separate estimate in Carlson Mining following the parameters used by TMS to the defined resource boundary. This separate resource estimate was within 3.6% of the TMS estimate. The QP considers the difference negligible considering the comparison uses two different modelling software packages.

Figure 11.1 Grade Variation Swath Plots



11.6 DENSITY MEASUREMENTS

The 2017 drilling program included the collection of 777 density measurements from core samples. Density determinations were made using the weight in air/weight in water method. The weighted average bulk density determined from the 381 samples collected through the mineralized horizons is 2.18 g/cm^3. and has been used as the bulk density in resource estimation.

11.7 MINERAL RESOURCE ESTIMATION

Results of the mineral resource estimation are shown in Table 11.4. The resource estimate contains a combined 97.55 Mt of Measured plus Indicated resources with an average grade of 6.53% B_2O_3 and 324 ppm Li, using a 5% cut-off grade for B_2O_3. The mineral resource estimate also identifies 11.43 Mt of Inferred resources under mineral control by FCCC. Approximately 91.21 Mt or 94% of the mineral resources controlled by FCCC occurs within the approved Operating Permit region approved for commercial-scale operations which was awarded to FCCC in 1995. 27.58 Mt or 25% of the total mineral resources is contained within the electrical transmission corridor operated by SCE. While SCE maintains control of the surface and resources to a depth of 500 ft., it does not impinge on FCCC's mineral rights for B_2O_3 and Li which occur at depths in excess of 1,000 ft. The resource boundary contains 23.18 Mt of Uncontrolled Resources, resources APBL does not have mineral rights to exploit. Uncontrolled resources are shown in Table 11.5. Figures 11.2 through 11.5.

The QP is not aware of any known environmental, permitting, legal, title, taxation. socio-economic, marketing, or other relevant factors that could affect the mineral resource estimate.

The accuracy of resource and reserve estimates is, in part, a function of the quality and quantity of available data and of engineering and geological interpretation and judgment. Given the data available at the time this report was prepared, the estimates presented herein are considered reasonable. However, they should be accepted with the understanding that additional data and analysis available subsequent to the date of the estimates may necessitate revision. These revisions may be material. There is no guarantee that all or any part of the estimated resources or reserves will be recoverable.

Table 11.4 Fort Cady Project Mineral Resource Estimate*, October 15, 2021

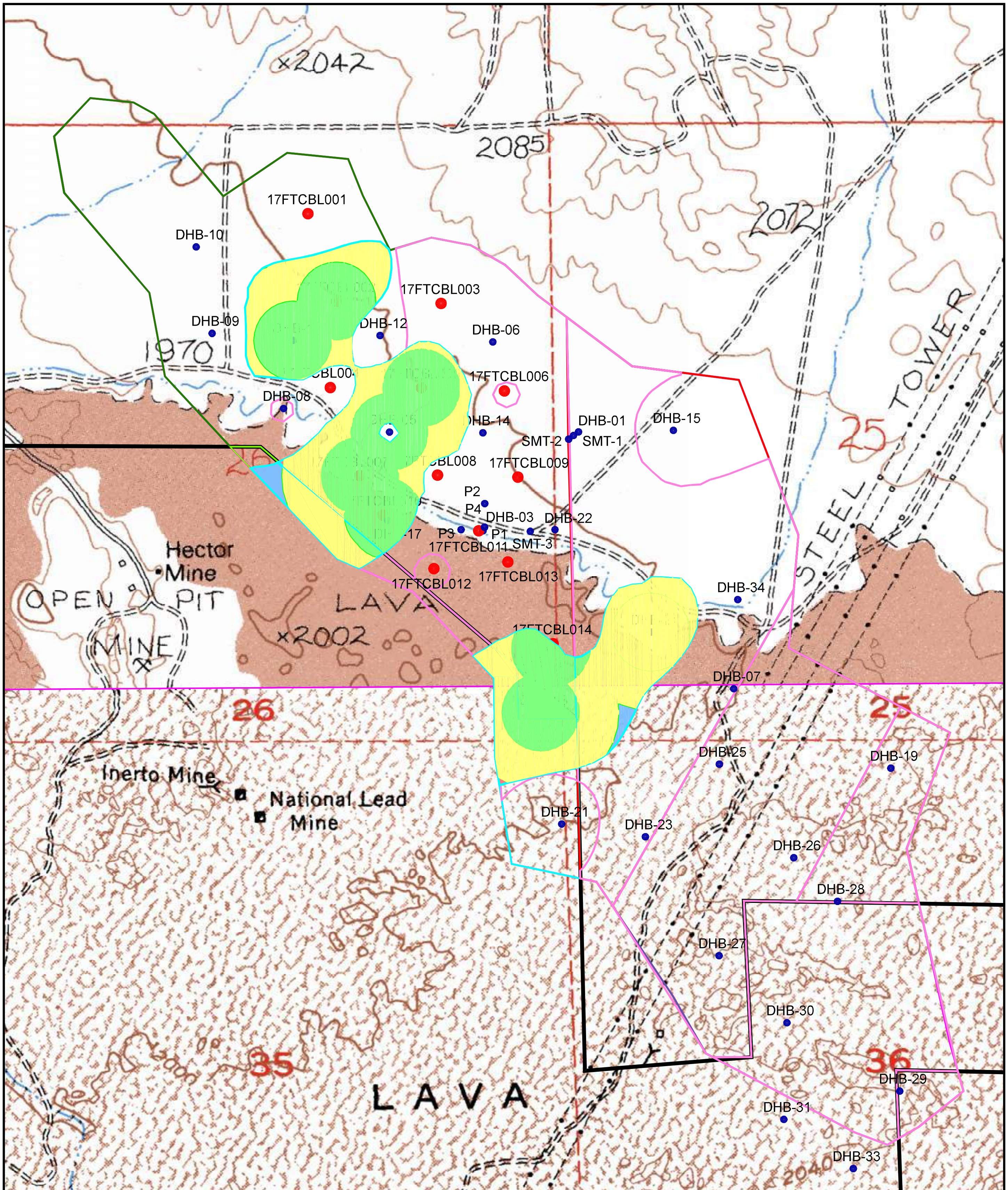
Measured Resource	Horizon	Tonnage (Mt)	B_2O_3 (wt. %)	H_3BO_3 (wt. %)	Lithium (ppm)	B_2O_3 (Mt)	H_3BO_3 (Mt)
FCCC Fee Lands	UMH	0.03	5.73	10.17	259	0.00	0.00
	MMH	7.01	6.31	11.20	317	0.44	0.79
FCCC Fee Lands - Transmission Corridor	MMH	5.24	6.51	11.55	293	0.34	0.61
FCCC-Elementis Leased Lands	UMH	0.75	6.64	11.79	264	0.05	0.09
	MMH	18.59	6.74	11.98	349	1.25	2.23
	IMH	4.34	6.35	11.27	324	0.28	0.49
Total Measured Resource		**35.96**	**6.57**	**11.67**	**330**	**2.36**	**4.20**
Indicated Resource	**Horizon**	**Tonnage (Mt)**	**B_2O_3 (wt. %)**	**H_3BO_3 (wt. %)**	**Lithium (ppm)**	**B_2O_3 (Mt)**	**H_3BO_3 (Mt)**
FCCC Fee Lands	UMH	0.87	5.73	10.17	259	0.05	0.09
	MMH	29.00	6.47	11.50	329	1.88	3.33
FCCC Fee Lands - Transmission Corridor	MMH	20.41	6.51	11.55	293	1.33	2.36
FCCC-Elementis Leased Lands	UMH	0.31	6.68	11.87	251	0.02	0.04
	MMH	7.70	6.74	11.98	349	0.52	0.92
	IMH	3.29	6.40	11.37	324	0.21	0.37
Total Indicated Resource		**61.59**	**6.51**	**11.55**	**318**	**4.01**	**7.12**
Total Measured + Indicated Resource		**97.55**	**6.53**	**11.61**	**324**	**6.37**	**11.31**
Inferred Resource	**Horizon**	**Tonnage (Mt)**	**B_2O_3 (wt. %)**	**H_3BO_3 (wt. %)**	**Lithium (ppm)**	**B_2O_3 (Mt)**	**H_3BO_3 (Mt)**
FCCC Fee Lands	UMH	0.03	5.73	10.17	259	0.00	0.00
	MMH	6.46	6.55	11.42	334	0.42	0.75
	IMH	0.59	5.64	10.01	330	0.03	0.06
FCCC Fee Lands - Transmission Corridor	MMH	1.93	6.51	11.55	293	0.13	0.22
FCCC-Elementis Leased Lands	MMH	0.27	6.74	11.98	349	0.02	0.03
	IMH	2.14	6.32	10.48	330	0.14	0.24
Total Inferred Resource		**11.43**	**6.40**	**11.37**	**324**	**0.74**	**1.31**

*** Using a 5% B_2O_3 cut-off grade.**

Table 11.5 Uncontrolled Resources

Resource	Classification	Horizon	Tonnage (Mt)	B_2O_3 (wt. %)	H_3BO_3 (wt. %)	Lithium (ppm)	B_2O_3 (Mt)	H_3BO_3 (Mt)
California State Land	Measured	MMH	0.93	6.98	12.40	366	0.07	0.12
	Indicated	MMH	14.61	6.98	12.40	366	1.02	1.81
	Inferred	IMH	0.81	5.44	9.66	333	0.04	0.08
Elementis Not Leased	Measured	UMH	0.13	7.15	12.69	228	0.01	0.02
		MMH	2.28	5.81	10.32	341	0.13	0.23
	Indicated	UMH	0.23	6.72	11.93	230	0.02	0.03
		MMH	3.68	7.10	12.62	401	0.26	0.46
	Inferred	UMH	0.03	6.09	10.82	239	0.00	0.00
		MMH	0.50	6.23	11.06	371	0.03	0.05
Total Uncontrolled Resources			**23.18**	**6.82**	**12.1**	**366**	**1.58**	**2.81**

*** Using a 5% B_2O_3 cut-off grade.**



Resource Boundary
Project Area Boundary
2017 APBL Drill Hole Location
Historic Drill Hole Location

CLASSIFICATION
Measured
Indicated
Inferred

N

1,000 Feet

AmericanPacific
BORATES LIMITED

FIGURE 11.2

FORT CADY PROJECT
RESOURCE CLASSIFICATION
FOR THE
UPPER MINERALIZED
HORIZON (UMH)

DATE: 10/12/2021
FILE: Figure 11.2.dwg

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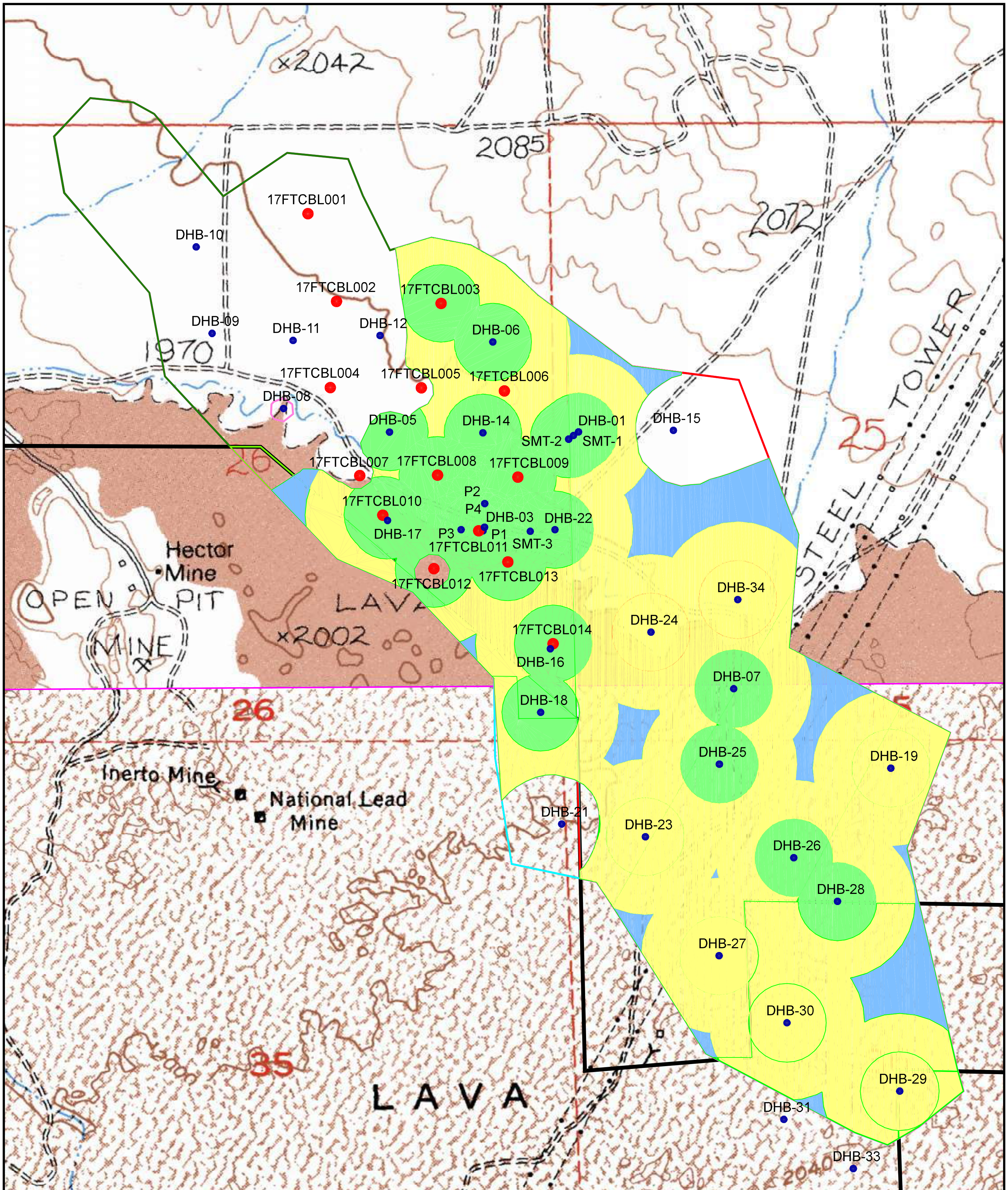

AmericanPacific
BORATES LIMITED

Resource Boundary
Project Area Boundary
2017 APBL Drill Hole Location
Historic Drill Hole Location

CLASSIFICATION
Measured
Indicated
Inferred

N
1,000 Feet

FIGURE 11.3

FORT CADY PROJECT
RESOURCE CLASSIFICATION
FOR THE
MAIN MINERALIZED
HORIZON (MMH)

DATE: 10/12/2021
FILE: Figure 11.3.dwg

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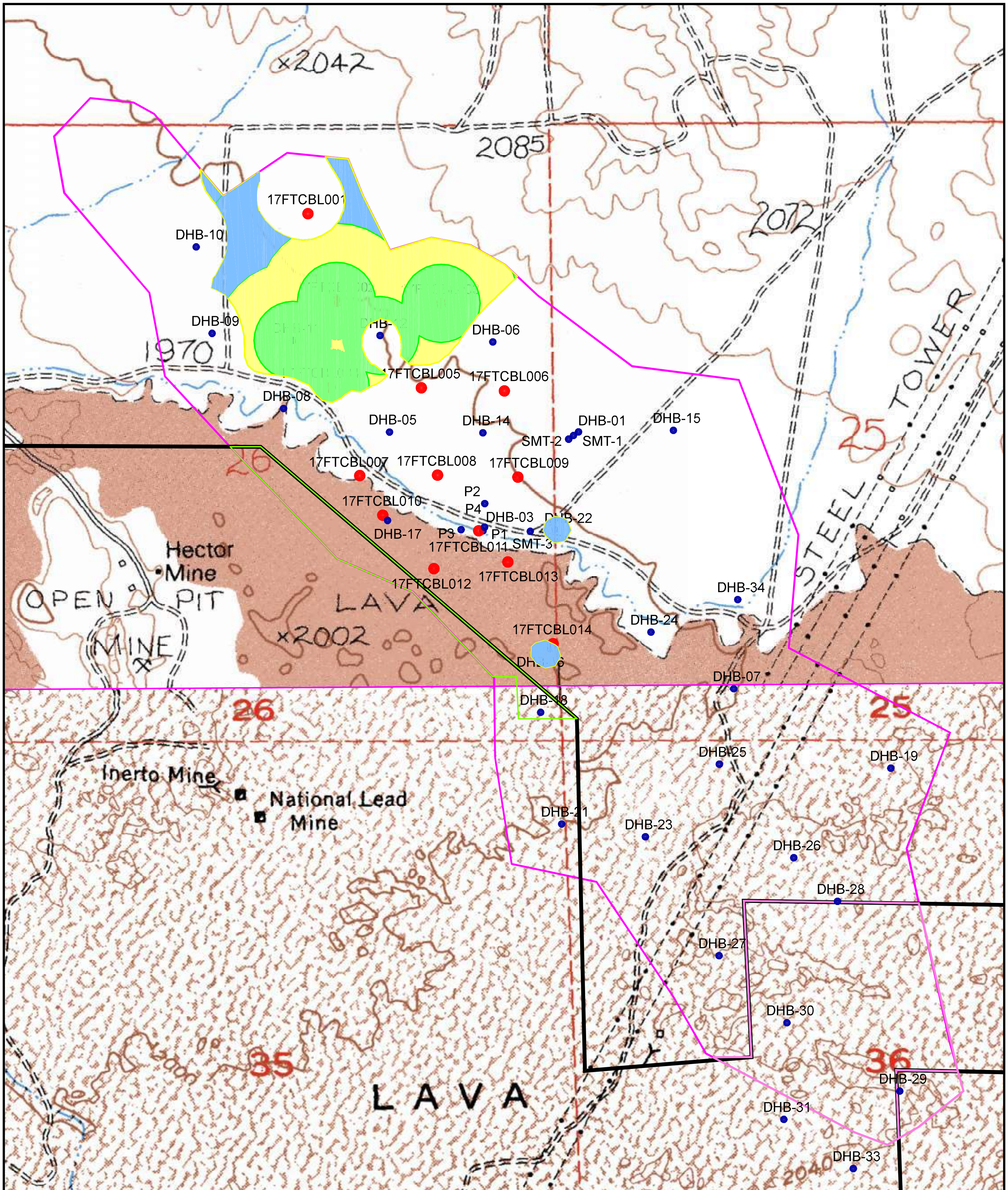

Resource Boundary

Project Area Boundary

2017 APBL Drill Hole Location

Historic Drill Hole Location

CLASSIFICATION

Measured

Indicated

Inferred

N

1,000 Feet

AmericanPacific

BORATES LIMITED

FIGURE 11.4

FORT CADY PROJECT
RESOURCE CLASSIFICATION
FOR THE
INTERMEDIATE MINERALIZED
HORIZON (IMH)

DATE: 10/12/2021

FILE: Figure 11.4.dwg

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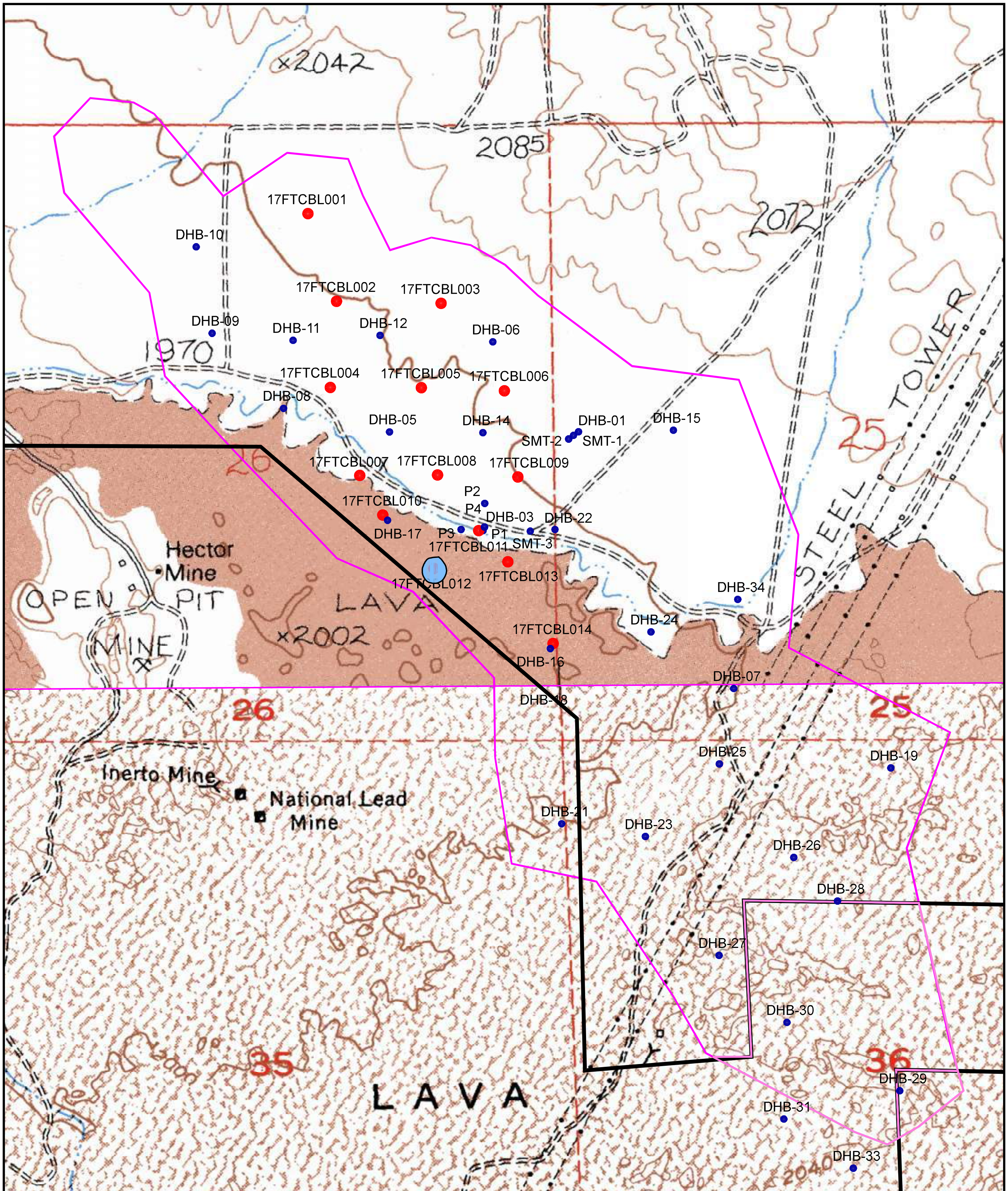

AmericanPacific
BORATES LIMITED

Resource Boundary
Project Area Boundary
2017 APBL Drill Hole Location
Historic Drill Hole Location

CLASSIFICATION
Measured
Indicated
Inferred

N
1,000 Feet

FIGURE 11.5

FORT CADY PROJECT
RESOURCE CLASSIFICATION
FOR THE
LOWER MINERALIZED
HORIZON (LMH)

DATE: 10/12/2021
FILE: Figure 11.5.dwg

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12 MINERAL RESERVE ESTIMATES

There are no mineral reserve estimates to report at this time. Respec, in APBL's eDFS, reported a proven mineral reserve estimate of 27.21 Mt at a 6.7% B_2O_3 grade and a probable reserve of 13.8 Mt at a 6.4% B_2O_3 grade. The estimate assumed a dissolution recovery of 70% B_2O_3 at a cut-off grade of 5% B_20_3 along with a plant recovery of 99.99%. no other economic factors were applied in determining mineral reserves.

Agapito is currently conducting additional dissolution testing that may yield a different recovery from dissolution of colemanite. Likewise, engineering and construction is currently in progress for the SSBF from which plant recovery and other economic factors will be determined. Dissolution testing and operation of the SSBF will provide the necessary parameters for determining the mineral reserve estimate.

13 MINING METHODS

The Project will be employing ISL as its mining method to recover borate and Li from the mineralized horizons. Following dissolution testing, Agapito has been selected by APBL to complete a wellfield design for the Project. The well field design will likely comprise push-pull wells; and/or using a series of wells injecting solution into the mineralized horizons along with another series of wells recovering the PLS. Detailed wellfield design is not available at this time.

14 PROCESSING AND RECOVERY METHODS

There are no processing or recovery methods to report at this time. Engineering and construction are progressing for the SSBF. Once operational, the SSBF should provide many of the necessary parameters that will lead to design of the processing plant for initial production of 90 kstpa boric acid and 80 kstpa SOP.

15 INFRASTRUCTURE

There are no quantified infrastructure needs to report at this time. Engineering and construction are progressing for the SSBF. Once operational, the SSBF should provide many of the necessary parameters that will identify infrastructure needs for the well field and processing plant for initial production of 90kstpa boric acid and 80kstpa SOP.

16 MARKET STUDIES

16.1 BORON MARKET

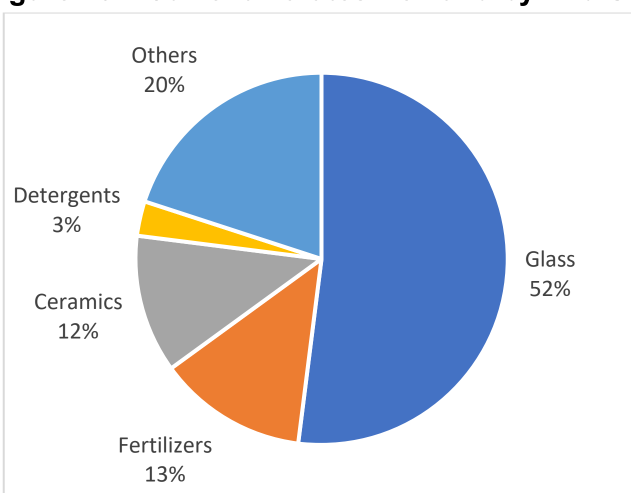
The global boron market is currently estimated to be valued at US$ 3.2 billion and consists of approximately 4.5Mtpa. Borates demand growth has had reasonably consistent compound annual growth rate (CAGR) of about 4% from 2013 through 2020. Traditional demand growth coupled with new applications are forecasted to increase demand growth to circa 6% CAGR from 2021 through 2028.

16.1.1 Boron Market

Traditional applications for boron include glass manufacturing (borosilicate glass and textile fiberglass), insulation, ceramics, specialty fertilizers and biocides for the agricultural industry, detergents, fire retardants, and wood preservatives (Figure 16.1. New applications for boron include its use for:

- permanent magnets used in electric vehicles and re-chargeable electrical/battery equipment.
- semi-conductors and electronics.
- green energy/decarbonization in wind turbines, nuclear energy, and solar cells and
- military vehicles & personal armor.

Figure 16.1 Current Borates Demand by End Use



The global boron market is dominated by two companies: Eti Maden (Turkish Govt-Owned); and Rio Tinto Borates (a subsidiary of Rio Tinto). Together, they supply approximately 80% of global boron market. Eti Maden alone supplies over 60% of the world market. Eti Maden appears to be the only producer with meaningful additional supply capacity.

The concentration of boron market reflects the rarity of economically viable borates deposits. There are only four main regions with large scale borate deposits: Anatolia (Turkey), California (USA), Central Andes (South America), and Tibet (Central Asia). Turkey has circa 73% of the world's total boron reserves. The Fort Cady Project is the only permitted Boron resource that will add meaningful supply in the next five to seven years.

Over the ten years, leading through 2019, Rio Tinto Borates appears to have been operating at full capacity with approximately one million stpa of boric acid equivalent production. Production from Rio Tinto Borates decreased 7.7% in 2020 to 940 st of boric acid equivalent production and is forecasted to decline a further 4.0% in 2021. Rio Tinto Borates supplies approximately 70% of the US boron demand and this reduction in supply is resulting in higher prices and supply shortfalls. The five-year weighted average operating costs of Rio Tinto Borates were circa US$635/t with first half 2021 operating costs of US$650/t. The US market is APBL's target market.

16.1.2 Boron Pricing

In 2020, Rio Tinto received an average price of US$750/ton on a boric acid equivalent basis. Eti Maden average boric acid pricing is US$815/ton in 2021 and has recently announced price increases of between 3% and 4%. Prices have steadily increased by 10% from 2019 through 2021 through to an average price of US$830/ton. Actual prices for boric acid are typically negotiated on short-term & long-term contracts between buyers and sellers.

16.2 LITHIUM MARKET

Global end-use markets for Li are estimated as follows: batteries, 65%; ceramics and glass, 18%; lubricating greases, 5%; polymer production, 3%; continuous casting mold flux powders, 3%; air treatment, 1%; and other uses, 5%. Lithium consumption significantly increased between 2014 and 2017 due to a strong demand for rechargeable lithium batteries used extensively in portable electronic devices, electric tools, electric vehicles, and grid storage applications. Lithium minerals were used directly as ore concentrates in ceramics and glass applications.

By 2017, prices had been propelled through successive multi year highs by strong demand from the Li-ion battery industry set against a backdrop of uncertainty over future supply. This attracted significant attention on the Li sector and incentivized investment into both mining and processing capacity. Prices for all Li products subsequently fell as production at operations in China, Australia, Canada, and Chile ramped-up, and as a swath of greenfield projects mitigated fears of future supply shortages.

Worldwide Lithium Carbonate equivalent production increased significantly from 38,000 mt in 2016 to 69,000 mt in 2017 and then to 95,000 mt in 2018. Lithium production retreated to 77,000 mt in 2019 and held steady through 2020. During the first half of 2020, the economic impact of the global COVID-19 pandemic resulted in substantial reduction on customer demand. During the second half of 2020, Li demand increased primarily due to strong growth in the Li-ion battery market.

16.2.1 Lithium Production

Lithium is extracted from brines that are pumped from beneath arid sedimentary basins and extracted from granitic pegmatite ores containing the mineral spodumene. Chile leads world production for Li and for production from brines. Australia leads production from pegmatites. Other potential sources for Li include clays, geothermal brines, oilfield brines, and zeolites. Owing to continued exploration, the USGS estimates a substantial increase in global resources of Li of 100 mt from a previous estimate of 39 mt in 2016. Currently five companies account for approximately two-thirds of the Li market: Albermarle, 18%; Ganfeng Lithium Co. Ltd., 17%; Sociedad Química y Minera de Chile (SQM), 14%; Tianqi Lithium Corp, 12%; and Livent Corp., 5%.

16.2.2 Pricing

Average annual lithium carbonate prices in 2016 were US$8,650/t. Lithium carbonate prices peaked in November 2017 at US$25,800/t. Since then, they have been under pressure, having fallen through much of 2018, 2019 and much of 2020. At the start of 2021, Lithium Carbonate equivalent spot prices were at US$4,786 and steadily increased to US$13,815 in July. At the end of July 2021 Lithium carbonate equivalent prices sharply increased with an average spot price for October 2021 at US$25,396 and that has peaked as high as US$28,688.

16.3 CONTRACTS

There are currently no contracts for boron or lithium at this time for the Project

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17 ENVIRONMENTAL STUDIES, PERMITTING AND PLANS, NEGOTIATIONS, OR AGREEMENTS WITH LOCAL INDIVIDUALS OR GROUPS

FCCC currently has the following permits in place:

1. Air Permit – All processes currently identified have been permitted by Mojave Desert Air Quality Control District (MDAQCD) for up to 270,000 tons per year (tpy) Boric Acid and 80,000 tpy SOP. The permits have been renewed annually by paying the annual fee. Any modifications to process equipment or use of process equipment will require a modification to the existing permit. All modifications must meet national ambient air quality standards and MDAQMD requirements.
2. Water Permits - The project has been operating under a Water Quality Permit issued by the Lahontan Regional Water Quality Control Board (LRWQCB) in 1988. The permit includes all surface impoundments associated with the boric acid pilot plant and requires post mining rinsing and monitoring. FCCC remains compliant with the permit by sampling water well DHB-1 quarterly and submitting quarterly reports. A Final Permanent Closure Plan has been submitted to LRWQCB for closure of the existing ponds. FCCC and LRWQCB have agreed to close the ponds if LRWQCB will close the permit.
3. Stormwater - The project has received a Notice of Non-applicability (NONA), documenting that the project does not require a stormwater permit for either construction or operations. The NONA was issued as the project is in a closed basin with no stormwater discharge.
4. San Bernardino County Land Use Planning issued the Mining and Reclamation Permit in 1994, based upon the 1990 Plan of Operations (PoO) and subsequent Environmental Impact Report (EIR). The PoO was amended, and the permit modified in 2019 to address changes such as moving the plant location, eliminating a rail crossing I-40 and including additional rights to water. The Fort Cady Project is not located within a water district with adjudicated water rights. Therefore, water rights are granted by San Bernardino County through the Mining & Reclamation Permit. The Mining and Reclamation Permit includes Condition of Approval requirements for engineering and planning, as well as requirements to eliminate impacts to desert tortoises.
5. The BLM issued a Record of Decision (ROD) in 1994 and approved the EIS/EIR boundary (noted on Figure 3.2). the ROD authorizes mining borates at a rate of 90,000 tpy. The ROD also has requirements for company activities to eliminate adverse impacts to desert tortoises and cultural resources. FCCC will be updating

the Plan of Operations to 270,000 tpy, which will require an update to the permit. FCCC has filed an updated PoO which is currently in the review process.

6. The Underground Injection Control (UIC) permit administered by the U.S. Environmental Protection Agency (EPA). FCCC is currently modifying this permit and is in the process of adding additional monitor wells that demonstrate that U.S. drinking water aquifers (USDW) are not degraded by ISL activities. FCCC will also be required to perform a series of tests on the first 5 Injection/Recovery wells out of each group of 40 wells to confirm the historical demonstrated permeability of 1 X 10^{-9} d is accurate.

Additional permitting that will likely be required for the project includes:

1. A financial assurance cost estimate (FACE), a surface disturbance bond, will need to be updated for all new equipment, buildings, and ground disturbance. The County conducts their annual inspection around Christmas each year. FCCC is required to update the FACE at that time. If construction is starts in January, then the FACE should be updated and posted at that time.
2. The California Unified Control Act/Agency (CUPA) has primacy over EPA's Tier II reporting requirements. Once the chemical inventory is finalized it can be filed online.
3. An EPA ID will be requested when waste streams have been finalized. This number is issued by the State of California Department of Toxic Substance Control (DTSC).
4. FCCC will need to obtain building permits from San Bernardino County prior to construction.

18 CAPITAL AND OPERATING COSTS

There are no operating or capital costs to report at this time. Engineering and construction are progressing for the SSBF. Once operational, the SSBF should provide many of the necessary parameters for determining operating and capital costs for initial production of 90 kstpa boric acid and 80 kstpa SOP.

19 ECONOMIC ANALYSIS

An economic analysis of the Project is not available at this time. Though APBL validated by Respec, completed an economic analysis in the DFS and eDFS, several parameters that directly impact an economic analysis are being re-evaluated. Once the project has advanced through dissolution testing, wellfield design, and operation of the SSBF, economic analysis will be addressed in a bankable feasibility study (BFS). APBL has announced advancing and targeting of a BFS in the second quarter 2022 (press release, October 13, 2021).

20 ADJACENT PROPERTIES

Elementis operates the Hectorite Mine adjacent to the west side of the Fort Cady Project. The mine produces hectorite, a specialty clay mineral used in ceramics, cosmetics, and other specialties requiring high viscosity or high thermal stability. While the mine is adjacent to the Fort Cady Project it produces a product that does not compete with borate, Li, or other possible by-products being considered by APBL. APBL through its subsidiary, FCCC does have a mineral lease agreement with Elementis for certain unpatented mining claims.

21 OTHER RELEVANT DATA AND INFORMATION

There is no other relevant information or data to present at this time.

22 INTERPRETATION AND CONCLUSIONS

APBL has an established mineral holding 4,910 acres through ownership of fee lands, unpatented placer claims, and a mineral lease agreement. The property has undergone past exploration primarily conducted in the 1980's along with more recent drilling conducted in 2017 which validated previous exploration and expanded known mineral occurrences. Drilling completed on the Project can be considered sufficient for the delineation of a mineral resource estimate.

Exploration drilling has led to a geologic interpretation of the deposit as lacustrine evaporite sediments containing colemanite, a hydrated calcium borate mineral. The deposit also contains appreciable quantities of Li though the source mineral for Li has not been identified at this time. Geologic modeling based on drilling and sampling results depicts an elongate deposit of lacustrine evaporite sediments containing colemanite. The deposit is approximately a 2.1 mi. long by 0.6 mi. wide and ranging in thickness from 70 to 262 ft. mineralization has been defined in four distinct horizons defined by changes in lithology and B_2O_3 analyses.

A mineral resource has been estimated and reported using a cut-off grade of 5% B_2O_3. Measured plus Indicated resources for the Project are 97.55 Mt with a grade of 6.53% for B_2O_3 and 324 ppm for Li. Much of the interpretation and mineral resource estimations were derived through a gridded model created from drilling and sampling data using Vulcan modeling software. Additional review and estimations of the model were conducted using Carlson Mining software. The details of the methodology are described in the report text.

Exploration to date, has focused on an approximate 1,000 acres located in the east-central portion of FCCC's mineral holding. Future exploration efforts should address mineral potential across other portions of the Project area. In particular, the QP believes there is potential upside to conducting additional drilling to the southeast in Section 36, along trend with resources identified in this report.

Current and previous evaluations of mining methods indicate a deposit well suited for ISL solution mining as a potential method for economic extraction. Metallurgical testing and process engineering indicate economic potential as well. APBL is currently having additional engineering and testing work performed to refine dissolution/recovery rates and wellfield design. In addition, the SSBF will provide parameters leading toward designing a processing facility. Additional studies that include detailed mine planning, geotechnical and hydrologic evaluations, full market studies and economic evaluations need to be performed. Based on this, the viability of the deposit for demonstrated economic feasibility has yet to be determined. APBL has announced in a press release (October 13,2021) of advancing and targeting a BFS in the second quarter 2022.

23 RECOMMENDATIONS

Millcreek considers the Fort Cady Borate Project to be of sufficient merit to recommend proceeding with project development of 90 kstpa production facility. The QP makes the following recommendations to advance the geology and resource characteristics for the Project:

1. The current resource estimate classifies approximately 10.5% of the estimate as Inferred resources and approximately 56% of the total resource is classified as Indicated resources. Additional delineation drilling will further refine resource classification, adding more tonnage to Measured from Indicated and from the Inferred to Indicated resource categories. Figure 23.1 shows 11 proposed drilling locations that should significantly increase Measured resources from Indicated classification. The QP has also located four drilling locations in Section 36 to further test resource potential on the southern land holdings held by APBL. The all-in cost per drill hole (access and pad preparation, drilling, sampling, analyses, permitting, and geologic support) is approximately $121,092. The proposed drilling program has an estimated budget of $1,816,386 (Table 23.1).

Table 23.1Recommended Drilling Budget

Item	Per Hole	15 Holes
Drilling	61,500	922,500
Access/Pad Preparation	25,000	375,000
Geologic Support	12,000	180,000
Sampling/Analysis	2,250	33,750
Permittin/Clearance	4,667	70,000
Mobilization/Demobilizatio	4,667	70,000
Contingency @ 10%	11,008	165,125
Total	**$121,092**	**$1,816,375**

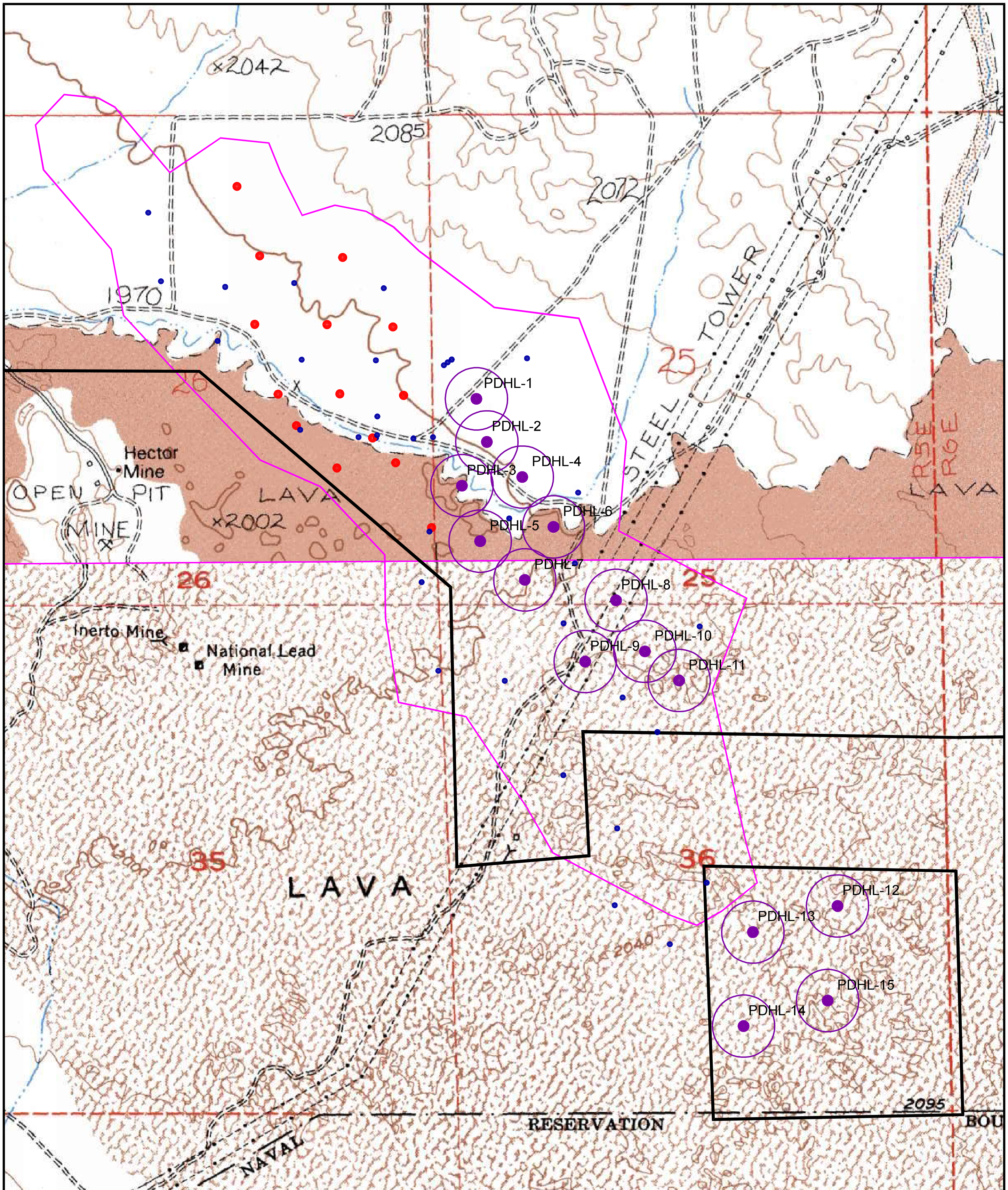
2. With any future drilling, the QP recommends using a standardized sample length of one or two meters. Sample lengths with past drilling has varied from 0.1 m. to 5.9 m. in the mineralized horizons. there is sufficient knowledge from previous drilling to determine horizon breaks and a standardized sample length will reduce sampling and analytical costs.

3. The deposit holds significant quantities of Li. Little is known at this time about which mineral(s) host Li and whether Li is recovered in appreciable quantities through ISL. Additional mineralogical testing should be done to identify the source for Li

such scanning electron microprobe or QEMSCAN. Further testing should be done on PLS to determine how much Li is leached and what processes might be required to extract Li and steps to produce lithium carbonate $LiCO_3$ and/or lithium hydroxide (LiOH (H_2O)n).

4. APBL should consider using seismic and electromagnetic surveying to gain further understanding of the structural setting of the Project and may assist in identifying facies changes in the sediments. Further understanding of faulting can assist in understanding permeability and flow for solution mining.

5. As the project moves forward, further analysis should be completed to determine if economics will support a lower cut-off grade for B_2O_3. A lower cut-off grade could significantly increase mineral resources and in the future, mineral reserves. Dissolution testing should help determine recovery of boric acid and the SSBF should identify associated costs of recovering boric acid at lower cut-off grades. For instance, lowering the cut-off grade to 2.5% B_2O_3, yields 240.1 Mt with an average grade of 4.92% B_2O_3%.



Resource Boundary

Project Area Boundary

2017 APBL Drill Hole Location

Historic Drill Hole Location

PDHL-4 Proposed Drilling Locatiom with Measured ROI

N

1,000 Feet

AmericanPacific
BORATES LIMITED

FIGURE 23.1

FORT CADY PROJECT
PROPOSED DRILLING
LOCATIONS

DATE: 10/12/2021

FILE: Figure 23.1.dwg

Millcreek Mining GROUP

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25 RELIANCE ON INFORMATION PROVIDED BY THE REGISTRANT

APBL has provided the QP with a large variety of materials for the preparation of this report. These materials include the following:

- Drilling records from the 2017 drilling program completed by APBL in 2017 including drilling locations, drill logs, sampling records, analytical results/certificates, geophysical logs, and core photos.
- Drilling records from Duval and FCMC including drill logs, sampling records, analytical results/certificates, and geophysical logs.
- Historical drilling maps and testing records.
- Agapito Conceptual Engineering Study.
- Various sections to the DFS and eDFS prepared by Respec.
- Land records, land maps, and land purchase agreements showing property holdings of FCCC.
- Geologic Model prepared by TMS including grid files and data input files.
- Copies of recent APBL press releases