UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

Quarterly Report Pursuant to Section 13 or 15 (d)
of the Securities Exchange Act of 1934

For the Quarterly Period Ended June 30, 2016

Commission File Number 0-13839

CAS MEDICAL SYSTEMS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**06-1123096**
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification no.)

44 East Industrial Road, Branford, Connecticut 06405
(Address of principal executive offices, including zip code)

(203) 488-6056
(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 ☒ No ☐

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 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 the definitions 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 ☒

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: Common Stock, $.004 par value 27,342,301 shares as of August 1, 2016.

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PART I – FINANCIAL INFORMATION

ITEM 1. FINANCIAL STATEMENTS

CAS Medical Systems, Inc.

Condensed Consolidated Balance Sheets
(Unaudited)

Assets	**June 30, 2016**	**December 31, 2015**
Current assets:		
Cash and cash equivalents	$ 7,570,291	$ 7,528,292
Accounts receivable, net	3,044,230	2,921,720
Inventories	1,827,096	1,428,425
Other current assets	551,727	416,112
Assets associated with discontinued operations	990,135	1,239,344
Total current assets	13,983,479	13,533,893
Property and equipment:		
Leasehold improvements	139,970	139,970
Equipment at customers	3,692,774	3,513,617
Machinery and equipment	4,929,681	4,753,062
	8,762,425	8,406,649
Accumulated depreciation and amortization	(6,339,162)	(6,173,823)
Property and equipment, net	2,423,263	2,232,826
Intangible and other assets, net	784,587	813,017
Total assets	$ 17,191,329	$ 16,579,736

CAS Medical Systems, Inc.

Condensed Consolidated Balance Sheets
(Unaudited)

Liabilities and Stockholders' Equity	**June 30, 2016**	**December 31, 2015**
Current liabilities:		
Accounts payable	$ 1,366,584	$ 1,459,798
Accrued expenses	1,689,010	1,833,502
Notes payable	162,363	82,377
Current portion of long-term debt, less unamortized debt issuance costs	—	2,616,992
Liabilities associated with discontinued operations	295,902	199,940
Total current liabilities	3,513,859	6,192,609
Deferred gain on sale and leaseback of property	158,921	226,240
Long-term debt, less current portion and unamortized debt issuance costs	7,277,550	4,207,629
Other long-term liability	320,000	300,000
Total liabilities	11,270,330	10,926,478
Commitments and contingencies		
Stockholders' equity:		
Preferred stock, $.001 par value per share, 1,000,000 shares authorized		
Series A convertible preferred stock, 95,500 shares issued and outstanding, liquidation value of $13,599,482 and $13,135,709 at June 30, 2016 and December 31, 2015, respectively	8,802,000	8,802,000
Series A exchangeable preferred stock, 54,500 shares issued and outstanding, liquidation value of $7,760,961 and $7,496,295 at June 30, 2016 and December 31, 2015, respectively	5,135,640	5,135,640
Common stock, $.004 par value per share, 60,000,000 shares authorized, 27,422,861 and 27,391,722 shares issued at June 30, 2016 and December 31, 2015, respectively, including shares held in treasury	109,691	109,567
Common stock held in treasury, at cost - 86,000 shares	(101,480)	(101,480)
Additional paid-in capital	30,159,202	29,636,087
Accumulated deficit	(38,184,054)	(37,928,556)
Total stockholders' equity	5,920,999	5,653,258
Total liabilities and stockholders' equity	$ 17,191,329	$ 16,579,736

See accompanying notes.

CAS Medical Systems, Inc.

Condensed Consolidated Statements of Operations
(Unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	**2015**	**2016**	**2015**
Net sales from continuing operations	$ 5,539,039	$ 4,707,607	$ 10,994,565	$ 9,228,494
Cost of sales	2,510,109	2,298,257	5,084,980	4,554,037
Gross profit	3,028,930	2,409,350	5,909,585	4,674,457
Operating expenses:				
Research and development	867,219	898,769	1,822,626	1,732,258
Selling, general and administrative	3,491,262	3,321,447	6,859,146	6,204,932
Total operating expenses	4,358,481	4,220,216	8,681,772	7,937,190
Operating loss	(1,329,551)	(1,810,866)	(2,772,187)	(3,262,733)
Interest expense	322,114	214,274	521,362	432,088
Other income	(2,000)	(777)	(6,873)	(1,126)
Loss from continuing operations before income taxes	(1,649,665)	(2,024,363)	(3,286,676)	(3,693,695)
Income tax expense (benefit)	30,334	(15,706)	(1,060,912)	(74,514)
Loss from continuing operations	(1,679,999)	(2,008,657)	(2,225,764)	(3,619,181)
Discontinued operations:				
(Loss) income from discontinued operations	(86,669)	61,814	89,083	212,898
Gain on sale of discontinued operations	—	—	2,942,095	—
Income tax (benefit) expense	(30,334)	15,706	1,060,912	74,514
(Loss) income from discontinued operations	(56,335)	46,108	1,970,266	138,384
Net loss	(1,736,334)	(1,962,549)	(255,498)	(3,480,797)
Preferred stock dividend accretion	367,378	342,749	728,438	679,603
Net loss applicable to common stockholders	$ (2,103,712)	$ (2,305,298)	$ (983,936)	$ (4,160,400)
Loss per common share from continuing operations - basic and diluted	$ (0.08)	$ (0.09)	$ (0.11)	$ (0.17)
(Loss) income per common share from discontinued operations - basic and diluted	$ (0.00)	$ 0.00	$ 0.07	$ 0.00
Per share basic and diluted net loss applicable to common stockholders	$ (0.08)	$ (0.09)	$ (0.04)	$ (0.17)
Weighted-average number of common shares outstanding:				
Basic and diluted	26,823,919	26,595,219	26,812,176	24,700,099

See accompanying notes.

CAS Medical Systems, Inc.

Condensed Consolidated Statement of Changes in Stockholders' Equity
For the Six Months Ended June 30, 2016
(Unaudited)

	Preferred Stock		Common Stock Issued		Common Stock Held in Treasury		Additional Paid-in Capital	Accumulated Deficit	Total
	Shares	Amount	Shares	Amount	Shares	Amount			
BALANCE, December 31, 2015	150,000	$ 13,937,640	27,391,722	$ 109,567	86,000	$ (101,480)	$ 29,636,087	$ (37,928,556)	$ 5,653,258
Net loss								(255,498)	(255,498)
Common stock issued under stock purchase plan			3,084	12			4,089		4,101
Common stock issued - options exercised			28,055	112			32,850		32,962
Warrants issued to lenders							92,906		92,906
Stock compensation							393,270		393,270
BALANCE, June 30, 2016	150,000	$ 13,937,640	27,422,861	$ 109,691	86,000	$ (101,480)	$ 30,159,202	$ (38,184,054)	$ 5,920,999

See accompanying notes.

CAS Medical Systems, Inc.

Condensed Consolidated Statements of Cash Flows
(Unaudited)

	Six Months Ended June 30,	
	2016	**2015**
OPERATING ACTIVITIES:		
Net loss	$ (255,498)	$ (3,480,797)
Income from discontinued operations	1,970,266	138,384
Loss from continuing operations	(2,225,764)	(3,619,181)
Adjustments to reconcile net loss from continuing operations to net cash used in operating activities of continuing operations:		
Depreciation and amortization	480,109	674,764
Amortization of debt issuance costs and discounts	207,864	36,246
Deferred income taxes	(1,060,912)	—
Stock compensation	393,270	398,306
Impairment of capitalized costs	33,944	—
Amortization of gain on sale and leaseback of property	(67,319)	(67,318)
Changes in operating assets and liabilities:		
Accounts receivable	(122,509)	(271,155)
Inventories	(398,671)	72,198
Other current assets	20,999	162,006
Accounts payable and accrued expenses	(237,706)	72,064
Net cash used in operating activities of continuing operations	(2,976,695)	(2,542,070)
INVESTING ACTIVITIES:		
Expenditures for property and equipment	(626,632)	(566,423)
Additions to intangible assets	(31,644)	(33,013)
Net cash used in investing activities of continuing operations	(658,276)	(599,436)
FINANCING ACTIVITIES:		
Proceeds from long-term debt	8,000,000	—
Repayment of long-term debt	(7,280,000)	—
Payment of final term loan fee	(218,000)	—
Deferred financing costs	(144,030)	—
Repayment of line-of-credit	—	(1,000,000)
Repayments of note payable	(76,630)	(97,983)
Proceeds from issuance of common stock	37,064	8,571,567
Net cash provided by financing activities of continuing operations	318,404	7,473,584
Net (decrease) increase in cash and cash equivalents from continuing operations	(3,316,567)	4,332,078
CASH FLOWS FROM DISCONTINUED OPERATIONS:		
Cash provided by operating activities of discontinued operations	3,358,566	729,914
Net cash provided by discontinued operations	3,358,566	729,914
Net change in cash and cash equivalents	41,999	5,061,992
Cash and cash equivalents, beginning of period	7,528,292	4,494,663
CASH AND CASH EQUIVALENTS, END OF PERIOD	$ 7,570,291	$ 9,556,655
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid during the period for interest	$ 313,497	$ 363,769
Insurance premiums funded with note payable	$ 156,616	$ 140,929
End-of-term fee payable to lenders	$ 320,000	$ —
Warrants issued to lenders	$ 92,906	$ —

See accompanying notes.

(1) The Company

CAS Medical Systems, Inc. ("CASMED®" or the "Company") is a leader in non-invasive patient monitoring of cerebral oxygenation. The Company's FORE-SIGHT® Absolute Cerebral Oximeter provides a highly accurate, non-invasive, continuous measurement of absolute cerebral tissue oxygen saturation for patients during critical care. Direct monitoring of tissue oxygenation provides a superior and powerful tool to alert clinicians to otherwise unrecognized and dangerously low levels of oxygenation of the brain and other tissues, thereby allowing them to intervene appropriately in the care of their patients.

In addition to FORE-SIGHT Oximeters and accessories which comprised approximately 81% of Company sales for the six months ended June 30, 2016, the Company also provides proprietary non-invasive blood pressure monitoring solutions for OEM use and service parts that the Company categorizes as Traditional Monitoring.

(2) Basis of Presentation

The condensed consolidated financial statements included herein have been prepared, without audit, pursuant to the rules and regulations of the Securities and Exchange Commission. Certain information and disclosures included in financial statements prepared in accordance with accounting principles generally accepted in the United States of America have been condensed or omitted pursuant to such rules and regulations. These condensed consolidated financial statements should be read in conjunction with the financial statements and notes thereto included in the Company's Annual Report filed on Form 10-K for the year ended December 31, 2015. The condensed consolidated balance sheet as of December 31, 2015, was derived from the audited financial statements.

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of sales and expenses during the reporting period. The Company's critical accounting policies and estimates include those related to revenue recognition, the valuation of inventories, deferred income tax assets and asset impairment, allowances for doubtful accounts, stock compensation expense, warranty costs, and the determination of the useful lives of intangible assets. The Company bases its estimates on historical experience and on various other assumptions that management believes to be reasonable under the circumstances. Actual results could differ from those estimates. In the opinion of the Company, all adjustments (consisting of normal recurring adjustments) necessary to present fairly the consolidated financial position of the Company, and its consolidated results of operations and cash flows have been included in the accompanying financial statements. The results of operations for interim periods are not necessarily indicative of the expected results for the full year.

The Company changed its method of accounting for debt issuance costs effective with the first quarter of 2016. In April 2015, the Financial Accounting Standards Board, (the "FASB") issued Accounting Standards Update 2015-03, *Interest – Imputation of Interest*, to simplify the presentation of debt issuance costs. ASU 2015-03 requires that debt issuance costs related to a recognized debt obligation be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with the treatment of debt discounts, rather than being presented as an asset. ASU 2015-03 became effective for financial statements issued for fiscal years beginning after December 15, 2015. The Company reclassified $455,379 of other assets for the period ended December 31, 2015, and reported those amounts as reductions in the principal amounts of term debt liabilities outstanding. Debt issuance costs are amortized over the term of the related debt obligation and recorded as interest expense.

As further discussed in Note (3) below, the Company reclassified the results of its vital signs monitoring and neonatal intensive care disposables product lines to discontinued operations. Accordingly, the consolidated financial statements for all periods reported reflect those results as discontinued, and all assets and liabilities related to the product lines and held as of June 30, 2016 and December 31, 2015, are stated as assets and liabilities associated with discontinued operations.

As of June 30, 2016, the Company had cash and cash equivalents plus available borrowings under its revolving loan with its lender totaling $9,677,000, which the Company believes are sufficient to support the Company's operations for at least the next 12 months. The Company expects to continue to use cash from operations during these periods. On June 30, 2016, the Company consummated a term loan agreement in the amount of $8,000,000 with two lenders, as further described in Note (5), which contains a 12-month interest-only period and a further six-month extension should the Company meet certain sales targets for the 12 months ending June 30, 2017. The Company's prior term loan agreement with Solar Capital Ltd. ("Solar") (as successor to General Electric Capital Corporation and Healthcare Financial Solutions, LLC) and its related revolving line-of-credit facility were both terminated. The Company's new credit facility includes a line-of-credit agreement with Western Alliance Bank which also syndicated with Solar on the new term loan.

Management believes that the Company has sufficient capital to support its operations during the next 12 months. The Company may seek additional capital to support its operations should the need arise, and management believes that it can obtain additional financing if needed. There can be no assurance, however, that such additional financing can be obtained on acceptable terms or at all.

(3) Discontinued Operations

On October 26, 2015, the Company entered into an agreement pursuant to which it sold certain assets related to its 740 SELECT® vital signs monitoring product line in exchange for $220,000 in cash at closing and a one-year, interest-bearing promissory note in the principal amount of $329,967. The agreement also provides for royalty payments to the Company for sales of 740 SELECT products during the three-year period following the closing.

On March 28, 2016, the Company consummated an agreement pursuant to which it sold certain assets related to its neonatal intensive care disposables product line for $3,350,000, including $3,035,000 in cash at closing after deductions of $100,000 for funds held in escrow for 12 months following the closing and $215,000 for inventory to be purchased following a transition services agreement expected to conclude at December 31, 2016.

The following table presents the assets and liabilities related to the vital signs monitoring and neonatal intensive care product lines classified as assets and liabilities associated with discontinued operations in the consolidated balance sheets as of the periods below:

	June 30, 2016	December 31, 2015
Accounts receivable	$ 425,722	$ 697,726
Non-trade receivable	315,319	—
Note receivable	221,545	333,005
Inventories	27,549	190,830
Property and equipment, net	—	6,681
Intangible assets	—	11,102
Total assets associated with discontinued operations	$ 990,135	$ 1,239,344
Accounts payable	$ 220,420	$ 144,106
Accrued expenses	75,482	55,834
Total liabilities associated with discontinued operations	$ 295,902	$ 199,940

The following table represents the financial results of the discontinued operations for the three and six months ended June 30th:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2016	2015	2016	2015
Net sales	$ 158,188	$ 1,079,754	$ 766,349	$ 2,366,096
Cost of sales	119,978	867,337	542,528	1,749,716
Gross profit	38,210	212,417	223,821	616,380
Operating expenses	—	150,603	9,859	403,482
Income from discontinued operations before income taxes	38,210	61,814	213,962	212,898
Other loss	(124,879)	—	(124,879)	—
Gain on sale of discontinued operations	—	—	2,942,095	—
Income tax (benefit) expense	(30,334)	15,706	1,060,912	74,514
(Loss) income from discontinued operations	$ (56,335)	$ 46,108	$ 1,970,266	$ 138,384

(4) Inventories, Property and Equipment, and Intangible and Other Assets

Inventories consist of:

	June 30, 2016	December 31, 2015
Raw materials	$ 1,242,636	$ 919,870
Work-in-process	78,777	20,917
Finished goods	505,683	487,638
Total	$ 1,827,096	$ 1,428,425

Property and equipment are stated at cost and are depreciated using the straight-line method over the estimated useful lives of the assets. Property and equipment include FORE-SIGHT cerebral oximetry monitors primarily located at customer sites within the United States. Such equipment, categorized as "Equipment at Customers", is typically held under a no-cost program whereby customers purchase disposable sensors for use with the Company's FORE-SIGHT equipment. Under this program, the Company retains title to the monitors shipped to its customers and amortizes the monitors using the straight-line method over their estimated useful lives. Equipment at Customers includes first-generation FORE-SIGHT cerebral oximeters, the net book value of which was reduced to an estimated fair value during the third quarter of 2013 upon the launch of the Company's next-generation FORE-SIGHT ELITE monitor.

Intangible assets consist of patents issued, patents pending, trademarks, and purchased technology which are recorded at cost. Patents are amortized on a straight-line basis over 20 years. Capitalized costs are amortized over their estimated useful lives.

Intangible and other assets consist of the following:

	June 30, 2016	December 31, 2015
Patents and other assets	$ 927,736	$ 905,454
Patents pending	302,346	315,826
	1,230,082	1,221,280
Accumulated amortization	(445,495)	(408,263)
Total	$ 784,587	$ 813,017

Amortization expense of intangible and other assets for the six months ended June 30, 2016, was $37,233. Estimated amortization expense for the calendar year 2016 is $68,655. Expected amortization expense of intangible and other assets for the next five calendar years and beyond follows:

2017	$ 32,600
2018	29,800
2019	27,500
2020	27,000
2021	27,000
Thereafter	538,600
	$ 682,500

The Company reviews its intangibles and other assets for impairment at least annually or whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. The Company believes that the carrying amounts of its remaining long-lived assets are fully recoverable.

(5) Financing Arrangements

Common Stock Public Offering

On February 17, 2015, the Company completed an underwritten public offering of 7,130,000 shares of its common stock at a price to the public of $1.30 per share, resulting in gross proceeds of $9,269,000. The offering included an over-allotment option exercised by the underwriter in full to purchase up to 930,000 shares. Pursuant to the underwriting agreement, the underwriter purchased the shares of common stock from the Company at a price of $1.222 per share. Net proceeds to the Company from the transaction, after fees and expenses, were $8,517,000. Proceeds from the offering are being used for general corporate purposes.

Debt Agreements

On June 30, 2016, the Company entered into a Loan and Security Agreement (the "Loan Agreement") with Solar Capital Ltd. and Western Alliance Bank (collectively, the "Lenders"). Pursuant to the Loan Agreement, the Lenders have provided the Company with a 48-month secured term loan in the amount of $8,000,000 (the "Term Loan") and a Revolving Loan in the maximum amount of $2,500,000 (the "Revolver"). The Revolver expires on July 1, 2018, and the Term Loan matures on July 1, 2020. The obligations under the Loan Agreement are secured by a lien on substantially all assets of the Company.

The Term Loan bears interest at a floating rate equal to 8.75% plus the 30-day LIBOR rate. Under the Term Loan, 36 equal payments of $222,222 commence on August 1, 2017, with one final payment in an amount equal to the remaining principal balance on the final maturity date. Principal payments under the Term Loan may be deferred an additional six months if the Company reaches a specified product line sales target for the 12 months ending June 30, 2017.

Revolver advances will bear interest at a floating rate equal to 2.5% plus the higher of 3.5% per annum or a specified prime rate. Maximum borrowings under the Revolver are based upon the Company's eligible accounts receivable as defined in the Loan Agreement. There were no borrowings under the Revolver as of June 30, 2016, and the amount available for borrowing at that date was $2,107,000.

The Company has the right to prepay the loans under the Loan Agreement in full at any time. If the Term Loan is prepaid prior to maturity, an additional fee of 2% of the Term Loan amount is due if such prepayment takes place within one year from the closing date, and thereafter, the additional fee declines to 1% for any prepayment taking place after such first anniversary and prior to the scheduled maturity date. Amounts prepaid under the Term Loan may not be re-borrowed. Upon repayment of the Term Loan at any time, the Lenders are entitled to an additional fee equal to 4% of the Term Loan amount. A separate early termination fee equal to 1% of the Revolver commitment amount is payable only if the Revolver is terminated on or before the one-year anniversary of the closing date.

The Loan Agreement contains customary affirmative covenants, including those covenants regarding the payment of taxes and other obligations, maintenance of insurance, reporting requirements and compliance with applicable laws and regulations. Further, the Loan Agreement contains customary negative covenants limiting the ability of the Company and its subsidiaries, among other things, to grant liens on the pledged collateral, incur additional indebtedness, make certain investments and acquisitions, and dispose of assets outside the ordinary course of business. The Loan Agreement also contains a financial covenant requiring the Company to maintain a continuing level of cash plus available borrowing capacity based on a formula. Management believes it was in compliance with all covenants as of June 30, 2016.

Upon an event of default, the Bank may declare all outstanding principal and accrued but unpaid interest under the Loan Agreement immediately due and payable and may exercise the other rights and remedies provided for under the Loan Agreement. The events of default under the Loan Agreement include payment defaults, breaches of covenants or representations and warranties, a material adverse change, certain adverse regulatory events, specified change of control events, and bankruptcy events.

The Company's existing secured term loan with Solar was repaid in full at the closing, and the revolving line-of-credit with Solar, which had no outstanding balance, was terminated. The Company paid a fee of $218,000 in connection with the termination of the prior credit facility, in lieu of the original contractual fee.

In connection with the Loan Agreement, on June 30, 2016, the Company issued warrants (the "Warrants") to the Lenders, which provide for the right to purchase an aggregate of 64,655 shares of the Company's common stock for a ten-year period, expiring on June 30, 2026, at an exercise price of $1.856 per share (of which 48,491 shares may be purchased by Solar and 16,164 shares may be purchased by Western Alliance Bank).

The amount of shares issuable pursuant to the Warrants, and the exercise price thereof, are subject to adjustment only in the event of stock splits, subdivisions, reclassifications, exchanges, combinations, and similar transactions. The Warrants also contain a cashless exercise provision.

The shares associated with the Warrants were fully vested at the time of issuance. The value of the Warrants were estimated on the date of grant to be $1.44 per share, using the Black-Scholes option pricing model assuming a weighted-average expected stock price volatility of 73.4%, an expected warrant life of ten years, an average risk-free interest rate of 1.48%, and a 0.0% average dividend yield. The value of the Warrants of $92,906, as calculated above, has been recorded as a debt discount and is being recognized as interest expense over the 48 months of the Loan Agreement.

The outstanding balance of the Company's term loan is stated for the following periods:

	June 30, 2016			December 31, 2015		
	Principal	Unamortized Debt Issuance Cost and Discounts	Debt, Net	Principal	Unamortized Debt Issuance Cost and Discounts	Debt, Net
Balance of term loan	$ 8,000,000	$ 722,450	$ 7,277,550	$ 7,280,000	$ 455,379	$ 6,824,621
Less current portion	—	—	—	2,817,940	200,948	2,616,992
Long-term portion	$ 8,000,000	$ 722,450	$ 7,277,550	$ 4,462,060	$ 254,431	$ 4,207,629

The Company incurred debt issuance costs and discounts of $556,936 associated with the Loan Agreement, including $320,000 of accrued fees payable upon repayment of the Term Loan, $92,906 pertaining to the Warrants, and other legal and brokerage costs. Unamortized debt issuance costs of $104,246 at June 30, 2016, pertaining to the Company's prior revolving credit agreement with Solar, were recorded as expense corresponding with the termination of that agreement. The remaining $165,614 of unamortized debt issuance costs and discounts together with the $556,936 of new deferred costs, aggregating $722,450, will be amortized through July 1, 2018 and June 30, 2020, the maturity dates of the Revolver and Term Loan, respectively. As a result of the debt issuance costs, the effective rate of the term loan was 11.82% at June 30, 2016.

(6) Loss per Common Share Applicable to Common Stockholders

Basic loss per share is calculated by dividing net loss applicable to common stockholders by the weighted-average number of common shares outstanding for the period. Diluted loss per share reflects the potential dilution that could occur if common stock equivalents, such as unvested restricted common shares, outstanding warrants and options, or convertible preferred stock, were exercised or converted into common stock. Therefore, for each period for which a loss is reported, diluted loss per share is equal to basic loss per share because the effect of including such common stock equivalents or other securities would have been anti-dilutive. As such, the Company has excluded potentially dilutive shares from the calculation of income per common share applicable to common stockholders.

At June 30, 2016, stock options and warrants to purchase 3,276,750 and 451,458 shares of common stock, respectively, were excluded from the diluted loss per share calculation as they would have been anti-dilutive. On an as-converted basis, 8,941,165 shares of common stock pertaining to the private placement of 150,000 shares of Series A Preferred Stock were also excluded as they would have been anti-dilutive.

(7) Stock Compensation Expense and Share-based Payment Plans

Stock compensation expense was $195,461 and $200,933 and $393,270 and $400,446 for the three- and six-month periods ended June 30, 2016 and 2015, respectively.

As of June 30, 2016, the unrecognized stock-based compensation cost related to stock option awards and unvested restricted common stock was $1,651,000. Such amount, net of estimated forfeitures, will be recognized in operations through the fourth quarter of 2019.

The following table summarizes the Company's stock option information as of and for the six-month period ended June 30, 2016:

	Option Shares	Weighted-Average Exercise Price	Aggregate Intrinsic Value (1)	Weighted-Average Contractual Life Remaining in Years
Outstanding at December 31, 2015	3,374,875	$ 1.95	$ 235,443	7.2
Granted	—	—		
Cancelled or expired	(70,070)	1.58		
Exercised	(28,055)	1.63	5,579	
Outstanding at June 30, 2016	3,276,750	1.96	315,163	6.8
Exercisable at June 30, 2016	1,929,375	$ 2.14	$ 81,538	5.7
Vested and expected to vest at June 30, 2016	3,236,347	$ 1.96	$ 308,154	6.8

(1) The intrinsic value of a stock option is the amount by which the market value of the underlying stock, as of the applicable date, exceeds the option exercise price.

The exercise period for all outstanding stock options may not exceed ten years from the date of grant. Stock options granted to employees typically vest over a four-year period. The Company attributes stock-based compensation cost to operations using the straight-line method over the applicable vesting period.

On June 22, 2016, the Company's stockholders approved an amendment to the CAS Medical Systems, Inc. 2011 Equity Incentive Plan (the "Plan") which increased the maximum number of shares that can be issued under the Plan by 1,500,000 to 4,500,000. Awards that may be granted under the Plan include options, restricted stock and restricted stock units, and other stock-based awards. In addition, the sublimit of awards of restricted stock and restricted stock units was increased from 500,000 to 1,250,000. The purposes of the Plan are to make available to our key employees and directors certain compensatory arrangements related to growth in value of our stock so as to generate an increased incentive to contribute to the Company's financial success and prosperity; to enhance the Company's ability to attract and retain exceptionally qualified individuals whose efforts can affect the Company's financial growth and profitability; and to align, in general, the interests of employees and directors with the interests of our stockholders. As of June 30, 2016, following the approved Plan amendment, there remained 1,593,231 total shares available for issuance, including a sublimit of 780,070 shares available for restricted stock and restricted stock units.

As of June 30, 2016, there were 508,000 outstanding restricted shares at a weighted-average fair-value of $1.78. Of the total amount outstanding, 150,000 restricted shares of common stock issued to the Company's Chief Executive Officer during August 2010 remained issued and non-vested. Such shares have been fully amortized as of June 30, 2016.

Warrants to purchase 451,458 shares of common stock at a weighted-average exercise price of $1.64 per share were outstanding as of June 30, 2016. The warrants have an exercise price range of $0.38 to $1.98 per share, and warrants underlying 109,000 shares of common stock have no expiration date.

(8) Preferred Stock

As of June 30, 2016, 95,500 shares of Series A Convertible Preferred Stock and 54,500 shares of Series A Exchangeable Preferred Stock issued in connection with a 2011 private placement (collectively, the "Preferred Stock"), are outstanding. The Preferred Stock has a par value $0.001 per share and is convertible into common stock of the Company at a price of $2.389 per share. The Company can force conversion of all of the outstanding Preferred Stock if the closing price of its common stock meets certain share price, trading volume requirements, and other conditions. The stated value ($100 per share) of the Series A Preferred Stock accretes at an annual rate of 7% compounded quarterly. While such accretion may be paid in cash at the Company's option, the Company's bank agreement prohibits the payment of cash dividends. As of June 30, 2016, dividend accretion of $6,360,443 had accumulated on the Preferred Stock. The Preferred Stock is entitled to a liquidation preference equal to the greater of 100% of the accreted value for each share of Preferred Stock, outstanding on the date of a liquidation, plus all accrued and unpaid dividends, or the amount a holder would have been entitled to had the holder converted the shares of Preferred Stock into common stock immediately prior to the liquidation. Accordingly, based upon the liquidation value of the Preferred Stock at June 30, 2016, there were 8,941,165 shares of common stock issuable upon conversion of the Preferred Stock. The Preferred Stock votes together with the common stock as if converted on the original date of issuance. Holders of Preferred Stock are entitled to purchase their pro rata share of additional stock issuances in certain future financings.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Certain statements included in this report, including without limitation statements in Management's Discussion and Analysis of Financial Condition and Results of Operations, which are not historical facts, are "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934, both as amended. These forward-looking statements represent the Company's current expectations regarding future events. The Company cautions that such statements are qualified by important factors that could cause actual results to differ materially from expected results which may be contained in the forward-looking statements. All forward-looking statements involve risks and uncertainties, including, but not limited to, the following: foreign currency fluctuations, regulations and other economic and political factors which affect the Company's ability to market its products internationally, changes in economic conditions that adversely affect demand for the Company's products, potential liquidity constraints, new product introductions by the Company's competitors, increased price competition, rapid technological changes, dependence upon significant customers, availability and cost of components for the Company's products, the impact of any product liability or other adverse litigation, marketplace acceptance for the Company's new products, FDA and other governmental regulatory and enforcement actions, changes in reimbursement levels from third-party payers, changes to federal research and development grant programs utilized by the Company, and other factors described in greater detail in the Company's Annual Report on Form 10-K for the year ended December 31, 2015.

Management Summary

The Company continues to execute on its strategy to focus on and expand the tissue oximetry market with its FORE-SIGHT cerebral oximetry technology. In the second quarter ended June 30, 2016, the Company recorded sales growth of 18% over the prior-year period, led by increases in FORE-SIGHT disposable sensor sales of 27%.

Consistent with that focus, during the past nine months, the Company divested two of its legacy product lines, both of which are being reported as discontinued operations. In March 2016, the Company sold its neonatal intensive care disposables line, and in October 2015, the Company sold its 740 Select vital signs monitoring line.

During the second quarter of 2016, the Company took steps to increase its cash balance and improve its liquidity. On June 30, 2016, a new loan agreement was secured in the amount of $10,500,000 which includes a 48-month term loan in the amount of $8,000,000 and a two-year revolving credit facility in the maximum amount of $2,500,000. The term loan provides additional working capital and defers principal repayment until August 1, 2017, with an additional six months if the Company reaches certain product line sales targets. The Company had been making principal payments under the previous loan agreement since January 1, 2016.

The Company extinguished its term debt under the previous loan agreement, the principal balance of which was $5,987,972, immediately prior to the close. Net proceeds to the Company were $1,733,867 after repayment of existing debt, fees, and legal costs.

Results of Operations

The Company incurred losses from continuing operations for the three months ended June 30, 2016, of $1,680,000, or ($0.08) per basic and diluted common share, compared to losses from continuing operations of $2,009,000, or ($0.09) per basic and diluted common share, for the three months ended June 30, 2015. Increases in sales from continuing operations and higher gross profit levels were partially offset by increased operating expenses. Operating expenses rose primarily as a result of the Company's sales force expansion which occurred during the second quarter of 2015.

The loss from discontinued operations, net of income taxes, was $56,000 for the second quarter of 2016 compared to income from discontinued operations of $46,000 for the second quarter of 2015.

For the three months ended June 30, 2016, the Company incurred net loss applicable to common stockholders of $2,104,000, or ($0.08) per basic and diluted common share, compared to a net loss applicable to common stockholders of $2,305,000, or ($0.09) per basic and diluted common share, for the three months ended June 30, 2015.

The Company incurred losses from continuing operations for the six months ended June 30, 2016, of $2,226,000, or ($0.11) per basic and diluted common share, compared to a loss from continuing operations of $3,619,000, or ($0.17) per basic and diluted common share, for the six months ended June 30, 2015. The improvement in losses from continuing operations largely results from income tax benefits associated with the sale of the Company's neonatal intensive care disposables product line assets in March 2016 for $3,350,000, resulting in a pre-tax gain from discontinued operations of approximately $2,942,000. Income tax expense of $1,061,000, resulting from the gain on the sale, was offset by an income tax benefit for $1,061,000 recorded against losses generated from continuing operations. The Company does not expect to pay income taxes in 2016. Losses from continuing operations before income taxes for the six-month periods ended June 30, 2016 and 2015, were $3,287,000 and $3,694,000, respectively.

Income from discontinued operations, net of income taxes, was $1,970,000, or $0.07 per basic and diluted common share, for the first six months of 2016 compared to income from discontinued operations net of income taxes of $138,000, or $0.00 per basic and diluted common share, for the first six months of 2015.

For the six months ended June 30, 2016, the Company incurred a net loss applicable to common stockholders of $984,000, or ($0.04) per basic and diluted common share, compared to a net loss applicable to common stockholders of $4,160,000, or ($0.17) per basic and diluted common share, for the first six months of 2015.

The following table provides information with respect to net sales by major category for the three months ended June 30th:

Total Net Sales from Continuing Operations ($000's)

	Three Months Ended June 30, 2016	Three Months Ended June 30, 2015	Increase / (Decrease)	% Change
Tissue Oximetry Monitoring	$ 4,482	$ 3,887	$ 595	15%
Traditional Monitoring	1,057	821	236	29%
	$ 5,539	$ 4,708	$ 831	18%
Domestic Sales	$ 4,579	$ 3,877	$ 702	18%
International Sales	960	831	129	16%
	$ 5,539	$ 4,708	$ 831	18%

Total sales from continuing operations were $5,539,000 for the three months ended June 30, 2016, an increase of $831,000, or 18%, over sales of $4,708,000 for the same three months of the prior year. Worldwide tissue oximetry product sales of $4,482,000 for the three months ended June 30, 2016, were $595,000, or 15%, above the $3,887,000 reported for the same period in the prior year led by increased U.S. sales. Sales of traditional monitoring products were $1,057,000 for the three months ended June 30, 2016, an increase of $236,000, or 29%, from sales of $821,000 for the same prior-year period.

Sales of all products to U.S. customers accounted for $4,579,000, or 83%, of the total sales reported for the three months ended June 30, 2016, an increase of $702,000, or 18%, from the $3,877,000 of U.S. sales reported for the three months ended June 30, 2015. International sales of all products accounted for $960,000, or 17%, of the total sales reported for the three months ended June 30, 2016, an increase of $129,000, or 16%, from the $831,000 reported for the same period of the prior year.

The following table provides additional information with respect to tissue oximetry sales for the three months ended June 30th:

Tissue Oximetry Sales ($000's)

	Three Months Ended June 30, 2016	Three Months Ended June 30, 2015	Increase / (Decrease)	% Change
Sensor Sales	$ 4,051	$ 3,197	$ 854	27%
Monitors & Accessories	431	690	(259)	(38%)
	$ 4,482	$ 3,887	$ 595	15%
Domestic Sales	$ 3,782	$ 3,205	$ 577	18%
International Sales	700	682	18	3%
	$ 4,482	$ 3,887	$ 595	15%

Worldwide sales of tissue oximetry products increased 15% for the second quarter of 2016, led by increased domestic sensor and monitor sales which were partially offset by lower sales of monitors to our international distributors. The Company shipped a net of 83 FORE-SIGHT monitors to customers in the second quarter, bringing the Company's worldwide net cumulative shipments of oximetry monitors, as of June 30, 2016, to 1,871 units, an increase of 25% above the net cumulative shipments of 1,496 units as of June 30, 2015, including the U.S. installed base which expanded to 1,019, a 25% increase over June 30, 2015.

U.S. tissue oximetry product sales increased 18% to $3,782,000, driven by a 24% increases in sensor sales over the second quarter of the prior year. International tissue oximetry product sales increased $18,000, or 3%. Lower international sales of monitors were more than offset by increases in sensor sales.

The following table provides information with respect to revenues by major category for the six months ended June 30th:

Total Net Sales from Continuing Operations ($000's)

	Six Months Ended June 30, 2016	Six Months Ended June 30, 2015	Increase / (Decrease)	% Change
Tissue Oximetry Monitoring	$ 8,760	$ 7,162	$ 1,598	22%
Traditional Monitoring	2,235	2,066	169	8%
	$ 10,995	$ 9,228	$ 1,767	19%
Domestic Sales	$ 9,143	$ 7,422	$ 1,721	23%
International Sales	1,852	1,806	46	3%
	$ 10,995	$ 9,228	$ 1,767	19%

Tissue oximetry product sales of $8,760,000 for the six months ended June 30, 2016, were $1,598,000, or 22%, above the $7,162,000 reported for the same period in the prior year, reflecting a significant growth in worldwide sensor sales and increased sales of monitors to U.S. customers.

Traditional monitoring product sales for the six months ended June 30, 2016, increased $169,000, or 8%, to $2,235,000 from $2,066,000 reported for the same period in the prior year from increased OEM technology product sales.

Sales of all products to the U.S. market accounted for $9,143,000, or 83%, of the total sales reported for the six months ended June 30, 2016, an increase of $1,721,000, from the $7,422,000 of U.S. sales reported for the six months ended June 30, 2015. The increase was primarily driven by higher sales of tissue oximetry sensors. International sales of all products accounted for $1,852,000, or 17%, of the total sales reported for the six months ended June 30, 2016, an increase of $46,000, or 3%, from the $1,806,000 reported for the same period of the prior year. Increases in sales of tissue oximetry sensors were partially offset by reduced sales of tissue oximetry monitors.

The following table provides information with respect to tissue oximetry sales for the six months ended June 30th:

Tissue Oximetry Sales ($000's)

	Six Months Ended June 30, 2016	Six Months Ended June 30, 2015	Increase / (Decrease)	% Change
Sensor Sales	$ 7,785	$ 6,120	$ 1,665	27%
Monitors & Accessories	975	1,042	(67)	(6%)
	$ 8,760	$ 7,162	$ 1,598	22%
Domestic Sales	$ 7,316	$ 5,775	$ 1,541	27%
International Sales	1,444	1,387	57	4%
	$ 8,760	$ 7,162	$ 1,598	22%

Worldwide tissue oximetry product sales increased 22% to $8,760,000 for the first six months of 2016, from $7,162,000 for the first six months of 2015. Domestic tissue oximetry product sales were $7,316,000, an increase of $1,541,000, over the first six months of 2015, driven by a 27% increase in sales of both sensors and monitors. International tissue oximetry product sales were $1,444,000, an increase of $57,000, or 4%, from the first six months of 2015, as a result of a 31% increase in sensor sales which was largely offset by lower sales of monitors.

Gross profit was $3,029,000, or 54.7% of sales, for the three months ended June 30, 2016, compared to $2,409,000, or 51.2% of sales for the three months ended June 30, 2015. Gross profit was $5,910,000, or 53.8% of sales, for the six months ended June 30, 2016, compared to $4,674,000, or 50.7% of sales, for the same period of the prior year. The gross profit improvement for both periods resulted primarily from favorable product mix driven by increased FORE-SIGHT sales, both in total and as a percentage of the Company's overall sales. Tissue oximetry sales continue to grow as a percentage of the Company's overall sales reaching 80% of total sales for the second quarter of 2016, led by disposable sensor sales which accounted for 71% of all Company sales. FORE-SIGHT sensor sales contain more favorable gross margin rates compared to our traditional monitoring products. Management expects gross profit rates to continue to improve as FORE-SIGHT ELITE sensor sales expand and become an increasing percentage of overall sales.

Total operating expenses for the three months ended June 30, 2016, increased $138,000, or 3%, to $4,358,000, from $4,220,000 for the three months ended June 30, 2015. Operating expenses for the first six months of 2016 increased $745,000, or 9%, to $8,682,000 from $7,937,000 for the same period of the prior year, reflecting the expansion of the Company's domestic FORE-SIGHT sales force in the second quarter of 2015.

Research and development ("R&D") expenses decreased $32,000 for the three months ended June 30, 2016, to $867,000, from $899,000 for the prior year period, due primarily to lower clinical projects spending. R&D expenses increased $91,000, or 5%, to $1,823,000 for the six months ended June 30, 2016, compared to $1,732,000 for the same period of the prior year, due to higher salaries and related fringe benefits and increased clinical projects expenses.

Selling, general and administrative ("S,G&A") expenses increased $170,000, or 5%, to $3,491,000 for the three months ended June 30, 2016, compared to $3,321,000 for the three months ended June 30, 2015. S,G&A expenses for the six months ended June 30, 2016, were $6,859,000 compared to $6,205,000 for the six months ended June 30, 2015, an increase of $654,000, or 11%. The increases resulted primarily from the expansion of the U.S. FORE-SIGHT sales force completed during the second quarter of 2015.

Interest expense of $322,000 and $521,000 for the three- and six-month periods ended June 30, 2016, respectively, reflected the borrowing costs associated with the Company's bank loans, including interest and amortization of deferred financing costs.

The Company does not expect to generate taxable income for its 2016 fiscal year. Income tax benefits that may be generated during 2016 would be offset by a deferred income tax asset valuation allowance. Management established the valuation allowance as a result of cumulative pre-tax losses and its estimates of future taxable income. Management has continued to perform the required analysis regarding the realization of our deferred income tax assets, concluding that a full valuation allowance is warranted.

Financial Condition, Liquidity and Capital Resources

As of June 30, 2016, the Company's cash and cash equivalents totaled $7,570,000, compared to $7,528,000 as of December 31, 2015. Working capital increased $3,129,000 to $10,470,000 as of June 30, 2016, from $7,341,000 as of December 31, 2015, resulting primarily from the proceeds of $3,035,000 received from the sale of the Company's neonatal product line assets and from $1,734,000 of net proceeds from the Company's term debt agreement executed on June 30, 2016, as further described below.

Cash used in operating activities of continuing operations for the six months ended June 30, 2016, was $2,977,000, compared to cash used in operating activities of continuing operations of $2,542,000 for the same period in the prior year. The increase in cash used from operations resulted from unfavorable changes in various working capital items, primarily accounts receivable and inventory.

Cash used in investing activities of continuing operations was $658,000 for the six months ended June 30, 2016, compared to cash used in investing activities of continuing operations of $599,000 for the same period in the prior year.

Cash provided by financing activities of continuing operations was $318,000 for the six months ended June 30, 2016, primarily due to the net proceeds associated with new term loan consummated on June 30, 2016, less the repayments of principal made during the first six months of 2016 under the Company's previous term debt agreement. Cash provided by financing activities of continuing operations for the six months ended June 30, 2015, of $7,474,000 largely reflected the net proceeds after transaction costs of $8,517,000 from the Company's public offering consummated in February 2015 partially offset by the repayment of $1,000,000 of borrowings from the prior line-of-credit.

On June 30, 2016, the Company entered into a Loan and Security Agreement (the "Loan Agreement") with Solar Capital Ltd. and Western Alliance Bank (collectively, the "Lenders"). Pursuant to the Loan Agreement, the Lenders have provided the Company with a 48-month secured term loan in the amount of $8,000,000 (the "Term Loan") and a revolving loan in the maximum amount of $2,500,000 (the "Revolver"). The Revolver expires on July 1, 2018, and the Term Loan matures on July 1, 2020. The obligations under the Loan Agreement are secured by a lien on substantially all assets of the Company.

The Term Loan bears interest at a floating rate equal to 8.75% plus the 30-day LIBOR rate. Under the Term Loan, 36 equal payments of $222,222 commence on August 1, 2017, with one final payment in an amount equal to the remaining principal balance on the final maturity date. Principal payments under the Term Loan may be deferred an additional six months if the Company reaches a specified product line sales target for the 12 months ending June 30, 2017.

Revolver advances will bear interest at a floating rate equal to 2.5% plus the higher of 3.5% per annum or a specified prime rate. Maximum borrowings under the Revolver are based upon the Company's eligible accounts receivable as defined in the Loan Agreement. There were no borrowings under the Revolver as of June 30, 2016, and the amount available for borrowing at that date was $2,107,000.

The Company has the right to prepay the loans under the Loan Agreement in full at any time. If the Term Loan is prepaid prior to maturity, an additional fee of 2% of the Term Loan amount is due if such prepayment takes place within one year from the closing date, and thereafter, the additional fee declines to 1% for any prepayment taking place after such first anniversary and prior to the scheduled maturity date. Amounts prepaid under the Term Loan may not be re-borrowed. Upon repayment of the Term Loan at any time, the Lenders are entitled to an additional fee equal to 4% of the Term Loan amount. A separate early termination fee equal to 1% of the Revolver commitment amount is payable only if the Revolver is terminated on or before the one-year anniversary of the closing date.

The Loan Agreement contains customary affirmative covenants, including covenants regarding the payment of taxes and other obligations, maintenance of insurance, reporting requirements, and compliance with applicable laws and regulations. Further, the Loan Agreement contains customary negative covenants limiting the ability of the Company and its subsidiaries, among other things, to grant liens on the pledged collateral, incur additional indebtedness, make certain investments and acquisitions, and dispose of assets outside the ordinary course of business. The Loan Agreement also contains a financial covenant requiring the Company to maintain a continuing level of cash plus available borrowing capacity based on a formula.

The Company's existing secured term loan with Solar was repaid in full at the closing, and the revolving line-of-credit with Solar, which had no outstanding balance, was terminated. The Company paid a fee of $218,000 in connection with the termination of the prior credit facility, in lieu of the original contractual fee.

The Company has also financed various insurance premiums with notes payable, aggregating $248,000 which will be repaid by December 2016.

As of June 30, 2016, the Company had cash and cash equivalents plus available borrowings under its revolving loan totaling $9,677,000, which the Company believes are sufficient to support the Company's operations for at least the next 12 months. The Company expects to continue to require cash for its operations during these periods. The Company may seek additional capital to support its operations should the need arise. Management believes that it can obtain additional financing; however, there can be no assurance that such additional financing can be obtained on acceptable terms or at all.

Critical Accounting Policies and Estimates

The Company's discussion and analysis of financial condition and results of operations are based on the consolidated financial statements. The preparation of these financial statements requires the Company to make estimates and judgments that affect the amounts reported in them. The Company's critical accounting policies and estimates include those related to revenue recognition, the valuations of inventories and deferred income tax assets, measuring stock compensation and warranty costs, determining useful lives of intangible assets, and making asset impairment valuations. The Company bases its estimates on historical experience and on various other assumptions that management believes to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. For additional information about the Company's critical accounting policies and estimates, see Item 7 and Note (2) to the financial statements included in the Company's Form 10-K for the year ended December 31, 2015. There were no significant changes in critical accounting policies and estimates during the six months ended June 30, 2016.

On August 27, 2014, the Financial Accounting Standards Board (the "FASB") issued ASU 2014-15, *Disclosure of Uncertainties about an Entity's Ability to Continue as a Going Concern*. Prior to the new guidance, there was no specific guidance in US GAAP about management's responsibility to evaluate and report on going concern. ASU 2014-15 requires management to evaluate whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern within one year after the date that the financial statements are issued and to provide related disclosures. The new standard is effective for the Company for the year ending December 31, 2016.

In April 2015, the FASB issued Accounting Standards Update 2015-03, *Interest – Imputation of Interest*, to simplify the presentation of debt issuance costs. ASU 2015-03 requires that debt issuance costs related to a recognized debt obligation be presented in the balance sheet as a direct deduction from the carrying amount of that debt liability, consistent with the treatment of debt discounts, rather than being presented as an asset. The recognition and measurement guidance for debt issuance costs are not affected by the amendment in ASU 2015-03 which becomes effective for financial statements issued for fiscal years beginning after December 15, 2015. Early adoption is permitted for financial statements that have not been previously issued. The Company adopted ASU 2015-03 during the three months ended March 31, 2016. The new standard did not have a material impact on the Company's financial statements. The Company reclassified $402,783 and $455,379 of assets for the periods ended March 31, 2016, and December 31, 2015, respectively, and reported those amounts as reductions in the principal amounts of term debt liabilities outstanding.

In February 2016, the FASB issued Accounting Standards Update 2016-02, *Leases - Topic 842. ASU 2016-02* requires the recognition by lessees on the balance sheet of lease assets and lease liabilities for those leases classified as operating leases. The new standard is effective for financial statements issued for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted for financial statements that have not been previously issued.

In April 2016, the FASB issued Accounting Standards Update 2016-10, *Topic 606, Revenue from Contracts with Customers*. ASU 2016-10 amends the revenue recognition standard it had issued in May 2014 (ASU 2014-09). The core principal of the guidance in Topic 606 is that an entity should recognize revenue to depict the transfer of promised goods and services to customers in an amount that reflects the consideration to which an entity expected to be entitled in exchange for those goods and service. The amendments in ASU 2016-10 clarify the identification of performance obligations and the licensing implementation guidance. The new standard is effective for financial statements issued for fiscal years beginning after December 15, 2017, including interim reporting periods therein.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

The Company at times has certain exposures to market risk related to changes in interest rates. The Company holds no derivative securities for trading or other purposes and is not subject in any material respect to currency or other commodity risk.

ITEM 4. CONTROLS AND PROCEDURES

The Company maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed in the Company's Exchange Act reports is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to the Company's management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure based on the definition of "disclosure controls and procedures" in Rule 13a-15(e). In designing and evaluating the disclosure controls and procedures, management recognizes that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and management necessarily is required to apply its judgment in evaluating the cost-benefit relationship of possible controls and procedures.

The Company carried out an evaluation, under the supervision and with the participation of the Company's management, including the Company's Chief Executive Officer and the Company's Chief Financial Officer, of the effectiveness of the design and operation of the Company's disclosure controls and procedures as of June 30, 2016. Based upon the foregoing evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of that date.

There have been no changes in the Company's internal control over financial reporting during the quarter ended June 30, 2016, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Reference is made to the Certifications of the Chief Executive Officer and the Chief Financial Officer about these and other matters attached as Exhibits 31.1, 31.2, and 32.1 to this quarterly report on Form 10-Q.

PART II – OTHER INFORMATION

ITEM 6. EXHIBITS

31.1	Certification pursuant to Rule 13a-14(a) of Thomas M. Patton, President and Chief Executive Officer
31.2	Certification pursuant to Rule 13a-14(a) of Jeffery A. Baird, Chief Financial Officer
32.1	Certification pursuant to 18 U.S.C. 1350 of Periodic Financial Report of Thomas M. Patton, President and Chief Executive Officer, and Jeffery A. Baird, Chief Financial Officer
101	Interactive data files pursuant to Rule 405 of Regulation S-T.

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.

CAS MEDICAL SYSTEMS, INC.
(Registrant)

/s/ Thomas M. Patton — Date: August 5, 2016

By: Thomas M. Patton
President and Chief Executive Officer

/s/ Jeffery A. Baird — Date: August 5, 2016

By: Jeffery A. Baird
Chief Financial Officer

EXHIBIT 31.1

CERTIFICATION

I, Thomas M. Patton, certify that:

1. I have reviewed this quarterly report on Form 10-Q of CAS Medical Systems, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, present fairly in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Thomas M. Patton Date: August 5, 2016
Thomas M. Patton
President and Chief Executive Officer

EXHIBIT 31.2

CERTIFICATION

I, Jeffery A. Baird, certify that:

1. I have reviewed this quarterly report on Form 10-Q of CAS Medical Systems, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, present fairly in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

/s/ Jeffery A. Baird
Jeffery A. Baird
Chief Financial Officer

Date: August 5, 2016

EXHIBIT 32.1

Certification of Periodic Financial Report

Pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned, Thomas M. Patton, the President and Chief Executive Officer, and Jeffery A. Baird, the Chief Financial Officer of CAS Medical Systems, Inc. (the "issuer"), do hereby certify that the quarterly report on Form 10-Q accompanying this certification (the "report") fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)) and that information contained in the report presents fairly, in all material respects, the financial condition and results of operations of the issuer.

/s/ Thomas M. Patton
Thomas M. Patton
President and Chief Executive Officer
CAS Medical Systems, Inc.

Date: August 5, 2016

/s/ Jeffery A. Baird
Jeffery A. Baird
Chief Financial Officer
CAS Medical Systems, Inc.

Date: August 5, 2016