

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

**Pursuant to Section 13 or 15(d)
of the Securities Exchange Act of 1934**

Date of Report (Date of earliest event reported): **May 4, 2010**

Axcelis Technologies, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

000-30941
(Commission
File Number)

34-1818596
(IRS Employer
Identification No.)

108 Cherry Hill Drive, Beverly, Massachusetts
(Address of principal executive offices)

01915
(Zip Code)

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

(Former name or former address, if changed since last report.)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 2.02 Results of Operations and Financial Condition

On May 4, 2010, Axcelis Technologies, Inc. (the "Company") issued a press release regarding its financial results for the three months ended March 31, 2010. The Company's press release is attached as Exhibit 99.1 to this Current Report on Form 8-K and incorporated by reference herein.

Item 9.01 Financial Statements and Exhibits

(d) Exhibits

99.1 Press Release dated May 4, 2010. Filed herewith.

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SIGNATURE

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

Date: May 4, 2010

Axcelis Technologies, Inc.

By: /s/ STEPHEN G. BASSETT

Stephen G. Bassett

Executive Vice President and Chief Financial Officer

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**AXCELIS ANNOUNCES FINANCIAL RESULTS
FOR FIRST QUARTER 2010**
Company Reports 25% Increase in Revenues and 45% Increase in Shipments

BEVERLY, Mass.—May 4, 2010—Axcelis Technologies, Inc. (Nasdaq: ACLS) today announced financial results for the quarter ended March 31, 2010.

The Company reported first quarter revenue of \$48.5 million, compared to \$38.7 million for the fourth quarter of 2009, a 25% increase. Net loss for the first quarter was \$11.1 million, or \$0.11 per share. This compares to a net loss for the fourth quarter of 2009 of \$10.0 million, or \$0.10 per share. Cash and cash equivalents, including restricted cash, were \$41.6 million at March 31, 2010. The company used \$10.2 million in cash during the quarter. The Company ended the quarter with working capital of \$157.3 million.

Commenting on the Company's performance, Mary Puma, chairman and CEO, stated, "Our business continues to strengthen as demand for our customers' products increases and additional manufacturing capacity is required. As a result, we are experiencing robust growth in both new system orders and aftermarket sales. During the quarter we secured significant penetrations in high current implant and cleaning at logic, memory and foundry chip manufacturers, and we expect this traction to continue as customers recognize the competitive advantages our technology provides. We are confident that this will translate into improving financial performance throughout 2010, including a return to profitability and positive cash flow generation."

First Quarter 2010 Conference Call

The Company will host a conference call today at 5:00 pm ET to discuss results for the first quarter 2010. The call will be available to interested listeners via an audio webcast that can be

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accessed through Axcelis' home page at www.axcelis.com, or by dialing 1-888-713-4218 (1-617-213-4870 outside North America). Participants calling into the conference call will be requested to provide the company name, Axcelis Technologies and pass code: 58143672. Webcast and telephone replays will be available from 8 pm ET on May 4, 2010 until 11:59 pm on July 29, 2010. Dial 1-888-286-8010 (617-801-6888 outside North America), and enter conference ID code# 48979281.

Safe Harbor Statement

This document contains forward-looking statements under the SEC safe harbor provisions. These statements, which include our guidance for future financial performance, are based on management's current expectations and should be viewed with caution. They are subject to various risks and uncertainties, many of which are outside the control of the Company, including the timing of orders and shipments, the conversion of orders to revenue in any particular quarter, or at all, our ability to implement successfully our profit plans, the continuing demand for semiconductor equipment, relative market growth, continuity of business relationships with and purchases by major customers, competitive pressure on sales and pricing, increases in material and other production costs that cannot be recouped in product pricing and global economic, political and financial conditions. These risks and other risk factors relating to Axcelis are described more fully in the most recent Form 10-K filed by Axcelis and in other documents filed from time to time with the Securities and Exchange Commission.

About Axcelis

Axcelis Technologies, Inc. (Nasdaq: ACLS) headquartered in Beverly, Massachusetts, provides innovative, high-productivity solutions for the semiconductor industry. Axcelis is dedicated to developing enabling process applications through the design, manufacture and complete life support of ion implantation and cleaning systems. The company's Internet address is: www.axcelis.com.

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

	Three months ended	
	March 31,	
	2010	2009
Revenue		
Product	\$ 40,278	\$ 17,734

Service	8,222	7,784
Royalties, primarily from SEN	—	210
	<u>48,500</u>	<u>25,728</u>
Cost of revenue		
Product	30,320	18,232
Service	5,173	4,489
	<u>35,493</u>	<u>22,721</u>
Gross profit	13,007	3,007
Operating expenses		
Research and development	9,133	9,535
Sales and marketing	6,604	6,879
General and administrative	7,700	10,670
Restructuring charges	—	984
	<u>23,437</u>	<u>28,068</u>
Loss from operations	(10,430)	(25,061)
Other income (expense)		
Gain on sale of SEN	—	1,080
Equity loss of SEN	—	(3,238)
Interest income	29	63
Interest expense	—	(1,676)
Other, net	(407)	(205)
	<u>(378)</u>	<u>(3,976)</u>
Loss before income taxes	(10,808)	(29,037)
Income taxes	293	118
Net loss	<u>\$ (11,101)</u>	<u>\$ (29,155)</u>
Net loss per share		
Basic and diluted net loss per share	<u>\$ (0.11)</u>	<u>\$ (0.28)</u>
Shares used in computing basic and diluted net loss per share		
Weighted average common shares	<u>104,116</u>	<u>103,284</u>

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

	<u>March 31,</u> <u>2010</u>	<u>December 31,</u> <u>2009</u>
ASSETS		
Current assets		
Cash and cash equivalents	\$ 34,801	\$ 45,020
Restricted cash	6,843	4,918
Accounts receivable, net	34,293	19,094
Inventories, net	105,205	114,558
Prepaid expenses and other current assets	10,474	10,016
Total current assets	<u>191,616</u>	<u>193,606</u>
Property, plant and equipment, net	40,226	40,868
Long-term restricted cash	—	2,245
Other assets	12,700	13,884
	<u>\$ 244,542</u>	<u>\$ 250,603</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	\$ 12,822	\$ 9,680
Accrued compensation	10,627	9,267
Warranty	730	638
Income taxes	1,099	1,499
Deferred revenue	5,295	5,127
Other current liabilities	3,760	3,546
Total current liabilities	<u>34,333</u>	<u>29,757</u>
Long-term deferred revenue	910	563

Other long-term liabilities	3,781	3,884
Stockholders' equity		
Preferred stock	—	—
Common stock	104	104
Additional paid-in capital	489,308	488,321
Treasury stock	(1,218)	(1,218)
Accumulated deficit	(287,048)	(275,947)
Accumulated other comprehensive income	4,372	5,139
	<u>205,518</u>	<u>216,399</u>
	<u>\$ 244,542</u>	<u>\$ 250,603</u>

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

	Three months ended	
	2010	2009
	<u>March 31,</u>	
Cash flows from operating activities		
Net loss	\$ (11,101)	\$ (29,155)
Adjustments to reconcile net loss to net cash used for operating activities		
Undistributed loss of SEN	—	3,238
Depreciation and amortization	1,937	1,861
Gain on sale of SEN	—	(1,080)
Deferred Taxes	167	—
Accretion of premium on convertible debt	—	133
Stock-based compensation expense	817	858
Provision for excess inventory	758	4,727
Changes in operating assets & liabilities		
Accounts receivable	(15,425)	6,228
Inventories	8,252	2,973
Prepaid expenses and other current assets	(362)	1,615
Accounts payable & other current liabilities	4,922	(3,297)
Deferred revenue	526	11
Income taxes	(408)	76
Other assets and liabilities	54	(270)
Net cash used for operating activities	<u>(9,863)</u>	<u>(12,082)</u>
Cash flows from investing activities		
Expenditures for property, plant, and equipment	(263)	(213)
Decrease in restricted cash	319	—
Proceeds from sale of SEN	—	129,377
Net cash provided by investing activities	<u>56</u>	<u>129,164</u>
Cash flows from financing activities		
Repayment of convertible debt	—	(83,344)
Financing fees and other expenses	(431)	—
Proceeds from exercise of stock options	32	—
Proceeds from Employee Stock Purchase Plan	169	182
Net cash used for financing activities	<u>(230)</u>	<u>(83,162)</u>
Effect of exchange rate changes on cash	(182)	(371)
Net increase (decrease) in cash and cash equivalents	<u>(10,219)</u>	<u>33,549</u>
Cash and cash equivalents at beginning of period	45,020	37,694
Cash and cash equivalents at end of period	<u>\$ 34,801</u>	<u>\$ 71,243</u>

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