

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**
Washington, D.C. 20549

FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

5E Advanced Materials, Inc.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

87-3426517
(I.R.S. Employer
Identification No.)

9329 Mariposa Road, Suite 210
Hesperia, CA 92344
(442) 221-0225

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Paul Weibel
Chief Financial Officer
5E Advanced Materials, Inc.
9329 Mariposa Road, Suite 210
Hesperia, CA 92344
(442) 221-0225

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copies of all communications to:

J. Eric Johnson, Esq.
Winston & Strawn LLP
800 Capitol Street, Suite 2400
Houston, TX 77002
(713) 651-2647

Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box. ☐

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. ☒

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box. ☐

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box. ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐

Accelerated filer ☐

Non-accelerated filer ☒

Smaller reporting company ☒

Emerging growth company ☒

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act. ☒

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

SUBJECT TO COMPLETION, DATED JANUARY 29, 2024

PRELIMINARY PROSPECTUS



Up to 85,310,403 Shares of Common Stock

This prospectus relates to the offer and resale from time to time by the Selling Stockholders (as defined below) of up to 85,310,403 shares of common stock, par value \$0.01 per share (the “Common Stock”) of 5E Advanced Materials, Inc. (the “Company”) which include (i) 66,261,621 shares of Common Stock (the “Convertible Notes Resale Shares”) which are issuable upon the conversion of amounts outstanding (including principal and accrued interest paid-in-kind as of the date hereof and assuming all accrued interest on such Convertible Notes is paid-in-kind until maturity) under the Company’s 4.50% senior secured convertible notes (the “Convertible Notes”) issued pursuant to a convertible note purchase agreement (the “Note Purchase Agreement”), dated August 11, 2022, as amended by the Amended and Restated Note Purchase Agreement, dated January 18, 2024 (the “Amended and Restated Note Purchase Agreement”), by and among the Company, BEP Special Situations IV LLC (“Bluescape”), Ascend Global Investment Fund SPC, for and on behalf of Strategic SP (“Ascend”), Meridian Investments Corporation (“Meridian”), and Alter Domus (US) LLC as collateral agent (the “Collateral Agent”), (ii) 5,365,854 shares of Common Stock (the “Ascend Resale Shares”) which were issued on January 18, 2024 to Ascend pursuant to a subscription agreement (the “Ascend Subscription Agreement”), dated December 5, 2023, by and between the Company and Ascend, and (iii) 13,682,928 shares of Common Stock (the “5ECAP Resale Shares,” and together with the Convertible Notes Resale Shares and the Ascend Resale Shares, the “Resale Shares”) which were issued on January 18, 2024 and January 29, 2024 to 5ECAP, LLC (“5ECAP,” and together with Bluescape, Ascend, and Meridian, the “Selling Stockholders”) pursuant to a subscription agreement (the “Amended and Restated 5ECAP Subscription Agreement”), dated January 18, 2024, by and between the Company and 5ECAP.

We will not receive any proceeds from the sale of the Resale Shares by the Selling Stockholders. We will pay the expenses associated with the sale of securities pursuant to this prospectus.

We are registering the Resale Shares pursuant to the Selling Stockholders’ registration rights under an amended and restated investor and registration rights agreement, dated January 18, 2024, by and among us and the Selling Stockholders (the “A&R IRRA”). Our registration of the Resale Shares does not mean that the Selling Stockholders will sell any of the securities offered hereby. The Selling Stockholders may offer and sell the Resale Shares in a number of different ways and at varying prices. We provide more information about how the Resale Shares may be sold in the section entitled “Plan of Distribution.”

You should read this prospectus, any prospectus supplement and any amendment carefully before you purchase any securities being offered hereby.

Our Common Stock is listed on the Nasdaq Global Select Market (“Nasdaq”) under the symbol “FEAM.” On January 26, 2024, the closing price of our Common Stock was \$1.36.

We are an “emerging growth company” under federal securities laws and are subject to reduced public company reporting requirements. Investing in our Common Stock involves a high degree of risk. See the section titled “Risk Factors” beginning on page 13.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2024

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. Under this shelf registration process, the Selling Stockholders may sell the Resale Shares from time to time and in one or more offerings.

This prospectus provides you with a general description of the shares of Common Stock which may be offered. Each time the Selling Stockholders sell Common Stock, we or the Selling Stockholders may provide a prospectus supplement that contains specific information about the terms of the offered shares and the offering, including a detailed description of the specific amount or amounts of Common Stock to be offered, the prices of the shares of Common Stock, the name of any agent, underwriter or dealer to or through which the shares of Common Stock may be sold and a description of any arrangement with such agent, underwriter or dealer, and information about any securities exchange or automated quotation system on which the shares will be listed.

A prospectus supplement may also add, update or change information included in this prospectus. Any statement contained in this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in such prospectus supplement modifies or supersedes such statement. Any statement so modified will be deemed to constitute a part of this prospectus only as so modified, and any statement so superseded will be deemed not to constitute a part of this prospectus.

We and the Selling Stockholders have not authorized anyone to provide any information or to make any representations other than those contained in this prospectus, any accompanying prospectus supplement or any free writing prospectus we have prepared. We and the Selling Stockholders take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus is an offer to sell only the Common Stock offered hereby and only under circumstances and in jurisdictions where it is lawful to do so. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus. This prospectus is not an offer to sell Common Stock, and it is not soliciting an offer to buy Common Stock, in any jurisdiction where the offer or sale is not permitted. You should assume that the information appearing in this prospectus or any prospectus supplement is accurate only as of the date on the front of those documents, regardless of the time of delivery of this prospectus or any applicable prospectus supplement, or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

This prospectus contains or incorporates by reference summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under “Where You Can Find More Information” and “Incorporation by Reference.”

For investors outside the United States: We and the Selling Stockholders have not taken any actions that would permit the possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering and distribution of this prospectus outside the United States.

This prospectus does not contain all of the information included in the registration statement of which it forms a part. For further information, we refer you to the entire registration statement, including its exhibits. Statements contained in this prospectus about the provisions or contents of any contract, agreement or other document are not necessarily complete. For each of these contracts, agreements or documents filed as an exhibit to the registration statement, we refer you to the actual exhibit for a more complete description of the matters involved.

When used in this prospectus and any prospectus supplement, unless otherwise specified or the context otherwise requires, the terms the “Company,” “we,” “our,” and “us” refer to 5E Advanced Materials Inc. together with its consolidated subsidiaries unless the context suggests otherwise.

TRADEMARKS AND TRADE NAMES

This document contains references to trademarks and service marks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus may appear without the ® or ™ symbols, but such references are not intended to indicate, in any way, that the applicable licensor will not assert, to the fullest extent under applicable law, its rights to these trademarks and trade names. We do not intend our use or display of other companies’ trade names, trademarks or service marks to imply a relationship with, or endorsement or sponsorship of us by, any other companies.

SELECTED DEFINITIONS

“ABR” refers to American Pacific Borates Limited, a company incorporated under the laws of Australia.

“ASX” refers to the Australian Securities Exchange.

“CDI” refers to a CHESS Depositary Interest.

“Company” refers to 5E Advanced Materials, Inc., a Delaware corporation.

“Corporations Act” refers to the Australian Corporations Act, 2001 (Cth).

“Exchange Act” means the Securities Exchange Act of 1934, as amended.

“Nasdaq” refers to The Nasdaq Global Select Market.

“Reorganization” refers to the transactions pursuant to which, among other things, we (i) issued (a) to eligible shareholders of ABR either one share of our Common Stock for every ten ordinary shares of ABR or one CDI over our Common Stock for every one ordinary share of ABR, in each case, as held on the Scheme record date and (b) to ineligible shareholders proceeds from the sale of the CDIs to which they would otherwise be entitled by a broker appointed by ABR, who sold the CDIs in accordance with the terms of a sale facility agreement and remitted the proceeds to ineligible shareholders, (ii) cancelled each of the outstanding options to acquire ordinary shares of ABR and issued replacement options representing the right to acquire shares of our Common Stock on the basis of a one replacement option for every ten existing ABR options held, (iii) maintained an ASX listing for its CDIs, with each CDI representing 1/10th of a share of Common Stock, (iv) delisted ABR’s ordinary shares from the ASX, and (v) became the parent company to ABR.

“Scheme” refers to a statutory Scheme of Arrangement under Australian law under Part 5.1 of the Corporations Act.

“SEC” means the U.S. Securities and Exchange Commission.

“Securities Act” means the Securities Act of 1933, as amended.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein and therein may include statements that express our and our subsidiaries' opinions, expectations, beliefs, plans, objectives, assumptions or projections regarding future events or future results and therefore are, or may be deemed to be, "forward-looking statements." These forward-looking statements can generally be identified by the use of forward-looking terminology, including the terms "believes," "estimates," "anticipates," "expects," "seeks," "projects," "forecasts," "intends," "plans," "may," "will" or "should" or, in each case, their negative or other variations or comparable terminology. These forward-looking statements include all matters that are not historical facts. They may appear in a number of places throughout this prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein and therein and these forward-looking statements reflect management's expectations regarding our future growth, results of operations, operational and financial performance and business prospects and opportunities. Such forward-looking statements are based on available current market material and management's expectations, beliefs and forecasts concerning future events impacting our business. Factors that may impact such forward-looking statements include, but are not limited to, statements concerning:

- The timing, completion and estimated production capacity of our proposed small-scale facility ("SSF") and proposed large-scale complex;
- The outputs from our proposed SSF and their impact on future estimates and potential studies regarding our proposed large-scale complex;
- Unanticipated costs or delays associated with our proposed SSF;
- Use of our injection-recovery wells for extraction once our proposed SSF and large-scale complex is complete;
- Our ability to successfully and economically extract boron and lithium from colemanite and lithium rich minerals;
- The quantities of resources we expect to be able to extract and our production capabilities;
- The timing of completing and the expected ability of our proposed SSF facility to serve as a foundation for future design, engineering and cost optimization for our proposed large-scale complex;
- Our ability to secure the requisite funding for the successful engineering, development, construction, completion and operation of our proposed facilities;
- The timing and viability of achieving initial commercial production;
- Our ability to commercialize our output and to enter into commercial agreements;
- The total addressable market for materials we intend on producing and selling, including its current size, growth trajectory and the underlying factors that may drive growth in the overall market size;
- The cost and availability of natural gas and electricity;
- Our ability to timely and successfully reach anticipated full commercial production capacity;
- Our ability to achieve and maintain profitability and to develop and maintain positive cash flow from our proposed operating activities;
- Our ability to enter into and deliver product under binding supply agreements;
- Our ability to acquire and maintain the necessary mining licenses, permits and access rights;
- Our ability to acquire and maintain the necessary mineral property interests and related water rights;
- The demand for borates and lithium and the market for their end-use applications; and
- Our ability to develop downstream advanced materials capabilities.

These forward-looking statements are subject to a number of risks and uncertainties, including:

- Our ability to implement and recognize benefits from certain reduced spending measures;
- The substantial doubt regarding our ability to continue as a going concern and our need to raise substantial additional funding, which may not be available on acceptable terms, if at all, to be able to continue as a going concern and advance the Fort Cady Project (the “Project”);
- Our limited operating history in the borates and lithium industries and no revenue from our proposed extraction operations at our properties;
- Our need for substantial additional financing, both in the near-term and long-term, to execute our business plan and our ability to access capital and the financial markets;
- Our status as an exploration stage company dependent on a single project with no known mineral reserves and the inherent uncertainty in estimates of mineral resources;
- Our lack of history in mineral production and the significant risks associated with achieving our business strategies, including our downstream processing ambitions;
- We have incurred significant net operating losses to date and we anticipate incurring continued losses for the foreseeable future;
- Risks and uncertainties relating to the development of the Project in Newberry Springs, CA;
- Risks related to our ability to prepare and update further technical and economic analysis of the Project, and the timing thereof;
- Our dependence on a single project;
- Risks related to our ability to achieve and maintain profitability and to develop positive cash flow from our operating activities;
- Risks, including changes in technology, that could adversely affect the demand for end use applications that require borates, lithium, and related minerals and compounds;
- Our long-term success is dependent on our ability to enter into and deliver product under supply agreements;
- Risks related to estimates of our total addressable market;
- The costs and availability of natural gas, electricity, and water;
- Uncertain global economic conditions and the impact this may have on our business and plans;
- Macroeconomic risks;
- Government efforts to combat inflation, along with other interest rate pressures arising from an inflationary economic environment, could lead to higher financing and project completion costs.
- Risks associated with our ongoing investment in the Project;
- Risks associated with the required infrastructure at the Project;
- Risks related to the titles of our mineral property interests and related water rights;
- Any restrictions on our ability to obtain, recycle, and dispose of water on site;
- Risks related to land use restrictions on our properties;
- Risks related to volatility in prices or demand for borates, lithium, and other minerals;
- Fluctuations in the U.S. dollar relative to other currencies;
- Risks related to mineral exploration and development;

- Risks related to equipment shortages and supply chain disruptions;
- Risks associated with any of our customers, suppliers, or any third parties not implementing ethical or legal business practices in compliance with applicable laws and regulations;
- Competition from new or current competitors in the mineral exploration and mining industry;
- Risks associated with consolidation in the markets in which we operate and expect to operate;
- Risks related to compliance with environmental and regulatory requirements, reclamation requirements, the potential generation and disposal of hazardous waste, climate change, and the proposed SEC rules on climate-related disclosures;
- Risks related to our ability to acquire and maintain necessary mining licenses, permits, or access rights;
- Litigation risk;
- Risks related to our main operations being located in California and our engagement with local communities;
- Our dependence on key management and third parties;
- Risks related to potential acquisitions, joint ventures, and other investments;
- Risks related to public health threats, including the novel coronavirus, that may continue to cause disruptions to our operations or may have a material adverse effect on our development plans and financial results;
- Information technology risks;
- Risks and costs relating to the Reorganization;
- Risks related to the possible dilution of our Common Stock;
- Risks related to our stock price and trading volume volatility;
- Risks relating to the development of an active trading market for our Common Stock;
- Risks related to our status as an emerging growth company;
- Risks related to technology systems and security breaches;
- A shortage of skilled technicians and engineers;
- Risks related to technology systems and security breaches;
- Our facilities of operations could be adversely affected by outside events outside of our control, such as natural disasters, climate change, wars, or health epidemics or pandemics;
- Risks and uncertainties related to the COVID-19 pandemic;
- Our increased costs as a result of being a U.S. listed public company;
- Strategic actions, including acquisitions and dispositions of investments, including but not limited to integrations of acquiring investments;
- Risks associated with the Convertible Notes;
- Risk of insufficient cash flow to service the Convertible Notes;
- Risk of foreclosure on our assets if we default on the Convertible Notes;
- Risk of dilution of the ownership interest of our existing stockholders if the Convertible Notes are converted;
- Risk of adverse impact on the price of our Common Stock if the Convertible Notes are converted;

- Risks associated with limitations on our ability to raise money through equity offerings and to incur additional indebtedness imposed by the Amended and Restated Note Purchase Agreement; and
- Any other risks described elsewhere in this registration statement or the documents incorporated herein by reference.

If any of these risks materialize or our assumptions prove incorrect, actual results could differ materially from the results implied by these forward-looking statements.

These and other factors that could cause actual results to differ from those implied by the forward-looking statements in this prospectus, any accompanying prospectus supplement and the documents incorporated by reference herein and therein are more fully described under the heading “Risk Factors” and elsewhere in this prospectus. The risks described under the heading “Risk Factors” are not exhaustive. Other sections of this prospectus and any accompanying prospectus supplement describe additional factors that could adversely affect the business, financial condition or results of operations of the Company. New risk factors emerge from time to time and it is not possible to predict all such risk factors, nor can the Company assess the impact of all such risk factors on the business of the Company or the extent to which any factor or combination of factors may cause actual results to differ materially from those contained in any forward-looking statements. All forward-looking statements attributable to the Company or persons acting on its behalf are expressly qualified in their entirety by the foregoing cautionary statements. The Company undertakes no obligation to update or revise publicly any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

CAUTIONARY NOTE REGARDING RESERVES

Unless otherwise indicated, all mineral resource estimates included in this prospectus have been prepared in accordance with, and are based on the relevant definitions set forth in, the SEC's Mining Disclosure Rules and Regulation S-K 1300 (each as defined below). Mining disclosure in the United States was previously required to comply with SEC Industry Guide 7 (the "SEC Industry Guide 7") under the Securities Exchange Act of 1934 (the "Exchange Act"). In accordance with the SEC's Final Rule 13-10570, Modernization of Property Disclosure for Mining Registrant, the SEC has adopted final rules, effective February 25, 2019, to replace SEC Industry Guide 7 with new mining disclosure rules (the "Mining Disclosure Rules") under sub-part 1300 (Title 17, Part 229, Items 601 and 1300 until 1305) of Regulation S-K of the Securities Act of 1933, as amended (the "Securities Act") ("Regulation S-K 1300"). Regulation S-K 1300 replaces the historical property disclosure requirements included in SEC Industry Guide 7. Regulation S-K 1300 uses the Committee for Mineral Reserves International Reporting Standards ("CRIRSCO")-based classification system for mineral resources and mineral reserves and accordingly, under Regulation S-K 1300, the SEC now recognizes estimates of "Measured Mineral Resources," "Indicated Mineral Resources" and "Inferred Mineral Resources," and require SEC-registered mining companies to disclose in their SEC filings specified information concerning their mineral resources, in addition to mineral reserves. In addition, the SEC has amended its definitions of "Proven Mineral Reserves" and "Probable Mineral Reserves" to be substantially similar to international standards. The SEC Mining Disclosure Rules more closely align SEC disclosure requirements and policies for mining properties with current industry and global regulatory practices and standards, including the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves, referred to as the "JORC Code." While the SEC now recognizes "Measured Mineral Resources," "Indicated Mineral Resources" and "Inferred Mineral Resources" under the SEC Mining Disclosure Rules, investors should not assume that any part or all of the mineral deposits in these categories will be converted into a higher category of mineral resources or into mineral reserves.

The following terms, as defined in Regulation S-K 1300, apply within this prospectus:

Measured Mineral Resource

("Measured" or "Measured Mineral Resource")

that is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of conclusive geological evidence and sampling. The level of geological certainty associated with a measured mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support detailed mine planning and final evaluation of the economic viability of the deposit. Because a measured mineral resource has a higher level of confidence than the level of confidence of either an indicated mineral resource or an inferred mineral resource, a measured mineral resource may be converted to a proven mineral reserve or to a probable mineral reserve.

Indicated Mineral Resource

("Indicated" or "Indicated Mineral Resource")

is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of adequate geological evidence and sampling. The level of geological certainty associated with an indicated mineral resource is sufficient to allow a qualified person to apply modifying factors in sufficient detail to support mine planning and evaluation of the economic viability of the deposit. Because an indicated mineral resource has a lower level of confidence than the level of confidence of a measured mineral resource, an indicated mineral resource may only be converted to a probable mineral reserve.

Inferred Mineral Resource
 (“Inferred” or “Inferred Mineral Resource”)

is that part of a mineral resource for which quantity and grade or quality are estimated on the basis of limited geological evidence and sampling. The level of geological uncertainty associated with an inferred mineral resource is too high to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Because an inferred mineral resource has the lowest level of geological confidence of all mineral resources, which prevents the application of the modifying factors in a manner useful for evaluation of economic viability, an inferred mineral resource may not be considered when assessing the economic viability of a mining project, and may not be converted to a mineral reserve.

Probable Mineral Reserve
 (“Probable” or “Probable Mineral Reserve”)

is the economically mineable part of an indicated and, in some cases, a measured mineral resource.

Proven Mineral Reserve
 (“Proven” or “Proven Mineral Reserve”)

is the economically mineable part of a measured mineral resource and can only result from conversion of a measured mineral resource.

The Company released an updated technical report on Form 10-K/A dated October 27, 2023, with an effective date of April 1, 2023 (the “Updated Initial Assessment Report”). The purpose of the Updated Initial Assessment Report is to support the disclosure of mineral resource estimates for the Project. The Updated Initial Assessment Report was prepared in accordance with the SEC’s Mining Disclosure Rules and Regulation S-K Subpart 1300 and Item 601(b)(96) (technical report summary). The Updated Initial Assessment Report is discussed in Business and Properties and incorporated by reference as Exhibit 96.1 to this registration statement.

UNLESS OTHERWISE EXPRESSLY STATED, NOTHING CONTAINED IN THIS PROSPECTUS IS, NOR DOES IT PURPORT TO BE, A TECHNICAL REPORT SUMMARY PREPARED BY A QUALIFIED PERSON PURSUANT TO AND IN ACCORDANCE WITH THE REQUIREMENTS OF SUBPART 1300 OF SECURITIES EXCHANGE COMMISSION REGULATION S-K.

CAUTIONARY NOTE REGARDING EXPLORATION STAGE COMPANIES

We are an exploration stage company and do not currently have any known mineral reserves and cannot expect to have known mineral reserves unless and until an appropriate technical and economic study is completed for Fort Cady or any of our other properties that shows Proven or Probable Mineral Reserves as defined by Regulation S-K 1300. We currently do not have any Proven or Probable Mineral Reserves. There can be no assurance that Fort Cady or any of our other properties contains or will contain any such SEC-compliant Proven or Probable Mineral Reserves or that, even if such reserves are found, the quantities of any such reserves warrant continued operations or that we will be successful in economically recovering them.

CAUTIONARY NOTE REGARDING EMERGING GROWTH COMPANY STATUS

Section 102(b)(1) of the Jumpstart Our Business Startups Act (“JOBS Act”) exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies (that is, those that have not had a Securities Act registration statement declared effective or do not have a class of securities registered under the Exchange Act) are required to comply with the new or revised financial accounting standards. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies but any such election to opt out is irrevocable. We have elected not to opt out of such extended transition period which means that when a standard is issued or revised and it has different application dates for public or private companies, we, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard, until such time we are no longer considered to be an emerging growth company. At times, we may elect to adopt a new or revised standard early.

CAUTIONARY NOTE REGARDING INDUSTRY AND MARKET DATA

This prospectus includes information concerning our industry and the markets in which we will operate that is based on information from various sources including public filings, internal company sources, various third-party sources and management estimates. Our management estimates regarding our position, share and industry size are derived from publicly available information and its internal research, and are based on a number of key assumptions made upon reviewing such data and our knowledge of such industry and markets, which we believe to be reasonable. While we believe the industry, market and competitive position data included in this prospectus is reliable and is based on reasonable assumptions, such data is necessarily subject to a high degree of uncertainty and risk and is subject to change due to a variety of factors, including those described in “Cautionary Note Regarding Forward-Looking Statements,” “Risk Factors” and elsewhere in this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates included in this prospectus. We have not independently verified any data obtained from third-party sources and cannot assure you of the accuracy or completeness of such data.

PROSPECTUS SUMMARY

This summary highlights selected information from this prospectus and does not contain all of the information that is important to you in making an investment decision. You should read the entire prospectus carefully, including the information under the headings “Risk Factors,” “Cautionary Note Regarding Forward-Looking Statements,” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and the financial statements and the notes to those financial statements contained herein or otherwise incorporated by reference in this prospectus.

Company Overview

We are focused on becoming a vertically integrated global leader and supplier of boron specialty and advanced materials, complemented by lithium co-product production. Our mission is to become a supplier of these critical materials to industries addressing global decarbonization, food and domestic security. Boron and lithium products will target applications in the fields of electric transportation, clean energy infrastructure, such as solar and wind power, fertilizers, and domestic security. The business strategy and objectives are to develop capabilities ranging from upstream extraction and product sales of boric acid, lithium carbonate, and potentially other co-products, to downstream boron advanced material processing and development. The business is based on our large domestic boron and lithium resource, which is located in Southern California and designated as Critical Infrastructure by the Department of Homeland Security’s Cybersecurity and Infrastructure Security Agency.

Recent Developments

Special Meeting of Stockholders

On January 12, 2024, the Company held a Special Meeting of Stockholders (the “Special Meeting”) where the following matters were voted upon and approved by the Company’s stockholders:

1. An amendment to the Company’s certificate of incorporation to increase the number of authorized shares of Common Stock from 180,000,000 to 360,000,000 (the “Amended and Restated Certificate of Incorporation”);
2. The issuance of up to \$35 million of the Company’s Common Stock at a price per share of \$1.025 (the “Securities Offering”) to Ascend and 5ECAP, and including a \$10 million option to purchase shares of Common Stock to Bluescape; and
3. The issuance of additional shares of the Company’s Common Stock upon conversion of the Company’s Convertible Notes.

On January 12, 2024, the Company filed its Amended and Restated Certificate of Incorporation with the Secretary of State of the State of Delaware.

Restructuring Transactions

Amended and Restated Note Purchase Agreement

On January 18, 2024, the Company entered into the Amended and Restated Note Purchase Agreement, pursuant to which the Convertible Notes, as amended and restated, bear interest at 4.50% per annum, payable semi-annually, or 10.00% per annum if the Company elects to pay such interest through the delivery of additional Convertible Notes, and are convertible into 66,261,621 shares of Common Stock at a conversion price of \$1.5375 per share of Common Stock (assuming all accrued interest is paid-in-kind until maturity) in accordance with the terms of the Amended and Restated Note Purchase Agreement. The Convertible Notes mature on August 15, 2028. Following certain corporate events that may occur prior to the maturity date, the Company will, in certain

circumstances, increase the conversion rate for a holder who elects to convert its Convertible Notes in connection with such a corporate event. In addition, the minimum cash covenant has been waived through June 28, 2024, with a reduction in such covenant thereafter from \$10 million to \$7.5 million.

In connection with the amendment and restatement, Ascend and Meridian each acquired twenty-five percent (25%) of the outstanding principal amount of the Convertible Notes (including accrued interest paid-in-kind) held by Bluescape.

First Closing of Private Placement

On January 18, 2024, pursuant to the Ascend Subscription Agreement and the Amended and Restated 5ECAP Subscription Agreement, the Company issued (i) 5,365,854 shares to Ascend at a price of \$1.025 per share, which shares include the placement fee paid to Ascend in shares of Common Stock and (ii) 5,365,854 shares of Common Stock to 5ECAP at a price of \$1.025 per share, which shares include the placement fee paid to 5ECAP in shares of Common Stock (the “First Closing”).

Second Closing of Private Placement

On January 29, 2024, pursuant to the Amended and Restated 5ECAP Subscription Agreement, the Company issued 8,370,733 additional shares of Common Stock to 5ECAP, at a price of \$1.025 per share, which shares include the placement fee paid to 5ECAP in shares of Common Stock (the “Second Closing”).

Amended and Restated Investor and Registration Rights Agreement

On January 18, 2024, in connection with the Amended and Restated Note Purchase Agreement, the Company entered into the A&R IRRA. Pursuant to the A&R IRRA, the Company granted Ascend, 5ECAP, Meridian, and Bluescape registration rights for the Resale Shares, which are the subject of this prospectus.

Corporate Information

We were incorporated in the State of Delaware on September 23, 2021 for the purposes of effecting the Reorganization. Our principal executive offices are located at 9329 Mariposa Road, Ste 210, Hesperia, CA 92344 and our telephone number is (442) 221-0225. We maintain a website on the Internet at <http://www.5eadvancedmaterials.com>. Information contained on the website does not constitute a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

Implications of Being a Smaller Reporting Company

We are a “smaller reporting company” meaning that the market value of our Common Stock held by non-affiliates is less than \$250.0 million measured on the last business day of our second fiscal quarter or our annual revenue is less than \$100.0 million during the most recent completed fiscal year and the market value of our Common Stock held by non-affiliates is less than \$700.0 million measured on the last business day of our second fiscal quarter. Accordingly, we may provide less public disclosure than larger public companies, including the inclusion of only two years of financial statements and only two years of management’s discussion and analysis of financial condition and results of operations disclosure. As a result, the information that we provide to our stockholders may be different than you might receive from other public reporting companies in which you hold equity interests.

THE OFFERING

Issuer 5E Advanced Materials, Inc.

Shares of Common Stock that may be
offered and sold from time to time by
the Selling Stockholders named
herein 85,310,403 shares of Common Stock, consisted of (i) 66,261,621
Convertible Notes Resale Shares, (ii) 5,365,854 Ascend Resale
Shares, and (iii) 13,682,928 5ECAP Resale Shares.

Use of proceeds We will not receive any of the proceeds from the sale of the Resale
Shares by the Selling Stockholders.

Market for our Common Stock Our Common Stock is currently listed on Nasdaq.

Trading Symbol “FEAM” for our Common Stock.

Risk Factors Any investment in the securities offered hereby is speculative and
involves a high degree of risk. You should carefully read and consider
the information set forth under “*Risk Factors*” on page 13 of this
prospectus.

RISK FACTORS

Investing in our Common Stock involves risk. Before making an investment decision, you should carefully consider the specific risks set forth under the caption “Risk Factors” in the applicable prospectus supplement and under the caption “Risk Factors” and elsewhere in our most recent Annual Report on Form 10-K, as amended, our Quarterly Report on Form 10-Q for the quarter ended September 30, 2023, any subsequently filed Quarterly Reports on Form 10-Q, any subsequently filed Current Reports on Form 8-K, our Definitive Proxy Statement filed with the SEC on December 18, 2023, which are incorporated by reference in this prospectus. See “Incorporation by Reference.”

USE OF PROCEEDS

All of the Resale Shares offered by the Selling Stockholders pursuant to this prospectus will be sold by the Selling Stockholders for their respective accounts. We will not receive any of the proceeds from the sale of the Resale Shares.

With respect to the registration of the Resale Shares offered by the Selling Stockholders pursuant to this prospectus, the Selling Stockholders will pay any underwriting discounts and commissions and expenses incurred by the Selling Stockholders for brokerage, accounting, tax, or legal services or any other expenses incurred by the Selling Stockholders in disposing the Resale Shares. We will bear the costs, fees, and expenses incurred in effecting the registration of the Resale Shares covered by this prospectus, including all registration and filing fees and expenses of our counsel and our independent registered public accounting firm.

DESCRIPTION OF CAPITAL STOCK

Description of Capital Stock

The following description of our capital stock is a summary. The complete text of our Certificate of Incorporation and Bylaws are each included as exhibits to this registration statement and are incorporated by reference herein. Our authorized share capital is 380,000,000 divided into 360,000,000 shares of Common Stock, par value of \$0.01 per share, and 20,000,000 shares of preferred stock, par value of \$0.01 per share (“Preferred Stock”). As of January 29, 2024, there are 63,285,836 shares of our Common Stock issued and outstanding. As of January 29, 2024, there are no shares of Preferred Stock issued and outstanding. The actual number of stockholders will be considerably greater than the number of stockholders of record and will include stockholders who are beneficial owners but whose CDIs or shares of Common Stock are held in street name by brokers and other nominees.

Common Stock

Except as otherwise required by law, as provided in our Certificate of Incorporation or as provided in the resolution or resolutions, if any, adopted by our Board of Directors (our “Board”) with respect to any series of the Preferred Stock, the holders of our Common Stock will exclusively possess all voting power. Each holder of shares of Common Stock will be entitled to one vote for each share held by such holder. Subject to the rights of holders of any series of outstanding Preferred Stock, holders of shares of our Common Stock will have equal rights of participation in the dividends and other distributions in cash, stock or property of the Company when, as and if declared thereon by our Board from time to time out of assets or funds legally available therefor and will have equal rights to receive the assets and funds of the Company available for distribution to stockholders in the event of any liquidation, dissolution or winding up of the affairs of the Company, whether voluntary or involuntary.

CDIs

CDIs confer the beneficial ownership of our Common Stock on each CDI holder, with the legal title to such securities held by an Australian depositary entity, CHESS Depositary Nominees Pty Ltd. (the “Depositary Nominee”). The Depositary Nominee will be the registered holder of those shares of our Common Stock held for the benefit of holders of CDIs. The Depositary Nominee does not charge a fee for providing this service. Ten CDIs will represent an interest in one share of our Common Stock. Holders of CDIs will not hold the legal title to the underlying shares of our Common Stock to which the CDIs relate, as the legal title will be held by the Depositary Nominee. Each holder of CDIs will, however, have a beneficial interest in the underlying shares in our Common Stock. Each holder of CDIs that elects to vote at a stockholders meeting will be entitled to one vote for every 10 CDIs held by such holder. In order to vote at a stockholder meeting, a CDI holder may:

- instruct the Depositary Nominee, as legal owner of the shares of Common Stock, to vote the Common Stock represented by their CDIs to vote the shares of our Common Stock represented by their CDIs in a particular manner. A voting instruction form will be sent to holders of CDIs and must be completed and returned to the share registry for the CDIs prior to a record date fixed for the relevant meeting, or the Voting Instruction Receipt Time, which is notified to CDI holders in the voting instructions included in a notice of meeting;
- inform us that they wish to appoint themselves or a third party as the Depositary Nominee’s proxy with respect to our shares of Common Stock underlying the holder’s CDIs for the purposes of attending and voting at the meeting. The instruction form must be completed and returned to the share registry for the CDI prior to the CDI Voting Instruction Receipt Time; or
- convert their CDIs into shares of our Common Stock and vote those shares at the meeting. The conversion must be undertaken prior to a record date fixed by the Board for determining the

entitlement of members to attend and vote at the meeting. If the holder later wishes to sell their investment on the ASX, it would first be necessary to convert those shares of Common Stock back to CDIs. Further details on the conversion process are set out below.

Voting instruction forms and details of these alternatives are included in each notice of meeting sent to CDI holders by the Company.

Conversion of CDIs to shares of Common Stock

CDI holders may at any time convert their CDIs to a holding of shares of Common Stock by instructing the share registry for the CDIs, either:

- Directly in the case of CDIs held on the issuer sponsored sub-register operated by the Company (holders of CDIs will be provided with a CDI issuance request form to return to the share registry for the CDIs); or
- Through their “sponsoring participant” (usually their broker) in the case of CDIs which are held on the CHESS sub-register (in this case, the sponsoring broker will arrange for completion of the relevant form and its return to the share registry for the CDIs).

In both cases, once the share registry for the CDIs has been notified, it will arrange the transfer of the relevant number of shares of Common Stock from the Depositary Nominee into the name of the CDI holder in book entry form or, if requested, deliver the relevant shares of Common Stock to their DTC participant in the United States Central Securities Depository. The share registry for the CDIs will not charge a fee for the conversion (although a fee may be payable by market participants). Holding shares of Common Stock will, however, prevent a person from selling their shares of Common Stock on the ASX, as only CDIs can be traded on that market.

Conversion of shares of Common Stock to CDIs

Shares of Common Stock may be converted into CDIs and traded on the ASX. Holders of shares of Common Stock may at any time convert those shares to CDIs by contacting the Company’s transfer agent. The underlying shares of Common Stock will be transferred to the Depositary Nominee, and CDIs (and a holding statement for the corresponding CDIs) will be issued to the relevant security holder. No trading in the CDIs may take place on the ASX until this conversion.

The Company’s transfer agent will not charge a fee to a holder of shares of Common Stock seeking to convert their shares of Common Stock to CDIs, although a fee may be payable by market participants.

In either case, it is expected that each of the above processes will be completed within 24 hours, provided that the Company’s transfer agent is in receipt of a duly completed and valid request form. No guarantee can, however, be given about the time required for this conversion to take place.

Dividends and Other Shareholder Entitlements

Holders of CDIs are entitled to receive all the direct economic benefits and other entitlements in relation to the underlying shares of Common Stock that are held by the Depositary Nominee, including dividends and other entitlements that attach to the underlying shares of Common Stock.

It is possible that marginal differences may exist between the resulting entitlement of a holder of CDIs and the entitlements that would have accrued if a holder of CDIs held their holding directly as shares of Common Stock. As the ratio of CDIs to Common Stock is not one-to-one, and any entitlement will be determined on the basis of shares of Common Stock rather than CDIs, a holder of CDIs may not always benefit to the same extent (e.g. from the rounding up of fractional entitlements). We will, however, be required by the ASX Settlement Rules to minimize any such differences where legally permissible. If a cash dividend or any other cash

distribution is declared in a currency other than Australian dollars, we currently intend to convert that dividend or other cash distribution to which a holder of CDIs is entitled to Australian dollars and distribute it to the relevant holder of CDIs in accordance with their entitlement.

Due to the need to convert dividends from United States dollars to Australian dollars in the above mentioned circumstances, holders of CDIs may potentially be advantaged or disadvantaged by exchange rate fluctuations, depending on whether the Australian dollar weakens or strengthens against the United States dollar during the period between the resolution to pay a dividend and conversion into Australian dollars.

Takeovers

If a takeover bid is made in respect of any of our Common Stock of which the Depositary Nominee is the registered holder, the Depositary Nominee is prohibited from accepting the offer made under the takeover bid except to the extent that acceptance is authorized by the CDI holders in respect of the shares of Common Stock represented by their holding of CDIs.

The Depositary Nominee must accept a takeover offer in respect of shares of Common Stock represented by a holding of CDIs if the relevant holder of CDIs instructs it to do so and must notify the entity making the takeover bid of the acceptance.

Preferred Stock

Our Board is authorized to provide, out of the unissued shares of Preferred Stock, for one or more series of Preferred Stock and, with respect to each such series, to fix the number of shares constituting such series and the designation of such series, the voting powers, if any, of the shares of such series, and the preferences and relative, participating, optional or other special rights, if any, and any qualifications, limitations or restrictions thereof, of the shares of such series, as are stated in the resolution or resolutions providing for the issuance of such series adopted by the Board. The authority of the Board with respect to each series of Preferred Stock includes determination of the following:

- the designation of the series;
- the number of shares of the series;
- the dividend rate or rates on the shares of that series, whether dividends will be cumulative and, if so, from which date or dates, and the relative rights of priority, if any, of payment of dividends on shares of that series;
- whether the series will have voting rights in addition to the voting rights provided by law and, if so, the terms of such voting rights;
- whether the series will have conversion privileges and, if so, the terms and conditions of such conversion, including provision for adjustment of the conversion rate in such events as the Board determines;
- whether or not the shares of that series will be redeemable, in whole or in part, at the option of the Company or the holder thereof and, if made subject to such redemption, the terms and conditions of such redemption, including the date or dates upon or after which they will be redeemable, and the amount per share payable in case of redemptions, which amount may vary under different conditions and at different redemption rates;
- the terms and amount of any sinking fund provided for the purchase or redemption of the shares of such series;
- the rights of the shares of that series in the event of voluntary or involuntary liquidation, dissolution or winding up of the Company, and the relative rights of priority, if any, of payment of shares of that series;
- the restrictions, if any, on the issue or reissue of any additional Preferred Stock; and
- any other relative rights, preferences and limitations of that series.

SELLING STOCKHOLDERS

This prospectus relates to the offer and resale from time to time by the Selling Stockholders of up to 85,310,403 shares of our Common Stock.

The Selling Stockholders may from time to time offer and sell any or all of the Resale Shares set forth below pursuant to this prospectus. When we refer to the “Selling Stockholders” in this prospectus, we mean the persons and entities listed in the table below, and the pledgee(s), donee(s), transferee(s), assignee(s), successor(s) and others who later come to hold any of the Selling Stockholders’ interest in our securities after the date of this prospectus.

The table below sets forth, as of the date of this prospectus, the names of the Selling Stockholders for which we are registering the Resale Shares for resale to the public, and the aggregate principal amount that such Selling Stockholders may offer pursuant to this prospectus.

We cannot advise you as to (i) any of the Selling Stockholders who are holders of the Convertible Notes will in fact convert their Convertible Notes into shares of Common Stock or (ii) whether the Selling Stockholders will in fact sell any or all of such shares of Common Stock. In addition, the Selling Stockholders may sell, transfer or otherwise dispose of, at any time and from time to time, the Resale Shares in transactions exempt from the registration requirements of the Securities Act after the date of this prospectus, subject to applicable law.

Selling Stockholders information for each additional Selling Stockholder, if any, will be set forth by prospectus supplement to the extent required prior to the time of any offer or sale of such Selling Stockholders’ securities pursuant to this prospectus. Any prospectus supplement may add, update, substitute, or change the information contained in this prospectus, including the identity of each Selling Stockholder and the number of shares of Common Stock registered on its behalf. The Selling Stockholders are not making any representation that any securities covered by this prospectus will be offered for sale. The Selling Stockholders reserve the right to accept or reject, in whole or in part, any proposed sale of the securities. See “Plan of Distribution.” For purposes of the table below, we assume that all of the securities covered by this prospectus will be sold.

We have determined beneficial ownership in accordance with the rules of the SEC and the information is not necessarily indicative of beneficial ownership for any other purpose. Unless otherwise indicated below, to our knowledge, the persons and entities named in the table have sole voting and sole investment power with respect to all securities that they beneficially own, subject to community property laws where applicable. Except as described in the footnotes to the following table, none of the persons and entities named in the table has held any position or office or had any other material relationship with us or our affiliates during the three years prior to the date of this prospectus. The inclusion of any shares of Common Stock in these table does not constitute an admission of beneficial ownership for the person named below.

We have based percentage ownership of our Common Stock prior to this offering on 63,285,836 shares of Common Stock issued and outstanding as of January 29, 2024.

Unless otherwise indicated, the address of each beneficial owner listed in the table below is c/o 5E Advanced Materials, Inc., 9329 Mariposa Road, Suite 210, Hesperia, CA 92344.

Selling Stockholders	Shares of Common Stock Beneficially Owned		Shares of Common Stock Registered Hereby	Shares of Common Stock Beneficially Owned After Sale of All Shares of Common Stock Offered	
	Shares	Percentage		Shares	Percentage
BEP Special Situations IV LLC ⁽¹⁾	33,130,810.5	52.4%	33,130,810.5	—	—
Ascend Global Investment Fund SPC for and on behalf of Strategic SP ⁽²⁾	38,496,664.5	60.8%	38,496,664.5	—	—
5ECAP, LLC ⁽³⁾	13,682,928	21.6%	13,682,928	—	—
Meridian Investments Corporation ⁽⁴⁾	16,565,405.25	26.2%	16,565,405.25	—	—

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- (1) BEP Special Situations IV LLC directly holds Convertible Notes, which are convertible pursuant to the Amended and Restated Note Purchase Agreement into 33,130,810 shares of Common Stock, issuable upon conversion of the outstanding principal of and paid-in-kind interest accrued on the Convertible Notes, and assuming all interest is paid-in-kind until the maturity date. The business address of BEP Special Situations IV LLC is 300 Crescent Court, Suite 1860, Dallas, Texas 75201. Bluescape Energy Partners IV GP LLC (“Bluescape GP”) is the general partner of Bluescape Energy Recapitalization and Restructuring Fund IV LP, which wholly owns BEP Special Situations IV LLC. As such, Bluescape GP may be deemed to have beneficial ownership of the securities directly held by BEP Special Situations IV LLC.
 - (2) Ascend Global Investment Fund SPC for and on behalf of Strategic SP (“Ascend Global”) is the record holder of Convertible Notes, which are convertible pursuant to the Amended and Restated Note Purchase Agreement into 16,565,405.25 shares of Common Stock, issuable upon conversion of the outstanding principal of and paid-in-kind interest accrued on the Convertible Notes, and assuming all interest is paid-in-kind until the maturity date. The business address of Ascend Global Investment Fund SPC for and on behalf of Strategic SP is 1 Kim Seng Promenade, #01-01 East Tower, Great World City, Singapore 237994. Ascend Global is the sole shareholder of Meridian, and as a result may be deemed to share beneficial ownership of the securities held of record by Meridian. Ascend Financial Holdings Limited (“Ascend Financial”) is the sole shareholder of Ascend Capital Advisors (S) Pte. Ltd., which is the sole partner of Ascend Global. As a result, each of the foregoing entities may be deemed to have beneficial ownership of the securities held by Ascend Global. By virtue of his control of Ascend Financial, Mr. Susanto may also be deemed to share beneficial ownership of the securities beneficially owned by Ascend Global under Section 13(d) of the Exchange Act and the rules promulgated by the SEC thereunder. Mr. Susanto disclaims beneficial ownership of the securities beneficially owned by Ascend Global.
 - (3) The business address of 5ECAP, LLC is c/o Empire Capital Management, LLC, 6724 Perimeter Loop Road, S 145, Dublin, Ohio 43017. Empire Capital Management, LLC is the manager of 5ECAP, LLC and may be deemed to have beneficial ownership of the securities directly held by 5ECAP, LLC.
 - (4) Meridian Investments Corporation is the record holder of Convertible Notes, which are convertible pursuant to the Amended and Restated Note Purchase Agreement into 16,565,405.25 shares of Common Stock, issuable upon conversion of the outstanding principal of and paid-in-kind interest accrued on the Convertible Notes, and assuming all interest is paid-in-kind until the maturity date.

PLAN OF DISTRIBUTION

We are registering the resale by the Selling Stockholders or their respective permitted transferees of the Resale Shares. We will not receive any of the proceeds from the sale of the securities by the Selling Stockholders.

The Selling Stockholders may offer and sell, from time to time, the Resale Shares. The Selling Stockholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. Such sales may be made on one or more exchanges or in the over-the-counter market or otherwise, at prices and under terms then prevailing or at prices related to the then current market price or in negotiated transactions. The Selling Stockholders may sell their securities by one or more of, or a combination of, the following methods:

- on Nasdaq, in the over-the-counter market or on any other national securities exchange on which our securities are listed or traded;
- purchases by a broker-dealer as principal and resale by such broker-dealer for their own account pursuant to this prospectus;
- through one or more underwritten transactions on a firm commitment or best efforts basis;
- ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- block trades in which the broker-dealer so engaged will attempt to sell the shares as agent but may purchase and resell a portion of the block as principal to facilitate the transaction;
- an over-the-counter distribution in accordance with the rules of Nasdaq;
- through trading plans entered into by the Selling Stockholders pursuant to Rule 10b5-1 under the Exchange Act that are in place at the time of an offering pursuant to this prospectus and any applicable prospectus supplement hereto that provide for periodic sales of their securities on the basis of parameters described in such trading plans;
- short sales;
- agreements with broker-dealers to sell a specified number of the shares at a stipulated price per share;
- distribution to employees, members, limited partners or stockholders of the Selling Stockholders;
- through the writing or settlement of options (including put or call options) or other hedging transaction, whether through an options exchange or otherwise;
- by pledge to secured debts and other obligations;
- delayed delivery arrangements;
- in “at the market” offerings, as defined in Rule 415 under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on a national securities exchange or sales made through a market maker other than on an exchange or other similar offerings through sales agents;
- directly to purchasers, including through a specific bidding, auction or other process or in privately negotiated transactions; and
- through a combination of any of the above methods of sale or any other method permitted pursuant to applicable law.

Instead of selling the securities pursuant to this prospectus, the Selling Stockholders may sell the securities in compliance with the provisions of Rule 144 under the Securities Act, if available, or pursuant to other available exemptions from the registration requirements of the Securities Act. A Selling Stockholder has the sole and absolute discretion not to accept any purchase offer or make any sale of securities if it deems the purchase price to be unsatisfactory at any particular time.

The Selling Stockholders also may transfer the securities in other circumstances, in which case the transferees, pledgees or other successors-in-interest will be the selling beneficial owners for purposes of this prospectus.

Upon being notified by a Selling Stockholder that a donee, pledgee, transferee, or other successor-in-interest intends to sell our securities, we will, to the extent required, promptly file a supplement to this prospectus to name specifically such person as a selling stockholder.

With respect to a particular offering of the securities held by a Selling Stockholder, to the extent required, an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the registration statement of which this prospectus is a part, will be prepared and will set forth the following information:

- the specific securities to be offered and sold;
- the name of the Selling Stockholder;
- the respective purchase prices and public offering prices, the proceeds to be received from the sale, if any, and other material terms of the offering;
- settlement of short sales entered into after the date of this prospectus;
- the names of any participating agents, broker-dealers or underwriters; and
- any applicable commissions, discounts, concessions and other items constituting compensation from the Selling Stockholder.

In connection with distributions of the securities or otherwise, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with such transactions, broker-dealers or other financial institutions may engage in short sales of the securities in the course of hedging the positions they assume with the Selling Stockholders.

The Selling Stockholders may also sell the securities short and redeliver the securities to close out such short positions. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Stockholders may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by any Selling Stockholder or borrowed from any Selling Stockholder or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from any Selling Stockholder in settlement of those derivatives to close out any related open borrowings of stock.

The Selling Stockholders may also pledge securities to a broker-dealer or other financial institution, and, upon a default, such broker-dealer or other financial institution, may affect sales of the pledged securities pursuant to this prospectus (as supplemented or amended to reflect such transaction).

In order to facilitate the offering of the securities, any underwriters or agents, as the case may be, involved in the offering of such securities may engage in transactions that stabilize, maintain or otherwise affect the price of our securities. Specifically, the underwriters or agents, as the case may be, may over allot in connection with the offering, creating a short position in our securities for their own account. In addition, to cover overallotments or to stabilize the price of our securities, the underwriter or agents, as the case may be, may bid for, and purchase, such securities in the open market. Finally, in any offering of securities through a syndicate of underwriters, the underwriting syndicate may reclaim selling concessions allotted to an underwriter or a broker-dealer for distributing such securities in the offering if the syndicate repurchases previously distributed securities in transactions to cover short positions, in stabilization transactions or otherwise. Any of these activities may stabilize or maintain the market price of the securities above independent market levels. The underwriters or

agents, as the case may be, are not required to engage in these activities, and may end any of these activities at any time.

A Selling Stockholder may solicit offers to purchase shares directly from, and it may sell such shares directly to, institutional investors or others. In this case, no underwriters or agents would be involved. The terms of any of those sales, including the terms of any bidding or auction process, if utilized, will be described in the applicable prospectus supplement, if any.

It is possible that one or more underwriters may make a market in our securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. We cannot give any assurance as to the liquidity of the trading market for our securities.

Our Common Stock is listed on Nasdaq under the symbol “FEAM.”

The Selling Stockholders may authorize underwriters, broker-dealers or agents to solicit offers by certain purchasers to purchase the securities at the public offering price set forth in the prospectus supplement pursuant to delayed delivery contracts providing for payment and delivery on a specified date in the future. The contracts will be subject only to those conditions set forth in the prospectus supplement, and the prospectus supplement will set forth any commissions we or a Selling Stockholder pay for solicitation of these contracts.

In effecting sales, broker-dealers or agents engaged by a Selling Stockholder may arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts, or concessions from the Selling Stockholders in amounts to be negotiated immediately prior to the sale. In compliance with the guidelines of the Financial Industry Regulatory Authority (“FINRA”), the aggregate maximum discount, commission, fees or other items constituting underwriting compensation to be received by any FINRA member or independent broker-dealer will not exceed eight percent (8%) of the gross proceeds of any offering pursuant to this prospectus and any applicable prospectus supplement.

If at the time of any offering made under this prospectus a member of FINRA participating in the offering has a “conflict of interest” as defined in FINRA Rule 5121 (“Rule 5121”), that offering will be conducted in accordance with the relevant provisions of Rule 5121.

To our knowledge, there are currently no plans, arrangements, or understandings between the Selling Stockholders and any broker-dealer or agent regarding the sale of the shares by the Selling Stockholders. Upon our notification by a Selling Stockholder that any material arrangement has been entered into with an underwriter or broker-dealer for the sale of securities through a block trade, special offering, exchange distribution, secondary distribution or a purchase by an underwriter or broker-dealer, we will file, if required by applicable law or regulation, a supplement to this prospectus pursuant to Rule 424(b) under the Securities Act disclosing certain material information relating to such underwriter or broker-dealer and such offering.

Underwriters, broker-dealers or agents may facilitate the marketing of an offering online directly or through one of their affiliates. In those cases, prospective investors may view offering terms and a prospectus online and, depending upon the particular underwriter, broker-dealer or agent, place orders online or through their financial advisors.

In offering the securities covered by this prospectus, the Selling Stockholders and any underwriters, broker-dealers or agents who execute sales for the Selling Stockholders may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. Any discounts, commissions, concessions or profit they earn on any resale of such shares may be underwriting discounts or commissions under the Securities Act.

The underwriters, broker-dealers and agents may engage in transactions with us or a Selling Stockholder, or perform services for us or a Selling Stockholder, in the ordinary course of business.

In order to comply with the securities laws of certain states, if applicable, the securities must be sold in such jurisdictions only through registered or licensed brokers or dealers. In addition, in certain states the securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

We have advised the Selling Stockholders that the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of securities in the market and to the activities of the Selling Stockholders and their respective affiliates. In addition, we will make copies of this prospectus available to the Selling Stockholders for the purpose of satisfying the prospectus delivery requirements of the Securities Act. The Selling Stockholders may indemnify any broker-dealer that participates in transactions involving the sale of the securities against certain liabilities, including liabilities arising under the Securities Act.

LEGAL MATTERS

The validity of the Common Stock offered under this prospectus will be passed upon for us by Winston & Strawn LLP. Certain legal matters with respect to the validity of the Common Stock offered under this prospectus will be passed upon for any underwriters, dealers or agents by counsel named in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements as of June 30, 2022 and for the year then ended incorporated by reference in this Prospectus and in the Registration Statement have been so incorporated in reliance on the report of BDO USA, LLP (n/k/a BDO USA, P.C.), an independent registered public accounting firm, incorporated herein by reference, given on the authority of said firm as experts in auditing and accounting.

The financial statements incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended June 30, 2023 have been so incorporated in reliance on the report (which contains an explanatory paragraph relating to the Company's ability to continue as a going concern as described in Note 1 to the financial statements) of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. For further information with respect to the Company and its Common Stock, reference is made to the registration statement and the exhibits and any schedules filed therewith. Statements contained in this prospectus as to the contents of any contract or other document referred to are not necessarily complete and in each instance, if such contract or document is filed as an exhibit, reference is made to the copy of such contract or other document filed as an exhibit to the registration statement, each statement being qualified in all respects by such reference. The SEC maintains a website at www.sec.gov, from which interested persons can electronically access the registration statement, including the exhibits and any schedules thereto and which contains the periodic reports, proxy and information statements and other information that we file electronically with the SEC.

We also maintain an Internet website at www.5eadvancedmaterials.com. Through our website, we make available, free of charge, the following documents of 5E Advanced Materials, Inc. as soon as reasonably practicable after they are electronically filed with, or furnished to, the SEC: Annual Reports on Form 10-K; proxy statements for our annual and special shareholder meetings; Quarterly Reports on Form 10-Q; Current Reports on Form 8-K; Forms 3, 4 and 5; Schedules 13G and Schedules 13D; and amendments to those documents. The information contained on, or that may be accessed through, our website is not part of, and is not incorporated into, this prospectus or the registration statement of which it forms a part.

INCORPORATION BY REFERENCE

The rules of the SEC allow us to incorporate information into this prospectus by reference. This means that we are disclosing important information to you by referring to other documents. The information incorporated by reference is considered to be part of this prospectus, except for any information superseded by information contained directly in this prospectus. We incorporate by reference the documents listed below and all documents that we subsequently file with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act prior to the termination of the offering of Common Stock by means of this prospectus, from their respective filing dates (other than any portions thereof, which under the Exchange Act, and applicable SEC rules, are not deemed “filed” under the Exchange Act):

- the description of our capital stock as set forth in our Registration Statement on Form 10-12B/A filed with the SEC on March 7, 2022, as amended by our current report on Form 8-K filed with the SEC on January 29, 2024;
- our Annual Report on Form 10-K for the year ended June 30, 2023 filed with the SEC on August 30, 2023 and as amended by our amended Annual Report on Form 10-K filed with the SEC on October 27, 2023;
- our Definitive Proxy Statement on Schedule 14A filed on December 18, 2023;
- our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2023, filed with the SEC on November 9, 2023; and
- our Current Reports on Form 8-K filed with the SEC on September 11, 2023, November 9, 2023, November 22, 2023, December 6, 2023, December 11, 2023, January 16, 2024, January 19, 2024, and January 29, 2024.

The information incorporated by reference into this prospectus is an important part of this prospectus. Neither we nor any underwriters have authorized anyone to provide you with information other than that contained in or incorporated by reference into this prospectus. You should not assume that the information in this prospectus is accurate as of any date other than the date of this prospectus.

You should not rely on or assume the accuracy of any representation or warranty in any agreement that we have filed as an exhibit to any document that we have publicly filed or that we may otherwise publicly file in the future because such representation or warranty may be subject to exceptions and qualifications contained in separate disclosure schedules, may have been included in such agreement for the purpose of allocating risk between the parties to the particular transaction, and may no longer continue to be true as of any given date.

If we have incorporated by reference any statement or information in this prospectus and we subsequently modify that statement or information with information contained in this prospectus, the statement or information previously incorporated in this prospectus is also modified or superseded in the same manner.



Up to 85,310,403 Shares of Common Stock

PROSPECTUS

PART II

INFORMATION NOT REQUIRED IN THE PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth the estimated fees and expenses payable by the registrant in connection with the offering and sale of our Common Stock:

SEC registration fee	\$	*
Printing and engraving expenses		*
Legal fees and expenses		*
Accounting fees and expenses		*
Miscellaneous		*
Total	\$	*

* Estimated expenses are not presently known. The applicable prospectus supplement or one or more Current Reports on Form 8-K, which will be incorporated by reference, will set forth the estimated amount of such expenses payable in respect of any offering of the Common Stock.

We will bear all costs, expenses and fees in connection with the registration of the Common Stock, including with regard to compliance with state securities or “blue sky” laws. All amounts are estimates except the SEC registration fee and the FINRA filing fee.

Item 15. Indemnification of Directors and Officers.

Section 145 of the DGCL provides, generally, that a corporation shall have the power to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director, officer, employee or agent of the corporation against all expenses, judgments, fines and amounts paid in settlement actually and reasonably incurred by such person in connection with such action, suit or proceeding if such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to the best interests of the corporation and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. A corporation may similarly indemnify such person for expenses actually and reasonably incurred by such person in connection with the defense or settlement of any action or suit by or in the right of the corporation, provided that such person acted in good faith and in a manner he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, in the case of claims, issues and matters as to which such person shall have been adjudged liable to the corporation, provided that a court shall have determined, upon application, that, despite the adjudication of liability but in view of all of the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses which such court shall deem proper.

In accordance with Section 102(b)(7) of the DGCL, our Certificate of Incorporation provides that a director will not be personally liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except for liability (i) for any breach of the director’s duty of loyalty to us or our stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) under Section 174 of the DGCL, or (iv) for any transaction from which the director derived an improper personal benefit. No such provision shall eliminate or limit the liability of a director for any act or omission occurring prior to the date when such provision became effective. Accordingly, these provisions will have no effect on the availability of equitable remedies such as an injunction or rescission based on a director’s breach of his or her duty of care.

The Certificate of Incorporation provides that we will indemnify its present and former directors and officers to the maximum extent permitted by the DGCL and that such indemnification will not be exclusive of any other rights to which those seeking indemnification may be entitled under any bylaw provision, agreement, vote of stockholders or disinterested directors or otherwise.

Item 16. Exhibits.

Exhibit No.	Description
1.1*	Form of Underwriting Agreement.
2.1#	Scheme Implementation Agreement dated as of October 11, 2021 between American Pacific Borates Limited and 5E Advanced Materials, Inc. (incorporated by reference to Exhibit 2.1 to the Company's Registration Statement on Form 10-12B filed with the SEC on March 7, 2022)
3.1	Amended and Restated Certificate of Incorporation, dated January 12, 2024 (incorporated by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K filed with the SEC on January 18, 2024)
3.2	Amended and Restated Bylaws of 5E Advanced Materials, Inc. (incorporated by reference to Exhibit 3.2 to the Company's Registration Statement on Form 10-12B filed with the SEC on March 7, 2022)
5.1	Opinion of Winston & Strawn LLP
23.1	Consent of BDO USA, P.C.
23.2	Consent of PricewaterhouseCoopers LLP
23.3	Consent of Winston & Strawn LLP (included in opinion filed as Exhibit 5.1)
23.4	Consent of Barr Engineering Co.
23.5	Consent of Mike Rockandel Consulting LLC
23.6	Consent of Louis Fourie, P.Geo., Principal, Terra Modeling Services
23.7	Consent of Mathew Banta, PH, Principal, Confluence Water Resources LLC
23.8	Consent of Escalante Geological Services LLC
23.9	Consent of Paul Weibel, CPA, Chief Financial Officer, 5E Advanced Materials, Inc.
24.1	Power of Attorney (see Signature page)
96.1	Initial Assessment Report (October 2023) (incorporated by reference to Exhibit 96.1 to the Company's Annual Report on Form 10-K/A filed with the SEC on October 27, 2023)
107	Filing Fee Table
*	To be filed, if necessary, by an amendment to this registration statement or incorporated by reference pursuant to a Current Report on Form 8-K in connection with the offering of securities registered hereunder.
#	Schedules have been omitted pursuant to Items 601(a)(5) and 601(b)(2) of Regulation S-K. The Company hereby undertakes to furnish supplemental copies of any of the omitted schedules upon request by the U.S. Securities and Exchange Commission. The Company may request confidential treatment pursuant to Rule 24b-2 of the Securities Exchange Act of 1934, as amended, for any schedules so furnished.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- A. To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (A)(i), (A)(ii) and (A)(iii) do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the SEC by the registrant pursuant to Section 13 or 15(d) of the Exchange Act that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- B. That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- C. To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- D. That, for the purpose of determining liability under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- E. That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

- (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- F. The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- G. Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Hesperia, State of California, on January 29, 2024.

5E ADVANCED MATERIALS, INC.

By: /s/ Paul Weibel

Paul Weibel
Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below hereby constitutes and appoints Paul Weibel and Susan Brennan, and each of them, individually, as the undersigned's true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution, for the undersigned and in the undersigned's name, place and stead in any and all capacities, in connection with this registration statement, including to sign in the name and on behalf of the undersigned, this registration statement and any and all amendments thereto, including post-effective amendments, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the U.S. Securities and Exchange Commission, granting unto such attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as the undersigned might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or his substitute, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and on the dates indicated.

<u>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Susan Brennan</u> Susan Brennan	Chief Executive Officer & Director (Principal Executive Officer)	January 29, 2024
<u>/s/ Paul Weibel</u> Paul Weibel	Chief Financial Officer (Principal Financial and Accounting Officer)	January 29, 2024
<u>/s/ David Salisbury</u> David Salisbury	Chair of the Board of Directors	January 29, 2024
<u>/s/ Sen Ming (Jimmy) Lim</u> Sen Ming (Jimmy) Lim	Director	January 29, 2024
<u>/s/ Graham van't Hoff</u> Graham van't Hoff	Director	January 29, 2024
<u>/s/ H. Keith Jennings</u> H. Keith Jennings	Director	January 29, 2024
<u>/s/ Stephen Hunt</u> Stephen Hunt	Director	January 29, 2024
<u>/s/ Stefan Selig</u> Stefan Selig	Director	January 29, 2024



NORTH AMERICA SOUTH AMERICA EUROPE ASIA

800 Capitol St., Suite 2400
Houston, TX 77002-2925
+1 713-651-2600
+1 713-651-2700

January 29, 2024

5E Advanced Materials, Inc.
9329 Mariposa Road, Suite 210
Hesperia, CA 92344

Re: Form S-3 Registration Statement

Ladies and Gentlemen:

We have acted as special counsel to 5E Advanced Materials, Inc., a Delaware corporation (the "Company"), in connection with the preparation of the Company's registration statement on Form S-3 (as amended) to be filed with the U.S. Securities and Exchange Commission (the "Commission") on or about the date hereof (the "Registration Statement"), under the Securities Act of 1933, as amended (the "Securities Act").

The Registration Statement relates to the offer and sale by certain securityholders set forth in the prospectus contained in the Registration Statement and any supplement to the prospectus of up to 85,310,403 shares (the "Resale Shares") of common stock, par value \$0.01 per share, of the Company, consisting of (i) 66,261,621 shares of Common Stock (the "Convertible Notes Resale Shares") which are issuable upon the conversion of amounts outstanding (including principal and accrued interest thereon) under the Company's 4.50% senior secured convertible notes issued pursuant to a convertible note purchase agreement, dated August 11, 2022, as amended by the Amended and Restated Note Purchase Agreement, dated January 18, 2024, by and among the Company, BEP Special Situations IV LLC, Ascend Global Investment Fund SPC, for and on behalf of Strategic SP ("Ascend"), Meridian Investments Corporation, and Alter Domus (US) LLC as collateral agent, (ii) 5,365,854 shares of Common Stock (the "Ascend Resale Shares") which were issued on January 18, 2024 to Ascend pursuant to a subscription agreement, dated December 5, 2023, by and between the Company and Ascend, and (iii) 13,682,928 shares of Common Stock (the "5ECAP Resale Shares," and together with the Convertible Notes Resale Shares and the Ascend Resale Shares, the "Resale Shares") which were issued on January 18, 2024 and January 29, 2024 to 5ECAP, LLC ("5ECAP") pursuant to a subscription agreement, dated January 18, 2024, by and between the Company and 5ECAP.

This opinion letter is being furnished in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Securities Act.

In rendering the opinions set forth below, we examined and relied upon such certificates, corporate records, agreements, instruments, and other documents, and examined such matters of law, that we considered necessary or appropriate as a basis for the opinions. In rendering the opinions set forth below, we have examined and are familiar with originals or copies, certified or otherwise identified to our satisfaction, of (i) the certificate of incorporation of the Company, as in effect on the date hereof, (ii) the Registration Statement, and (iii) such other documents as we have deemed necessary or appropriate as a basis for the opinions set forth below. In our examination, we have assumed the legal capacity of all natural persons, the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies, the authenticity of the originals of such latter documents, that all parties to such documents had the power, corporate or other, to enter into and perform all obligations thereunder and all such documents have been duly authorized by all requisite action, corporate or other, and duly executed and delivered by all parties thereto. As to any facts material to the opinions expressed herein that we did not independently establish or verify, we have relied upon oral or written statements and representations of officers and other representatives of the Company and others.

Based upon the foregoing and subject to the assumptions, qualifications and limitations set forth herein, we are of the opinion that (i) the Resale Shares, other than the Convertible Notes Resale Shares included in the Resale Shares, have been duly authorized and are validly issued, fully paid and non-assessable and (ii) the Convertible Notes Resale Shares have been duly authorized and, when issued upon conversion of the Convertible Notes in accordance with their terms, will be validly issued, fully paid and nonassessable.

The opinions expressed herein are based upon and limited to the General Corporation Law of the State of Delaware (including the statutory provisions, the applicable provisions of the Delaware Constitution and reported judicial decisions interpreting the foregoing). We express no opinion herein as to any other laws, statutes, regulations, or ordinances.

We hereby consent to the filing of this opinion letter as Exhibit 5.1 to the Registration Statement and to the reference to our firm under the caption "Legal Matters" in the prospectus included in the Registration Statement. In giving such consent, we do not thereby admit that we are experts within the meaning of the Securities Act or the rules and regulations of the Commission or that this consent is required by Section 7 of the Securities Act.

Very truly yours,

/s/ Winston & Strawn LLP

5E Advanced Materials, Inc.
Hesperia, California

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement of our report dated September 28, 2022, relating to the consolidated financial statements of 5E Advanced Materials, Inc. as of June 30, 2022 and for the year then ended, appearing in the Company's Annual Report on Form 10-K for the year ended June 30, 2023.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ BDO USA, P.C.
Spokane, Washington

January 29, 2024

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in this Registration Statement on Form S-3 of 5E Advanced Materials, Inc. of our report dated August 30, 2023 relating to the financial statements which appears in 5E Advanced Materials, Inc.'s Annual Report on Form 10-K for the year ended June 30, 2023. We also consent to the reference to us under the heading "Experts" in such Registration Statement.

/s/ PricewaterhouseCoopers LLP

Denver, Colorado
January 29, 2024

CONSENT OF BARR ENGINEERING CO.

To: U.S. Securities and Exchange Commission
Board of Directors of 5E Advanced Materials, Inc.

Re: Registration Statement on Form S-3 of 5E Advanced Materials, Inc. dated January 29, 2024 (“S-3”)
Barr Engineering Co. (“Barr”), in connection with the S-3 consents to:

- (i) The filing and/or incorporation by reference by the Company and use of the Technical Report Summary titled “Initial Assessment Report (October 2023) on 5E Advanced Materials Fort Cady Project” with a revised report date of October 27, 2023, report date of May 11, 2023, and report effective date of April 1, 2023 (the “Technical Report Summary”) that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the SEC, filed as Exhibit 96.1 to the Annual Report on Form 10-K/A;
- (ii) The use of and references to our name, including our status as an expert or “qualified person” (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the S-3 and any such Technical Report Summary; and
- (iii) The use of any quotation from, or summarization of, the particular section or sections of the Technical Report Summary in the Form S-3, to the extent it was prepared by us, that we supervised its preparation of and/or that was reviewed and approved by us, that is included or incorporated by reference to the Form S-3.

Barr is responsible for, and this consent pertains to Sections 13, 15 and 18 of the Technical Report Summary.

Neither the whole nor any part of the Initial Assessment Report (October 2023) nor any reference thereto may be included in any other filings with the SEC without the prior written consent of Barr as to the form and context in which it appears.

Dated: January 29, 2024

By: /s/ Daniel R. Palo
Name: Daniel R. Palo, PhD, P. Eng., P.E.
Title: Senior Process Engineer, Barr Engineering Co.

CONSENT OF MIKE ROCKANDEL CONSULTING LLC

To: U.S. Securities and Exchange Commission
Board of Directors of 5E Advanced Materials, Inc.

Re: Registration Statement on Form S-3 of 5E Advanced Materials, Inc. dated January 29, 2024 (“S-3”)

Mike Rockandel Consulting LLC (“MRC”), in connection with the S-3 consents to:

- (i) The filing and/or incorporation by reference by the Company and use of the Technical Report Summary titled “Initial Assessment Report (October 2023) on 5E Advanced Materials Fort Cady Project” with a revised report date of October 27, 2023, report date of May 11, 2023, and report effective date of April 1, 2023 (the “Technical Report Summary”) that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the SEC, filed as Exhibit 96.1 to the Annual Report on Form 10-K/A;
- (ii) The use of and references to our name, including our status as an expert or “qualified person” (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the S-3 and any such Technical Report Summary; and
- (iii) The use of any quotation from, or summarization of, the particular section or sections of the Technical Report Summary in the Form S-3, to the extent it was prepared by us, that we supervised its preparation of and/or that was reviewed and approved by us, that is included or incorporated by reference to the Form S-3.

MRC is responsible for, and this consent pertains to Sections 10.3 and 14 of the Technical Report Summary.

Neither the whole nor any part of the Initial Assessment Report (October 2023) nor any reference thereto may be included in any other filings with the SEC without the prior written consent of MRC as to the form and context in which it appears.

Dated: January 29, 2024

By: /s/ Mike Rockandel
Name: Mike Rockandel
Society for Mining, Metallurgy and
Exploration (Member No. 4122579)
Title: President, Mike Rockandel Consulting LLC

CONSENT OF TERRA MODELING SOLUTIONS

To: U.S. Securities and Exchange Commission
Board of Directors of 5E Advanced Materials, Inc.

Re: Registration Statement on Form S-3 of 5E Advanced Materials, Inc. dated January 29, 2024 (“S-3”)
Terra Modeling Solutions (“TMS”), in connection with the S-3 consents to:

- (i) The filing and/or incorporation by reference by the Company and use of the Technical Report Summary titled “Initial Assessment Report (October 2023) on 5E Advanced Materials Fort Cady Project” with a revised report date of October 27, 2023, report date of May 11, 2023, and report effective date of April 1, 2023 (the “Technical Report Summary”) that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the SEC, filed as Exhibit 96.1 to the Annual Report on Form 10-K/A;
- (ii) The use of and references to our name, including our status as an expert or “qualified person” (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the S-3 and any such Technical Report Summary; and
- (iii) The use of any quotation from, or summarization of, the particular section or sections of the Technical Report Summary in the Form S-3, to the extent it was prepared by us, that we supervised its preparation of and/or that was reviewed and approved by us, that is included or incorporated by reference to the Form S-3.

TMS is responsible for, and this consent pertains to Sections 8, 9, 10, 11 and 12 of the Technical Report Summary.

Neither the whole nor any part of the Initial Assessment Report (October 2023) nor any reference thereto may be included in any other filings with the SEC without the prior written consent of TMS as to the form and context in which it appears.

Dated: January 29, 2024

By: /s/ Louis Fourie
Name: Louis Fourie, P.Geo.
Title: Principal, Terra Modeling Solutions

CONSENT OF CONFLUENCE WATER RESOURCES LLC

To: U.S. Securities and Exchange Commission
Board of Directors of 5E Advanced Materials, Inc.

Re: Registration Statement on Form S-3 of 5E Advanced Materials, Inc. dated January 29, 2024 (“S-3”)

Confluence Water Resources, LLC (“CWR”), in connection with the S-3 consents to:

- (i) The filing and/or incorporation by reference by the Company and use of the Technical Report Summary titled “Initial Assessment Report (October 2023) on 5E Advanced Materials Fort Cady Project” with a revised report date of October 27, 2023, report date of May 11, 2023, and report effective date of April 1, 2023 (the “Technical Report Summary”) that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the SEC, filed as Exhibit 96.1 to the Annual Report on Form 10-K/A;
- (ii) The use of and references to our name, including our status as an expert or “qualified person” (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the S-3 and any such Technical Report Summary; and
- (iii) The use of any quotation from, or summarization of, the particular section or sections of the Technical Report Summary in the Form S-3, to the extent it was prepared by us, that we supervised its preparation of and/or that was reviewed and approved by us, that is included or incorporated by reference to the Form S-3.

CWR is responsible for, and this consent pertains to Section 7.3 of the Technical Report Summary.

Neither the whole nor any part of the Initial Assessment Report (October 2023) nor any reference thereto may be included in any other filings with the SEC without the prior written consent of CWR as to the form and context in which it appears.

Dated: January 29, 2024

By: /s/ Mathew Banta
Name: Mathew Banta, PH
Title: Principal, Confluence Water Resources LLC

**CONSENT OF
ESCALANTE GEOLOGICAL SERVICES
LLC**

To: U.S. Securities and Exchange Commission

Board of Directors of 5E Advanced Materials, Inc.

Re: Registration Statement on Form S-3 of 5E Advanced Materials, Inc. dated January 29, 2024 (“S-3”)

Escalante Geological Services LLC (“Escalante”), in connection with the S-3 consents to:

- (i) The filing and/or incorporation by reference by the Company and use of the Technical Report Summary titled “Initial Assessment Report (October 2023) on 5E Advanced Materials Fort Cady Project” with a revised report date of October 27, 2023, report date of May 11, 2023, and report effective date of April 1, 2023 (the “Technical Report Summary”) that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the SEC, filed as Exhibit 96.1 to the Annual Report on Form 10-K/A;
- (ii) The use of and references to our name, including our status as an expert or “qualified person” (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the S-3 and any such Technical Report Summary; and
- (iii) The use of any quotation from, or summarization of, the particular section or sections of the Technical Report Summary in the Form S-3, to the extent it was prepared by us, that we supervised its preparation of and/or that was reviewed and approved by us, that is included or incorporated by reference to the Form S-3.

Escalante is responsible for, and this consent pertains to Sections 3, 4, 5, 6, 7, 17 and 20 of the Technical Report Summary.

Neither the whole nor any part of the Initial Assessment Report (October 2023) nor any reference thereto may be included in any other filings with the SEC without the prior written consent of Escalante as to the form and context in which it appears.

Dated: January 29, 2024

By: /s/ Steven Kerr
Name: Steven Kerr, P.G., C.P.G.
Title: Principal, Escalante Geological Services LLC

In connection with the Registration Statement on Form S-3 (the “Form S-3”) to be filed by 5E Advanced Materials, Inc. (the “Company”) with the U.S. Securities and Exchange Commission (“SEC”), the undersigned hereby consents to:

- (i) The filing and/or incorporation by reference by the Company and use of the Technical Report Summary titled “Initial Assessment Report (October 2023) on 5E Advanced Materials Fort Cady Project” with a revised report date of October 27, 2023, report date of May 11, 2023, and report effective date of April 1, 2023 (the “Technical Report Summary”) that was prepared in accordance with Subpart 1300 of Regulation S-K promulgated by the SEC, filed as Exhibit 96.1 to the Annual Report on Form 10-K/A;
- (ii) The use of and references to the undersigned’s name as a “qualified person” (as defined in Subpart 1300 of Regulation S-K promulgated by the SEC), in connection with the Form S-3 and any such Technical Report Summary; and
- (iii) The use of any quotation from, or summarization of, the particular section or sections of the Technical Report Summary in the Form S-3, to the extent it was prepared by the undersigned, that the undersigned supervised its preparation of and/or that was reviewed and approved by the undersigned, that is included or incorporated by reference to the Form S-3.

The undersigned is responsible for, and this consent pertains to Sections 1, 2, 16, 19, 21, 22, 23, 24 and 25 of the Technical Report Summary.

Neither the whole nor any part of the Initial Assessment Report (October 2023) nor any reference thereto may be included in any other filings with the SEC without the prior written consent of the undersigned as to the form and context in which it appears.

By: /s/ Paul Weibel
Name: Paul Weibel, CPA
(License No. CA 056912)
Title: Chief Financial Officer,
5E Advanced Materials, Inc.

Date: January 29, 2024

Calculation of Filing Fee Tables
Form S-3
(Form Type)

5E Advanced Materials, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered ⁽¹⁾	Proposed Maximum Offering Price Per Share ⁽²⁾	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	Carry Forward File Number	Carry Forward Initial Effective Date	Filing Fee Previously Paid in Connection with Unsold Securities to be Carried Forward
Newly Registered Securities												
Fees to Be Paid	Equity	Common stock, par value \$0.01 per share	Other	85,310,403 ⁽³⁾	\$1.325	\$113,036,283.98	0.00014760	\$16,684.16	—	—	—	—
	Total Offering Amounts					\$0		\$16,684.16				
	Total Fees Previously Paid							\$0				
	Total Fee Offsets							\$5,043.80				
	Net Fee Due							\$11,640.36				

- (1) Pursuant to Rule 416(a) of the Securities Act of 1933, as amended, this Registration Statement shall also cover any additional shares of common stock, par value \$0.01 per share (the “Common Stock”) of 5E Advanced Materials, Inc. (the “Registrant”) that become issuable by reason of any stock dividend, stock split, recapitalization, or other similar transaction without receipt of consideration.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) under the Securities Act of 1933, as amended. The offering price per share and aggregate offering price are based upon the average of the high and low prices for the Common Stock as reported on Nasdaq on January 26, 2024, a date within five business days prior to the filing of this Registration Statement.
- (3) The 85,310,403 shares of Common Stock consist of (i) 66,261,621 Convertible Notes Resale Shares, (ii) 5,365,854 Ascend Resale Shares, and (iii) 13,682,928 SECAP Resale Shares
- (4) On October 11, 2022, the Registrant filed a registration statement on Form S-1 (File No. 333-267803), which became effective February 6, 2023 (the “Prior Registration Statement”). The Prior Registration Statement registered 4,581,534 shares of Common Stock held by selling stockholders named therein for resale by such selling stockholders, in each case, which were not sold pursuant to the Prior Registration Statement. Pursuant to Rule 457(p) of the Securities Act, the Registrant hereby offsets \$5,043.80 of the \$5,043.80 registration fee previously paid in connection with such unsold shares, which will continue to be applied to such unsold securities. Pursuant to Rule 415(a)(6) under the Securities Act, the offering of such unsold securities under the Prior Registration Statement will be deemed terminated as of the date of effectiveness of this Registration Statement.

Table 2: Fee Offset Claims and Sources

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
Rule 457(p)											
Fee Offset Claims	5E Advanced Materials, Inc.	Form S-1	333-267803	October 11, 2022		\$5,043.80	Equity	Common Stock	(4)	\$45,769,524.66	—
Fee Offset Sources	5E Advanced Materials, Inc.	Form S-1	333-267803	—	October 11, 2022	—	—	—		—	\$5,043.80