

**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-Q**

(Mark  
One)

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

For the quarterly period ended September 30, 2008

or

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

For the transition period from \_\_\_\_\_ to \_\_\_\_\_

Commission file number 000-30941

**AXCELIS TECHNOLOGIES, INC.**

(Exact name of registrant as specified in its charter)

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

**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  No .

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

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

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

As of November 7, 2008 there were 103,049,301 shares of the registrant's common stock outstanding.

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## PART I—FINANCIAL INFORMATION

## Item 1. Financial Statements.

## Axcelis Technologies, Inc.

## Consolidated Statements of Operations

(In thousands, except per share amounts)

(Unaudited)

	Three months ended September 30,		Nine months ended September 30,	
	2008	2007	2008	2007
Revenue				
Product	\$ 32,490	\$ 91,982	\$ 163,543	\$ 267,481
Service	13,163	14,187	41,360	42,787
Royalties, primarily from SEN	801	1,384	3,334	4,884
	<u>46,454</u>	<u>107,553</u>	<u>208,237</u>	<u>315,152</u>
Cost of revenue				
Product	22,759	61,569	112,906	167,624
Service	6,536	9,715	21,866	26,419
	<u>29,295</u>	<u>71,284</u>	<u>134,772</u>	<u>194,043</u>
Gross profit	17,159	36,269	73,465	121,109
Operating expenses				
Research and development	15,873	18,288	49,680	54,114
Sales and marketing	12,381	12,411	36,760	38,495
General and administrative	10,562	10,367	31,254	31,037
Impairment of goodwill	—	4,658	—	4,658
Amortization of intangible assets	656	656	1,968	1,968
Restructuring charges	444	—	3,512	—
	<u>39,916</u>	<u>46,380</u>	<u>123,174</u>	<u>130,272</u>
Loss from operations	(22,757)	(10,111)	(49,709)	(9,163)
Other income (expense)				
Equity income (loss) of SEN	(968)	1,767	(1,100)	8,340
Interest income	319	1,224	1,400	3,824
Interest expense	(1,724)	(1,587)	(5,005)	(4,822)
Other—net	763	254	314	505
	<u>(1,610)</u>	<u>1,658</u>	<u>(4,391)</u>	<u>7,847</u>
Loss before income taxes	(24,367)	(8,453)	(54,100)	(1,316)
Income taxes (credits)	374	(256)	1,118	(536)
Net loss	<u>\$ (24,741)</u>	<u>\$ (8,197)</u>	<u>\$ (55,218)</u>	<u>\$ (780)</u>
Net loss per share				
Basic	\$ (0.24)	\$ (0.08)	\$ (0.54)	\$ (0.01)
Diluted	(0.24)	(0.08)	(0.54)	(0.01)
Shares used in computing basic and diluted loss per share				
Basic	103,002	102,206	102,635	101,772
Diluted	103,002	102,206	102,635	101,772

See accompanying Notes to Consolidated Financial Statements

**Axcelis Technologies, Inc.****Consolidated Balance Sheets****(In thousands)****(Unaudited)**

	<u>September 30,</u> <u>2008</u>	<u>December 31,</u> <u>2007</u>
<b>ASSETS</b>		
Current assets		
Cash and cash equivalents	\$ 49,727	\$ 83,877
Restricted cash	12,641	17,018
Accounts receivable, net	36,571	76,067
Inventories, net	177,012	169,278
Prepaid expenses and other current assets	19,216	32,442
Total current assets	<u>295,167</u>	<u>378,682</u>
Property, plant and equipment, net	63,997	68,101
Investment in SEN	136,131	132,911
Goodwill	42,115	42,115
Intangible assets	8,957	10,925
Other assets	33,374	37,195
	<u>\$ 579,741</u>	<u>\$ 669,929</u>
<b>LIABILITIES AND STOCKHOLDERS' EQUITY</b>		
Current liabilities		
Accounts payable	\$ 12,589	\$ 27,054
Accrued compensation	14,925	17,003
Warranty	3,166	5,011
Income taxes	754	531
Deferred revenue	15,107	35,827
Other current liabilities	5,294	8,577
Current portion of convertible subordinated debt	82,364	—
Total current liabilities	<u>134,199</u>	<u>94,003</u>
Convertible subordinated debt	—	79,923
Long-term deferred revenue	3,308	4,704
Other long-term liabilities	4,858	5,293
Stockholders' equity		
Preferred stock	—	—
Common stock	103	103
Additional paid-in capital	482,725	478,726
Treasury stock	(1,218)	(1,218)
Accumulated deficit	(57,033)	(1,815)
Accumulated other comprehensive income	12,799	10,210
	<u>437,376</u>	<u>486,006</u>
	<u>\$ 579,741</u>	<u>\$ 669,929</u>

See accompanying Notes to Consolidated Financial Statements

## Axcelis Technologies, Inc.

## Consolidated Statements of Cash Flows

(In thousands)

(Unaudited)

	Nine months ended September 30,	
	2008	2007
<b>Operating activities</b>		
Net loss	\$ (55,218)	\$ (780)
Adjustments required to reconcile net income to net cash used for operating activities		
Depreciation and amortization	15,307	14,093
Amortization of intangible assets	1,968	1,968
Accretion of premium on convertible subordinated debt	2,441	2,255
Stock-based compensation expense	4,099	4,291
Undistributed (income)/loss of SEN	1,100	(8,340)
Impairment of goodwill	—	4,658
Changes in operating assets and liabilities		
Accounts receivable	39,233	(1,876)
Inventories	(8,994)	(12,861)
Other current assets	12,838	(2,161)
Accounts payable and other current liabilities	(21,439)	(34,252)
Deferred revenue	(22,116)	6,445
Income taxes	254	(3,047)
Cash dividends from SEN	2,016	12,424
Other assets and liabilities	(5,614)	(17,268)
Net cash used for operating activities	(34,125)	(34,451)
<b>Investing activities</b>		
Purchases of marketable securities	—	(13,000)
Sales and maturities of marketable securities	—	76,200
Expenditures for property, plant and equipment	(3,027)	(8,422)
Decrease (increase) in restricted cash	3,354	(4,500)
Net cash provided by investing activities	327	50,278
<b>Financing activities</b>		
Repayment of convertible subordinated debt	—	(74,217)
Proceeds from the exercise of stock options	110	1,066
Proceeds from employee stock purchase plan	771	1,513
Net cash provided by (used for) financing activities	881	(71,638)
Effect of exchange rate changes on cash	(1,233)	(1,488)
Net decrease in cash and cash equivalents	(34,150)	(57,299)
Cash and cash equivalents at beginning of period	83,877	140,451
Cash and cash equivalents at end of period	\$ 49,727	\$ 83,152

See accompanying Notes to Consolidated Financial Statements

**Axcelis Technologies, Inc.**

**Notes To Consolidated Financial Statements (Unaudited)**

**(All tabular amounts in thousands, except per share amounts)**

**Note 1. Nature of Business and Basis of Presentation**

Axcelis Technologies, Inc. ("Axcelis" or the "Company"), is a producer of ion implantation and dry strip equipment used in the fabrication of semiconductors 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 Company owns 50% of the equity of a joint venture with Sumitomo Heavy Industries, Ltd. in Japan. This joint venture, which is known as SEN Corporation, an SHI and Axcelis Company ("SEN"), licenses technology from the Company relating to the manufacture of specified ion implantation products and has exclusive rights to manufacture and sell these products in the territory of Japan. SEN is the leading producer of ion implantation equipment in Japan.

*Recent Developments and Liquidity*

In the first three quarters of fiscal 2008, the last two quarters of fiscal 2007 and for the entire fiscal year 2007, the Company incurred net losses. Beginning in 2004, most customers shifted from multi wafer tools to single wafer tools for high current ion implant applications. Because Axcelis did not have a single wafer high current product, it has experienced a significant loss of market share which it has yet to regain. The Company's reported net losses for the past several quarters are attributable to its loss of market share coupled with the fact that the entire semiconductor industry experienced a downturn beginning in the second half of 2007 and has continued throughout 2008. Axcelis introduced its single wafer Optima HD (for high current applications) product in 2006 and has begun to gain acceptance of this product at several customers. Axcelis believes that the Optima product line represents a viable offering to its existing customer base that will allow it to regain market share when its customers begin to add production capacity and the overall market recovers. During the nine months ended September 30, 2008, the Company recognized revenue of approximately \$18.1 million on sales of the Optima HD. As of September 30, 2008, total amounts included in inventory, other current assets and internal use assets related to the Company's investment in the Optima product line approximated \$111.4 million.

During September of 2008, the Company's stock price dropped significantly below book value. Investor concerns about Axcelis' ability to repay outstanding debt in 2009 and its ability to generate sufficient cash flows to support ongoing operations have adversely impacted the stock price. In concert with market uncertainty resulting from the current credit crisis, the Company believes that declining business and consumer confidence and increased unemployment have precipitated an economic slowdown and fears of a long recession. An economic downturn characterized by higher unemployment, lower family income, lower corporate earnings, lower business investment and lower consumer spending, has severely impacted many technology manufacturers and has significantly lowered the demand for the Company's products. As mentioned above, the Company has lost significant market share in high current ion implant (the largest segment of the ion implant market) over the past several years. Axcelis believes that it now has competitive products for the high current and high energy ion implant market segments, as well as for dry strip. However, challenging market conditions have severely limited the Company's ability to increase sales and market share. The Company believes that a combination of these factors accounts for the difference between its stock trading price and our book value.

**Axcelis Technologies, Inc.**

**Notes To Consolidated Financial Statements (Unaudited) (Continued)**

**(All tabular amounts in thousands, except per share amounts)**

**Note 1. Nature of Business and Basis of Presentation (Continued)**

These conditions give rise to certain accounting and reporting considerations including recoverability of goodwill, long-lived assets and inventory, which are discussed further in Notes 2, 3, and 7, respectively. These conditions also have a significant impact on the Company's liquidity, which is discussed further below.

Unrestricted cash, cash equivalents, and marketable securities at September 30, 2008 were \$49.7 million, compared with \$83.9 million at December 31, 2007. The \$34.2 million decrease in cash, cash equivalents, and short-term investments is mainly attributable to cash used by operations of \$34.0 million. At October 31, 2008, unrestricted cash, cash equivalents, and marketable securities were \$44.7 million. Furthermore, as of September 30, 2008, the Company's Senior Subordinated Notes (discussed below and in Note 11), due January 15, 2009, are classified as current liabilities. Axcelis' liquidity is affected by many factors. Some of these factors are based on normal operations of the business, including continued acceptance of the Optima product line, and others relate to the uncertainties of global economies and the semiconductor equipment industry.

The Company anticipates continued cash outflows in the fourth quarter of 2008, and believes it will need to preserve existing cash and cash equivalents to support operations. The Company expects that existing cash and cash equivalents (based primarily on current expectations of customer orders coupled with enacted cost reducing efforts) will be sufficient to satisfy the Company's anticipated cash requirements for the remainder of 2008. However, the Company will need to secure new financing to repay the 4.25% Convertible Senior Subordinated Notes due January 15, 2009 (the "Senior Subordinated Notes"). At maturity, we will be required to repay the outstanding principal of the Senior Subordinated Notes plus a maturity premium of 11.125% of such principal (a total of approximately \$84 million), resulting in an effective annual yield to maturity of approximately 8.0%. The Company is exploring various financing alternatives, as discussed below. The amount and timing of the Company's financing needs depends on the accuracy of our assumptions about levels of sales and expenses, and a number of other factors described in "Risk Factors," in the Company's Form 10-K for the year ended December 31, 2007. In addition, should the Company continue to experience losses and negative cash flows from operations, our assets, in particular, inventory, long-lived assets, goodwill and internal use assets may become subject to impairment in future periods (See Notes 2 and 3).

As discussed in Note 11 below, in April 2008, the Company entered into a revolving credit facility with a bank that provides for borrowings up to \$50 million, subject to a borrowing base calculation. Presently, the Company's 2008 forecast does not anticipate drawing down on the facility because the Company is not currently, and does not expect to become, in compliance with the financial covenants under this facility.

Currently, the Company is seeking to address its financing requirements through a combination of a sale-leaseback of the Company's headquarters and manufacturing facility located in Beverly, Massachusetts, and a secured loan facility with one or more lenders. We expect that the secured loan facility would be an asset backed revolving line of credit with a borrowing base that would consist of accounts receivable, inventory and certain other assets of the Company. The terms of these financing transactions will depend on market conditions and the Company's performance and financial condition. The Company expects that the terms of any new financing arrangement will be less attractive than the terms of the Senior Subordinated Notes. There can be no assurance that any financing transaction will be completed. If the Company is not able to obtain financing, it will not have sufficient liquid resources

**Axcelis Technologies, Inc.**

**Notes To Consolidated Financial Statements (Unaudited) (Continued)**

**(All tabular amounts in thousands, except per share amounts)**

**Note 1. Nature of Business and Basis of Presentation (Continued)**

to repay the Senior Subordinated Notes in January 2009. The uncertainty of the Company's ability to secure financing to repay the Senior Subordinated Notes when they mature creates substantial doubt about the Company's ability to continue as a going concern.

In addition, the depressed market conditions and the related negative effect on the Company's ability to generate revenues and positive cash flow could result in the Company not having sufficient cash to fund ongoing operations. The Company's management may seek alternative strategies intended to improve the Company's cash position. These strategies could include initiating further efforts to restructure the business and reduce the revenue breakeven level and equity financings that could be dilutive to the existing holders of our common stock.

The accompanying unaudited consolidated financial statements do not include any adjustment to reflect the possible future effects of the recoverability and classifications of assets or the amounts and classification of liabilities that may result should the Company not be able to receive sufficient financing.

The accompanying unaudited consolidated financial statements have been prepared in accordance with 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, considered necessary for a fair presentation 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, 2007 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, 2007.

**Note 2. Impairment of Goodwill**

In accordance with FASB Statement No. 142, *Goodwill and Other Intangible Assets* (SFAS 142), the Company is required to review goodwill for impairment at least annually or more often if there are indicators of impairment present. Historically, the Company has performed its annual impairment analysis during the fourth quarter of each year. The provisions of SFAS 142 require that a two-step impairment test be performed for goodwill. In the first step, the Company compares the fair value of each reporting unit to which goodwill has been allocated to its carrying value. If the fair value of the reporting unit exceeds the carrying value of the net assets assigned to that unit, goodwill is considered not impaired and the Company is not required to perform further testing. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of the reporting unit, then the Company must perform the second step of the impairment test in order to determine the implied fair value of the reporting unit's goodwill. If the carrying value of a reporting unit's goodwill exceeds its implied fair value, then the Company would record an impairment loss equal to the difference.



**Axcelis Technologies, Inc.**

**Notes To Consolidated Financial Statements (Unaudited) (Continued)**

**(All tabular amounts in thousands, except per share amounts)**

**Note 2. Impairment of Goodwill (Continued)**

Determining the number of reporting units and the fair value of a reporting unit requires the Company to make judgments and involves the use of significant estimates and assumptions. These estimates and assumptions include revenue growth rates and operating margins used to calculate projected future cash flows, risk-adjusted discount rates, future economic and market conditions and determination of appropriate market comparables. The Company bases its fair value estimates on assumptions it believes to be reasonable but that are unpredictable and inherently uncertain. Actual future results may differ from those estimates. In addition, the Company makes judgments and assumptions in allocating assets and liabilities to its reporting units.

During September of 2008, pursuant to Axcelis' accounting policy, the Company determined that certain circumstances, primarily related to a significant decline in our stock price, recent history of cash outflows and losses from operations constituted a triggering event which suggested that the carrying amount of goodwill may not be recoverable. Accordingly, the Company performed an impairment test of the carrying value of goodwill as of September 30, 2008. Goodwill relates principally to our Dry Strip product line.

As a result of this analysis, the Company concluded that goodwill was not impaired at September 30, 2008. The Company considered the income approach in determining the fair value, which requires estimates of future operating results and discounted cash flows of the reporting unit.

The estimates of future operating results and cash flows were principally derived from the Company's updated long-term financial forecast, which is developed as part of its strategic planning cycle conducted annually during the middle of the third quarter. This updated long-term financial forecast represents the best estimate that the Company has at this time and the Company believes that its underlying assumptions are reasonable based primarily on current product performance. The underlying assumptions contemplate increased market share substantially above current levels and greater than the Company has achieved since 2000, continued improvement to gross margins and managing operating expenses at current levels. However, actual performance in the near-term and longer-term could be materially different from these forecasts, which could impact future estimates of fair value and may result in the impairment of the carrying amount of goodwill. This could be caused by events such as, strategic decisions made in response to economic and competitive conditions, the impact of the economic environment on the Company's customer base, or a material negative change in its relationships with significant customers.

For purposes of the discounted cash flow analysis, the Company assumed a cash flow period of 3 years, terminal value based upon terminal growth rate of 3.0 percent and an estimated discount rate of 18 percent, which is based on our weighted average cost of capital, adjusted for the risks associated with obtaining the revenue plan and market penetration. A variance in these assumptions could have a significant impact on the assessment as to whether goodwill may or may not be impaired. Accordingly, the Company will continue to perform this analysis no less than quarterly for the foreseeable future.

During the three month period ended September 30, 2007, the Company's management elected to discontinue future development of the RTP and curing product lines. Based on that business decision, the forecast of future cash flows was revised and, in September 2007, a goodwill impairment loss of \$4.7 million was recorded.

**Axcelis Technologies, Inc.****Notes To Consolidated Financial Statements (Unaudited) (Continued)****(All tabular amounts in thousands, except per share amounts)****Note 3. Long-lived Assets**

In accordance with FASB Statement No. 144, *Accounting for the Impairment or Disposal of Long-Lived Assets*, the Company would record impairment losses on long-lived assets used in operations when events and circumstances indicate that long-lived assets might be impaired and the undiscounted cash flows estimated to be generated by those assets are less than the carrying amounts of those assets. During September of 2008, we determined that certain circumstances, primarily related to the significant decline in the market price of the Company's stock and recent history of cash outflows and losses from operations, indicated that the carrying value of the net assets of the Company might be impaired. Accordingly, the Company performed an analysis, which compared the undiscounted cash flows estimated to be generated by those assets to the carrying amounts of those assets. This analysis demonstrated that such carrying amounts were expected to be recovered.

The estimates of future operating results and cash flows were principally derived from the Company's updated long-term financial forecast, which is developed as part of its strategic planning cycle conducted annually during the middle of the third quarter. This updated long-term financial forecast represents the best estimate that the Company has at this time and the Company believes that its underlying assumptions are reasonable based primarily on current product performance and customer acceptance. The underlying assumptions contemplate increased market share substantially above current levels and to levels greater than the Company has achieved since 2000, continued improvement to gross margins and managing operating expenses at current levels. This forecast relies primarily on market assumptions and market share Axcelis expects to achieve. However, actual performance in the near-term and longer-term could be materially different from these forecasts, which could impact future estimates of undiscounted cash flows and may result in the impairment of the carrying amount of long-lived assets. This could be caused by events such as strategic decisions made in response to economic and competitive conditions, the impact of the economic environment on the Company's customer base, or a material negative change in its relationships with significant customers. Accordingly, the Company will continue to perform this analysis no less than quarterly for the foreseeable future.

**Note 4. Stock-Based Compensation****2000 Stock Plan**

The Company maintains the Axcelis Technologies, Inc. 2000 Stock Plan (the "2000 Plan"), a stock award and incentive plan which permits the issuance of options, restricted stock, restricted stock units and performance awards to selected employees, directors and consultants of the Company. The Company also maintains the Axcelis Technologies, Inc. Employee Stock Purchase Plan (the "ESPP"), an Internal Revenue Code Section 423 plan. The 2000 Plan and the ESPP are more fully described in Note 15 to the consolidated financial statements in our 2007 Annual Report on Form 10-K.

The Company recognized stock-based compensation expense of \$1.9 million and \$4.1 million for the three and nine months ended September 30, 2008, respectively. For the three and nine months ended September 30, 2007, the Company recognized stock-based compensation expense of \$1.9 million and \$4.3 million, respectively. These amounts include the impact of recognizing compensation expense related to restricted stock units, restricted stock, non-qualified stock options and stock offered under the ESPP.

## Axcelis Technologies, Inc.

## Notes To Consolidated Financial Statements (Unaudited) (Continued)

(All tabular amounts in thousands, except per share amounts)

**Note 5. Net Income Per Share**

SFAS No. 128, "Earnings Per Share," requires two presentations of earnings per share, "basic" and "diluted." Basic earnings per share is computed by dividing income 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 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 had been issued.

For purposes of computing diluted earnings per share, weighted average common shares outstanding do not include stock options and restricted stock awards with an exercise price inclusive of unrecognized compensation expense which exceeded the average fair market value of the Company's common stock for the period, as the effect would be anti-dilutive. The Company has excluded 0.1 million and 0.2 million incremental shares attributable to restricted stock, restricted stock units and outstanding stock options for the three and nine months ended September 30, 2008, respectively, as their effect would be anti-dilutive. The Company has excluded 0.1 million and 0.6 million incremental shares attributable to restricted stock, restricted stock units and outstanding stock options for the three and nine months ended September 30, 2007, respectively, as their effect would be anti-dilutive. In addition, 4.1 million shares of common stock for the assumed conversion of the Company's convertible debt for the three and nine months ended September 30, 2008, and 4.0 million shares of common stock for the assumed conversion of the Company's convertible debt for the three and nine months ended September 30, 2007, respectively, computed using the if converted method, were excluded from the computation of diluted earnings per share as the effect of conversion would be anti-dilutive. These stock options, restricted stock awards, and conversions could, however, become dilutive in future periods.

A reconciliation of net income and shares used in computing basic and diluted earnings per share follows:

	Three months ended September 30,		Nine months ended September 30,	
	2008	2007	2008	2007
	(In thousands, except per share data)			
Loss available to common stockholders	\$ (24,741)	\$ (8,197)	\$ (55,218)	\$ (780)
Weighted average common shares outstanding used in computing basic net loss per share	103,002	102,206	102,635	101,772
Incremental shares	—	—	—	—
Weighted average common shares outstanding used in computing diluted net loss per share	103,002	102,206	102,635	101,772
Net loss per share				
Basic	\$ (0.24)	\$ (0.08)	\$ (0.54)	\$ (0.01)
Diluted	(0.24)	(0.08)	(0.54)	(0.01)

**Axcelis Technologies, Inc.**

**Notes To Consolidated Financial Statements (Unaudited) (Continued)**

(All tabular amounts in thousands, except per share amounts)

**Note 6. Comprehensive Income (loss)**

The components of comprehensive income (loss) follow:

	Three months ended		Nine months ended	
	September 30,		September 30,	
	2008	2007	2008	2007
	(in thousands)			
Net loss	\$(24,741)	\$(8,197)	\$(55,218)	\$ (780)
Other comprehensive income (loss):				
Foreign currency translation adjustments	(5,961)	10,169	3,227	6,341
Unfunded pension liability of SEN	(638)	—	(638)	—
Unrealized gain on marketable securities	—	—	—	4
Comprehensive income (loss)	<u>\$(31,340)</u>	<u>\$ 1,972</u>	<u>\$(52,629)</u>	<u>\$5,565</u>

**Note 7. Inventories**

The components of inventories follow:

	September 30,	December 31,
	2008	2007
	(in thousands)	
Raw materials	\$ 98,954	\$ 95,289
Work-in-process	44,166	41,018
Finished goods (completed systems)	33,892	32,971
	<u>\$ 177,012</u>	<u>\$ 169,278</u>

Inventories are carried at the lower of cost, determined using the first-in, first-out (FIFO) method, or market. The Company periodically reviews its inventories and makes provisions as necessary for estimated obsolescence or damaged goods to ensure values approximate the lower of cost or market. The amount of such markdowns is equal to the difference between cost of inventory and the estimated market value based upon assumptions about future demands, selling prices, and market conditions.

Axcelis records an allowance for estimated excess and obsolete inventory. The allowance is determined using management's assumptions of materials usage, based on estimates of demand and market conditions. If actual market conditions become less favorable than those projected by management, additional inventory write-downs may be required. The Company believes that existing inventory balances will be used or sold in the normal course of business.

Approximately \$83.0 million and \$75.9 million of inventory at September 30, 2008 and December 31, 2007, respectively, relates to the Optima product family.

**Axcelis Technologies, Inc.**

**Notes To Consolidated Financial Statements (Unaudited) (Continued)**

**(All tabular amounts in thousands, except per share amounts)**

**Note 8. Other Assets**

Included in amounts reported as other assets are the net book value of products manufactured by the Company for internal use as follows:

	September 30, 2008	December 31, 2007
	(in thousands)	
Cost	\$ 86,768	\$ 82,447
Accumulated amortization	(56,510)	(48,138)
	\$ 30,258	\$ 34,309

Approximately \$23.9 million, net, and \$26.4 million, net, of the internal use assets as of September 30, 2008 and December 31, 2007, respectively, are dedicated to the Optima family of products. As discussed in Note 3, at September 30, 2008 the Company concluded that long-lived assets including products manufactured by the Company for internal use were not impaired.

**Note 9. Restructuring Charges**

In May 2008, the Company implemented a reduction in force as part of planned actions taken by management to control costs to provide future profitability and conserve cash. This reduction in force resulted in a total charge to expense of approximately \$3.7 million principally for separation and outplacement costs, of which \$3.4 million has been recognized as expense through September 30, 2008. The remaining \$0.3 million is expected to be recognized in the fourth quarter of 2008. A total of \$3.4 million has been paid through September 30, 2008. Substantially all payments related to these actions are expected to be completed in 2008.

In October 2007, the Company implemented a reduction in force as part of management's efforts to control costs. This reduction in force resulted in a total charge to expense of approximately \$2.6 million related to separation and outplacement costs, of which \$2.5 million was recorded in 2007 and \$0.1 million was recorded in the period ended March 31, 2008. A total of \$2.4 million has been paid through September 30, 2008. Substantially all payments related to these actions are expected to be completed in 2008.

Changes in the Company's restructuring liability, which consists primarily of severance and related costs, included in amounts reported as other current liabilities, follows:

Balance at December 31, 2007	\$ 916
Restructuring expense	3,512
Cash payments	(4,099)
Balance at September 30, 2008	\$ 329

**Note 10. Product Warranty**

The Company offers a one to three year warranty for all of its products, 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

## Axcelis Technologies, Inc.

## Notes To Consolidated Financial Statements (Unaudited) (Continued)

(All tabular amounts in thousands, except per share amounts)

**Note 10. Product Warranty (Continued)**

systems revenue attributable to the fair value of non-standard warranty. Revenue for non-standard warranty is recognized ratably over the applicable warranty period. 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.

Changes in the Company's product warranty liability are as follows:

	Nine months ended September 30,	
	2008	2007
	(in thousands)	
Balance at December 31	\$ 6,245	\$ 6,472
Warranties issued during the period	2,124	5,467
Settlements made during the period	(4,418)	(4,610)
Changes in liability for pre-existing warranties during the period	(163)	(558)
Balance at September 30	<u>\$ 3,788</u>	<u>\$ 6,771</u>
Amount classified as current	\$ 3,166	\$ 4,989
Amount classified as long-term	622	1,782
Balance at September 30	<u>\$ 3,788</u>	<u>\$ 6,771</u>

**Note 11. Convertible Subordinated Debt and Revolving Credit Facility**

We have issued an aggregate of \$75 million of 4.25% Convertible Senior Subordinated Notes due January 15, 2009 (the "Senior Subordinated Notes"). At maturity, we will be required to repay the outstanding principal of the Senior Subordinated Notes plus a maturity premium of 11.125% of such principal (a total of approximately \$84 million), resulting in an effective annual yield to maturity of approximately 8.0%.

The principal amount of the Senior Subordinated Notes, together with the accreted portion of the maturity premium, which increases over the term of the notes, as of the conversion date, are convertible at the option of the holder, at any time on or prior to maturity, into shares of the Company's common stock at a conversion price equal to \$20.00 per share, subject to adjustment in certain circumstances. In addition, debt issuance costs of approximately \$0.2 million related to the Senior Subordinated Notes are being amortized to interest expense over the term of the Senior Subordinated Notes.

On April 23, 2008, the Company entered into a revolving credit facility with a bank that provides for borrowings up to the lesser of (A) \$50 million or (B) specified percentages of the amounts of qualifying accounts receivable and inventory. Presently, the Company's 2008 forecast does not anticipate drawing down on the facility because the Company is not currently, and does not expect to become, in compliance with the financial covenants under this facility. This facility expires in April 2010. If the Company terminates this revolving credit facility prior to its expiration, we will have to pay an early termination fee of approximately \$1.0 million at the date of termination.

**Axcelis Technologies, Inc.**

**Notes To Consolidated Financial Statements (Unaudited) (Continued)**

**(All tabular amounts in thousands, except per share amounts)**

**Note 11. Convertible Subordinated Debt and Revolving Credit Facility (Continued)**

As discussed in Note 1, the Company will require financing to repay the Senior Subordinated Notes and is seeking to address its current financing requirements through a combination of a sale-leaseback of the Company's headquarters and manufacturing facility located in Beverly, Massachusetts, and a secured loan facility with one or more lenders.

See Note 1 for discussion of liquidity and financing alternatives.

**Note 12. Cash Equivalents**

Effective January 1, 2008, certain cash equivalents carried by the Company are subject to the provisions of SFAS 157, *Fair Value Measurement*. Under SFAS 157, the Company is required to measure the fair value of its financial assets using a three-tier fair value hierarchy. Based on this hierarchy, the Company determined the fair value of its money market funds using quoted market prices, a Level 1 observable input as defined under SFAS 157. As of September 30, 2008, the Company's cash equivalents consisted entirely of money market funds and certificates of deposits with a fair value of approximately \$34.1 million.

**Note 13. Income Taxes**

Income tax expense relates principally to operating results of foreign entities in jurisdictions, primarily in Asia, where the company earns taxable income. The Company has significant net operating losses in the United States and certain foreign tax jurisdictions and, as a result, does not pay significant income taxes in those jurisdictions. Accordingly, our effective income tax rate is not meaningful.

**Note 14. Significant Customers**

In the three months ended September 30, 2008, no single customer accounted for more than 10% of revenue. In the nine months ended September 30, 2008, one customer accounted for approximately 13% of revenue. In the three months ended September 30, 2007, two customers accounted for approximately 16% and 10% of revenue, respectively. In the nine months ended September 30, 2007, two customers accounted for approximately 12% and 10% of revenue, respectively.

**Note 15. Contingencies**

**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.

**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

**Axcelis Technologies, Inc.**

**Notes To Consolidated Financial Statements (Unaudited) (Continued)**

**(All tabular amounts in thousands, except per share amounts)**

**Note 15. Contingencies (Continued)**

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.

**Note 16. Subsequent Events**

In October of 2008 the Company implemented a reduction in force to further control costs in the face of industry fundamentals that continued to deteriorate. This reduction will result in a restructuring charge to expense of approximately \$3.9 million principally for separation and outplacement costs, most of which will be recorded in the fourth quarter of 2008 and the remainder in the first quarter of 2009.

**Note 17. Recent Accounting Pronouncements**

In September 2006, the Financial Accounting Standards Board (FASB) issued SFAS No. 157, *Fair Value Measurement*. SFAS No. 157 defines fair value, establishes a framework for measuring fair value in generally accepted accounting principles and establishes a hierarchy that categorizes and prioritizes the sources to be used to estimate fair value. SFAS No. 157 also expands financial statement disclosures about fair value measurements. On February 6, 2008, the FASB issued FASB Staff Position (FSP) 157-b, which delayed the effective date of SFAS No. 157 for one year for all nonfinancial assets and nonfinancial liabilities, except those that are recognized or disclosed at fair value in the financial statements on a recurring basis (at least annually). SFAS No. 157 and FSP 157-b are effective for financial statements issued for fiscal years beginning after November 15, 2007. We have elected a partial deferral of SFAS No. 157 under the provisions of FSP 157-b related to the measurement of fair value used when evaluating goodwill, other intangible assets and other long-lived assets for impairment and valuing asset retirement obligations and liabilities for exit or disposal activities. The impact of partially adopting SFAS No. 157 effective January 1, 2008 was not material to our consolidated financial statements.

In February 2007, the FASB issued SFAS No. 159, *The Fair Value Option for Financial Assets and Financial Liabilities—Including an Amendment of SFAS 115*, which permits but does not require us to measure financial instruments and certain other items at fair value. Unrealized gains and losses on items for which the fair value option has been elected are reported in earnings. This statement is effective for financial statements issued for fiscal years beginning after November 15, 2007. As we have not elected to fair value any of our financial instruments under the provisions of SFAS No. 159, the adoption of this statement has not had any impact to our consolidated financial statements.

In December 2007, the FASB issued SFAS No. 141(R) *Business Combinations*. This statement applies to all transactions or other events in which an entity (the acquirer) obtains control of one or more businesses (the acquiree), including those sometimes referred to as "true mergers" or "mergers of equals" and combinations achieved without the transfer of consideration, for example, by contract alone or through the lapse of minority veto rights. This statement applies to all business entities, including mutual entities that previously used the pooling-of-interests method of accounting for some business combinations. It does not apply to 1) the formation of a joint venture; 2) the acquisition of an asset or a group of assets that does not constitute a business; 3) a combination between entities or businesses under common control; 4) a combination between not-for-profit organizations or the acquisition of a for-profit business by a not-for-profit organization. This statement applies prospectively



**Axcelis Technologies, Inc.**

**Notes To Consolidated Financial Statements (Unaudited) (Continued)**

**(All tabular amounts in thousands, except per share amounts)**

**Note 17. Recent Accounting Pronouncements (Continued)**

to business combinations for which the acquisition date is on or after the beginning of the first annual reporting period beginning on or after December 15, 2008. An entity may not apply it before that date.

The effective date of this statement is the same as that of the related SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements*. The adoption of SFAS No. 141(R) is not expected to have a material impact on the Company's financial position, results of operations or liquidity.

In December 2007, the FASB issued SFAS No. 160, *Noncontrolling Interests in Consolidated Financial Statements, an Amendment to ARB No. 51*. This statement applies to all entities that prepare consolidated financial statements, except not-for-profit organizations, but will affect only those entities that have an outstanding noncontrolling interest in one or more subsidiaries or that deconsolidate a subsidiary. This statement is effective for fiscal years, and interim periods within those fiscal years, beginning on or after December 15, 2008 (that is, January 1, 2009, for entities with calendar year-ends). Earlier adoption is prohibited. The effective date of this statement is the same as that of the related SFAS No. 141(R). The adoption of SFAS No. 160 is not expected to have a material impact on the Company's financial position, results of operations or liquidity.

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

Certain statements in "Management's Discussion and Analysis of Financial Condition and Results of Operations" are forward-looking statements that involve risks and uncertainties. Words such as may, will, should, would, anticipates, expects, intends, plans, believes, seeks, estimates and similar expressions identify such forward-looking statements. The forward-looking statements contained herein are based on current expectations and entail various risks and uncertainties that could cause actual results to differ materially from those expressed in such forward-looking statements. Factors that might cause such a difference include, among other things, those set forth under or referred to in "Liquidity and Capital Resources" and "Risk Factors" and those appearing elsewhere in this Form 10-Q. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date hereof. We assume no obligation to update these forward-looking statements to reflect actual results or changes in factors or assumptions affecting forward-looking statements.

### Overview

Axcelis Technologies, Inc. ("Axcelis," "we," "us," or "our"), is a producer of ion implantation and dry strip equipment used in the fabrication of semiconductors in the United States, Europe and Asia. In addition, we provide extensive aftermarket service and support, including spare parts, equipment upgrades, and maintenance services. We own 50% of the equity of a joint venture known as SEN Corporation, an SHI and Axcelis Company, or "SEN," with Sumitomo Heavy Industries, Ltd. ("SHI") in Japan. SEN licenses technology from us relating to the manufacture of specified ion implantation products and has exclusive rights to manufacture and sell these products in the territory of Japan. SEN is the leading producer of ion implantation equipment in Japan.

The semiconductor capital equipment industry is subject to significant cyclical swings in capital spending by semiconductor manufacturers. Capital spending is influenced by demand for semiconductors and the products using them, the utilization rate and capacity of existing semiconductor manufacturing facilities and changes in semiconductor technology, all of which are outside of our control. As a result, our revenues and gross margins, to the extent affected by increases or decreases in volume, could fluctuate from year to year and period to period. The industry experienced a downturn beginning in the second half of 2007, which has continued throughout 2008. Our gross margins are also affected by the introduction of new products. We typically become more efficient in manufacturing products as they mature. Our operating expense base is largely fixed and does not vary significantly with changes in volume. Therefore, we could experience fluctuations in operating results and cash flows depending on our revenues as driven by the level of capital expenditures by semiconductor manufacturers.

The sizable expense of building, upgrading or expanding a semiconductor fabrication facility is increasingly causing semiconductor companies to contract with foundries to manufacture their semiconductors. In addition, consolidation and partnering within the semiconductor manufacturing industry is increasing. We expect these trends to continue to reduce the number of our potential customers. This growing concentration of Axcelis' customers may increase competitive pricing as higher percentages of our total revenues are tied to the buying decisions of a particular customer or a small number of customers.

In the first three quarters of fiscal 2008, the last two quarters of fiscal 2007 and for the entire fiscal year 2007, we have incurred net losses. Beginning in 2004, most customers shifted from multi wafer tools to single wafer tools for high current ion implant applications. Because we did not have a single wafer high current product, we have experienced a significant loss of market share which we have yet to regain. Our reported net losses for the past several quarters are attributable to our loss of market share coupled with the industry downturn discussed previously. We introduced our single wafer Optima HD (for high current applications) product in 2006 and have begun to gain acceptance of this product at several customers. We believe that the Optima product line represents a viable offering to

our existing customer base that will allow us to regain market share when our customers begin to add production capacity and the overall market recovers. During the nine months ended September 30, 2008, we recognized revenue of approximately \$18.1 million on sales of the Optima HD. As of September 30, 2008, total amounts included in inventory, other current assets and internal use assets related to our investment in the Optima product line approximated \$111.4 million.

During September of, 2008, our stock price dropped significantly below book value. Investor concerns about our ability to repay outstanding debt in 2009 and our ability to generate sufficient cash flows to support ongoing operations have adversely impacted our stock price. In concert with the market uncertainty resulting from the current credit crisis, we believe that declining business and consumer confidence and increased unemployment have precipitated an economic slowdown and fears of a long recession. An economic downturn characterized by higher unemployment, lower family income, lower corporate earnings, lower business investment and lower consumer spending, has severely impacted many technology manufacturers and has significantly lowered the demand for our products. In concert with these factors, as mentioned above, we have lost significant market share in high current ion implant (the largest market segment in ion implant) over the past several years. We believe that we now have competitive products in the high current and high energy ion implant market segments, as well as in dry strip. However, challenging market conditions have severely limited our ability to increase sales and market share. The Company believes that a combination of these factors accounts for the difference between our stock trading price and our book value.

Continuing capital market upheavals may have an adverse effect on us because we are dependent on customer behavior. Our revenues are likely to continue to decline in such circumstances and our profit margins will continue to erode. In addition, in the event of extreme prolonged events, such as the global credit crisis, we could incur significant losses. Factors such as consumer spending, business investment, and the volatility and strength of the capital markets all affect the business and economic environment, and, ultimately, the amount and profitability of our business. Continuing adverse trends in the economy are likely to affect our earnings negatively and to have a material adverse effect on our business, results of operations and financial condition.

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

### **Critical Accounting Estimates**

Management's discussion and analysis of our financial condition and results of operations 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, revenues and expenses, and related disclosure of contingent assets and liabilities. On an on-going basis, we evaluate our estimates, including those related to revenue recognition, income taxes, intangibles, accounts receivable, inventory and warranty obligations. Management bases its estimates 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.

The critical accounting estimates are those that we believe are the more significant judgments and estimates used in the preparation of our condensed consolidated financial statements. Our critical accounting estimates are described in our Management's Discussion and Analysis of Financial Condition and Results of Operations and in the Notes to the consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2007. For the third quarter of fiscal 2008, we believe that the following critical accounting estimates significantly affected our estimates and judgments in the preparation of our consolidated financial statements.

### *Inventory Valuation*

At each balance sheet date, we evaluate our ending inventories for excess quantities and obsolescence. This evaluation includes analysis of sales levels by product and projections of future demand. These projections assist us in determining the carrying value of our inventory and are also used for near-term factory production planning. Generally, inventories on hand in excess of historical usage or forecasted demand are not valued. In addition, we write off inventories that are considered obsolete. Among other factors, management considers forecasted demand in relation to the inventory on hand, competitiveness of product offerings, market conditions and product life cycles when determining obsolescence and net realizable value. We adjust remaining specific inventory balances to approximate the lower of our manufacturing cost or market value. If actual future demand or market conditions are less favorable than our projections as forecasted, additional inventory write-downs may be required and would be reflected in cost of sales in the period the revision is made. This would have a negative impact on our gross margin in that period. If in any period we are able to sell inventories that were not valued or that had been written off in a previous period, related revenues would be recorded without any offsetting charge to cost of sales, resulting in a net benefit to our gross margin in that period.

### *Goodwill*

In accordance with SFAS No. 142, *Goodwill and Other Intangible Assets*, we are required to review goodwill for impairment at least annually or more often if there are indicators of impairment present. Historically, we have performed our annual impairment analysis during the fourth quarter of each year. As a result of current economic conditions, coupled with our stock trading at a price below book value, we now perform our impairment test no less frequently than quarterly. The provisions of SFAS 142 require that a two-step impairment test be performed for goodwill. In the first step, we will compare the fair value of the reporting unit to which goodwill has been allocated to its carrying value. If the fair value of the reporting unit exceeds the carrying value of the net assets assigned to that unit, goodwill is considered not impaired and we are not required to perform further testing. If the carrying value of the net assets assigned to the reporting unit exceeds the fair value of the reporting unit, then we must perform the second step of the impairment test and determine the implied fair value of the reporting unit's goodwill. If the carrying value of a reporting unit's goodwill exceeds its implied fair value, then we would record an impairment loss equal to the difference.

Determining the number of reporting units and the fair value of a reporting unit requires us to make judgments and involves the use of significant estimates and assumptions. These estimates and assumptions include revenue growth rates and operating margins used to calculate projected future cash flows, risk-adjusted discount rates, future economic and market conditions and determining appropriate market comparables. We believe these assumptions to be reasonable but actual conditions are unpredictable and inherently uncertain. Actual future results may differ from our estimates.

As discussed in Note 2 to the consolidated financial statements, during the quarter we conducted analyses of the potential impairment of goodwill and concluded that this asset was not impaired at September 30, 2008. We will continue to perform these analyses on a quarterly basis for the foreseeable future.

### *Impairment of Long-Lived Assets*

We consider no less frequently than quarterly whether indicators of impairment of long-lived assets are present. These indicators may include, but are not limited to, significant decreases in the market value of an asset, significant changes in the extent or manner in which an asset is used and instances where our stock price trades at a price below our book value. If these or other indicators are present, we determine whether the estimated undiscounted cash flows attributable to the assets in question are less than their carrying value. If less, we would recognize an impairment loss based on the excess of the carrying amount of the assets over their respective fair values. Fair value is determined by discounted

future cash flows, appraisals or other methods. If the asset determined to be impaired is to be held and used, we recognize an impairment loss through a charge to our operating results which also reduces the carrying basis of the related asset(s). The new carrying value of the related asset(s) is depreciated over the remaining estimated useful life of the asset(s). We may incur impairment losses in future periods if factors influencing our estimates of the undiscounted cash flows change.

As discussed in Note 3 to the consolidated financial statements, during the quarter we conducted analyses of the potential impairment of long-lived assets and concluded that these assets were not impaired. We will continue to perform these analyses on a quarterly basis for the foreseeable future.

## Results of Operations

The following table sets forth our results of operations as a percentage of revenue for the periods indicated:

	Three months ended September 30,		Nine months ended September 30,	
	2008	2007	2008	2007
Revenue				
Product	69.9%	85.5%	78.5%	84.9%
Service	28.4	13.2	19.9	13.6
Royalties, primarily from SEN	1.7	1.3	1.6	1.5
	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>	<u>100.0</u>
Cost of revenue				
Product	49.0	57.3	54.2	53.2
Service	14.1	9.0	10.5	8.4
	<u>63.1</u>	<u>66.3</u>	<u>64.7</u>	<u>61.6</u>
Gross profit	36.9	33.7	35.3	38.4
Other costs and expenses				
Research and development	34.2	17.1	23.9	17.2
Sales and marketing	26.6	11.5	17.7	12.2
General and administrative	22.7	9.6	15.0	9.8
Impairment of goodwill	—	4.3	—	1.5
Amortization of intangible assets	1.4	0.6	0.9	0.6
Restructuring	1.0	—	1.7	—
	<u>85.9</u>	<u>43.1</u>	<u>59.2</u>	<u>41.3</u>
Loss from operations	(49.0)	(9.4)	(23.9)	(2.9)
Other income (expense)				
Equity income of SEN	(2.1)	1.7	(0.5)	2.6
Interest income	0.7	1.1	0.7	1.2
Interest expense	(3.7)	(1.5)	(2.4)	(1.5)
Other-net	1.6	0.2	0.1	0.2
	<u>(3.5)</u>	<u>1.5</u>	<u>(2.1)</u>	<u>2.5</u>
Loss before income taxes	(52.5)	(7.9)	(26.0)	(0.4)
Income taxes (credits)	0.8	(0.3)	0.5	(0.2)
Net loss	<u>(53.3)%</u>	<u>(7.6)%</u>	<u>(26.5)%</u>	<u>(0.2)%</u>

**Three and nine months ended September 30, 2008 in comparison to the three and nine months ended September 30, 2007**

**Revenue**

*Product*

Product revenue, which includes systems sales, sales of spare parts and product upgrades was \$32.5 million, or 69.9% of revenue for the three months ended September 30, 2008, compared with \$92.0 million, or 85.5% of revenue for the three months ended September 30, 2007. Product revenue was \$163.5 million, or 78.5% of revenue for the nine months ended September 30, 2008, compared with \$267.5 million, or 84.9% of revenue for the nine months ended September 30, 2007. Product revenue levels in 2007 and 2008 have been impacted by the Company's low level high current market share. The decline in product revenue in both the three and nine month periods ended September 30, 2008 is attributable to a weakening semiconductor market and a related decrease in capital spending by semiconductor manufacturers.

A portion of the Company's revenue from system sales is deferred until installation and other services related to future deliverables are performed. The total amount of deferred revenue at September 30, 2008 and 2007 was \$18.4 million and \$40.5 million, respectively.

*Service*

Service revenue, which includes the labor component of maintenance and service contracts and service hours provided by on-site service personnel, was \$13.2 million, or 28.4% of revenue for the three months ended September 30, 2008, compared with \$14.2 million, or 13.2% of revenue, for the three months ended September 30, 2007. Service revenue was \$41.4 million, or 19.9% of revenue for the nine months ended September 30, 2008, compared with \$42.8 million, or 13.6% of revenue, for the nine months ended September 30, 2007. Although service revenue generally increases with the expansion of the installed base of systems, it can fluctuate period to period based on capacity utilization at customers' manufacturing facilities, which affects the need for equipment service.

*Ion Implant*

The largest portion of the Company's product and service revenues are derived from ion implantation products and services, which typically average from 70% to 80% of total revenues. During the three months ended September 30, 2008, revenue from sales of ion implantation products and service accounted for \$36.8 million, or 79.1% of total revenue, compared with \$80.5 million, or 74.8%, of total revenue in the three months ended September 30, 2007. Revenue from sales of ion implantation products and service accounted for \$170.6 million, or 81.9% of revenue in the nine months ended September 30, 2008, compared with \$232.5 million, or 73.8% of revenue in the nine months ended September 30, 2007. The remainder of the Company's revenue derives from the sale of products and services relating to dry strip and other processing equipment.

*Aftermarket*

The Company's product revenues include sales of spare parts and product upgrades as well as complete systems. We refer to the business of selling spare parts and product upgrades, combined with the sale of maintenance labor and service contracts and service hours as the "aftermarket" business. The revenue from our aftermarket business was \$36.8 million for the three month period ended September 30, 2008, compared to \$43.2 million for the corresponding period of the preceding year. The revenue from our aftermarket business was \$115.7 million for the nine month period ended September 30, 2008, compared to \$128.8 million for nine month period ended September 30, 2007. Aftermarket revenue generally increases with expansion of the installed base of systems but can

fluctuate period to period based on capacity utilization at customers' manufacturing facilities which affects the sale of spare parts and demand for equipment service.

#### *Royalties*

Royalty revenue was \$0.8 million, or 1.7% of revenue for the three months ended September 30, 2008, compared with \$1.4 million, or 1.3% of revenue for the three months ended September 30, 2007. Royalty revenue for the nine months ended September 30, 2008 was \$3.3 million, or 1.6% of revenue, compared to \$4.9 million, or 1.5% of revenue for the nine months ended September 30, 2007. Royalties are primarily earned under the terms of our license agreement with SEN. Revenue changes are mainly attributable to fluctuations in SEN sales volume based on demand for equipment by Japanese semiconductor manufacturers and the timing of shipments in Japan.

#### **Gross Profit**

##### *Product*

Gross profit from product revenue was 30.0% for the three months ended September 30, 2008, compared to 33.1% for the three months ended September 30, 2007. The three percent decrease in gross profit from product revenues is attributable to the significantly lower systems sales volume during the current quarter, which was coupled with significant revenue deferrals creating close to break-even margins. These amounts were offset by the favorable impact of an increased mix of parts and upgrade revenue at much higher margins. Gross profit from product revenue was 31.0% for the nine months ended September 30, 2008, compared with 37.3% in the nine months ended September 30, 2007. The decrease in gross profit from product revenues for the nine month period is attributable to lower margins on new product revenue recognized and the impact of operating overheads on lower volumes (14.5% decrease from the prior year), offset by the favorable impact of an increased mix of parts and upgrade revenue at higher margins (8.2% increase from the prior year). Revenue recognized on new products generally carries lower margins than mature products due to higher initial material costs and labor inefficiencies.

##### *Service*

Gross profit from service revenue was 50.3% for the three months ended September 30, 2008, compared to 31.5% for the three months ended September 30, 2007. Gross profit from service revenue was 47.1% for the nine months ended September 30, 2008, compared to 38.3% for the nine months ended September 30, 2007. The increase in gross profit for both the three and nine month periods ended September 30, 2008, is attributable to service pricing increases enacted during the first quarter of 2008 driving a higher mix of profitable service support agreements and lower expenses against fixed price support contracts.

#### **Research and Development**

Research and development expense was \$15.9 million in the three months ended September 30, 2008, a decrease of \$2.4 million, or 13.1%, compared with \$18.3 million in the three months ended September 30, 2007. The decrease was driven primarily by decreased professional fee expenses (\$0.6 million), decreased payroll costs (\$0.8 million) and decreased development material costs (\$1.0 million). Research and development expense was \$49.7 million in the nine months ended September 30, 2008, a decrease of \$4.4 million, or 8.1%, compared with \$54.1 million in the nine months ended September 30, 2007. The decrease was driven primarily by decreased professional fee expenses (\$2.4 million), decreased payroll costs (\$2.3 million) and decreased development material costs (\$0.5 million), offset by development asset amortization and depreciation costs (\$0.8 million). We

expect research and development spending to decline slightly throughout 2008 as development costs for new products drop off and are replaced by a lower level of spending for continuous improvement.

Research and development expense was attributable to the following activities through the third quarter of 2008: 47% for new product development, 35% for improvement of existing products, and 18% for product testing.

### **Sales and Marketing**

Sales and Marketing expense was \$12.4 million in the three months ended September 30, 2008, which is flat as compared with \$12.4 million in the three months ended September 30, 2007. The activity from quarter to quarter related primarily to decreased payroll and related costs (\$1.0 million), decreased marketing costs (\$0.2 million) and decreased commissions (\$0.2 million), offset by increased evaluation system costs (\$1.4 million). Selling expense was \$36.8 million in the nine months ended September 30, 2008, a decrease of \$1.7 million, or 4.5%, compared with \$38.5 million in the nine months ended September 30, 2007. The decrease was driven primarily by decreased travel costs (\$0.7 million), decreased separation costs (\$0.6 million), decreased payroll costs (\$1.2 million), and decreased commissions and bonuses expenses (\$0.6 million), offset partially by increased evaluation system costs (\$1.4 million).

### **General and Administrative**

General and administrative expense was \$10.6 million in the three months ended September 30, 2008, an increase of \$0.2 million, or 1.9%, compared with \$10.4 million in the three months ended September 30, 2007. The increase was driven primarily by increased legal fee expenses (\$0.5 million), offset by decreased separation costs (\$0.2 million) and decreased travel costs (\$0.1 million). General and administrative expense was \$31.3 million in the nine months ended September 30, 2008, an increase of \$0.2 million, or 0.6%, compared with \$31.1 million in the nine months ended September 30, 2007. Increased legal and professional fee expenses (\$1.7 million) were offset by decreased payroll related costs (\$0.8 million), decreased lease, travel, utilities, sales tax and insurance expense (\$0.5 million), and lower depreciation expense (\$0.2 million).

### **Restructuring Charges**

In May 2008, the Company implemented a reduction in force as part of planned actions taken by management to control costs to provide future profitability and conserve cash. This reduction in force resulted in a total charge to expense of approximately \$3.7 million principally for separation and outplacement costs, of which \$3.4 million has been recognized as expense through September 30, 2008. The remaining \$0.3 million is expected to be recognized in the fourth quarter of 2008. A total of \$3.4 million has been paid through September 30, 2008. Substantially all payments related to these actions are expected to be completed in 2008.

In October 2007, the Company implemented a reduction in force as part of management's efforts to control costs. This reduction in force resulted in a total charge to expense of approximately \$2.6 million related to separation and outplacement costs, of which \$2.5 million was recorded in 2007 and \$0.1 million was recorded in the period ended March 31, 2008. A total of \$2.4 million has been paid through September 30, 2008. Substantially all payments related to these actions are expected to be completed in 2008.

### **Other Income (Expense)**

Equity income (loss) attributable to SEN was \$(1.0) million and \$(1.1) million for the three and nine months ended September 30, 2008, respectively. This is compared to equity income attributable to SEN of \$1.8 million and \$8.3 million for the three and nine months ended September 30, 2007,



respectively. The fluctuations in equity income from SEN reflect changes in its sales volume and net income resulting from demand changes in the weakening Japanese semiconductor market, and the timing of revenue recognition in Japan.

Interest income of \$0.3 million and \$1.4 million for the three and nine months ended September 30, 2008, respectively, primarily relates to interest earned on cash, cash equivalents and short-term investments. Interest income decreased by \$0.9 million and \$2.4 million from the three and nine months ended September 30, 2007, respectively, due primarily to lower average cash balances.

Interest expense of \$1.7 million and \$5.0 million in the three and nine months ended September 30, 2008, respectively, an increase of \$0.1 million and \$0.2 million over the three and nine months ended September 30, 2007, respectively, relates primarily to outstanding convertible senior subordinated notes which have an effective yield to maturity of 8%.

### **Income Taxes**

Income tax expense was \$0.4 million and \$1.1 million for the three and nine months ended September 30, 2008, respectively. Income tax expense relates principally to operating results of foreign entities in jurisdictions, principally in Asia, where we earn taxable income.

Income tax credits were \$(0.3) million and \$(0.5) million in the three and nine months ended September 30, 2007. During the three month period ended September 30, 2007, we recorded tax benefits related to the realization of foreign tax credits, which allowed the Company to recover approximately \$1.2 million in tax refunds of amounts paid for alternative minimum taxes remitted for tax years 2004 through 2007.

We have significant net operating loss carryforwards in the United States and certain foreign jurisdictions, principally Europe, and, as a result, we do not currently pay significant income taxes in those jurisdictions and we do not recognize the tax benefit for such losses. Accordingly, our effective income tax rate is not meaningful.

### **Liquidity and Capital Resources**

Axcelis' liquidity is affected by many factors. Some of these factors are based on Axcelis' particular business, including acceptance of the Optima product line, and others relate to the uncertainties of global economies and the semiconductor equipment industry. During the first nine months of 2008, the Company experienced negative cash flows from operations and as of September 30, 2008, the Company had approximately \$62.9 million of cash and cash equivalents.

Unrestricted cash, cash equivalents, and marketable securities at September 30, 2008 were \$49.7 million, compared with \$83.9 million at December 31, 2007. The \$34.2 million decrease in unrestricted cash, cash equivalents, and short-term investments is mainly attributable to cash used by operations of \$34.0 million. At September 30, 2008, we had outstanding standby letters of credit, bank guarantees and surety bonds in the amount of \$17.9 million to support certain operating lease obligations, workers' compensation insurance, and certain value added tax claims in Europe of which, \$12.6 million at September 30, 2008 was supported by cash pledged as collateral. This pledged cash is reflected as restricted cash on the consolidated balance sheet. At October 31, 2008, unrestricted cash, cash equivalents, and marketable securities were \$44.7 million.

Capital expenditures were \$3.0 million and \$8.4 million for the nine months ended September 30, 2008 and 2007, respectively. We have no significant capital projects planned for the remainder of 2008 and total capital expenditures for 2008 are projected to be less than \$4.0 million. Future capital expenditures beyond 2008 will depend on a number of factors, including the timing and rate of expansion of our business.

We have net operating loss and tax credit carryforwards the tax effect of which aggregate \$86.7 million at December 31, 2007. These carryforwards, which expire principally between 2021 and 2027, are available to reduce future income tax liabilities in the United States and certain foreign jurisdictions.

We receive annual dividends from SEN Corporation, an SHI and Axcelis Company, a Japanese joint venture of which the Company owns half of the outstanding shares. We have an agreement with Sumitomo Heavy Industries, Ltd., the other shareholder of SEN, to instruct SEN to dividend 40% of SEN's annual net earnings. Under this agreement, Axcelis received approximately \$12.4 million in dividends from SEN in 2007 (representing dividends for SEN's fiscal years ended March 31, 2006 and March 31, 2007) and, in 2008, a dividend of \$2.0 million for SEN's fiscal year ended March 31, 2008. The dividends from SEN will be impacted by SEN's financial performance, and the Company does not expect to receive a substantial dividend in 2009 reflecting SEN's net earnings for its fiscal year ending March 31, 2009.

As discussed in Note 11 to the consolidated financial statements accompanying this Form 10-Q, the Company has issued an aggregate of \$75 million principal amount of Senior Subordinated Notes, which are due on January 15, 2009. At maturity, the Company is required to repay the outstanding principal of the Senior Subordinated Notes, plus a maturity premium of 11.125% of such principal, resulting in an effective annual yield to maturity of approximately 8.0%. The amount due in January 2009 relating to the Senior Subordinated Notes is approximately \$84 million. At September 30, 2008, the Senior Subordinated Notes are classified as current liabilities.

The Company anticipates continued cash outflows in the fourth quarter of 2008, and believes it will need to preserve existing cash and cash equivalents to support operations. The Company expects that existing cash and cash equivalents and expected cash flow for the remainder of 2008, based primarily on current expectations of customer orders coupled with enacted cost reducing efforts, will be sufficient to satisfy the Company's anticipated cash requirements for the remainder of 2008. However, the Company will need to secure new financing to repay the Senior Subordinated Notes in January 2009. At maturity, we will be required to repay the outstanding principal of the Senior Subordinated Notes plus a maturity premium of 11.125% of such principal (a total of approximately \$84 million), resulting in an effective annual yield to maturity of approximately 8.0%. The Company is exploring various financing alternatives as discussed below. The amount and timing of the Company's financing needs depends on the accuracy of our assumptions about levels of sales and expenses, and a number of other factors described in "Risk Factors," in the Company's Form 10-K for the year ended December 31, 2007. In addition, should the Company continue to experience losses and negative cash flows from operations, our assets, in particular, inventory, long-lived assets, goodwill and internal use assets may become subject to impairment in future periods.

Currently, the Company is seeking to address its financing requirements through a combination of a sale-leaseback of the Company's headquarters and manufacturing facility located in Beverly, Massachusetts, and a secured loan facility with one or more lenders. The terms of these financing transactions will depend on market conditions and the Company's performance and financial condition. The Company expects that the terms of any new debt financing will be less attractive than the terms of the Senior Subordinated Notes. There can be no assurance that any financing transaction will be completed. If the Company is not able to obtain financing, we will not have sufficient liquid resources to repay the Senior Subordinated Notes when they mature in January 2009. The uncertainty of our ability to secure financing to repay the Senior Subordinated Notes when they mature creates substantial doubt about the Company's ability to continue as a going concern.

In addition, the depressed market conditions and the related negative effect on the Company's ability to generate revenues and positive cash flow could result in the Company not having sufficient cash to fund ongoing operations. The Company's management may seek alternative strategies intended

to improve the Company's cash position. These strategies could include initiating further efforts to restructure the business and reduce the revenue breakeven level and equity financings that could be dilutive to the existing holders of our common stock.

## **Outlook**

Our performance is directly related to semiconductor manufacturers' levels of capital expenditures to open new fabrication facilities and expand existing ones, market acceptance of our products, as well as realizing the benefits of operational improvements we have implemented over the past several years. The level of capital expenditures by these manufacturers depends upon the current and anticipated market demand for semiconductors and the products utilizing them, the available manufacturing capacity in manufacturers' fabrication facilities, and the ability of manufacturers to increase productivity in existing facilities without incurring additional capital expenditures. As discussed previously, the industry has been in a significant downturn since 2007, and we expect continued market weakness during the balance of 2008.

On November 4, 2008, we announced that Axcelis' revenues for the fourth quarter of 2008 are forecast in the range of \$45 million to \$60 million. We expect results of operations will be a loss per share of approximately \$0.24 to \$0.28.

It is difficult to predict our customers' capital spending plans since they can change very quickly. At our current sales level, each sale, or failure to make a sale, could have a material effect on our results of operations in a particular quarter.

**Item 3. Quantitative and Qualitative Disclosures about Market Risk.**

As of September 30, 2008, there have been no material changes to the quantitative and qualitative information about market risk disclosed in Item 7A to our annual report on Form 10-K for the year ended December 31, 2007.

**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 quarterly 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 our third quarter of 2008 that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

## PART II—OTHER INFORMATION

### Item 1. Legal Proceedings.

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. Pending matters that arose outside of the ordinary course of business and which had developments since July 1, 2008 are:

- The purported class action suit filed by Martin Meltzer in February 2008 in Massachusetts Superior Court (Civil Action No. 08-0692-E) has been voluntarily dismissed by the plaintiff.
- The purported class action suit filed by Shirley Simon in February 2008 in Delaware Chancery Court (Case No. 3582) has been voluntarily dismissed by the plaintiff.

### Item 1A. Risk Factors.

As of September 30, 2008, there have been no material changes to the risk factors disclosed in Item 1A to our annual report on Form 10-K for the year ended December 31, 2007.

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

None.

### Item 3. Defaults Upon Senior Securities.

None.

### Item 4. Submission of Matters to a Vote of Security Holders.

Not applicable.

### Item 5. Other Information.

**Amendment and Restatement of the Company's Certificate of Incorporation.** On October 30, 2008, the Company's Board of Directors adopted an amended and restated certificate of incorporation, subject to stockholder approval, providing for the phase out of the Company's classified Board of Directors, commencing in 2010. The adoption of this proposed amended and restated certificate of incorporation will be submitted to the stockholders of the Company at the annual meeting of stockholders to be held in 2009, and, if adopted, shall apply to directors elected at subsequent annual meetings.

**Item 6. Exhibits.**

a) Exhibits are numbered in accordance with the Exhibit Table of Item 601 of Regulation S-K:

<u>Exhibit No</u>	<u>Description</u>
3.1	Amended and Restated Certificate of Incorporation of the Company. Incorporated by reference to Exhibit 3.1 of the Company's Registration Statement on Form S-1 (Registration No. 333-36330).
3.2	Bylaws of the Company, as amended as of August 8, 2007. Incorporated by reference to Exhibit 3.2 of the Company's Form 10-Q for the quarter ended June 30, 2008, filed with the Commission on August 9, 2008.
3.3	Certificate of Designation of Series A Participating Preferred Stock, filed with the Secretary of State of Delaware on July 5, 2000. Incorporated by reference to Exhibit 3.3 of the Company's Form 10-K for the year ended December 31, 2000, filed with the Commission on March 30, 2001.
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 November 10, 2008. 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 November 10, 2008. 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 November 10, 2008. 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 November 10, 2008. Filed herewith.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) 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.

/s/ STEPHEN G. BASSETT

DATED: November 10, 2008

By: Stephen G. Bassett  
*Executive Vice President and Chief Financial Officer*  
*Duly Authorized Officer and Principal Financial Officer*





**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 company as of, and for, the periods presented in this report;
4. The company'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 company 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 company, 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 company'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 company's internal control over financial reporting that occurred during the company'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 company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company'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 company'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: November 10, 2008

/s/ MARY G. PUMA

Mary G. Puma, *Chairman, Chief Executive Officer and President*

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## QuickLinks

[Exhibit 31.1](#)

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

I, Stephen G. Bassett, 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 company as of, and for, the periods presented in this report;
4. The company'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 company 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 company, 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 company'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 company's internal control over financial reporting that occurred during the company'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 company's internal control over financial reporting; and
5. The company's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the company's auditors and the audit committee of the company'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 company'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: November 10, 2008

/s/ STEPHEN G. BASSETT

Stephen G. Bassett, *Executive Vice President and Chief Financial Officer*

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## QuickLinks

[Exhibit 31.2](#)

**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 November 10, 2008.

/s/ MARY G. PUMA

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

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## QuickLinks

[Exhibit 32.1](#)

**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 November 10, 2008.

/s/ STEPHEN G. BASSETT

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Stephen G. Bassett  
*Executive Vice President and Chief Financial Officer of  
Axcelis Technologies, Inc.*

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## QuickLinks

[Exhibit 32.2](#)