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 4, 2015

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))
- 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 August 4, 2015, Axcelis Technologies, Inc. (the "Company") issued a press release regarding its financial results for the quarter ended June 30, 2015. 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.

Exhibit No.	Description
99.1	Press Release dated August 4, 2015. 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: August 4, 2015 Axcelis Technologies, Inc.

Kevin J. BREWER

Kevin J. Brewer

Executive Vice President
and Chief Financial Officer

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AXCELIS ANNOUNCES FINANCIAL RESULTS FOR SECOND QUARTER 2015

Purion Market Share Gains as Customer Base Expands

BEVERLY, Mass. — August 4, 2015—Axcelis Technologies, Inc. (Nasdaq: ACLS) today announced financial results for the second quarter ended June 30, 2015. Recent highlights include:

- · Revenues of \$78.4 million, a 7% increase over the first quarter.
- · Operating profit of \$7.2 million, a 108.5% increase over the first quarter.
- · Improved gross margin to 34.6% from 31.9% in the first quarter.
- · Increased cash and cash equivalents to \$78.1 million from \$74.5 million in the first quarter.

The Company reported second quarter revenue of \$78.4 million, compared to \$73.3 million for the first quarter of 2015. Operating profit for the quarter was \$7.2 million, compared to \$3.4 million for the first quarter. Net income for the quarter was \$5.9 million, or \$0.05 per share. This compares to net income for the first quarter of 2015 of \$1.9 million, or \$0.02 per share. Cash and cash equivalents was \$78.1 million at June 30, 2015, compared to \$74.5 million on March 31, 2015.

President and CEO Mary Puma said, "Axcelis' top line continued to grow in the second quarter, driven by steady Purion system sales and a robust service business. In particular, the Purion H continues to gain market share, and is the fastest growing new product in Axcelis history. Since the start of the year we have doubled the number of Purion H customers, as well as added three new, non-memory Purion XE customers. The success we are seeing with Purion is positioning us well for future revenue and market share growth, as well as stronger earnings and cash flow."

Business Outlook

For the third quarter ending September 30, 2015, Axcelis expects revenues to be \$75-80 million. Gross margin in the third quarter is expected to be approximately 34-35%. Third quarter operating profit is forecasted to be \$5-7 million with earnings of \$0.03-0.05 per share. Cash and cash equivalents in the third quarter is expected to be approximately \$80 million.

Second Quarter 2015 Conference Call

The Company will host a conference call today at 5:00 pm ET to discuss results for the second quarter 2015.

The call will be available to interested listeners via an audio webcast that can be accessed through the Investors page of Axcelis' website at www.axcelis.com, or by dialing 866.588.8911 (707.294.1561 outside North America). Participants calling into the conference call will be requested to provide the company name, Axcelis Technologies, and pass code: 77665194. Webcast replays will be available for 30 days following the call.

Safe Harbor Statement

This press release and the conference call contain 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, 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 (Nasdaq: ACLS), headquartered in Beverly, Mass., has been providing innovative, high-productivity solutions for the semiconductor industry for over 35 years. Axcelis is dedicated to developing enabling process applications through the design, manufacture and complete life cycle support of ion implantation systems, one of the most critical and enabling steps in the IC manufacturing process. Learn more about Axcelis at www.axcelis.com.

Company Contacts

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Consolidated Statements of Operations (In thousands, except per share amounts) (Unaudited)

	Three months ended June 30,			Six months ended June 30,					
		2015		2014		2015		2014	
Revenue:									
Product	\$	72,748	\$	34,795	\$	140,278	\$	89,810	
Services	•	5,689		6,355	•	11,442		12,180	
Total revenue	·	78,437		41,150	_	151,720		101,990	
Cost of Revenue:	·	,		,		- ,		,,,,,,	
Product		46,560		21,021		91,745		54,823	
Services		4,703		5,645		9,421		10,943	
Total cost of revenue		51,263		26,666		101,166		65,766	
Gross profit		27,174		14,484		50,554		36,224	
Operating expenses:									
Research and development		7,899		8,845		16,098		18,102	
Sales and marketing		5,858		5,037		11,486		10,513	
General and administrative		6,231		6,494		12,332		12,975	
Restructuring charges		8		160		18		360	
Total operating expenses		19,996		20,536		39,934		41,950	
Income (loss) from operations		7,178		(6,052)		10,620		(5,726)	
Other (expense) income:									
Interest income		6		2		9		4	
Interest expense		(1,310)		(257)		(2,353)		(508)	
Other, net		49		(362)		(384)		(70)	
Total other expense		(1,255)		(617)		(2,728)		(574)	
Income (loss) before income taxes		5,923		(6,669)		7,892		(6,300)	
Income tax provision		40		231		141		426	
Net income (loss)	\$	5,883	\$	(6,900)	\$	7,751	\$	(6,726)	
Net income (loss) per share									
Basic	\$	0.05	\$	(0.06)	\$	0.07	\$	(0.06)	
Diluted	\$	0.05	\$	(0.06)	\$	0.06	\$	(0.06)	
Shares used in computing net income (loss) per share:									
Basic weighted average common shares		113,784		111,212		113,470		110,932	
Diluted weighted average common shares	-	120,612		111,212		119,900		110,932	
		120,012		111,212		117,700	_	110,732	

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

	,	June 30, 2015		ecember 31, 2014
		_		
ASSETS				
Cash and cash equivalents	\$	78,085	\$	30,753
Accounts receivable, net		42,002		42,794
Inventories, net		122,001		104,063
Prepaid expenses and other assets		23,209		18,755
Property, plant and equipment, net		29,951		30,464
Restricted cash		65		825
Total assets	\$	295,313	\$	227,654
LIABILITIES AND STOCKHOLDERS' EQUITY				
Accounts payable	\$	38,849	\$	21,605
Accrued compensation		5,262		4,232
Warranty		2,886		1,352
Income taxes		297		196
Deferred revenue		8,884		7,231
Debt		47.586		14.530

11,159

10,156

Other liabilities

Total liabilities	114,923	59,302
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, \$0.001 par value, 30,000 shares authorized; none issued or outstanding	_	_
Common stock, \$0.001 par value, 300,000 shares authorized; 114,322 shares issued and 114,202 shares		
outstanding at June 30, 2015; 112,849 shares issued and 112,729 shares outstanding at December 31,		
2014	114	113
Additional paid-in capital	523,997	519,068
Treasury stock, at cost, 120 shares at June 30, 2015 and December 31, 2014	(1,218)	(1,218)
Accumulated deficit	(343,136)	(350,887)
Accumulated other comprehensive income	633	1,276
Total stockholders' equity	180,390	168,352
Total liabilities and stockholders' equity	\$ 295,313	\$ 227,654