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

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended June 30, 2015

OR

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the transition period from _____ to _____

Commission file number: 001-36481

ASPEN AEROGELS, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction of
incorporation or organization)

04-3559972
(I.R.S. Employer
Identification No.)

30 Forbes Road, Building B
Northborough, Massachusetts
(Address of principal executive offices)

01532
(Zip Code)

Registrant's telephone number, including area code: (508) 691-1111

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes ☒ No ☐

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

Large accelerated filer ☐

Accelerated filer ☐

Non-accelerated filer ☒ (Do not check if a smaller reporting company)

Smaller reporting company ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

As of July 31, 2015, the registrant had 23,046,278 shares of common stock outstanding.

Table of Contents

ASPEN AEROGELS, INC. INDEX TO FORM 10-Q

	<u>Page</u>
<u>PART I FINANCIAL INFORMATION</u>	
Item 1. <u>Financial Statements</u>	
<u>Consolidated Balance Sheets (unaudited) as of June 30, 2015 and December 31, 2014</u>	1
<u>Consolidated Statements of Operations (unaudited) for the three and six months ended June 30, 2015 and 2014</u>	2
<u>Consolidated Statements of Cash Flows (unaudited) for the six months ended June 30, 2015 and 2014</u>	3
<u>Notes to Consolidated Financial Statements (unaudited)</u>	5
Item 2. <u>Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	12
Item 3. <u>Quantitative and Qualitative Disclosures About Market Risk</u>	28
Item 4. <u>Controls and Procedures</u>	28
<u>PART II OTHER INFORMATION</u>	
Item 1. <u>Legal Proceedings</u>	29
Item 1A. <u>Risk Factors</u>	29
Item 2. <u>Unregistered Sales of Equity Securities and Use of Proceeds</u>	29
Item 3. <u>Defaults Upon Senior Securities</u>	30
Item 4. <u>Mine Safety Disclosures</u>	30
Item 5. <u>Other Information</u>	30
Item 6. <u>Exhibits</u>	30
SIGNATURES	31

Trademarks, Trade Names and Service Marks

We own or have rights to use “Aspen Aerogels,” “Cryogel,” “Pyrogel,” “Spaceloft,” the Aspen Aerogels logo and other trademarks, service marks and trade names of Aspen Aerogels, Inc. appearing in this quarterly report on Form 10-Q. Solely for convenience, the trademarks, service marks and trade names referred to in this report are without the ® and TM symbols, but such references are not intended to indicate, in any way, that the owner thereof will not assert, to the fullest extent under applicable law, such owner’s rights to these trademarks, service marks and trade names. This report contains additional trademarks, service marks and trade names of other companies, which, to our knowledge, are the property of their respective owners.

PART I — FINANCIAL INFORMATION

Item 1. Financial Statements.

ASPEN AEROGELS, INC.
Consolidated Balance Sheets
(Unaudited)

	June 30, 2015	December 31, 2014
	(In thousands, except share and per share data)	
Assets		
Current assets:		
Cash and cash equivalents	\$ 29,575	\$ 49,719
Marketable securities	2,504	—
Accounts receivable, net of allowances of \$108 and \$120, respectively	19,957	17,924
Inventories	6,075	4,897
Prepaid expenses and other current assets	2,105	836
Total current assets	60,216	73,376
Property, plant and equipment, net	78,149	71,492
Other assets	123	175
Total assets	<u>\$ 138,488</u>	<u>\$ 145,043</u>
Liabilities and Stockholders' Equity		
Current liabilities:		
Capital leases, current portion	\$ 75	\$ 76
Accounts payable	9,791	14,202
Accrued expenses	4,081	5,588
Deferred revenue	2,531	292
Other current liabilities	37	50
Total current liabilities	16,515	20,208
Capital leases, excluding current portion	52	89
Other long-term liabilities	1,038	1,030
Total liabilities	17,605	21,327
Commitments and contingencies (Note 9)		
Stockholders' equity:		
Preferred stock, \$0.00001 par value; 5,000,000 shares authorized, no shares issued and outstanding at June 30, 2015 and December 31, 2014;	—	—
Common stock, \$0.00001 par value; 125,000,000 shares authorized, 23,046,278 and 22,992,273 shares issued and outstanding at June 30, 2015 and December 31, 2014, respectively	—	—
Additional paid-in capital	525,499	522,800
Accumulated deficit	(404,616)	(399,084)
Total stockholders' equity	<u>120,883</u>	<u>123,716</u>
Total liabilities and stockholders' equity	<u>\$ 138,488</u>	<u>\$ 145,043</u>

See accompanying notes to unaudited consolidated financial statements.

ASPEN AEROGELS, INC.
Consolidated Statements of Operations
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2015	2014	2015	2014
	(in thousands, except share and per share data)			
Revenue:				
Product	\$ 29,755	\$ 25,893	\$ 52,966	\$ 47,386
Research services	341	722	630	1,592
Total revenue	30,096	26,615	53,596	48,978
Cost of revenue:				
Product	24,814	22,850	43,659	41,391
Research services	173	340	313	816
Gross profit	5,109	3,425	9,624	6,771
Operating expenses:				
Research and development	1,551	1,920	2,855	3,203
Sales and marketing	2,722	3,420	5,054	5,658
General and administrative	3,534	6,206	7,157	8,928
Total operating expenses	7,807	11,546	15,066	17,789
Loss from operations	(2,698)	(8,121)	(5,442)	(11,018)
Interest expense	(45)	(34,027)	(90)	(50,178)
Total interest expense	(45)	(34,027)	(90)	(50,178)
Net loss	\$ (2,743)	\$ (42,148)	\$ (5,532)	\$ (61,196)
Net loss attributable to common stockholders	\$ (2,743)	\$ (42,148)	\$ (5,532)	\$ (61,196)
Net loss attributable to common stockholders per share:				
Basic	\$ (0.12)	\$ (13.88)	\$ (0.24)	\$ (40.05)
Diluted	\$ (0.12)	\$ (13.88)	\$ (0.24)	\$ (40.05)
Weighted-average common shares outstanding:				
Basic and diluted	22,999,988	3,035,717	22,996,152	1,527,806

See accompanying notes to unaudited consolidated financial statements.

Table of Contents

ASPEN AEROGELS, INC. Consolidated Statements of Cash Flows (Unaudited)

	Six Months Ended June 30,	
	2015	2014
	(In thousands)	
Cash flows from operating activities:		
Net loss	\$ (5,532)	\$(61,196)
Adjustments to reconcile net loss to net cash (used in) provided by operating activities:		
Depreciation and amortization	4,759	5,179
Loss on disposal of assets	—	15
Debt issuance costs	—	32
Accretion of debt to fair value	—	50,011
Stock compensation expense	2,699	6,344
Other	—	(31)
Changes in operating assets and liabilities:		
Accounts receivable	(2,033)	213
Inventories	(1,178)	1,402
Prepaid expenses and other assets	(1,267)	(436)
Accounts payable	1,177	(83)
Accrued expenses	(1,507)	(1,623)
Deferred revenue	2,239	364
Net cash (used in) provided by operating activities	(643)	191
Cash flows from investing activities:		
Capital expenditures	(16,959)	(2,197)
Purchases of marketable securities	(2,504)	—
Net cash used in investing activities	(19,463)	(2,197)
Cash flows from financing activities:		
Borrowings under line of credit	—	4,500
Repayments under line of credit	—	(5,500)
Repayment of borrowing under long-term debt	—	(18,849)
Financing costs	—	(32)
Repayment of obligations under capital lease	(38)	(42)
Proceeds from initial public offering	—	77,270
Proceeds from issuance of common stock	—	2
Net cash (used in) provided by financing activities	(38)	57,349
Net (decrease) increase in cash	(20,144)	55,343
Cash at beginning of period	49,719	1,574
Cash at end of period	\$ 29,575	\$ 56,917

Table of Contents

	Six Months Ended	
	June 30,	
	2015	2014
	(In thousands)	
Supplemental disclosures of cash flow information:		
Interest paid	\$ 99	\$ 134
Income taxes paid	\$ —	\$ —
Supplemental disclosures of non-cash activities:		
Conversion of convertible and senior convertible notes to common stock	\$ —	\$168,511
Unpaid initial public offering costs	\$ —	\$ 2,516
Changes in accrued capital expenditures	\$(5,588)	\$ 52
Capitalized interest	\$ —	\$ 34
Capitalized leases	\$ —	\$ 5

See accompanying notes to unaudited consolidated financial statements.

ASPEN AEROGELS, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS
(UNAUDITED)

(1) Description of Business and Basis of Presentation

Nature of Business

Aspen Aerogels, Inc. (the Company) is an energy technology company that designs, develops and manufactures innovative, high-performance aerogel insulation. The Company also conducts research and development related to aerogel technology supported by funding from several agencies of the U.S. government and other institutions in the form of research and development contracts.

The Company maintains its corporate offices in Northborough, Massachusetts. The Company has two wholly owned subsidiaries: Aspen Aerogels Rhode Island, LLC and Aspen Aerogels Germany, GmbH.

On June 18, 2014, the Company completed an initial public offering (IPO) of 7,500,000 shares of its common stock at a public offering price of \$11.00 per share. The Company received net proceeds of \$74.7 million after deducting underwriting discounts and commissions of \$4.3 million and offering expenses of approximately \$3.5 million. Upon the closing of the offering, all of the Company's then-outstanding (i) warrants to purchase Series C preferred stock (the Series C warrants) were subject to an automatic net cashless exercise, (ii) convertible preferred stock (including the shares of Series C preferred stock issued upon the automatic net cashless exercise of Series C warrants) automatically converted into 115,982 shares of common stock, and (iii) Convertible Notes and Senior Convertible Notes (see note 7) automatically converted into 15,319,034 shares of common stock.

Prior to the closing of the offering, the Company completed a 1-for-824.7412544 reverse stock split of its common stock. All common shares and related per share amounts in the financial statements and notes have been adjusted retroactively to reflect the reverse stock split.

Unaudited Interim Financial Information

The accompanying unaudited interim consolidated financial statements include the accounts of the Company and have been prepared in accordance with accounting principles generally accepted in the United States of America (U.S. GAAP) and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Certain information and disclosures normally included in the consolidated financial statements prepared in accordance with U.S. GAAP have been condensed or omitted pursuant to such rules and regulations. As such, the information included in this quarterly report on Form 10-Q should be read in conjunction with the audited consolidated financial statements and accompanying notes in the Company's Annual Report on Form 10-K for the year ended December 31, 2014 (the Annual Report), filed with the Securities and Exchange Commission on March 13, 2015.

In the opinion of the Company's management, the unaudited interim consolidated financial statements have been prepared on the same basis as the audited consolidated financial statements and include all adjustments that are of a normal recurring nature and necessary for the fair statement of the Company's financial position as of June 30, 2015 and the results of its operations for the three and six months ended June 30, 2015 and 2014 and the cash flows for the six month period then ended. The Company has evaluated events through the date of this filing.

The results of operations for the three and six months ended June 30, 2015 are not necessarily indicative of the results to be expected for the year ending December 31, 2015 or any other period.

There have been no changes to the Company's significant accounting policies described in the Annual Report that have had a material impact on the Company's consolidated financial statements and notes thereto.

Table of Contents

Principles of Consolidation

The accompanying consolidated financial statements, which have been prepared in accordance with U.S. GAAP, include the accounts of the Company and its wholly owned subsidiaries. All intercompany balances and transactions have been eliminated in consolidation.

(2) Significant Accounting Policies

Use of Estimates

The preparation of the consolidated financial statements requires the Company to make a number of estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Significant items subject to such estimates and assumptions include allowances for doubtful accounts, sales returns and allowances, inventory valuation, the carrying amount of property and equipment, fair value of debt and capital stock, stock-based compensation and deferred income taxes. The Company evaluates its estimates and assumptions on an on-going basis using historical experience and other factors, including the current economic environment, which are believed to be reasonable under the circumstances. Management adjusts such estimates and assumptions when facts and circumstances dictate. Illiquid credit markets, volatile equity markets and declines in business investment increase the uncertainty inherent in such estimates and assumptions. As future events and their effects cannot be determined with precision, actual results could differ significantly from these estimates. Changes in these estimates resulting from continuing changes in the economic environment will be reflected in the financial statements in future periods.

Cash and Cash Equivalents

Cash equivalents include short-term, highly liquid instruments, which consist of money market accounts. All cash and cash equivalents are maintained with major financial institutions in North America. Deposits with these financial institutions may exceed the amount of insurance provided on such deposits; however, these deposits typically may be redeemed upon demand and, therefore, bear minimal risk.

Marketable Securities

Marketable securities consist primarily of marketable debt securities which are classified as available-for-sale and are carried at fair value at June 30, 2015. The Company held no marketable securities at December 31, 2014. The unrealized gains and losses on available-for-sale securities are recorded in accumulated other comprehensive income (loss). The Company considers all highly liquid investments with maturities of 90 days or less at the time of purchase to be cash equivalents, and investments with maturities of greater than 90 days at the time of purchase to be marketable securities. When a marketable security incurs a significant unrealized loss for a sustained period of time, the Company will review the instrument to determine if it is other-than-temporarily impaired. If it is determined that an instrument is other-than-temporarily impaired, the Company will record the unrealized loss in the consolidated statement of operations.

The following table classifies the Company's marketable securities by contractual maturities as of June 30, 2015:

	<u>Fair Value</u> <u>(In thousands)</u>
Due in one year or less	\$ 2,504
Due in more than one year	—
Total marketable securities	<u>\$ 2,504</u>

Accumulated Other Comprehensive Income (Loss)

Accumulated other comprehensive income (loss) consists of changes in the fair market value of available-for-sale securities. As of June 30, 2015, amortized cost of available-for-sale securities approximated fair value.

Table of Contents

Fair Value of Financial Instruments

Fair value is an exit price that represents the amount that would be received from the sale of an asset or paid to transfer a liability in an orderly transaction between market participants. Accordingly, fair value is a market-based measurement that should be determined based on assumptions that market participants would use in pricing an asset or liability. The Company discloses the manner in which fair value is determined for assets and liabilities based on a three-tiered fair value hierarchy. The hierarchy ranks the quality and reliability of the information used to determine the fair values. The three levels of inputs described in the standard are:

- Level 1: Quoted prices in active markets for identical assets or liabilities.
- Level 2: Observable inputs, other than Level 1 prices, for the assets or liabilities, either directly or indirectly, for substantially the full term of the assets or liabilities.
- Level 3: Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Under the Fair Value Option Subsections of Financial Accounting Standards Board (FASB) ASC Subtopic 825-10, *Financial Instruments — Overall*, the Company has the irrevocable option to report most financial assets and financial liabilities at fair value on an instrument by instrument basis, with changes in fair value reported in earnings each reporting period. As a result of electing this option, the Company recorded its previously outstanding Subordinated Notes, Senior Convertible Notes and Convertible Notes at fair value in order to measure these liabilities at amounts that more accurately reflect the economics of these instruments (see note 7).

During the six month period ended June 30, 2014, the Company valued its then outstanding Subordinated Notes, Senior Convertible Notes and Convertible Notes utilizing Level 3 inputs.

Upon the completion of the Company's IPO discussed in note 1, the Company used a portion of the net proceeds to settle all obligations under the Subordinated Notes in full and the Senior Convertible Notes and Convertible Notes automatically converted into 15,319,034 shares of common stock.

At June 30, 2015, the Company held marketable debt securities classified as available-for-sale totaling \$2.5 million, which were valued utilizing Level 1 inputs. The Company held no marketable securities at December 31, 2014.

Stock-based Compensation

Stock-based compensation expense is measured at the grant date based on the fair value of the award. Expense is recognized on a straight-line basis over the requisite service period for all awards with service conditions. For performance-based awards, the grant date fair value is recognized as expense when the condition is probable of being achieved, and then on a graded basis over the requisite service period. The Company uses the Black-Scholes option-pricing model to determine the fair value of service-based option awards, which requires a number of complex and subjective assumptions including fair value of the underlying security, the expected volatility of the underlying security, a risk-free interest rate and the expected term of the option. The fair value of restricted stock and restricted stock unit grants is determined using the closing trading price of the Company's common stock on the date of grant.

During the six months ended June 30, 2015, the Company issued 219,944 restricted common stock units (RSUs) and non-qualified stock options (NSOs) to purchase 231,223 shares of common stock to its employees under the 2014 Employee, Director and Consultant Equity Incentive Plan (the 2014 Equity Plan). These RSUs and NSOs will vest over a three year period. In June 2015, the Company also issued 54,005 shares of restricted common stock and an additional 71,596 NSOs to its non-employee directors. These awards vest one year from the date of grant. Pursuant to the evergreen provisions of the 2014 Equity Plan, the number of shares of common stock available for issuance under the plan automatically increased to 3,698,257 shares effective January 1, 2015.

Earnings per Share

The Company calculates net loss per common share based on the weighted-average number of common shares outstanding during each period. Potential common stock equivalents are determined using the treasury stock method. The weighted-average number of common shares included in the computation of diluted net loss gives effect to all potentially dilutive common equivalent shares, including outstanding stock options, RSUs and warrants. Common equivalent shares are excluded from the computation of diluted net loss per share if their effect is antidilutive.

Table of Contents

Segments

Operating segments are identified as components of an enterprise about which discrete financial information is available for evaluation by the chief operating decision maker when making decisions on how to allocate resources and assess performance. The Company's chief operating decision maker is the Chief Executive Officer. The Company's chief operating decision maker reviews consolidated operating results to make decisions about allocating resources and assessing performance for the entire Company. The Company views its operations and manages its business as one operating segment.

Information about the Company's total revenues, based on shipment destination or services location, is presented in the following table:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2015	2014	2015	2014
(In thousands)				
Revenue:				
U.S.	\$11,038	\$ 6,772	\$21,722	\$17,435
International	19,058	19,843	31,874	31,543
Total	<u>\$30,096</u>	<u>\$26,615</u>	<u>\$53,596</u>	<u>\$48,978</u>

Recently Issued Accounting Standards

From time to time, new accounting pronouncements are issued by the FASB or other standard setting bodies and adopted by the Company as of the specified effective date. Unless otherwise discussed, the Company believes that the impact of recently issued standards that are not yet effective will not have a material impact on its financial position or results of operations upon adoption.

(3) Fair Value Measurements

The following table sets forth the manner, within the three-tiered fair value hierarchy, by which financial assets are measured and reported at fair value as of June 30, 2015:

	<u>June 30, 2015</u>	Fair Value Measurement at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets	Significant Other Observable	Significant Unobservable
		(Level 1)	Inputs (Level 2)	Inputs (Level 3)
		(In thousands)		
Marketable securities:				
U.S. corporate bonds	\$ 1,004	\$ 1,004	\$ —	\$ —
Foreign corporate bonds	<u>1,500</u>	<u>1,500</u>	<u>—</u>	<u>—</u>
Total	\$ 2,504	\$ 2,504	\$ —	\$ —

As of June 30, 2015, the amortized cost of available-for-sale securities approximated their fair value.

(4) Inventories

Inventories consist of the following:

	June 30,	December 31,
	2015	2014
(In thousands)		
Raw materials	\$4,635	\$ 4,052
Finished goods	1,440	845
Total	<u>\$6,075</u>	<u>\$ 4,897</u>

Table of Contents

(5) Property, Plant and Equipment, Net

Property, plant and equipment consist of the following:

	June 30, 2015	December 31, 2014 (In thousands)	Useful life
Construction in progress	\$ 1,422	\$ 24,124	—
Buildings	23,849	16,303	30 years
Machinery and equipment	103,452	78,378	3-10 years
Computer equipment and software	6,752	5,556	3 years
Total	135,475	124,361	
Accumulated depreciation and amortization	(57,326)	(52,869)	
Property, plant and equipment, net	<u>\$ 78,149</u>	<u>\$ 71,492</u>	

Depreciation expense was \$4.7 million and \$5.1 million for the six months ended June 30, 2015 and 2014, respectively.

Construction in progress totaled \$1.4 million and \$24.1 million at June 30, 2015 and December 31, 2014, respectively. In March 2015, the Company placed into service approximately \$31.8 million of assets related to the Company's completed third production line at its manufacturing facility in East Providence, Rhode Island.

(6) Accrued Expenses

Accrued expenses consist of the following:

	June 30, 2015	December 31, 2014 (In thousands)
Employee compensation	\$3,122	\$ 4,851
Professional fees	135	76
Deferred rent	181	155
Other accrued expenses	643	506
Total	<u>\$4,081</u>	<u>\$ 5,588</u>

(7) Interest Expense

Interest expense consists of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2015	2014	2015	2014
	(In thousands)			
Changes in fair value:				
Subordinated Notes	\$ —	\$ 748	\$ —	\$ 1,543
Senior Convertible Notes	—	7,838	—	11,373
Convertible Notes, net of capitalization	—	25,355	—	37,095
Debt closing costs	—	15	—	32
Other interest	45	71	90	135
Total interest expense	<u>\$ 45</u>	<u>\$ 34,027</u>	<u>\$ 90</u>	<u>\$50,178</u>

Prior to the completion of the Company's IPO on June 18, 2014, the Company had Subordinated Notes, Senior Convertible Notes and Convertible Notes outstanding that were measured at fair value using level 3 inputs.

Table of Contents

The change in fair value of the Subordinated Notes for the three and six months ended June 30, 2014 was determined by utilizing a probability weighted discounted cash flow analysis of the amount to be paid on the notes upon the occurrence of certain events in which the Subordinated Notes would be repaid to the noteholders in cash. This analysis utilized assumptions related to the probability of the occurrence of each of the various events and appropriate discount rates for each of the scenarios. The Subordinated Notes were repaid in full on June 20, 2014. As of that date, the aggregate fair value of the Subordinated Notes was determined to be \$18.8 million.

The change in the fair value of the Senior Convertible Notes and the Convertible Notes for the three and six months ended June 30, 2014 was determined by utilizing a probability weighted discounted cash flow analysis which took into consideration market and general economic events as well as the Company's financial results and other data available as of that date. This analysis determined the amount to be paid on the notes in either cash or shares at the occurrence of certain events in which the Senior Convertible Notes and the Convertible Notes would be converted into shares of the Company's common stock or would be repaid to the noteholders in cash. This analysis also utilized assumptions related to the probability of the occurrence of each of the various events and appropriate discount rates for each of the scenarios. The fair value of the Senior Convertible Notes and the Convertible Notes upon the closing of the Company's IPO were determined to be \$39.5 million and \$129.0 million, respectively.

(8) Revolving Line of Credit

The Company maintains a revolving credit facility with Silicon Valley Bank. On September 3, 2014, the Company amended and restated the loan and security agreement to extend the maturity date of the facility to August 31, 2016 and increase the maximum amount the Company is permitted to borrow, subject to continued covenant compliance and borrowing base requirements, from \$10 million to \$20 million. At the Company's election, the interest rate applicable to borrowings under the revolving credit facility may be based on the prime rate or LIBOR. Prime rate-based rates vary from prime rate plus 0.75% per annum to prime rate plus 1.75% per annum, while LIBOR-based rates vary from LIBOR plus 3.75% per annum to LIBOR plus 4.25% per annum. In addition, the Company is required to pay a monthly unused revolving line facility fee of 0.5% per annum of the average unused portion of the revolving credit facility. The revolving credit facility is secured by a first priority security interest in all assets of the Company, including those at the East Providence facility, except for certain exclusions.

At both June 30, 2015 and December 31, 2014, the Company had no amounts drawn on the revolving credit facility. The Company had outstanding letters of credit backed by the revolving credit facility of \$1.8 million at June 30, 2015 and \$1.4 million at December 31, 2014, respectively, which reduce the funds otherwise available to the Company. Based on the available borrowing base, the effective amount available to the Company under the revolving credit facility at June 30, 2015 was \$12.8 million after consideration of the \$1.8 million of outstanding letters of credit (see note 9). Under the revolving credit facility, the Company is required to comply with financial covenants relating to, among other items, minimum Adjusted EBITDA, maximum unfinanced capital expenditures and other non-financial covenants. At June 30, 2015, the Company was in compliance with all such financial covenants.

(9) Commitments and Contingencies

Letters of Credit

Pursuant to the terms of its Northborough, Massachusetts facility lease, the Company has been required to provide the lessor with letters of credit securing certain obligations. In addition, the Company has been required to provide certain customers with letters of credit securing obligations under commercial contracts.

The Company had letters of credit outstanding for \$1.8 million at June 30, 2015 and \$1.4 million at December 31, 2014. These letters of credit are secured by the Company's revolving line of credit (see note 8).

Litigation

The Company is, from time to time, a party to litigation that arises in the normal course of its business operations. The Company is not presently a party to any litigation for which it believes a loss is probable requiring an amount to be accrued or a possible loss contingency requiring disclosure.

Table of Contents

(10) Net Loss Per Share

The computation of basic and diluted net loss attributable to common stockholders per share consists of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2015	2014	2015	2014
	(In thousands, except share and per share data)			
Numerator:				
Net loss attributable to common stockholders	\$ (2,743)	\$ (42,148)	\$ (5,532)	\$ (61,196)
Denominator:				
Weighted average shares outstanding, basic and diluted	22,999,988	3,035,717	22,996,152	1,527,806
Net loss attributable to common stockholders per common share, basic and diluted	\$ (0.12)	\$ (13.88)	\$ (0.24)	\$ (40.05)

Potential dilutive common shares that were excluded from the computation of diluted net loss attributable to common stockholders per common share because they were anti-dilutive consist of the following:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2015	2014	2015	2014
Common stock options	1,298,931	96,999	1,298,931	96,999
Restricted common stock units	521,599	—	521,599	—
Common stock warrants	131	131	131	131
Total	1,820,661	97,130	1,820,661	97,130

As of June 30, 2015 and 2014, there was no dilutive impact of the common stock options, RSUs and common stock warrants.

(11) Income Taxes

The Company incurred net operating losses and recorded a full valuation allowance against net deferred tax assets for all periods presented. Accordingly, the Company has not recorded a provision for federal or state income taxes.

Table of Contents

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following information should be read in conjunction with the unaudited financial information and the notes thereto included in this Quarterly Report on Form 10-Q and the audited financial information and the notes thereto included in the Annual Report on Form 10-K for the year ended December 31, 2014, filed with the Securities and Exchange Commission on March 13, 2015, which we refer to as the Annual Report.

Certain matters discussed in this Quarterly Report on Form 10-Q may be deemed to be forward-looking statements that involve risks and uncertainties. We make such forward-looking statements pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995 and other federal securities laws. In this Quarterly Report on Form 10-Q, words such as "may," "will," "anticipate," "estimate," "expects," "projects," "intends," "plans," "believes" and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements.

Our actual results and the timing of certain events may differ materially from the results discussed, projected, anticipated, or indicated in any forward-looking statements. We caution you that forward-looking statements are not guarantees of future performance and that our actual results of operations, financial condition and liquidity, and the development of the industry in which we operate may differ materially from the forward-looking statements contained in this Quarterly Report. In addition, even if our results of operations, financial condition and liquidity, and the development of the industry in which we operate are consistent with the forward-looking statements contained in this Quarterly Report, they may not be predictive of results or developments in future periods.

The following information and any forward-looking statements should be considered in light of factors discussed elsewhere in this Quarterly Report on Form 10-Q, including those risks identified under Part II, Item 1A of this Quarterly Report on Form 10-Q, and under "Risk Factors" in Item 1A of the Annual Report.

We caution readers not to place undue reliance on any forward-looking statements made by us, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any such statements to reflect any change in our expectations or in events, conditions or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

You should read the following discussion and analysis of financial condition and results of operations together with Part I Item 1 "Financial Information" and our financial statements and related notes included elsewhere in this Quarterly Report on Form 10-Q.

Overview

We design, develop and manufacture innovative, high-performance aerogel insulation. We believe our aerogel blankets deliver the best thermal performance of any widely used insulation product available on the market today and provide a combination of performance attributes unmatched by traditional insulation materials. Our end-use customers select our products where thermal performance is critical and to save money, reduce energy use, preserve operating assets and protect workers.

Our insulation is used by oil producers and the owners and operators of refineries, petrochemical plants, LNG facilities, power generating assets and other energy infrastructure. Our Pyrogel and Cryogel product lines have undergone rigorous technical validation by industry leading end-users and achieved significant market adoption. We also derive product revenue from the building and construction and other end markets. Customers in these markets use our aerogels for applications as diverse as wall systems, military and commercial aircraft, trains, buses, appliances, apparel, footwear and outdoor gear.

Table of Contents

We generate product revenue through the sale of our line of aerogel blankets. We market and sell our products primarily through a sales force based in North America, Europe and Asia. The efforts of our sales force are supported by a small number of sales consultants with extensive knowledge of a particular market or region. Our sales force is responsible for establishing and maintaining customer and partner relationships, delivering highly technical information and ensuring high-quality customer service.

Our salespeople work directly with end-use customers and engineering firms to promote the qualification, specification and acceptance of our products. We also rely on an existing and well-established channel of qualified insulation distributors and contractors in more than 30 countries around the world that ensures rapid delivery of our products and strong end-user support. Our salespeople also work to educate insulation contractors about the technical and operating cost advantages of our aerogel blankets.

We also perform research services under contracts with various agencies of the U.S. government, including the Department of Defense and the Department of Energy, and other institutions. Research performed under contract with government agencies and other institutions enables us to develop and leverage technologies into broader commercial applications.

We manufacture our products using our proprietary process and technology at our facility in East Providence, Rhode Island. We have operated the East Providence facility since 2008. We commenced operation of a second production line at this facility during 2011, which doubled our annual nameplate capacity to 40 million to 44 million square feet of aerogel blankets, depending on product mix. We completed the construction and start-up of a third production line in the East Providence facility during the first quarter of 2015 with a total construction cost of \$31.8 million. We expect that this third production line will increase our annual nameplate capacity by 10 million to 11 million square feet of aerogel blankets, depending on product mix.

Our revenue for the six months ended June 30, 2015 was \$53.6 million, which represented an increase of 9% from the six months ended June 30, 2014. Net loss for the six months ended June 30, 2015 was \$5.5 million and net loss attributable to common stockholders, basic and diluted, was \$0.24 per share. Net loss for the six months ended June 30, 2014 was \$61.2 million and net loss per diluted share was \$40.05. Net loss for the six months ended June 30, 2014 included a total of \$38.8 million of expense or \$25.42 per share attributable to common stockholders related to expenses recorded in connection with the closing of our initial public offering including (i) recognition of compensation cost of performance-based stock options of \$5.6 million and (ii) accretion of convertible notes to final conversion value of \$33.2 million.

Key Metrics and Non-GAAP Financial Measures

We regularly review a number of metrics, including the following key metrics, to evaluate our business, measure our performance, identify trends affecting our business, formulate financial projections and make strategic decisions.

Square Foot Operating Metric

We price our product and measure our product shipments in square feet. With the successful commissioning and start-up of our third production line at the East Providence facility in March 2015, we estimate our annual nameplate capacity is 50 million to 55 million square feet of aerogel blankets, depending on product mix. We believe the square foot operating metric allows us and our investors to measure the growth in our manufacturing capacity and product shipments on a uniform and consistent basis. The following chart sets forth product shipments associated with recognized revenue in square feet for the periods presented:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2015	2014	2015	2014
	(Square feet in thousands)			
Product shipments in square feet	11,150	10,088	19,929	18,891

Table of Contents

Adjusted EBITDA

We use Adjusted EBITDA, a non-GAAP financial measure, as a means to assess our operating performance. We define Adjusted EBITDA as net income (loss) before interest expense, taxes, depreciation, amortization, stock-based compensation expense and other items, which occur from time to time, that we do not believe are indicative of our core operating performance. In previous periods these items included loss on disposal of assets, gain or loss on extinguishment or exchange of debt, write-off of costs of postponed financing activities and write-off of construction in progress. Adjusted EBITDA is a supplemental measure of our performance that is not presented in accordance with accounting principles generally accepted in the United States of America, or U.S. GAAP. Adjusted EBITDA should not be considered as an alternative to net income (loss) or any other measure of financial performance calculated and presented in accordance with U.S. GAAP. In addition, our definition and presentation of Adjusted EBITDA may not be comparable to similarly titled measures presented by other companies.

We use Adjusted EBITDA:

- as a measure of operating performance because it does not include the impact of items that we do not consider indicative of our core operating performance;
- for planning purposes, including the preparation of our annual operating budget, to allocate resources to enhance the financial performance of our business; and
- as a performance measure used under our bonus plan.

We also believe that the presentation of Adjusted EBITDA provides useful information to investors with respect to our results of operations and in assessing the performance and value of our business. Various measures of EBITDA are widely used by investors to measure a company's operating performance without regard to items that can vary substantially from company to company depending upon financing and accounting methods, book values of assets, capital structures and the methods by which assets were acquired.

Although measures similar to Adjusted EBITDA are frequently used by investors and securities analysts in their evaluation of companies, we understand that Adjusted EBITDA has limitations as an analytical tool, and you should not consider it in isolation or as a substitute for U.S. GAAP, income from operations or an analysis of our results of operations as reported under U.S. GAAP. Some of these limitations are:

- Adjusted EBITDA does not reflect our historical cash expenditures or future requirements for capital expenditures or other contractual commitments;
- Adjusted EBITDA does not reflect changes in, or cash requirements for, our working capital needs;
- Adjusted EBITDA does not reflect stock-based compensation expense;
- Adjusted EBITDA does not reflect our tax expense or cash requirements to pay our income taxes;
- Adjusted EBITDA does not reflect our interest expense, or the cash requirements necessary to service interest or principal payments on our debt;
- Although depreciation, amortization and impairment charges are non-cash charges, the assets being depreciated, amortized or impaired will often have to be replaced in the future, and Adjusted EBITDA does not reflect any cash requirements for these replacements; and
- Other companies in our industry may calculate EBITDA or Adjusted EBITDA differently than we do, limiting their usefulness as a comparative measure.

Because of these limitations, our Adjusted EBITDA should not be considered as a measure of discretionary cash available to us to reinvest in the growth of our business or as a measure of cash available for us to meet our obligations.

To properly and prudently evaluate our business, we encourage you to review the U.S. GAAP financial statements included elsewhere in this Quarterly Report on Form 10-Q, and not to rely on any single financial measure to evaluate our business.

Table of Contents

The following table presents a reconciliation of net loss, the most directly comparable U.S. GAAP measure, to Adjusted EBITDA for the periods presented:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2015	2014	2015	2014
	(\$ in thousands)			
Net loss	\$(2,743)	\$(42,148)	\$(5,532)	\$(61,196)
Interest expense ⁽¹⁾	45	34,027	90	50,178
Depreciation and amortization	2,574	2,547	4,759	5,179
Loss on disposal of assets	—	—	—	15
Stock-based compensation ⁽²⁾	1,404	6,006	2,699	6,344
Adjusted EBITDA	<u>\$ 1,280</u>	<u>\$ 432</u>	<u>\$ 2,016</u>	<u>\$ 520</u>

- (1) Interest expense in 2014 consists primarily of fair market value adjustments related to our subordinated notes, senior convertible notes, and convertible notes.
- (2) Represents non-cash stock-based compensation related to vesting and modifications of stock option grants, vesting of restricted stock and vesting of restricted common stock units.

Our Adjusted EBITDA is affected by a number of factors including the mix of aerogel products sold, average selling prices, average material costs, our actual manufacturing costs, the costs associated with and timing of expansions and start-up of additional production capacity and the amount and timing of operating expenses. As we continue to grow our base of product revenue and to build out our manufacturing capacity, we expect increased manufacturing expenses will periodically have a negative impact on Adjusted EBITDA, but will set the framework for improved Adjusted EBITDA moving forward. Accordingly, we expect that our Adjusted EBITDA will vary from period to period as we continue to expand our manufacturing capacity.

Components of Our Results of Operations

Revenue

We recognize product revenue from the sale of our line of aerogel products and research services revenue from the provision of services under contracts with various agencies of the U.S. government and other institutions. Product revenue is recognized upon transfer of title and risk of loss, which is generally upon shipment or delivery.

Cost of Revenue

Cost of revenue for our product revenue consists primarily of materials and manufacturing expense, including direct labor, utilities, maintenance expense and depreciation on manufacturing assets. Cost of product revenue is recorded when the related product revenue is recognized. Cost of product revenue also includes stock-based compensation of manufacturing employees and shipping costs.

Material is our most significant component of cost of product revenue and includes fibrous batting, silica materials and additives. Material costs as a percentage of product revenue vary from product to product due to differences in average selling prices, material requirements, blanket thickness and manufacturing yields. As a result, material costs as a percentage of revenue will vary from period to period due to changes in the mix of aerogel products sold. However, in general, we expect material costs in the aggregate to decline as a percentage of revenue as we seek to achieve higher selling prices, material sourcing improvements and manufacturing yield enhancements for our aerogel products.

Table of Contents

Manufacturing expense is also a significant component of cost of revenue. As we continue to increase manufacturing capacity in our East Providence facility and ultimately in a second plant, we expect manufacturing expense as a percentage of product revenue will increase in the near-term following each expansion but will decrease in the long-term with increased revenues supported by the effect of completed capacity expansions.

Cost of revenue for our research services revenue consists of direct labor costs of research personnel engaged in the contract research, third-party consulting expense, and associated direct material costs. This cost of revenue also includes overhead expenses associated with project resources, development tools and supplies. Cost of revenue for our research services revenue is recorded when the related research services revenue is recognized.

Gross Profit

Our gross profit as a percentage of revenue is affected by a number of factors, including the mix of aerogel products sold, average selling prices, average material costs, our actual manufacturing costs and the costs associated with expansions and start-up of production capacity. As we continue to build out our manufacturing capacity, we expect increased manufacturing expenses will periodically have a negative impact on gross profit, but will set the framework for improved gross profit moving forward. Accordingly, we expect our gross profit in absolute dollars and as a percentage of revenue to vary from period to period as we expand our manufacturing capacity. However, in general, we expect gross profit to improve as a percentage of revenue in the long-term due to increases in manufacturing productivity, increased production volumes, improved manufacturing yields and material purchasing efficiencies.

Operating Expenses

Operating expenses consist of research and development, sales and marketing, and general and administrative expenses. The largest component of our operating expenses is personnel costs, consisting of salaries, benefits, incentive compensation and stock-based compensation. We expect to continue to hire a significant number of new employees in order to support our anticipated growth. In any particular period, the timing of additional hires could materially affect our operating expenses, both in absolute dollars and as a percentage of revenue.

Research and Development Expenses

Research and development expenses consist primarily of expenses for personnel engaged in the development of next generation aerogel compositions, form factors and manufacturing technologies. These expenses also include testing services, prototype expenses, consulting services, equipment depreciation, facilities costs and related overhead. We expense research and development costs as incurred. We expect to continue to devote substantial resources to the development of new aerogel technology. We believe that these investments are necessary to maintain and improve our competitive position. We expect to continue to invest in additional research and engineering personnel and the infrastructure required in support of their efforts. We expect that our research and development expenses will continue to increase in absolute dollars but decrease as a percentage of revenue in the long-term.

Sales and Marketing Expenses

Sales and marketing expenses consist primarily of personnel costs, incentive compensation, marketing programs, travel and related costs, consulting expenses and facilities-related costs. We plan to expand our sales force and sales consultants globally to drive anticipated growth in customers and demand for our products. We expect that sales and marketing expenses will continue to increase in absolute dollars but decrease as a percentage of revenue in the long-term.

General and Administrative Expenses

General and administrative expenses consist primarily of personnel costs, legal expenses, consulting and professional services, audit and tax consulting costs, and expenses for our executive, finance, human resources and information technology organizations. General and administrative expenses have increased as we have incurred additional costs related to operating as a publicly-traded company, which include costs of compliance with securities, corporate governance and related laws and regulations, investor relations expenses, increased insurance premiums, including director and officer insurance, and increased audit and legal fees. In addition, we expect to add general and administrative personnel to support the anticipated growth of our business and continued expansion of our manufacturing operations. We expect that general and administrative expenses will continue to increase in absolute dollars but decrease as a percentage of revenue in the long-term.

Table of Contents

Interest Expense

For the three and six months ended June 30, 2015, interest expense consisted primarily of fees related to our revolving credit facility.

For the three and six months ended June 30, 2014, interest expense consisted primarily of interest expense associated with fair market value adjustments to our subordinated notes, senior convertible notes and convertible notes.

Provision for Income Taxes

We have incurred net losses since inception and have not recorded benefit provisions for U.S. federal income taxes or state income taxes since the tax benefits of our net losses have been offset by valuation allowances due to the uncertainty associated with the utilization of net operating loss carryforwards.

Results of Operations

Three months ended June 30, 2015 compared to the three months ended June 30, 2014

The following tables set forth a comparison of the components of our results of operations for the periods presented:

Revenue

	Three Months Ended June 30,		2014		Change	
	2015	Percentage of	2014	Percentage of		
	Amount	Revenue	Amount	Revenue	Amount	Percentage
			(\$ in thousands)			
Revenue:						
Product	\$29,755	99%	\$25,893	97%	\$3,862	15%
Research services	341	1%	722	3%	(381)	(53)%
Total Revenue	<u>\$30,096</u>	100%	<u>\$26,615</u>	100%	<u>\$3,481</u>	13%

The following chart sets forth product shipments in square feet for the periods presented:

	Three Months Ended June 30,		Change	
	2015	2014	Amount	Percentage
Product shipments in square feet (in thousands)	11,150	10,088	1,062	11%

Total revenue increased \$3.5 million, or 13%, to \$30.1 million for the three months ended June 30, 2015 from \$26.6 million in the comparable period in 2014 as a result of an increase in product revenue.

Product revenue increased \$3.9 million, or 15%, to \$29.8 million for the three months ended June 30, 2015 from \$25.9 million in the comparable period in 2014. This increase was principally the result of an increase in sales of our aerogel products in the refinery and petrochemical sectors in Asia and Europe. The revenue increase reflects price increases enacted in late 2014, offset, in part, by a modest shift in the mix of aerogel products sold towards lower priced products. The average selling price per square foot of our products increased by an effective \$0.10, or 4.0%, to \$2.67 per square foot for the three months ended June 30, 2015 from \$2.57 per square foot for the comparable period in 2014. This increase in average selling price contributed approximately \$1.1 million to the increase in product revenue. In volume terms, product shipments increased 1.1 million square feet, or 11%, to 11.2 million square feet of aerogel products for the three months ended June 30, 2015 from 10.1 million square feet in the comparable period in 2014. The increase in volume was supported by the increase in manufacturing capacity associated with operation of the third production line in the East Providence facility. The increase in product volume contributed approximately \$2.8 million to the increase in product revenue.

Table of Contents

Research services revenue decreased \$0.4 million, or 53%, to \$0.3 million for the three months ended June 30, 2015 from \$0.7 million in the comparable period in 2014. The decrease was primarily due to a reduction in active research contracts with government agencies during 2015. During the three months ended June 30, 2015, we provided research services on four contracts compared to six contracts in the comparable period in 2014. This reduction in active contracts is principally the result of certain limitations on our eligibility to receive contract awards under federal guidelines and programs due to a variety of factors including the size of our revenues, the number of our employees and the makeup of our ownership.

Product revenue was 99% and 97% of total revenue for the three months ended June 30, 2015 and 2014, respectively. Research services revenue was 1% and 3% of total revenue for the three months ended June 30, 2015 and 2014, respectively. We expect that product revenue will continue to comprise a significant percentage of our total revenue due to the anticipated growth in demand for our products in the energy infrastructure market.

Cost of Revenue

	Three Months Ended June 30,							
	2015			2014				
	Amount	Percentage of Related Revenue	Percentage of Total Revenue	Amount (\$ in thousands)	Percentage of Related Revenue	Percentage of Total Revenue	Change	
							Amount	Percentage
Cost of revenue:								
Product	\$24,814	83%	82%	\$22,850	88%	86%	\$1,964	9%
Research services	173	51%	1%	340	47%	1%	(167)	(49%)
Total cost of revenue	\$24,987	83%	83%	\$23,190	87%	87%	\$1,797	8%

Total cost of revenue increased \$1.8 million, or 8%, to \$25.0 million for the three months ended June 30, 2015 from \$23.2 million in the comparable period in 2014. The increase in total cost of revenue was the result of an increase of \$1.0 million each in both material costs and manufacturing expense to support increased product revenue, offset, in part, by a decrease of \$0.2 million in cost of research services.

Product cost of revenue increased \$2.0 million, or 9%, to \$24.8 million for the three months ended June 30, 2015 from \$22.9 million in the comparable period in 2014. This increase was the result of higher compensation expense of \$0.9 million, higher utility expenses of \$0.5 million, and higher depreciation expense of \$0.2 million related primarily to the third production line in the East Providence facility, which commenced operation in the first quarter of 2015. These increases were partially offset by a decrease in stock-based compensation of \$0.6 million. Material costs for the three months ended June 30, 2015 increased \$1.0 million versus the comparable period in 2014 due principally to the 11% increase in product volume period over period. We expect that product cost of revenue will continue to increase during the remainder of 2015 due to an increase in manufacturing expense, including compensation, depreciation, utilities and other costs associated with the operation and production ramp of the third manufacturing line. In addition, we expect material costs to increase in line with the expected increase in product volume to be produced and shipped from the facility.

Product cost of revenue as a percentage of product revenue decreased to 83% during the three months ended June 30, 2015 from 88% during the three months ended June 30, 2014. This decrease was due principally to the selling price increase implemented in late 2014 and improved manufacturing productivity associated with operation of the third production line during the three months ended June 30, 2015. We expect that product cost of revenue as a percentage of revenue during the remainder of 2015 will continue to decrease from the levels realized during the three months ended June 30, 2015 due to continued increases in manufacturing productivity and increased production volumes associated with operation of the third manufacturing line.

Research services cost of revenue decreased \$0.1 million, or 49%, to \$0.2 million for the three months ended June 30, 2015 from \$0.3 million in the comparable period in 2014. The decrease in cost of research services revenue was due principally to the 53% reduction in research services revenue during the three months ended June 30, 2015.

Table of Contents

Gross Profit

	Three Months Ended June 30,				Change	
	2015		2014			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
				(\$ in thousands)		
Gross profit	\$5,109	17%	\$3,425	13%	\$1,684	49%

Gross profit increased \$1.7 million, or 49%, to \$5.1 million for the three months ended June 30, 2015 from \$3.4 million in the comparable period in 2014. The increase is due to \$1.1 million in incremental contribution from the effective 4% sales price increase during 2015 and \$2.8 million related to increased volume supported by output from the third manufacturing line. These increases were offset, in part, by a \$1.0 million increase in material costs due principally to the increase in volume, a \$1.0 million increase in manufacturing expense due principally to the operation of the third manufacturing line, and a \$0.2 million decrease associated with the reduction in research services revenue.

Gross profit as a percentage of total revenue increased to 17% of total revenue for the three months ended June 30, 2015 from 13% in the comparable period in 2014. We expect gross profit as a percentage of total revenue to continue to increase during the remainder of 2015 from the levels realized during the three months ended June 30, 2015 due to anticipated increases in production volumes and continued improvement in manufacturing productivity associated with the operation of the third manufacturing line in the East Providence facility.

Research and Development Expenses

	Three Months Ended June 30,				Change	
	2015		2014			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
			(\$ in thousands)			
Research and development expenses	\$1,551	5%	\$1,920	7%	\$ (369)	(19%)

Research and development expenses decreased \$0.4 million, or 19%, to \$1.6 million for the three months ended June 30, 2015 from \$1.9 million in the comparable period in 2014. The decrease is principally the result of lower stock-based compensation charges of \$0.5 million, partially offset by an increase of \$0.1 million in compensation expense. We expect that our research and development expenses will increase in the long-term as we invest in additional research and engineering personnel and the infrastructure required in support of their efforts. However, we expect that research and development expenses will decline as a percentage of total revenue in the long-term due to projected growth in product revenue.

Table of Contents

Sales and Marketing Expenses

	Three Months Ended June 30,				Change	
	2015		2014			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	(\$ in thousands)					
Sales and marketing expenses	\$2,722	9%	\$3,420	13%	\$ (698)	(20%)

Sales and marketing expenses decreased \$0.7 million, or 20%, to \$2.7 million for the three months ended June 30, 2015 from \$3.4 million in the comparable period in 2014 due primarily to a decrease of \$0.7 million in stock-based compensation charges. We plan to continue to expand our sales force to support anticipated growth in customers and demand for our products. We expect that sales and marketing expenses will increase in absolute dollars in the long term as we increase sales personnel and marketing efforts. However, we expect that sales and marketing expenses will decrease as a percentage of total revenue in the long-term due to projected growth in product revenue.

General and Administrative Expenses

	Three Months Ended June 30,				Change	
	2015		2014			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	(\$ in thousands)					
General and administrative expenses	\$3,534	12%	\$6,206	23%	\$(2,672)	(43%)

General and administrative expenses, or G&A expenses, decreased \$2.7 million, or 43%, to \$3.5 million for the three months ended June 30, 2015 compared to the same period in 2014. G&A expenses as a percentage of total revenue decreased to 12% for the three months ended June 30, 2015 from 23% in the comparable period in 2014. The \$2.7 million decrease was primarily the result of a decrease in stock-based compensation charges of \$2.8 million and depreciation expense of \$0.1 million. These decreases were offset by an increase of \$0.2 million in insurance, professional services and other operating expenses related to operating as a publicly traded company. We expect that G&A expenses will increase in absolute dollars in the long term as we incur additional expenses in support of the anticipated growth of our business and expansion of our manufacturing operations. However, we expect G&A expenses will decline as a percentage of total revenue in the long-term as a result of projected growth in product revenue.

Interest Expense

	Three Months Ended June 30,				Change	
	2015		2014			
	Amount	Percentage of Revenue	Amount	Percentage of Revenue	Amount	Percentage
	(\$ in thousands)					
Interest expense	\$ (45)	(0)%	\$(34,027)	(128)%	\$33,982	(100)%

Interest expense of less than \$0.1 million during the three months ended June 30, 2015 was comprised primarily of costs related to our revolving credit facility. During the three months ended June 30, 2014, we recorded approximately \$34.0 million in interest expense comprised of changes in fair value for our then outstanding subordinated notes, senior convertible notes and convertible notes. Upon completion of the IPO in June 2014, the subordinated notes were repaid and the senior convertible notes and convertible notes were converted to equity.

Table of Contents

Six months ended June 30, 2015 compared to the six months ended June 30, 2014

The following tables set forth a comparison of the components of our results of operations for the periods presented:

Revenue

	Six Months Ended June 30,				Change	
	2015		2014			
	Amount	Percentage of Revenue	Amount (\$ in thousands)	Percentage of Revenue	Amount	Percentage
Revenue:						
Product	\$52,966	99%	\$47,386	97%	\$5,580	12%
Research services	630	1%	1,592	3%	(962)	(60)%
Total Revenue	\$53,596	100%	\$48,978	100%	\$4,618	9%

The following chart sets forth product shipments in square feet for the periods presented:

	Six Months Ended June 30,		Change	
	2015	2014	Amount	Percentage
Product shipments in square feet (in thousands)	19,929	18,891	1,038	5%

Total revenue increased \$4.6 million, or 9%, to \$53.6 million for the six months ended June 30, 2015 from \$49.0 million in the comparable period in 2014 as a result of an increase in product revenue.

Product revenue increased \$5.6 million, or 12%, to \$53.0 million for the six months ended June 30, 2015 from \$47.4 million in the comparable period in 2014. This increase was principally the result of an increase in sales of our aerogel products in the refinery and petrochemical sectors in Asia and Europe. The revenue increase reflects price increases enacted in late 2014, offset, in part, by a modest shift in the mix of aerogel products sold towards higher priced products. The average selling price per square foot of our products increased by an effective \$0.15, or 6.0%, to \$2.66 per square foot for the six months ended June 30, 2015 from \$2.51 per square foot for the comparable period in 2014. This increase in average selling price contributed approximately \$2.9 million to the increase in product revenue. In volume terms, product shipments increased 1.0 million square feet, or 5%, to 19.9 million square feet of aerogel products for the six months ended June 30, 2015 from 18.9 million square feet in the comparable period in 2014. The increase in volume was supported by the increase in manufacturing capacity associated with operation of the third production line in the East Providence facility. The increase in product volume contributed approximately \$2.7 million to the increase in product revenue.

Research services revenue decreased \$1.0 million, or 60%, to \$0.6 million for the six months ended June 30, 2015 from \$1.6 million in the comparable period in 2014. The decrease was primarily due to a reduction in active research contracts with government agencies during 2015. During the six months ended June 30, 2015, we provided research services on four contracts compared to six contracts in the comparable period in 2014. This reduction in active contracts is principally the result of certain limitations on our eligibility to receive contract awards under federal guidelines and programs due to a variety of factors including the size of our revenues, the number of our employees and the makeup of our ownership.

Product revenue was 99% and 97% of total revenue for the six months ended June 30, 2015 and 2014, respectively. Research services revenue was 1% and 3% of total revenue for the six months ended June 30, 2015 and 2014, respectively. We expect that product revenue will continue to comprise a significant percentage of our total revenue due to the anticipated growth in demand for our products in the energy infrastructure market.

Table of Contents

Cost of Revenue

	Six Months Ended June 30,						Change	
	2015			2014				
	Amount	Percentage of Related Revenue	Percentage of Total Revenue	Amount	Percentage of Related Revenue	Percentage of Total Revenue	Amount	Percentage
Cost of revenue:								
Product	\$43,659	82%	81%	\$41,391	87%	85%	\$2,268	5%
Research services	313	50%	1%	816	51%	2%	(503)	(62)%
Total cost of revenue	<u>\$43,972</u>	82%	82%	<u>\$42,207</u>	86%	86%	<u>\$1,765</u>	4%

Total cost of revenue increased \$1.8 million, or 4%, to \$44.0 million for the six months ended June 30, 2015 from \$42.2 million in the comparable period in 2014. The increase in total cost of revenue was the result of an increase of \$0.9 million in material costs and \$1.4 million in manufacturing expense to support increased product revenue, offset, in part, by a decrease of \$0.5 million in cost of research services.

Product cost of revenue increased \$2.3 million, or 5%, to \$43.7 million for the six months ended June 30, 2015 from \$41.4 million in the comparable period in 2014. The increase was the result of higher compensation expense of \$1.4 million, higher utility expenses of \$0.6 million and higher operating supply costs of \$0.2 million related primarily to the third production line in the East Providence facility, which commenced operation in the first quarter of 2015. These increases were partially offset by decreases in depreciation expense of \$0.4 million and stock-based compensation of \$0.4 million. The decrease in depreciation expense was due to certain manufacturing assets becoming fully depreciated during the period offset, in part, by additional depreciation expense associated with the third production line. Material costs for the six months ended June 30, 2015 increased \$0.9 million versus the comparable period in 2014 due principally to the 5% increase in product volume period over period. We expect that product cost of revenue will continue to increase during the remainder of 2015 due to an increase in manufacturing expense, including compensation, depreciation, utilities and maintenance costs associated with the operation and production ramp of the third manufacturing line. In addition, we expect material costs to increase in line with the expected increase in product volume to be produced and shipped from the facility.

Product cost of revenue as a percentage of product revenue decreased to 82% during the six months ended June 30, 2015 from 87% during the six months ended June 30, 2014. This decrease was due principally to the selling price increase implemented in late 2014 and improved manufacturing productivity associated with operation of the third production line during the six months ended June 30, 2015. We expect that product cost of revenue as a percentage of revenue during the remainder of 2015 will decrease from the levels realized during the six months ended June 30, 2015 due to continued increases in manufacturing productivity and increased production volumes associated with operation of the third manufacturing line.

Research services cost of revenue decreased \$0.5 million, or 62%, to \$0.3 million for the six months ended June 30, 2015 from \$0.8 million in the comparable period in 2014. The decrease in cost of research services revenue was due principally to the 60% reduction in research services revenue during the six months ended June 30, 2015.

Table of Contents

Gross Profit

	Six Months Ended June 30,				Change	
	2015		2014		Amount	Percentage
	Amount	Percentage of Revenue	Amount (\$ in thousands)	Percentage of Revenue		
Gross profit	\$9,624	18%	\$6,771	14%	\$2,853	42%

Gross profit increased \$2.9 million, or 42%, to \$9.6 million for the six months ended June 30, 2015 from \$6.8 million in the comparable period in 2014. The increase is due to \$2.9 million in incremental contribution from an effective 6.0% increase in average sales price during 2015 and \$2.7 million related to increased volume supported by output from the third manufacturing line. These increases were offset, in part, by a \$0.9 million increase in material costs due principally to the increase in volume, a \$1.4 million increase in manufacturing expenses due principally to the operation of the third manufacturing line, and a \$0.5 million reduction in contribution due to the decline in research services revenue.

Gross profit as a percentage of total revenue increased to 18% of total revenue for the six months ended June 30, 2015 from 14% in the comparable period in 2014. We expect gross profit as a percentage of total revenue to continue to increase during the remainder of 2015 from the levels realized during the six months ended June 30, 2015 due to anticipated increases in production volumes and continued improvement in manufacturing productivity associated with the operation of the third manufacturing line in the East Providence facility.

Research and Development Expenses

	Six Months Ended June 30,				Change	
	2015		2014		Amount	Percentage
	Amount	Percentage of Revenue	Amount (\$ in thousands)	Percentage of Revenue		
Research and development expenses	\$2,855	5%	\$3,203	7%	\$ (348)	(11%)

Research and development expenses decreased \$0.3 million, or 11%, to \$2.9 million for the six months ended June 30, 2015 from \$3.2 million in the comparable period in 2014. The decrease is principally the result of lower stock-based compensation charges of \$0.4 million offset by increases in compensation expense of \$0.1 million. We expect that our research and development expenses will increase in the long-term as we invest in additional research and engineering personnel and the infrastructure required in support of their efforts. However, we expect that research and development expenses will decline as a percentage of total revenue in the long-term due to projected growth in product revenue.

Sales and Marketing Expenses

	Six Months Ended June 30,				Change	
	2015		2014		Amount	Percentage
	Amount	Percentage of Revenue	Amount (\$ in thousands)	Percentage of Revenue		
Sales and marketing expenses	\$5,054	9%	\$5,658	12%	\$ (604)	(11%)

Sales and marketing expenses decreased \$0.6 million, or 11%, to \$5.1 million for the six months ended June 30, 2015 from \$5.7 million in the comparable period in 2014. The \$0.6 million decrease was primarily due to a decrease of \$0.5 million in stock-based compensation charges and \$0.1 million in employee related expenditures. We expect that sales and marketing expenses will increase in absolute dollars in the long term as we increase sales personnel and marketing efforts. However, we expect that sales and marketing expenses will decrease as a percentage of total revenue in the long-term due to projected growth in product revenue.

Table of Contents

General and Administrative Expenses

	Six Months Ended June 30,				Change	
	2015		2014			
	Amount	Percentage of Revenue	Percentage of Revenue (\$ in thousands)	Percentage of Revenue	Amount	Percentage
General and administrative expenses	\$7,152	13%	\$ 8,928	18%	\$(1,771)	(20%)

General and administrative expenses, or G&A expenses, decreased \$1.7 million, or 20%, to \$1.8 million for the six months ended June 30, 2015 compared to the same period in 2014. G&A expenses as a percentage of total revenue decreased to 13% for the six months ended June 30, 2015 from 18% in the comparable period in 2014. The \$1.8 million decrease was primarily the result of a decrease in stock-based compensation charges of \$2.3 million and depreciation expense of \$0.1 million. These decreases were offset by an increase of \$0.6 million in insurance, professional services and other operating expenses related principally to operating as a publicly traded company. We expect that G&A expenses will increase in absolute dollars in the long term as we incur additional expenses in support of the anticipated growth of our business and expansion of our manufacturing operations. However, we expect G&A expenses will decline as a percentage of total revenue in the long-term as a result of projected growth in product revenue.

Interest Expense

	Six Months Ended June 30,				Change	
	2015		2014			
	Percentage		Percentage		Amount	Percentage
	Amount	of Revenue	Amount	of Revenue		
	(\$ in thousands)					
Interest expense	\$ (90)	(0)%	\$(50,178)	(102)%	\$50,088	(100)%

Interest expense of less than \$0.1 million during the six months ended June 30, 2015 was comprised primarily of costs related to our revolving credit facility. During the six months ended June 30, 2014, we recorded approximately \$50.2 million in interest expense comprised of changes in fair value for our then outstanding subordinated notes, senior convertible notes and convertible notes. Upon completion of the IPO in June 2014, the subordinated notes were repaid and the senior convertible notes and convertible notes were converted to equity.

Table of Contents

Liquidity and Capital Resources

Overview

We have experienced significant losses and invested significant resources since our inception to develop and commercialize our aerogel technology and to build a manufacturing infrastructure capable of supplying aerogel products at the volumes and costs required by our customers. These investments have included research and development and other operating expenses, capital expenditures and investment in working capital balances.

We are currently experiencing revenue growth as we gain share in our target markets. Our current financial forecast anticipates continued revenue growth, increasing gross profit and improving cash flows from operations. However, we expect to incur significant capital expenditures through 2017 related to the expansion of our manufacturing capacity as we seek to keep pace with the expected growth in demand.

We believe that our existing cash balance and available credit will be sufficient (i) to fund the remaining amounts included in accounts payable related to the completed construction of our third production line in the East Providence facility, and (ii) to fund a portion of the design, development and construction of a second production plant in the United States. We expect to supplement our cash balance with anticipated cash flows from operations, local government grants, debt financings and potentially equity financings to provide the capital required to complete the first production line in our second facility.

Primary Sources of Liquidity

Our principal sources of liquidity are currently our cash and cash equivalents, marketable securities and revolving credit facility with Silicon Valley Bank. Cash and cash equivalents consist primarily of cash and money market accounts on deposit with banks. As of June 30, 2015, we had \$29.6 million of cash and cash equivalents. In addition, we had \$2.5 million of marketable securities at June 30, 2015 comprised of available-for-sale securities.

From our inception through March 2013, our primary sources of liquidity were funds raised through issuances of common stock, preferred stock, subordinated notes, senior convertible notes and convertible notes to venture capital funds and other private investors. In June 2014, we completed an initial public offering of our common stock and received net proceeds of \$74.7 million after underwriting discounts and offering expenses. Upon the closing of the offering, all principal and accrued interest of our senior convertible notes and our convertible notes automatically converted into shares of our common stock. In addition, we utilized \$19.8 million of the net proceeds of the offering to repay all amounts outstanding under our subordinated notes and revolving credit facility. At June 30, 2015, our only debt obligations were \$0.1 million related to capital lease obligations. At June 30, 2015, we also had \$1.8 million of outstanding letters of credit secured by the revolving credit facility described below.

In March 2011, we entered into a \$10.0 million revolving credit facility with Silicon Valley Bank. This facility has been amended at various dates through 2014. On September 3, 2014, we further amended the loan and security agreement to extend the maturity date of the revolving credit facility to August 31, 2016 and to increase the maximum amount we are permitted to borrow, subject to continued covenant compliance and borrowing base requirements, from \$10 million to \$20 million. At our election, the interest rate applicable to borrowings under the amended revolving credit facility may be based on the prime rate or LIBOR. Prime rate-based rates vary from prime rate plus 0.75% per annum to prime rate plus 1.75% per annum, while LIBOR-based rates vary from LIBOR plus 3.75% per annum to LIBOR plus 4.25% per annum. In addition, we are required to pay a monthly unused revolving line facility fee of 0.5% per annum of the average unused portion of the revolving credit facility.

Due to the borrowing base limitations of the revolving credit facility, the effective amount available to us under the facility at June 30, 2015 was \$12.8 million after giving effect to the \$1.8 million of letters of credit outstanding. As of June 30, 2015, we had no outstanding balances drawn on the revolving credit facility.

Table of Contents

Analysis of Cash Flow

Net Cash (Used in) Provided by Operating Activities

During the six months ended June 30, 2015, we used \$0.6 million net cash from operating activities, as compared to generating \$0.2 million in net cash during the comparable period of 2014, a decrease of \$0.8 million. This decrease was primarily the result of a decrease in cash from changes in operating assets and liabilities of \$2.4 million, offset, in part, by a decrease in net loss adjusted for non-cash items in the period of \$1.6 million.

Net Cash Used in Investing Activities

During the six months ended June 30, 2015, net cash used in investing activities was primarily related to capital expenditures to support our growth and the purchase of marketable securities. Net cash used in investing activities for the six months ended June 30, 2015 and 2014 was \$19.5 million and \$2.2 million, respectively. Net cash used in investing activities for the six months ended June 30, 2015 included \$17.0 million of capital expenditures primarily for the third production line to expand the capacity of our East Providence manufacturing facility and \$2.5 million for the purchase of marketable securities. Net cash used in investing activities for the six months ended June 30, 2014 was primarily for machinery and equipment to improve the throughput and efficiency of our East Providence facility.

Net Cash (Used in) Provided by Financing Activities

Net cash used in financing activities for the six months ended June 30, 2015 totaled less than \$0.1 million for repayments of obligations under capital leases. Net cash provided by financing activities for the six months ended June 30, 2014 totaled \$57.3 million. Financing activities during the period included \$77.3 million of net proceeds from the initial public offering (which does not reflect the payment of \$2.5 million of unpaid public offering costs), offset in part by \$1.0 million of net repayments under the line of credit facility, \$18.8 million of repayments on the subordinated debt and other net payments of \$0.2 million.

Off Balance Sheet Arrangements

Since inception, we have not engaged in any off balance sheet activities as defined in Item 303(a)(4) of Regulation S-K.

Recent Accounting Pronouncements

Information regarding new accounting pronouncements is included in note 2 to our unaudited consolidated financial statements contained in Item 1 of this Quarterly Report on Form 10-Q.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with U.S. GAAP. The preparation of our financial statements and related disclosures requires us to make estimates, assumptions and judgments that affect the reported amount of assets, liabilities, revenue, costs and expenses and related disclosures. We believe that the estimates, assumptions and judgments involved in these accounting policies have the greatest potential impact on our financial statements; and therefore, we consider these to be our critical accounting policies. Accordingly, we evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions and conditions. See our Annual Report on Form 10-K for the year ended December 31, 2014, filed on March 13, 2015 with the Securities and Exchange Commission, and note 2 to our unaudited consolidated financial statements included elsewhere in this Quarterly Report on Form 10-Q for information about these critical accounting policies, as well as a description of our other significant accounting policies.

Certain Factors That May Affect Future Results of Operations

The Securities and Exchange Commission, or SEC, encourages companies to disclose forward-looking information so that investors can better understand a company's future prospects and make informed investment decisions. This Quarterly Report on Form 10-Q contains such "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. These statements involve known and unknown risks, uncertainties and other important factors which may cause our actual results, performance or achievements to be materially different from any future results, performances or achievements expressed or implied by the forward-looking statements. Forward-looking statements include, but are not limited to, statements about: our beliefs in the appropriateness of our assumptions, the accuracy of our estimates regarding expenses, loss contingencies, future revenues, future profits, capital requirements, and the need for additional financing; the performance of our aerogel blankets; the estimated effects of our third production line on our annual nameplate capacity; our estimates of annual production capacity; our beliefs and expectations on the actual production capacity and product yields; our beliefs about the usefulness of the square foot operating metric; our beliefs about the financial metrics that are indicative of our core performance; our beliefs about the usefulness of our presentation of Adjusted EBITDA; our expectations about the effect of manufacturing capacity on financial metrics such as Adjusted EBITDA; our beliefs about the outcome, effects or estimated liabilities of current or potential litigation; our expectations about hiring additional personnel; our plans to devote substantial resources to the development of new aerogel technology; our expectations about product mix; our beliefs and expectations on the average selling prices; our beliefs about the impact of sales price increases; our expectations about future material costs and manufacturing expenses as a percentage of revenue; our expectations of future gross profit and the effect of manufacturing expenses, manufacturing capacity and productivity on gross profit; our expectations about our resources and other investments in new technology and related research and development activities and associated expenses; our expectations about short and long term (a) research and development (b) general and administrative and (c) sales and marketing expenses; our expectations of continued revenue growth, increased gross profit, and improving cash flows; our expectations about incurring significant capital expenditures in the future; our expectations about the expansion of our workforce and resources and its effect on sales and marketing, general and administrative, and related expenses; our expectations about future product revenue and growth of demand for our products; our expectations about the effect of stock based compensation on various costs and expenses; our expectations about potential sources of future financing; our beliefs about the impact of accounting policies on our financial statements; our beliefs about the effect of interest rates, inflation and foreign currency fluctuations on our results of operations and financial condition; and our beliefs about the expansion of our international operations.

Words such as "may," "will," "anticipate," "estimate," "expects," "projects," "intends," "plans," "believes" and words and terms of similar substance used in connection with any discussion of future operating or financial performance, identify forward-looking statements. All forward-looking statements are management's present expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially and adversely from those described in the forward-looking statements. These risks include, but are not limited to, those set forth in Part II, Item 1A of this Quarterly Report on Form 10-Q and under the heading "Risk Factors" contained in Item 1A of our Annual Report on Form 10-K for the year ended December 31, 2014.

In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this Quarterly Report on Form 10-Q might not occur. Stockholders and other readers are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this Quarterly Report on Form 10-Q. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to Aspen Aerogels, Inc. or to any person acting on its behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

Table of Contents

Item 3. Quantitative and Qualitative Disclosures About Market Risk.

Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure results primarily from fluctuations in interest rates as well as from inflation. In the normal course of business, we are exposed to market risks, including changes in interest rates which affect our line of credit under our revolving credit facility as well as cash flows. We may also face additional exchange rate risk in the future as we expand our business internationally.

Interest Rate Risk

We are exposed to changes in interest rates in the normal course of our business. At June 30, 2015, we had unrestricted cash of \$29.6 million. These amounts were held for working capital purposes in our operating cash account at a financial institution in the North America. We believe that we do not have any material exposure to changes in the fair value of our cash as a result of changes in interest rates.

As of June 30, 2015, we have no debt outstanding other than capital lease obligations of approximately \$0.1 million with fixed interest rates. In September 2014, we amended our revolving credit agreement to extend the maturity date of the facility to August 31, 2016 and increase the maximum amount we are permitted to borrow, subject to continued covenant compliance and borrowing base requirements, from \$10 million to \$20 million. As of June 30, 2015, we had no outstanding balance drawn on the revolving credit facility and outstanding letters of credit of \$1.8 million. At our election, the interest rate applicable to borrowings under the amended line of credit may be based on the prime rate or the LIBOR. Prime rate-based rates vary from prime rate plus 0.75% per annum to prime rate plus 1.75% per annum, while LIBOR-based rates vary from LIBOR plus 3.75% per annum to LIBOR plus 4.25% per annum. Based on the available borrowing base, the effective amount available to us at June 30, 2015 was \$12.8 million due to the limitation of \$1.8 million of outstanding letters of credit against the line.

Inflation Risk

Although we expect that our operating results will be influenced by general economic conditions, we do not believe that inflation has had a material effect on our results of operations during the periods presented. However, our business may be affected by inflation in the future.

Foreign Currency Exchange Risk

We are subject to certain risks inherent to operating in a global economy. Principally all of our revenue, receivables, purchases and debts are denominated in U.S. dollars. Although our international operations involving foreign currencies are currently not significant compared to our operations denominated in U.S. dollars, we expect to expand our international operations in the long-term. An expansion of our international operations will increase our potential exposure to fluctuations in foreign currencies.

Item 4. Controls and Procedures.

(a) *Evaluation of Disclosure Controls and Procedures* . We maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed in the reports that we file or submit under the Securities and Exchange Act of 1934, as amended, or the Exchange Act, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

As of June 30, 2015, our management, with the participation of our principal executive officer and principal financial officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act). Our management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives, and management necessarily applies its judgment in evaluating the cost-benefit relationship of possible controls and procedures. Based on such evaluation, our principal executive officer and principal financial officer have concluded, that, as of June 30, 2015, our disclosure controls and procedures were effective to ensure that information required to be disclosed by us in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and is accumulated and communicated to our management, including our principal executive officer and principal financial officer, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

(b) *Changes in Internal Controls* . During the three months ended June 30, 2015, there were no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15(d)-15(f) promulgated under the Exchange Act, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II — OTHER INFORMATION

Item 1. Legal Proceedings.

We are not currently a party to any material legal proceedings.

Item 1A. Risk Factors.

There have been no material changes to the risk factors included in our Annual Report on Form 10-K for the fiscal year ended December 31, 2014.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

(a) *Unregistered Sales of Equity Securities.* Not applicable.

(b) *Use of Proceeds from Initial Public Offering of Common Stock.* We registered shares of our common stock in connection with our initial public offering pursuant to a registration statement on Form S-1 (File No. 333-195523), which was declared effective by the SEC on June 12, 2014, and a registration statement on Form S-1 (File No. 333-196719) filed pursuant to Rule 462(b) of the Securities Act of 1933, as amended, or the Securities Act.

We received aggregate net proceeds from the offering of approximately \$74.7 million, after deducting \$4.3 million of underwriting discounts and approximately \$3.5 million of offering expenses.

As of June 30, 2015, we have used \$19.8 million of the net proceeds of the offering to repay all amounts outstanding under our subordinated notes and our revolving credit facility and \$28.2 million of the net proceeds of the offering for capital expenditures. The remainder of the net proceeds is held in a deposit account with a major financial institution in North America. We have broad discretion in the use of the net proceeds from our initial public offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our stock. There has been no material change in our planned use of the balance of the net proceeds from the offering as described in our final prospectus dated June 12, 2014, filing with the Securities and Exchange Commission on June 16, 2014.

(c) *Purchases of Equity Securities By the Issuer and Affiliated Purchasers.* We did not repurchase any of our equity securities during the quarter ended June 30, 2015.

Table of Contents

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

(a) Exhibits

- 31.1 Certification of principal executive officer under Section 302(a) of the Sarbanes-Oxley Act of 2002.
- 31.2 Certification of principal financial officer under Section 302(a) of the Sarbanes-Oxley Act of 2002.
- 32 Certifications of the principal executive officer and the principal financial officer under Section 906 of the Sarbanes-Oxley Act of 2002.
- 101 The following materials from Aspen Aerogels, Inc.'s Quarterly Report on Form 10-Q for the quarter ended June 30, 2015, formatted in XBRL (eXtensible Business Reporting Language): (i) the Consolidated Balance Sheets (unaudited) as of June 30, 2015 and December 31, 2014, (ii) the Consolidated Statements of Operations (unaudited) for the three and six months ended June 30, 2015 and 2014, (iii) the Consolidated Statements of Cash Flows (unaudited) for the six months ended June 30, 2015 and 2014, and (iv) the Notes to Consolidated Financial Statements (unaudited).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

ASPEN AEROGELS, INC.

Date: August 7, 2015

By: /s/ Donald R. Young
Donald R. Young
President and Chief Executive Officer
(principal executive officer)

Date: August 7, 2015

By: /s/ John F. Fairbanks
John F. Fairbanks
Vice President, Chief Financial Officer and Treasurer
(principal accounting and financial officer)

CERTIFICATIONS UNDER SECTION 302

I, Donald R. Young, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aspen Aerogels, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - c) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 7, 2015

/s/ Donald R. Young

Donald R. Young
President and Chief Executive Officer
(principal executive officer)

CERTIFICATIONS UNDER SECTION 302

I, John F. Fairbanks, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q of Aspen Aerogels, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the registrant and have:
 - a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - c) disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: August 7, 2015

/s/ John F. Fairbanks

John F. Fairbanks

Vice President, Chief Financial Officer and Treasurer
(principal accounting and financial officer)

CERTIFICATIONS UNDER SECTION 906

Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (subsections (a) and (b) of section 1350, chapter 63 of title 18, United States Code), each of the undersigned officers of Aspen Aerogels, Inc., a Delaware corporation (the “Company”), does hereby certify, to such officer’s knowledge, that:

The Quarterly Report on Form 10-Q for the quarter ended June 30, 2015 (the “Form 10-Q”) of the Company fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and the information contained in the Form 10-Q fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: August 7, 2015

/s/ Donald R. Young

Donald R. Young
President and Chief Executive Officer
(principal executive officer)

Dated: August 7, 2015

/s/ John F. Fairbanks

John F. Fairbanks
Vice President, Chief Financial Officer and Treasurer
(principal accounting and financial officer)

A signed original of this written statement required by Section 906 has been provided to the Company and will be retained by the Company and furnished to the Securities and Exchange Commission or its staff upon request.