

**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): **August 8, 2008**

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 August 8, 2008, Axcelis Technologies, Inc. (the "Company") issued a press release regarding its financial results for the quarter ended June 30, 2008. 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

(c) Exhibits

<u>Exhibit No.</u>	<u>Description</u>
99.1	Press Release dated August 8, 2008

2

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: August 8, 2008

Axcelis Technologies, Inc.

By: /s/ STEPHEN G. BASSETT
Stephen G. Bassett
Executive Vice President
and Chief Financial Officer

3

99.1

Press Release dated August 8, 2008

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AXCELIS ANNOUNCES FINANCIAL RESULTS FOR SECOND QUARTER 2008

BEVERLY, Mass., August 8, 2008 (PRIME NEWSWIRE) — Axcelis Technologies, Inc. (Nasdaq:ACLS) today announced financial results for the second quarter ended June 30, 2008. The Company reported second quarter revenues of \$76.9 million, compared to \$84.9 million for the first quarter of 2008. Net loss for the second quarter was \$19.4 million, or \$0.19 per share. This compares to a net loss for the first quarter of 2008 of \$11.1 million, or \$0.11 per share. This net loss is greater than our guidance due to restructuring charges of \$3.0 million, or \$0.03 per share, as well as income contributions from SEN of \$1.0 million, or \$0.01 per share, less than SEN originally forecast. In the corresponding quarter for the previous year, the Company reported revenues of \$110.1 million, and net income of \$4.7 million, or \$0.05 per share.

Commenting on the Company's performance, Chairman and CEO Mary Puma said, "Revenues remain challenged by weak market conditions. We continue to reduce costs and optimize processes, and as a result implemented a significant restructuring during the quarter. At the same time, we remain focused on new product development and customer support. Recently, we shipped three additional Optima HDs as well as our first Optima XE single wafer high energy system. In addition, we launched the new Integra RS multi-chamber dry strip system and have already shipped two tools for use in memory manufacturing and 32/22nm development."

Puma continued, "In light of our confidentiality agreement with Sumitomo Heavy Industries (SHI) and TPG Capital, the Company will not comment on discussions with SHI. The Company does not plan to hold a quarterly earnings call this quarter."

Second Quarter Detail

Shipments and Margins

Shipments for the second quarter, including aftermarket business, before provision for deferred revenue totaled \$67.9 million. Geographically, Axcelis' systems shipments were to: Asia, 46%; North America, 21%; and Europe, 33%. The ion implantation business accounted for 93% of total systems shipments in the second quarter. Gross margin for the second quarter was 35.2%.

Orders and Backlog

Orders received for the second quarter (new systems bookings and aftermarket) totaled \$62.6 million. New systems bookings, excluding aftermarket, amounted to \$24.3 million. Backlog plus

deferred systems revenue at quarter end was \$33.0 million. Backlog consists of systems orders (aftermarket orders are excluded) that are generally scheduled to ship within six months.

SEN Corporation, an SHI and Axcelis Company ("SEN")

Axcelis owns 50% of SEN, a Japanese company that is licensed by Axcelis to manufacture and sell certain implant products in Japan. SEN's revenue for the second quarter totaled \$48.6 million. Revenues in Japan are also challenged by weak market conditions.

Business Outlook

Axcelis' financial outlook for the third quarter of 2008 includes revenues in the range of \$47 million to \$57 million. The Company also forecasts a third quarter loss per share in the range of \$0.21 to \$0.25. Axcelis assumes no responsibility to update guidance. Axcelis will only confirm or update guidance via a press release.

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 Technologies, Inc.

Axcelis Technologies, Inc., 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 cycle support of ion implantation and cleaning systems. Axcelis also licenses its 50% owned joint venture, SEN Corporation, an SHI and Axcelis Company, to manufacture and sell certain implant products in Japan. The company's Internet address is: www.axcelis.com.

	June 30, 2008	December 31, 2007
Assets		
Current assets		
Cash and cash equivalents	\$ 59,651	\$ 83,877
Restricted cash	14,821	17,018
Accounts receivable, net	51,233	76,067
Inventories, net	178,855	169,278
Prepaid expenses and other current assets	17,551	32,442
Total current assets	322,111	378,682
Property, plant and equipment, net	66,352	68,101
Investment in SEN	140,044	132,911
Goodwill	42,115	42,115
Intangible assets	9,613	10,925
Other assets	35,313	37,195
	<u>\$ 615,548</u>	<u>\$ 669,929</u>
Liabilities and stockholders' equity		
Current liabilities		
Accounts payable	\$ 15,636	\$ 27,054
Accrued compensation	16,426	17,003
Warranty	3,931	5,011
Income taxes	757	531
Deferred revenue	14,518	35,827
Other current liabilities	6,579	8,577
Current portion of convertible subordinated debt	81,534	—
Total current liabilities	139,381	94,003
Convertible subordinated debt	—	79,923
Long-term deferred revenue	3,291	4,704
Other long-term liabilities	5,290	5,293
Stockholders' equity		
Preferred Stock	—	—
Common stock	103	103
Additional paid-in capital	481,596	478,726
Treasury stock	(1,218)	(1,218)
Accumulated deficit	(32,293)	(1,815)
Accumulated other comprehensive income	19,398	10,210
	<u>467,586</u>	<u>486,006</u>
	<u>\$ 615,548</u>	<u>\$ 669,929</u>

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

	Three Months ended June 30,		Six Months ended June 30,	
	2008	2007	2008	2007
Revenue	76,889	110,073	161,783	207,599
Cost of revenue	49,799	66,483	105,477	122,759
Gross profit	27,090	43,590	56,306	84,840
Operating expenses				
Research and development	16,954	17,598	33,807	35,826
Sales and marketing	12,475	13,146	24,380	26,084
General and administrative	10,878	10,194	20,692	20,670
Amortization of intangible assets	656	656	1,312	1,312
Restructuring charges	3,017	—	3,068	—
	<u>43,980</u>	<u>41,594</u>	<u>83,259</u>	<u>83,892</u>
Income (loss) from operations	(16,890)	1,996	(26,953)	948
Other income (expense)				
Equity income (loss) of SEN	(133)	1,905	(132)	6,573
Interest income	391	1,146	1,081	2,600
Interest expense	(1,680)	(1,566)	(3,281)	(3,235)
Other-net	(767)	275	(449)	251

	<u>(2,189)</u>	<u>1,760</u>	<u>(2,781)</u>	<u>6,189</u>
Income (loss) before income taxes	(19,079)	3,756	(29,734)	7,137
Income taxes (credits)	<u>318</u>	<u>(988)</u>	<u>744</u>	<u>(280)</u>
Net income (loss)	<u>\$ (19,397)</u>	<u>\$ 4,744</u>	<u>\$ (30,478)</u>	<u>\$ 7,417</u>
Net income (loss) per share				
Basic	\$ (0.19)	\$ 0.05	\$ (0.30)	\$ 0.07
Diluted	(0.19)	0.05	(0.30)	0.07
Shares used in computing net income (loss) per share				
Basic	102,450	101,609	102,449	101,551
Diluted	102,450	102,503	102,449	102,463