

MECHANICAL TECHNOLOGY INC  
Form 10-Q  
August 13, 2009

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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

**FORM 10-Q**

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

**FOR THE QUARTERLY PERIOD ENDED JUNE 30, 2009  
OR**

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

**FOR THE TRANSITION PERIOD FROM \_\_\_ TO \_\_\_**

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**Mechanical Technology, Incorporated**

(Exact name of registrant as specified in its charter)

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**New York**  
(State or Other Jurisdiction  
of Incorporation)

**0-6890**  
(Commission File Number)

**14-1462255**  
(IRS Employer  
Identification No.)

**431 New Karner Road, Albany, New York 12205**  
(Address of registrant's principal executive office)

**(518) 533-2200**  
(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 o

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T

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during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes  No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See definition of large accelerated filer, accelerated filer, and smaller reporting company in Rule 12b-2 of the Exchange Act (check one):

Large accelerated filer     Accelerated filer     Non-accelerated filer     Smaller reporting company   
(Do not check if a small reporting company)

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12B-2 of the Act). Yes  No

The number of shares of common stock, par value of \$0.01 per share, outstanding as of August 10, 2009 was 4,771,658.

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**PART I. FINANCIAL INFORMATION**  
**Item 1. Financial Statements**

**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**  
**CONDENSED CONSOLIDATED BALANCE SHEETS**  
**As of December 31, 2008 and June 30, 2009 (Unaudited)**

(Dollars in thousands)	<b>December 31, 2008</b>	<b>June 30, 2009</b>
<b>Assets</b>		
<b>Current Assets:</b>		
Cash and cash equivalents	\$ 1,662	\$ 407
Accounts receivable	540	1,756
Inventories, net	1,509	1,273
Prepaid expenses and other current assets	272	367
Total Current Assets	3,983	3,803
Property, plant and equipment, net	1,528	1,190
Total Assets	\$ 5,511	\$ 4,993
<b>Liabilities and Stockholders' Equity</b>		
<b>Current Liabilities:</b>		
Accounts payable	\$ 508	\$ 746
Accrued liabilities	1,648	1,413
Deferred revenue	8	10
Bridge note payable to related party, at fair value	1,544	2,690
Income taxes payable	23	23
Total Current Liabilities	3,731	4,882
<b>Long-Term Liabilities:</b>		
Uncertain tax position liability	213	-
Derivative liability	41	9
Total Long-Term Liabilities	254	9
Total Liabilities	3,985	4,891
<b>Stockholders' Equity:</b>		
Common stock, par value \$0.01 per share, authorized 75,000,000; 5,777,578 issued in 2008 and 5,776,750 issued in 2009	58	58
Paid-in-capital	132,781	133,083
Accumulated deficit	(117,570)	(119,258)
Common stock in treasury, at cost, 1,005,092 shares in both 2008 and 2009	(13,754)	(13,754)
Total MTI stockholders' equity	1,515	129
Noncontrolling interest	11	(27)
Total Equity	1,526	102
Total Liabilities and Stockholders' Equity	\$ 5,511	\$ 4,993

The accompanying notes are an integral part of the condensed consolidated financial statements.

**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**  
**CONDENSED CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)**  
**For the Three and Six Months Ended June 30, 2008 and 2009**

(Dollars in thousands, except per share)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2008	2009	2008	2009
Product revenue	\$ 1,720	\$ 1,310	\$ 3,700	\$ 2,859
Funded research and development revenue	309	542	482	1,059
Total revenue	2,029	1,852	4,182	3,918
Operating costs and expenses:				
Cost of product revenue	826	628	1,666	1,294
Research and product development expenses:				
Funded research and product development	634	1,088	990	2,122
Unfunded research and product development	2,137	308	4,154	736
Total research and product development expenses	2,771	1,396	5,144	2,858
Selling, general and administrative expenses	2,053	754	4,671	1,645
Operating loss	(3,621)	(926)	(7,299)	(1,879)
Interest expense	□	(59)	□	(101)
Gain on derivatives	333	14	666	32
Gain on sale of securities available for sale	682	□	682	□
Other (expense) income, net	(3)	2	39	23
Loss before income taxes and non-controlling interest	(2,609)	(969)	(5,912)	(1,925)
Income tax benefit (expense)	(754)	5	(762)	199
Net loss, net of tax	(3,363)	(964)	(6,674)	(1,726)
Plus: Net loss attributed to noncontrolling interest	85	18	209	38
Net loss attributed to MTI	\$ (3,278)	\$ (946)	\$ (6,465)	\$ (1,688)
Loss per Share (Basic and Diluted):				
Loss per share	\$ (0.69)	\$ (0.20)	\$ (1.35)	\$ (0.35)

The accompanying notes are an integral part of the condensed consolidated financial statements.

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**  
**CONDENSED CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY**  
**AND COMPREHENSIVE LOSS (Unaudited)**  
**For the Six Months Ended June 30, 2008 and 2009**

(Dollars in thousands)

	Six Months Ended June 30, 2009
<b>Common Stock</b>	
Balance, beginning	\$ 1,000
Balance, ending	\$ 1,000
<b>Paid-In Capital</b>	
Balance, beginning	\$ 132,000
Stock-based compensation	5
MTI MicroFuel Cell Investment	(1)
Balance, ending	\$ 132,400
<b>Accumulated Deficit</b>	
Balance, beginning	\$ (105,000)
Cumulative effect of adoption of FIN 48	(6,400)
Net loss	(6,400)

Balance, ending

\$ (11,

**Accumulated Other Comprehensive Income (Loss):**

Unrealized gain (loss) on securities available for sale, net of taxes	
Balance, beginning	\$ 5
Change in unrealized (loss) gain on securities available for sale (net of taxes of \$0 in 2008 and 2009)	(1,1
Less reclassification adjustment for gains included in net income (net of taxes of \$0 in 2008 and 2009)	(1
Balance, ending	\$ (8

**Treasury Stock**

Balance, beginning	\$ (13,7
Balance, ending	\$ (13,7

**Noncontrolling Interest (NCI)**

Balance, beginning	\$ 1
Net loss attributed to NCI	(
Balance, ending	\$

**Total Stockholders' Equity**

Balance, ending	\$ 6,4
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**Total Comprehensive (Loss):**

Net loss	\$ (6,4
Other comprehensive (loss):	
Change in unrealized (loss) gain on securities available for sale, net of taxes	(1,1
Total comprehensive (loss)	\$ (7,5

The accompanying notes are an integral part of the condensed consolidated financial statements.

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**MECHANICAL TECHNOLOGY, INCORPORATED AND SUBSIDIARIES**  
**CONDENSED CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited)**  
**For the Six Months Ended June 30, 2008 and 2009**

(Dollars in thousands)	Six Months Ended June 30,	
	2008	2009
<b>Operating Activities</b>		
Net (loss)/income excluding discontinued operations	\$ (6,674)	\$ (1,726)
Adjustments to reconcile net loss to net cash used by operating activities:		
Gain on derivatives	(666)	(32)
Depreciation and amortization	431	338
Gain on sale of securities available for sale	(682)	□
Deferred income taxes	748	□
Stock based compensation	517	302
Changes in operating assets and liabilities:		
Accounts receivable	326	(1,216)
Inventories	(293)	236
Prepaid expenses and other current assets	(542)	(95)
Accounts payable	333	238
Income taxes payable	7	(213)
Deferred revenue	(117)	2
Accrued liabilities	69	(235)
Accrued liabilities □ related parties	□	101
Net cash used by operating activities	(6,543)	(2,300)

**Investing Activities**

Purchases of property, plant and equipment	(185)	□
Proceeds from sale of securities available for sale	1,449	□
Net cash (used) provided by investing activities	1,264	□

**Financing Activities**

Proceeds from short-term debt	□	1,045
Fractional share payout associated with reverse split	(1)	□
Net cash provided by financing activities	(1)	1,045
(Decrease)/increase in cash and cash equivalents	(5,280)	(1,255)
Cash and cash equivalents - beginning of period	7,650	1,662
Cash and cash equivalents - end of period	\$ 2,370	\$ 407

The accompanying notes are an integral part of the condensed consolidated financial statements.

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**MECHANICAL TECHNOLOGY, INCORPORATED**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)**

**1. Description of Business**

Mechanical Technology, Incorporated, (□MTI□ or the □Company□), a New York corporation, was incorporated in 1961. MTI operates in two segments, the New Energy segment which is conducted through MTI MicroFuel Cells Inc. (□MTI Micro□), a majority owned subsidiary, and the Test and Measurement Instrumentation segment, which is conducted through MTI Instruments, Inc. (□MTI Instruments□), a wholly owned subsidiary.

At its MTI Micro subsidiary, the Company□s Mobion<sup>®</sup> cord-free power packs are being developed to replace current lithium-ion and similar rechargeable battery systems in many handheld electronic devices for the military and consumer markets. Mobion<sup>®</sup> power packs are based on direct methanol fuel cell technology which has been recognized as enabling technology for advanced portable power sources by the scientific community and industry analysts. As the need for advancements in portable power increases, MTI Micro is developing Mobion<sup>®</sup> cord-free rechargeable power pack technology as a superior solution for powering the multi-billion dollar portable electronics market.

At its MTI Instruments subsidiary, the Company continues to be a worldwide supplier of precision non-contact physical measurement solutions, portable balancing equipment and wafer inspection tools. MTI Instruments□ products use a comprehensive array of technologies to solve complex real world applications in numerous industries including manufacturing, semiconductor, commercial/military aviation, automotive and data storage. The Company□s products consist of electronic gauging instruments for position, displacement and vibration applications within the design, manufacturing/production, test and research markets; wafer characterization tools for the semiconductor and solar industries; and engine balancing and vibration analysis systems for both military and commercial aircraft.

**Nature of Operations**

In the opinion of management of Mechanical Technology, Incorporated (the □Company□), the accompanying unaudited condensed consolidated financial statements have been prepared in accordance with the rules and regulations of the Securities and Exchange Commission (the □SEC□) and contain all adjustments, consisting of normal, recurring adjustments, necessary for a fair statement of results for such periods. The results of operations for the interim periods presented are not necessarily indicative of results for the full year.

Certain information and footnote disclosures normally included in the annual consolidated financial statements prepared in accordance with accounting principles generally accepted in the United States of America (□U.S. GAAP□) have been condensed or omitted. These unaudited condensed consolidated financial statements should be read in conjunction with the Company□s audited consolidated financial statements and notes thereto included in the Company□s Annual Report on Form 10-K for the year ended December 31, 2008.

The information presented in the accompanying condensed consolidated balance sheet as of December 31, 2008 has been derived from the Company's audited consolidated financial statements but does not include all disclosures required by U.S. GAAP. All other information has been derived from the Company's unaudited condensed consolidated financial statements for the three and six months ended June 30, 2008 and 2009, as adjusted for the adoption of FAS 160.

### **Reverse Stock Split**

Unless otherwise noted, all capital values, share, and per share amounts in the consolidated financial statements have been retroactively adjusted for the effects of the Company's reverse split of its issued and outstanding common stock at a rate of 1-for-8 which became effective on May 16, 2008. This action was approved by stockholders on May 15, 2008.

### **Liquidity and Going Concern**

The Company incurred significant losses as it continued to fund the direct methanol fuel cell product development and commercialization programs of its majority owned subsidiary, MTI MicroFuel Cells Inc. ("MTI Micro"), and had a consolidated accumulated deficit of \$119,258 thousand and working capital deficit of \$1,079 thousand at June 30, 2009. Because of these losses, limited current cash and cash equivalents, negative cash flows and accumulated deficit, the report of the Company's independent registered public accounting firm for the year ended December 31, 2008 expressed substantial doubt about the Company's ability to continue as a going concern.

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## **MECHANICAL TECHNOLOGY, INCORPORATED**

### **NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)**

Throughout 2008, the Company sold its remaining 1,137,166 shares of Plug Power Inc. ("Plug Power") common stock with proceeds totaling \$3,039 thousand and gains totaling \$1,018 thousand. These proceeds reflect the Company's previous strategy to raise additional capital through the sale of Plug Power common stock in order to fund MTI Micro operations. During the first six months of 2008, the Company sold 431,509 shares of Plug Power common stock with proceeds totaling \$682,000.

At present, the Company does not expect to continue to fund MTI Micro. Based on the Company's projected cash requirements for operations and capital expenditures and its current cash and cash equivalents of \$407,000 at June 30, 2009, management believes it will have adequate resources to fund its current operations, excluding MTI Micro operations, through at least December 2009. Since the company will no longer fund MTI Micro, the subsidiary has sought other sources of funding.

In September 2008, MTI Micro issued bridge notes to investors, including MTI, in the form of conversion of existing debt of \$700,000, Dr. Walter L. Robb, a member of the Company's Board of Directors, and a fund managed by Dr. Robb, totaling \$2.2 million. In February 2009, MTI Micro issued additional bridge notes to the fund managed by Dr. Robb in the amount of \$500,000. On April 15, 2009, MTI Micro, a new investor and the fund managed by Dr. Robb agreed to amend the bridge note to permit MTI Micro to sell additional bridge notes from time to time with an additional principal amount of up to \$800,000 in increments not to exceed \$165,000 per month. As of June 30, 2009 and August 13, 2009, MTI Micro has drawn down \$545,000 and \$710,000, respectively, from these additional bridge notes. (See Note 14).

On April 16, 2009, MTI Micro was awarded a cost share funding grant of \$2.4 million from the United States Department of Energy (DOE) as part of the DOE's \$41.9 million in American Recovery and Reinvestment Act funding for fuel cell technology. As of August 13, 2009, \$1,058,712 has been billed and paid by the DOE under this grant.

In order to continue full commercialization of its micro fuel cell solution, MTI Micro will need to do one or more of the following to raise additional resources, or reduce its cash requirements:

- obtain additional government or private funding of the Company's direct methanol fuel cell research, development, manufacturing readiness and commercialization;

- secure additional debt or equity financing; or
- further reduce its current expenditure run-rate.

There is no guarantee that resources will be available to MTI Micro on terms acceptable to it, or at all, or that such resources will be received in a timely manner, if at all, or that MTI Micro will be able to reduce its expenditure run-rate without materially and adversely affecting its business. MTI Micro had cash and cash equivalents as of June 30, 2009 of \$38 thousand. Subsequently, MTI Micro received an additional \$165,000 from the Bridge Notes, and received retroactive billings from the DOE for work performed through June 30, 2009 of \$1.06 million. Additionally, MTI Micro has \$90,000 available through the Bridge Note, and the remainder of the \$2.4 million DOE contract as work is performed. With these resources, management currently believes it will have adequate resources to fund its MTI Micro operations into the fourth quarter of 2009.

## 2. Accounting Policies

### *Fair Value Measurement*

On January 1, 2008, the Company adopted SFAS No. 157, *Fair Value Measurements* (SFAS No. 157). As defined in SFAS No. 157, fair value is the price that would be received to sell an asset or transfer a liability in an orderly transaction between market participants at the measurement date. The Company utilizes valuation techniques that maximize the use of observable inputs and minimize the use of unobservable inputs. Based on the observability of the inputs used in the valuation methods, the Company is required to provide the following information according to the fair value hierarchy as specified by SFAS No. 157. This hierarchy ranks the quality and reliability of the information used to determine fair values.

Financial assets and liabilities are classified and disclosed in one of the following three categories:

- Level 1:** Quoted market prices in active markets for identical assets or liabilities, which includes listed equities.
- Level 2:** Observable market based inputs or unobservable inputs that are corroborated by market data. These items are typically priced using models or other valuation techniques. These models are primarily financial industry-standard models that consider various assumptions, including the time value of money, yield curves, volatility factors, as well as other relevant economic measures.
- Level 3:** **These use unobservable inputs that are not corroborated by market data. These values are generally estimated based upon methodologies utilizing significant inputs that are generally less observable from objective sources.**

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## MECHANICAL TECHNOLOGY, INCORPORATED

### NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)

In determining the appropriate levels, the Company performs a detailed analysis of financial assets and liabilities that are subject to SFAS No. 157. At each reporting period, all assets and liabilities for which the fair value measurements are based upon significant unobservable inputs are classified as Level 3.

The following is a summary of the Company's fair value instruments categorized by their associated fair value input level:

(Dollars in thousands)

Balance Sheet Classification	Level 1	Level 2	Level 3	Balance at June 30, 2009
Financial Liabilities:				
Derivative liability	\$ 0	\$ 0	\$ 9	\$ 9
Bridge note payable		2,690		2,690
Total fair value of liabilities	\$ 0	\$ 2,690	\$ 9	\$ 2,699



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The following is a rollforward of Level 3 fair value instruments for the twelve months ended December 31, 2008:

(Dollars in thousands)

<b>Instrument</b>	<b>Beginning Balance as of Jan. 1, 2008</b>	<b>Total Gains / (Losses) Realized and Unrealized</b>	<b>Purchases, Issuances, Sales and Settlements</b>	<b>Ending Balance as of Dec. 31, 2008</b>
Derivative liability	\$ 696	\$ 655	\$ □	\$ 41
Total Level 3 instruments	\$ 696	\$ 655	\$ □	\$ 41

The following is a rollforward of Level 3 fair value instruments for the six months ended June 30, 2009:

(Dollars in thousands)

<b>Instrument</b>	<b>Beginning Balance as of Jan. 1, 2009</b>	<b>Total Gains / (Losses) Realized and Unrealized</b>	<b>Purchases, Issuances, Sales and Settlements</b>	<b>Ending Balance as of June 30, 2009</b>
Derivative liability	\$ 41	\$ 32	\$ □	\$ 9
Total Level 3 instruments	\$ 41	\$ 32	\$ □	\$ 9

*Revenue Recognition*  *Prototype Evaluation Agreements*

The Company recognizes income derived from its micro fuel cell prototype evaluation agreements, where the Company receives a lump-sum amount from Original Equipment Manufacturers (□OEMs□) which are testing the Company's Mobion prototypes for an OEM-specific application, upon delivery of the evaluation prototypes. These prototypes are returned to the Company once the evaluation period expires. There are no warranties given to any OEM regarding these prototypes, and each evaluation agreement is considered a customer specific arrangement. The costs associated with executing these prototype evaluation arrangements are expensed in research and development expense as they are incurred. Income derived from these arrangements is recorded in the Consolidated Statements of Operations in the line titled □Other income (expense), net.□ For the three and six months ended June 30, 2009, MTI recognized \$0 and \$20,000 respectively.

*Subsequent Events*

The Company has performed an evaluation of subsequent events through August 13, 2009, which is the date the financial statements were issued. On July 1, 2009, MTI Micro drew \$165,000 against the additional bridge note (see Note 14).

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**MECHANICAL TECHNOLOGY, INCORPORATED**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)**

*New Accounting Standards Implemented*

In April 2009, the FASB issued FSP No. FAS 157-4, *Determining Fair Value When the Volume and Level of Activity for the Asset or the Liability Have Significantly Decreased and Identifying Transactions That Are Not Orderly*. FSP No. FAS 157-4 amends SFAS No. 157 to provide additional guidance on (i) estimating fair value

when the volume and level of activity for an asset or liability have significantly decreased in relation to normal market activity for the asset or liability, and (ii) circumstances that may indicate that a transaction is not orderly. FSP No. FAS 157-4 also requires additional disclosures about fair value measurements in interim and annual reporting periods. FSP No. FAS 157-4 is effective for interim and annual reporting periods ending after June 15, 2009. The adoption of FSP No. FAS 157-4 did not have a material impact on the Company's financial statements.

In April 2009, the FASB issued FSP No. FAS 115-2 and FAS 124-2, *Recognition and Presentation of Other-Than-Temporary Impairments* (FSP No. FAS 115-2). FSP No. FAS 115-2 provides additional guidance on the timing of impairment recognition and greater clarity about the credit and noncredit components of impaired debt securities that are not expected to be sold. FSP No. FAS 115-2 also requires additional disclosures about impairments in interim and annual reporting periods. FSP No. FAS 115-2 is effective for interim and annual reporting periods ending after June 15, 2009. The adoption of FSP No. FAS 115-2 did not have a material impact on the Company's financial statements.

In April 2009, the FASB issued FSP No. FAS 107-1 and APB 28-1, *Interim Disclosures about Fair Value of Financial Instruments*. FSP No. FAS 107-1 and APB 28-1 amends SFAS No. 107, *Disclosures about Fair Value of Financial Instruments*, to require disclosures about fair value of financial instruments in interim as well as in annual financial statements. This FSP also amends Accounting Principles Board (APB) Opinion No. 28, *Interim Financial Reporting*, to require those disclosures in all interim financial statements. FSP No. FAS 107-1 and APB 28-1 is effective for interim reporting periods ending after June 15, 2009. The adoption of FSP No. FAS 107-1 and APB 28-1 did not have a material impact on the Company's financial statements.

Effective January 1, 2009, the Company adopted SFAS 160, *Noncontrolling Interests in Consolidated Financial Statements, an Amendment of ARB No. 51* (SFAS 160). This standard changed the accounting for and reporting of minority interests (now referred to as noncontrolling interests). Noncontrolling interests are now classified as equity in the financial statements. SFAS 160 also changed the way the consolidated income statement is presented by requiring net income to include the net income for both the parent and the noncontrolling interests, with disclosure of both amounts on the consolidated statement of income. The calculation of earnings per share continues to be based on income amounts attributable to the parent. As a result of the adoption of SFAS 160, prior period amounts related to noncontrolling interests have been reclassified to conform to the current period presentation.

On January 1, 2009, the Company adopted FSP No. EITF 03-6-1, *Determining Whether Instruments Granted in Share-Based Payment Transactions Are Participating Securities*, (FSP EITF 03-6-1). FSP EITF 03-6-1 states that unvested share-based payment awards that contain nonforfeitable rights to dividends or dividend equivalents (whether paid or unpaid) are participating securities and shall be included in the computation of earnings per share pursuant to the two-class method. The adoption of FSP EITF 03-6-1 did not have a material impact on the Financial Statements.

In December 2007, the FASB issued FAS No. 141 (revised 2007), *Business Combinations* (FAS No. 141(R)) which replaces FAS No. 141, *Business Combinations*. FAS No. 141 (R) retains the underlying concepts of FAS No. 141 in that all business combinations are still required to be accounted for at fair value under the acquisition method of accounting but FAS No. 141 (R) changed the method of applying the acquisition method in a number of significant aspects. FAS No. 141(R) is effective on a prospective basis for all business combinations for which the acquisition date is on or after the beginning of the first annual period subsequent to December 15, 2008, with the exception of the accounting for valuation allowances on deferred taxes and acquired tax contingencies. FAS No. 141(R) amends FAS 109 such that adjustments made to valuation allowances on deferred taxes and acquired tax contingencies associated with acquisitions that closed prior to the effective date of FAS No. 141(R) would also apply the provisions of FAS No. 141(R). The Company's adoption of this Standard on January 1, 2009 did not have a material effect on its financial statements.

In March 2008, the FASB issued FAS No. 161, *Disclosures about Derivative Instruments and Hedging Activities*. The Standard requires enhanced disclosures about derivative instruments and is effective for fiscal periods beginning after November 15, 2008. SFAS No. 161 was effective for our Company on January 1, 2009, and will be applied prospectively. Other than the required disclosures (see Note 6), the adoption of SFAS 161 had no impact on the Financial Statements.

**MECHANICAL TECHNOLOGY, INCORPORATED**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)**

In May 2008, the FASB issued FAS No. 162, "The Hierarchy of Generally Accepted Accounting Principles" (FAS No. 162). FAS No. 162 identifies the sources of accounting principles and the framework for selecting principles to be used in the preparation of financial statements of nongovernmental entities that are presented in conformity with generally accepted accounting principles in the United States. The FASB does not expect that FAS No. 162 will result in a change in current practice. However, transition provisions have been provided in the unusual circumstance that the application of the provisions of FAS No. 162 results in a change in practice. FAS No. 162 is effective 60 days following the SEC's approval of the Public Company Accounting Oversight Board amendments to AU Section 411, "The Meaning of Present Fairly in Conformity With Generally Accepted Accounting Principles." The Company's adoption of this Standard on January 1, 2009 did not have a material effect on its financial statements.

In April 2008, the FASB issued FASB Staff Position No. FAS 142-3, "Determination of the Useful Life of Intangible Assets" (FSP 142-3). FSP 142-3 amends the factors that should be considered in developing renewal or extension assumptions used to determine the useful life of a recognized intangible asset under FASB Statement No. 142, "Goodwill and Other Intangible Assets" and requires enhanced disclosures relating to: (a) the entity's accounting policy on the treatment of costs incurred to renew or extend the term of a recognized intangible asset; (b) in the period of acquisition or renewal, the weighted-average period prior to the next renewal or extension (both explicit and implicit), by major intangible asset class and (c) for an entity that capitalizes renewal or extension costs, the total amount of costs incurred in the period to renew or extend the term of a recognized intangible asset for each period for which a statement of financial position is presented, by major intangible asset class. The Company's adoption of this Standard on January 1, 2009 did not have a material effect on its financial statements.

In May 2008, the FASB issued FASB Staff Position No. APB 14-1, "Accounting for Convertible Debt Instruments That May Be Settled in Cash upon Conversion (Including Partial Cash Settlement)" (FSP APB 14-1). This staff position applies to convertible debt instruments that, by their stated terms, may be settled in cash (or other assets) upon conversion, including partial cash settlement, unless the embedded conversion option is required to be separately accounted for as a derivative under FAS No. 133, "Accounting for Derivative Instruments and Hedging Activities." FSP APB 14-1 requires the issuer to separately account for the liability and equity components of convertible debt instruments in a manner that reflects the issuer's nonconvertible debt borrowing rate on the instrument's issuance date when interest cost is recognized. The Company's adoption of this Standard on January 1, 2009 did not have a material effect on its financial statements.

### 3. Accounts Receivable

Receivable balances consist of the following at:

(Dollars in thousands)

	New Energy	Test and Measurement Instrumentation	Consolidated Totals
December 31, 2008			
U.S. and State Government	\$ 102	\$ 4	\$ 106
Commercial	15	419	434
Total	\$ 117	\$ 423	\$ 540
June 30, 2009			
U.S. and State Government	\$ 1,059	\$ 196	\$ 1,255
Commercial	0	501	501
Total	\$ 1,059	\$ 697	\$ 1,756

For the six months ended June 30, 2008 and 2009, a single commercial customer represented 15.1% and 12.2%, respectively, and a U.S. governmental agency represented 12.5% and 21.2%, respectively, of the Company's instrumentation segment product revenue. As of December 31, 2008 and June 30, 2009, this commercial customer represented 6.3% and 10.2%, respectively, and this U.S. governmental agency represented 1.0% and

28.1%, respectively, of the Company's instrumentation segment accounts receivable.

For the six months ended June 30, 2009, 100% of the accounts receivable of the new energy segment is due from a U.S. governmental agency.

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**MECHANICAL TECHNOLOGY, INCORPORATED**  
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**4. Inventories, net**

Inventories, net consist of the following at:

(Dollars in thousands)	<b>Dec. 31, 2008</b>	<b>June 30, 2009</b>
Finished goods	\$ 772	\$ 574
Work in process	449	491
Raw materials, net	288	208
	\$ 1,509	\$ 1,273

**5. Income Taxes**

The Company's effective income tax (expense) rate from operations differed from the federal statutory rate for each of the three and six months ended June 30 as follows:

(Dollars in thousands)	<b>Three Months Ended June 30,</b>		<b>Six Months Ended June 30,</b>	
	<b>2008</b>	<b>2009</b>	<b>2008</b>	<b>2009</b>
Federal statutory tax rate	34.00%	34.00%	34.00%	34.00%
State taxes, net of federal tax effect	1.55	6.09	3.95	6.10
Change in valuation allowance	(45.11)	(40.40)	(45.11)	(40.58)
Disproportionate tax effect of reclassification adjustment for gains included in net income (loss)	(24.37)	--	(10.75)	--
Minimum State Income Tax YTD - Estimated	--	.34	--	.17
Reversal of Uncertain Tax Position for NYS Settlement	--	--	--	10.08
Permanent tax difference on derivative valuation	5.11	0.49	4.51	0.57
Other, net	(0.08)	--	(0.08)	--
Tax rate	(28.90)%	(.52)%	(12.88)%	10.34%

Income tax (expense) benefit for the three and six months ended June 30 consists of the following:

(Dollars in thousands)	<b>Three Months Ended June 30,</b>		<b>Six Months Ended June 30,</b>	
	<b>2008</b>	<b>2009</b>	<b>2008</b>	<b>2009</b>
Operations before noncontrolling interest				
Federal	\$ (748)	\$ --	\$ (748)	\$ --
State	(6)	5	(14)	199
Total	\$ (754)	\$ 5	\$ (762)	\$ 199

The valuation allowance at December 31, 2008 and June 30, 2009 was \$27,880 thousand and \$28,663 thousand, respectively, and represents a full valuation allowance. The valuation allowance reflects the estimate that it is more likely than not that the net deferred tax assets in excess of deferred tax liabilities may not be realized.

At June 30, 2009 the Company has unused Federal net operating loss carry forwards of approximately \$65.0 million. The Company's and/or its subsidiaries' ability to utilize their net operating loss carryforwards may be significantly limited by Section 382 of the Internal Revenue Code of 1986, as amended, if the Company or any of its subsidiaries undergoes an "ownership change" as a result of subsequent changes in the ownership of the Company's or its subsidiaries' outstanding stock pursuant to the exercise of the warrants, the conversion of the bridge notes, or otherwise. A corporation generally undergoes an "ownership change" when the ownership of its stock, by value, changes by more than 50 percentage points over any three-year testing period. In the event of an ownership change, Section 382 imposes an annual limitation on the amount of post-ownership change taxable income a corporation may offset with pre-ownership change net operating loss carryforwards and certain recognized built-in losses.

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**MECHANICAL TECHNOLOGY, INCORPORATED**  
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As of June 30, 2009, although no formal 382 study has been performed, the Company and its subsidiaries do not appear to have had an ownership change for Section 382 purposes. However, when combined with the changes that the Company has experienced through June 30, 2009, any additional change in ownership that could result from the conversion of MTI Micro's bridge notes payable is likely to trigger a Section 382 ownership change that will subject MTI Micro's net operating loss carryforwards to significant annual Section 382 limitations and will likely result in MTI Micro no longer being permitted to be included in Mechanical Technology, Inc. and Subsidiaries' consolidated federal and combined New York State tax returns, resulting in Mechanical Technology, Inc. not being able to utilize MTI Micro's net operating losses.

MTI Micro's separate company net operating loss carryforwards as of June 30, 2009, which are currently included with Mechanical Technology, Inc.'s consolidated net operating loss carryforwards, equal approximately \$61 million.

On February 2, 2009, the New York State Department of Taxation and Finance notified the Company that it was no longer going to pursue the issue associated with potentially not permitting the Company to file combined tax returns for the period 2002 through 2004. The Company had recorded a \$213,000 long-term liability for this issue. In settlement of this issue, the Company paid New York State approximately \$19,000, and recognized the benefit of the reversal of this liability of \$194,000 in the first quarter of 2009.

## 6. Stockholders' Equity

Changes in common shares issued and treasury stock outstanding are as follows:

	Year Ended Dec. 31, 2008	Six Months Ended June 30, 2009
Common Shares		
Balance, beginning	5,777,578	5,776,750
Fractional shares redeemed during reverse stock split	(203)	0
Forfeiture of restricted stock grant	(625)	0
Balance, ending	5,776,750	5,776,750

## Warrants

SFAS No. 161 requires enhanced disclosures about derivative instruments, amending and expanding the disclosure requirements of SFAS No. 133, to provide users of financial statements with enhanced understanding of (i) how and why an entity uses derivative instruments, (ii) how derivative instruments and related hedged items are accounted for under SFAS No. 133 and its related interpretations, and (iii) how derivative instruments and

related hedged items affect an entity's financial position, results of operations, and cash flows.

On December 20, 2006, the Company issued warrants to investors to purchase 378,472 shares of the Company's common stock at an exercise price of \$18.16 per share. These warrants will be fair valued by the Company until expiration or exercise of the warrants. The warrants became exercisable on June 30, 2007 and expire on December 19, 2011. The fair value of the warrants at December 31, 2008 and June 30, 2009 was \$41 thousand and \$9 thousand, respectively. During the six month periods ending June 30, 2009 and June 30, 2008 the Company recognized a gain on derivatives of \$32,000 and \$666,000, respectively.

The Company accounts for derivative instruments and embedded derivative instruments in accordance with Statement of Financial Accounting Standards (SFAS) No. 133, *Accounting for Derivative Instruments and Hedging Activities*, as amended. The amended standard requires an entity to recognize all derivatives as either assets or liabilities in the statement of financial position and measure these instruments at fair value. Fair value is estimated using the Black-Scholes Option Pricing model. The Company also follows Emerging Issues Task Force (EITF) Issue No. 00-19, *Accounting for Derivative Financial Instruments Indexed to and Potentially Settled in, a Company's Own Stock*, which requires freestanding contracts that are settled in a company's own stock, including common stock warrants, to be designated as an equity instrument, asset or a liability. Under the provisions of EITF Issue No. 00-19, a contract designated as an asset or a liability must be carried at fair value, with any changes in fair value recorded in the results of operations. A contract designated as an equity instrument can be included in equity, with no fair value adjustments required. Based on the terms and conditions of the warrants discussed above, the instrument does not qualify to be designated as an equity instrument under the provisions of EITF Issue No. 00-19 and is therefore recorded as a derivative liability.

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**MECHANICAL TECHNOLOGY, INCORPORATED**  
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The asset/liability derivatives are valued on a quarterly basis using the Black-Scholes Option Pricing model. Significant assumptions used in the valuation include exercise dates, closing market prices for the Company's common stock, volatility of the Company's common stock, and proxy risk-free interest rates. Gains (losses) on derivatives are included in "Gain (loss) on derivatives" in the Consolidated Statement of Operations.

### **Reservation of Shares**

The Company has reserved common shares for future issuance as of June 30, 2009 as follows:

Stock options outstanding	691,663
Stock options available for issuance	52,466
Warrants outstanding	378,472
Number of common shares reserved	1,122,601

### **7. Loss per Share**

The following table sets forth the reconciliation of the numerators and denominators of the basic and diluted per share computations for the three and six months ended June 30:

(Dollars in thousands, except shares)	<b>Three Months Ended</b>		<b>Six Months Ended</b>	
	<b>June 30,</b>		<b>June 30,</b>	
	<b>2008</b>	<b>2009</b>	<b>2008</b>	<b>2009</b>
Numerator:				
Net loss	\$ (3,278)	\$ (946)	\$ (6,465)	\$ (1,688)

Denominator:

Basic EPS:

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Common shares outstanding, beginning of period	4,772,486	4,771,658	4,772,486	4,771,658
Weighted average common shares issued during the period	□	□	□	□
Weighted average restricted shares forfeited during period	(34)	□	(17)	□
Weighted average common shares redeemed during the period in conjunction with the reverse stock split	(102)	□	(51)	□
Effect of non-vested restricted stock	34	□	17	□
Denominator for basic earnings per common shares □				
Weighted average common shares	4,772,384	4,771,658	4,772,435	4,771,658
Diluted EPS:				
Common shares outstanding, beginning of period	4,772,486	4,771,658	4,772,486	4,771,658
Weighted average common shares issued during the period	□	□	□	□
Weighted average restricted shares forfeited during period	(34)	□	(17)	□
Weighted average common shares redeemed during the period in conjunction with the reverse stock split	(102)	□	(51)	□
Effect of non-vested restricted stock due to anti-dilutive effect	34	□	17	□
Denominator for diluted earnings per common shares □				
Weighted average common shares	4,772,384	4,771,658	4,772,435	4,771,658

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**MECHANICAL TECHNOLOGY, INCORPORATED**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)**

Not included in the computation of earnings per share, assuming dilution for the three and six months ended June 30, 2008, were options to purchase 846,783 shares of the Company's common stock, warrants to purchase 378,472 shares of the Company's common stock, 625 unvested restricted shares of the Company's common stock forfeited during the period, and options to purchase 22,668 shares of MTI Micro's common stock. These potentially dilutive items were excluded because the Company incurred a loss for this period and their inclusion would be anti-dilutive.

Not included in the computation of earnings per share, assuming dilution for the three and six months ended June 30, 2009, were options to purchase 691,663 shares of the Company's common stock, warrants to purchase 378,472 shares of the Company's common stock, and options to purchase 17,939 shares of MTI Micro's common stock. These potentially dilutive items were excluded because the Company incurred a loss for this period and their inclusion would be anti-dilutive.

**8. Stock-Based Compensation**

During the six month period ended June 30, 2009, there were no stock options granted.

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Total stock-based compensation expense related to all of the Company's stock-based awards, recognized for the three and six months ended June 30, 2008 and 2009, was comprised as follows:

(Dollars in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2008	2009	2008	2009
Unfunded research and product development	\$ 49	\$ 39	\$ 90	\$ 225
Selling, general and administrative	79	101	427	77
Stock-based compensation expense before taxes	128	140	517	302
Related income tax benefits <sup>A</sup>	□	□	□	□
Stock-based compensation expense, net of taxes	\$ 128	\$ 140	\$ 517	\$ 302

<sup>A</sup> Income tax effect is zero due to the Company maintaining a full valuation allowance.

The fair value of stock option awards is estimated on the date of grant using a Black-Scholes Pricing Model with the following weighted average assumptions for the three and six months ended June 30:

(Dollars in thousands)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2008	2009	2008	2009
Expected life of options (years)	4.4	n/a	4.4	n/a
Risk free interest rate range	3.07 - 3.36%	n/a	2.58 □ 3.36%	n/a
Expected volatility of stock	75.61%	n/a	75.62%	n/a
Expected dividend yield	n/a	n/a	n/a	n/a

The fair value of restricted stock awards is determined using the intrinsic value of the award on the date of grant.

## 9. Segment Information

The Company operates in two business segments, New Energy and Test and Measurement Instrumentation. The New Energy segment is focused on commercializing direct methanol fuel cells. The Test and Measurement Instrumentation segment designs, manufactures, markets and services high performance test and measurement instruments and systems, wafer characterization tools for the semiconductor and solar industries and computer-based balancing systems for aircraft engines. The Company's principal operations are located in North America.

The accounting policies of the New Energy and Test and Measurement Instrumentation segments are similar to those described in the summary of significant accounting policies in the Company's Annual Report on Form 10-K. The Company evaluates performance based on profit or loss from operations before income taxes, accounting changes, items management does not deem relevant to segment performance, and interest income and expense. Inter-segment sales and expenses are not significant.

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**MECHANICAL TECHNOLOGY, INCORPORATED**  
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Summarized financial information concerning the Company's reportable segments is shown in the following table. The "Other" column includes corporate related items and items such as income taxes or unusual items, which are not allocated to reportable segments. The "Reconciling Items" column includes noncontrolling interests in a consolidated subsidiary. In addition, segments' non-cash items include any depreciation and amortization in reported profit or loss. The New Energy segment figures for the 2008 periods include the Company's equity securities of Plug Power and gains on the sale of these securities.



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(Dollars in thousands)

	Test and Measurement			Reconciling	Condensed Consolidated
	New Energy	Instrumentation	Other	Items	Totals
Three months ended June 30, 2008					
Product revenue	\$ □	\$ 1,720	\$ □	\$ □	\$ 1,720
Funded research and development revenue	309	□	□	□	309
Research and product development expenses	2,291	480	□	□	2,771
Selling, general and administrative expenses	444	682	927	□	2,053
Segment loss from operations before income taxes					
and noncontrolling interest	(2,532)	(400)	323	□	(2,609)
Segment (loss) profit	(2,532)	(400)	(431)	85	(3,278)
Total assets	4,044	2,827	3,039	□	9,910
Securities available for sale	1,658	□	□	□	1,658
Capital expenditures	56	10	17	□	83
Depreciation and amortization	160	34	16	□	210

Three months ended June 30, 2009

Product revenue	\$ □	\$ 1,310	\$ □	\$ □	\$ 1,310
Funded research and development revenue	542	□	□	□	542
Research and product development expenses	1,145	251	□	□	1,396
Selling, general and administrative expenses	(7)	386	375	□	754
Segment loss from operations before income taxes					
and noncontrolling interest	(659)	(18)	(292)	□	(969)
Segment (loss) profit	(659)	(18)	(287)	18	(946)
Total assets	2,189	2,204	1,355	(755)	4,993
Securities available for sale	□	□	□	□	□
Capital expenditures	□	□	□	□	□
Depreciation and amortization	125	26	12	□	163

(Dollars in thousands)

	Test and Measurement			Reconciling	Condensed Consolidated
	New Energy	Instrumentation	Other	Items	Totals
Six months ended June 30, 2008					
Product revenue	\$ □	\$ 3,700	\$ □	\$ □	\$ 3,700
Funded research and development revenue	482	□	□	□	482
Research and product development expenses	4,182	962	□	□	5,144
Selling, general and administrative expenses	1,372	1,439	1,860	□	4,671
Segment loss from operations before income taxes					
and noncontrolling interest	(5,926)	(632)	646	□	(5,912)
Segment (loss) profit	(5,926)	(632)	(116)	209	(6,465)
Total assets	4,044	2,827	3,039	□	9,910
Securities available for sale	1,658	□	□	□	1,658
Capital expenditures	108	60	17	□	185
Depreciation and amortization	327	67	37	□	431

**MECHANICAL TECHNOLOGY, INCORPORATED**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)**

(Dollars in thousands)

	New Energy	Test and Measurement		Reconciling		Condensed Consolidated
		Instrumentation	Other	Items	Totals	
Six months ended June 30, 2009						
Product revenue	\$ 0	\$ 2,859	\$ 0	\$ 0	\$ 2,859	
Funded research and development revenue	1,059	0	0	0	1,059	
Research and product development expenses	2,322	536	0	0	2,858	
Selling, general and administrative expenses	83	870	692	0	1,645	
Segment loss from operations before income taxes and noncontrolling interest	(1,439)	(25)	(461)	0	(1,925)	
Segment (loss) profit	(1,439)	(25)	(262)	38	(1,688)	
Total assets	2,189	2,204	1,355	(755)	4,993	
Securities available for sale	0	0	0	0	0	
Capital expenditures	0	0	0	0	0	
Depreciation and amortization	259	54	25	0	338	

The following table presents the details of "Other" segment (loss) profit:

(Dollars in thousands)	Three Months Ended June 30,		Six Months Ended June 30,	
	2008	2009	2008	2009
Corporate and other (expenses) income:				
Depreciation and amortization	\$ (16)	\$ (12)	\$ (37)	\$ (25)
Interest income	15	18	58	36
Gain on derivatives	333	13	666	32
Income tax (expense) benefit	(754)	5	(762)	199
Other expense, net	(9)	(311)	(41)	(504)
Total income (expense)	\$ (431)	\$ (287)	\$ (116)	\$ (262)

**10. Restructuring**

In August 2008, the Board of Directors approved a restructuring plan (the "Restructuring"), which was designed to help the Company reduce expenses and preserve cash. As part of the Restructuring, a total of 29 positions across the Company and its subsidiaries were eliminated. The Company incurred total severance and other benefit charges of \$342 thousand in connection with this plan. All cash expenditures related to this restructuring have been paid as of June 30, 2009.

**11. Commitments and Contingencies****Lawrence Litigation**

On September 9, 1998, Barbara Lawrence, the Lawrence Group, Inc. ("Lawrence") and certain other Lawrence-related entities ("Plaintiffs") initially filed suit in the United States Bankruptcy Court for the Northern District of New York ("Bankruptcy Court") and the United States District Court for the Northern District of New York ("District Court"), which were subsequently consolidated in the District Court, against First Albany Corporation, now known as Broadpoint Capital, Inc. ("BCI"), the Company, Dale Church, Edward Dohring, Beno Sternlicht, Alan Goldberg and George McNamee (Church, Dohring, Sternlicht, Goldberg and McNamee are

former Directors of the Company), Marty Mastroianni (former President and Chief Operating Officer of the Company) and 33 other individuals (the Defendants) who purchased a total of 820,909 shares (307,841 post-split and reverse split) of the Company's stock from the Plaintiffs. The case concerns the Defendants' 1997 purchase of the Company's common stock from the Plaintiffs at the price of \$2.25 per share (\$6.00 per share post split and reverse split). BCI acted as Placement Agent in connection with the negotiation and sale of the shares, including in proceedings before the Bankruptcy Court, which approved the sale in September 1997.

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**MECHANICAL TECHNOLOGY, INCORPORATED**  
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Plaintiffs claim that the Defendants failed to disclose material inside information to the Plaintiffs in connection with the sale and that the \$2.25 per share (\$6.00 per share post split and reverse split) purchase price was unfair. Plaintiffs are seeking damages of \$5 million plus punitive damages and costs. In April 1999, Defendants filed a motion to dismiss the amended complaint, which was denied by the Bankruptcy Court. On appeal in October 2000, Plaintiffs' claims were dismissed by the District Court. In November 2000, Plaintiffs filed an appeal of that dismissal with the United States Court of Appeals for the Second Circuit. In June 2002, the Second Circuit Court of Appeals reversed the District Court decision in part and remanded the case for further consideration of the Plaintiffs' claims as motions to modify the Bankruptcy Court sale order. The Plaintiffs' claims have now been referred back to Bankruptcy Court for such consideration. By order and decision dated September 30, 2003, the Bankruptcy Court allowed certain limited discovery to proceed, and this process is still underway.

The Company believes the claims have no merit and intends to defend them vigorously. The Company cannot predict the outcome of the claims nor reasonably estimate a range of possible loss given the current status of the litigation. Accordingly, no amounts have been reserved for this matter.

### **Leases**

The Company and its subsidiaries lease certain manufacturing, laboratory and office facilities. The leases generally provide for the Company to pay either an increase over a base year level for taxes, maintenance, insurance and other costs of the leased properties or the Company's allocated share of insurance, taxes, maintenance and other costs of leased properties. The leases contain renewal provisions.

The Company's future minimum rental payments required under non-cancelable operating leases are (dollars in thousands): \$295 remaining in 2009, \$39 in 2010, \$9 in 2011 and \$0 in 2012.

### **Warranties**

Below is a reconciliation of changes in product warranty liabilities:

(Dollars in thousands)	<b>Six Months Ended</b>	
	<b>June 30,</b>	
	<b>2008</b>	<b>2009</b>
Balance, January 1	\$ 72	\$ 31
Accruals for warranties issued	28	14
Settlements made (in cash or in kind)	(15)	(6)
Balance, end of period	\$ 85	\$ 39

### **Licenses**

Under a 2002 NYSERDA contract, MTI Micro agreed to pay NYSERDA a royalty of 5.0% of the sales price of any product sold incorporating IP developed pursuant to the NYSERDA contract. If the product is manufactured by a New York State manufacturer, this royalty is reduced to 1.5%. Total royalties are subject to a cap equal to two times the total contract funds paid by NYSERDA to MTI Micro, and may be reduced to reflect any New York State jobs created by MTI Micro.

**Employment Agreements**

The Company has employment agreements with certain employees that provide severance payments, certain other payments, accelerated vesting and exercise extension periods of certain options upon termination of employment under certain circumstances, as defined in the applicable agreements. As of June 30, 2009, the Company's potential minimum cash obligation to these employees was approximately \$684 thousand.

**12. Issuance of Stock by Subsidiary**

MTI Micro was formed on March 26, 2001. As of June 30, 2009, the Company owned approximately 97% of MTI Micro's outstanding common stock.

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**MECHANICAL TECHNOLOGY, INCORPORATED**  
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**13. Derivatives**

The Company held or has outstanding the following derivative financial instruments:

	<b>Dec. 31,</b>	<b>June 30,</b>	
	<b>2008</b>	<b>2009</b>	<b>Expiration</b>
<b>Derivatives issued:</b>			
Warrants, exercisable beginning June 20, 2007, to purchase the Company's common stock issued to three investors at a purchase price of \$18.16 per share	378,472	378,472	12/19/2011

The estimated fair value of this warrant at the date issued was \$18.16 per share, using a Black-Scholes Option Pricing model and assumptions similar to those used for valuing the Company's employee stock-based compensation. The fair value of the derivative is recorded in the "Derivative liability" line on its financial statements, and is valued quarterly using the Black-Scholes Option Pricing Model.

The assumptions used for the valuations were as follows:

	<b>Dec. 31,</b>	<b>June 30,</b>
	<b>2008</b>	<b>2009</b>
Expected life of option (number of days)	1,084	903
Risk-free interest rate	1.55%	2.54%
Expected volatility of stock	93.45%	112.50%
Expected dividend yield	None	None

The Company recognizes changes in fair value in its Consolidated Statements of Operations in the line titled "Gain on derivatives."

**14. Bridge note payable - related party, at fair value**

On September 18, 2008, MTI Micro executed a Bridge Note and Warrant Purchase Agreement (the "Purchase Agreement"), Secured Convertible Promissory Note Agreements (the "Bridge Notes"), Security Agreement (the "Security Agreement") and Warrant Agreements (the "Warrants") with the Company and other accredited investors, including Dr. Walter L. Robb, a member of the Company's Board of Directors, and a fund managed by Dr. Robb (the "Other Investors", and together with the Company, the "Investors"). The Bridge Notes allowed MTI Micro to borrow up to an aggregate of \$2.2 million, including conversion of outstanding debt totaling \$700,000 owed to the Company. Under this agreement, MTI Micro closed on \$1.5 million of funding from Other Investors and

\$700,000 from the Company on September 18, 2008.

On February 20, 2009, MTI Micro and the Investors agreed to, among other things, amend the Bridge Notes (□Amendment No. 1□) to permit MTI Micro to sell additional Bridge Notes with an additional principal amount of up to \$500,000, and to extend the maturity date from March 31, 2009 to May 31, 2009 (the □Maturity Date□). No other terms of the Bridge Notes were amended. Following the effectiveness of the Amendment No. 1, MTI Micro borrowed an additional \$500,000 from an existing Bridge Investor, a fund managed by Dr. Robb, bringing the aggregate outstanding principal amount borrowed under the Bridge Notes, as amended, to \$2.7 million, including conversion of outstanding debt totaling \$700,000 owed to the Company.

On April 15, 2009, MTI Micro and the Investors agreed to amend the Bridge Notes (□Amendment No. 2□) to permit MTI Micro to sell additional Bridge Notes with an additional principal amount of up to \$800,000 to an additional investor and the fund managed by Dr. Robb, and to extend the maturity date from May 31, 2009 to March 31, 2010 (the □Maturity Date□).

If the next equity financing does not occur on or before the Maturity Date, all principal and (at MTI Micro□s option) accrued interest outstanding under all of the Notes shall be converted into equity securities of MTI Micro based upon a valuation of MTI Micro and on such terms to be agreed upon by MTI Micro and the holders of a majority interest of the Notes within thirty (30) days following the earlier to occur of (i) the Maturity Date or (ii) the date upon which the aggregate principal amount under all the Notes equals or exceeds \$3,500,000, which the valuation and terms shall be negotiated in good faith by MTI Micro and a majority interest of the Notes.

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**MECHANICAL TECHNOLOGY, INCORPORATED**  
**NOTES TO CONDENSED CONSOLIDATED FINANCIAL STATEMENTS (Unaudited)**

The Bridge Notes have an interest rate of 10%, compounded annually. Accrued interest at June 30, 2009 was \$145,000. MTI Micro intends to use the proceeds for general corporate purposes, including development and commercialization activities in support of its portable power source products. The Bridge Notes were issued in private placements with accredited investors and were exempt from registration pursuant to Section 4(2) of the Securities Act of 1933, as amended.

The bridge note payable has been accounted for as a liability in accordance with FAS 150, *Accounting for Certain Financial Instruments with Characteristics of both Liabilities and Equity*, as it represents a financial instrument with an obligation that requires settlement by issuance of a variable number of the issuer□s equity shares that has a value equal to a fixed monetary amount.

Depending on the valuation of MTI Micro at the time of conversion, the Company□s ownership position could be substantially diluted, and the Company may no longer have sufficient equity to control the operations of MTI Micro. If MTI Micro and holders of a majority interest of the Bridge Notes cannot agree upon the valuation and terms of a negotiated conversion, and do not consummate such negotiated conversion within thirty (30) days following the Maturity Date, then all principal and accrued interest outstanding under the Bridge Notes shall be due and payable upon demand by the holders at any time thereafter.

In the event of a change of control of MTI Micro prior to the consummation of the next equity financing, a negotiated conversion, or the repayment in full of all principal and accrued interest under the Bridge Notes, then all unpaid principal and accrued interest shall become immediately due and payable in an amount equal to 125% of the principal amount of the Bridge Notes and 100% of the accrued interest then outstanding within thirty (30) days following the consummation of a change in control.

The Bridge Notes contain customary negative covenants for loans of this type, including limitations on MTI Micro□s ability to incur indebtedness, issue securities, and dispose of assets. As of June 30, 2009, MTI Micro was not in default. The Bridge Notes are secured by all of MTI Micro□s assets (including intellectual property) and are senior to all other debts and obligations of MTI Micro in accordance with the provisions of a Security Agreement among MTI Micro and the Investors.

The Investors will also receive Warrants to purchase securities issued in the next equity financing or issued in a negotiated conversion, as applicable, having an aggregate exercise price equal to 10% of the principal amount of

the outstanding Bridge Notes. The per share exercise price of the Warrants shall be the per share price at which securities are sold or issued in the next equity financing or negotiated conversion, as applicable. The Warrants will be net-exercisable and will expire on the earlier of: (i) the fifth anniversary of the Warrant issue date; (ii) immediately prior to a change in control; (iii) thirty days following the Maturity Date if no negotiated conversion is consummated; or (iv) immediately prior to an initial public offering of MTI Micro.

Because the next equity financing or a negotiated conversion has not yet taken place, the warrant's exercise price and number of shares are not yet determinable. As such, the warrants have not been measured. When the next equity financing or a negotiated conversion does occur, the warrants will be measured and recognized at that time.

As of June 30, 2009, the Company owned approximately 97% of MTI Micro. MTI Micro's financial results are presently consolidated into the Company's financial information. Conversion of the Bridge Notes and exercise of the Warrants into equity of MTI Micro by the Other Investors besides the Company could result in substantial dilution of the Company's ownership interest in MTI Micro, and could result in the Company deconsolidating future financial results of MTI Micro.

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

Unless the context requires otherwise, the terms "we," "us," and "our" refer to Mechanical Technology Incorporated, a New York Corporation, "MTI Micro" refers to MTI MicroFuel Cells Inc., a Delaware corporation and our majority owned subsidiary, and "MTI Instruments" refers to MTI Instruments, Inc., a New York corporation and our wholly owned subsidiary. We have a registered trademark in the United States for "Mobion." Other trademarks, trade names, and service marks used in this Quarterly Report on Form 10-Q are the property of their respective owners.

The following discussion of our financial condition and results of operations should be read in conjunction with the condensed consolidated financial statements and the notes thereto included in Item 1 of Part I of this Quarterly Report on Form 10-Q and the audited consolidated financial statements and the notes thereto and Management's Discussion and Analysis of Financial Condition and Results of Operations for the year ended December 31, 2008 contained in our 2008 Annual Report on Form 10-K.

In addition to historical information, the following discussion contains forward-looking statements, which involve risk and uncertainties. Our actual results could differ materially from those anticipated in the forward-looking statements. Important factors that could cause actual results to differ include those discussed in Part II, Item 1A "Risk Factors" and elsewhere in this Quarterly Report on Form 10-Q.

### Overview

We are developing and commercializing off-the-grid rechargeable power sources for portable electronics. We have developed a patented, proprietary direct methanol fuel cell technology platform called Mobion, which generates electrical power using up to 100% methanol as fuel. Our proprietary fuel cell power solution consists of two primary components integrated in an easily manufactured device: the direct methanol fuel cell power engine, which we refer to as our Mobion Chip, and methanol replacement cartridges. Our Mobion Chip weighs less than one ounce and is small enough to fit in the palm of one's hand. The methanol used by the technology is fully biodegradable. We believe we are the only micro fuel cell developer to have demonstrated power density of over 62 mW/cm<sup>2</sup> while producing more than 1,800 Wh/kg of energy from the direct methanol fuel feed. For these reasons, we believe our technology offers a compelling alternative to current lithium-ion and similar rechargeable battery systems currently used by original equipment manufacturers and branded partners, or OEMs, in many handheld electronic devices, such as mobile phones (including smart phones) and mobile phone accessories, digital cameras, portable media players, personal digital assistants (PDAs), and global positioning systems (GPS) devices. We believe our platform will facilitate the development of numerous product advantages, including small size, environmental friendliness, and simplicity of design, all critical for commercialization in the consumer market, and can be implemented as three different product options: a compact external charging device, a snap-on or attached power accessory, or a lithium-ion battery replacement embedded fuel cell power solution. We have strategic arrangements with Samsung Electronics, an OEM of mobile phone accessories, with a global Japanese consumer electronics company, with a U.S. based developer and marketer of universal chargers, with a power tool manufacturer, with Trident Systems, a defense contractor, and with Neosolar, a South Korean electronics company. We also have a letter of intent with Duracell, part of the Procter & Gamble Company. Our

goal is to become a leading provider of portable power for handheld electronic devices and, assuming available financing, we intend to commercialize Mobion products in late 2009 or early 2010.

Our Mobion technology eliminates the need for active water recirculation pumps or the inclusion of water as a fuel dilutant. The water required for the electrochemical process is transferred internally within the Mobion Chip from the site of water generation on the air-side of the cell. This internal flow of water takes place without the need for any pumps, complicated re-circulation loops or other micro-plumbing tools. Our Mobion technology is protected by a patent portfolio that includes over 110 U.S. patent applications covering five key technologies and manufacturing areas.

We also design, manufacture, and sell high-performance test and measurement instruments and systems serving three markets: general dimensional gauging, semiconductor and solar wafers, and aviation. These products consist of: electronic, computerized gauging instruments for position, displacement and vibration applications in the design, manufacturing and test markets; semiconductor products for wafer characterization; and engine balancing and vibration analysis systems for military and commercial aircraft.

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Our cash requirements depend on numerous factors, including completion of our portable power source products development activities, our ability to commercialize our portable power source products, market acceptance of our portable power source products, and other factors.

Several key indicators of our liquidity are summarized in the following table:

(Dollars in thousands)	<b>Six Months Ended June 30,</b>	
	<b>2008</b>	<b>2009</b>
Cash and cash equivalents	\$ 2,370	\$ 407
Securities available for sale	1,658	0
Working capital	4,409	(1,079)
Net loss	(6,465)	(1,688)
Net cash used in operating activities	(6,543)	(2,300)
Purchase of property, plant and equipment	(185)	0

From inception through June 30, 2009, we have incurred an accumulated deficit of \$119.3 million, and we expect to incur losses for the foreseeable future as we continue micro fuel cell product development and commercialization programs. We expect that losses will fluctuate from year to year and that such fluctuations may be substantial as a result of, among other factors, our operating results, the availability of equity financing, and the ability to attract government funding resources to offset research and development costs.

At present, the Company does not expect to continue to fund MTI Micro's development and commercialization of its portable power source products. MTI Micro had cash and cash equivalents as of June 30, 2009 of \$38 thousand. Subsequently, MTI Micro received an additional \$165,000 from the Bridge Notes, and received retroactive billings from the DOE for work performed through June 30, 2009 of \$1.06 million. Additionally, MTI Micro has \$90,000 available through the Bridge Note, and the remainder of the \$2.4 million DOE contract as work is performed. With these resources, management currently believes it will have adequate resources to fund its MTI Micro operations into the fourth quarter of 2009. MTI Micro will be required to raise additional funds through issuance of its equity or debt, government funding and/or explore other strategic alternatives including but not limited to the sale of assets and/or the company. If MTI Micro is unable to raise additional financing, it may be required to discontinue its business operations. Based upon projected cash requirements and current cash and cash equivalents for MTI Instruments, along with cash necessary to operate the public parent company, we believe that we will have adequate resources to fund MTI Instruments and the public parent company at least through December 2009.

## Results of Operations

*Results of Operations for the Three and Six Months Ended June 30, 2009 Compared to the Three and Six Months Ended June 30, 2008.*

**Product Revenue.** Product revenue in our test and measurement instrumentation business for the three months ended June 30, 2009 decreased in comparison to the same period in 2008 by \$410,000, or 23.9%, to \$1.3 million. The revenue decrease was primarily the result of a \$617,000 decrease in semiconductor metrology tool sales due to four fewer semi-automated tools being sold this quarter. This decline was partially offset by a \$75,000 increase in aviation product sales, an increase in solar metrology tool sales of \$71,000 and a \$61,000 increase in general instrumentation sales.

Product revenue in our test and measurement instrumentation business for the six months ended June 30, 2009 decreased in comparison to the same period in 2008 by \$841,000, or 22.8%, to \$2.9 million. The revenue decrease was attributable to a \$494,000 drop in semiconductor metrology tool sales and a \$444,000 decrease in general instrumentation sales due to a decline in business from the Pacific Rim. These declines were partially offset by a \$71,000 increase in solar metrology products and a \$26,000 rise in aviation business.

As a result of delays in receiving new Air Force contracts, significant slowdowns in the semiconductor industry and sluggish traction in the solar market, our test and measurement instrumentation business is not projecting growth this year and continues to expect 2009 revenues to be comparable to the revenue recorded in 2008.

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Information regarding government contracts included in product revenue is as follows:

(Dollars in thousands)

Contract <sup>(1)</sup>	Expiration	Revenues for the Three Months Ended June 30,		Revenue Contract to	Total Contract Orders Received to
		2008	2009	Date June 30, 2009	Date June 30, 2009
\$2.3 million Air Force New PBS-4100 Systems	07/28/2010 <sup>(2)</sup>	\$ □	\$ 171	\$ 2,052	\$ 2,052
\$8.8 million Air Force Retrofit and Maintenance of PBS-4100 Systems	06/19/2008 <sup>(3)</sup>	\$ 41	\$ □	\$ 8,009	\$ 8,009

(Dollars in thousands)

Contract <sup>(1)</sup>	Expiration	Revenues for the Six Months Ended June 30,		Revenue Contract to	Total Contract Orders Received to
		2008	2009	Date June 30, 2009	Date June 30, 2009
\$2.3 million Air Force New PBS-4100 Systems	07/28/2010 <sup>(2)</sup>	\$ □	\$ 456	\$ 2,052	\$ 2,052
\$8.8 million Air Force Retrofit and Maintenance of PBS-4100 Systems	06/19/2008 <sup>(3)</sup>	\$ 379	\$ 50	\$ 8,009	\$ 8,009

(1) Contract values represent maximum potential values and may not be representative of actual results.

(2) Date represents expiration of contract, including all three potential option extensions.

(3) The contract expiration date has passed, however, three delivery orders remain open under the contract.

**Funded Research and Development Revenue.** Funded research and development revenue in our new energy business for the three months ended June 30, 2009 increased in comparison to the same period in 2008 by \$233,000, or 75.4%, to \$542,000. The increase in revenue was primarily the result of billings under the recently placed DOE contract.



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Funded research and development revenue in our new energy business for the six months ended June 30, 2009 increased in comparison to the same period in 2008 by \$577,000, or 119.7%, to \$1.06 million. The increase in revenue was primarily the result of billings back to January 2009 under the recently placed DOE contract.

Information regarding our contracts included in funded research and development revenue is as follows:

(Dollars in thousands)

Contract	Expiration <sup>(1)</sup>	Revenue Six Months Ended June 30, 2008		Revenue Six Months Ended June 30, 2009		Revenue Contract to Date June 30, 2009
		Total	% of 2008	Total	% of 2009	
\$3.0 million DOE <sup>(2)</sup>	03/31/09	\$ 482	100%	\$ --	--%	\$ 3,000
\$2.4 million DOE <sup>(3)</sup>	03/31/10	--	--	\$ 1,059	100%	\$ 1,059

- (1) Dates represent expiration of contract, not date of final billing.
- (2) The DOE contract is a cost share contract. DOE funding for this contract was suspended during January 2006 and reinstated during May 2007. During 2007, we received notifications from the DOE of funding releases totaling \$1.0 million and an extension of the termination date for the contract from July 31, 2007 to September 30, 2008. During 2008, we received notifications of funding releases totaling \$825,000 and an extension of the termination date for the contract from September 30, 2008 to March 31, 2009.
- (3) The DOE contract is a cost share contract.

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**Cost of Product Revenue.** Cost of product revenue in our test and measurement instrumentation business for the three months ended June 30, 2009 decreased in comparison to the same period in 2008 by \$198,000, or 24.0%, to \$628,000. The decrease corresponded to the 23.9% decline in product revenue for the quarter. Gross profit, as a percentage of product revenue, remained comparable to that of the same period in the prior year at 52%.

Cost of product revenue in our test and measurement instrumentation business for the six months ended June 30, 2009 decreased in comparison to the same period in 2008 by \$372,000, or 22.4%, to \$1.29 million. The decrease corresponded to the 22.9% decline in product revenue for the first six months. Gross profit, as a percentage of product revenue, remained comparable to that of the same six months of last year at 55%.

**Funded Research and Product Development Expenses.** Funded research and product development expenses in our new energy business increased by \$454,000, or 71.6%, to \$1.09 million for the three months ended June 30, 2009 in comparison to the same period in 2008. This change was the result of the new DOE contract, as mentioned above in Funded Research and Development Revenue, and recognition of the expenses as Funded Research and Product Development Expenses.

Funded research and product development expenses in our new energy business increased by \$1.13 million, or 114.4%, to \$2.12 million for the six months ended June 30, 2009 in comparison to the same period in 2008. This change was the result of the new DOE contract, as mentioned above in Funded Research and Development Revenue, and recognition of the expenses as Funded Research and Product Development Expenses.

**Unfunded Research and Product Development Expenses.** Unfunded research and product development expenses decreased by \$1.8 million, or 85.6%, to \$308,000 for the three months ended June 30, 2009 from \$2.1 million for the three months ended June 30, 2008. This decrease is attributable to continued cost reductions by management due to decreases in funding.

Unfunded research and product development expenses decreased by \$3.4 million, or 82.3%, to \$736,000 for the six months ended June 30, 2009 from \$4.2 million for the six months ended June 30, 2008. This decrease is attributable to continued cost reductions by management due to decreases in funding.

**Selling, General and Administrative Expenses.** Selling, general and administrative expenses decreased by \$1.3 million, or 63.3%, to \$754,000 for the three months ended June 30, 2009 from \$2.05 million for the three months ended June 30, 2008. This decrease was primarily the result of staff reductions in conjunction with the 2008 restructuring and an increase in allocations to funded research and development costs, due to an increase in the government approved general and administrative rate.

Selling, general and administrative expenses decreased by \$3.0 million, or 64.8%, to \$1.6 million for the six months ended June 30, 2009 from \$4.67 million for the six months ended June 30, 2008. This decrease was primarily the result of staff reductions in conjunction with the 2008 restructuring and an increase in liquidations to funded research and development costs was due to an increase in the government approved general and administrative rate.

**Operating Loss.** Operating loss decreased by \$2.7 million, or 74.4%, to \$926,000 for the three months ended June 30, 2009 compared with the three months ended June 30, 2008 as a result of the factors noted above.

Operating loss decreased by \$5.42 million, or 74.3%, to \$1.88 million for the six months ended June 30, 2009 compared with the six months ended June 30, 2008 as a result of the factors noted above.

**Gain(loss) on Derivatives.** Our gain on derivative treatment of the freestanding warrants issued in conjunction with our December 2006 capital raise decreased by \$319,000, or 95.8%, to \$14,000 for the three months ended June 30, 2009 compared with \$333,000 for the three months ended June 30, 2008. The decrease in derivative income was attributable to valuation changes of the underlying warrants using the Black-Scholes Pricing model.

Our gain on derivative treatment of the freestanding warrants issued in conjunction with our December 2006 capital raise decreased by \$634,000, or 95.2%, to \$32,000 for the six months ended June 30, 2009 compared with \$666,000 for the six months ended June 30, 2008. The decrease in derivative income was attributable to valuation changes of the underlying warrants using the Black-Scholes Pricing model.

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**Income Tax (Expense) Benefit.** Our income tax rate for the three months ended June 30, 2009 was (0.52%) and our income tax rate for the three months ended June 30, 2008 was (28.90)%. These tax rates were primarily the result of losses generated by operations, changes in the valuation allowance, permanent deductible differences for derivative valuations, and disproportionate effects of reclassification of gains on Plug Power, Inc., or Plug Power, security sales included in operating loss.

Our income tax rate for the six months ended June 30, 2009 was 10.34% and our income tax rate for the six months ended June 30, 2008 was (12.88)%. These tax rates were primarily the result of losses generated by operations, changes in the valuation allowance, state true-ups, permanent deductible differences for derivative valuations and disproportionate effects of reclassification of gains on Plug Power security sales included in operating loss.

The valuation allowance against our deferred tax assets at June 30, 2009 was \$28.7 million and at December 31, 2008 was \$27.9 million. We determined that it was more likely than not that ultimate recognition of certain deferred tax assets would not be realized.

### **Liquidity and Capital Resources**

We have incurred significant losses as we continue to fund the development and commercialization of our portable power source business. We expect that losses will fluctuate from year to year and that such fluctuations may be substantial as a result of, among other factors, our operating results, the availability of equity financing, and the ability to attract government funding resources to offset research and development costs.

As of June 30, 2009, we had an accumulated deficit of \$119.3 million. During the six months ended June 30, 2009, our results of operations resulted in a net loss of \$1.7 million and cash used in operating activities totaling \$2.3 million. This cash use in 2009 was funded primarily by cash and cash equivalents on hand as of December 31, 2008 of \$1.7 million and borrowings under the bridge note. We expect to continue to incur losses during this global economic slowdown, and we expect to continue funding our operations from current cash and cash

equivalents, proceeds, if any, from debt or equity financings and government funding. We expect to spend approximately \$1.2 million on research and development on MTI Instruments' products and \$2 million in MTI Micro during 2009.

In September 2008, MTI Micro issued Bridge Notes to investors, including MTI in the form of conversion of existing debt of \$700,000, Dr. Walter L. Robb, a member of the Company's Board of Directors, and a fund managed by Dr. Robb, totaling \$2.2 million.

In February 2009, MTI Micro and the Bridge Investors agreed to, among other things, amend the Bridge Notes (Amendment No. 1) to permit MTI Micro to sell additional Bridge Notes with an additional principal amount of up to \$500,000, and to extend the maturity date from March 31, 2009 to May 31, 2009 (the Maturity Date). No other terms of the Bridge Notes were amended. Following the effectiveness of the Amendment No. 1, MTI Micro borrowed an additional \$500,000 from an existing Bridge Investor, a fund managed by Dr. Robb, bringing the aggregate outstanding principal amount borrowed under the Bridge Notes, as amended, to \$2.7 million, including conversion of outstanding debt totaling \$700,000 owed to the Company.

On April 15, 2009, MTI Micro, a new investor and the fund managed by Dr. Robb agreed to amend the Bridge Notes (Amendment No. 2) to permit MTI Micro to sell additional Bridge Notes with an additional principal amount of up to \$800,000 to additional investors, and to extend the maturity date from May 31, 2009 to March 31, 2010 (the Maturity Date). As of June 30, 2009 and August 13, 2009, MTI Micro has drawn down \$545,000 and \$710,000, respectively, from these additional bridge notes.

If the next equity financing does not occur on or before the Maturity Date, all principal and (at MTI Micro's option) accrued interest outstanding under all of the Notes shall be converted into equity securities of MTI Micro based upon a valuation of MTI Micro and on such terms to be agreed upon by MTI Micro and the holders of a majority interest of the Notes within thirty (30) days following the earlier to occur of (i) the Maturity Date or (ii) the date upon which the aggregate principal amount under all the Notes equals or exceeds \$3,500,000, which the valuation and terms shall be negotiated in good faith by MTI Micro and a majority interest of the Notes.

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The Bridge Notes carry an annual interest rate of 10%. These Bridge Notes are secured by all of the assets of MTI Micro, including intellectual property. Lastly, five-year warrants to purchase additional securities were issued to all investors, having an aggregate exercise price equal to 10% of the outstanding principal amounts under the Bridge Notes. These warrants will be priced in a manner similar to the conversion of the Bridge Notes.

On April 16, 2009, MTI Micro was awarded a cost share funding grant of \$2.4 million from the United States Department of Energy (DOE) as part of the DOE's \$41.9 million in American Recovery and Reinvestment Act funding for fuel cell technology.

We have no other commitments for funding future needs of the organization at this time and financing during the remainder of 2009 may not be available to us on acceptable terms, if at all. We may also seek to supplement our resources through additional debt or equity financings, sales of assets (including MTI Micro or MTI Instruments), and additional government funding.

Our working capital deficit was \$1.079 million at June 30, 2009, a \$1.33 million decrease from \$252,000 at December 31, 2008. This decrease was primarily the result of the use of cash in operations.

At June 30, 2009, our order backlog was \$663,000 compared to \$1.4 million at December 31, 2008.

Our inventory turnover ratios and accounts receivable days sales outstanding for the trailing twelve month periods and their changes at June 30, 2008 and 2009 are as follows:

	2008	2009	Change
Inventory turnover	2.1	1.6	-0.5
Average accounts receivable days sales outstanding	56	40	-16

The decline in inventory turnover is attributed to a 7% increase in average inventory balances over the last twelve months, as compared to the prior twelve months. The increase is associated with higher level of subassemblies necessary to support engine balancing and vibration system sales along with strategic stock increases to support more competitive product delivery schedules.

The decrease in average accounts receivable days sales outstanding for the last twelve months, compared to the previous twelve months, was primarily attributable to our decision to grant our largest commercial customer 90-day payment terms during 2007.

Cash used by operating activities was \$2.3 million for the six months ended June 30, 2009 compared with \$6.5 million in 2008. This cash use decrease of \$4.2 million reflects a net increase in cash expenditures to fund operations of \$3.2 million, together with net balance sheet changes which decreased cash expenditures by \$1.0 million, reflecting the timing of cash payments and receipts, particularly recognition of deferred revenue and the accrual of certain accrued liabilities.

There were no capital expenditures during the six months ended June 30, 2009, a decrease of \$185,000 from the prior year. This decrease was attributable to cash conservation initiatives across all business segments. Capital expenditures in 2008 included manufacturing, laboratory and demonstration equipment. There were no outstanding commitments for capital expenditures as of June 30, 2009. We expect to finance any potential future expenditures with current cash and cash equivalents as appropriate and to the extent available.

During 2008, we sold our remaining 1,137,166 shares of Plug Power common stock with proceeds totaling \$3.0 million and gains totaling \$1.0 million. These proceeds reflect our previously announced strategy to raise additional capital through the sale of Plug Power stock to fund our micro fuel cell operations. The net gains were offset by our operating losses for purposes of computing taxable income. We estimate that as of June 30, 2009, our remaining net operating loss carry forwards were approximately \$65 million.

### Off-Balance Sheet Arrangements

Pursuant to a financing transaction between us and certain investors on December 15, 2006, we issued warrants to purchase up to an aggregate 378,472 shares of our common stock exercisable at any time until December 19, 2011 at an exercise price per share of \$18.16. The shares issuable upon exercise of these warrants would be issued under a shelf registration statement covering the resale of such shares. The terms of the warrant agreement permit a cash settlement with the holders of the warrants if we are acquired by, or merge with, a private company. Because of the possibility of such a settlement, we have classified this agreement as an asset/liability derivative in accordance with SFAS No. 133 and EITF 00-19.

### Contractual Payment Obligations

We have entered into various agreements that result in contractual payment obligations in future years. These contracts include financing arrangements for the Bridge Notes and leases. The following table summarizes cash payments that we are committed to make under the existing terms of contracts to which we are a party as of June 30, 2009. This table does not include contingencies.

Contractual Payment Obligations (in thousands)	Less	More			Total
	Than 1 Year	1-3 Years	3-5 Years	Than 5 Years	
Bridge Notes:					
Principal (1)	\$ 2,545	\$ □	\$ □	\$ □	\$ 2,545
Interest	145	□	□	□	145
Operating Leases (2)	295	48	□	□	343
Total Contractual Payment Obligations	\$ 2,985	\$ 48	\$ □	\$ □	\$ 3,033

(1) Reflects amounts outstanding with respect to the Bridge Notes (See Note 14).

(2) Reflects payment obligations under certain manufacturing, laboratory and office facility lease agreements.

### **Critical Accounting Policies and Significant Judgments and Estimates**

The discussion and analysis of our financial condition and results of operations are based upon our consolidated financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America. Note 2 to the consolidated financial statements in our Annual Report on Form 10-K for the year ended December 31, 2008 includes a summary of our most significant accounting policies. There have been no material changes to the critical accounting policies previously disclosed in our 2008 Annual Report on Form 10-K. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of assets and liabilities. On an ongoing basis, we evaluate our estimates and judgments, including those related to revenue recognition, inventories, securities available for sale, income taxes, stock-based compensation and derivatives. Management bases its estimates on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Periodically, we review our critical accounting estimates with the Audit Committee of our Board of Directors.

### **Statement Concerning Forward-Looking Statements**

This Quarterly Report on Form 10-Q contains forward-looking statements that involve risks and uncertainties within the meaning of Section 27A of the Securities Act and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. Any statements contained in this Form 10-Q that are not statements of historical fact may be forward-looking statements. When we use the words "anticipate," "estimate," "plans," "projects," "continuing," "ongoing," "expects," "management believes," "we believe," "we intend," "should," "could," "may," "will" words or phrases, we are identifying forward-looking statements. Forward-looking statements involve risks, uncertainties, estimates and assumptions which may cause our actual results, performance or achievements to be materially different from those expressed or implied by forward-looking statements. Important factors that could cause these differences include the following:

- our history of recurring net losses and the risk of continued net losses;
- our independent auditors raising substantial concern about our ability to continue as a going concern;
- sales revenue growth of our test and measurement instrumentation business may not be achieved;
- the dependence of our test and measurement instrumentation business on a small number of customers and potential loss of government funding;
- our ownership position in MTI Micro may be reduced as a result of our plans to seek external financing for MTI Micro's operations;
- risks related to developing Mobion direct methanol fuel cells and whether we will ever successfully develop reliable and commercially viable Mobion fuel cell solutions;
- our need to raise additional financing;
- the risk that certain European Union regulations will not be changed to permit methanol to be carried onto airplanes;
- our portable power source products or our customers' products that utilize our portable power source products may not be accepted by the market;
- our inability to build and maintain relationships with our customers;
- our limited experience in manufacturing fuel cell systems on a commercial basis;
- our dependence on others for our production requirements for our portable power source products;
- our dependence on our manufacturing subcontractors to maintain high levels of productivity and satisfactory delivery schedules for our portable power source products;
- our dependence on third-party suppliers for most of the manufacturing equipment necessary to produce our portable power source products;
- our inability to obtain sufficient quantities of components and other materials, including platinum and ruthenium, necessary for the production of our portable power source products;
- our dependence on OEMs integrating Mobion fuel cell systems into their devices;
- our lack of long-term purchase commitments from our customers and the ability of our customers to cancel, reduce, or delay orders for our products;
- risks related to protection and infringement of intellectual property;
- our new technologies may not result in customer or market acceptance;

- our ability to commercialize our proposed portable power source solutions and develop new product solutions on a timely basis;
- our ability to develop and utilize new technologies that address the needs of our customers;
- intense competition in the direct methanol fuel cell and instrumentation businesses;
- change in policies by U.S. or foreign governments that hinder, disrupt or economically disadvantage international trade;
- the impact of future exchange rate fluctuations;
- uncertainty of the U.S. economy;
- the historical volatility of our stock price;
- the cyclical nature of the electronics industry;
- failure of our strategic alliances to achieve their objectives or perform as contemplated and the risk of cancellation or early termination of such alliance by either party;
- product liability or defects;
- risks related to the flammable nature of methanol as a fuel source;

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- the loss of services of one or more of our key employees or the inability to hire, train, and retain key personnel;
- significant periodic and seasonal quarterly fluctuations in our results of operations;
- risks related to the limitation of the use of our net operating losses in the event of certain ownership changes; and
- other factors discussed under the heading "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2008 and in Part II, Item 1A of this Quarterly Report on Form 10-Q.

Forward-looking statements speak only as of the date they are made. You should not put undue reliance on any forward-looking statements. We assume no obligation to update forward-looking statements to reflect actual results, changes in assumptions, or changes in other factors affecting forward-looking information, except to the extent required by applicable securities laws. If we do update one or more forward-looking statements, no inference should be drawn that we will make additional updates with respect to those or other forward-looking statements.

#### **Item 4. Controls and Procedures**

The certifications of our Chief Executive Officer and Acting Chief Financial Officer attached as Exhibits 31.1 and 31.2 to this Quarterly Report on Form 10-Q include, in paragraph 4 of such certifications, information concerning our disclosure controls and procedures and internal control over financial reporting. Such certifications should be read in conjunction with the information contained in this Item 4 for a more complete understanding of the matters covered by such certifications.

##### *(a) Evaluation of Disclosure Controls and Procedures*

Our management, with the participation of our chief executive officer and our acting chief financial officer evaluated the effectiveness of MTI's disclosure controls and procedures as of June 30, 2009. The term "disclosure controls and procedures," as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act, means controls and other procedures of a company that are designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by a company in the reports that it files or submits under the Exchange Act is accumulated and communicated to the company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure. We recognize that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving their objectives and we necessarily apply our judgment in evaluating the cost-benefit relationship of possible controls and procedures.

Based on the evaluation of our disclosure controls and procedures as of June 30, 2009, our chief executive officer and our acting chief financial officer concluded that, as of such date, our disclosure controls and procedures were not effective due to staffing turnover and a lack of adequate resources within the accounting and finance department. In August 2008, the Board of Directors approved a restructuring plan (the "August 2008

Restructuring[]), which was designed to help the Company reduce expenses and preserve cash. As part of the August 2008 restructuring, the Company's chief financial officer transitioned out of the Company along with several other accounting and Information Technology personnel. Prior to the August 2008 restructuring, the Company's controller left the Company to pursue other opportunities. Additionally, effective December 1, 2008 the Company's interim chief financial officer and director of financial reporting resigned from the Company. In response to the turnover, the Company has retained an outside consulting firm to provide controllership and chief financial officer related services. On June 18, 2009, the Company appointed an acting chief financial officer, who will continue to utilize the services of the outside consulting firm until the position is reinstated.

*(b) Changes in Internal Control Over Financial Reporting*

There have been no changes in our internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, during our fiscal quarter ended June 30, 2009 that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

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## **PART II. OTHER INFORMATION**

### **Item 1. Legal Proceedings**

At any point in time, we may be involved in various lawsuits or other legal proceedings. Such lawsuits could arise from the sale of products or services or from other matters relating to our regular business activities, compliance with various governmental regulations and requirements, or other transactions or circumstances. We do not believe there are any such proceedings presently pending that could have a material adverse effect on our financial condition. See Note 11 to our Condensed Consolidated Financial Statements for further information.

### **Item 1A. Risk Factors**

Our Annual Report on Form 10-K for the year ended December 31, 2008 contains a detailed discussion of our risk factors. In addition, information regarding risk factors appears in "Management's Discussion and Analysis of Financial Condition and Results of Operations" Statement Concerning Forward Looking Statements. These risk factors could cause our actual results to differ materially from those stated in forward-looking statements contained in this document and elsewhere. Pursuant to the instructions to this Quarterly Report on Form 10-Q, we have provided below only those risk factors that are new or that have been materially amended since the time that we filed our 2008 Annual Report on Form 10-K. Accordingly, the information presented below should be read in conjunction with the risk factors and information disclosed in our 2008 Annual Report on Form 10-K.

#### ***We have incurred recurring net losses and anticipate continued net losses as we execute our commercialization plan for our portable power source business.***

We have incurred recurring net losses, including net losses of \$6.5 million for the six months ended June 30, 2008 and \$1.7 million for the six months ended June 30, 2009, which includes a net gain of \$32,000 on derivatives in 2009. As a result of ongoing operating losses, we had an accumulated deficit of \$119.3 million as of June 30, 2009. We expect to continue to make significant expenditures and incur substantial expenses as we develop and commercialize our proposed portable power source products; develop our manufacturing, sales, and distribution networks; implement internal systems and infrastructure; and hire additional personnel. As a result, we expect to continue to incur continued significant losses as we execute our plan to commercialize our portable power source business and may never achieve or maintain profitability. We will be unable to satisfy our current obligations solely from cash generated from operations or become profitable until we successfully commercialize our portable power source business. If we continue to incur substantial losses and are unable to secure additional financing, we could be forced to discontinue or curtail our business operations; sell assets at unfavorable prices; or merge, consolidate, or combine with a company with greater financial resources in a transaction that may be unfavorable to us.

At present, the Company does not expect to fund MTI Micro's development and commercialization of its portable power source products. MTI Micro had cash and cash equivalents as of June 30, 2009 of \$38 thousand. Subsequently, MTI Micro received an additional \$165,000 from the Bridge Notes, and received retroactive billings from the DOE for work performed through June 30, 2009 of \$1.06 million. Additionally, MTI Micro has

\$90,000 available through the Bridge Note, and the remainder of the \$2.4 million DOE contract as work is performed. With these resources, management currently believes it will have adequate resources to fund its MTI Micro operations into the fourth quarter of 2009. MTI Micro will be required to raise additional funds through issuance of its equity or debt, government funding and/or explore other strategic alternative, including the sale of assets and/or the company. If MTI Micro is unable to raise additional financing, it may be required to discontinue its business operations. Based upon projected cash requirements and current cash and cash equivalents for MTI Instruments, along with cash necessary to operate the public parent company, we believe that we will have adequate resources to fund MTI Instruments and the public parent company at least through December 2009.

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***Our independent auditors have included a going concern paragraph in their opinion.***

Our auditors included an explanatory paragraph in their opinion that accompanies our audited consolidated financial statements as of December 31, 2008, indicating that our recurring losses from operations, net capital deficiency, and current liquidity position raised substantial doubt about our ability to continue as a going concern. The accompanying consolidated financial statements did not include any adjustments that would have resulted from the outcome of this uncertainty.

***We currently do not have sufficient funds to commercialize our portable power source products.***

We will need additional funding to commercialize our portable power source business. MTI Micro had cash and cash equivalents as of June 30, 2009 of \$38 thousand. Subsequently, MTI Micro received an additional \$165,000 from the Bridge Notes, and received retroactive billings from the DOE for work performed through June 30, 2009 of \$1.06 million. Additionally, MTI Micro has \$90,000 available through the Bridge Note, and the remainder of the \$2.4 million DOE contract as work is performed. With these resources, management currently believes it will have adequate resources to fund its MTI Micro operations into the fourth quarter of 2009. If we are unable to secure the necessary additional funding, we will need to delay further commercialization plans. In order to conserve cash and extend operations while we pursue any additional necessary financing, we will be required to reduce operating expenses and raise additional capital through funding. There is no assurance that funds raised in any such a financing will be sufficient, that the financing will be available on terms favorable to us or to existing stockholders and at such times as required, or that we will be able to obtain the additional financing required for the continued operation and growth of our business. During the last twelve months, we have raised \$3.5 million in external debt financing. If we raise additional funds by issuing equity securities, our stockholders will experience dilution. Additional debt financing, if available, may involve restrictive covenants. Any debt financing or additional equity financing may contain terms that are not favorable to us or our stockholders. If we raise additional funds through collaboration and licensing arrangements with third parties, it may be necessary to relinquish some rights to our technologies or our products, or grant licenses on terms that are not favorable to us. If we are unable to raise adequate funds, we may have to liquidate some or all of our assets or delay, reduce the scope of or eliminate some or all of our research and development programs, or discontinue our portable power source business.

***Our ownership position in MTI Micro may be reduced as a result of our plans to seek external financing for MTI Micro's operations, which could limit our ability to control the operations.***

We currently own approximately 97% of the outstanding equity in MTI Micro and have control over the operations of this subsidiary. In September 2008 and February 2009, MTI Micro issued \$1.5 million and \$500,000, respectively, of secured notes to outside investors, which notes are convertible into shares of MTI Micro. On April 15, 2009, MTI Micro amended the notes to permit MTI Micro to sell additional notes with an additional principal amount of up to \$800,000 to additional investors, and to extend the maturity date from May 31, 2009 to March 31, 2010. A further amendment provided that if the next equity financing does not occur on or before the Maturity Date, all principal and (at MTI Micro's option) accrued interest outstanding under all of the Notes shall be converted into equity securities of MTI Micro based upon a valuation of MTI Micro and on such terms to be agreed upon by MTI Micro and the holders of a majority interest of the Notes within thirty (30) days following the earlier to occur of (i) the Maturity Date or (ii) the date upon which the aggregate principal amount under all the Notes equals or exceeds \$3,500,000, which the valuation and terms shall be negotiated in good faith by MTI Micro and a majority interest of the Notes. If the notes are converted, our ownership could decrease significantly. In addition, we do not currently expect to advance additional resources to MTI Micro to fund its continued direct methanol fuel cell development and commercialization programs. Instead, MTI Micro will seek additional capital from external sources to fund future development and operations. Depending on the valuation



of MTI Micro at the time of future financings, if any, our ownership position could be substantially diluted, and we may no longer have sufficient equity to control the operations of MTI Micro. If MTI Micro is unable to secure the necessary additional external financing, we may be forced to substantially downsize or eliminate its operations.

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***We may experience an ownership change which would result in a limitation of the use of our net operating losses.***

As of June 30, 2009, we had approximately \$65 million of net operating loss, or NOL, carryforwards. Our ability to utilize these NOL carryforwards, including any future NOL carryforwards that may arise, may be limited by Section 382 of the Internal Revenue Code of 1986, as amended, if we or MTI Micro undergo an "ownership change" as a result of subsequent changes in the ownership of our outstanding common stock pursuant to the exercise of the warrants, the conversion of the MTI Micro's bridge notes, or otherwise. A corporation generally undergoes an "ownership change" when the ownership of its stock, by value, changes by more than 50 percentage points over any three-year testing period. In the event of an ownership change, Section 382 imposes an annual limitation on the amount of post-ownership change taxable income a corporation may offset with pre-ownership change NOL carryforwards and certain recognized built-in losses.

***Our common stock was delisted from the NASDAQ Stock Market, which could adversely affect the price of our stock and the ability of our stockholders to trade in our stock.***

In April 2009, we voluntarily delisted our common stock from the NASDAQ Stock Market to reduce expenses and to avoid a likely involuntary delisting for failure to comply with the continued listing requirements. Our common stock subsequently began trading on the Pink Sheets under the symbol "MKTY PK." As a result of the delisting, the liquidity in our stock may decrease, which could adversely affect the price of our stock and make it more difficult for you to trade in our stock.

**Item 5. Other Information**

None

**Item 6. Exhibits**

Exhibit No.	Description
10.1	Amendment No. 2 to Convertible Note and Warrant Purchase Agreement dated April 15, 2009
31.1	Rule 13a-14(a)/15d-14(a) Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, of Peng K. Lim
31.2	Rule 13a-14(a)/15d-14(a) Certification Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, of Frederick W. Jones
32.1	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, of Peng K. Lim
32.2	Certification Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, of Frederick W. Jones

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**SIGNATURES**

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 thereunto duly authorized.

Mechanical Technology, Incorporated

By: /S/ PENG K. LIM

Peng K. Lim  
Chief Executive Officer

By:

/S/ FREDERICK W. JONES  
Frederick W. Jones  
Acting Chief Financial Officer