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

FORM 10-Q

(Mark One)

x **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

o **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 000-30941

AXCELIS TECHNOLOGIES, INC.
(Exact name of registrant as specified in its charter)

Delaware	**34-1818596**
(State or other jurisdiction of incorporation or organization)	(IRS Employer Identification No.)

108 Cherry Hill Drive
Beverly, Massachusetts 01915
(Address of principal executive offices, including zip code)

(978) 787-4000
(Registrant's telephone number, including area code)

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 x No o.

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 during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes x No o.

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 o	Accelerated filer x
Non-accelerated filer o (Do not check if a smaller reporting company)	Smaller reporting company o

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

As of July 31, 2015 there were 114,279,081 shares of the registrant's common stock outstanding.

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PART 1—FINANCIAL INFORMATION

Item 1. Financial Statements.

Axcelis Technologies, Inc.
Consolidated Statements of Operations
(In thousands, except per share amounts)
(Unaudited)

	Three months ended June 30,		Six months ended June 30,	
	2015	2014	2015	2014
Revenue:				
Product	$ 72,748	$ 34,795	$ 140,278	$ 89,810
Services	5,689	6,355	11,442	12,180
Total revenue	78,437	41,150	151,720	101,990
Cost of revenue:				
Product	46,560	21,021	91,745	54,823
Services	4,703	5,645	9,421	10,943
Total cost of revenue	51,263	26,666	101,166	65,766
Gross profit	27,174	14,484	50,554	36,224
Operating expenses:				
Research and development	7,899	8,845	16,098	18,102
Sales and marketing	5,858	5,037	11,486	10,513
General and administrative	6,231	6,494	12,332	12,975
Restructuring charges	8	160	18	360
Total operating expenses	19,996	20,536	39,934	41,950
Income (loss) from operations	7,178	(6,052)	10,620	(5,726)
Other (expense) income:				
Interest income	6	2	9	4
Interest expense	(1,310)	(257)	(2,353)	(508)
Other, net	49	(362)	(384)	(70)
Total other expense	(1,255)	(617)	(2,728)	(574)
Income (loss) before income taxes	5,923	(6,669)	7,892	(6,300)
Income taxes	40	231	141	426
Net income (loss)	$ 5,883	$ (6,900)	$ 7,751	$ (6,726)
Net income (loss) per share				
Basic	$ 0.05	$ (0.06)	$ 0.07	$ (0.06)
Diluted	$ 0.05	$ (0.06)	$ 0.06	$ (0.06)
Shares used in computing net income (loss) per share:				
Basic weighted average common shares	113,784	111,212	113,470	110,932

Diluted weighted average common shares	120,612	111,212	119,900	110,932

See accompanying Notes to these Consolidated Financial Statements

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Axcelis Technologies, Inc.
Consolidated Statements of Comprehensive Income (Loss)
(In thousands)
(Unaudited)

	Three months ended June 30, 2015	Three months ended June 30, 2014	Six months ended June 30, 2015	Six months ended June 30, 2014
Net income (loss)	$ 5,883	$ (6,900)	$ 7,751	$ (6,726)
Other comprehensive income (loss):				
Foreign currency translation adjustments	329	759	(681)	82
Amortization of actuarial gains from pension plan	19	6	38	12
Total other comprehensive income (loss)	348	765	(643)	94
Comprehensive income (loss)	$ 6,231	$ (6,135)	$ 7,108	$ (6,632)

See accompanying Notes to these Consolidated Financial Statements

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Axcelis Technologies, Inc.
Consolidated Balance Sheets
(In thousands, except per share amounts)
(Unaudited)

	June 30, 2015	December 31, 2014
ASSETS		
Current assets:		
Cash and cash equivalents	$ 78,085	$ 30,753
Restricted cash	—	825
Accounts receivable, net	42,002	42,794
Inventories, net	122,001	104,063
Prepaid expenses and other current assets	8,650	6,700
Total current assets	250,738	185,135
Property, plant and equipment, net	29,951	30,464
Restricted cash	65	—
Other assets	14,559	12,055
Total assets	$ 295,313	$ 227,654
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	$ 38,849	$ 21,605
Accrued compensation	5,262	4,232
Warranty	2,886	1,352
Income taxes	297	196
Deferred revenue	8,429	6,782
Current portion of long-term debt	—	14,530
Other current liabilities	4,620	3,401
Total current liabilities	60,343	52,098
Sale leaseback obligation	47,586	—
Long-term deferred revenue	455	449
Other long-term liabilities	6,539	6,755
Total liabilities	114,923	59,302
Commitments and contingencies (Note 13)		
Stockholders' equity:		
Preferred stock, $0.001 par value, 30,000 shares authorized; none issued or outstanding	—	—
Common stock, $0.001 par value, 300,000 shares authorized; 114,322 shares issued and 114,202 shares outstanding at June 30, 2015; 112,849 shares issued and 112,729 shares outstanding at December 31, 2014	114	113
Additional paid-in capital	523,997	519,068

Treasury stock, at cost, 120 shares at June 30, 2015 and December 31, 2014	(1,218)	(1,218)
Accumulated deficit	(343,136)	(350,887)
Accumulated other comprehensive income	633	1,276
Total stockholders' equity	180,390	168,352
Total liabilities and stockholders' equity	$ 295,313	$ 227,654

See accompanying Notes to these Consolidated Financial Statements

Axcelis Technologies, Inc.
Consolidated Statements of Cash Flows
(In thousands)
(Unaudited)

	Six months ended June 30, 2015	Six months ended June 30, 2014
Cash flows from operating activities		
Net income (loss)	$ 7,751	$ (6,726)
Adjustments to reconcile net loss to net cash used for operating activities:		
Depreciation and amortization	2,298	2,299
Deferred taxes	97	334
Stock-based compensation expense	3,055	2,182
Provision for excess and obsolete inventory	537	244
Changes in operating assets & liabilities:		
Accounts receivable	516	4,493
Inventories	(19,381)	(10,917)
Prepaid expenses and other current assets	(2,205)	(1,334)
Accounts payable and other current liabilities	21,213	(3,860)
Deferred revenue	1,671	(377)
Income taxes	104	13
Other assets and liabilities	(3,888)	1,794
Net cash provided by (used for) operating activities	11,768	(11,855)
Cash flows from investing activities		
Expenditures for property, plant and equipment	(672)	(567)
Net cash used for investing activities	(672)	(567)
Cash flows from financing activities		
Decrease in restricted cash	760	—
Financing fees and other expenses	(847)	—
Principal payments on term loan	(14,530)	—
Principal payments on sale leaseback obligation	(392)	—
Proceeds from sale leaseback obligation	48,940	—
Proceeds from exercise of stock options	1,665	1,583
Proceeds from Employee Stock Purchase Plan	213	227
Net cash provided by financing activities	35,809	1,810
Effect of exchange rate changes on cash and cash equivalents	427	(90)
Net increase/(decrease) in cash and cash equivalents	47,332	(10,702)
Cash and cash equivalents at beginning of period	30,753	46,290
Cash and cash equivalents at end of period	$ 78,085	$ 35,588

See accompanying Notes to these Consolidated Financial Statements

Axcelis Technologies, Inc.
Notes to Consolidated Financial Statements (Unaudited)

Note 1. Nature of Business

Axcelis Technologies, Inc. ("Axcelis" or the "Company") was incorporated in Delaware in 1995, and is a worldwide producer of ion implantation and other processing equipment used in the fabrication of semiconductor chips in the United States, Europe and Asia. In addition, the Company provides extensive aftermarket service and support, including spare parts, equipment upgrades and maintenance services to the semiconductor industry.

The accompanying unaudited consolidated financial statements have been prepared in accordance with U.S. generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments which are of a normal recurring nature and considered necessary for a fair presentation of these financial statements have been included.

Operating results for the interim periods presented are not necessarily indicative of the results that may be expected for other interim periods or for the year as a whole.

The balance sheet at December 31, 2014 has been derived from the audited financial statements at that date but does not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. For further information, refer to the consolidated financial statements and footnotes thereto included in Axcelis Technologies, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2014.

Note 2. Stock-Based Compensation

The Company maintains the Axcelis Technologies, Inc. 2012 Equity Incentive Plan (the "2012 Equity Plan"), which became effective on May 2, 2012, and permits the issuance of options, restricted stock, restricted stock units and performance awards to selected employees, directors and consultants of the Company. The Company's 2000 Stock Plan (the "2000 Stock Plan"), expired on May 1, 2012 and no new grants may be made under that plan after that date. However, unexpired awards granted under the 2000 Stock Plan remain outstanding and subject to the terms of the 2000 Stock Plan. The Company also maintains the Axcelis Technologies, Inc. Employee Stock Purchase Plan (the "ESPP"), an Internal Revenue Code Section 423 plan.

The 2012 Equity Plan and the ESPP are more fully described in Note 13 to the consolidated financial statements in the Company's 2014 Annual Report on Form 10-K.

The Company recognized stock-based compensation expense of $1.9 million for the three-month period ended June 30, 2015, which included $1.1 million of expense due to accelerated vesting. There are no remaining stock option grants containing an acceleration clause. The Company recognized $1.0 million for the three-month period ended June 30, 2014. The Company recognized stock-based compensation expense of $3.1 million and $2.2 million for the six-month periods ended June 30, 2015 and 2014, respectively. These amounts include compensation expense related to restricted stock units, non-qualified stock options and stock to be issued to participants under the ESPP.

Note 3. Sale of Corporate Headquarters and Related Leaseback

On January 30, 2015, the Company sold its corporate headquarters facility to Beverly Property Owner LLC ("Beverly Properties"), an affiliate of Middleton Partners, based in Northbrook, Illinois, for the purchase price of $48.9 million. As part of this sale, the Company also entered into a 22-year lease agreement with Beverly Properties, with the right to extend the term of the lease for five successive periods of five years each. The Company will pay rent of $4.7 million for the first year of the lease, with increased annual rent payments thereafter that will increase to $7.3 million in year twenty-two. At the time of this sale, the Company discharged the outstanding term loan of $14.4 million, the related accrued interest and paid a pre-payment penalty to Northern Bank and Trust Company for a total payment of $14.8 million. The Company accounted for the sale leaseback transaction as a financing arrangement for financial reporting purposes due to continuing involvement in association with the $5.9 million collateralized letter of credit requirement. See Note 10 for further discussion. As such, at the time of sale, the Company recorded a financing obligation in the amount of $48.9 million, less a pre-paid rent amount of $0.4 million, for a net liability of $48.5 million. Upon the adoption of Accounting Standards Update 2015-03, the Company reduced the carrying value of the financing obligation for debt issuance costs related to this transaction by $0.9 million, for a net liability of $47.6 million. See Note 14 for discussion regarding the adoption of this update. The Company classified the liability as long-term due to initial rent payments relating only to interest with future

principal payments occurring outside of one year. The Company retained the historical costs of the property and the related accumulated depreciation on its financial books within property, plant and equipment and will continue to depreciate the property for financial reporting purposes over the remaining useful life as originally determined. The associated lease payments, less the portion considered to decrease the financing liability, will be recorded as interest expense using the effective interest method. The implicit interest rate on the associated cash flows during the initial 22 year lease term is 10.65%. See Note 13 for the schedule of contractual lease payments relating to the lease obligation.

The Company does not anticipate any federal or state tax liability associated with the taxable gain on the sale of the building due to its current level of net operating loss carry forwards and has not provided for any federal or state tax expense.

Note 4. Computation of Net Earnings (Loss) per Share

Basic earnings (loss) per share is computed by dividing income (loss) available to common stockholders (the numerator) by the weighted-average number of common shares outstanding (the denominator) for the period. The computation of diluted earnings (loss) per share is similar to basic earnings per share, except that the denominator is increased to include the number of additional common shares that would have been outstanding if the potentially dilutive common shares issuable on stock options, restricted stock units and employee stock purchase plan accounts had been issued, calculated using the treasury stock method.

The components of net earnings (loss) per share are as follows:

	Three months ended June 30,		Six months ended June 30,	
	2015	2014	2015	2014
	(in thousands, except per share data)			
Net income (loss) available to common stockholders	$ 5,883	$ (6,900)	$ 7,751	$ (6,726)
Weighted average common shares outstanding used in computing basic earnings (loss) per share	113,784	111,212	113,470	110,932
Incremental options and RSUs	6,828	—	6,430	—
Weighted average common shares outstanding used in computing diluted net earnings (loss) per share	120,612	111,212	119,900	110,932
Net earnings (loss) per share				
Basic	$ 0.05	$ (0.06)	$ 0.07	$ (0.06)

Diluted	$ 0.05	$ (0.06)	$ 0.06	$ (0.06)

The Company incurred net losses for the three and six-month periods ended June 30, 2014, and has excluded the incremental shares attributable to outstanding stock options, and restricted stock units and employee stock purchase plan accounts from the calculation of net loss per share because the effect would have been anti-dilutive. The following table sets forth the number of incremental shares excluded from the calculation above:

	Three months ended June 30,		Six months ended June 30,	
	2015	2014	2015	2014
	(in thousands)			
Incremental shares excluded from the calculation of net loss per share	—	4,047	—	4,625

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Note 5. Accumulated Other Comprehensive Income (Loss)

The following table presents the changes in accumulated other comprehensive income (loss), net of tax, by component for the six months ended June 30, 2015:

	Foreign currency	Defined benefit pension plan	Total
	(in thousands)		
Balance at December 31, 2014	$ 1,920	$ (644)	$ 1,276
Other comprehensive income (loss)	(681)	38	(643)
Balance at June 30, 2015	$ 1,239	$ (606)	$ 633

Note 6. Inventories, net

The components of inventories are as follows:

	June 30, 2015	December 31, 2014
	(in thousands)	
Raw materials	$ 74,245	$ 65,723
Work in process	33,277	22,358
Finished goods (completed systems)	14,479	15,982
	$ 122,001	$ 104,063

When recorded, inventory reserves are intended to reduce the carrying value of inventories to their net realizable value. The Company establishes inventory reserves when conditions exist that indicate inventory may be in excess of anticipated demand or is obsolete based upon assumptions about future demand for the Company's products or market conditions. The Company regularly evaluates the ability to realize the value of inventories based on a combination of factors including the following: forecasted sales or usage, estimated product end of life dates, estimated current and future market value and new product introductions. Purchasing and usage alternatives are also explored to mitigate inventory exposure. As of June 30, 2015 and December 31, 2014, inventories are stated net of inventory reserves of $17.6 million and $23.6 million, respectively.

Note 7. Restructuring Charges

In 2014, the Company had severance and other costs related to reductions in force. Changes in the Company's restructuring liability, which consist primarily of severance and related costs, included in amounts reported as other current liabilities, are as follows:

	(in thousands)
Balance at December 31, 2014	$ 481
Severance and related costs	18
Cash payments	(479)
Balance at June 30, 2015	$ 20

Note 8. Product Warranty

The Company generally offers a one year warranty for all of its systems, the terms and conditions of which vary depending upon the product sold. For all systems sold, the Company accrues a liability for the estimated cost of standard warranty at the time of system shipment and defers the portion of systems revenue attributable to the fair value of non-standard warranty. Costs for non-standard warranty are expensed as incurred. Factors that affect the Company's warranty liability include the number of installed units, historical and anticipated product failure rates, material usage and service labor costs. The Company periodically assesses the adequacy of its recorded liability and adjusts the amount as necessary.

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The changes in the Company's standard product warranty liability are as follows:

	Six months ended June 30,	
	2015	2014
	(in thousands)	
Balance at January 1 (beginning of year)	$ 1,526	$ 1,428

Warranties issued during the period	2,230	832
Settlements made during the period	(1,020)	(978)
Changes in estimate of liability for pre-existing warranties during the period	344	79
Balance at June 30 (end of period)	$ 3,080	$ 1,361
Amount classified as current	$ 2,886	$ 1,326
Amount classified as long-term	194	35
Total warranty liability	$ 3,080	$ 1,361

Note 9. Fair Value Measurements

Certain of the assets and liabilities on the Company’s balance sheets are reported at their “Fair Value”. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date.

(a) Fair Value Hierarchy

The accounting guidance for fair value measurement requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The standard establishes a fair value hierarchy based on the level of independent, objective evidence surrounding the inputs used to measure fair value. A financial instrument’s categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the fair value measurement. The fair value hierarchy is as follows:

Level 1 - applies to assets or liabilities for which there are quoted prices in active markets for identical assets or liabilities.

Level 2 - applies to assets or liabilities for which there are inputs other than quoted prices that are observable for the asset or liability, such as quoted prices for similar assets or liabilities in active markets; quoted prices for identical assets or liabilities in markets with insufficient volume or infrequent transactions (less active markets); or model-derived valuations in which significant inputs are observable or can be derived principally from, or corroborated by, observable market data.

Level 3 - applies to assets or liabilities for which there are unobservable inputs to the valuation methodology that are significant to the measurement of the fair value of the assets or liabilities.

(b) Fair Value Measurements

The Company’s money market funds are included in cash and cash equivalents in the consolidated balance sheets and are considered a level 1 investment as they are valued at quoted market prices in active markets. The Company’s sale leaseback obligation relating to the sale of our corporate headquarters is carried at amortized cost, which approximates fair value based on an implied borrowing rate of 10.65%. The underlying cash flow associated with our lease payments is being applied to both an interest and principal component using the effective interest method over the associated lease term. The liability is categorized as level 3 within the fair value hierarchy. The Company’s term loan was carried at amortized cost, which approximated fair value, based on current market pricing of similar debt instruments and was categorized as level 2 within the fair value hierarchy.

The following table sets forth the Company’s assets and liabilities by level within the fair value hierarchy:

	June 30, 2015 Fair Value Measurements			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets				
Cash equivalents:				
Money market funds	$ 62,959	$ —	$ —	$ 62,959
Liabilities				
Sale leaseback obligation	$ —	$ —	$ 47,586	$ 47,586

	December 31, 2014 Fair Value Measurements			
	Level 1	Level 2	Level 3	Total
	(in thousands)			
Assets				
Cash equivalents:				
Money market funds	$ 7,004	$ —	$ —	$ 7,004
Liabilities				
Term loan	$ —	$ 14,530	$ —	$ 14,530

(c) Other Financial Instruments

The carrying amounts reflected in the consolidated balance sheets for cash and cash equivalents (which are comprised primarily of deposit and investment accounts), accounts receivable, prepaid expenses and other current and non-current assets, accounts payable and accrued expenses approximate fair value due to their short-term maturities.

Note 10. Financing Arrangements

Term Loan

On February 2, 2015, in connection with the sale of our headquarters facility, the Company repaid the outstanding balance on a term loan from Northern Bank and Trust Company of $14.4 million and related accrued interest of $0.1 million as well as a 2.0% prepayment penalty of $0.3 million for a total payment of $14.8 million. See Note 3 above for further discussion.

Sale Leaseback Obligation

On January 30, 2015, the Company sold its corporate headquarters facility to Beverly Property Owner LLC, an affiliate of Middleton Partners, based in Northbrook, Illinois, for the purchase price of $48.9 million. As part of the sale, the Company also entered into a 22-year lease agreement with Beverly Properties. The sale leaseback is accounted for as a financing arrangement for financial reporting and, as such, the Company has recorded a financing obligation of $47.6 million as of June 30, 2015. The associated lease payments will include both an interest component and payment of principal, with the underlying liability being extinguished at the end of the original lease term. The Company posted a collateralized security deposit of $5.9 million in the form of an irrevocable letter of credit at the time of the closing. See Note 3 above for further discussion.

Credit Facility

The Company has a revolving credit facility with Silicon Valley Bank dated October 31, 2013. Under this revolving credit facility, the Company has the ability to borrow up to $10.0 million on a revolving basis during its two year term. The Company's ability to borrow under this line of credit is limited to 80% of the then current amount of qualified accounts receivable. As of June 30, 2015, the Company had not drawn down on the line of credit, although a portion of the availability is being used to support outstanding letters of credit in the amount of $6.9 million, which includes the $5.9 million associated to the security deposit for the sale leaseback transaction. At June 30, 2015, the Company's available borrowing capacity under the revolving credit facility was $3.1 million. The Company was in compliance with all covenants associated with the credit facility during the second quarter of 2015.

Note 11. Income Taxes

Income tax expense relates principally to operating results of foreign subsidiaries in Europe and Asia, where the Company earns taxable income and does not have offsetting net operating loss carryforwards. The Company has significant net operating loss carryforwards available to offset income taxes in the U.S. and certain foreign tax jurisdictions and, as a result, has not provided for significant income taxes in those jurisdictions.

As of December 31, 2014, the Company had deferred tax assets related to the U.S. of approximately $140.0 million. The Company maintains a 100% valuation allowance to reduce the carrying value of these deferred tax assets to zero because the Company is in a three year cumulative loss position in the United States. The Company will continue to maintain a full valuation allowance for these tax assets until sustainable future levels of profitability are evident. See Note 3 above relating to the potential effect associated with the taxable gain on the sale of the Company's corporate headquarters.

Note 12. Concentration of Risk

For the three months ended June 30, 2015, a customer accounted for 29.9%, and a second customer accounted for 10.0%, of consolidated revenue. For the six months ended June 30, 2015, one customer accounted for 33.1% of consolidated revenue.

For the three months ended June 30, 2014, a customer accounted for 15.9%, and a second customer accounted for 11.1%, of consolidated revenue. For the six months ended June 30, 2014, a customer accounted for 24.5%, and a second customer accounted for 12.5%, of consolidated revenue.

At June 30, 2015, a customer accounted for 18.1%, a second customer accounted for 17.0%, a third customer accounted for 14.3%, and a fourth customer accounted for 10.5%, of consolidated accounts receivable. At December 31, 2014, a customer accounted for 21.7%, and a second customer accounted for 20.4%, of consolidated accounts receivable.

Note 13. Contingencies

(a) Litigation

The Company is not presently a party to any litigation that it believes might have a material adverse effect on its business operations. The Company is, from time to time, a party to litigation that arises in the normal course of its business operations.

(b) Indemnifications

The Company's system sales agreements typically include provisions under which the Company agrees to take certain actions, provide certain remedies and defend its customers against third-party claims of intellectual property infringement under specified conditions and to indemnify customers against any damage and costs awarded in connection with such claims. The Company has not incurred any material costs as a result of such indemnifications and has not accrued any liabilities related to such obligations in the accompanying consolidated financial statements.

(c) Lease Commitments

In addition to the lease commitments as described within Note 16 to the consolidated financial statements in the Company's Annual Report on Form 10-K for our year ending December 31, 2014, in January 2015, the Company entered into a 22-year lease agreement relating to our corporate headquarters in Beverly, Massachusetts. The following table relates to the cash payment schedule associated with our lease obligation as of June 30, 2015:

	Lease Obligation (in thousands)
2015	$ 2,350
2016	4,815
2017	5,315
2018	5,470

2019		5,594
Thereafter		109,567
Total lease payments	$	133,111
Less interest portion		(85,525)
Sale leaseback obligation	$	47,586

Note 14. Recent Accounting Guidance

Accounting Standards or Updates Recently Adopted

In April 2015, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") No. 2015-03, *Interest — Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*. The amendments in this Update require that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with debt discounts. For public business entities, the amendments in this Update are effective for the financial statements issued for fiscal years beginning after December 15, 2015, and the interim periods within those fiscal years. Early adoption of the amendments in this Update is permitted for financial statements that have not been previously issued and shall be applied on a retrospective basis, wherein the balance sheet of each individual period presented should be adjusted to reflect the period-specific effects of applying the new guidance. The Company adopted ASU No. 2015-03, effective on January 1, 2015. Our balance sheet at December 31, 2014 was not retrospectively adjusted, due to the immateriality of the effect of the adoption of this ASU. The Company's balance sheet presentation as of June 30, 2015 netted all capitalized costs associated with our lease obligation. See Note 3 above regarding the amounts recognized relating to the lease obligation.

Accounting Standards or Updates Not Yet Effective

In May 2014, the FASB issued ASU No. 2014-09, *"Revenue from Contracts with Customers,"* which provides guidance for revenue recognition. The standard's core principle is that a company will recognize revenue when it transfers promised goods or services to customers in an amount that reflects the consideration to which the company expects to be entitled in exchange for those goods or services. On July 9, 2015, the FASB voted to defer for one year the effective date, which is now for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period with early adoption permitted as of January 1, 2017. We are currently assessing the potential impact the adoption of this standard will have on our financial statements.

In July 2015, the FASB issued ASU No. 205-11, *"Simplifying the Measurement of Inventory,"* which changes the inventory measurement principles for entities using the first-in, first-out (FIFO) or average cost methods. For entities utilizing one of these methods, the inventory measurement principle will change from lower of cost or market to the lower of cost and net realizable value. Net realizable value is the estimated selling price in the ordinary course of business, less the reasonably predictable costs of completion, disposal and transportation. The amendments are effective for annual and interim periods beginning after December 15, 2016. We are currently assessing the potential impact the adoption of this standard will have on our financial statements.

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

Overview

Axcelis is a worldwide producer of ion implantation and other processing equipment used in the fabrication of semiconductor chips in the United States, Europe and Asia. In addition, the Company provides extensive aftermarket service and support, including spare parts, equipment upgrades and maintenance services to the semiconductor industry worldwide. Consolidation and partnering within the semiconductor manufacturing industry has resulted in a small number of customers representing a substantial portion of our business. Our net revenue from our ten largest customers accounted for 75.4% of total revenue for the six months ended June 30, 2015.

Our product development and manufacturing activities occur primarily in the United States. Axcelis' equipment and service products are highly technical and are sold primarily through a direct sales force in the United States, Europe and Asia.

Demand for semiconductor manufacturing equipment and services has historically been subject to cyclical industry conditions reflecting our customers' responses to changes in the nature and timing of technological advances in fabrication processes, supply and demand for chips, and global economic and market conditions.

Separately from overall market demand, Axcelis' results are also impacted by our customers' decisions to purchase our products rather than our competitors' systems. Our recent financial results reflect increasing sales of our innovative Purion ion implantation systems, and our continued investment in research and development programs related to our Purion ion implantation products. Throughout 2015 we expect to continue to grow Purion system sales and maintain tight control of our cost structure.

In light of these conditions, Axcelis' results can vary significantly year-over-year, as well as quarter-over-quarter. A discussion of factors that could affect Axcelis' operations is set forth under "Risk Factors" in Part II, Item 1A to our annual report on Form 10-K for the year ended December 31, 2014, which discussion is incorporated herein by reference.

Critical Accounting Estimates

Management's discussion and analysis of our financial condition and results of operations included herein and in our Annual Report on Form 10-K for the year ended December 31, 2014 are based upon Axcelis' consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue and expenses and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates and assumptions. Management's estimates are based on historical experience and on various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Management has not identified any need to make any material change in, and has not changed, any of our critical accounting estimates and judgments as described in Management's Discussion and Analysis of Financial Conditions and Results of Operations included in our Annual Report on Form 10-K for the year ended December 31, 2014.

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Results of Operations

The following table sets forth our results of operations as a percentage of total revenue:

	Three months ended June 30,		Six months ended June 30,	
	2015	2014	2015	2014
Revenue:				
Product	92.7%	84.6%	92.5%	88.1%
Services	7.3	15.4	7.5	11.9
Total revenue	100.0	100.0	100.0	100.0
Cost of revenue:				
Product	59.4	51.1	60.5	53.8
Services	6.0	13.7	6.2	10.7
Total cost of revenue	65.4	64.8	66.7	64.5
Gross profit	34.6	35.2	33.3	35.5
Operating expenses:				
Research and development	10.1	21.5	10.6	17.7
Sales and marketing	7.5	12.2	7.6	10.3
General and administrative	7.9	15.8	8.1	12.7
Restructuring charges	0.0	0.4	0.0	0.4
Total operating expenses	25.5	49.9	26.3	41.1
Income (loss) from operations	9.1	(14.7)	7.0	(5.6)
Other (expense) income:				
Interest income	0.0	0.0	0.0	0.0
Interest expense	(1.7)	(0.6)	(1.6)	(0.5)
Other, net	0.1	(0.9)	(0.3)	(0.1)
Total other expense	(1.6)	(1.5)	(1.9)	(0.6)
Income (loss) before income taxes	7.5	(16.2)	5.1	(6.2)
Income taxes	0.1	0.6	0.1	0.4
Net income (loss)	7.4%	(16.8)%	5.0%	(6.6)%

Revenue

The following table sets forth our revenue.

	Three months ended June 30,		Period-to-Period Change		Six months ended June 30,		Period-to-Period Change	
	2015	2014	$	%	2015	2014	$	%
				(dollars in thousands)				
Revenue:								
Product	$ 72,748	$ 34,795	$ 37,953	109.1%	$ 140,278	$ 89,810	$ 50,468	56.2%
Percentage of revenue	*92.7%*	*84.6%*			*92.5%*	*88.1%*		
Services	5,689	6,355	(666)	(10.5)%	11,442	12,180	(738)	(6.1)%
Percentage of revenue	*7.3%*	*15.4%*			*7.5%*	*11.9%*		
Total revenue	$ 78,437	$ 41,150	$ 37,287	90.6%	$ 151,720	$ 101,990	$ 49,730	48.8%

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Three Months Ended June 30, 2015 Compared with Three Months Ended June 30, 2014

Product

Product revenue, which includes system sales, sales of spare parts, product upgrades and used systems was $72.7 million, or 92.7%, of revenue during the three months ended June 30, 2015, compared with $34.8 million, or 84.6% of revenue for the three months ended June 30, 2014. The $38.0 million increase in product revenue for the three month period ending June 30, 2015 was primarily driven by an increase in the number of Purion systems sold.

A portion of our revenue from system sales is deferred until installation and other services related to future deliverables are performed. The total amount of deferred revenue at June 30, 2015 and December 31, 2014 was $8.9 million and $7.2 million, respectively. The increase in deferred revenue is primarily due to additional volume of system sales and to a lesser extent, the timing of the acceptance of system sales.

Services

Services revenue, which includes the labor component of maintenance and service contracts and fees for service hours provided by on-site service personnel, was $5.7 million, or 7.3% of revenue for the three months ended June 30, 2015, compared with $6.4 million, or 15.4% of revenue for the three months ended June 30, 2014. Although services revenue should increase with the expansion of the installed base of systems, it can fluctuate from period to period based on capacity utilization at customers' manufacturing facilities, which affects the need for equipment service.

Six Months Ended June 30, 2015 Compared with Six Months Ended June 30, 2014

Product

Product revenue was $140.3 million, or 92.5% of revenue for the six months ended June 30, 2015, compared with $89.8 million, or 88.1% of revenue for the six months ended June 30, 2014. The increase in product revenue is attributable to the number of Purion systems sold.

Services

Services revenue was $11.4 million, or 7.5% of revenue for the six months ended June 30, 2015, compared with $12.2 million, or 11.9% of revenue for the six months ended June 30, 2014. Although services revenue should increase with the expansion of the installed base of systems, it can fluctuate from period to period based on capacity utilization at customers' manufacturing facilities, which affects the need for equipment service.

Revenue Categories used by Management

As an alternative to the line item revenue categories discussed above, management also uses revenue categorizations which look at revenue by systems and aftermarket, as described below.

Three Months Ended June 30, 2015 Compared with Three Months Ended June 30, 2014

Systems

Included in total revenue of $78.4 million during the three months ended June 30, 2015 is revenue from sales of systems of $41.6 million, or 53.0% of total revenue, compared with $10.9 million, or 26.4%, of total revenue for the three months ended June 30, 2014. The increase was due to higher sales of our Purion systems, reflecting market share gains and an improved semiconductor equipment market.

Aftermarket

We refer to the business of selling spare parts, product upgrades and used systems, combined with the sale of maintenance labor and service contracts and service hours, as the "aftermarket" business. Included in total revenue of $78.4 million during the three months ended June 30, 2015 is revenue from our aftermarket business of $36.9 million, compared to $30.3 million for the three months ended June 30, 2014. Aftermarket revenue fluctuates from period to period

based on capacity utilization at customers' manufacturing facilities which affects the sale of spare parts and demand for equipment service. Aftermarket revenue can also fluctuate from period to period based on the demand for system upgrades or used tools.

Six Months Ended June 30, 2015 Compared with Six Months Ended June 30, 2014

Systems

Included in total revenue of $151.7 million during the six months ended June 30, 2015 is revenue from sales of systems of $84.1 million, or 55.4% of total revenue, compared with $43.3 million, or 42.5% of total revenue for the six months ended June 30, 2014. The increase was due to higher sales of our Purion systems, reflecting market share gains and an improved semiconductor equipment market during the first six months of 2015.

Aftermarket

Included in total revenue of $151.7 million during the six months ended June 30, 2015 is revenue from our aftermarket business of $67.7 million, or 44.6%, compared to $58.7 million, or 57.5% for the six months ended June 30, 2014.

Gross Profit / Gross Margin

The following table sets forth our gross profit / gross margin.

	Three months ended June 30, 2015	Three months ended June 30, 2014	Period-to-Period Change $	Period-to-Period Change %	Six months ended June 30, 2015	Six months ended June 30, 2014	Period-to-Period Change $	Period-to-Period Change %
			(dollars in thousands)					
Gross Profit:								
Product	$ 26,188	$ 13,774	$ 12,414	90.1%	$ 48,533	$ 34,987	$ 13,546	38.7%
Product gross margin	*36.0%*	*39.6%*			*34.6%*	*39.0%*		
Services	986	710	276	38.9%	2,021	1,237	784	63.4%

	Three months ended June 30, 2015	Three months ended June 30, 2014	Period-to-Period Change $	Period-to-Period Change %	Six months ended June 30, 2015	Six months ended June 30, 2014	Period-to-Period Change $	Period-to-Period Change %
Services gross margin	*17.3%*	*11.2%*			*17.7%*	*10.2%*		
Total gross profit	$ 27,174	$ 14,484	$ 12,690	87.6%	$ 50,554	$ 36,224	$ 14,330	39.6%
Gross margin	*34.6%*	*35.2%*			*33.3%*	*35.5%*		

Three Months Ended June 30, 2015 Compared with Three Months Ended June 30, 2014

Product

Gross margin from product revenue was 36.0% for the three months ended June 30, 2015, compared to 39.6% for the three months ended June 30, 2014. The decrease in gross margin of 3.6 percentage points resulted from the net effect of higher systems sales volume of new Purion systems at lower initial margins.

Services

Gross margin from services revenue was 17.3% for the three months ended June 30, 2015, compared to 11.2% for the three months ended June 30, 2014. The increase in gross margin is attributable to changes in the mix of service contracts and lower overall service costs.

Six Months Ended June 30, 2015 Compared with Six Months Ended June 30, 2014

Product

Gross margin from product revenue was 34.6% for the six months ended June 30, 2015, compared to 39.0% for the six months ended June 30, 2014. The decrease in gross margin of 4.4 percentage points resulted from the net effect of higher system sales volume of new Purion systems at lower initial margins and a decreased mix of parts and upgrade revenue.

Services

Gross margin from services revenue was 17.7% for the six months ended June 30, 2015, compared to 10.2% for the six months ended June 30, 2014. The increase in gross margin is attributable to changes in the mix of service contracts and lower overall service costs.

Operating Expenses

The following table sets forth our operating expenses:

	Three months ended June 30,		Period-to-Period Change		Six months ended June 30,		Period-to-Period Change	
	2015	2014	$	%	2015	2014	$	%
	(dollars in thousands)							
Research and development	$ 7,899	$ 8,845	$ (946)	(10.7)%	$ 16,098	$ 18,102	$ (2,004)	(11.1)%
Percentage of revenue	*10.1%*	*21.5%*			*10.6%*	*17.7%*		
Sales and marketing	5,858	5,037	821	16.3%	11,486	10,513	973	9.3%
Percentage of revenue	*7.5%*	*12.2%*			*7.6%*	*10.3%*		
General and administrative	6,231	6,494	(263)	(4.0)%	12,332	12,975	(643)	(5.0)%
Percentage of revenue	*7.9%*	*15.8%*			*8.1%*	*12.7%*		
Restructuring charges	8	160	(152)	(95.0)%	18	360	(342)	(95.0)%
Percentage of revenue	*0.0%*	*0.4%*			*0.0%*	*0.4%*		
Total operating expenses	$ 19,996	$ 20,536	$ (540)	(2.6)%	$ 39,934	$ 41,950	$ (2,016)	(4.8)%
Percentage of revenue	*25.5%*	*49.9%*			*26.3%*	*41.1%*		

Our operating expenses consist primarily of personnel costs, including salaries, commissions, expected incentive plan payouts, share-based compensation and related benefits and taxes; project material costs related to the design and development of new products and enhancement of existing products; and professional fees, travel and depreciation expenses.

Personnel costs are our largest expense, representing $9.2 million and $17.8 million, or 46.0% and 44.5%, of our total operating expenses for the three and six-month periods ended June 30, 2015, respectively. For the three and six month periods ended June 30, 2014, personnel costs were $11.8 million and $24.4 million, respectively, or 58.0% and 58.7%, respectively, of our total operating expenses. The reduction in personal costs are primarily due to reductions in force in 2014.

Research and Development

	Three months ended June 30,		Period-to-Period Change		Six months ended June 30,		Period-to-Period Change	
	2015	2014	$	%	2015	2014	$	%
	(dollars in thousands)							
Research and	$ 7,899	$ 8,845	$ (946)	(10.7)%	$ 16,098	$ 18,102	$ (2,004)	(11.1)%

development								
Percentage of revenue	*10.1%*	*21.5%*			*10.6%*	*17.7%*		

Our ability to remain competitive depends largely on continuously developing innovative technology, with new and enhanced features and systems and introducing them at competitive prices on a timely basis. Accordingly, based on our strategic plan, we establish annual R&D budgets to fund programs that we expect will drive competitive advantages.

Three Months Ended June 30, 2015 Compared with Three Months Ended June 30, 2014

Research and development expense was $7.9 million during the three months ended June 30, 2015; a decrease of $0.9 million, or 10.7%, compared with $8.8 million during the three months ended June 30, 2014. The decrease in expense is primarily due to reduced labor and material costs incurred in the current year compared to costs incurred last year associated with the rollout of our Purion platform.

Six Months Ended June 30, 2015 Compared with Six Months Ended June 30, 2014

Research and development expense was $16.1 million during the six months ended June 30, 2015; a decrease of $2.0 million, or 11.1%, compared with $18.1 million during the six months ended June 30, 2014. The decrease was primarily due to lower personnel costs driven by reduced headcount from the previous year as well as a spike in labor and materials costs experienced in the prior year relating to the roll out of our Purion platform.

Sales and Marketing

	Three months ended June 30,		Period-to-Period Change		Six months ended June 30,		Period-to-Period Change	
	2015	2014	$	%	2015	2014	$	%
	(dollars in thousands)							
Sales and marketing	$ 5,858	$ 5,037	$ 821	16.3%	$ 11,486	$ 10,513	$ 973	9.3%
Percentage of revenue	*7.5%*	*12.2%*			*7.6%*	*10.3%*		

Our sales and marketing expenses result primarily from the sale of our equipment and services through our direct sales force.

Three Months Ended June 30, 2015 Compared with Three Months Ended June 30, 2014

Sales and marketing expense was $5.9 million during the three months ended June 30, 2015; an increase of $0.8 million, or 16.3%, compared with $5.0 million during the three months ended June 30, 2014. The increase is primarily due to higher new tool evaluation costs and stock compensation expense.

Six Months Ended June 30, 2015 Compared with Six Months Ended June 30, 2014

Sales and marketing expense was $11.5 million during the six months ended June 30, 2015; an increase of $1.0 million, or 9.3%, compared with $10.5 million during the six months ended June 30, 2014. The increase is primarily due to higher new tool evaluation costs and stock compensation expense.

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General and Administrative

	Three months ended June 30,		Period-to-Period Change		Six months ended June 30,		Period-to-Period Change	
	2015	2014	$	%	2015	2014	$	%
	(dollars in thousands)							
General and administrative	$ 6,231	$ 6,494	$ (263)	(4.0)%	$ 12,332	$ 12,975	$ (643)	(5.0)%
Percentage of revenue	*7.9%*	*15.8%*			*8.1%*	*12.7%*		

Our general and administrative expenses result primarily from the costs associated with our executive, finance, information technology, legal and human resource functions.

Three Months Ended June 30, 2015 Compared with Three Months Ended June 30, 2014

General and administrative expense was $6.2 million during the three months ended June 30, 2015; a decrease of $0.3 million, or 4.0%, compared with $6.5 million during the three months ended June 30, 2014. The decrease was primarily due to a reduction in professional fees.

Six Months Ended June 30, 2015 Compared with Six Months Ended June 30, 2014

General and administrative expense was $12.3 million during the six months ended June 30, 2015; a decrease of $0.6 million, or 5.0%, compared with $13.0 million during the six months ended June 30, 2014. The decrease was primarily due to reductions in personnel costs associated with a reduction in headcount and professional fees.

Restructuring Charges

	Three months ended June 30,		Period-to-Period Change		Six months ended June 30,		Period-to-Period Change	
	2015	2014	$	%	2015	2014	$	%
	(dollars in thousands)							
Restructuring charges	$ 8	$ 160	$ (152)	(95.0)%	$ 18	$ 360	$ (342)	(95.0)%
Percentage of revenue	*0.0%*	*0.4%*			*0.0%*	*0.4%*		

We implemented reductions in force in prior periods to improve the focus of our operations, control costs, achieve profitability and conserve cash. As a result of these actions, we recorded minor adjustments to restructuring expense in the three and six months periods ended June 30, 2015, compared to $0.2 million and 0.3 million during the three months and six months periods ended June 30, 2014, respectively.

Other (Expense) Income

	Three months ended June 30,		Period-to-Period Change		Six months ended June 30,		Period-to-Period Change	
	2015	2014	$	%	2015	2014	$	%
			(dollars in thousands)					
Other (expense) income	$ (1,255)	$ (617)	$ (638)	(103.4)%	$ (2,728)	$ (574)	$ (2,154)	(375.3)%
Percentage of revenue	*(1.6)%*	*(1.5)%*			*(1.8)%*	*(0.6)%*		

Other (expense) income consists primarily of foreign exchange gains and losses attributable to fluctuations against local currencies of the countries in which we operate, interest earned on our invested cash balances, bank fees associated with our financing arrangements and interest expense related to financing arrangements. Other expense was $1.3 million for the three months ended June 30, 2015, compared with $0.6 million for the three months ended June 30, 2014. The increase in other expense was primarily driven by charges incurred related to the sale of our corporate headquarters facility. The Company recorded $1.3 million in interest expense associated with the lease of our headquarters in Beverly, which is being accounted for as a financing obligation. See Note 3 for further discussion.

The $2.2 million increase in other expense for the six month period ended June 30, 2015 compared with the six month period ended June 30, 2014, was primarily due to the $2.4 million interest expense recorded associated with the lease of our headquarters in Beverly. See Note 3 for further discussion.

During the three and six-month periods ended June 30, 2015 and 2014, with the exception of the lease agreement entered into by the Company relating to the sale leaseback transaction, we had no significant off-balance-sheet risk such as exchange contracts, option contracts or other foreign hedging arrangements.

Income Taxes

	Three months ended June 30,		Period-to-Period Change		Six months ended June 30,		Period-to-Period Change	
	2015	2014	$	%	2015	2014	$	%
			(dollars in thousands)					
Income taxes	$ 40	$ 231	$ (191)	(82.7)%	$ 141	$ 426	$ (285)	(66.9)%
Percentage of revenue	*0.0%*	*0.6%*			*0.0%*	*0.4%*		

We incur income tax expense relating principally to operating results of foreign entities in Europe and Asia, where we earn taxable income. We have significant net operating loss carryforwards in the United States and certain European tax jurisdictions and, as a result, we do not currently pay significant income taxes in those jurisdictions. Additionally, we do not recognize the tax benefit for such losses in the United States and certain European taxing jurisdictions until there is sufficient income such that the tax benefits can be recognized. As stated in Note 3, the Company does not anticipate any federal or state tax liability associated with the taxable gain on the sale of its corporate headquarters. The Company will continue to maintain a full valuation allowance for these tax assets until sustainable future levels of profitability are evident.

Liquidity and Capital Resources

Our liquidity is primarily affected by the rate of sale of our products. Our established cost structure, other than cost of goods sold, does not vary significantly with changes in volume. We experience fluctuations in operating results and cash flows depending largely on changes in revenue levels.

During the six month period ended June 30, 2015, the Company generated $11.8 million of cash from operating activities. This was predominately driven by the Company's income from operations, excluding non-cash charges such as depreciation and amortization and stock based compensation expense. The Company also had increases in accounts payable

and deferred revenue of approximately $22.9 million, offset by the increases in inventory and prepaid expenses and other current assets of approximately $21.6 million. In comparison, during the six month period ended June 30, 2014, the Company used $11.9 million of cash to support operating activities.

Investing activities for the six months periods ending June 30, 2015 and 2014 included $0.7 million and $0.6 million, respectively, used for capital expenditures.

Financing activities for the six month period ending June 30, 2015 provided net cash of $35.8 million. This resulted largely from the first quarter 2015 sale of our corporate headquarters building in Beverly, Massachusetts, which provided $48.9 million of gross proceeds, less $0.4 million for prepaid rent, for a net amount of $48.5 million. Also in the first quarter, the Company paid $14.5 million to Northern Bank & Trust Company relating to a scheduled principal payment on a term loan, followed by a discharge of the loan, which was secured by the property sold. This loan discharge resulted in a $0.8 million decrease in our restricted cash balance. The Company incurred $0.8 million of related financing expenses associated with this transaction. Also included in cash provided by financing activities in the six month period was $1.9 million received relating to the exercise of stock options and purchases of Company stock through the Employee Stock Purchase Plan. In comparison, financing activities for the six month period ending June 30, 2014 included $1.8 million of cash received, primarily upon exercise of stock options.

Our revolving credit facility with Silicon Valley Bank provides for borrowings of up to $10.0 million on a revolving basis during a two year term ending October 31, 2015, based primarily on accounts receivable. The Company's ability to borrow under this line of credit is limited to 80% of the then current amount of qualified accounts receivable. As of June 30, 2015, the Company had not drawn down on the line of credit, although a portion of the availability is being used to support outstanding letters of credit in the amount of $6.9 million. At June 30, 2015, our available borrowing capacity under the credit facility was $3.1 million and we were in compliance with all covenants related to the credit facility. The revolving credit facility is used by the Company to support letters of credit and for short-term borrowing, as needed.

We believe that based on our current market, revenue, expense and cash flow forecasts, our existing cash, cash equivalents and borrowing capacity will be sufficient to satisfy our anticipated cash requirements for the short and long-term. In the event that demand for our products declines in future periods, we believe we can align manufacturing and operating spending levels to the changing business conditions and provide sufficient liquidity to support operations. Our expectation for adequate liquidity is subject to risks that may cause our actual results to differ materially from our expectations. These risks include the timing and degree of customer acceptance of our products, the continuing demand for ion implantation equipment, overall activity levels of semiconductor manufacturing, competitive pressure on sales and pricing, increases in material and other production costs that cannot be recouped in product pricing and global economic, political and financial conditions.

Commitments and Contingencies

Other than the lease obligation related to the sale leaseback of our Corporate headquarters shown in the table below, significant commitments and contingencies at June 30, 2015 are consistent with those discussed in Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations," and Note 16 to the consolidated financial statements in our Annual Report on Form 10-K for the fiscal year ended December 31, 2014.

The following represents all material changes from our prior year end to our contractual obligations as of June 30, 2015 (in thousands):

		Payments Due by Period		
Contractual Obligations	**Total**	**2015**	**2016-2019**	**2020-2037**
Lease obligation	$ 133,111	$ 2,350	$ 21,194	$ 109,567
Total	$ 133,111	$ 2,350	$ 21,194	$ 109,567

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Item 3. Quantitative and Qualitative Disclosures about Market Risk.

As of June 30, 2015, there have been no material changes to the quantitative information about market risk disclosed in Item 7A to our annual report on Form 10-K for the year ended December 31, 2014.

Item 4. Controls and Procedures.

Evaluation of Disclosure Controls and Procedures

Our management, with the participation of our principal executive officer and principal financial officer, has evaluated the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended (the "Exchange Act") as of the end of the period covered by this report (the "Evaluation Date"). Based on this evaluation, our principal executive officer and principal financial officer concluded that, as of the Evaluation Date, these disclosure controls and procedures are effective.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Exchange Act) identified in connection with the evaluation of our internal control that occurred during the three months ended June 30, 2015 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

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 that it believes might have a material adverse effect on its business operations.

Item 1A. Risk Factors.

As of June 30, 2015, there have been no material changes to the risk factors described in Item 1A to our annual report on Form 10-K for the year ended December 31, 2014.

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

None.

Item 3. Defaults Upon Senior Securities.

None.

Item 4. Mine Safety Disclosures.

Not Applicable.

Item 5. Other Information.

None.

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Item 6. Exhibits.

The following exhibits are filed herewith:

Exhibit No	Description
3.1	Amended and Restated Certificate of Incorporation of the Company adopted May 6, 2009. Incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K filed with the Commission on May 11, 2009.
3.2	Bylaws of the Company, as amended as of May 13, 2014. Incorporated by reference to Exhibit 3.2 of the Company's Form 8-K, filed with the Commission on May 19, 2014.
10.1	Axcelis Technologies, Inc. 2012 Equity Incentive Plan, as amended through May 13, 2015. Filed herewith.
31.1	Certification of the Principal Executive Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated August 5, 2015. Filed herewith.
31.2	Certification of the Principal Financial Officer under Exchange Act Rule 13a-14(a)/15d-14(a) (Section 302 of the Sarbanes-Oxley Act), dated August 5, 2015. Filed herewith.
32.1	Certification of the Principal Executive Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated August 5, 2015. Filed herewith.
32.2	Certification of the Principal Financial Officer pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code (Section 906 of the Sarbanes-Oxley Act), dated August 5, 2015. Filed herewith.
101	The following materials from the Company's Form 10-Q for the quarter ended June 30, 2015, formatted in eXtensible Business Reporting Language (XBRL): (i) Consolidated Statements of Operations, (ii) Consolidated Statements of Comprehensive Income (Loss), (iii) Consolidated Balance Sheets, (iv) Consolidated Statements of Cash Flows and (v) Notes to Consolidated Financial Statements (Unaudited).

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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.

AXCELIS TECHNOLOGIES, INC.

DATED: August 5, 2015

By: /s/ KEVIN J. BREWER

Kevin J. Brewer
Executive Vice President and Chief Financial Officer
Duly Authorized Officer and Principal Financial Officer

AXCELIS TECHNOLOGIES, INC.
2012 EQUITY INCENTIVE PLAN

As approved by the Shareholders on May 2, 2012, May 14, 2013, May 13, 2014 and May 13, 2015

1. Purpose.

The purpose of the Axcelis Technologies, Inc. 2012 Equity Incentive Plan (the "Plan") is to attract and retain persons who are expected to make important contributions to the Company and its Affiliates, to provide an incentive for them to achieve the Company's goals, and to enable them to participate in the growth of the Company by granting Awards with respect to the Company's Common Stock. Certain capitalized terms used herein are defined in Section 7 below.

2. Administration.

The Plan shall be administered by the Committee; provided, that the Board may in any instance perform any of the functions of the Committee hereunder. The Committee shall have authority to adopt, alter and repeal such administrative rules, guidelines and practices governing the operation of the Plan as it shall from time to time consider advisable, and to interpret the provisions hereof in its discretion. The Committee's determinations hereunder shall be final and binding. The Committee may, subject to applicable law, delegate to one or more Executive Officers of the Company the power to make Awards to Participants who are not Reporting Persons or Covered Employees and all determinations hereunder with respect thereto, provided that the Committee shall fix the maximum number of shares that may be subject to such Awards.

3. Eligibility.

All directors and all employees and consultants of the Company or any Affiliate capable of contributing to the successful performance of the Company, other than any person who has irrevocably elected not to be eligible, are eligible to be Participants in the Plan.

4. Stock Available for Awards.

(a) Amount. Subject to adjustment under subsection 4(b), up to an aggregate of 11,050,000 shares of Common Stock may be issued pursuant to Awards, including Incentive Stock Options, under the Plan. For the purposes of counting shares hereunder:

i. The number of shares issued as, or upon settlement of, any Award other than an Option or Stock Appreciation Right shall be multiplied by 1.5;

ii. Outstanding shares tendered by the Participant to pay for the exercise of an Option or Stock Appreciation Right, shares repurchased in the open market by the Company, and shares that are withheld by the Company to satisfy the exercise or tax withholding obligation upon exercise or vesting of an Award may not be netted out against shares of Common Stock issued pursuant to Awards hereunder;

iii. Shares subject to any Award granted under this Plan that are not issued because the Award expires, is terminated unexercised or is forfeited, in whole or in part, may be subject to new Awards without being deemed to exceed such maximum amount;

iv. Shares that are not issued under an award that is outstanding under the 2000 Stock Plan as of May 2, 2012 because such award expires, is terminated unexercised or is forfeited may be subject to new Awards under this Plan (other than Incentive Stock Options), without being deemed to exceed such maximum amount; and

v. Shares issued under this Plan as a result of the assumption or substitution of outstanding grants from an acquired company shall not be deemed to exceed such maximum amount.

Shares issued under the Plan may consist of authorized but unissued shares or treasury shares

(b) Adjustments. Upon any equity restructuring, whether a stock dividend, recapitalization, split-up or combination of shares, or otherwise, the number of shares in respect of which Awards may be made under the Plan, the number of shares subject to outstanding Awards, the exercise, purchase or conversion price with respect to any Award, and the limit on individual grants in subsection 5(c) shall be proportionately adjusted, provided that the number of shares subject to any Award shall always be a whole number. In the event the Committee determines that any other reorganization, recapitalization, merger, spin-off or other corporate transaction affects the Common Stock such that an adjustment is required in order to preserve the benefits intended to be provided by the Plan, the Committee shall equitably adjust any or all of the number and kind of shares in respect of which Awards may be made under the Plan, the number and kind of shares subject to outstanding Awards, the exercise, purchase or conversion price with respect to any Award, and the limit on individual grants in subsection 5(c), provided that the number of shares subject to any Award shall always be a whole number. If considered appropriate, the Committee may make provision for a cash payment with respect to all or part of an outstanding Award instead of or in addition to any such adjustment. Any adjustment made pursuant to this subsection shall be subject, in the case of Incentive Stock Options, to any limitation required under the Code.

5. Awards under the Plan.

(a) Types of Awards. The Committee may grant Options, Stock Appreciation Rights, Restricted Stock, Restricted Stock Units, Stock Equivalents, and Awards of shares of Common Stock that are not subject to restrictions or forfeiture. The effectiveness of any such grant may be conditioned on the passage of time, the achievement of any Performance Goals, or the happening of any other event.

(b) Terms and Conditions of Awards.

(i) *Participants; Terms.* The Committee shall select the Participants to receive Awards and determine the terms and conditions of each Award. Without limiting the foregoing but subject to the other provisions of the Plan and applicable law, the Committee shall determine (A) the number of shares of Common Stock subject to each Award or the manner in which such number shall be determined, (B) the price, if any, a Participant shall pay to receive or exercise an Award or the manner in which such price shall be determined, (C) the time or times when an Award may vest or be exercised, settled, or transferred, (D) any Performance Goals, restrictions or other conditions to vesting, exercise, settlement, or transferability of an Award, (E) whether an Award may be settled in the form of cash, Common Stock or other securities of the Company, Awards or other property, and the manner of calculating the amount or value thereof, (F) the duration of any Restricted Period or any other circumstances in which an Award may be forfeited to the Company, (G) the effect on an Award of the disability, death, retirement or other termination of employment or other service of a Participant, and (H) the extent to which, and the period during which, the Participant or the Participant's legal representative, guardian or Designated Beneficiary may receive payment of an Award or exercise rights thereunder. Except as otherwise provided hereby or in a particular Award, any determination or action with respect to an Award may be made or taken by the Committee at the time of grant or at any time thereafter.

(ii) *Options and Stock Appreciation Rights.* Incentive Stock Options may only be granted to persons eligible to receive such Options under the Code. The exercise price for any Option or Stock Appreciation Right shall not be less than 100% of the Fair Market Value of the Common Stock on the Date of Grant; provided that Options granted in substitution for options granted by a former employer to persons who become eligible to receive Awards hereunder as a result of a transaction described in Section 424(a) of the Code may, consistent with such Section, have a lower exercise price. No Option or Stock Appreciation Right shall have a term longer than seven (7) years. No Incentive Stock Option may be granted more than ten years after the Effective Date. The Committee shall determine the manner of calculating the excess in value of the shares of Common Stock over the exercise price of a Stock Appreciation Right.

(iii) *Restricted Stock and Restricted Stock Units.* Shares of Restricted Stock and shares subject to Restricted Stock Units may not be sold, assigned, transferred, pledged or otherwise encumbered, except as permitted by the Committee, during the applicable Restricted Period. Restricted Stock Units may be settled in shares of Common Stock or cash as determined by the Committee.

(iv) *Minimum Vesting Requirements*. Notwithstanding Sections 5(b)(i) or Section 6(e), with respect to Awards to Executive Officers:

(A) vesting, settlement, or lapse of forfeiture restrictions that is solely based on continued employment, service or the passage of time shall occur (A) with respect to no more than one-third of the shares subject to such Award per year and (B) over not less than

four years from the date of grant with respect to the full number of shares subject to such Award; and

(B) vesting, settlement, or lapse of forfeiture restrictions that is based on the achievement of Performance Goals shall occur based on a Performance Period of at least one year;

provided that the foregoing limitations shall not (1) apply to vesting, settlement, or lapse of forfeiture restrictions in connection with the termination of employment or other service of a Participant by the Company or due to the Participant's disability, death or retirement nor (2) preclude the Committee from (x) exercising its discretion to accelerate the vesting of any Award upon a Transaction as contemplated by Section 5(b)(viii), (y) establishing a shorter vesting schedule for consultants or newly-hired employees, or (z) establishing a shorter schedule for vesting, settlement, or lapse of forfeiture restrictions on Awards that are granted in exchange for or in lieu of the right to receive the payment of an equivalent amount of salary, bonus or other compensation.

(v) *Payment of Exercise Price.* The Committee shall determine the form of consideration and manner of payment of the exercise price, if any, of any Award. Without limiting the foregoing, the Committee may, subject to applicable law, permit such payment to be made in whole or in part in cash or by surrender of shares of Common Stock (which may be shares retained from the respective Award or any other Award) valued at their Fair Market Value on the date of surrender, or such other lawful consideration, including a payment commitment of a financial or brokerage institution, as the Committee may determine. The Company may accept, in lieu of actual delivery of stock certificates, an attestation by the Participant in form acceptable to the Committee that he or she owns of record the shares to be tendered free and clear of claims and other encumbrances.

(vi) *Dividends.* In the discretion of the Committee, any Award may provide the Participant with dividends or dividend equivalents payable (in cash, in shares of Common Stock, or in the form of Awards under the Plan) currently or deferred and with or without interest ; provided that any dividend paid or issued with respect to any portion of an Award of Restricted Stock and any dividend equivalent paid or issued with respect to any portion of any other Award shall be subject to the same restrictions (including risk of forfeiture) as such Restricted Stock or other Award, respectively, until the end of the respective Restricted Period or such portion has otherwise vested.

(vii) *Termination and Forfeiture.* The terms of any Award may include such continuing provisions for termination of the Award and/or forfeiture or recapture of any shares, cash or other property previously issued pursuant thereto relating to competition or other activity or circumstances detrimental to the Company as the Committee may determine to be in the Company's best interests. Without limiting the foregoing, the terms of any Award shall be subject to, and shall be deemed automatically amended to incorporate, any "clawback," "recapture," or similar policy adopted by the Company and in effect before or after the grant of such Award.

(viii) *Certain Extraordinary Transactions.* The Committee may in its discretion provide, at the time of grant or at any time thereafter, that in the case of any recapitalization, stock acquisition, merger, consolidation or other form of corporate transaction in which a company other than the Company is the surviving, continuing, successor or purchasing entity (a "Transaction"), the surviving, continuing, successor or purchasing entity or a parent or subsidiary of such entity may, without the consent of the Participant, assume the Company's rights and obligations under any Award or portion thereof outstanding immediately before the Transaction or substitute for any such outstanding Award or portion thereof a substantially equivalent award with respect to such entity's own stock or other property or cash, in either case with equitable adjustments in the number and type of shares or other assets subject to the Awards and the exercise, purchase or conversion price with respect to any Award, in light of the consideration received by the Company's stockholders in the

Transaction. Any such Award that is not so assumed or substituted for shall terminate upon the consummation of such Transaction on such terms, if any, as the Committee shall provide. Notwithstanding the foregoing, if the stockholders of the Company receive consideration that is all or predominantly cash in exchange for their shares of common Stock in a Transaction, then, in order to preserve the Participants' rights under outstanding Awards, the Committee shall, without the need for consent of any Participant, either (A) cause any unexercisable or unvested portion of an Award outstanding immediately before the Transaction to become fully exercisable and vested prior to such Transaction (but effective only on consummation of the Transaction), and any Options and Stock Appreciation Rights that have not been exercised as of the consummation of the Transaction shall thereupon terminate or (B) provide for payment to the Participant of cash, stock of another entity party to the Transaction, or other property with a Fair Market Value equal to the amount, if any, that would have been received upon the vesting, exercise, settlement, or transferability of the Award had any unexercisable or unvested portion of the Award become fully exercisable and vested and the Award been exercised or paid in connection with the Transaction, reduced (but not below zero) by the exercise or purchase price per share, if any, under such Award, whereupon the Award shall terminate. If any portion of such consideration may be received by Company's stockholders in the Transaction on a contingent or delayed basis, the Committee may, in its sole discretion, determine such Fair Market Value per share as of the time of the Transaction on the basis of the Committee's good faith estimate of the present value of the probable amount of future payment of such consideration.

In the event of a recapitalization, stock acquisition, merger, consolidation or other form of corporate transaction in which the Company is the surviving, continuing, successor or purchasing entity, the Committee may make equitable adjustments to outstanding Awards pursuant to Section 4(b).

(ix) *Documentation.* Each Award under the Plan shall be evidenced by documentation in the form prescribed from time to time by the Committee and delivered to or executed and delivered by the Participant specifying the terms and conditions of the Award and containing such other terms and conditions not inconsistent with the provisions hereof as the Committee considers necessary or advisable to achieve the purposes of the Plan or to comply

with applicable law and accounting principles. Any such documentation may be maintained solely in electronic format.

(x) *In General.* Any Award may be made alone, in addition to, or in relation to any other Award. The terms of Awards of each type need not be identical, and the Committee need not treat Participants uniformly. No Award shall be transferable except upon such terms and conditions and to such extent as the Committee determines, provided that no Award shall be transferable for value and Incentive Stock Options may be transferable only to the extent permitted by the Code. No Award to any Participant subject to United States income taxation shall provide for the deferral of compensation that does not comply with Section 409A of the Code. The achievement or satisfaction of any Performance Goals, restrictions or other conditions to vesting, exercise, settlement, or transferability of an Award shall be determined by the Committee.

(c) Limit on Individual Grants. The maximum number of shares of Common Stock subject to Options, Stock Appreciation Rights and other Awards intended to satisfy the requirements for "performance-based compensation" within the meaning of Section 162(m) of the Code that may be granted to a Participant in any fiscal year may not exceed 1,250,000 shares, subject to adjustment under subsection 4(b). In the case of any performance-based Awards settled in cash, no more than $1,000,000 may be paid to any Participant with respect to any one year of a Performance Period.

6. General Provisions.

(a) Tax Withholding. A Participant shall pay to the Company, or make provision satisfactory to the Committee for payment of, any taxes required by law to be withheld in respect of Awards under the Plan no later than the date of the event creating the tax liability. The Company and its Affiliates may, to the extent permitted by law, deduct any such tax obligations from any payment of any kind due to the Participant under the Plan or otherwise. In the Committee's discretion, the minimum tax obligations required by law to be withheld in respect of Awards may be paid in whole or in part in shares of Common Stock, including shares retained from the Award creating the tax obligation, valued at their Fair Market Value on the date of retention or delivery.

(b) Legal Compliance. The Company shall not be required to issue any shares of Common Stock or take any other action pursuant to the Plan unless the Company is satisfied that all requirements of law, or of any stock exchange on which the Common Stock is then listed, in connection therewith have been or will be complied with, and the Committee may impose any restrictions on the rights of Participants hereunder as it shall deem necessary or advisable to comply with any such requirements.

(c) Foreign Nationals. Awards may be made to Participants who are foreign nationals or employed outside the United States on such terms and conditions different from those specified herein as the Committee considers necessary or advisable to achieve the purposes of the Plan or to comply with applicable laws.

(d) Awards Not Includable for Benefit Purposes. Awards and other payments received by a Participant pursuant to the provisions of the Plan shall not be included in the determination of benefits under any pension, group insurance or other benefit plan applicable to the Participant which is maintained by the Company or any of its Affiliates, except as may be provided under the terms of such plans or determined by the Board.

(e) Amendment, Exchange and Repurchase of Awards.

(i) Subject to clauses (ii) and (iii) below, the Committee may amend, modify or terminate any outstanding Award, including without limitation changing the dates of vesting, exercise or settlement, causing the Award to be assumed by another entity, and substituting therefor another Award of the same or a different type, provided that the Participant's consent to such action shall be required unless the terms of this Plan or the Award permit such action, the Committee determines that such action is required by law or stock exchange rule, or the Committee determines that the action, taking into account any related action, would not materially and adversely affect the Participant.

(ii) Notwithstanding the attainment of Performance Goals in the case of any Award intended to satisfy the requirements for "performance-based compensation" within the meaning of Section 162(m) of the Code, the Committee may reduce (but not increase) the amount payable at a given level of performance to take into account additional factors that the Committee may deem relevant.

(iii) The foregoing notwithstanding, without further approval of the stockholders of the Company, (A) the Committee shall not authorize the amendment of any outstanding Option or Stock Appreciation Right to reduce the exercise price, (B) no Option or Stock Appreciation Right shall be canceled and replaced with an Award exercisable for Common Stock at a lower exercise price and (C) no Award shall be canceled in exchange for a cash payment from the Company to the Award owner, except under the limited circumstances described above in Section 5(b)(viii) relating to Transactions.

7. Certain Definitions. As used in this Plan:

"Affiliate" means any business entity in which the Company owns directly or indirectly 50% or more of the total voting power or has a significant financial interest as determined by the Committee.

"Award" means any award of shares of Common Stock or right with respect to shares described in Section 5(a).

"Board" means the Board of Directors of the Company.

"Code" means the Internal Revenue Code of 1986, as amended from time to time, or any successor law.

"Committee" means one or more committees appointed by the Board to administer the Plan or a specified portion thereof. Each such committee shall be comprised of not less than two members of the Board who shall meet such criteria as the Board may specify from time to time.

"Common Stock" means the Common Stock, $0.001 par value, of the Company.

"Company" means Axcelis Technologies, Inc., a Delaware corporation.

"Covered Employee" means a "covered employee" within the meaning of Section 162(m) of the Code.

"Date of Grant" means the date on which all requirements under applicable law and the Company's certificate of incorporation and bylaws for the effective grant of an Award have been satisfied.

"Designated Beneficiary" means the beneficiary designated by a Participant, in a manner determined by the Committee, to receive amounts due or exercise rights of the Participant in the event of the Participant's death. In the absence of an effective designation by a Participant, "Designated Beneficiary" means the Participant's legal representative.

"Effective Date," from time to time, means the most recent date that the Plan was adopted or, if earlier, that it was approved by the stockholders (including approval of the Plan as amended), as such terms are used in the regulations under Section 422 of the Code.

"Exchange Act" means the Securities Exchange Act of 1934, as amended from time to time, or any successor law.

"Executive Officer" has the meaning given in Rule 3b-7 under the Exchange Act, or any successor provision.

"Fair Market Value" with respect to the Common Stock or other property means the fair market value thereof determined by such methods as shall be established by the Committee from time to time. Unless otherwise determined by the Committee in good faith, the per share Fair Market Value of the Common Stock as of any date shall mean (a) if the Common Stock is then listed or admitted to trading on a national securities exchange, (i) the last reported sale price on such date on the principal national securities exchange on which the Common Stock is then listed or admitted to trading, (ii) if no such reported sale took place on such date, the average of the closing bid and asked prices on such exchange on such date, or (iii) if neither (i) nor (ii) applies, the last reported sale price on the next preceding date on which trading took place, or (b) if the Common Stock is then traded in the over-the-counter market, the average of the closing bid and asked prices on such date, as reported by The Wall Street Journal or other appropriate publication selected by the Committee, for the over-the-counter market.

"Incentive Stock Option" means an Option complying with the requirements of Section 422 of the Code or any successor provision and any regulations thereunder.

"Option" means a right to purchase shares of Common Stock and may be an Incentive Stock Option if specified by the Committee.

"Participant" means a person selected by the Committee to receive an Award under the Plan.

"Performance Goals" means, in the case of Awards intended to satisfy the requirements for "performance-based compensation" within the meaning of Section 162(m) of the Code, one or more objective performance goals established by the Committee, based on one or more of the following criteria: revenue; revenue growth; sales; expenses; margins; net income; earnings or earnings per share; cash flow; stock price; shareholder return; return on investment; return on invested capital, assets, or equity; profit before or after tax; operating profit; operating margin; return on research and development investment; market capitalization; quality improvements; market share; cycle time reductions; customer satisfaction measures; strategic positioning or marketing programs; market penetration or expansion; business / information systems improvements; expense management; infrastructure support programs; human resource programs; customer programs; technology development programs; goals relating to acquisitions or divestitures, or any combination of the foregoing, including without limitation goals based on any of such measures relative to peer groups or market indices, and may be particular to a Participant or may be based, in whole or in part, on the performance of the division, department, line of business, subsidiary, or other business unit, whether or not legally constituted, in which the Participant works or on the performance of the Company generally.

"Performance Period" means any period of service of at least one year designated by the Committee as applicable to an Award intended to satisfy the requirements for "performance-based compensation."

“Reporting Person” means a person subject to Section 16 of the Exchange Act.

“Restricted Period” means any period during which an Award or any part thereof may be forfeited to the Company.

“Restricted Stock” means shares of Common Stock that are subject to forfeiture to the Company.

“Restricted Stock Unit” means the right, subject to forfeiture, to receive the value of a share of Common Stock in the future, payable in the form of cash, Common Stock or other securities of the Company, Awards or other property, and is an unfunded and unsecured obligation of the Company.

“Stock Appreciation Right” means the right to receive any excess in value of shares of Common Stock over the exercise price of such right.

“Stock Equivalent” means the right to receive payment from the Company based in whole or in part on the value of the Common Stock, payable in the form of cash, Common Stock

or other securities of the Company, Awards or other property, and may include without limitation phantom stock, performance units, and Stock Appreciation Rights.

“Termination of employment or other service of a Participant” means the voluntary or involuntary termination of a Participant’s employment with the Company or an Affiliate for any reason, including death, disability, retirement or as the result of the divestiture of the Participant’s employer or any similar transaction in which the Participant’s employer ceases to be the Company or one of its Affiliates. Whether entering military or other government service shall constitute “termination of employment or other service,” or whether a “termination of employment or other service” shall occur as a result of disability, shall be determined in each case by the Committee in its sole discretion before or after the grant of the respective Award. In the case of a member of the Board or consultant who is not an employee of the Company or an Affiliate, “termination of employment or other service” shall mean the voluntary or involuntary termination of Board service or the consulting relationship, as the case may be, for any reason.

“Transferable for value” means a transfer on terms that would prevent the Company from relying on Securities and Exchange Commission Form S-8 (or any successor form) with respect to the issuance of the Common Stock underlying the respective Award.

8. Miscellaneous.

(a) No Rights with Respect to Service. No person shall have any claim or right hereunder to be granted an Award. Neither the adoption, maintenance, or operation of the Plan nor any Award hereunder shall confer upon any person any right with respect to the continuance of his or her employment by or other service with the Company or any Affiliate nor shall they interfere with the rights of the Company or any Affiliate to terminate or otherwise change the terms of such service at any time, including, without limitation, the right to promote, demote or otherwise re-assign any person from one position to another within the Company or any Affiliate. Unless the Committee otherwise provides in any case, the service of a Participant with an Affiliate shall be deemed to terminate for purposes of the Plan when such Affiliate ceases to be an Affiliate of the Company.

(b) No Rights as Stockholder. Subject to the provisions of the applicable Award, no Participant or Designated Beneficiary shall have any rights as a stockholder with respect to any shares of Common Stock to be issued under the Plan until he or she becomes the holder thereof. A Participant to whom Common Stock is awarded will be considered the holder of such Common Stock at the time of the Award, except as otherwise provided in the applicable Award.

(c) Amendment of Plan. The Board may amend, suspend or terminate the Plan or any portion thereof at any time, subject to such stockholder approval as the Board determines to be necessary or advisable to comply with any tax or regulatory requirement.

Exhibit 31.1

CERTIFICATION
of the Principal Executive Officer
Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)

I, Mary G. Puma, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Axcelis Technologies, 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) 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

   (d) 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 5, 2015

/s/ MARY G. PUMA

Mary G. Puma,
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATION
of the Principal Financial Officer
Pursuant to Rule 13a-14(a)/15d-14(a) (implementing Section 302 of the Sarbanes-Oxley Act)

I, Kevin J. Brewer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Axcelis Technologies, 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)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) 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) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) 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

   (d) 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 5, 2015

/s/ KEVIN J. BREWER

Kevin J. Brewer,
Executive Vice President and Chief Financial Officer

EXHIBIT 32.1

AXCELIS TECHNOLOGIES, INC.
Certification of the Principal Executive Officer
Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code

The undersigned Chief Executive Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-Q quarterly report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of August 5, 2015.

/s/ MARY G. PUMA

Mary G. Puma
President and Chief Executive Officer of Axcelis Technologies, Inc.

EXHIBIT 32.2

AXCELIS TECHNOLOGIES, INC.
Certification of the Principal Financial Officer
Pursuant to Section 1350 of Chapter 63 of title 18 of the United States Code

The undersigned Chief Financial Officer of Axcelis Technologies, Inc., a Delaware corporation, hereby certifies, for the purposes of Section 1350 of Chapter 63 of title 18 of the United States Code (as implemented by Section 906 of the Sarbanes-Oxley Act of 2002) as follows:

This Form 10-Q quarterly report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and the information contained herein fairly presents, in all material respects, the financial condition and results of operations of the Company.

IN WITNESS WHEREOF, the undersigned has executed this Certification as of August 5, 2015.

/s/ KEVIN J. BREWER

Kevin J. Brewer
Executive Vice President and Chief Financial Officer of Axcelis Technologies, Inc.