## 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 7, 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:

o Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

o Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

o Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

o 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 7, 2008, Axcelis Technologies, Inc. (the "Company") issued a press release regarding its financial results for the quarter ended March 31, 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

99.1

Exhibit No

Press Release dated May 7, 2008

2

Description

#### 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 7, 2008

Axcelis Technologies, Inc.

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

3

Exhibit No.

Exhibit Index

99.1

Investor Contact: Stephen Bassett Axcelis Technologies, Inc. Tel:+1 (978) 787 4000 Fax:+1 (978) 787 9133 investor.relations@axcelis.com Agency Contact: Heather Smith Loomis Group Tel:+1 (617) 309 8005 Fax:+1 (617) 638 0033 smithh@loomisgroup.com

#### AXCELIS ANNOUNCES FINANCIAL RESULTS FOR FIRST QUARTER 2008

BEVERLY, Mass.—(Prime Newswire)—May 7, 2008—Axcelis Technologies, Inc. (Nasdaq: ACLS) today announced financial results for the first quarter ended March 31, 2008. The Company reported first quarter revenues of \$84.9 million, compared to \$89.6 million for the fourth quarter of 2007. 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 2007 of \$10.6 million, or \$0.10 per share. In the corresponding quarter for the previous year, the Company reported revenues of \$97.5 million, and net income of \$2.7 million, or \$0.03 per share.

Commenting on the Company's performance, Chairman and CEO Mary Puma said, "Deterioration in the semiconductor industry continues to adversely affect our financial performance. Even so, we are making significant progress in positioning our product portfolio for a market recovery. As evidence of the acceptance of our technology, we've secured one new Optima HD design win and shipped two Optima HDs. We have also shipped our first Optima XE single wafer high energy tool. We believe that the proven performance advantages and superior productivity of our tools will lead to capacity orders and recovery of our market share as industry conditions improve."

#### First Quarter Detail

#### Shipments and Margins

Shipments, including aftermarket business, before provision for deferred revenue for the first quarter totaled \$68.8 million. Geographically, Axcelis' systems shipments were to: Asia, 72%; North America, 23%; and Europe, 5%. The ion implantation business accounted for 83% of total systems shipments in the first quarter. Gross margin for the first quarter was 34.4%.

#### **Orders and Backlog**

Orders (new systems bookings and aftermarket) received for the first quarter totaled \$69.2 million. New systems bookings, excluding aftermarket, amounted to \$28.6 million. Backlog plus deferred systems revenue at quarter end was \$46.5 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 first quarter totaled \$42.8 million.

#### **Business Outlook**

Axcelis' financial outlook for the second quarter of 2008 includes revenues in the range of \$75 million to \$90 million. The Company also forecasts a second quarter loss per share in the range of \$0.11 to \$0.15 per share. Axcelis assumes no responsibility to update guidance. Axcelis will only confirm or update guidance via a press release.

#### First Quarter 2008 Conference Call

The Company will be hosting a conference call today, Wednesday, May 7, 2008, beginning at 5:00 pm ET. The purpose of the call is to discuss first quarter results and to provide guidance for the second quarter of 2008.

The call will be available to interested listeners via an audio webcast that can be accessed through Axcelis' home page at www.axcelis.com, or by dialing 1-800-479-1628 (1-719-457-2729 outside North America). Participants calling into the conference call will be requested to provide the company name: Axcelis Technologies, the conference leader: David Snyder, and pass code: # 7110454. A webcast replay will be available from 8:00 pm ET on May 7, 2008 until 5:00 pm ET, June 7, 2008.

#### 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.



#### Consolidated Balance Sheets In thousands (Unaudited)

	N	March 31, 2008		December 31, 2007	
Assets					
Current assets					
Cash and cash equivalents	\$	68,192	\$	83,877	
Restricted cash		18,300		17,018	
Accounts receivable, net		55,093		76,067	
Inventories, net		186,003		169,278	
Prepaid expenses and other current assets		23,492		32,442	
Total current assets		351,080		378,682	
Property, plant and equipment, net		67,309		68,101	
Investment in SEN		148,481		132,911	
Goodwill		42,115		42,115	
Intangible assets		10,269		10,925	
Other assets		35,859		37,195	
	\$	655,113	\$	669,929	
Liabilities and stockholders' equity					
Current liabilities					
Accounts payable	\$	23,521	\$	27,054	
Accrued compensation		12,457		17,003	
Warranty		4,513		5,011	
Income taxes		763		531	
Deferred revenue		21,389		35,827	
Other current liabilities		7,907		8,577	
Current portion of convertible subordinated debt		80,721			
Total current liabilities		151,271		94,003	
Convertible subordinated debt				79,923	
Long-term deferred revenue		4,383		4,704	
Other long-term liabilities		5,340		5,293	
Stockholders' equity					
Preferred Stock		—			
Common stock		103		103	
Additional paid-in capital		479,604		478,726	
Treasury stock		(1,218)		(1,218)	
Accumulated deficit		(12,896)		(1,815)	
Accumulated other comprehensive income		28,526		10,210	
		494,119		486,006	
	\$	655,113	\$	669,929	

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

	Three months en March 31,	Three months ended March 31.		
	2008	2007		
Revenue	84,894	97,526		
Cost of revenue	55,678	56,276		
Gross profit	29,216	41,250		
Operating expenses				
Research and development	16,853	18,228		
Sales and marketing	11,905	12,938		
General and administrative	9,814	10,476		
Amortization of intangible assets	656	656		
Restructuring charges	51	—		
	39,279	42,298		
Loss from operations	(10,063)	(1,048)		
Other income (expense)				
Equity income of SEN	1	4,667		

Interest income	690	1,454
Interest expense	(1,601)	(1,668)
Other-net	318	(24)
	 (592)	 4,429
	 ·	
Income (loss) before income taxes	(10,655)	3,381
Income taxes	426	709
Net income (loss)	\$ (11,081)	\$ 2,672
Net income (loss) per share		
Basic	\$ (0.11)	\$ 0.03
Diluted	\$ (0.11)	\$ 0.03
Shares used in computing net income (loss) per share		
Basic	102,447	101,492
Diluted	102,447	102,421