UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-Q

(MARK ONE)

[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the quarterly period ended March 31, 2001 or

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission file number 000-30941

AXCELIS TECHNOLOGIES, INC.

(Exact name of registrant as specified in its charter)

Delaware	**34-1818596**
(State or other jurisdiction of incorporation or organization)	*(I.R.S. Employer Identification Number)*

55 Cherry Hill Drive
Beverly, Massachusetts 01915
(Address of principal executive offices, including zip code)

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15 (d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. YES [X] NO [ ] .

As of May 11, 2000 there were 97,131,122 shares of the registrant's common stock outstanding.

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PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

AXCELIS TECHNOLOGIES, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS
(UNAUDITED)

(In thousands, except per share amounts)	Three Months Ended March 31, 2001	2000
Net sales	$ 152,149	$ 143,051
Cost of products sold	88,801	81,577
Gross profit	63,348	61,474
Other costs & expenses		
Research & development	19,262	16,125
Selling	13,380	11,598
General and administrative	17,711	13,030
Amortization of goodwill & intangible assets	2,320	2,320
Income from operations	10,675	18,401
Other income:		
Royalty income	2,800	3,823
Equity income of Sumitomo Eaton Nova Corporation	6,632	3,340
Interest income	2,377	-
Other income - net	5	1,549
Total other income	11,814	8,712
Income before income taxes	22,489	27,113
Income taxes	6,298	8,251
Net income	$ 16,191	$ 18,862

Basic net income per share	$ 0.17	$ 0.24
Diluted net income per share	$ 0.17	$ 0.24
Shares used in computing:		
Basic net income per share	97,059	80,000
Diluted net income per share	97,599	80,000

See accompanying notes to consolidated financial statements.

AXCELIS TECHNOLOGIES, INC.
CONSOLIDATED BALANCE SHEETS
(UNAUDITED)

(In thousands)	March 31, 2001	December 31, 2000
ASSETS		
Current assets		
Cash and cash equivalents	$ 133,199	$ 168,157
Accounts receivable, net	126,764	150,482
Inventories	118,910	122,036
Deferred income taxes and other current assets	27,339	26,851
Total current assets	406,212	467,526
Property, plant and equipment, net	81,164	75,653
Investment in Sumitomo Eaton Nova Corporation	45,792	44,915
Goodwill	40,585	42,977
Intangible assets	20,334	20,418
Other assets	25,509	20,842
Total assets	$ 619,596	$ 672,331
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities		
Accounts payable	$ 33,601	$ 46,855
Payable to Eaton Corporation	-	25,818
Accrued compensation	15,973	17,686
Warranty reserve	37,198	36,195
Income taxes payable	7,331	31,153
Other current liabilities	13,024	12,471
Total current liabilities	107,127	170,178
Deferred income taxes	8,365	7,391
Pension & other employee benefit liabilities	3,393	3,393
Stockholders' equity		
Common stock	97	97
Additional paid-in capital	437,626	437,472
Treasury stock - at cost	(743)	-
Retained earnings	74,873	58,682
Accumulated other comprehensive income (loss)	(11,142)	(4,882)
Total stockholders' equity	500,711	491,369
Total liabilities and stockholders' equity	$ 619,596	$ 672,331

See accompanying notes to consolidated financial statements.

AXCELIS TECHNOLOGIES, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS
(UNAUDITED)

(In thousands)	Three Months Ended March 31, 2001	2000
Cash flows from operating activities:		
Net income	$ 16,191	$ 18,862
Adjustments required to reconcile net income to net cash used by operating activities:		
Depreciation	2,245	2,332
Amortization of goodwill & intangible assets	2,320	2,320
Deferred income taxes	932	(72)
Equity income of Sumitomo Eaton Nova Corporation	(6,632)	(3,340)
Changes in operating assets & liabilities:		
Accounts receivable, net	22,254	(13,837)
Inventories	2,335	(14,477)
Accounts payable and other current liabilities	(12,445)	7,200
Payable to Eaton Corporation	(25,818)	-
Income taxes payable	(23,822)	-
Other assets	(4,669)	181
Other - net	(336)	(1,077)
Net cash used by operating activities	(27,445)	(2,270)
Cash flows from investing activities:		
Expenditures for property, plant & equipment	(7,754)	(299)
Other - net	-	(317)
Net cash used by investing activities	(7,754)	(616)
Cash flows from financing activities:		
Proceeds from the exercise of stock options	153	-
Acquisition of treasury shares	(743)	
Net transfers from Parent Company	-	2,787
Net cash provided (used) by financing activities	(590)	2,787
Effect of foreign exchange rate changes	831	(628)
Net decrease in cash & cash equivalents	(34,958)	(727)
Cash & cash equivalents at beginning of period	168,157	3,530
Cash & cash equivalents at end of period	$ 133,199	$ 2,803

See accompanying notes to consolidated financial statements.

AXCELIS TECHNOLOGIES, INC.
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS *(Unaudited)*
THREE MONTHS ENDED MARCH 31, 2001

1) Nature of Business and Basis of Presentation

Axcelis Technologies, Inc. ("Axcelis" or the "Company"), a wholly owned subsidiary of Eaton Corporation ("Eaton") prior to July 10, 2000, is a leading producer of ion implantation, dry strip and photostabilization equipment used in the fabrication of semiconductors in the United States, Europe and Asia Pacific. The Company has recently introduced rapid thermal processing equipment, which is used in semiconductor manufacturing primarily before and after the ion implantation process. In addition, the Company provides extensive aftermarket service and support, including spare parts, equipment upgrades, maintenance services and customer training. The Company has a 50-50 joint venture with Sumitomo Heavy Industries, Ltd. in Japan. This joint venture, which is known as Sumitomo Eaton Nova Corporation, or SEN, licenses technology from the Company for ion implantation, has exclusive rights to the territory of Japan and is the leading producer of ion implantation equipment in Japan.

On April 26, 2000, Eaton announced its plan to reorganize its semiconductor equipment operations into an independent, publicly-held company, Axcelis Technologies, Inc. On June 30, 2000, Eaton substantially completed the transfer of all the assets and related liabilities of its semiconductor equipment operations to the Company. Prior to the transfer, the financial statements of the semiconductor equipment operations were presented on a combined basis. On July 10, 2000, the Company commenced its initial public offering (IPO) of 15,500,000 shares of common stock. On July 20, 2000, the IPO was completed when the underwriters of the IPO exercised their over-allotment option to purchase an additional 1,550,000 shares. A portion of the net proceeds of the offering of $348.6 million was used to pay a previously declared $300 million dividend to Eaton. Following the IPO, Eaton owned approximately 82 percent of Axcelis' outstanding common stock. On October 25, 2000, Eaton announced that its board of directors had declared a stock dividend of all remaining shares of Axcelis held by Eaton. The dividend was distributed on December 29, 2000. The distribution was made on the basis of 1.179023 shares of Axcelis for each Eaton common share outstanding.

Axcelis' legal separation from Eaton occurred on June 30, 2000, at which time the Company began to operate independently from Eaton. Subsequent to June 30, 2000, the Company's financial statements are prepared on a consolidated basis. Although prior periods have been prepared on a combined basis, all statements presented are referred to as consolidated statements for simplicity. For periods prior to the separation date, the consolidated financial statements reflect historical results of operations and cash flows of Eaton's semiconductor equipment operations during each respective period, and include allocations of certain Eaton expenses. Beginning in the third quarter of fiscal year 2000, Axcelis' consolidated financial statements no longer include an allocated portion of Eaton's corporate services and infrastructure costs. However, the Company has continued to incur amounts payable to Eaton in connection with transitional agreements, under which Eaton provides services, such as voice and data transmissions and other data-related operations, accounts receivable, accounts payable, fixed assets, payroll, general accounting, financial accounting consolidation, cash management, human resources, tax, legal and real estate.

The accompanying unaudited consolidated financial statements have been prepared in accordance with generally accepted accounting principles for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments considered necessary for a fair presentation have been included. Operating results for the three months ended March 31, 2001 are not necessarily indicative of the results that may be expected for the year ended December 31, 2001.

The balance sheet at December 31, 2001 has been derived from the audited financial statements at that date but does not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements.

For furthur information, refer to the consolidated financial statements and footnotes thereto included in Axcelis Technologies, Inc.'s annual report on Form 10-K for the year ended December 31, 2000.

2) Net Income Per Share

Basic net income per share is calculated based on the weighted average number of shares of common stock outstanding during the period. Diluted net income per share is calculated based on the weighted average number of shares of common stock outstanding plus the dilutive effect of stock options, calculated using the treasury stock method. The dilutive effect of stock options was approximately 540,000 shares for the first quarter of fiscal 2001. For the first quarter of fiscal 2000, there was no dilutive effect from stock options, as there were no Axcelis stock options outstanding.

3) Comprehensive Income

The components of comprehensive income are as follows (in thousands):

	Three Months Ended March 31, 2001	Three Months Ended March 31, 2000
Net income	$ 16,191	$ 18,862
Foreign currency translation adjustments	(6,260)	(478)

Comprehensive income..........	$ 9,931	$ 18,384

4) Inventories

Inventories are carried at the lower of cost, determined using the first-in, first out (FIFO) method, or market. The components of inventory were as follows (in thousands):

	March 31, 2001	December 31, 2000
Raw materials................	$ 78,584	$ 74,929
Work-in-process..............	20,494	31,531
Finished goods...............	31,829	26,828
	130,907	133,288
Inventory allowances.........	(11,997)	(11,252)
	$ 118,910	$ 122,036

5) Recent Accounting Pronouncements

In June 1998, the Financial Accounting Standards Board issued Statement of Financial Accounting Standard (SFAS) No. 133, "Accounting for Derivative Instruments and Hedging Activities". This statement revises accounting and reporting standards for derivative instruments, including derivative instruments embedded in other contracts, and for hedging activities. SFAS No. 133, as amended by SFAS No. 137 and SFAS No. 138, is effective for fiscal quarters of fiscal years beginning after June 15, 2000. The Company adopted this standard beginnning in the first quarter of 2001. SFAS No. 133 did not have a material impact on the Company's consolidated financial statements for the three months ended March 31, 2001.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Certain statements in "Management's Discussion and Analysis of Financial Condition and Results of Operations" are forward-looking statements that involve risks and uncertainties. Words such as may, will, should, would, anticipates, expects, intends, plans, believes, seeks, estimates and similar expressions identify such forward-looking statements. The forward-looking statements contained herein are based on current expectations and entail various risks and uncertainties that could cause actual results to differ materially from those expressed in such forward-looking statements. Factors that might cause such a difference include, among other things, those set forth under "Financial Condition, Liquidity and Capital Resources" and "Risk Factors" included in these sections and those appearing elsewhere in this Form 10-Q. Readers are cautioned not to place undue reliance on these forward-looking statements, which reflect management's analysis only as of the date hereof. The Company assumes no obligation to update these forward-looking statements to reflect actual results or changes in factors or assumptions affecting forward-looking statements.

Overview

We are a leading producer of ion implantation, dry strip and photostabilization equipment used in the fabrication of semiconductors in the United States, Europe and Asia Pacific. We have recently introduced rapid thermal processing equipment, which is used in semiconductor manufacturing primarily before and after the ion implantation process. In addition, we provide extensive aftermarket service and support, including spare parts, equipment upgrades, maintenance services and customer training. We have a 50-50 joint venture with Sumitomo Heavy Industries, Ltd. in Japan. This joint venture, which is known as Sumitomo Eaton Nova Corporation, or SEN, licenses technology from us for ion implantation, has exclusive rights to the territory of Japan and is the leading producer of ion implantation equipment in Japan.

Separation from Eaton Corporation

Prior to the initial public offering on July 10, 2000, we were a wholly owned subsidiary of Eaton Corporation (Eaton). On June 30, 2000, Eaton substantially completed the transfer to us of all of the assets of its semiconductor equipment operations that were not previously owned by us, and we assumed the related liabilities. On December 29, 2000, Eaton completed the divestiture of its investment in Axcelis by distributing its remaining 82% ownership interest in Axcelis in the form of a spin-off to Eaton shareholders. We also entered into various other agreements with Eaton which provide for transitional services and support, including those associated with voice and data transmissions and other data-related operations, accounts receivable, accounts payable, fixed assets, payroll, general accounting, financial accounting consolidation, cash management, human resources, tax, legal and real estate. Under these agreements, we reimbursed Eaton for its direct and indirect costs of providing these services until completion of the divestiture, and thereafter, for a limited time, we will reimburse Eaton for its costs plus an additional fee. The transition periods covered by these agreements generally expire by December 29, 2001. The agreements do not necessarily reflect the costs of obtaining these services from unrelated third parties or of providing the applicable services in-house. However, management believes that purchasing these services from Eaton provides an efficient means of obtaining these services during the transition period. We must also negotiate new agreements with various third parties as a separate, standalone entity. There can be no assurance that the terms we will be able to negotiate for these agreements will be as favorable as those we have enjoyed as part of Eaton.

Results of Operations

During fiscal 2000, unprecedented demand for our products and services by our semiconductor manufacturing customers resulted in record sales and earnings for Axcelis for the fiscal year ended December 31, 2000. However, during the first quarter of fiscal 2001, reduced demand for semiconductors resulted in a significant decline in demand for semiconductor manufacturing equipment. A large number of our customers rescheduled existing orders resulting in the postponement of scheduled equipment deliveries while a smaller number of our customers canceled existing orders. This has resulted in a decline in net sales from the record level of the fourth quarter of fiscal 2000.

The following table sets forth consolidated statements of operations data expressed as a percentage of net sales for the periods indicated:

	Three Months Ended March 31, 2001	Three Months Ended March 31, 2000
Net sales	100.0%	100.0%
Gross profit	41.6	43.0
Other costs & expenses		
Research & development	12.7	11.3
Selling	8.8	8.1
General & administrative	11.6	9.1
Amortization of goodwill & intangible assets	1.5	1.6
Income from operations	7.0	12.9
Other income (expense)		
Royalty income	1.8	2.7
Equity income of SEN	4.4	2.3
Interest income	1.5	-
Other income (expense)-net	-	1.1
Income before income taxes	14.7	19.0
Income taxes	4.1	5.8
Net income	10.6%	13.2%

Net Sales
Net sales were $152.1 million for the first quarter of fiscal 2001, an increase of $9.1 million, or 6.4% as compared to net sales of $143.1 million for the first quarter of fiscal 2000. The increase in net sales was primarily due to increased levels of capital spending by integrated circuit manufacturing customers resulting in increased sales of our products and services.

Gross Profit
Gross profit was $63.3 million in the first quarter of fiscal 2001, an increase of $1.8 million or 3.0%, as compared to gross profit of $61.5 million in the first quarter of 2000. The increase in gross profit is due to increased sales volume. Gross profit as a percentage of net sales decreased to 41.6% in the first quarter of fiscal 2001 from 43.0% in the first quarter of fiscal 2000. This decrease was due primarily to reduced capacity utilization. Capacity utilization increased during fiscal 2000 to support the significant increase in sales volume; however, sales have declined 19.5% from the peak sales achieved in the fourth quarter of fiscal 2000.

Operating Expenses
Operating expenses were 34.6% of net sales for the three months ended March 31, 2001, compared to 30.1% for the three months ended March 31, 2000. In terms of absolute dollars, operating expenses for the three months ended March 31, 2001 increased $9.6 million, or 22.3%, from the comparable period in fiscal 2000. Research and development expenses increased to support our continuing investment to deliver our second generation of 300mm tools. Selling, general and administrative expenses increased primarily as a result of continuing transitions costs associated with our separation from Eaton and increased legal expenses associated with our patent infringement litigation against Applied Materials.

Income From Operations
Income from operations was $10.7 million for the first quarter of fiscal 2001 as compared to $18.4 million for the first quarter of fiscal 2000. The increase was primarily a result of the factors described above.

Other Income

Total other income increased to $11.8 million for the first quarter of fiscal 2001 as compared to $8.7 million for the first quarter of fiscal 2000. Total other income consists primarily of royalty income and equity income from SEN. Royalty income, primarily from SEN, was $2.8 million for the first quarter of fiscal 2001 as compared to $3.8 million for the first quarter of fiscal 2000. The decrease in royalty income is due primarily to a difference in the mix of SEN sales in the first quarter of fiscal 2001 compared to the comparable quarter in 2000 as overall SEN sales were higher in the first quarter of fiscal 2001 compared to the first quarter of fiscal 2000. Equity income attributable to SEN was $6.6 million for the first quarter of fiscal 2001 compared to $3.3 million for the first quarter of fiscal 2000. The increase in equity income was primarily attributable to increased year-over-year SEN sales volume.

Interest income amounted to $2.4 million in the first quarter of fiscal 2001 supported by the level of cash balances maintained during the first quarter of fiscal 2001.

Income Taxes

Income taxes were $6.3 million in the first quarter of fiscal 2001 as compared to $8.3 million in the first quarter of fiscal 2000. The effective income tax rate was 28.0% in the first quarter of fiscal 2001 and 30.4% in the first quarter of fiscal 2000. The tax rate in both periods differs from the U.S. statutory rate primarily due to undistributed nontaxable equity income from SEN and credits from increased research activities.

Net Income

Net income was $16.2 million in the first quarter of fiscal 2001 as compared to $18.9 million in the first quarter of fiscal 2000. Earnings per share were $0.17 in the first quarter of fiscal 2001 and $0.24 in the first quarter of fiscal 2000. The decrease was principally a result of the factors discussed above. In addition, the decrease in earnings per share was due to the higher number of common shares outstanding in the first quarter of fiscal 2001 compared to the comparable period in fiscal 2000 as a result of our intial public offering in the third quarter of fiscal 2000.

Financial Condition, Liquidity and Capital Resources

As of March 31, 2001, cash and cash equivalents were $133.2 million, compared with $168.2 million as of December 31, 2000. The decrease in cash and cash equivalents from December 31, 2000 was due mainly to payments to Eaton for transition expenses, income tax payments, capital expenditures and lower accounts payable offset by lower accounts receivable and earnings generated in the first quarter of fiscal 2001. Net working capital was $299.1 million at March 31, 2001 as compared to net working capital of $297.3 million as of December 31, 2000.

Net cash used by operating activities was $27.1 million for the three months ended March 31, 2001 as compared to net cash used of $2.3 million for the three months ended March 31, 2000. The cash used by operating activities in the first three months of fiscal 2001 was primarily the result of the factors described above.

Capital expenditures were $7.8 million in the first three months of fiscal 2001 and $0.3 million in the first three months of fiscal 2000. The increase in capital expenditures in the first quarter of fiscal 2001 was principally due to the expansion of our Beverly, Massachusetts facility to house an advanced product demonstration and customer training center for all of our products. The amount of future capital requirements will depend on a number of factors, including the timing and rate of the expansion of our business.

Axcelis' liquidity is affected by many factors. Some of these factors are based on normal operations of the business and others relate to the uncertainties of global economies and the semiconductor equipment industry. Although our cash requirements fluctuate based on the timing and the extent of these factors, we believe that available cash and our cash flows from operations will provide sufficient working capital and satisfy commitments for capital expenditures and other cash requirements of the business.

Risk Factors

As defined under Safe Harbor provisions of The Private Securities Litigation Reform Act of 1995, some of the matters discussed in this filing contain forward-looking statements regarding future events that are subject to risks and uncertainties. The following factors, among others, could cause actual results to differ materially from those described by such statements. These factors include, but are not limited to: the cyclical nature of the semiconductor industry, our ability to keep pace with rapid technological changes in semiconductor manufacturing processes, the highly competitive nature of the semiconductor equipment industry, quarterly fluctuations in operating results attributable to the timing and amount of orders for our products and services, dependency on SEN (our Japanese joint venture) for access to the Japanese semiconductor equipment market, and those risk factors contained in the section titled "Outlook" and Exhibit 99 of our Form 10-K for the year ended December 31, 2000. If any of those risk factors actually occur, our business, financial condition and results of operations could be seriously harmed and the trading price of our common stock could decline.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

A discussion of market risk exposures is included in our Form 10-K for the year ended December 31, 2000 under Management's Discussion and Analysis - Outlook and Exhibit 99 file therewith. There were no material changes during the three months ended March 31, 2001.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

On January 8, 2001, Axcelis filed a lawsuit against Applied Materials, Inc. (Applied) in the United States District Court for the District of Massachusetts. The complaint alleges that Applied's medium current/high energy ion implanter machine infringes an Axcelis patent for ion implantation equipment using radio frequency linear accelerator technology. Axcelis has also alleged that Applied unlawfully interfered with Axcelis' existing and future contracts. On January 18, 2001, Axcelis filed a motion for a preliminary injunction, asking the court to stop Applied from manufacturing, selling or offering to sell its medium current/high energy ion implanter machine and to order Applied to remove all Axcelis patented technology from implanters that Applied may have placed in chipmakers' plants for process development trials. The parties are engaged in the process of discovery and, based on the scheduling order entered by the court, a trial is scheduled for the fourth quarter of 2001. The Company believes its claims are meritorious and intends to pursue the matter vigorously. Although there can be no assurance of a favorable outcome, the Company does not believe that this matter will have a material adverse effect on the Company's financial condition, results of operations or liquidity.

Item 6. Exhibits and Reports on Form 8-K

a) Exhibits are numbered in accordance with the Exhibit Table of Item 601 of Regulation S-K:

None

b) Reports on Form 8-K

Not applicable

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

AXCELIS TECHNOLOGIES, INC.

Dated: May 14, 2001

By: /s/ Cornelius F. Moses III

Cornelius F. Moses III
Executive Vice President, Chief Financial Officer
Duly authorized officer and
Principal financial officer