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 1, 2013

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)
- 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 August 1, 2013, Axcelis Technologies, Inc. (the "Company") issued a press release regarding its financial results for the quarter ended June 30, 2013. 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

Press Release dated August 1, 2013. 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 1, 2013 Axcelis Technologies, Inc.

By: /s/ KEVIN J. BREWER

Kevin J. Brewer Executive Vice President and Interim Chief Financial Officer

News Release



AXCELIS ANNOUNCES FINANCIAL RESULTS FOR SECOND QUARTER 2013

BEVERLY, Mass. — August 1, 2013—Axcelis Technologies, Inc. (Nasdaq: ACLS) today announced financial results for the quarter ended June 30, 2013. The Company reported second quarter revenue of \$47.5 million, compared to \$40.7 million for the first quarter of 2013. Net loss for the quarter was \$4.0 million, or (\$0.04) per share. This compares to a net loss for the first quarter of 2013 of \$9.0 million, or (\$0.08) per share. Cash and cash equivalents were \$34.6 million at June 30, 2013 compared with \$42.4 million at March 31, 2013.

Chairman and CEO Mary Puma said, "Second quarter results were in line with our forecast, reflecting our expectations for an improving market in 2013. During this last industry downturn we invested in our competitive Purion platform, improved our financial position and strengthened our team. We have received positive feedback from our customers regarding these initiatives and as the industry picks up, we expect to capitalize on these investments."

Second Quarter 2013 Conference Call

The Company will host a conference call today at 5:00 pm ET to discuss results for the second quarter of 2013. An audio webcast will be available on the Investor page of Axcelis' website at www.axcelis.com, or by dialing 1.888.713.4213 (1.617.213.4865 outside North America). Participants calling into the conference call will be requested to provide the passcode: 20165545. A replay of the webcast will be available for 30 days following the conference call.

Safe Harbor Statement

The conference call will 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 Technologies, Inc. (Nasdaq: ACLS) headquartered in Beverly, Massachusetts, 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, one of the most critical and enabling steps in the IC manufacturing process. The Company's Internet address is: www.axcelis.com.

Company Contacts

Investor Relations: Doug Lawson 978.787.9552

Editorial/Media: Maureen Hart 978.787.4266

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

	 Three months ended June 30,			Six months ended June 30,			
	2013		2012		2013		2012
Revenue	_				_		_
Product	\$ 40,769	\$	51,465	\$	75,220	\$	99,003
Services	6,732		7,649		13,006		15,117
Total revenue	47,501		59,114		88,226		114,120
Cost of revenue							
Product	25,457		30,599		47,638		59,883
Services	5,307		5,727		10,910		10,913
Total cost of revenue	30,764		36,326		58,548		70,796
Gross profit	16,737		22,788		29,678		43,324

Operating expenses				
Research and development	8,503	10,478	17,709	22,147
Sales and marketing	5,594	6,231	10,796	12,814
General and administrative	6,412	6,488	13,001	14,287
Gain on sale of dry strip assets and intellectual property	(799)	_	(1,167)	_
Restructuring charges	421	153	2,222	3,034
Total operating expenses	20,131	23,350	42,561	52,282
Loss from operations	(3,394)	(562)	(12,883)	(8,958)
Other income (expense)				
Interest income	3	9	6	18
Interest expense	(51)	_	(115)	
Other, net	(314)	551	580	(373)
Total other income (expense)	(362)	560	471	(355)
Loss before income taxes	(3,756)	(2)	(12,412)	(9,313)
Income taxes	263	469	596	1,186
Net loss	\$ (4,019)	\$ (471)	\$ (13,008)	\$ (10,499)
Net loss per share				
Basic and Diluted	\$ (0.04)	\$ (0.00)	\$ (0.12)	\$ (0.10)
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Shares used in computing net loss per share				
Basic and diluted weighted average common shares	108,409	107,639	108,319	107,353

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

(Chaudicu)				
	June 30, 2013		December 31, 2012	
ASSETS				
Current assets				
Cash and cash equivalents	\$	34,639	\$	44,986
Accounts receivable, net		30,220		24,843
Inventories, net		96,412		100,234
Restricted cash		104		106
Prepaid expenses and other current assets		6,025		5,056
Total current assets		167,400		175,225
Property, plant and equipment, net		32,964		34,413
Other assets		13,406		12,520
Total assets	\$	213,770	\$	222,158
LIABILITIES AND STOCKHOLDERS' EQUITY				
Current liabilities				
Accounts payable	\$	16,188	\$	10,166
Accrued compensation	Ψ	6,559	Ψ	7,283
Warranty		1,419		1,700
Income taxes		226		278
Deferred revenue		5,728		6,423
Other current liabilities		4,432		3,932
Total current liabilities	<u></u>	34,552		29,782
		,		,
Long-term deferred revenue		259		456
Other long-term liabilities		5,829		5,844
Total liabilities		40,640		36,082
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; 108,772 shares issued and 108,652 shares outstanding at June 30, 2013;108,293 shares issued and 108,173 shares outstanding at December 31,				
2012		109		108
Additional paid-in capital		506,647		504,643
Treasury stock, at cost, 120 shares at June 30, 2013 and December 31, 2012		(1,218)		(1,218)
Accumulated deficit		(335,485)		(322,477)
Accommunica deficie		(555,405)		(522,477)

Accumulated other comprehensive income		3,077	5,020
Total stockholders' equity	,	173,130	186,076
Total liabilities and stockholders' equity	\$	213,770	\$ 222,158

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

		Six months ended June 30,		
		2013	Ĺ	2012
Cash flows from operating activities Net loss	\$	(12,000)	¢	(10, 400)
Adjustments to reconcile net loss to net cash used for operating activities:	Э	(13,008)	\$	(10,499)
Depreciation and amortization		2.710		3,625
Gain on sale of dry strip assets and intellectual property		2,719		3,023
Deferred taxes		(1,167) 52		995
		1,644		2,010
Stock-based compensation expense				2,010 406
Provision for excess inventory		2,370		406
Changes in operating assets & liabilities		(F. F.O.F.)		1.5
Accounts receivable		(5,587)		16
Inventories		431		(7,213)
Prepaid expenses and other current assets		(1,049)		(808)
Accounts payable and other current liabilities		5,642		(3,928)
Deferred revenue		(891)		(3,109)
Income taxes		(48)		(286)
Other assets and liabilities		(1,905)		6,226
Net cash used for operating activities		(10,797)		(12,565)
Cash flows from investing activities				
Proceeds from sale of dry strip assets and intellectual property		1,200		_
Expenditures for property, plant, and equipment		(336)		(385)
Decrease in restricted cash		2		3
Net cash provided by (used for) investing activities		866		(382)
Cash flows from financing activities				
Proceeds from exercise of stock options		206		847
Proceeds from Employee Stock Purchase Plan		197		179
Net cash provided by financing activities		403		1,026
Effect of exchange rate changes on cash		(819)		(1,159)
Net decrease in cash and cash equivalents		(10,347)		(13,080)
Cash and cash equivalents at beginning of period		44,986		46,877
Cash and cash equivalents at end of period	\$	34,639	\$	33,797