

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

**Amendment No. 1
To**

**FORM S-1
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933**

ATOMERA INCORPORATED

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of
incorporation or organization)

3674

(Primary Standard Industrial
Classification Code Number)

30-0509586

(I.R.S. Employer
Identification No.)

**750 University Avenue, Suite 280
Los Gatos, California 95032
(408) 442-5248**

(Address, including zip code, and telephone number,
including area code, of registrant's principal executive offices)

**Scott A. Bibaud
Chief Executive Officer
Atomera Incorporated
750 University Avenue, Suite 280
Los Gatos, California 95032
(408) 442-5248**

(Name, address, including zip code, and telephone number,
including area code, of agent for service)

Copies to:

**Daniel K. Donahue
Greenberg Traurig, LLP
3161 Michelson Drive, Suite 1000
Irvine, California 92612
Telephone: (949) 732-6557**

**Andrew Hudders
Golenbock Eiseman Assor Bell & Peskoe LLP
437 Madison Avenue - 40th Floor
New York, New York 10022
Telephone: (212) 907-7349**

Approximate date of commencement of proposed sale to the public: As soon as practicable after this registration statement becomes effective.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 check the following box. ☐

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering. ☐

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 ☐

Non-accelerated filer ☐

Accelerated filer ☐

Smaller reporting company

☒

(Do not check if a smaller
reporting company)

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Proposed Maximum Aggregate Offering Price (1)(2)	Amount of Registration Fee ⁽⁶⁾
Common Stock, \$0.001 par value per share	\$ 27,600,000	\$ 2,779.32
Underwriter Warrant ⁽³⁾⁽⁴⁾⁽⁵⁾	\$ 100	—
Shares of Common Stock underlying Underwriter Warrant	\$ 3,450,000	\$ 347.42

- (1) Estimated solely for the purpose of computing the amount of the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended.
- (2) Includes the aggregate offering price of additional shares that the underwriter has the option to purchase to cover over-allotments, if any.
- (3) No registration fee required pursuant to Rule 457(g) under the Securities Act of 1933.
- (4) Registers a warrant to be granted to the underwriter for an amount equal to 10% of the number of the shares sold to the public. See “Underwriting” on page 40 of the prospectus contained within this registration statement for information on underwriting arrangements relating to this offering.
- (5) Pursuant to Rule 416 under the Securities Act of 1933, this registration statement shall be deemed to cover the additional securities (i) to be offered or issued in connection with any provision of any securities purported to be registered hereby to be offered pursuant to terms which provide for a change in the amount of securities being offered or issued to prevent dilution resulting from stock splits, stock dividends, or similar transactions and (ii) of the same class as the securities covered by this registration statement issued or issuable prior to completion of the distribution of the securities covered by this registration statement as a result of a split of, or a stock dividend on, the registered securities.
- (6) A filing fee of \$2,345 has previously been paid.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment, which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this prospectus is not complete and may be changed. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and we are not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JULY 29, 2016

3,200,000 Shares of Common Stock



Atomera Incorporated is offering 3,200,000 shares of common stock on a firm commitment basis. This is an initial public offering of our common stock and there is presently no public market for our common stock. The initial public offering price is \$7.50 per share. The shares offered hereby have been approved for listing upon the Nasdaq Capital Market under the symbol “ATMR.”

We have agreed to pay the underwriter a selling discount of \$2.04 million, or 8.5%, of the gross proceeds of this offering. We have also agreed to issue to the underwriter warrants to purchase shares of our common stock in an amount up to 10% of the shares of common stock sold in the public offering, with an exercise price equal to 125% of the public offering price.

We are an “emerging growth company” under the federal securities laws and will have the option to use reduced public company reporting requirements. Please see “Risk Factors” beginning on page 6 to read about certain factors you should consider before buying our securities.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Price to Public	Underwriting Discounts and Commissions (1)	Proceeds to Atomera
Per Share	\$ 7.50	\$ 0.6375	\$ 6.8625
Total Offering	\$ 24,000,000	\$ 2,040,000	\$ 21,960,000

(1) Does not include our obligation to reimburse the underwriter for its expenses in an amount not to exceed \$185,000. See “Underwriting” for a description of the compensation payable to the underwriter.

The underwriter may also purchase an additional 480,000 shares of our common stock amounting to 15% of the number of shares offered to the public, within 45 days of the date of this prospectus, to cover over-allotments, if any, on the same terms set forth above.

The underwriter expects to deliver the shares on or about _____, 2016.

National Securities Corporation

The date of this prospectus is _____, 2016

TABLE OF CONTENTS

	PAGE
<u>PROSPECTUS SUMMARY</u>	1
<u>RISK FACTORS</u>	6
<u>SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	12
<u>INDUSTRY AND MARKET DATA</u>	13
<u>OUR BUSINESS</u>	14
<u>MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS</u>	20
<u>MANAGEMENT</u>	22
<u>PRINCIPAL STOCKHOLDERS</u>	27
<u>ESTIMATED USE OF PROCEEDS</u>	29
<u>CAPITALIZATION</u>	30
<u>DILUTION</u>	31
<u>DESCRIPTION OF SECURITIES</u>	33
<u>SHARES ELIGIBLE FOR FUTURE SALE</u>	38
<u>UNDERWRITING</u>	40
<u>LEGAL MATTERS</u>	44
<u>EXPERTS</u>	44
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	44
<u>INDEX TO FINANCIAL STATEMENTS</u>	F-1

Neither we nor the underwriter has authorized anyone to provide any information or make any representations other than those contained in this prospectus or in any free writing prospectus prepared by or on behalf of us or to which we have referred you. Neither we nor the underwriter takes responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus, regardless of the time of delivery of this prospectus or of any sale of the common stock.

Through and including _____, 2016 (the 25th day after the date of this prospectus), all dealers effecting transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

For investors outside of the United States: Neither we nor the underwriter has done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States are required to inform themselves about, and to observe any restrictions relating to, this offering and the distribution of this prospectus outside of the United States.

PROSPECTUS SUMMARY

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this prospectus, including our financial statements and related notes, before investing in our common stock. If any of the following risks materialize, our business, financial condition, operating results and prospects could be materially and adversely affected. In that event, the price of our common stock could decline, and you could lose part or all of your investment.

On December 11, 2015, we effected a 1-for-15 reverse stock split of our common stock. All historical share amounts and share price information presented in this prospectus have been proportionally adjusted to reflect the impact of this reverse stock split.

OUR COMPANY

Overview

We are engaged in the business of developing, commercializing and licensing proprietary processes and technologies for the \$350+ billion semiconductor industry. Our lead technology, named Mears Silicon Technology™, or MST®, is a thin film of reengineered silicon, typically 100 to 300 angstroms (or approximately 20 to 60 silicon atomic unit cells) thick. MST® can be applied as a transistor channel enhancement to CMOS-type transistors, the most widely used transistor type in the semiconductor industry. MST® is our proprietary and patent-protected performance enhancement technology that we believe addresses a number of key engineering challenges facing the semiconductor industry. We believe that by incorporating MST®, transistors can be smaller, with increased speed, reliability and energy efficiency. In addition, since MST® is an additive and low cost technology, it can be deployed on an industrial scale, with machines commonly used in semiconductor manufacturing. We believe that MST® can be widely incorporated into the most common types of semiconductor products, including analog, logic, optical and memory integrated circuits.

We do not intend to design or manufacture integrated circuits directly. Instead, we intend to develop and license technologies and processes that will offer the designers and manufacturers of integrated circuits a low-cost solution to the industry need for greater performance and lower power consumption.

In the mid-1980s, our founder, Dr. Robert Mears, was part of a team that re-engineered silica optical fiber to invent the erbium-doped fiber amplifier, or EDFA, a technology that increased the bandwidth of optical fiber more than 1,000 times. The invention of EDFA helped to revolutionize the development of broadband and to this day remains a key technology in the optical communications industry. Dr. Mears anticipated scaling problems for silicon semiconductors and founded Atomera Incorporated in order to address those problems for the semiconductor industry.

Over the last ten years, we have undertaken significant laboratory testing and engaged with a range of semiconductor industry and academic technology leaders to evaluate MST® performance on test chips in industrial fabrication environments. We believe this testing has demonstrated that MST® offers performance benefits beyond and in most cases additive to those provided by already successful semiconductor performance enhancement technologies, such as dual stress liners and source/drain channel stressors, such as eSiGe/eSiC, and can be implemented without significant additional cost or significant modification to the current semiconductor fabrication process.

We are now in the process of transitioning MST® technology toward commercial adoption. We are currently in the early stages of process qualification with leading integrated device manufacturers, or IDMs, and foundries. The IDMs and foundries are our intended customers and by way of the process qualification stage they test and evaluate the potential incorporation of our MST® technology into the integrated circuits they produce. We are also partnering with manufacturers of semiconductor fabrication equipment and developers of modeling tools. These parties are part of a semiconductor infrastructure supporting the industry with manufacturing capital equipment for transistor production and transistor process modeling software, and we are in discussions with certain equipment manufacturers and tool developers concerning their incorporation of our MST® technology into the equipment and tools they offer to the industry. Assuming the timely and successful completion of process and subsequent product qualification by customers and partners, we expect MST® enabled product revenue in 2017.

Private Placement of Convertible Promissory Notes

On March 17, 2015, we completed the private placement of \$14.75 million in senior secured convertible promissory notes, and on April 1, 2016 we completed the private placement of an additional \$5.96 million in senior secured convertible notes on the same terms as the promissory notes placed in March 2015. We refer to these promissory notes in this prospectus as our “convertible notes.” The convertible notes bear simple interest

at 10% per year. All interest and principal under the notes must be paid or converted into shares of our common stock on or before May 31, 2017. Pursuant to the terms of our convertible notes, all principal and accrued interest under the notes will automatically convert into shares of our common stock concurrent with the completion of this offering, at the conversion price of 50% of the initial public offering price, provided, however, in no event shall the conversion price be greater than \$7.362 nor less than \$3.681 per share. Assuming that this offering was completed on March 31, 2016 at a price of \$7.50 per share, and based on interest accrued through such date in the amount of \$2,037,377, the convertible notes would have been converted into 6,065,549 shares of our common stock.

Risks Related to Our Business

Our business is subject to numerous risks, the most significant of which are highlighted in the section entitled “Risk Factors” immediately following this prospectus summary. Some of these risks include:

- since we have a limited operating history, it is difficult for potential investors to evaluate our business;
- we are a development stage company, have not yet commenced revenue producing operations and may never achieve or maintain profitability;
- while testing of MST®-based test chips have been successful to date, qualification of a MST®-enabled integrated circuit product has not yet been demonstrated;
- the report of our independent registered public accounting firm for the year ended December 31, 2015 states that due to our recurring and expected losses and cash on-hand there is substantial doubt about our ability to continue as a going concern;
- we anticipate needing additional financing in addition to the proceeds of this offering to fully execute our business plan and fund operations, which additional financing may not be available on reasonable terms or at all;
- our proprietary technologies and processes are not yet verified on a commercial scale;
- our proprietary rights may be difficult to enforce, which could enable others to copy or use aspects of our technologies without compensating us, thereby eroding our competitive advantages and harming our business;
- we may be subject to intellectual property rights claims by third parties, which are extremely costly to defend, could require us to pay significant damages and could limit our ability to use certain technologies; and
- our success will require timely expansion of our operations and if we are unable to manage future expansion effectively, our business, operations and financial condition may suffer significantly, resulting in decreased productivity.

For further discussion of these and other risks that you should consider before making an investment in our common stock, see the section titled “Risk Factors” immediately following this prospectus summary.

Corporate Information

Atomera Incorporated was formed as a limited liability company in Delaware on April 26, 2001 under the name Nanovis LLC, which we changed to R.J. Mears, LLC on July 10, 2003. On March 14, 2007, we converted to a Delaware corporation under the name Mears Technologies, Inc. On January 12, 2016, we changed our name to Atomera Incorporated. Our offices are located at 750 University Avenue, Suite 280, Los Gatos, California and our telephone number is (408) 442-5248. Our website is www.atomera.com. Information contained in, or accessible through, our website does not constitute part of this prospectus and inclusions of our website address in this prospectus are inactive textual references only.

Unless otherwise indicated, the terms “Atomera,” “Company,” “we,” “us,” and “our” refer to Atomera Incorporated.

“Atomera,” “MST” and “Mears” and Atomera’s logo are our trademarks. This prospectus contains additional trade names, trademarks and service marks of ours and of other companies. We do not intend our use or display of other companies’ trade names, trademarks, or service marks to imply a relationship with these other companies, or endorsement or sponsorship of us by these other companies. Other trademarks appearing in this prospectus are the property of their respective holders.

Emerging Growth Company

The Jumpstart Our Business Startups Act, or the JOBS Act, was enacted in April 2012 with the intention of encouraging capital formation in the United States and reducing the regulatory burden on newly public companies that qualify as “emerging growth companies.” We are an emerging growth company within the meaning of the JOBS Act. As an emerging growth company, we may take advantage of certain exemptions from various public reporting requirements, including:

- the requirement that our internal control over financial reporting be attested to by our independent registered public accounting firm pursuant to Section 404 of the Sarbanes-Oxley Act of 2002;
- certain requirements related to the disclosure of executive compensation in this prospectus and in our periodic reports and proxy statements;
- the requirement that we hold a nonbinding advisory vote on executive compensation and any golden parachute payments; and
- the ability to delay compliance with new or revised financial accounting standards until private companies are required to comply with the new or revised financial accounting standard.

We may take advantage of the exemptions under the JOBS Act discussed above until we are no longer an emerging growth company. We will remain an emerging growth company until the earliest to occur of (1) the last day of the fiscal year in which we have \$1.0 billion or more in annual revenue; (2) the date we qualify as a “large accelerated filer,” with at least \$700 million of equity securities held by non-affiliates; (3) the date on which we have issued, in any three-year period, more than \$1.0 billion in non-convertible debt securities; or (4) the last day of the fiscal year ending after the fifth anniversary of our initial public offering.

We may choose to take advantage of some, but not all, of the available benefits under the JOBS Act. We are choosing to irrevocably “opt out” of the extended transition periods available under the JOBS Act for complying with new or revised accounting standards, but we intend to take advantage of the other exemptions discussed above. Accordingly, the information contained herein and in our subsequent filing with the Securities and Exchange Commission may be different than the information you receive from other public companies in which you hold stock.

For certain risks related to our status as an emerging growth company, see the disclosure elsewhere in this prospectus under “Risk Factors — Risks Related to this Offering and Owning Our Common Stock — We are an ‘emerging growth company’ under the JOBS Act of 2012 and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors.”

THE OFFERING

Common stock offered by us 3,200,000 shares

**Common stock to be
outstanding after this
offering** 11,323,226 shares

**Over-allotment option offered
by us** 480,000 shares

Proposed Nasdaq symbol “ATMR”

Use of proceeds Development engineering, research, business development and general working capital

The number of shares of our common stock to be outstanding after this offering is based on 1,617,313 shares of common stock outstanding as of the date of this prospectus, plus 440,364 shares of common stock to be issued as bonuses to certain officers and directors upon the completion of this offering and 6,065,549 shares common stock issuable upon conversion of our convertible notes (including accrued interest as of March 31, 2016), and excludes:

- 538,014 shares of our common stock issuable upon exercise of outstanding options granted pursuant to our 2007 Stock Incentive Plan;
- 713,795 shares of our common stock underlying options to be granted to our chief executive officer and chief financial officer upon the completion of this offering;
- 398,965 shares of our common stock issuable upon exercise of outstanding warrants;
- up to 480,000 shares issuable pursuant to the underwriter’s over-allotment option;
- shares of our common stock reserved for future grants pursuant to our 2007 Stock Incentive Plan; and
- the shares of our common stock issuable upon exercise of the underwriter’s warrant.

Except as otherwise indicated, all information in this prospectus assumes:

- the automatic conversion of \$20.71 million principal amount of our convertible notes, and \$2,037,337 of accrued interest thereon as of March 31, 2016, into an aggregate of 6,065,549 shares of common stock effective upon the completion of this offering;
- no exercise of outstanding warrants or options subsequent to March 31, 2016; and
- no exercise of the underwriter’s over-allotment option.

Summary Financial Data

The following tables summarize our financial data. You should read this summary financial data together with the section entitled “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and our financial statements and related notes that are included elsewhere in this prospectus. The financial information as of and for the fiscal years ended December 31, 2015 and 2014 are derived from the audited financial statements that are included elsewhere in this prospectus. The financial information as of March 31, 2016 and for the three months ended March 31, 2016 and 2015 is derived from our unaudited financial statements that are included elsewhere in this prospectus. The unaudited financial statements were prepared on a basis consistent with our audited financial statements and include, in management’s opinion, all adjustments, consisting only of normal recurring adjustments that we consider necessary for a fair presentation of the financial information set forth in those statements. Our historical results are not necessarily indicative of the results that may be expected in the future, and our interim results are not necessarily indicative of the results to be expected for the full year or any other period.

	Year Ended December 31,		Three Months Ended March 31,	
	2015	2014	2016 (unaudited)	2015 (unaudited)
Revenues	\$ —	\$ —	\$ —	\$ —
Net income (loss)	\$ (9,512,141)	\$ (3,817,734)	\$ (2,488,187)	\$ (2,460,749)
Net income (loss) per common share	\$ (7.55)	\$ (3.10)	\$ (1.54)	\$ (2.00)

	March 31, 2016		
	Actual (unaudited)	Pro Forma ⁽¹⁾ (unaudited)	Pro Forma as Adjusted ⁽²⁾ (unaudited)
Balance Sheet Data:			
Cash and cash equivalents	\$ 1,501,384	\$ 6,968,039	\$ 28,408,481
Working capital (deficit)	\$ (15,604,023)	\$ 6,519,678	\$ 27,960,120
Total assets	\$ 1,799,805	\$ 7,266,460	\$ 28,526,460
Convertible notes	\$ 16,657,046	\$ —	\$ —
Total stockholders’ (deficit) equity	\$ (15,364,611)	\$ 6,759,090	\$ 28,019,090

(1) The pro forma column reflects our issuance of additional convertible notes in the aggregate principal amount of \$5.96 million on April 1, 2016 and our receipt of net cash proceeds of \$5.47 million, and the automatic conversion of all \$20.71 million principal amount of our convertible notes and \$2.04 million of accrued interest thereon as of March 31, 2016, into an aggregate of 6,065,549 shares of common stock and reclassified into common stock and additional paid in capital.

(2) The pro forma as adjusted column reflects all adjustments included in the pro forma column and gives effect to the sale by us of 3,200,000 shares of common stock offered by this prospectus at the initial public offering price of \$7.50 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

RISK FACTORS

Investing in our common stock involves a high degree of risk. You should carefully consider the risks and uncertainties described below, together with all of the other information in this prospectus, including our consolidated financial statements and related notes, before investing in our common stock. If any of the following risks materialize, our business, financial condition, operating results and prospects could be materially and adversely affected. In that event, the price of our common stock could decline, and you could lose part or all of your investment.

Risks Relating to Our Business

Since we have not commenced revenue-producing operations, it is difficult for potential investors to evaluate our business. We have not commenced revenue-producing operations. To date, our operations have consisted of technology research and development, testing, and joint development work with leading potential customers and strategic partners. Our limited operating history makes it difficult for potential investors to evaluate our technology or prospective operations. As a development stage company, we are subject to all the risks inherent in the initial organization, financing, expenditures, complications and delays in a new business. Investors should evaluate an investment in us in light of the uncertainties encountered by developing companies in a competitive environment. There can be no assurance that our efforts will be successful or that we will ultimately be able to attain profitability.

We have a history of significant operating losses and anticipate continued operating losses for at least the near term. For the three months ended March 31, 2016 and the years ended December 31, 2015 and 2014, we have incurred net losses of \$2,488,187, \$9,512,141 and \$3,817,734, respectively, and our operations have used \$1,650,576, \$4,387,148 and \$2,593,360 of cash, respectively. As of March 31, 2016, December 31, 2015 and December 31, 2014, we had accumulated deficits of \$85,874,810, \$83,386,623 and \$73,874,482, respectively. We expect to continue to experience negative cash flows from operations until such time as we are able to secure one or more IDMs or fabless semiconductor manufacturers to qualify and license MST[®] and start full-scale industrial production of a device that incorporates our MST[®] technology and otherwise generate revenue, and control expenses, at levels that will allow us to operate on a cash flow positive basis. While management will endeavor to generate positive cash flows from the commercialization of our MST[®] technology, there can be no assurance that we will be successful in generating positive cash flows from operations. If we are unable to generate positive cash flow within a reasonable period of time, we may be unable to further pursue our business plan or continue operations, in which case you may lose your entire investment.

We may need additional financing to execute our business plan and fund operations, which additional financing may not be available on reasonable terms or at all. As of March 31, 2016, we had total assets of \$1,799,805 and a working capital deficit of \$15,604,022. On April 1, 2016, we received net proceeds of \$5,465,970 from our sale of additional convertible notes. We believe that we require a minimum of \$15 million of additional capital in order to fund our current business plan over, at least, the 12 months following the date of this prospectus, including the securing of one or more foundries, IDMs or fabless semiconductor manufacturers to qualify and license our MST[®] and start full-scale industrial production of a device that incorporates our MST[®] technology. We have undertaken this initial public offering of our common shares to acquire the necessary capital and through this offering we expect to receive net proceeds of approximately \$21.3 million in addition to the conversion of approximately \$22.74 million of debt to equity. However, we may require additional capital, the receipt of which there can be no assurance. In the event we require additional capital, we will endeavor to seek additional funds through various financing sources, including the private sale of our equity and debt securities, licensing fees for our technology and joint ventures with industry partners. In addition, we will consider alternatives to our current business plan that may enable us to achieve revenue producing operations and meaningful commercial success with a smaller amount of capital. However, there can be no guarantees that such funds will be available on commercially reasonable terms, if at all. If such financing is not available on satisfactory terms, we may be unable to further pursue our business plan and we may be unable to continue operations, in which case you may lose your entire investment.

The report of our independent registered public accounting firm for the year ended December 31, 2015 states that due to our recurring and expected losses and cash on-hand there is substantial doubt about our ability to continue as a going concern.

While the preliminary testing of our MST[®] technology has been successful to-date, there can be no assurance that we will be able to replicate the process, along with all of the expected economic advantages, on a large commercial scale. As of the date of this prospectus, we have done technology simulation work on our MST[®] with universities and potential customers at nodes from 180 nanometers (nm) to 7nm. Together with leading industry research facilities and in customer manufacturing facilities, we have also built and tested test element group transistors using MST[®]. The test element group transistors using MST[®] consistently demonstrated increased speed, reliability and energy efficiency over test element group transistors without MST[®]. While we believe that our development and testing to date has proven the effectiveness and benefits of our MST[®] technology, a MST[®]-enabled product has not been qualified and manufactured on a commercial scale. Our plan

of operations for the 12 months following this offering will focus on securing one or more foundries, IDMs or fabless semiconductor manufacturers as a licensee-customer and start full-scale industrial production of a device that incorporates MST ® technology. However, there can be no assurance that we will be able to secure the adoption of our technology by a potential customer or, if we are successful in doing so, that a MST ® enabled product manufactured on a commercial scale will provide the expected performance enhancements at the projected cost.

The long-term success of our business is dependent on a royalty-based business model, which is inherently risky. The long-term success of our business is dependent on future royalties paid to us by licensee-customers. Royalty payments under our licenses may be based, among other things, upon the number of silicon substrate, or wafers, onto which our MST ® is deposited or a percentage of the net sales of a MST ® - enabled product or a fixed quarterly amount. We will depend upon our ability to structure, negotiate and enforce agreements for the determination and payment of royalties, as well as upon our licensees' compliance with their agreements. We face risks inherent in a royalty-based business model, many of which are outside of our control, such as the following:

- the rate of adoption and incorporation of our technology by semiconductor designers and manufacturers and the manufacturers of semiconductor fabrication equipment;
- the length of the design cycle and the ability to successfully integrate our MST ® technology into integrated circuits;
- the demand for products incorporating semiconductors that use our licensed technology;
- the cyclical nature of supply and demand for products using our licensed technology;
- the impact of economic downturns; and
- the timing of receipt of royalty reports may not meet our revenue recognition criteria resulting in fluctuation in our results of operations.

Our revenues may be concentrated in a few customers and if we lose any of these customers, or these customers do not pay us, our revenues could be materially adversely affected. If we are able to secure the adoption of our MST ® by one or more foundries, IDMs or fabless semiconductor manufacturers and commence revenue producing operations, we expect that for at least the first few years we will earn a significant amount of our revenues from a limited number of customers. Due to the concentration and ongoing consolidation within the semiconductor industry, we may also find that over the longer term our revenues are dependent on a relatively few customers. If we lose any of these customers, or these customers do not pay us, our revenues could be materially adversely affected.

It may be difficult for us to verify royalty amounts owed to us under our licensing agreements, and this may cause us to lose revenues . We will endeavor to provide that the terms of our license agreements require our licensees to document their use of our technology and report related data to us on a regular basis. We will endeavor to provide that the terms of our license agreements give us the right to audit books and records of our licensees to verify this information, however audits can be expensive, time consuming, and may not be cost justified based on our understanding of our licensees' businesses. We will endeavor to audit certain licensees to review the accuracy of the information contained in their royalty reports in an effort to decrease the likelihood that we will not receive the royalty revenues to which we are entitled under the terms of our license agreements, but we cannot give assurances that such audits will be effective to that end.

We expect that our product qualification and licensing cycle will be lengthy and costly, and our marketing, engineering and sales efforts may be unsuccessful . We expect to incur significant engineering, marketing and sales expenses prior to entering into our license agreements, generating a license fee and establishing a royalty stream from each licensee. The length of time it takes to establish a new licensing relationship, and for our customers to incorporate our technologies in their integrated circuits, can take 18 to 36 months or longer. As such, we will incur significant expenses in any particular period before any associated revenue stream begins. If our engineering, marketing and sales efforts are unsuccessful, then the expenses incurred could have an adverse effect on our financial condition, results of operations and cash flows.

Our business operations could suffer in the event of information technology systems' failures or security breaches. While we believe that we have implemented adequate security measures within our internal information technology and networking systems, our information technology systems may be subject to security breaches, damages from computer viruses, natural disasters, terrorism, and telecommunication failures. Any system failure or security breach could cause interruptions in our operations in addition to the possibility of losing proprietary information and trade secrets. To the extent that any disruption or

security breach results in inappropriate disclosure of our confidential information, our competitive position may be adversely effected and we may incur liability or additional costs to remedy the damages caused by these disruptions or security breaches.

If we fail to protect and enforce our intellectual property rights and our confidential information, our business will suffer . We rely primarily on a combination of nondisclosure agreements and other contractual provisions and patent, trade secret and copyright laws to protect our technology and intellectual property. If we fail to protect our technology and intellectual property, our licensees and others may seek to use our technology and intellectual property without the payment of license fees and royalties, which could weaken our competitive position, reduce our operating results and increase the likelihood of costly litigation. The growth of our business depends in large part on our ability to secure intellectual property rights in a timely manner, our ability to convince third parties of the applicability of our intellectual property rights to their products, and our ability to enforce our intellectual property rights. In certain instances, we attempt to obtain patent protection for portions of our technology, and our license agreements typically include both issued patents and pending patent applications. If we fail to obtain patents in a timely manner or if the patents issued to us do not cover all of the inventions disclosed in our patent applications, others could use portions of our technology and intellectual property without the payment of license fees and royalties.

We also rely on trade secret laws rather than patent laws to protect other portions of our proprietary technology. However, trade secrets can be difficult to protect. The misappropriation of our trade secrets or other proprietary information could seriously harm our business. We protect our proprietary technology and processes, in part, through confidentiality agreements with our employees, consultants, suppliers and customers. We cannot be certain that these contracts have not been and will not be breached, that we will be able to timely detect unauthorized use or transfer of our technology and intellectual property, that we will have adequate remedies for any breach, or that our trade secrets will not otherwise become known or be independently discovered by competitors. If we fail to use these mechanisms to protect our technology and intellectual property, or if a court fails to enforce our intellectual property rights, our business will suffer. We cannot be certain that these protection mechanisms can be successfully asserted in the future or will not be invalidated or challenged.

Further, the laws and enforcement regimes of certain countries do not protect our technology and intellectual property to the same extent as do the laws and enforcement regimes of the U.S. In certain jurisdictions we may be unable to protect our technology and intellectual property adequately against unauthorized use, which could adversely affect our business.

A court invalidation or limitation of our key patents could significantly harm our business. Our patent portfolio contains some patents that are particularly significant to our MST[®] technology and other business prospects. If any of these key patents are invalidated, or if a court limits the scope of the claims in any of these key patents, the likelihood that companies will take new licenses and that any current licensees will continue to agree to pay under their existing licenses could be significantly reduced. The resulting loss in license fees and royalties could significantly harm our business. Moreover, our stock price may fluctuate based on developments in the course of ongoing litigation.

We expect to continue to be involved in material legal proceedings in the future to enforce or protect our intellectual property rights, which could harm our business . From time to time, we identify products that we believe infringe our patents. In that event, we initially seek to license the manufacturer of the infringing products, however if the manufacturer is unwilling to enter into a license agreement, we may have to initiate litigation to enforce our patent rights against those products. As disclosed in “Our Business – Litigation”, we are currently involved in a civil litigation against a manufacturer of optical communication products we believe to be infringing one of our patents. Litigation stemming from that or other disputes could harm our ability to gain new customers, who may postpone licensing decisions pending the outcome of the litigation or who may, as a result of such litigation, choose not to adopt our technologies. Such litigation may also harm our relationships with existing licensees, who may, as a result of such litigation, cease making royalty or other payments to us or challenge the validity and enforceability of our patents or the scope of our license agreements.

In addition, the costs associated with legal proceedings are typically high, relatively unpredictable and not completely within our control. These costs may be materially higher than expected, which could adversely affect our operating results and lead to volatility in the price of our common stock. Whether or not determined in our favor or ultimately settled, litigation diverts our managerial, technical, legal and financial resources from our business operations. Furthermore, an adverse decision in any of these legal actions could result in a loss of our proprietary rights, subject us to significant liabilities, require us to seek licenses from others, limit the value of our licensed technology or otherwise negatively impact our stock price or our business and consolidated financial position, results of operations and cash flows.

Even if we prevail in our legal actions, significant contingencies may exist to their settlement and final resolution, including the scope of the liability of each party, our ability to enforce judgments against the parties, the ability and willingness of the

parties to make any payments owed or agreed upon and the dismissal of the legal action by the relevant court, none of which are completely within our control. Parties that may be obligated to pay us royalties could be insolvent or decide to alter their business activities or corporate structure, which could affect our ability to collect royalties from such parties.

Our technologies may infringe on the intellectual property rights of others, which could lead to costly disputes or disruptions . The semiconductor industry is characterized by frequent allegations of intellectual property infringement. Any allegation of infringement could be time consuming and expensive to defend or resolve, result in substantial diversion of management resources, cause suspension of operations or force us to enter into royalty, license, or other agreements rather than dispute the merits of such allegation. Furthermore, third parties making such claims may be able to obtain injunctive or other equitable relief that could block our ability to further develop or commercialize some or all of our technologies, and the ability of our customers to develop or commercialize their products incorporating our technologies, in the U.S. and abroad. If patent holders or other holders of intellectual property initiate legal proceedings, we may be forced into protracted and costly litigation. We may not be successful in defending such litigation and may not be able to procure any required royalty or license agreements on acceptable terms or at all.

If we are unable to manage future expansion effectively, our business, operations and financial condition may suffer significantly, resulting in decreased productivity. If our MST *proves to be commercially valuable, it is likely that we will experience a rapid growth phase that could place a significant strain on our managerial, administrative, technical, operational and financial resources. Our organization, procedures and management may not be adequate to fully support the expansion of our operations or the efficient execution of our business strategy. If we are unable to manage future expansion effectively, our business, operations and financial condition may suffer significantly, resulting in decreased productivity.

If integrated circuits incorporating our technologies are used in defective products, we may be subject to product liability or other claims . If our MST *technology is used in defective or malfunctioning products, we could be sued for damages, especially if the defect or malfunction causes physical harm to people. While we will endeavor to carry product liability insurance and obtain indemnities from our customers, there can be no assurance that we will be able to obtain insurance at satisfactory rates or in adequate amounts or that any insurance and customer indemnities will be adequate to defend against or satisfy any claims made against us. The costs associated with legal proceedings are typically high, relatively unpredictable and not completely within our control. Even if we consider any such claim to be without merit, significant contingencies may exist, similar to those summarized in the above risk factor concerning intellectual property litigation, which could lead us to settle the claim rather than incur the cost of defense and the possibility of an adverse judgment. Product liability claims in the future, regardless of their ultimate outcome, could have a material adverse effect on our business, financial condition and reputation, and on our ability to attract and retain licensees and customers.

Risks Related to this Offering and Owning Our Common Stock

Prior to the completion of our initial public offering, there was no public trading market for our common stock.

The offering under this prospectus is an initial public offering of our common shares. Upon the completion of this offering, our common stock will commence trading on the Nasdaq Capital Market, under the symbol “ATMR.” However, there can be no assurance that we will be able to successfully develop a liquid market for our common shares. The stock market in general, and early stage public companies in particular, has experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of such companies. If we are unable to develop a market for our common shares, you may not be able to sell your common shares at prices you consider to be fair or at times that are convenient for you, or at all.

We are an “emerging growth company” under the JOBS Act of 2012 and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors. We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (“JOBS Act”), and we may take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not “emerging growth companies” including, but not limited to:

- not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act;
- reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements;
- exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments; and
- extended transition periods available for complying with new or revised accounting standards.

We have chosen to “opt out” of the extended transition periods available for complying with new or revised accounting standards, but we intend to take advantage of all of the other benefits available under the JOBS Act, including the exemptions discussed above. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

We will remain an “emerging growth company” for up to five years, although we will lose that status sooner if our revenues exceed \$1 billion, if we issue more than \$1 billion in non-convertible debt in a three year period, or if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of any June 30.

Our status as an “emerging growth company” under the JOBS Act may make it more difficult to raise capital as and when we need it . Because of the exemptions from various reporting requirements provided to us as an “emerging growth company,” we may be less attractive to investors and it may be difficult for us to raise additional capital as and when we need it. Investors may be unable to compare our business with other companies in our industry if they believe that our reporting is not as transparent as other companies in our industry. If we are unable to raise additional capital as and when we need it, our financial condition and results of operations may be materially and adversely affected.

We have not paid dividends in the past and have no immediate plans to pay dividends . We plan to reinvest all of our earnings, to the extent we have earnings, to cover operating costs and otherwise become and remain competitive. We do not plan to pay any cash dividends with respect to our securities in the foreseeable future. We cannot assure you that we would, at any time, generate sufficient surplus cash that would be available for distribution to the holders of our common stock as a dividend. Therefore, you should not expect to receive cash dividends on the common stock we are offering.

We will incur significant increased costs as a result of becoming a public company that reports to the Securities and Exchange Commission and our management will be required to devote substantial time to meet compliance obligations. As a public company reporting to the Securities and Exchange Commission, we will incur significant legal, accounting and other expenses that we did not incur as a private company. We will be subject to reporting requirements of the Securities Exchange Act of 1934 and the Sarbanes-Oxley Act of 2002, as well as rules subsequently implemented by the Securities and Exchange Commission that impose significant requirements on public companies, including requiring establishment and maintenance of effective disclosure and financial controls and changes in corporate governance practices. In addition, on July 21, 2010, the Dodd-Frank Wall Street Reform and Protection Act was enacted. There are significant corporate governance and executive compensation-related provisions in the Dodd-Frank Act that are expected to increase our legal and financial compliance costs, make some activities more difficult, time-consuming or costly and may also place undue strain on our personnel, systems and resources. Our management and other personnel will need to devote a substantial amount of time to these compliance initiatives. In addition, we expect these rules and regulations to make it more difficult and more expensive for us to obtain director and officer liability insurance, and we may be required to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. As a result, it may be more difficult for us to attract and retain qualified people to serve on our board of directors, our board committees or as executive officers.

Assuming a market for our common stock develops, shares eligible for future sale may adversely affect the market for our common stock. We and all of our officers and directors have agreed not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period of 12 months following the close of this offering. All of our other common shares outstanding prior to this offering, including the 6,065,549 common shares issuable upon conversion of our convertible notes, are subject to lock-up agreements whereby the holder has agreed not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period 180 days following the close of this offering, subject to extensions under certain circumstances of up to a total of 216 days following our IPO. On the 181st day following the close of this offering (subject to the potential extension described above) and on every subsequent 31st day thereafter, 15% of such holder’s securities shall be released from the lock-up until the 366th day following the close of this offering, as of which none of such holder’s securities shall be subject to the lock-up. Notwithstanding the lock-up agreements, we have agreed to register for resale 6,065,549 shares of common stock expected to be issued upon conversion of our convertible notes and 395,369 shares of common stock underlying warrants that are in addition to the warrants we will issue to the underwriter in connection with this offering. Furthermore, commencing on the 90th day following the close of this offering, certain of our stockholders may be eligible to sell all or some of their shares of common stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144, promulgated under the Securities Act, subject to certain limitations. In general, pursuant to Rule 144, non-affiliate stockholders may sell freely after six months subject only to the current public information requirement (which disappears after one year). Following the 180th day following the close of this offering, our stockholders will be eligible to begin publicly selling their shares under Rule 144.

Any substantial sale of our common stock pursuant to Rule 144 or pursuant to any resale prospectus (including sales by investors of securities acquired in connection with this offering) may have a material adverse effect on the market price of our common stock.

You will experience immediate dilution in the book value per share of the common stock you purchase.

Because the price per share of our common stock being offered is substantially higher than the book value per share of our common stock, you will experience substantial dilution in the net tangible book value of the common stock you purchase in this offering. Based on the offering price of \$7.50 per share, if you purchase shares of common stock in this offering, you will experience immediate and substantial dilution of \$4.93 per share in the net tangible book value of the common stock at March 31, 2016.

Our charter documents and Delaware law may inhibit a takeover that stockholders consider favorable. Upon the closing of this offering, provisions of our Certificate of Incorporation (“Certificate”) and bylaws and applicable provisions of Delaware law may delay or discourage transactions involving an actual or potential change in control or change in our management, including transactions in which stockholders might otherwise receive a premium for their shares, or transactions that our stockholders might otherwise deem to be in their best interests. The provisions in our Certificate and bylaws:

- limit who may call stockholder meetings;
- do not permit stockholders to act by written consent;
- do not provide for cumulative voting rights; and
- provide that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

In addition, once we become a publicly traded corporation, Section 203 of the Delaware General Corporation Law may limit our ability to engage in any business combination with a person who beneficially owns 15% or more of our outstanding voting stock unless certain conditions are satisfied. This restriction lasts for a period of three years following the share acquisition. These provisions may have the effect of entrenching our management team and may deprive you of the opportunity to sell your shares to potential acquirers at a premium over prevailing prices. This potential inability to obtain a control premium could reduce the price of our common stock.

Our bylaws designate the Court of Chancery of the State of Delaware as the sole and exclusive forum for certain litigation that may be initiated by our stockholders, which could limit our stockholders’ ability to obtain a favorable judicial forum for disputes with the Company . Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim against us or any our directors, officers or other employees arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, or (iv) any action asserting a claim against us or any our directors, officers or other employees governed by the internal affairs doctrine. This forum selection provision in our bylaws may limit our stockholders’ ability to obtain a favorable judicial forum for disputes with us or any our directors, officers or other employees.

Our board of directors may issue blank check preferred stock, which may affect the voting rights of our holders and could deter or delay an attempt to obtain control of us. Our board of directors is authorized, without stockholder approval, to issue preferred stock in series and to fix and state the voting rights and powers, designation, preferences and relative, participating, optional or other special rights of the shares of each such series and the qualifications, limitations and restrictions thereof. Preferred stock may rank prior to our common stock with respect to dividends rights, liquidation preferences, or both, and may have full or limited voting rights. Accordingly, issuance of shares of preferred stock could adversely affect the voting power of holders of our common stock and could have the effect of deterring or delaying an attempt to obtain control of us.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, including the sections entitled “Prospectus Summary,” “Risk Factors,” “Use of Proceeds,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” and “Our Business,” contains forward-looking statements. The words “believe,” “may,” “will,” “potentially,” “estimate,” “continue,” “anticipate,” “intend,” “could,” “would,” “project,” “plan,” “expect” and similar expressions that convey uncertainty of future events or outcomes are intended to identify forward-looking statements. These forward-looking statements include, but are not limited to, statements concerning the following:

- our future financial and operating results;
- our intentions, expectations and beliefs regarding anticipated growth, market penetration and trends in our business;
- the timing and success of our plan of commercialization;
- our ability to operate our royalty-based business model;
- the adequacy of the net proceeds of this offering;
- the effects of market conditions on our stock price and operating results;
- our ability to maintain our competitive technological advantages against competitors in our industry;
- our ability to have our technology solutions gain market acceptance;
- our ability to maintain, protect and enhance our intellectual property;
- the effects of increased competition in our market and our ability to compete effectively;
- our plans to use the proceeds from this offering;
- costs associated with initiating and defending intellectual property infringement and other claims;
- our expectations concerning our relationships with potential customers, partners and other third parties;
- the attraction and retention of qualified employees and key personnel;
- future acquisitions of or investments in complementary companies or technologies; and
- our ability to comply with evolving legal standards and regulations, particularly concerning requirements for being a public company.

These forward-looking statements are subject to a number of risks, uncertainties and assumptions, including those described in “Risk Factors” and elsewhere in this prospectus. Moreover, we operate in a very competitive and rapidly changing environment, and new risks emerge from time to time. It is not possible for us to predict all risks, nor can we assess the impact of all factors on our business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements we may make. In light of these risks, uncertainties and assumptions, the forward-looking events and circumstances discussed in this prospectus may not occur and actual results could differ materially and adversely from those anticipated or implied in our forward-looking statements.

You should not rely upon forward-looking statements as predictions of future events. Although we believe that the expectations reflected in our forward-looking statements are reasonable, we cannot guarantee that the future results, levels of activity, performance or events and circumstances described in the forward-looking statements will be achieved or occur. Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of the forward-looking statements. We undertake no obligation to update publicly any forward-looking statements for any reason after the date of this prospectus to conform these statements to actual results or to changes in our expectations, except as required by law.

You should read this prospectus and the documents that we reference in this prospectus and have filed with the Securities and Exchange Commission as exhibits to the registration statement of which this prospectus is a part with the understanding that our actual future results, levels of activity, performance and events and circumstances may be materially different from what we expect.

INDUSTRY AND MARKET DATA

This prospectus contains statistical data, estimates, and forecasts that are based on independent industry, government and non-government organization publications or other publicly available information, as well as other information based on our internal sources. Although we believe that the third-party sources referred to in this prospectus are reliable, estimates as they relate to projections involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under the section titled “Risk Factors” and elsewhere in this prospectus. These and other factors could cause results to differ materially from those expressed in the estimates made by the independent parties and by us.

Certain information in the text of this prospectus is contained in independent industry government and non-governmental organizational publications. The sources of these publications are provided below:

- IC Insights, Inc., *The McClean Report 2016*
- IC Insights, Inc., *Integrated Circuit Market Drivers 2016*
- IC Insights, Inc., *Global Wafer Capacity 2015-2019*
- IC Knowledge LLC, *The Strategic Forecast Report 2015*

OUR BUSINESS

General

We are engaged in the business of developing, commercializing and licensing proprietary processes and technologies for the \$350+ billion semiconductor industry. Our lead technology, named Mears Silicon Technology™, or MST®, is a thin film of reengineered silicon, typically 100 to 300 angstroms (or approximately 20 to 60 silicon atomic unit cells) thick. MST® can be applied as a transistor channel enhancement to CMOS-type transistors, the most widely used transistor type in the semiconductor industry. MST® is our proprietary and patent protected performance enhancement technology that we believe addresses a number of key engineering challenges facing the semiconductor industry. We believe that by incorporating MST®, transistors made with CMOS technology can be smaller, with increased speed, reliability and energy efficiency. In addition, since MST® is an additive and low cost technology, it can be deployed on an industrial scale, with machines commonly used in semiconductor manufacturing. We believe that MST® can be widely incorporated into the most common types of semiconductor products, including analog, logic, optical and memory integrated circuits.

We do not intend to design or manufacture integrated circuits directly. Instead, we intend to develop and license technologies and processes that will offer the designers and manufacturers of integrated circuits a low-cost solution to the industry need for greater performance and lower power consumption.

In the mid-1980s, our founder, Dr. Robert Mears, was part of a team that re-engineered silica optical fiber to invent the erbium-doped fiber amplifier, or EDFA, a technology that increased the bandwidth of optical fiber more than 1,000 times. The invention of EDFA helped to revolutionize the development of broadband and to this day remains a key technology in the multi-hundred billion dollar optical communications industry. Dr. Mears anticipated scaling problems for silicon semiconductors and founded Atomera Incorporated in order to address those problems for the semiconductor industry.

Over the last ten years, we have undertaken significant laboratory testing and engaged with a range of semiconductor industry and academic technology leaders to evaluate MST® performance on test chips in industrial fabrication environments. We believe this testing has demonstrated that MST® offers performance benefits, including increased speed, reliability and energy efficiency, beyond and in most cases additive to those provided by already successful semiconductor performance enhancement technologies, such as dual stress liners and source/drain channel stressors, such as eSiGe/eSiC, and can be implemented without significant additional cost or significant modification to the current semiconductor fabrication process.

We are now in the process of transitioning our MST® toward commercial adoption. We are currently in the process qualification stage with leading integrated device manufacturers, or IDMs, and foundries. The IDMs and foundries are our intended initial customers and by way of the process qualification stage they test and evaluate the potential incorporation of our MST® technology into the integrated circuits they produce. We are also partnering with manufacturers of semiconductor fabrication equipment and developers of modeling tools. These parties are part of a semiconductor infrastructure supporting the industry with capital equipment for transistor production and transistor process modeling software, and we are in discussions with certain equipment manufacturers and tool developers concerning their incorporation of our MST® technology into the equipment and tools they offer to the industry. We also intend to market our MST® technology to fabless semiconductor manufacturers concerning their incorporation of MST® into the integrated circuits they design. Assuming the timely and successful completion of process and the subsequent product qualification by customers and partners, we expect revenue based on sales of MST® enabled products in 2017.

We believe that the technologies underlying MST® are part of a larger platform of reengineered materials that have potential application beyond CMOS, including:

- faster and more efficient nano-structured semiconductor materials for electronic applications;
- enhanced nano-structured materials for application in photonics;
- improved magnetic materials for advanced memory; and
- more responsive “lead-free” piezo-electric materials (commonly used in antenna and transducers).

Industry Overview

Semiconductors, Generally

Recent years have seen a remarkable proliferation of consumer and commercial products, especially in wireless, automotive and mobile electronic devices. The growth of the Internet and cloud computing has provided people with new ways to create, store

and share information. At the same time, the increasing use of electronics in cars, buildings, appliances and other consumer products is creating a broad landscape of “smart” devices and the evolution of wearable technologies and The Internet of Things.

These developments depend, in large part, on integrated circuits, or microchips, which are sets of electronic circuits on a single chip of semiconductor material, normally silicon. It is common for a single semiconductor chip to combine many components (processor, communications, memory, custom logic, input/output) resulting in highly complex chip designs. Transistors are the building blocks of integrated circuits and the most complex semiconductor chips today contain more than a billion transistors, each of which may have features that are much less than 1/1,000th the diameter of a human hair.

The most widely used transistors in semiconductor chips today are based on the complementary metal-oxide-semiconductor, or CMOS, technology. Among its many attributes, CMOS allows for a higher density of transistors on a chip and lower power usage than non-CMOS technologies.

The Pursuit of Increased Semiconductor Performance

For years, the semiconductor industry was able to almost double the number of transistors it can pack into a single microchip about every two years, a rate of improvement commonly known as “Moore’s Law.” The semiconductor industry uses the term “node” to describe the minimum line width or geometry on a semiconductor chip, expressed in nanometers (nm) for today’s technologies. Historically, the smaller the node, the smaller the transistors and the more closely they are packed together, producing chips that are denser and thus less costly on a per-transistor basis. Frequently, smaller nodes also correspond to an improvement in chip performance, making them the mile markers of Moore’s Law, with each node marking a new generation of chip-manufacturing technology.

Until recently, the industry succeeded at maintaining the rate of improvement predicted by Moore’s Law by scaling the key transistor parameters, such as shrinking feature sizes and operating voltages, thereby allowing more transistors to be packed onto a single microchip. This trend was facilitated in large part by the development of the CMOS technologies. However, a discontinuity in the rate of improvement delivered by scaling appeared a few years ago when transistor technology reached deep sub-micron levels with transistor features below 100 nanometers. The industry responded with advanced materials to supplement the ongoing geometry shrinks. Some of those materials advances included strained silicon, Silicon on Insulator and High-K/Metal Gate.

In addition, due to the popularity of mobile devices and other electronic products, there is increasing demand for integrated circuits and systems with greater functionality and performance, reduced size, and much less power consumption as key requirements.

The designers and manufacturers of integrated circuits and systems — our potential customers — are facing intense pressure to deliver innovative products at ever shorter times-to-market, as well as at lower prices. In other words, innovation in chip and system design today often hinges on “better, sooner and cheaper.” We believe that the semiconductor industry has accepted that to move forward in the nano-era, progress will require adoption of new innovations that extend the scaling formula, including those based on the use of new engineered materials, a market opportunity our MST[®] technology seeks to address. Because shrinking geometries at the smaller nodes incurs higher capital and manufacturing costs, only limited products can take on the increased cost burden and still be economically viable. We believe cost sensitive devices will turn to engineered materials, like MST[®], to solve this problem.

Disaggregation of the Industry

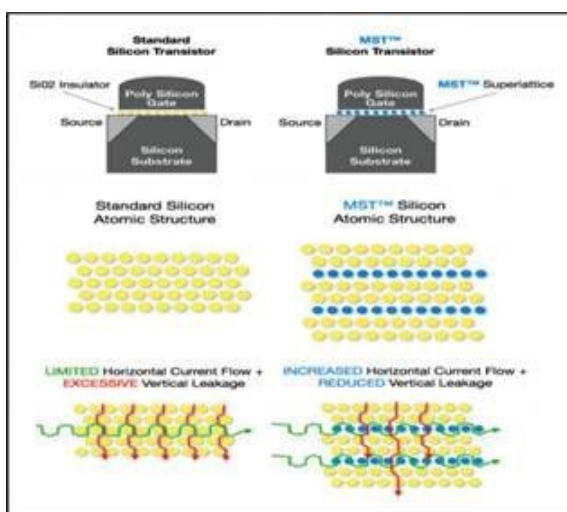
In trying to keep research and development costs manageable, while attempting to satisfy the demand for increasingly complex semiconductors, certain designers and manufacturers of integrated circuits have transitioned to an open innovation model in which competing companies and third-party providers actively collaborate to address performance issues through various alliances, joint ventures, and licensing of externally developed technology.

Historically, most semiconductor companies were vertically integrated. They designed, fabricated, packaged and tested their semiconductors using internally developed software design tools and manufacturing processes and equipment. As the cost and skills required for designing and manufacturing complex semiconductors have increased, the semiconductor industry has become disaggregated, with companies concentrating on one or more individual stages of the semiconductor development and production process. This disaggregation has fueled the growth of fabless semiconductor companies, design tool vendors, semiconductor equipment manufacturers, third-party semiconductor manufacturers (or foundries), semiconductor assembly, package and test companies, and intellectual property companies that develop and license technology to others.

While specialization has enabled greater development and manufacturing efficiency, it has also created an opportunity for IP-based companies, such as Atomera Incorporated, that develop and license technology to meet fundamental, industry-wide challenges. These intellectual property companies have been able to gain broad adoption of their technology throughout the industry by working with companies within the semiconductor supply chain to evaluate and integrate their technology. Oftentimes, the industry will share in the large up-front development cost of these technologies in exchange for a lower licensing fee or royalty. We believe this collaboration and integration benefits semiconductor companies by enabling them to bring new technology to market faster and more cost-effectively, without having to make the investment alone.

Our Initial Application of Mears Silicon Technology

The initial application of our MST[®] will be for CMOS integrated circuits, the most widely used type of integrated circuits in the semiconductor industry. As applied to CMOS-type transistors, MST[®] is a thin film of reengineered silicon, typically 100 to 300 angstroms (or approximately 20 to 60 silicon atomic cell units) thick, that functions as a transistor channel enhancement. We believe MST[®] has the potential to overcome the key challenges found in the implementation of next generation nano-scale semiconductor devices incorporating CMOS-type transistors, namely enhancing drive current, reducing gate leakage and reducing variability. In addition, we believe that MST[®] has the potential to deliver these benefits through a single technology that requires relatively minor modifications to the industry standard CMOS manufacturing flow. Consequently, we believe that by incorporating MST[®], designers can make transistors with increased speed, reliability and energy efficiency, without significantly altering the current fabrication process or cost of production.



As illustrated by the accompanying diagram, MST[®] is a “silicon-on-silicon” solution that provides multiple benefits through a relatively simple modification to the standard CMOS manufacturing flow. MST[®] improvements are delivered through our proprietary and patent protected silicon band engineering approach that is based on the quantum mechanics of modern deep sub-micron devices. The MST[®] film creates channels that allow electrons to flow more freely in the plane of the transistor, thereby enhancing drive current, while reducing electron flow or “leakage” in the transverse direction. Our MST[®] film can also create more controlled doping profiles which allow dopants to be held in the desired locations, thereby reducing variability and improving production yield.

We believe we have demonstrated in simulations and on test chips that MST[®] provides performance enhancements, including increased speed, reliability and energy efficiency, to most CMOS type transistors equivalent to the enhancements enabled by approximately one-half to a full node of improvement depending on the device technology and application and, therefore, it enables life extension to capital equipment and wafer fabrication facilities. We believe that MST[®] CMOS compares favorably to other performance enhancing alternatives as follows:

- *Strained Silicon and Silicon-on-Insulator, or SOI*: Unlike strained silicon or SOI, we believe that MST[®] delivers in a single film multiple benefits at once and in a cost effective manner, including enhanced transistor drive current, reduced leakage, and reduced variability. Also, strained silicon tends to lose much of its effectiveness below 45nm, constraining its scalability, while the MST[®] thin film approach is expected to be scalable below 22nm. Also, based on our own research and development and third-party evaluations, we believe that MST[®] can deliver improved cost-benefit performance, in most cases in an additive manner, compared to already successful strain technologies, such as dual stress liners and SiGe.

- *High-K/Metal Gate, or HKMG* : Unlike HKMG, MST[®] is silicon-based. As a “silicon-on-silicon” solution, MST[®] does not require new materials or equipment, which in our opinion makes it much easier and less costly to adopt than HKMG for devices not requiring ultra-thin gate dielectrics. For devices with HKMG, we believe MST[®] still benefits transistor performance and variability in a similar manner to that observed in non-HKMG devices.

Because of its physical characteristics in the channel region of the transistor, we believe MST[®] has the further benefit of being complementary and additive to the performance enhancing technologies noted above, making MST[®] broadly applicable across multiple devices and process flows to meet a wide variety of customer design objectives. Given the increasingly difficult economic challenges faced by the industry while moving to more advanced technologies, we believe one of the most compelling aspect of MST[®] may be its cost/benefit profile. We believe that MST[®] will provide a lower cost of production due to our technology’s potential to reduce die size while leveraging existing manufacturing tools, thereby providing chip makers with increased performance at all process nodes with significantly fewer disruptions to manufacturing processes and less incremental cost than other advanced technologies.

We believe MST[®] properties can improve transistor performance in a variety of device types including microprocessors; logic products; DRAM, SRAM, and other memory integrated circuits; as well as analog, radio frequency, and mixed-signal devices. We have therefore developed different MST[®] product options that can be applied to the critical industry segments and technology nodes. As of the date of this prospectus, we have done technology simulation work with universities and leading industry players at nodes from 180nm to 7nm. We have also simulated devices with leading industry research facilities and built and electrically verified test chips using MST[®] in customer manufacturing facilities which have produced results that demonstrate many of the benefits described above.

MST[®] Commercialization

We do not intend to design or manufacture integrated circuits directly. Instead, we intend to develop and license technologies and processes that will offer the designers and manufacturers of integrated circuits a low-cost solution to the industry need for increased performance. Our customers and partners are expected to include:

- integrated device manufacturers, or IDMs, which are the fully integrated designers and manufacturers of integrated circuits;
- fabless semiconductor manufacturers, which are designers of integrated circuits who outsource the manufacture of their chips to third-party contract semiconductor manufacturers, or foundries;
- foundries, which manufacture integrated circuits on behalf of fabless manufacturers;
- original equipment manufacturers, or OEMs, that manufacture the epitaxial, or EPI, machines used to deposit semiconductor layers, such as the MST[®] onto the base silicon wafer; and
- electronic design automation companies, which make tools used throughout the industry to simulate performance of semiconductor products using different materials, design structures and process technologies.

We intend to generate revenue through licensing arrangements whereby foundries and IDMs pay us a license fee for their use of MST[®] technology in the manufacture of silicon wafers as well as a royalty for each silicon wafer or device that incorporates our MST[®] technology. We also intend to enter into licensing arrangements with fabless semiconductor manufacturers pursuant to which we will charge them a royalty for each device they sell that incorporates our MST[®] technology. The IDMs and fabless semiconductor manufacturers are the primary beneficiaries of our commercialization activities, as they are producers and distributors of the integrated circuits onto which we will endeavor to incorporate our MST[®] technology. The foundries and OEMs also play an important role in our commercialization strategy in that these parties have traditionally sought to provide new technologies to their customers, which in the case of the foundries are the fabless semiconductor manufacturers and in the case of the OEMs are the IDMs and foundries that purchase EPI machines.

In the semiconductor industry, new technologies are vetted thoroughly and carefully by early adopters but, once proven, tend to be adopted broadly by the industry and, wherever possible, exploited for several generations until their full potential is reached. Before introducing a new technology into its fabrication process, the customer will conduct a formal and rigorous multi-step product qualification, which can range from 18 to 36 months. Major qualification steps typically include:

- process qualification — the integration of process steps or process segments to deliver the expected electrical results from test chips that provide the specification data base for design of integrated circuits;

- wafer level reliability qualification — demonstration of reliability indices under accelerated test condition that allow extraction of acceleration factors and life time predictions of specific process components for a given technology; and
- product qualification — the qualification of packaged and fully functional integrated circuit devices including reliability performance.

We believe that our success is dependent upon the adoption of our MST® technology by at least one IDM, foundry, or fabless semiconductor manufacturer. MST® is currently undergoing process qualification by potential customers, including foundries and IDM manufacturers. Subject to process and subsequent product qualifications that demonstrate, in commercial scale production, the enhancements we believe our MST® technology offers, including increased speed, reliability and energy efficiency, we expect to license our MST® technology to the customer. We are also engaged at different stages of customer development with other potential customers.

We are also undergoing process development and equipment certification with OEMs. If we meet the development and certification requirements of the OEMs, we believe they will promote the incorporation of our MST® technology in the OEM's EPI machines as an option to their standard offering. By doing so, we believe they will simultaneously stimulate additional sales of their capital equipment and encourage more customers to adopt MST®.

We market our MST® technology directly to the semiconductor industry through our significant industry contacts and relationships. We also sponsor academic research and participate in industry conferences and associations. In certain foreign jurisdictions, we engage sales representatives to pursue and assist us in establishing relationships with local customers.

Competition

Our lead product, MST®, is a proprietary and patent protected performance enhancement technology that we believe addresses a number of key engineering challenges facing the semiconductor industry. We compete with IDMs, OEMs, foundries, fabless manufacturers of semiconductors and semiconductor IP licensing companies, for the development and commercialization of technologies that improve the performance of semiconductors. Historically, when a new fabrication process proves to be a low-cost improvement to the standard fabrication process, and is additive, rather than in place of other performance technologies, it has been successfully adopted industry-wide. Good examples of such advances have been strained silicon, such as SiGe. We believe that MST® has the potential to be one of these low-cost additive technologies, in which case MST® would not be subject to significant direct competition from other technologies.

Research and Development

We are focused on designing and developing engineered semiconductor material technologies and processes for the semiconductor and other industries. We believe that our success depends in part on our ability to achieve the following in a cost-effective and timely manner:

- develop new technologies that meet the changing needs of the semiconductor industry;
- improve our existing technologies to enable growth into new application areas; and
- expand our intellectual property portfolio.

Our research and development is conducted internally, however we work closely with third parties in the semiconductor industry to evaluate and qualify our technology for incorporation into semiconductor products and fabrication equipment. During the 2015 and 2014 fiscal years, we incurred research and development expenses of \$2,022,133 and \$1,853,091, respectively. During the three month periods ended March 31, 2016 and 2015, we incurred research and development expenses of \$945,891 and \$519,452, respectively.

Intellectual Property Rights

We regard the protection of our technologies and intellectual property rights as an important element of our business operations and crucial to our success. We rely primarily on a combination of patent laws, trade secrets, confidentiality procedures, and contractual provisions to protect our proprietary technology. We require our employees, consultants, and advisors to enter into confidentiality agreements. These agreements provide that all confidential information developed or made known to the individual during the course of the individual's relationship with us is to be kept confidential and not disclosed to third parties except under specific circumstances. In the case of our employees and certain consultants, the agreements provide that all of the technology that is conceived by the individual during the course of employment is our exclusive property. The development of our technology and many of our processes are dependent upon the knowledge, experience, and skills of key scientific and technical personnel.

We have been issued a significant number of patents, with more than 50 patents granted in the U.S. and more than 50 abroad. Our core patents relating to MST ® cover materials, physical structures and manufacturing processes. Our core patents relating to MST ® were filed beginning on August 22, 2003 and have grant dates beginning on December 14, 2004. Our MST patent portfolio begins to expire commencing August 22, 2023. While we believe our core patents adequately block competitors from using our MST ® without our approval, there can be no assurance that one or more of our core patents may not survive a legal challenge to their scope, validity, or enforceability, or provide significant protection for us. The failure of our patents, or the failure of trade secret laws, to adequately protect our technology, might make it easier for our competitors to offer similar products or technologies. In addition, patents may not issue from any of our current or any future applications.

We also hold registered trademarks in the United States for the mark “MST” and in China for the mark “Mears”. We have applied with the U.S. Patent and Trademark Office for the registration of the mark “Atomera” in the United States.

We have entered into an Exclusive License and Collaboration Agreement dated March 3, 2010 with K2 Energy Limited, an energy resource company located in Sydney, Australia, pursuant to which we have granted K2 Energy an exclusive, world-wide, royalty bearing license to commercialize our MST ® in the field of photovoltaic devices and all solar energy applications. The license agreement is for a term co-terminus with the licensed patents and requires K2 Energy to pay us royalties in the amount of 50% of all net revenue derived by K2 Energy under our license, with net revenue generally defined as gross revenue less all costs associated with the production and sale of the licensed product. As part of the license agreement, K2 Energy made a \$1 million investment in our Company and funded \$2.7 million of research into the solar applications of our technology.

We have also entered into a License Agreement dated December 22, 2006 with ASM International, NV, a semiconductor OEM located in Almere, The Netherlands, pursuant to which ASM has granted to us a non-exclusive, worldwide license to make, and sublicense others to make, semiconductor devices using certain ASM patents. The ASM license restricts us and our sublicensees from using the ASM licensed rights in the manufacture of EPI machines or any other machines used to manufacture semiconductors. The ASM license is coterminous with patents licensed by ASM, which expires on January 8, 2019, and requires us to pay ASM a royalty of 5% of net royalty revenue, generally defined as gross royalty revenue less certain customer offsets and credits, from the sale of any product incorporating the ASM licensed patents not manufactured on ASM equipment and a royalty of 2.5% of net revenue from the sale of any product incorporating ASM licensed patents manufactured on ASM equipment. As of the date of this prospectus, all semiconductor devices incorporating our MST ® technology manufactured prior to January 8, 2019 will be subject to the ASM license royalty.

Employees

As of the date of this prospectus, we employ 12 people on a full-time basis, including our four executive officers, seven technical staff and one general and administrative employee.

Property

Our executive offices are presently located in a 3,396 square foot facility in Los Gatos, California pursuant to a two-year lease, expiring on January 31, 2018, at the rate of \$12,395 per month, which will increase to \$13,074 per month commencing February 1, 2017.

We also lease approximately 1,730 square feet in Wellesley Hills, Massachusetts from which we conduct certain research activities. The Wellesley Hills facilities are occupied pursuant to a one-year lease expiring November 30, 2016 at a lease rate of \$4,613 per month.

Litigation

Except as described below, there are no pending legal proceedings to which we or our properties are subject.

In May 2013, we initiated a civil action in U.S. federal court against Finisar Corporation, a Sunnyvale, California based manufacturer of optical communication products, alleging that Finisar’s manufacture and sale of certain products infringe on U.S. Patent No. 6,141,361 owned by us. *Mears Technologies, Inc. v. Finisar Corporation*, No. 2:13-cv-00376 (E.D. Tex.). On December 30, 2014, the court entered an order granting summary judgment in favor of Finisar on the issue of whether Finisar is infringing our patents, and on December 14, 2015 the final judgment was entered and we agreed to pay approximately \$47,000 for costs related to the lawsuit, which we paid in January 2016. We have filed an appeal of that judgment with the United States Court of Appeals for the Federal Circuit.

Following the trial court’s entry of the December 2014 order granting summary judgment in favor of Finisar, in January 2015 Finisar filed a motion with the court to recover from us its attorney’s fees and costs. The court denied Finisar’s motion for reimbursement of fees and costs in December 2015. In January 2016, Finisar filed an appeal of the trial court’s denial of its motion for fees and costs with the United States Court of Appeals for the Federal Circuit. As of the date of this prospectus, we are unable to predict the outcome of our appeal of the judgment in Finisar’s favor.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

General

We are engaged in the business of developing, commercializing and licensing proprietary processes and technologies for the \$350+ billion semiconductor industry. We were organized as a Delaware limited liability company under the name Nanovis LLC on November 26, 2001. On March 13, 2007, we converted to a Delaware corporation under the name Mears Technologies, Inc. On January 12, 2016, we changed our name to Atomera Incorporated.

Since our formation, we have focused our efforts on the research, development, patent protection, and commercialization of our processes and technologies, including our proprietary and patent-protected MST[®] performance enhancement technology. We have undertaken significant laboratory testing and engaged with a range of semiconductor industry technology leaders to evaluate and characterize MST[®] performance in industrial fabrication environments. We believe that this testing has demonstrated that MST[®]-enabled transistors can be made smaller and with increased speed, reliability and energy efficiency. In addition, we believe that this testing shows that MST[®] can be deployed on a low-cost, industrial scale using machines already employed in semiconductor manufacturing.

On March 17, 2015, we completed the private placement of \$14.75 million in senior secured convertible promissory notes and on April 1, 2016 we completed the private placement of an additional \$5.96 million in senior secured convertible notes on the same terms as the promissory notes placed in March 2015. We refer to these promissory notes in this prospectus as our "convertible notes." We issued the March 2015 convertible notes for cash consideration of \$7.4 million and the exchange for previously issued promissory notes that at the time of exchange had principal and accrued interest in the aggregate amount of \$7.35 million. As a result, we have issued and outstanding convertible notes in the aggregate principal amount of \$20,708,433, with accrued and unpaid interest as of March 31, 2016 in the amount of \$2,037,377.

Interest on our convertible notes accrues on the unpaid principal at the rate of 10% per year, except during any event of default under the convertible notes in which case the interest rate shall be 12% per year. All principal and interest under the convertible notes are due and payable on May 31, 2017. All principal and interest under the convertible notes are convertible into shares of common stock as follows:

- Upon the consummation of an initial public offering by us, all principal and interest shall automatically convert at 50% of the IPO price, provided, however, in no event shall the conversion price be greater than \$7.362 nor less than \$3.681 per share;
- In the event of a subsequent private placement approved by the holders of 50% or more of the aggregate principal amount of all convertible notes, all principal and interest shall automatically convert at 50% of the offer price in the subsequent private placement, provided, however, in no event shall the conversion price be greater than \$7.362 nor less than \$3.681 per share; and
- Until the 10th day prior to the consummation of an IPO by us, a holder of a convertible note, at its option, may convert at a conversion price of \$7.362 per share.

Pursuant to the terms of our convertible notes, all principal and accrued interest under the notes will automatically convert into 6,065,549 shares of our common stock, at the conversion price of \$3.75 per share, upon the completion of this offering.

During October 2015, we conducted a recapitalization of our outstanding options and warrants to purchase shares of our common stock. Pursuant to the recapitalization, we offered all holders of our options and warrants as of December 31, 2014 a one-time opportunity to exchange their options and warrants for shares of our common stock at a ratio of two options or warrants for one share of common stock regardless of exercise price. The offer resulted in 166,230 options and 601,861 warrants converting to a total of 384,045 shares of common stock. In connection with the recapitalization, we incurred a one-time non-cash charge of \$2,088,542 in the fourth quarter of 2015 relating to our loss on the exchange of the options and warrants for the common stock.

On December 11, 2015, we effected a 1-for-15 reverse stock split of our common stock. All historical share amounts and share price information presented in this prospectus have been proportionally adjusted to reflect the impact of this reverse stock split.

Plan of Operations

Our plan of operations for the 12 months following the completion of this offering will focus on securing one or more foundries, IDMs or fabless semiconductor manufacturers to qualify and license our MST[®] technology and start full-scale industrial production of a device that incorporates our MST[®] technology. We will also continue our research into new applications and materials. We intend to develop marketing tools to expand our potential customer base. These tools will include process and product simulation models which will help potential customers understand the benefits of MST[®] and how to implement it in their factories, as well as more comprehensive data showing the improvements that MST[®] can bring to specific classes of semiconductor devices. During the 12 months following this offering, we expect to hire up to six additional employees, including four additional development engineers and two additional business development and sales persons in order to support the increased marketing and qualification of our MST[®] technology to a wider set of customers and markets. We also intend to expand our patent portfolio through additional patent applications, both US and foreign.

Results of Operations

We have not commenced revenue-producing operations. To date, our operations have focused on the research, development, patent protection, and commercialization of our processes and technologies, including our proprietary and patent-protected MST ® performance enhancement technology, and the development of our business plan. For the fiscal years ended December 31, 2015 and 2014, we incurred \$2,022,133 and \$1,853,091, respectively, of research and development expense related to ongoing efforts to evaluate and qualify our technology. Other expenses for the 2015 fiscal year were \$4,020,270, consisting of \$2,088,542 loss on the exchange of our warrants and options into shares of common stock and \$1,931,728 of interest expense on our convertible notes. During the prior year period, other expenses consisted of \$560,310 of interest expense related to our convertible note financing. We also incurred during our 2015 fiscal year \$3,441,149 of general and administrative expense, consisting primarily of \$1,435,977 of consulting expense, \$1,015,848 of which represents the estimated fair value of the warrant issued to Liquid Patent Advisors for advisory services performed in 2015, \$699,094 of legal expense and \$308,442 of payroll expense. During the prior year period, we incurred \$1,402,879 of general and administrative expense, consisting primarily of \$509,197 of legal fees, \$385,613 of consulting expense and \$191,480 of payroll expense. We incurred a net loss of \$9,512,141 for the fiscal year ended December 31, 2015 and a net loss of \$3,817,734 for the prior year period.

For the three month periods ended March 31, 2016 and 2015, we incurred \$945,891 and \$519,452, respectively, of research and development expense related to ongoing efforts to evaluate and qualify our technology. During the three months ended March 31, 2016, we incurred \$861,119 of general and administrative expense, consisting of \$433,860 of payroll expense and \$288,423 of professional services for legal, audit and tax. Payroll expense for the three months ended March 31, 2016 includes \$187,500 in bonus expense in connection with the settlement of a loan to an officer as described further in “ *Management-Related Party Transactions* .” During the prior year period, we incurred \$1,698,781 of general administrative expense, consisting of \$1,113,737 of consulting expense (of which \$1,015,848 represented the fair value of the warrant granted to Liquid Patent Advisors), \$222,743 of legal expense and \$54,390 of payroll expense. Other expenses for the three months ended March 31, 2016 and 2015 included \$562,167 and \$232,869, respectively, of interest expense, net of interest income, relating to our convertible note financing. We incurred a net loss of \$2,488,187 for the three months ended March 31, 2016 and a net loss of \$2,460,749 for the prior year period.

Financial Condition

As of March 31, 2016, we had total assets of \$1,799,805 and a working capital deficit of \$15,604,022. The assets and working capital deficit do not include our placement of \$5.96 million of convertible notes which closed on April 1, 2016 or our receipt of net cash proceeds of \$5.47 million from the sale of such notes. We believe that the net proceeds of this offering, combined with the net proceeds of our placement of convertible notes on April 1, 2016 and the conversion of approximately \$22.74 million of debt to equity concurrent with the close of this offering, will be sufficient to fund our presently forecasted working capital requirements over, at least, the 12 months following the date of this prospectus, including securing one or more foundries, IDMs or fabless semiconductor manufacturers to qualify and license our MST ® technology and start full-scale industrial production of a device that incorporates our MST ® technology. However, we may require additional capital in order to get to full-scale industrial production of a device that incorporates our MST ® technology the receipt of which there can be no assurance. In the event we require additional capital over and above the \$21.3 million net proceeds of this offering, we will endeavor to acquire additional funds through various financing sources, including follow-on equity offerings, debt financing, licensing fees for our technology and joint ventures with industry partners. In addition, we will consider alternatives to our current business plan that may enable to us to achieve revenue producing operations and meaningful commercial success with a smaller amount of capital. However, there can be no guarantees that such funds will be available on commercially reasonable terms, if at all. If such financing is not available on satisfactory terms, we may be unable to further pursue our business plan and we may be unable to continue operations.

The report of our independent registered public accounting firm for the year ended December 31, 2015 states that due to our recurring and expected losses and cash on-hand there is substantial doubt about our ability to continue as a going concern.

Off Balance Sheet Transactions

We do not have any off-balance sheet transactions.

MANAGEMENT

Set forth below are our directors and officers:

Name	Age	Position
John Gerber	54	Chairman of the Board
Scott Bibaud	53	Chief Executive Officer, President and Director
Erwin Trautmann	68	Executive Vice President of Strategic Business Development and Director
Dr. Robert Mears	55	Chief Technology Officer
Francis Laurencio	47	Chief Financial and Accounting Officer
C. Rinn Cleavelin, Ph.D.	73	Director
Rolf Stadheim	76	Director

John Gerber has served as a member of our board of directors since 2007 and chairman of the board since 2011. For the past five years, Mr. Gerber has served as managing partner of Four Points, a specialty investment group with more than \$1.8 billion of investment and capital transaction experience across 40 real estate and venture capital investments. He has diversified experience in corporate and project management, project and venture finance and development. Mr. Gerber has a BSE degree magna cum laude from Princeton University and a masters degree from Harvard University.

Mr. Gerber has experience as a director of multiple companies and has extensive investing experience, in addition to significant leadership and strategic planning skills. As a result of these and other professional experiences, our board of directors has concluded that Mr. Gerber is qualified to serve as a director.

Scott Bibaud has served as our president, chief executive officer and a director since October 2015. Mr. Bibaud has been active in the semiconductor industry for over twenty years. From June 2012 to August 2015, he was senior vice president and general manager of Altera's Communications and Broadcast Division. Prior to that, he was executive vice president and general manager of the mobile platforms group at Broadcom from June 2000 to May 2011. Mr. Bibaud received a B.S. degree in electrical engineering from Rensselaer Polytechnic Institute and an MBA from Harvard University.

Mr. Bibaud has extensive experience in and knowledge of the semiconductor industry. As a result of these and other professional experiences, our board of directors has concluded that Mr. Bibaud is qualified to serve as a director.

Erwin Trautmann has served as our executive vice president of strategic business development since October 2015, and from September 2011 to October 2015 he served as our chief executive officer. Mr. Trautmann has also served as a member of our board of directors since September 2011. Mr. Trautmann has held executive positions at several Fortune 500 companies. From November 1999 to December 2005, Mr. Trautmann served as a senior vice president for KLA-Tencor, where he was most recently responsible for the global service and support division. From April 1980 to October 1998, Mr. Trautmann held various executive level positions with Texas Instruments, including program manager responsible for the technology development and global fan-out of major design nodes, vice president of global product engineering and vice president of global quality and reliability. During a short tenure at Micron Technologies, from October 1998 to July 1999, Mr. Trautmann supported the integration of Texas Instruments' world-wide product engineering team into Micron Technologies. Mr. Trautmann received a Dipl. Engr. (FH) in chemical technology from Fachhochschule Mannheim, Germany.

Mr. Trautmann has extensive experience in and knowledge of the semiconductor industry. As a result of these and other professional experiences, our board of directors has concluded that Mr. Trautmann is qualified to serve as a director.

Dr. Robert Mears is the founder of our company and has served as our chief technology officer since inception. Dr. Mears also served as our president from inception to October 2015. Dr. Mears co-developed a transformative technology for long-distance optical networks in the late 1980's and has authored or co-authored approximately 150 publications and numerous patents. He is an Emeritus Fellow of Pembroke College, Cambridge, England.

Francis Laurencio has served as our chief financial officer since February 2016. Prior to joining Atomera, Mr. Laurencio served as chief financial officer of Sycomp, A Technology Company Inc. from February 2013 to July 2015 and as general counsel to Sycomp from July 2015 to January 2016. Mr. Laurencio also served as chief financial officer of Orbis Global, Inc. from January 2012 to December 2012 and chief financial officer of Smapper Technologies, Inc. from December 2009 to December 2011. Mr. Laurencio holds an A.B., degree from Princeton University and a J.D. from New York University School of Law.

C. Rinn Cleavelin, Ph.D. has served as a member of our board of directors since December 2009. From July 2002 to November 2007, Dr. Cleavelin served as manager for devices and manufacturing for external research and development for Texas Instruments. From January 2000 to June 2002, Dr. Cleavelin served as chief operating officer of International SEMATECH, where he was responsible for all technical programs and the advanced technology development facility. Previously, Dr. Cleavelin served as director of front end processing at International SEMATECH from 1998 to 2000. Since November 2007, Dr. Cleavelin has engaged in consulting activities on behalf of Atomera and other companies in the semiconductor industry. Dr. Cleavelin has a Ph.D. in Physics from Texas Tech University.

Dr. Cleavelin has extensive experience in and knowledge of the semiconductor industry. As a result of these and other professional experiences, our board of directors has concluded that Dr. Cleavelin is qualified to serve as a director.

Rolf Stadheim has served as a member of our board of directors since June 2010. Mr. Stadheim is founder and managing partner of Stadheim & Grear, Ltd., a Chicago, Illinois law firm founded by Mr. Stadheim in 1990 specializing in intellectual property law. Mr. Stadheim received his undergraduate degree from the University of Wisconsin and his law degree from the University of Chicago.

Mr. Stadheim has extensive experience in and knowledge of intellectual property law, including licensing and litigation of infringement claims in the semiconductor industry. As a result of these and other professional experiences, our board of directors has concluded that Mr. Stadheim is qualified to serve as a director.

Board Composition

Our board of directors may establish the authorized number of directors from time to time by resolution. Our board of directors currently consists of five members, two of whom qualify as independent under the Nasdaq Stock Market rules.

Nasdaq Stock Market Rule 5615(b) requires a majority of a listed company's board of directors be comprised of independent directors under the Nasdaq Stock Market Rules within one year of the completion of this offering. Our board of directors has determined that neither John Gerber nor C. Rinn Cleavelin, Ph.D. has a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director and that each is "independent" as that term is defined under the applicable rules and regulations of the SEC and the listing requirements and rules of the Nasdaq Stock Market. In making this determination, our board of directors considered the current and prior relationships Mr. Gerber and Dr. Cleavelin have with our company and all other facts and circumstances our board of directors deemed relevant in determining their independence, including their beneficial ownership of our capital stock. We intend to appoint additional independent directors to our board so that a majority of our directors are independent, as required under applicable Nasdaq Stock Market rules, within one year of the completion of this offering.

Committees of the Board of Directors

Our board of directors has established an audit committee, a compensation committee, and a nominating and corporate governance committee. The phase-in rules contained in Rule 5615(b) of Nasdaq's Stock Market Rules (and in Rule 10A-3(b)(1)(iv)(A) of the Exchange Act with respect to audit committees) provide that a company listing in connection with its initial public offering will be permitted to phase-in its compliance with the committee composition requirements as follows: (1) one member must satisfy the independence requirement at the time of listing; (2) a majority of members must satisfy the independence requirement within 90 days of listing; and (3) all members must satisfy the independence requirement within one year of listing. We intend to rely on Nasdaq's phase-in rules for meeting the independence requirements for our audit committee.

Our board of directors may establish other committees to facilitate the management of our business. The composition and functions of each committee are described below. Members serve on these committees until their resignation or until otherwise determined by our board of directors.

Audit Committee

Our audit committee consists of John Gerber, C. Rinn Cleavelin and Rolf Stadheim, with Mr. Gerber serving as Chairperson. Each member of our audit committee meets the financial literacy requirements of the Nasdaq Stock Market listing standards and Mr. Gerber is an audit committee financial expert within the meaning of Item 407(d) of Regulation S-K under the Securities Act of 1933. Our audit committee will, among other things:

- select a qualified firm to serve as the independent registered public accounting firm to audit our financial

statements;

- discuss the scope and results of the audit with the independent registered public accounting firm, and review, with management and the independent registered public accounting firm, our interim and year-end operating results;
- develop procedures for employees to submit concerns anonymously about questionable accounting or audit matters;
- review our policies on risk assessment and risk management;
- review related-party transactions; and
- approve (or, as permitted, pre-approve) all audit and all permissible nonaudit services, other than de minimis nonaudit services, to be performed by the independent registered public accounting firm.

Our audit committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of the Nasdaq Stock Market, except for such provisions requiring that all members be independent. We intend to appoint one more independent director to our audit committee, at which time Mr. Stadheim shall resign from the committee, in order to achieve compliance with the Nasdaq Stock Market Rules and Rule 10A-3 under the Exchange Act relating to audit committee composition within the timeline allowed for under Nasdaq Stock Market Rule 5615(b) and Rule 10A-3(b)(1)(iv)(A) under the Exchange Act.

Compensation Committee

Our compensation committee consists of Dr. Cleavelin and Mr. Gerber, with Dr. Cleavelin serving as Chairperson. The composition of our compensation committee meets the requirements for independence under Nasdaq Stock Market listing standards and SEC rules and regulations. Each member of the compensation committee is also a nonemployee director, as defined pursuant to Rule 16b-3 promulgated under the Exchange Act, and an outside director, as defined pursuant to Section 162(m) of the Internal Revenue Code of 1986, as amended, or the Code. The purpose of our compensation committee is to discharge the responsibilities of our board of directors relating to compensation of our executive officers. Our compensation committee will, among other things:

- review, approve and determine the compensation of our executive officers;
- administer our stock and equity incentive plans;
- make recommendations to our board of directors regarding the establishment and terms of incentive compensation and equity plans; and
- establish and review general policies relating to compensation and benefits of our employees.

Our compensation committee operates under a written charter that satisfies the applicable rules of the SEC and the listing standards of the Nasdaq Stock Market.

Nominating and Corporate Governance Committee

Our nominating and corporate governance committee consists of Mr. Gerber and Dr. Cleavelin, with Mr. Gerber serving as Chairperson. The composition of our nominating and corporate governance committee meets the requirements for independence under Nasdaq Stock Market listing standards and SEC rules and regulations. Our nominating and corporate governance committee will, among other things:

- identify, evaluate and make recommendations to our board of directors regarding nominees for election to our board of directors and its committees;
- evaluate the performance of our board of directors and of individual directors;
- consider and make recommendations to our board of directors regarding the composition of our board of directors and its committees;
- review developments in corporate governance practices;
- evaluate the adequacy of our corporate governance practices and reporting; and
- develop and make recommendations to our board of directors regarding corporate governance guidelines and matters.

The nominating and corporate governance committee operates under a written charter that satisfies the applicable listing requirements and rules of the Nasdaq Stock Market.

Compensation Committee Interlocks and Insider Participation

None of our independent directors is currently or has been at any time one of our officers or employees. None of our executive officers currently serves, or has served during the last year, as a member of the board of directors or compensation committee of any entity that has one or more executive officers serving as a member of our board of directors.

Executive Compensation

Summary Compensation Table

The following table sets forth the compensation awarded to, earned by or paid to, our chief executive officer and our other two highest paid executive officers for the years ended December 31, 2015 and 2014. In reviewing the table, please note that:

- Mr. Trautmann served as our chief executive officer from September 2011 to October 2015;
- Mr. Bibaud, our current chief executive officer, commenced his employment with us in October 2015; and
- Ron Cope served as our chief operating officer from September 2011 to June 2016.

Name and Principal Position	Year	Salary	Option Awards ⁽¹⁾	All Other Compensation	Total
Scott Bibaud, Chief Executive Officer	2015	\$ 62,600	\$ 719,003	—	\$ 781,603
	2014	—	—	—	—
Erwin Trautmann, Former Chief Executive Officer, Executive Vice President of Strategic Business Development	2015	\$ 228,000	\$ 110,679	—	\$ 338,679
	2014	\$ 207,000	—	—	\$ 207,000
Robert Mears, Chief Technology Officer	2015	\$ 220,000	\$ 41,070	—	\$ 261,070
	2014	\$ 220,000	—	\$ 1,780(2)	\$ 221,780
Ron Cope, Former Chief Operating Officer	2015	\$ 156,000	\$ 93,170	—	\$ 249,170
	2014	\$ 135,000	—	—	\$ 135,000

(1) The dollar amounts in the Option Awards column reflect the values of options as of the grant date in accordance with ASC 718, Compensation-Stock Compensation and, therefore, do not necessarily reflect actual benefits received by the individuals. Assumptions used in the calculation of these amounts are included in Note 11 to our audited financial statements.

(2) Reflects payment by us of life insurance premiums for the benefit of Dr. Mears.

Narrative Disclosure to Summary Compensation Table

Bibaud Employment Agreement

We entered into an employment agreement with Mr. Bibaud, our chief executive officer, in October 2015. Pursuant to the employment agreement, we compensate Mr. Bibaud at the annual rate of \$250,000. Upon the completion of this offering, Mr. Bibaud's employment agreement entitles him to a \$250,000 incentive bonus and an increase in base salary to \$300,000. Mr. Bibaud is eligible to receive an annual bonus of up to 50% of his base salary based on performance criteria set by our compensation committee and is also eligible for participation in long-term incentive compensation plans. Mr. Bibaud's employment agreement entitles him to reasonable and customary health insurance and other benefits, at our expense, and a severance payment in the amount of eighteen months of his base salary in the event of an involuntary termination of his employment.

In connection with his employment agreement, we granted Mr. Bibaud options to purchase 303,002 shares of our common stock at an exercise price of \$5.70 per share. 138,515 of Mr. Bibaud's options vest and become exercisable subject to the conversion of all principal and accrued interest under our convertible notes into shares of our common stock on or before May 31, 2017 and, in addition to the performance vesting condition, all of the 303,002 options vest and first become exercisable over a four-year period commencing on the first anniversary of the date of grant. Upon the completion of this offering, Mr. Bibaud is entitled to receive additional stock options, or the gross up options, to purchase 552,341 shares of our common stock which, together with the options discussed above, will represent 6.3% of the outstanding shares of our common stock on a fully-diluted basis after giving effect to this offering and the related stock issuances, at a strike price of the public offering price of this offering. The initial vesting date of the gross up options vest on the later of the one year anniversary of the date of Mr. Bibaud's employment or the completion of this offering. A portion of the gross up options equal to the product of .25 times a fraction, the denominator of which is 12 and the numerator of which is the lesser of 12 and the number of 30-day periods, or portions thereof, or the variable number, between the date of Mr. Bibaud's employment and the initial vesting date of the gross up options will vest on such date, with the remainder vesting in equal monthly installments over 48 months less the variable number. Mr. Bibaud's options were and will be granted pursuant to our 2007 Stock Incentive Plan.

Additional Executive Employment Agreements

In January 2016, we entered into employment agreements with three other executive officers, Erwin Trautmann, Dr. Robert Mears and Ron Cope. Pursuant to those employment agreements, we compensate Mr. Trautmann with an annual salary of \$250,000 and compensate Dr. Mears and compensated Mr. Cope with annual salaries of \$220,000 each. Each officer is or was eligible for an annual

bonus of up to a certain percentage amount of their annual salary (30% for Mr. Trautmann and 15% each for Dr. Mears and Mr. Cope) based on performance criteria set by the compensation committee of our board of directors and to otherwise participate in all other plans that we may establish from time to time. The employment agreements entitle each officer to reasonable and customary health insurance and other benefits, at our expense, and a severance payment in the amount of six months of their then annual salary and related benefits in the event of our termination of their employment without cause or their resignation for good reason.

In connection with our execution of the employment agreement with Dr. Mears, effective as of January 13, 2016 we awarded Dr. Mears a bonus in the amount of \$187,500, payable in the form of our cancellation of a note payable to us by Dr. Mears in the outstanding principal amount of \$187,500.

In connection with the relocation of our corporate offices from Wellesley Hills, Massachusetts to Los Gatos, California, our board of directors elected to eliminate the position of chief operating officer and dismiss Ron Cope effective as of June 30, 2016. Pursuant to the terms of his employment agreement, Mr. Cope will receive six months severance from the effective date of termination.

In February 2016, we entered into an employment agreement with Francis Laurencio. Pursuant to that employment agreement, we compensate Mr. Laurencio with an annual salary of \$225,000. Mr. Laurencio is eligible for an annual bonus of up to 30% of his annual salary based on performance criteria set by the compensation committee of our board of directors and to otherwise participate in all other plans that we may establish from time to time. The employment agreement entitles Mr. Laurencio to reasonable and customary health insurance and other benefits, at our expense, and a severance payment in the amount of six months of his then annual salary and related benefits in the event of our termination of his employment without cause or his resignation for good reason.

In connection with his employment agreement, we granted Mr. Laurencio options to purchase 21,834 shares of our common stock at an exercise price of \$5.70 per share. 5,661 of Mr. Laurencio's options vest and become exercisable subject to the conversion of all principal and accrued interest under our convertible notes into shares of our common stock on or before May 31, 2017 and, in addition to the performance vesting condition, all of the 21,834 options vest and first become exercisable over a four-year period commencing on the first anniversary of the date of grant. Upon the completion of our IPO, Mr. Laurencio is entitled to receive additional stock options, or the gross up options, to purchase 161,454 shares of our common stock which, together with the options discussed above, will represent 1.35% of the outstanding shares of our common stock on a fully-diluted basis after giving effect to the IPO and the related stock issuances, at a strike price of the IPO price. The initial vesting date of the gross up options vest on the later of the one year anniversary of the date of Laurencio's employment or the completion of the IPO. A portion of the gross up options equal to the product of .25 times a fraction, the denominator of which is 12 and the numerator of which is the lesser of 12 and the number of 30-day periods, or portions thereof, or the variable number, between the date of Mr. Laurencio's employment and the initial vesting date of the gross up options will vest on such date, with the remainder vesting in equal monthly installments over 48 months less the variable number. Laurencio's options were and will be granted pursuant to our 2007 Stock Incentive Plan.

The employment agreements with our executive officers were unanimously approved by our full board of directors. No officer or employee of our company was involved in the board's deliberation over the employment agreements of our executive officers, other than those directors who also serve as officers of our company, Scott Bibaud and Erwin Trautmann.

Management Share Bonuses

In September 2015, we have agreed to provide incentive bonuses to certain of our officers and directors contingent upon the completion of this offering on a sale of the Company and each individual's continued engagement with us as an officer or director, as applicable, until the completion of either event; provided, in the case of an IPO, that we receive net proceeds of at least \$15 million and realize a post-offering valuation of our company of at least \$50 million, and that the officer or director remains in service to us through the close of the offering, except in cases where we terminate the officer without cause or the officer resigns for good reason. In June 2016, we dismissed Ron Cope, our former chief operating officer, without cause, and Mr. Cope remains eligible to receive the management share bonus. In July 2016, we reached an agreement with the recipients of the share bonuses to cancel their aforementioned share bonuses in return for our agreement to grant each recipient, upon the close of this offering, shares of our restricted common stock pursuant to a restricted stock agreement. The restricted stock agreements provided that we issue to each of the recipients shares of our common stock, in the share amounts set forth below, and that all shares remain subject to forfeiture, until the prescribed vesting date, in the event the recipient fails to remain in service to us for any reason other than our termination without cause or the recipient's termination for good reason. The restricted stock agreements provide that 15% of the share award will vest upon the six month anniversary of the date of grant and that 15% of the share award will vest on each monthly anniversary of the initial vesting date until the award is fully vested on the one year anniversary of the date of grant. The restricted common shares will be granted under our 2007 Stock Incentive Plan and will be subject to required tax withholding. The recipients and their respective share amounts are as follows:

Name	Share Amount
John Gerber	\$ 200,000
Erwin Trautmann	\$ 133,603

Ron Cope	\$	79,158
Dr. Robert Mears	\$	20,798
C. Rinn Cleavelin, Ph.D.	\$	6,805

Compensation of Directors

We do not compensate any of our executive directors for their service as a director and we have not adopted any policies or plans with regard to the compensation of our independent directors. However, we reimburse our independent directors for their reasonable expenses incurred in connection with attending meetings of our board of directors. We have engaged a member of our board, C. Rinn Cleavelin, Ph.D., to provide consulting services to us from time to time. We have paid Dr. Cleavelin consulting fees of \$10,000 during each of fiscal years 2014 and 2015.

Related Party Transactions

On January 14, 2005, we entered into a loan transaction with Dr. Robert Mears pursuant to which we loaned Dr. Mears \$187,500. Pursuant to the loan agreements, the loan to Dr. Mears bore interest at the rate of 3.67% per year and required the payment of interest only until the loan maturity date, at which time all principal and accrued interest was payable. The loan was secured by shares of our common stock owned by Dr. Mears. In December 2015, we agreed to extend the term of Dr. Mears' loan to January 14, 2019, subject to acceleration in the event of the sale of our Company or our liquidation, bankruptcy or like event. Effective as of January 13, 2016, we awarded Dr. Mears with a bonus in the amount of \$187,500, payable in the form of our cancellation of the outstanding principal amount under the note in the amount of \$187,500. As of the date of the award, there was accrued and unpaid interest under the note in the amount of \$7,050, which Dr. Mears remains obligated to pay. In return for the cancellation of the principal amount under the note, Dr. Mears was required to reimburse us for withholding taxes payable by us, in the amount of \$13,998, in connection with the \$187,500 award.

Between 2013 and 2016, we conducted private placements of our convertible promissory notes. Certain of our officers and directors participated in the placements and purchased convertible notes in the

aggregate principal amount of \$3,347,607, representing 16.2% of the convertibles notes sold by us, including notes in the principal amount of \$625,331 purchased by John Gerber, \$985,115 purchased by Rolf Stadheim, \$25,000 purchased by Scott Bibaud, \$1,278,536 purchased by K2 Energy Limited, an entity controlled by a former director, Samuel Gazal, and \$433,625 purchased by a former director, Rosalie Stahl.

A member of our board of directors, Rolf Stadheim, is a partner of a law firm that serves as legal counsel to our company in connection with our civil action against Finisar Corporation. See, “Our Business- Litigation.” Pursuant to our agreement with Mr. Stadheim’s firm, the law firm is responsible for paying all of our out-of-pocket costs and expenses associated with the Finisar litigation incurred after the date of this prospectus, including any claims by Finisar for the reimbursement of its fees and costs involved in the action. During fiscal 2014 and 2015, the law firm billed us approximately \$19,700 and \$236,600, respectively. During fiscal 2014 and 2015, we paid \$-0- and \$277,580, respectively, to the law firm. We owed the law firm \$1,310 as of March 31, 2016.

In April 2009, we acquired the rights to several US and foreign patents relating to optical communication technologies from our founder, Dr Robert Mears, and three other co-inventors, none of whom are affiliated with us. The inventions covered by the assigned patents had been developed by Dr. Mears and his co-inventors prior to Dr. Mears’s founding of our company’s business. Pursuant to the patent assignment agreement, we are required to pay to Dr. Mears and the three other co-inventors 10% each of all revenue derived by us from the assigned patents. The assigned patents do not relate to our core MST® technology, however they are the subject of certain litigation initiated by us against Finisar Corporation discussed in “Our Business — Litigation”.

Except as set forth above, we have not entered into any transactions with any of our directors, officers, beneficial owners of five percent or more of our common shares, any immediate family members of the foregoing or entities of which any of the foregoing are also officers or directors or in which they have a material financial interest, other than the compensatory arrangements described elsewhere in this prospectus. We have adopted a policy that any transactions with directors, officers, beneficial owners of five percent or more of our common stock, any immediate family members of the foregoing or entities of which any of the foregoing are also officers or directors or in which they have a financial interest, will only be on terms consistent with industry standards and approved by a majority of the disinterested directors of our board.

Limitation of Liability of Directors and Indemnification of Directors and Officers

The Delaware General Corporation Law provides that corporations may include a provision in their certificate of incorporation relieving directors of monetary liability for breach of their fiduciary duty as directors, provided that such provision shall not eliminate or limit the liability of a director (i) for any breach of the director’s duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) for unlawful payment of a dividend or unlawful stock purchase or redemption, or (iv) for any transaction from which the director derived an improper personal benefit. Our certificate of incorporation provides that directors are not liable to us or our stockholders for monetary damages for breach of their fiduciary duty as directors to the fullest extent permitted by Delaware law. In addition to the foregoing, our certificate of incorporation provides that we may indemnify directors and officers to the fullest extent permitted by law.

The above provisions in our certificate of incorporation may have the effect of reducing the likelihood of derivative litigation against directors and may discourage or deter stockholders or management from bringing a lawsuit against directors for breach of their fiduciary duty, even though such an action, if successful, might otherwise have benefited us and our stockholders. However, we believe that the foregoing provisions are necessary to attract and retain qualified persons as directors.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to our directors, officers and controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC, such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

PRINCIPAL STOCKHOLDERS

The following table sets forth certain information regarding the beneficial ownership of our common stock as of the date of this prospectus by:

- each person who is known by us to be the beneficial owner of more than five percent (5%) of our issued and outstanding shares of common stock;
- each of our directors and executive officers; and
- all directors and executive officers as a group.

The beneficial ownership of each person was calculated based on 8,123,226 shares of common stock issued and outstanding prior to the offering, including 1,617,313 shares issued and outstanding as of the date of this prospectus, our issuance of 440,364 shares of common stock as bonuses to certain members of management upon completion of this offering and 6,065,549 shares issuable upon the conversion of our outstanding convertible notes (including \$2,037,337 of accrued interest as of March 31, 2016). The SEC has defined “beneficial ownership” to mean more than ownership in the usual sense. For example, a person has beneficial ownership of a share not only if he owns it, but also if he has the power (solely or shared) to vote, sell or otherwise dispose of the share. Beneficial ownership also includes the number of shares that a person has the right to acquire within 60 days of the date of this prospectus, pursuant to the exercise of options or warrants or the conversion of notes, debentures or other indebtedness. Two or more persons might count as beneficial owners of the same share. Unless otherwise indicated, the address for each reporting person is 750 University, Suite 280, Los Gatos, California 95032.

Name of Director or Executive Officer	Number of Shares	Percentage Owned Prior to Offering (1)	Percentage Owned After Offering (2)
		%	%
John Gerber	404,052 ⁽³⁾	5.0	3.6
Scott Bibaud	6,666 ⁽⁴⁾	*	*
Erwin Trautmann	195,369 ⁽⁵⁾	2.4%	1.7%
Dr. Robert Mears	66,933 ⁽⁶⁾	*	*
Francis Laurencio	— ⁽⁷⁾	—	—
C. Rinn Cleavelin, Ph.D.	13,355 ⁽⁸⁾	*	*
Rolf Stadheim	292,341 ⁽⁹⁾	3.6%	2.6%
Directors and executive officers as a group	978,716	12.0%	8.6%

* Less than 1%.

Name and Address of 5% + Holders	Number of Shares	Percentage Owned Prior to Offering (1)	Percentage Owned After Offering (2)
Vulpes Innovative Technologies Investment Company Pte Ltd. One George Street Floor 07, Unit 03 Singapore, 049145	673,777 ⁽¹⁰⁾	8.3%	6.0%
K2 Energy Limited Level 2, 27 Macquarie Place Sydney NSW 2000	508,838 ⁽¹¹⁾	6.3%	4.5%

1 Assumes the issuance of 6,065,549 shares of our common stock upon the conversion of our convertible notes and 440,364 shares of common stock as bonuses to certain members of management.

2 Assumes the sale of 3,200,000 shares of our common stock in the present offering.

3 Includes 366,755 shares of our common stock to be issued upon the completion of this offering, including 166,755 shares issuable upon conversion of convertible notes in the principal amount of \$625,332 and 200,000 shares issuable as a bonus.

- 4 Includes 6,666 shares of our common stock issuable upon conversion of a convertible note in the principal amount of \$25,000. Does not include 303,002 shares of common stock underlying an outstanding option subject to vesting or an additional option to be granted to Mr. Bibaud upon the completion of this offering to purchase 552,341 shares of common stock which, along with the aforementioned option, will entitle him to purchase 6.3% of our shares of common stock outstanding upon the completion of this offering, calculated on a fully-diluted basis.
- 5 Includes 133,603 shares of our common stock to be issued upon the completion of this offering as a management bonus.
- 6 Includes 20,798 shares of our common stock to be issued upon the completion of this offering as a management bonus.
- 7 Does not include 21,834 shares of common stock underlying an outstanding option subject to vesting or an additional option to be granted to Mr. Laurencio upon the completion of this offering to purchase 161,454 shares of common stock which, along with the aforementioned option, will entitle him to purchase 1.35% of our shares of common stock outstanding upon the completion of this offering, calculated on a fully-diluted basis.
- 8 Includes 6,805 shares of our common stock to be issued upon the completion of this offering as a management bonus.
- 9 Includes 262,697 shares of our common stock to be issued upon the completion of this offering pursuant to the conversion of a convertible note in the principal amount of \$985,115.
- 10 Includes 431,238 shares of our common stock to be issued upon the completion of this offering pursuant to the conversion of convertible notes in the principal amount of \$1,617,143.
- 11 Includes 340,943 shares of our common stock to be issued upon the completion of this offering pursuant to the conversion of a convertible note in the principal amount of \$1,278,536.

ESTIMATED USE OF PROCEEDS

After the payment of underwriting discounts of 8.5% on the sale of the shares offered hereby and estimated offering expenses of \$700,000, the net proceeds of this offering will be approximately \$21,260,000. We intend to apply the estimated net proceeds of the offering as follows:

	Amount	Percent
Development engineering	\$ 13,776,480	64.8%
Business development, sales and marketing	\$ 3,316,560	15.6%
Research	\$ 1,509,460	7.1%
Working Capital	\$ 2,657,500	12.5%
Total Net Proceeds	<u>\$ 21,260,000</u>	<u>100%</u>

We intend to apply approximately \$13.8 million of the net proceeds of this offering towards development engineering, which will consist primarily of our further development and qualification of MST ® and the evaluation, testing and engineering involved in the formal product qualification process undertaken by our potential customers. As our marketing and business development efforts lead to a significant indication of interest on the part of a potential customer, we will engage in development engineering for purposes of characterizing our solution to the goals and needs of the customer, and work with customer to tune our MST ® to their unique production process and equipment.

We intend to apply approximately \$3.3 million of the net proceeds of this offering towards business development, marketing and sales. In the initial stages of our marketing and business development, we expect to spend a significant amount of time and capital in defining the benefits of MST ® for each target customer, including simulation, modeling, data collection, marketing costs, market research, partnership development, and business development efforts.

We intend to apply approximately \$1.5 million of the net proceeds of this offering towards research spending, including long-term investigation into additional advanced materials and techniques for our platform, efforts with our academic and scientific partners, and maintenance of our patent portfolio.

The net proceeds allocated towards working capital will be applied towards our costs of facilities, information technology, public company related costs, including accounting and legal, along with normal recurring general and administrative expenses.

Our estimated use of proceeds is based on our current assumptions and estimates concerning the costs and timelines of securing one or more IDMs or fabless semiconductor manufacturers to qualify and license MST ® technology and start full-scale industrial production of a device that incorporates our MST ® technology. If our assumptions or estimates prove to be inaccurate, we may require additional funds in order to carry out the activities described above. In addition, the expected allocation of net proceeds set forth above represents our best estimates based upon our present plans and our assumptions regarding industry conditions and our anticipated future revenues and expenditures. We may find it necessary to reallocate some of the proceeds within the above-described categories or to use portions thereof for other purposes in order to carry out our business plan if those assumptions change.

If the underwriter exercises its right to purchase additional 480,000 shares of common stock to cover over-allotments, we may receive up to an additional \$3,294,000, after deducting \$306,000 for underwriting discounts. We intend to apply any net proceeds from the exercise of the over-allotment option to working capital. Pending the uses described above, we intend to invest the net proceeds from this offering in short-term, investment-grade interest-bearing securities such as money market accounts, certificates of deposit, commercial paper, and guaranteed obligations of the U.S. government.

CAPITALIZATION

The following table sets forth our capitalization as of March 31, 2016 on:

- an actual basis;
- a pro forma basis, giving effect to our issuance of additional convertible notes in the aggregate principal amount of \$5.96 million on April 1, 2016 and our receipt of net cash proceeds of \$5.47 million and the automatic conversion of all \$20.71 million principal amount, net, of our convertible notes, and \$2,037,337 of accrued interest thereon as of March 31, 2016, into 6,065,549 shares of common stock, effective immediately upon the consummation of this offering as if such conversion had occurred on March 31, 2016; and
- a pro forma as adjusted basis to reflect, in addition, our sale of 3,200,000 shares of common stock in this offering at the initial public offering price of \$7.50 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us.

You should read the information in this table together with our consolidated financial statements and related notes and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” appearing elsewhere in this prospectus.

	As of March 31, 2016		
	Actual ⁽¹⁾	Pro Forma ⁽²⁾	Pro Forma As Adjusted
Convertible notes, net	\$ 16,657,046	\$ —	\$ —
Stockholders’ (deficit) equity:			
Common stock, \$0.001 par value, 47,500,000 shares authorized, 1,617,313 shares issued and outstanding, actual; 7,682,862 shares issued and outstanding, pro forma; 11,323,226 shares issued and outstanding, pro forma as adjusted	1,617	7,683	11,323
Preferred stock, \$0.001 par value, 2,500,000 shares authorized, no shares issued and outstanding			
Additional paid-in capital	70,508,581	93,248,325	114,504,685
Accumulated earnings (deficit)	<u>(85,874,809)</u>	<u>(86,496,918)</u>	<u>(86,496,918)</u>
Total stockholders’ (deficit) equity	<u>(15,364,611)</u>	<u>6,759,090</u>	<u>28,019,090</u>
Total capitalization	<u>\$ 1,292,435</u>	<u>6,759,090</u>	<u>28,019,090</u>

(1) Our convertible notes consist of \$14,750,000 of principal and \$2,037,377 of accrued interest, net of debt discount representing the unamortized commissions and warrant value.

(2) The pro forma column reflects (i) our issuance of additional convertible notes in the aggregate principal amount of \$5.96 million on April 1, 2016 and our receipt of net cash proceeds of \$5.47 million and the automatic conversion of all \$20.71 million principal amount and \$2,037,337 of accrued interest thereon as of March 31, 2016, into an aggregate of 6,065,549 shares of common stock and reclassified to common stock and additional paid in capital and (ii) our issuance of 440,364 shares of common stock issuable as bonuses to certain members of management upon completion of this offering.

The number of shares of our common stock to be outstanding after this offering is based on 1,617,313 shares of our common stock outstanding as of the date of this prospectus, plus 440,364 shares of common stock issuable as bonuses to certain members of management upon completion of this offering and 6,065,549 shares common stock issuable upon conversion of our convertible notes as of March 31, 2016, and excludes:

- 538,014 shares of our common stock issuable upon exercise of outstanding options granted pursuant to our 2007 Stock Incentive Plan;
- 713,795 shares of our common stock underlying options to be granted to our chief executive officer and chief financial officer upon the completion of this offering;
- 398,965 shares of our common stock issuable upon exercise of outstanding warrants;
- up to 480,000 shares issuable pursuant to the underwriter’s over-allotment option;
- shares of our common stock reserved for future grants pursuant to our 2007 Stock Incentive Plan; and
- the shares of our common stock issuable upon exercise of the underwriter’s warrant.

DILUTION

If you invest in our common stock, your interest will be diluted to the extent of the difference between the amount per share paid by purchasers of shares of common stock in this offering and the pro forma as adjusted net tangible book value per share of common stock immediately after the completion of this offering.

As of March 31, 2016, our pro forma net tangible book value was approximately \$6,759,090, or \$0.88 per share of common stock. Our pro forma net tangible book value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities and divided by the total number of shares of our common stock outstanding as of March 31, 2016, assuming (i) our issuance of additional convertible notes in the aggregate principal amount of \$5.96 million on April 1, 2016 and our receipt of net cash proceeds of \$5.47 million and the conversion of approximately \$22.74 million of indebtedness relating to our convertible notes and related interest into 6,065,549 shares of common stock the resulting elimination of the derivative liability related to the debt effective upon the completion of this offering and (ii) our issuance of 440,364 shares of common stock as bonuses to certain members of management upon completion of this offering.

After giving effect to our sale in this offering of 3,200,000 shares of our common stock, at the initial public offering price of \$7.50 per share, after deducting underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of March 31, 2016 would have been approximately \$28,019,090, or \$2.47 per share of our common stock. This represents an immediate increase in pro forma as adjusted net tangible book value of \$1.59 per share to our existing stockholders and an immediate dilution of \$4.93 per share to investors purchasing shares in this offering.

The following table illustrates this dilution:

Initial public offering price per share	\$ 7.50
Pro forma net tangible book value per share as of March 31, 2016, before giving effect to this offering	\$ 0.88
Increase in pro forma net tangible book value per share attributable to new investors purchasing shares in this offering	<u>1.59</u>
Pro forma as adjusted net tangible book value per share, after giving effect to this offering	<u>\$ 2.47</u>
Dilution per share to new investors purchasing shares in this offering	<u><u>\$ 5.03</u></u>

If the underwriter exercises its over-allotment option in full, the pro forma as adjusted net tangible book value per share of our common stock would be \$2.65 per share, and the dilution per share to new investors purchasing shares in this offering would be \$4.85 per share.

The following table summarizes, on a pro forma as adjusted basis as of March 31, 2016 after giving effect to (i) our issuance of additional convertible notes in the aggregate principal amount of \$5.96 million on April 1, 2016 and our receipt of net cash proceeds of \$5.47 million and the automatic conversion of approximately \$22.74 million principal amount of indebtedness related to our convertible notes into shares of common stock and (ii) completion of this offering at the initial public offering price of \$7.50 per share, the difference between existing stockholders and new investors with respect to the number of shares of common stock purchased from us, the total consideration paid to us and the average price per share paid, before deducting underwriting discounts and commissions and estimated offering expenses:

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	8,123,226	71.7%	\$ 81,731,612	77.3%	\$ 10.06
New public investors	3,200,000	28.3%	24,000,000	22.7 %	\$ 7.50
Total	<u>11,323,226</u>	<u>100.0%</u>	<u>\$ 105,731,612</u>	<u>100.0%</u>	

To the extent that our outstanding warrants are exercised, investors will experience further dilution.

Except as otherwise indicated, the above discussion and tables assume no exercise of the underwriter's over-allotment option. If the underwriter exercises its over-allotment option in full, our existing stockholders would own 68.8% and our new investors would own 31.2% of the total number of shares of our common stock outstanding upon the completion of this offering.

The number of shares of our common stock held by existing stockholders is based on 1,617,313 shares of common stock outstanding as of the date of this prospectus, plus 440,364 shares of common stock to be issued as bonuses to certain members of management upon completion of this offering and 6,065,549 shares common stock issuable upon conversion of our convertible notes (including accrued interest as of March 31, 2016) and excludes:

- 538,014 shares of our common stock issuable upon exercise of outstanding options granted pursuant to our 2007 Stock Incentive Plan;
- 713,795 shares of our common stock underlying options to be granted to our chief executive officer and chief financial officer upon the completion of this offering;
- 398,965 shares of our common stock issuable upon exercise of outstanding warrants;
- up to 480,000 shares issuable pursuant to the underwriter's over-allotment option;
- shares of our common stock reserved for future grants pursuant to our 2007 Stock Incentive Plan; and
- the shares of our common stock issuable upon exercise of the underwriter's warrant.

DESCRIPTION OF SECURITIES

Common Stock

We are authorized to issue 47,500,000 shares of \$0.001 par value common stock. As of the date of this prospectus, there are 1,617,313 shares of our common stock issued and outstanding. Except as described below, there are no other agreements or outstanding options, warrants or similar rights that entitle their holder to acquire from us any of our equity securities.

Holders of shares of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders generally. Stockholders are entitled to receive such dividends as may be declared from time to time by the board of directors out of funds legally available therefore, and in the event of liquidation, dissolution or winding up of the company to share ratably in all assets remaining after payment of liabilities. The holders of shares of common stock have no preemptive, conversion, subscription rights or cumulative voting rights.

Record Holders

As of the date of this prospectus, our outstanding shares of common stock were held of record by approximately 278 stockholders.

Preferred Stock

We are authorized to issue 2,500,000 shares of preferred stock. Our board of directors is authorized to issue from time to time, without stockholder authorization, in one or more designated series or classes, any or all of the authorized but unissued shares of preferred stock with such dividend, redemption, conversion and exchange provisions as may be provided in the particular series. Any series of preferred stock may possess voting, dividend, liquidation and redemption rights superior to that of the common stock. The rights of the holders of common stock will be subject to and may be adversely affected by the rights of the holders of any preferred stock that may be issued in the future. Issuance of a new series of preferred stock, while providing desirable flexibility in connection with possible acquisition and other corporate purposes, could make it more difficult for a third party to acquire, or discourage a third party from acquiring, a majority of the outstanding voting stock of our company. As of the date of this prospectus, no class or series of preferred stock has been designated and no shares of preferred stock are issued.

Dividends

We do not anticipate the payment of cash dividends on our common stock in the foreseeable future.

Senior Secured Convertible Promissory Notes

On March 17, 2015, we completed the private placement of \$14.75 million of senior secured convertible promissory notes, and on April 1, 2016 we completed the private placement of an additional \$5.96 million in senior secured convertible notes on the same terms as the promissory notes placed in March 2015. We refer to these promissory notes in this prospectus as our “convertible notes”. The interest accrues on the unpaid principal amount under the convertible notes at the rate of 10% per year, except during any event of default under the convertible notes in which case the interest rate shall be 12% per year. All principal and interest under the convertible notes are due and payable on May 31, 2017. All principal and interest under the convertible notes are convertible into shares of common stock as follows:

- Upon the consummation of an initial public offering by us, all principal and interest shall automatically convert at 50% of the IPO price, provided, however, in no event shall the conversion price be greater than \$7.362 nor less than \$3.681 per share;
- In the event of a subsequent private placement approved by the holders of 50% or more of the aggregate principal amount of all convertible notes, all principal and interest shall automatically convert at 50% of the offer price in the subsequent private placement, provided, however, in no event shall the conversion price be greater than \$7.362 nor less than \$3.681 per share; and
- Until the 10th day prior to the consummation of an IPO by us, a holder of the convertible note, at its option, may convert at a conversion price of \$7.362 per share.

We granted to the holders of the convertible notes one-time demand registration rights exercisable by the holders of 50% or more of the aggregate principal amount of all notes and certain piggyback registration rights. However, the note holders have agreed that in connection with the present offering not to sell, transfer or pledge, or offering to do any of the same, directly or

indirectly, any of our securities for a period 180 days following the close of this offering, subject to extensions under certain circumstances of up to a total of 216 days following this offering. On the 181st day following the close of this offering (subject to the potential extension described above) and on every subsequent 31st day thereafter, 15% of such holder's securities shall be released from the lock-up until the 366th day following the close of this offering, as of which none of such holder's securities shall be subject to the lock-up.

We have issued and outstanding convertible promissory notes in the aggregate principal amount of \$20.71 million, with accrued and unpaid interest as of March 31, 2016 in the amount of approximately \$2,037,337. Pursuant to the terms of our convertible notes, all principal and accrued interest under the notes will automatically convert into shares of our common stock, at the conversion price of \$3.75 per share.

Management Share Bonuses

In September 2015, we agreed to provide incentive bonuses to certain of our officers and directors contingent upon the completion of this offering or a sale of the Company and each individual's continued engagement with us as an officer or director, as applicable, until the completion of either event; provided that, in the case of an IPO, we receive net proceeds of at least \$15 million and realize a post-offering valuation of our Company of at least \$50 million, and that the officer or director remains in service to us through the close of the offering, except in cases where we terminate the officer without cause or the officer resigns for good reason. In June 2016, we dismissed Ron Cope, our former chief operating officer, without cause, and Mr. Cope remains eligible to receive the management share bonus. In July 2016, we reached an agreement with the recipients of the share bonuses to cancel their aforementioned share bonuses in return for our agreement to grant each recipient, upon the close of this offering, shares of our restricted common stock pursuant to a restricted stock agreement. The restricted stock agreements provided that we issue to each of the recipients shares of our common stock, in the share amounts set forth below, and that all shares remain subject to forfeiture, until the prescribed vesting date, in the event the recipient fails to remain in service to us for any reason other than our termination without cause or the recipient's termination for good reason. The restricted stock agreements provide that 15% of the share award will vest upon the six month anniversary of the date of grant and that 15% of the share award will vest on each monthly anniversary of the initial vesting date until the award is fully vested on the one year anniversary of the date of grant. The restricted common shares will be granted under our 2007 Stock Incentive plan and each incentive bonus will be subject to required tax withholding. The recipients and their share amounts are as follows:

Name	Share Amount
John Gerber	200,000
Erwin Trautmann	133,603
Ron Cope	79,158
Dr. Robert Mears	20,798
Rinn Cleavelin, Ph.D.	6,805

2007 Stock Incentive Plan

We have adopted our 2007 Stock Incentive Plan providing for the grant of non-qualified stock options and incentive stock options to purchase shares of our common stock and for the grant of restricted and unrestricted share grants. We currently have reserved 613,333 shares of our common stock under the plan; however, upon completion of this offering the number of shares reserved for issuance under the plan shall increase to 20% of our outstanding shares of common stock calculated on a fully diluted basis. The purpose of the plan is to provide eligible participants with an opportunity to acquire an ownership interest in our company. All officers, directors, employees and consultants to our company are eligible to participate under the plan. The plan provides that options may not be granted at an exercise price less than the fair market value of our common shares on the date of grant. As of the date of this prospectus, we have outstanding options to purchase an aggregate of 538,014 shares of our common stock at an average exercise price of \$6.98 per share, exclusive of certain gross-up options to purchase 612,280 shares of common stock to be granted to our chief executive officer and chief financial officer upon completion of this offering.

Warrants

Upon the completion of this offering, we will have outstanding the following warrants to purchase shares of our common stock:

- warrants to purchase 3,596 shares of our common stock at an average exercise price of \$33.75 per share, which warrants were issued in connection with past equity financings;
- warrants to purchase 198,767 shares of our common stock, of which warrants to purchase 188,829 are exercisable at \$0.87 per share and warrants to purchase 9,938 shares are exercisable at \$0.15 per share. The warrants were issued on February 9, 2015 to Liquid Patent Advisors, LLC (formerly known as Liquid Patent Consulting, LLC) as consideration for consulting services, (some of which warrants were subsequently transferred by Liquid Patent Advisors, LLC to other persons;

- warrants to purchase 196,602 shares of our common stock issued to National Securities Corporation on March 17, 2015 as placement agent compensation in connection with our March 2015 placement of convertible notes, which equals 10% of our common stock issuable upon conversion of convertible notes in the original principal amount of \$7,372,557, sold in the placement by National Securities, at an exercise price equal to the note conversion price of \$3.75 per share (some of which warrants were subsequently transferred by National Securities Corporation to other persons); and
- the underwriter's warrant to purchase a number of shares of our common stock equal to 10% of the number of shares of common stock sold in this offering, including the over-allotment, at an exercise price equal to 125% of the price of the common stock sold in this offering.

The warrants contain provisions for the adjustment of the exercise price and the number of shares issuable upon the exercise of the warrants in the event of certain stock dividends, stock splits, reorganizations, reclassifications and consolidations. The holders of the shares issuable upon exercise of the warrants issued to Liquid Patent Advisors, LLC and National Securities Corporation are entitled to registration rights with respect to such shares as described in greater detail under the heading "Registration Rights" below.

Registration Rights

Following the completion of this offering, certain holders of an aggregate of 6,577,659 shares of our common stock, or their permitted transferees, are entitled to rights with respect to the registration under the Securities Act of their shares of common stock, including demand registration rights and piggyback registration rights. These rights are provided under the terms of two registration rights agreements between us and the holders of our capital stock. In any registration made pursuant to these agreements, all fees, costs and expenses of the registrations will be borne by us, and all selling expenses, including estimated underwriting discounts and selling commissions, will be borne by the holders of the shares being registered.

In connection with our March 2015 and April 2016 convertible note financings, in which we issued \$20.71 million principal amount of our convertible notes, which notes will automatically convert into an aggregate of 6,065,549 shares of our common stock effective upon the completion of this offering. We entered into a registration rights agreement with the convertible note purchasers pursuant to which we will be required, upon the written request at any time more than 180 days after the completion of this offering by the holders of at least 50% of the shares that are entitled to registration rights under the agreement, to register, as soon as practicable, all or a portion of these shares for public resale. We are required to effect only one registration pursuant to this provision of the registration rights agreement. These demand registration rights terminate as to each investor when their shares subject to the registration rights agreement may be sold by the investor pursuant to Rule 144 under the Securities Act without regard to both the volume limitations for sales as provided in Rule 144.

In connection with our issuance to Liquid Patent Advisors, LLC of warrants to purchase 198,767 shares of our common stock and our issuance to National Securities Corporation of warrants to purchase 196,602 shares of our common stock in connection with the March 2015 private placement of convertible notes, we entered into a registration rights agreement with Liquid Patent Advisors, LLC and National Securities Corporation pursuant to which we will be required, upon the written request at any time more than 180 days after the completion of this offering by the holders of at least 50% of the shares that are entitled to registration rights under that agreement and the registration rights agreement entered into with the convertible note investors, as a group, to register, as soon as practicable, all or a portion of these shares for public resale. We are required to effect only one registration pursuant to this provision of the registration rights agreement. These demand registration rights terminate as to each stockholder when their shares subject to the registration rights agreement may be sold by the investor pursuant to Rule 144 under the Securities Act without regard to both the volume limitations for sales as provided in Rule 144.

In addition, the two above-mentioned registration rights agreements each contain piggyback registration rights with respect our capital stock held by these investors. These piggyback registration rights terminate with respect to each stockholder when their shares subject to the registration rights agreement may be sold by the stockholder pursuant to Rule 144 under the Securities Act without regard to both the volume limitations for sales as provided in Rule 144.

If we register any of our securities for our own account, after the completion of this offering, the holders of these shares are entitled to include their shares in the registration. Both we and the underwriters of any underwritten offering have the right to limit the number of shares registered by these holders for marketing reasons, subject to limitations set forth in the respective agreements with these investors.

Anti-Takeover Effects of Certain Provisions of Delaware Law and Our Charter Documents

The following is a summary of certain provisions of Delaware law, our Certificate of Incorporation and our bylaws. This summary does not purport to be complete and is qualified in its entirety by reference to the corporate law of Delaware and our Certificate of Incorporation and bylaws.

Effect of Delaware Anti-Takeover Statute. We are subject to Section 203 of the Delaware General Corporation Law, an anti-takeover law. In general, Section 203 prohibits a Delaware corporation from engaging in any business combination (as defined below) with any interested stockholder (as defined below) for a period of three years following the date that the stockholder became an interested stockholder, unless:

- prior to that date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares of voting stock outstanding (but not the voting stock owned by the interested stockholder) those shares owned by persons who are directors and officers and by excluding employee stock plans in which employee participants do not have the right to determine whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to that date, the business combination is approved by the board of directors of the corporation and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66 2/3% of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 defines “business combination” to include the following:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder;
- subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder;
- subject to limited exceptions, any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an interested stockholder as any entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation, or who beneficially owns 15% or more of the outstanding voting stock of the corporation at any time within a three-year period immediately prior to the date of determining whether such person is an interested stockholder, and any entity or person affiliated with or controlling or controlled by any of these entities or persons.

Our Charter Documents. Our charter documents include provisions that may have the effect of discouraging, delaying or preventing a change in control or an unsolicited acquisition proposal that a stockholder might consider favorable, including a proposal that might result in the payment of a premium over the market price for the shares held by our stockholders. Certain of these provisions are summarized in the following paragraphs.

Effects of authorized but unissued common stock. One of the effects of the existence of authorized but unissued common stock may be to enable our board of directors to make more difficult or to discourage an attempt to obtain control of our Company by means of a merger, tender offer, proxy contest or otherwise, and thereby to protect the continuity of management. If, in the due exercise of its fiduciary obligations, the board of directors were to determine that a takeover proposal was not in our best interest, such shares could be issued by the board of directors without stockholder approval in one or more transactions that might prevent or render more difficult or costly the completion of the takeover transaction by diluting the voting or other rights

of the proposed acquirer or insurgent stockholder group, by putting a substantial voting block in institutional or other hands that might undertake to support the position of the incumbent board of directors, by effecting an acquisition that might complicate or preclude the takeover, or otherwise.

Effects of authorized but unissued preferred stock Our board of directors is authorized, without stockholder approval, to issue preferred stock in series and to fix and state the voting rights and powers, designation, preferences and relative, participating, optional or other special rights of the shares of each such series and the qualifications, limitations and restrictions thereof. Preferred stock may rank prior to our common stock with respect to dividends rights, liquidation preferences, or both, and may have full or limited voting rights. Accordingly, issuance of shares of preferred stock could adversely affect the voting power of holders of our common stock and could have the effect of deterring or delaying an attempt to obtain control of us.

Cumulative Voting. Our Certificate of Incorporation does not provide for cumulative voting in the election of directors, which would allow holders of less than a majority of the stock to elect some directors.

Vacancies. Our Certificate of Incorporation provides that all vacancies may be filled by the affirmative vote of a majority of directors then in office, even if less than a quorum.

Special Meeting of Stockholders and Stockholder Action by Written Consent. A special meeting of stockholders may only be called by our president, board of directors or such officers or other persons as our board may designate at any time and for any purpose or purposes as shall be stated in the notice of the meeting. Our charter documents do not allow stockholders to take action by written consent. Therefore, stockholders, without the assistance of management, will be unable to propose a vote on any transaction that would delay, defer or prevent a change of control, even if the transaction were in the best interests of our stockholders.

Forum Selection. Our bylaws provide that, unless we consent in writing to the selection of an alternative forum, the Court of Chancery of the State of Delaware shall be the sole and exclusive forum for (i) any derivative action or proceeding brought on our behalf, (ii) any action asserting a claim of breach of fiduciary duty owed by any of our directors, officers or other employees to us or our stockholders, (iii) any action asserting a claim arising pursuant to any provision of the Delaware General Corporation Law or our certificate of incorporation or bylaws, or (iv) any action asserting a claim governed by the internal affairs doctrine.

Transfer Agent and Registrar

Upon the closing of this offering, the transfer agent and registrar for our common stock will be VStock Transfer, LLC, located at 18 Lafayette Place, Woodmere, New York 11598.

SHARES ELIGIBLE FOR FUTURE SALE

Prior to this offering, there has been no public market for shares of our common stock. Future sales of substantial amounts of shares of common stock, including shares issued upon the exercise of outstanding warrants and options, in the public market after this offering, or the possibility of these sales occurring, could adversely affect the prevailing market price for our common stock or impair our ability to raise equity capital.

Upon the completion of this offering, a total of 11,323,226 shares of common stock will be outstanding, assuming (i) the automatic conversion of all outstanding convertible notes into 6,065,549 shares of common stock in connection with the completion of this offering and (ii) our issuance of 440,364 shares of common stock as bonuses to certain members of management upon completion of this offering. All 3,200,000 shares of common stock sold in this offering by us, plus any shares sold upon exercise of the underwriter's over-allotment option, will be freely tradable in the public market without restriction or further registration under the Securities Act, unless these shares are held by "affiliates," as that term is defined in Rule 144 under the Securities Act.

The remaining 8,123,226 shares of common stock will be "restricted securities," as that term is defined in Rule 144 under the Securities Act. These restricted securities are eligible for public sale only if they are registered under the Securities Act or if they qualify for an exemption from registration under Rules 144 or 701 under the Securities Act, which are summarized below.

Subject to the lock-up agreements described below and the provisions of Rules 144 and 701 under the Securities Act, these restricted securities will begin to be available for sale in the public market beginning more than 180 days after the date of this prospectus.

Rule 144

In general, under Rule 144 as currently in effect, once we have been subject to public company reporting requirements for at least 90 days, a person who is not deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates, is entitled to sell such shares without complying with the manner of sale, volume limitation, or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then such person is entitled to sell such shares without complying with any of the requirements of Rule 144.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell upon expiration of the lock-up agreements described below, within any three-month period beginning 90 days after the date of this prospectus, a number of shares that does not exceed the greater of:

- 1% of the number of shares of common stock then outstanding; or
- the average weekly trading volume of the common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to such sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 701

Rule 701 generally allows a stockholder who purchased shares of our common stock pursuant to a written compensatory plan or contract and who is not deemed to have been one of our affiliates during the immediately preceding 90 days to sell these shares in reliance upon Rule 144, but without being required to comply with the public information, holding period, volume limitation, or notice provisions of Rule 144. Rule 701 also permits our affiliates to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. However, all holders of Rule 701 shares are required to wait until 90 days after the date of this prospectus before selling such shares pursuant to Rule 701.

Lock-Up Agreements

We and all of our directors and officers have agreed in connection with the present offering, that, without the prior written consent of National Securities Corporation, not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period of 12 months following the close of this offering. The holders of substantially all of our other common stock or securities exercisable for or convertible into our common stock outstanding immediately prior to this offering have agreed in connection with the present

offering, that, without the prior written consent of National Securities Corporation, not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period 180 days following the close of this offering, subject to extensions under certain circumstances of up to a total of 216 days following this offering. On the 181st day following the close of this offering (subject to the potential extension described above) and on every subsequent 31st day thereafter, 15% of such holder's securities shall be released from the lock-up until the 366th day following the close of this offering, as of which none of such holder's securities shall be subject to the lock-up.

In connection with our issuance of warrants to purchase shares of our common stock to Liquid Patent Advisors, LLC and National Securities Corporation, including the underwriter warrant to be issued to National Securities upon the completion of this offering, Liquid Patent Advisors and National Securities have agreed not to sell, transfer or pledge, or offering to do any of the same, directly or indirectly, the share of common stock issuable upon exercise of such warrants for a period of 12 months following the close of this offering

Registration Statements on Form S-8

We intend to file a registration statement on Form S-8 under the Securities Act to register all of the shares of common stock to be issued or reserved for issuance under our 2007 Stock Incentive plan. Shares covered by this registration statement will be eligible for sale in the public market, upon the expiration or release from the terms of the lock-up agreements and subject to vesting of such shares.

UNDERWRITING

We are offering the shares of common stock described in this prospectus through the underwriter, National Securities Corporation, which is acting as lead managing underwriter of the offering. National Securities Corporation has rendered advisory services to us in the past and has acted as our placement agent in connection with the placements of our senior secured convertible promissory notes in March 2015 and April 2016.

We have agreed to enter into an underwriting agreement with the underwriter prior to the closing of this offering. Subject to the terms and conditions of the underwriting agreement, we will agree to sell to the underwriter, and the underwriter will agree to purchase, at the public offering price less the underwriting discounts and commissions set forth on the cover page of this prospectus, as it may be supplemented, shares of common stock.

The underwriter is committed to purchase all of the common shares offered by us, other than those covered by the option to purchase additional shares described below, if they purchase any shares. The underwriting agreement provides that the underwriter's obligations to purchase shares of our common stock are subject to conditions contained in the underwriting agreement. A copy of the underwriting agreement has been filed as an exhibit to the registration statement of which this prospectus forms a part.

We have been advised by the underwriter that the underwriter proposes to offer shares of our common stock directly to the public at the public offering price set forth on the cover page of this prospectus and to certain dealers that are members of the Financial Industry Regulatory Authority, or FINRA. Any securities sold by the underwriter to such securities dealers will be sold at the public offering price less a selling concession not in excess of \$_____ per share. After the public offering of the shares, the offering price and other selling terms may be changed by the underwriter.

None of our securities included in this offering may be offered or sold, directly or indirectly, nor may this prospectus and any other offering material or advertisements in connection with the offer and sales of any of our common stock, be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons who receive this prospectus are advised to inform themselves about and to observe any restrictions relating to this offering of our common stock and the distribution of this prospectus. This prospectus is neither an offer to sell nor a solicitation of any offer to buy any of our common stock included in this offering in any jurisdiction where that would not be permitted or legal.

The underwriter has advised us that it does not intend to confirm sales to any accounts over which they exercise discretionary authority.

Underwriting Discount and Expenses

The following table summarizes the underwriting discount and commission to be paid to the underwriter by us.

	Without Over- Allotment	With Over- Allotment
Public offering price	\$ 7.50	\$ 7.50
Underwriting discount to be paid to the underwriter	\$ 2,040,000	\$ 2,346,000
Net proceeds, before other expenses	\$ 21,960,000	\$ 25,254,000

In addition to the discount set forth in the above table, we have agreed to issue to the underwriter and its designees a warrant to purchase up to 10% of the shares of common stock sold in this offering. The terms of the underwriter's warrant are more fully described in this section under the caption, "Underwriter Warrant."

We estimate the total expenses payable by us for this offering to be approximately \$2.74 million, which amount includes (i) the underwriting discount of \$2.04 million (approximately \$2.346 million if the underwriter's over-allotment option is exercised in full), (ii) a non-accountable expense in the amount of \$185,000 being paid by us to the underwriter, and (iii) other estimated company expenses of approximately \$515,000, which includes legal, accounting, printing costs and various fees associated with the registration and listing of our shares.

Over-Allotment Option

We have granted to the underwriter an option, exercisable not later than 45 days after the date of this prospectus, to purchase up to an additional 480,000 shares of our common stock (up to 15% of the shares firmly committed in this offering) at

the public offering price, less the underwriting discount, set forth on the cover page of this prospectus. The underwriter may exercise the option solely to cover over-allotments, if any, made in connection with this offering. If any additional shares of our common stock are purchased pursuant to the over-allotment option, the underwriter will offer these additional shares of our common stock on the same terms as those on which the other shares of common stock are being offered hereby.

Determination of Offering Price

There is no current market for our common stock. Our underwriter, National Securities Corporation, is not obligated to make a market in our securities, and even if it chooses to make a market, can discontinue at any time without notice. Neither we nor the underwriter can provide any assurance that an active and liquid trading market in our securities will develop or, if developed, that the market will continue.

The public offering price of the shares offered by this prospectus has been determined by negotiation between us and the underwriter. Among the factors considered in determining the public offering price of the shares were:

- our history and our prospects;
- the industry in which we operate;
- our past and present operating results;
- the previous experience of our executive officers; and
- the general condition of the securities markets at the time of this offering.

The offering price stated on the cover page of this prospectus should not be considered an indication of the actual value of the shares. Upon the commencement of trading, the price of our shares will be subject to change as a result of market conditions and other factors, and we cannot assure you that the shares can be resold at or above the public offering price.

Underwriter Warrant

We have agreed to issue to National Securities Corporation and its designees a warrant to purchase shares of our common stock (up to 10% of the shares of common stock sold in this offering). This warrant is exercisable at \$9.375 per share (125% of the price of the common stock sold in this offering), commencing 12 months after the effective date of this offering and expiring five years from the effective date of this offering. The warrant and the shares of common stock underlying the warrant have been deemed compensation by FINRA and are therefore subject to a 180 day lock-up pursuant to Rule 5110(g)(1) of FINRA. National Securities Corporation (or permitted assignees under the Rule) will not sell, transfer, assign, pledge, or hypothecate this warrant or the securities underlying this warrant, nor will it engage in any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of this warrant or the underlying securities for a period of 12 months from the effective date of the offering.

Pursuant to our engagement agreement with Liquid Patent Advisors, LLC, on February 9, 2015, we issued to Liquid Patent Advisors, LLC a warrant to purchase 198,767 shares of our common stock, of which warrants to purchase 188,829 are exercisable at \$0.87 per share and warrants to purchase 9,339 shares are exercisable at \$0.15 per share, over a five year term. The warrants were issued in consideration of Liquid Patent Advisors' provision of services relating to the design, development and implementation of our intellectual property. The warrants include customary anti-dilution and net issuance provisions. The warrants also provide its holders with certain demand and piggyback registration rights. The principals of Liquid Patent Advisors hold investment banking positions with National Securities Corporation.

Lock-Up Agreements

In connection with our issuance of warrants to purchase shares of our common stock to Liquid Patent Advisors, LLC and National Securities Corporation, including the underwriter warrant to be issued to National Securities upon the completion of this offering, Liquid Patent Advisors and National Securities have agreed not to sell, transfer or pledge, or offering to do any of the same, directly or indirectly, the share of common stock issuable upon exercise of such warrants for a period of 12 months days following the close of this offering. We and all of our directors and officers have agreed in connection with the present offering, that, without the prior written consent of National Securities Corporation, not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period of 12 months following the close of this offering. The holders of substantially all of our other common stock or securities exercisable for or convertible into our common stock outstanding immediately prior to this offering

have agreed in connection with the present offering, that, without the prior written consent of National Securities Corporation, not to sell, transfer or pledge, or offer to do any of the same, directly or indirectly, any of our securities for a period 180 days following the close of this offering, subject to extensions under certain circumstances of up to a total of 216 days following this offering. On the 181st day following the close of this offering (subject to the potential extension described above) and on every subsequent 31st day thereafter, 15% of such holder's securities shall be released from the lock-up until the 366th day following the close of this offering, as of which none of such holder's securities shall be subject to the lock-up.

The number of shares of common stock outstanding upon the completion of this offering subject to the 180-day lock-up totals 7,144,510 shares, and the number of shares underlying options and warrants subject to the 180-day lock-up totals 125,229. The number of shares of common stock outstanding upon completion of this offering subject to the 12 month lock-up totals 978,716 shares and the number of shares underlying options and warrants subject to the 12-month lock-up totals 808,154 shares plus the number of shares issuable upon exercise of the warrant issuable to the underwriter in connection with this offering.

Other than in respect of the warrants issued or to be issued to Liquid Patent Advisors, LLC and National Securities Corporation, the underwriter may consent to an early release from the lock-up period if, in its opinion, the market for the common stock would not be adversely impacted by sales and in cases of a financial emergency of an officer, director or other stockholder. We are unaware of any security holder who intends to ask for consent to dispose of any of our equity securities during the relevant lock-up periods.

Indemnification

We will agree to indemnify the underwriter against certain liabilities, including certain liabilities arising under the Securities Act, and to contribute to payments that the underwriter may be required to make for these liabilities.

Short Positions and Penalty Bids

The underwriter may engage in over-allotment, syndicate covering transactions, and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of the common stock, in accordance with Regulation M under the Exchange Act.

- Over-allotment involves sales by the underwriter of shares in excess of the number of shares the underwriter is obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of shares over-allotted by an underwriter is not greater than the number of shares that it may purchase in the over-allotment option. In a naked short position, the number of shares involved is greater than the number of shares in the over-allotment option. The underwriter may close out any short position by either exercising its over-allotment option and/or purchasing shares in the open market.
- Syndicate covering transactions involve purchases of the common stock in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of shares to close out the short position, the underwriter will consider, among other things, the price of shares available for purchase in the open market as compared to the price at which it may purchase shares through the over-allotment option. If an underwriter sells more shares than could be covered by the over-allotment option, a naked short position, the position can only be closed out by buying shares in the open market. A naked short position is more likely to be created if an underwriter is concerned that there could be downward pressure on the price of the shares in the open market after pricing that could adversely affect investors who purchase in the offering.
- Penalty bids permit an underwriter to reclaim a selling concession from a syndicate member when the shares originally sold by the syndicate member are purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our common stock or preventing or retarding a decline in the market price of the common stock. As a result, the price of the common stock may be higher than the price that might otherwise exist in the open market. These transactions may be effected on the NASDAQ Capital Market, and if commenced, they may be discontinued at any time.

Neither we nor the underwriter make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of the common stock. In addition, neither we nor the underwriter make any representation that the underwriter will engage in these transactions or that any transaction, once commenced, will not be discontinued without notice.

Electronic Distribution

A prospectus in electronic format may be made available on the Internet sites or through other online services maintained by the underwriter, or by its affiliates. In those cases, prospective investors may view offering terms online and, depending upon the underwriter, prospective investors may be allowed to place orders online. The underwriter may agree with us to allocate a specific number of shares for sale to online brokerage account holders. Any such allocation for online distributions will be made by the underwriter on the same basis as other allocations.

Other than the prospectus in electronic format, the information on the underwriter's website and any information contained in any other website maintained by the underwriter is not part of the prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter and should not be relied upon by investors.

The underwriter's compensation in connection with this offering is limited to the fees and expenses described above under "Underwriting Discount and Expenses."

LEGAL MATTERS

Greenberg Traurig, LLP, Irvine, California, will pass upon the validity of the shares of common stock offered by this prospectus and certain other legal matters. Golenbock Eiseman Assor Bell & Peskoe LLP, New York, New York, is legal counsel to National Securities Corporation.

EXPERTS

The financial statements of Atomera Incorporated as of and for the fiscal years ended December 31, 2015 and 2014 included in this prospectus have been audited by Marcum LLP, independent registered public accounting firm as set forth in their report. We have included these financial statements in this prospectus in reliance upon the report of Marcum LLP, given on their authority as experts in accounting and auditing. The report of Marcum LLP, also included in this prospectus, for the fiscal years ended December 31, 2015 and 2014 includes an explanatory paragraph as to the Company's ability to continue as a going concern.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act that registers the shares of our common stock to be sold in this offering. Our SEC filings are and will become available to the public over the Internet at the SEC's website at www.sec.gov. You may also read and copy any document we file with the SEC at its public reference facilities at 100 F Street N.E., Washington, D.C. 20549. You can also obtain copies of the documents upon the payment of a duplicating fee to the SEC. Please call the SEC at 1-800-SEC-0330 for further information on the operation of the public reference facilities.

This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. Some items are omitted in accordance with the rules and regulations of the SEC. You should review the information and exhibits included in the registration statement for further information about us and the securities we are offering. Statements in this prospectus concerning any document we filed as an exhibit to the registration statement or that we otherwise filed with the SEC are not intended to be comprehensive and are qualified by reference to these filings. You should review the complete document to evaluate these statements.

ATOMERA INCORPORATED

INDEX TO FINANCIAL STATEMENTS

Report of Independent Registered Public Accounting Firm	F-2
Balance Sheets at December 31, 2015 and 2014	F-3
Statements of Operations for the years ended December 31, 2015 and 2014	F-4
Statements of Stockholders' Deficit for the years ended December 31, 2015 and 2014	F-5
Statements of Cash Flows for the years ended December 31, 2015 and 2014	F-6
Notes to the Financial Statements	F-7
Condensed Balance Sheets at March 31, 2016 (Unaudited) and December 31, 2015	F-24
Unaudited Condensed Statements of Operations for the three months ended March 31, 2016 and 2015	F-25
Unaudited Condensed Statement of Stockholders' Deficit for the three months ended March 31, 2016	F-26
Unaudited Condensed Statements of Cash Flows for the three months ended March 31, 2016 and 2015	F-27
Notes to the Unaudited Condensed Financial Statements	F-28

F-1

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the
Board of Directors and Shareholders
of Atomera Incorporated

We have audited the accompanying balance sheets of Atomera Incorporated (the "Company") (formerly known as Mears Technologies, Inc.) as of December 31, 2015 and 2014, and the related statements of operations, changes in stockholders' deficit and cash flows for the years then ended. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. Our audits included consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of Atomera Incorporated, as of December 31, 2015 and 2014, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As more fully described in Note 2, the Company has a significant accumulated deficit, working capital deficit, incurred significant net losses and needs to raise additional funds to meet its obligations and sustain its operations. These conditions raise substantial doubt about the Company's ability to continue as a going concern. Management's plans in regard to these matters are described in Note 2. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

/s/ Marcum LLP

New York, NY
June 17, 2016

F-2

ATOMERA INCORPORATED
BALANCE SHEETS
December 31, 2015 and 2014

	2015	2014
<u>ASSETS</u>		
Current assets:		
Cash	\$ 3,196,943	\$ 20,980
Restricted investment	15,000	15,000
Prepaid expenses and other current assets	48,137	24,131
Total current assets	<u>3,260,080</u>	<u>60,111</u>
Property and equipment, net	15,533	21,239
Deferred offering costs	144,669	-
Total assets	<u>\$ 3,420,282</u>	<u>\$ 81,350</u>
<u>LIABILITIES AND STOCKHOLDERS' DEFICIT</u>		
Current liabilities:		
Accounts payable	\$ 301,517	\$ 630,934
Accrued expenses	144,642	143,754
Senior secured convertible promissory notes payable, net	16,094,877	-
Total current liabilities	<u>16,541,036</u>	<u>774,688</u>
Convertible promissory notes payable	-	6,608,045
Total liabilities	<u>16,541,036</u>	<u>7,382,733</u>
Commitments and contingencies (Notes 6 and 14)		
Stockholders' deficit:		
Preferred stock, \$0.001 par value, authorized 2,500,000 shares; none issued and outstanding at December 31, 2015 and 2014	-	-
Common stock, \$0.001 par value, authorized 47,500,000 shares; issued and outstanding 1,617,313 and 1,233,268 shares at December 31, 2015 and 2014, respectively	1,617	1,233
Additional paid-in capital	70,451,752	66,759,366
Subscription receivable	(187,500)	(187,500)
Accumulated deficit	(83,386,623)	(73,874,482)
Total stockholders' deficit	<u>(13,120,754)</u>	<u>(7,301,383)</u>
Total liabilities and stockholders' deficit	<u>\$ 3,420,282</u>	<u>\$ 81,350</u>

See accompanying notes to the financial statements.

ATOMERA INCORPORATED
STATEMENTS OF OPERATIONS
Years Ended December 31, 2015 and 2014

	<u>2015</u>	<u>2014</u>
OPERATING EXPENSES:		
Research and development	\$ 2,022,133	\$ 1,853,091
General and administrative	3,441,149	1,402,879
Selling and marketing	35,661	9,392
Total operating expenses	<u>5,498,943</u>	<u>3,265,362</u>
Loss from operations	<u>(5,498,943)</u>	<u>(3,265,362)</u>
OTHER INCOME (EXPENSE):		
Interest income	7,072	7,088
Interest expense	(1,931,728)	(560,310)
Loss on settlement of options and warrants	(2,088,542)	-
Other income	-	850
Total other expense, net	<u>(4,013,198)</u>	<u>(552,372)</u>
Net Loss	<u>\$ (9,512,141)</u>	<u>\$ (3,817,734)</u>
Net loss per common share, basic and diluted	<u>\$ (7.55)</u>	<u>\$ (3.10)</u>
Weighted average number of common shares outstanding, basic and diluted	<u>1,259,567</u>	<u>1,233,268</u>

See accompanying notes to the financial statements.

ATOMERA INCORPORATED
STATEMENTS OF STOCKHOLDERS' DEFICIT
Years Ended December 31, 2015 and 2014

	<u>Preferred Stock</u>		<u>Common Stock</u>		<u>Additional Paid-in Capital</u>	<u>Subscription Receivable</u>	<u>Accumulated Deficit</u>	<u>Total Stockholders' Deficit</u>
	<u>Shares</u>	<u>Amount</u>	<u>Shares</u>	<u>Amount</u>				
Balance, January 1, 2014	-	\$ -	1,233,268	\$ 1,233	\$ 66,681,041	\$ (187,500)	\$ (70,056,748)	\$ (3,561,974)
Stock-based compensation	-	-	-	-	78,325	-	-	78,325
Net loss	-	-	-	-	-	-	(3,817,734)	(3,817,734)
Balance, December 31, 2014	-	-	1,233,268	1,233	66,759,366	(187,500)	(73,874,482)	(7,301,383)
Issuance of common stock warrants	-	-	-	-	1,172,335	-	-	1,172,335
Issuance of common stock for the settlement of options and warrants	-	-	384,045	384	2,088,158	-	-	2,088,542
Stock-based compensation	-	-	-	-	431,893	-	-	431,893
Net loss	-	-	-	-	-	-	(9,512,141)	(9,512,141)
Balance, December 31, 2015	-	\$ -	1,617,313	\$ 1,617	\$ 70,451,752	\$ (187,500)	\$ (83,386,623)	\$ (13,120,754)

See accompanying notes to the financial statements.

ATOMERA INCORPORATED
STATEMENTS OF CASH FLOWS
Years Ended December 31, 2015 and 2014

	<u>2015</u>	<u>2014</u>
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	\$ (9,512,141)	\$ (3,817,734)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	9,517	5,460
Non-cash warrant fair value for services rendered	1,015,848	-
Non-cash interest expense	1,931,728	558,766
Non-cash loss on option and warrant settlement	2,088,542	-
Stock-based compensation	431,893	78,325
Changes in operating assets and liabilities:		
Prepaid expenses and other current assets	(24,006)	11,904
Accounts payable	(329,417)	491,185
Accrued expenses	888	78,734
Net cash used in operating activities	<u>(4,387,148)</u>	<u>(2,593,360)</u>
CASH FLOWS FROM INVESTING ACTIVITIES		
Acquisition of property and equipment	(3,811)	(26,512)
Net cash used in investing activities	<u>(3,811)</u>	<u>(26,512)</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from convertible promissory notes payable	1,096,560	1,576,002
Net proceeds from senior secured convertible promissory notes payable	6,615,031	-
Proceeds from bridge loan notes payable	-	738,147
Payments on bridge loan notes payable	-	(5,482)
Payment of offering costs	(144,669)	-
Net cash provided by financing activities	<u>7,566,922</u>	<u>2,308,667</u>
Net increase (decrease) in cash	3,175,963	(311,205)
Cash at beginning of year	<u>20,980</u>	<u>332,185</u>
Cash at end of year	<u>\$ 3,196,943</u>	<u>\$ 20,980</u>

See Note 15 for supplemental cash flow information.

See accompanying notes to the financial statements.

ATOMERA INCORPORATED
NOTES TO THE FINANCIAL STATEMENTS
Years Ended December 31, 2015 and 2014

1. NATURE OF OPERATIONS

Atomera Incorporated (the “Company”) (formerly known as MEARS Technologies, Inc.) was incorporated in the state of Delaware in March 2007 under the name MEARS Technologies, Inc. and is engaged in the development, commercialization and licensing of proprietary processes and technologies for the semiconductor industry. On January 12, 2016, the Company changed its name to Atomera Incorporated.

The Company is in the development stage, having not yet started planned principal operations, and is devoting substantially all of its efforts toward technology research and development.

2. LIQUIDITY, GOING CONCERN AND MANAGEMENT PLANS

At December 31, 2015, the Company had cash of approximately \$3.2 million and a working capital deficit of approximately \$13.3 million. The Company has incurred recurring operating losses and at December 31, 2015 had an accumulated deficit of approximately \$83.4 million. The Company has primarily financed operations through the sale of equity and debt securities. In March 2015, the Company raised financing of approximately \$7.4 million through the issuance of senior secured convertible notes. Because of recurring and expected future losses and its cash on hand, there is a substantial doubt about the Company’s ability to continue as a going concern.

The Company believes that it requires a minimum of \$15 million of capital in order to fund its current business plans and start full-scale industrial production of a device that incorporates the Company’s technology. The Company also believes that the net proceeds of its presently proposed initial public offering will be sufficient to fund its presently forecasted working capital requirements over, at least, the 12 months following the close of the offering. The Company endeavors to acquire additional funds through various financing sources, including private placement of its equity and debt securities, initial public offering of its equity securities, licensing fees for its technology and joint ventures with industry partners. In addition, the Company will consider alternatives to its current business plans that may enable the Company to achieve revenue producing operations and meaningful commercial success with a smaller amount of capital. However, there can be no assurance that such financing will be available on terms favorable to the Company, if at all. The Company’s ability to continue as a going concern is dependent upon its ability to (1) obtain additional financing as may be required, (2) generate sufficient cash flow to meet its obligations on a timely basis and (3) ultimately attain profitability. The accompanying financial statements do not include any adjustments relating to the recoverability and classification of asset carrying amounts or the amount and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

3. REVERSE STOCK SPLIT

On December 8, 2015, the Company's Board of Directors approved a 1-for-15 reverse split of the Company's common stock. The reverse stock split became effective on December 11, 2015. Upon the effectiveness of the reverse stock split, (i) every 15 shares of outstanding common stock were combined into one share of common stock, (ii) the number of shares of common stock into which each outstanding option or warrant to purchase common stock is exercisable was proportionally decreased and (iii) the exercise price of each outstanding option or warrant to purchase common stock was proportionately increased. The authorized common and preferred stock shares decreased to 47.5 million and 2.5 million, respectively. The par value remained the same. All share and per share amounts have been retroactively restated to reflect the reverse stock split in the accompanying financial statements and notes.

4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying financial statements reflect the application of certain significant accounting policies as described below:

Development Stage

The Company has early adopted as permitted authoritative guidance under ASU No. 2014-10, allowing for the elimination of inception-to-date information and certain disclosures for development stage companies.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Company's 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 expenses during the reporting period. Significant estimates include the fair value of stock-based compensation and warrants, valuation allowance against deferred tax assets and related disclosures. Actual results could differ from those estimates.

Restricted Investment

The Company's restricted investment consists of a certificate of deposit held as collateral to secure borrowing limits for certain corporate credit cards. The Company is required to maintain this deposit for as long as it retains possession of the credit cards. The certificate of deposit matures on April 5, 2017. The carrying value of this certificate of deposit approximates the fair value.

Deferred Offering Costs

The Company complies with the requirements of the ASC 340, *Other Assets and Deferred Costs*. Deferred offering costs of \$144,669 consist principally of legal, accounting, and filing fees incurred through the balance sheet date that are related to the proposed offering and that will be charged to capital upon the receipt of the capital raised or charged to expense if the proposed offering is not completed.

Income Taxes

In accordance with authoritative guidance, deferred tax assets and liabilities are recorded for temporary differences between the financial reporting and tax bases of assets and liabilities using the current enacted tax rate expected to be in effect when the differences are expected to reverse. A valuation allowance is recorded on deferred tax assets unless realization is considered more likely than not.

The Company evaluates its tax positions taken or expected to be taken in the course of preparing the Company's tax returns to determine whether the tax positions are "more-likely-than-not" of being sustained by the applicable tax authority. Tax positions not deemed to meet the "more-likely-than-not" threshold are not recorded as a tax benefit or expense in the current year. The Company recognizes interest and penalties, if any, related to uncertain tax positions in interest expense. No interest and penalties related to uncertain tax positions were accrued at December 31, 2015.

The Company follows authoritative guidance which requires the evaluation of existing tax positions. Management has analyzed all open tax years, as defined by the statute of limitations, for all major jurisdictions, which includes federal and certain states, the principal state being Massachusetts. Open tax years are those that are open for examination by taxing authorities.

Fair Value of Financial Instruments

Authoritative guidance requires disclosure of the fair value of financial instruments. The Company's financial instruments consist of cash, certificate of deposits, accounts payable, accrued expenses and bridge loan notes payable, the carrying amounts of which approximate their estimated fair values primarily due to the short-term nature of the instruments or based on information obtained from market sources and management estimates. The Company measures the fair value of certain of its financial assets and liabilities on a recurring basis. A fair value hierarchy is used to rank the quality and reliability of the information used to determine fair values. Financial assets and liabilities carried at fair value which is not equivalent to cost will be classified and disclosed in one of the following three categories:

Level 1 – Quoted prices (unadjusted) in active markets for identical assets and liabilities.

Level 2 – Inputs other than Level 1 that are observable, either directly or indirectly, such as unadjusted quoted prices for similar assets and liabilities, unadjusted quoted prices in the markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets or liabilities.

Level 3 – Unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets or liabilities.

Debt Discounts

Debt discounts are amortized to interest expense using the straight-line method, which approximates the interest rate method, over the earlier of the term of the related debt or their earliest date of redemption.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to concentrations of credit risk consist principally of cash.

The Company maintains its operating accounts in a single financial institution. The balances are insured by the U.S. Federal Deposit Insurance Corporation (“FDIC”) up to specified limits. The Company’s cash is maintained in checking accounts with reputable financial institutions that may at times exceed amount covered by FDIC limits. The Company has not experienced any realized losses on the Company’s deposits of cash.

Research and Development Costs

In accordance with authoritative guidance, the Company charges research and development costs to operations as incurred. Research and development costs consist of personnel costs for the design, development, testing and enhancement of the Company’s technology, and certain other allocated costs, such as depreciation and other facilities related expenditures.

Property and Equipment

Items capitalized as property and equipment are stated at cost. Maintenance and routine repairs are charged to operations when incurred, while betterments and renewals are capitalized. Depreciation and amortization are computed using the straight-line method over the estimated useful lives of the respective assets starting when the asset is placed in service.

Common Stock Warrants

The Company classifies as equity any warrants that (i) require physical settlement or net-share settlement or (ii) provide the Company with a choice of net-cash settlement or settlement in its own shares (physical settlement or net-share settlement). The Company classifies as assets or liabilities any contracts that (i) require net-cash settlement (including a requirement to net cash settle the contract if an event occurs and if that event is outside the Company’s control), (ii) gives the counterparty a choice of net-cash settlement or settlement in shares (physical settlement or net-share settlement) or (iii) that contain reset provisions that do not qualify for the scope exception. The Company assesses classification of its common stock warrants and other freestanding derivatives at each reporting date to determine whether a change in classification between assets and liabilities is required. The Company’s freestanding derivatives consist of warrants to purchase common stock that were issued in connection with its notes payable. The Company evaluated these warrants to assess their proper classification and determined that the common stock warrants meet the criteria for equity classification in the balance sheet. Such warrants are measured at fair value, which the Company determines using the Black-Scholes-Merton option-pricing model.

Stock-Based Compensation

The Company computes stock-based compensation in accordance with authoritative guidance. The Company uses the Black-Scholes-Merton option-pricing model to determine the fair value of its stock options. The Black-Scholes-Merton option-pricing model includes various assumptions, including the fair market value of the common stock of the Company, expected life of stock options, the expected volatility and the expected risk-free interest rate, among others. These assumptions reflect the Company’s best estimates, but they involve inherent uncertainties based on market conditions generally outside the control of the Company.

As a result, if other assumptions had been used, stock-based compensation cost, as determined in accordance with authoritative guidance, could have been materially impacted. Furthermore, if the Company uses different assumptions on future grants, stock-based compensation cost could be materially affected in future periods.

The Company has a stock-based compensation plan under which stock options are granted to employees, consultants and directors. All grants are approved by the Company's Board of Directors. Grants to employees generally vest over a two- to four-year period. Additionally, the Company from time to time grants options that vest based on performance conditions or that vest immediately upon grant. The Company's stock options expire no later than ten years after the grant date.

The Company accounts for the fair value of equity instruments issued to non-employees using either the fair value of the services received or the fair value of the equity instrument, whichever is considered more reliable. The Company utilizes the Black-Scholes-Merton option-pricing model to measure the fair value of options issued to non-employees.

The Company recorded \$189,365 and \$78,325 of compensation expense related to stock options awarded to employees for the years ended December 31, 2015 and 2014, respectively. In addition, the Company recorded \$242,528 of compensation expense related to stock options awarded to non-employees for the year ended December 31, 2015. There was no compensation expense related to stock options awarded to non-employees for the year ended December 31, 2014.

Basic and Diluted Net Loss per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares outstanding for the period. Diluted net loss per share is computed by dividing the net loss by the weighted-average number of shares and dilutive share equivalents outstanding for the period, determined using the treasury-stock and if-converted methods. Since the Company has had net losses for all periods presented, all potentially dilutive securities are anti-dilutive. Accordingly, basic and diluted net loss per share are equal.

The following potential common stock equivalents were not included in the calculation of diluted net loss per common share because their inclusion would be anti-dilutive at December 31:

	2015	2014
Stock Options	511,245	181,492
Warrants	302,751	605,702
Conversion of Promissory Notes	2,230,323	897,588
	<u>3,044,319</u>	<u>1,684,782</u>

Recent Accounting Pronouncements

In June 2014, the Financial Accounting Standards Board ("FASB") issued Accounting Standard Update ("ASU") No. 2014-12, *Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period*. ASU 2014-12 requires that a performance target that affects vesting and could be achieved after the requisite service period be treated as a performance condition. ASU 2014-12 is effective for the Company in its first quarter of 2016 with early adoption permitted. The Company does not expect its pending adoption of ASU 2014-12 to have a material impact on its financial statements and disclosures.

In August 2014, the FASB issued ASU No. 2014-15, *Disclosure of Uncertainties About an Entity's Ability to Continue as a Going Concern* . The new standard provides guidance around management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern and to provide related footnote disclosures. The new standard is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2016. Early adoption is permitted. The adoption of this standard is not expected to have a material impact on the Company's financial statements.

In April 2015, the FASB issued ASU No. 2015-03, *Interest—Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs* , which requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of the related debt liability, consistent with debt discounts. ASU 2015-03 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2015. Early adoption is permitted. The Company does not expect that the adoption of ASU 2015-03 will have a material effect on its financial statements.

In November 2015, the FASB issued ASU No. 2015-17, *Balance Sheet Classification of Deferred Taxes* . The standard amends the current requirement for organizations to present deferred tax liabilities and assets as current and noncurrent in a classified balance sheet. Instead, companies will now be required to classify all deferred tax assets and liabilities as noncurrent. The ASU is effective for fiscal years, and interim periods within those years, beginning after December 15, 2016, with early adoption permitted. The Company does not expect that the adoption of ASU 2015-17 will have a material effect on its financial statements.

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities* , which addresses certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. This guidance will be effective in the first quarter of fiscal year 2019 and early adoption is not permitted. The Company is currently evaluating the impact that this guidance will have on its financial statements.

The Company has considered all other recently issued accounting pronouncements and does not believe the adoption of such pronouncements will have a material impact on its financial statements.

5. PROPERTY AND EQUIPMENT

Property and equipment consisted of the following:

	2015	2014
Computer equipment	\$ 38,894	\$ 35,083
Software	4,716	4,716
Laboratory equipment	184,461	184,461
Office equipment	16,699	16,699
Furniture and fixtures	824	824
	<u>245,594</u>	<u>241,783</u>
Less: Accumulated depreciation and amortization	(230,061)	(220,544)
	<u>\$ 15,533</u>	<u>\$ 21,239</u>

Depreciation and amortization expense relating to property and equipment was \$9,517 and \$5,460 for the years ended December 31, 2015 and 2014, respectively.

During the year ended December 31, 2014, the Company disposed of fully depreciated computer equipment with a cost of \$422,645, software with a cost of \$20,726, lab equipment with a cost of \$8,874 and furniture and fixtures with a cost of \$4,395.

6. COMMITMENTS AND CONTINGENCIES

Operating Leases

The Company had an operating lease agreement for the use of 4,400 square feet of office space in Newton, Massachusetts as its corporate headquarters. The lease commenced on January 31, 2011 and was amended and extended various times through December 31, 2014, the termination date.

On November 5, 2014, the Company entered a new lease agreement for the use of 1,730 square feet of office space in Wellesley Hills, Massachusetts. The lease with monthly payments of \$4,613 commenced on December 1, 2014 and was amended to expire on November 30, 2016.

On January 19, 2016, the Company entered into a real estate lease agreement for a 3,396 square foot office facility in Los Gatos, California as its new corporate headquarters. The lease commenced on February 1, 2016 and expires on January 31, 2018. The lease rate is \$12,395 per month, which will increase to \$13,074 per month commencing February 1, 2017.

Rent expense was \$55,360 and \$92,613 during the years ended December 31, 2015 and 2014, respectively.

Approximate future minimum lease payments required under the operating leases are as follows:

<u>Years ending December 31,</u>	<u>Amount</u>
2016	\$ 187,000
2017	156,200
2018	<u>13,100</u>
Total	<u>\$ 356,300</u>

Incentive Bonus

During September 2015 and amended in December 2015, the Board of Directors resolved to pay an incentive bonus to certain directors and officers contingent upon the Company being listed on the NASDAQ stock exchange before May 31, 2016, an initial public offering (IPO) with net proceeds of at least \$15 million and a post-IPO valuation of at least \$50 million and that the officers and directors remain in service with the Company through the close of the IPO. If these circumstances are met, a total bonus of \$1,651,369 will be paid to employees in the form of common stock, convertible at the greater of the IPO price to the public or \$3.681 per share.

Officer Compensation

During October 2015, the Company entered into an employment agreement with an officer. The agreement calls for an annual base salary of \$250,000 and a bonus of up to 50% of his base salary. Upon completion of an IPO, the officer is entitled to an increase in his annual base salary to \$300,000 and a \$250,000 incentive bonus. In the event of involuntary termination, the officer is entitled to 18 months of severance pay.

7. NOTES PAYABLE

As of January 1, 2014, the Company had outstanding notes payable (the “Bridge Loan Notes”), substantially all of which were issued to existing investors, totaling \$3,740,612 including accrued interest of approximately \$486,000. These notes were issued in 2012 and 2013 in the aggregate principal amount of \$1,584,243 and \$1,671,876, respectively, and accrued interest at 8% and 18%, respectively. The Company also issued a warrant to purchase 93,878 shares of common stock in connection with the 2012 notes (Note 10). The initial maturity dates of these notes had been previously extended to May 31, 2014.

From March 5, 2014 through May 9, 2014, the Company issued Bridge Loan Promissory Notes with certain investors in the aggregate principal amount of \$738,147 (the “2014 Bridge Loan Notes”). The 2014 Bridge Loan Notes had a maturity date of April 30, 2014 or May 31, 2014. The 2014 Bridge Loan Notes were extendable. The notes accrued interest at 18% per annum. The 2014 Bridge Loan Notes were subordinate to the preceding Bridge Loan Notes. The 2014 Bridge Loan Notes due April 30, 2014 had their initial maturity dates extended to May 31, 2014.

On May 31, 2014, the outstanding principal and accrued interest for the Bridge Loan Notes and the 2014 Bridge Loan Notes were exchanged for 2014 Unsecured Convertible Promissory Notes. The total converted principal and accrued interest was \$4,676,664. The 2014 Unsecured Convertible Promissory Notes were due on May 31, 2016. The notes accrued interest at the rate of 10% per annum. Effective upon the closing of a firm commitment underwritten public offering of at least \$15 million, all of the outstanding principal and accrued interest would automatically be converted into shares of common stock at a conversion price equal to the lower of the Discounted Price Per Share, the Convertible Note Price Per Share or the Pre-IPO Price Per Share, as defined in the agreement. Until the 10th day prior to the consummation of an IPO, a holder of a convertible note, at its option, could convert at a conversion price of \$7.362 per share. The Company determined there was no beneficial conversion feature.

From June 6, 2014 through December 15, 2014, the Company issued for cash consideration additional 2014 Unsecured Convertible Promissory Notes under the same terms as specified in the preceding paragraph, with certain investors in the aggregate principal amount of \$1,576,002. Accrued interest associated with the 2014 Unsecured Convertible Promissory Notes was approximately \$355,400 as of December 31, 2014 and was included in the balance outstanding in the accompanying balance sheets.

From January 9, 2015 through February 5, 2015, the Company issued additional 2014 Unsecured Convertible Promissory Notes with certain investors in the aggregate principal amount of \$1,096,560, of which \$596,560 was from existing investors.

On March 17, 2015, the Company issued Senior Secured Convertible Notes (“Secured Notes”) to certain investors under which the Company borrowed \$7,400,774, of which \$28,217 was from existing investors. The Company paid brokerage commissions to National Securities Corporation (“NSC”) of approximately \$785,700. The brokerage commissions are being amortized as interest expense over the life of the loan. During the year ended December 31, 2015, the Company recognized interest expense of approximately \$514,900 related to the brokerage commissions. The Company also issued a warrant to NSC in connection with this financing (Note 10). The aggregate unamortized balance of the brokerage commissions and warrant value at December 31, 2015 is classified as debt discount of \$324,760.

In addition on March 17, 2015, the Company exchanged all of the existing 2014 Unsecured Convertible Promissory Notes for Secured Notes with an aggregate principal balance of \$7,349,226. During 2015, the interest expense on the 2014 Unsecured Convertible Promissory Notes was approximately \$144,000 and total accrued interest on the 2014 Unsecured Convertible Promissory Notes was \$499,000 at March 17, 2015. The total closing represented \$14,750,000. The Secured Notes are due on May 31, 2016 and accrue interest at a rate of 10% per annum, except in any event of default in which case the interest rate shall be 12% per annum. The Secured Notes automatically convert to common stock in the event of an IPO of the Company and are optionally convertible upon a subsequent placement of equity other than an IPO or at the discretion of the note holder. Based on the method of conversion, the Secured Notes are converted into common stock at the Conversion Price, as defined in the agreement. Accrued interest associated with the Secured Notes was approximately \$1,670,000 as of December 31, 2015 and was included in the balance outstanding in the accompanying balance sheet.

At December 31, 2015, the senior secured convertible promissory notes payable consisted of the following:

Senior Notes	\$ 14,750,000
Accrued interest	1,669,637
Debt Discount	<u>(324,760)</u>
Senior secured convertible promissory notes payable, net	<u>\$ 16,094,877</u>

8. RELATED PARTY TRANSACTIONS

Through 2014, the Company raised additional financing through notes payable, substantially all of which were issued to existing investors (Note 7). Certain of the Company’s officers and directors participated in the placements and purchased convertible notes in the aggregate principal amount of \$3,317,607, representing 22.5% of the convertible notes sold by the Company. During 2014, substantially all interest expense was related to these notes payable to existing investors. During 2015, the Company issued notes payable to existing investors in the amount of \$624,777. During 2015, the interest expense on the 2014 Unsecured Convertible Promissory Notes and the Secured Notes with existing investors totaled approximately \$655,000.

On January 14, 2005, the Company executed a Secured Promissory Note (the “Promissory Note”) with an officer of the Company. Under the Promissory Note, the officer borrowed \$187,500 from the Company, which is classified as a subscription receivable in the accompanying balance sheet. The Promissory Note bears interest at a fixed rate of 3.76% per annum, with interest-only payments due annually through the maturity date of January 14, 2014. The Promissory Note is collateralized by common stock owned by the officer. The Promissory Note is a full recourse obligation such that the Company may pursue all remedies available to it in the event of nonpayment. The Promissory Note matured on January 14, 2014 and was not paid.

During December 2015, the Company extended the term of the Promissory Note to the earliest of (i) January 14, 2019, (ii) five business days following written notice by the Company to the officer of the occurrence of a Capital Event, as defined, (iii) five business days following written notice to the officer that (A) the Company has ceased operations in the ordinary course of business, or (B) the Company has dissolved, or (iv) the earlier of any date on which (A) the Company has commenced liquidation, or (B) a receiver, conservator or similar officer has been appointed, the Company has made an assignment for the benefit of creditors, or entered into an arrangement with its creditors or any proceeding under any bankruptcy or insolvency law, provided however that in the case of any involuntary proceeding, the Promissory Note shall only become due and payable sixty days after the commencement of the involuntary proceeding and only if the Company has not obtained a dismissal of such proceeding. The Promissory Note was cancelled effective January 13, 2016 (Note 16).

During both 2015 and 2014, a director, who is also a shareholder of the Company, was paid \$10,000 for his work as a consultant for the Company.

During 2015 and 2014, a law firm, a partner of which serves on our board and is a shareholder, billed the Company approximately \$19,700 and \$236,600, respectively. Included in current liabilities at December 31, 2015 and 2014 is approximately \$1,300 and \$259,000, respectively, owed to this law firm.

9. STOCKHOLDERS' EQUITY

As of December 31, 2015 the Company has reserved 916,084 shares of common stock for stock options and warrants.

During October 2015, the Company offered all option holders as of December 31, 2014 a one-time opportunity to exchange their options for shares of restricted common stock in a ratio of two options for one share of restricted common stock regardless of exercise price. The offer resulted in 166,230 options converting to 83,115 shares of restricted common stock on December 7, 2015. The Company recorded a loss of \$427,695 on this exchange based on the incremental increase in value of the options after the exchange compared to before the exchange.

During October 2015, the Company offered all warrant holders as of December 31, 2014 a one-time opportunity to exchange their warrants for shares of common stock in a ratio of two warrants for one share of common stock regardless of exercise price. The offer resulted in 601,861 warrants converting to 300,930 shares of common stock on December 7, 2015. The Company recorded a loss of \$1,660,847 on this exchange based on the incremental increase in value of the warrants after the exchange compared to before the exchange.

10. WARRANTS

Prior to 2014, the Company had outstanding warrants to purchase 605,702 shares of common stock at \$33.75 per share and of these warrants, 428,082 were set to expire June 15, 2016, 83,742 were set to expire November 14, 2016 and 93,878 were set to expire through May 2022. During December 2015, 601,861 of these warrants were exchanged for 300,930 shares of common stock (Note 9). Of the remaining 3,841 warrants, 1,574 expire June 15, 2016, 1,541 expire November 14, 2016 and 726 expire May 21, 2022.

On February 9, 2015, the Company issued a five year warrant to purchase 198,767 shares of common stock at \$0.15 per share to Liquid Patent Advisors, LLC (formerly known as Liquid Patent Consulting, LLC) ("LPC"). The warrant represented consideration for business, strategic and intellectual property development to be performed during 2015. The fair value of the warrant on the grant date was estimated using the Black-Scholes-Merton option pricing model with a common stock value of \$5.25 per share, a contractual life of 5 years, a dividend yield of 0%, a volatility of 43.9% and an assumed risk free interest rate of 1.49%. The fair value of the warrant was determined to be \$1,015,848 and was recorded as consulting expense and is included in general and administrative expenses in the statement of operations. During July 2015, the exercise price within this warrant to purchase 188,829 shares of common stock was modified to an exercise price of \$0.87 per share. The modification resulted in a decrease in the fair value of the warrant; such decrease is not recognized under authoritative guidance.

On March 17, 2015, the Company issued a five year warrant to purchase 100,143 shares of common stock at \$7.362 per share to NSC as additional consideration for serving as placement agent in connection with the sale of the Secured Notes in the principal amount of \$7,400,774 (Note 7). Upon conversion of the Secured Notes, the number of warrant shares is adjusted to 10% of the common stock shares issued in the conversion and the exercise price is adjusted to the Conversion Price. The fair value of the warrants on the grant date was estimated using the Black-Scholes-Merton option pricing model with a common stock fair value of \$5.25 per share, a contractual life of 5 years, a dividend yield of 0%, a volatility of 43.9% and an assumed risk free interest rate of 1.56%. The relative fair value of the warrants was determined to be \$156,487 and will be amortized as interest expense over the life of the loan. During the year ended December 31, 2015, the Company recognized approximately \$102,600 of interest expense related to these warrants.

In determining the fair value for warrants, the expected life of the Company's options was determined using the contractual life. The methodology in determining all other inputs to calculate the fair value utilizing the Black-Scholes-Merton option pricing model is the same as the stock option methodology described in Note 11 for stock options.

A summary of warrant activity for the years ended December 31, 2015 and 2014 is as follows:

	Number of Shares	Range of Exercise Prices	Weighted- Average Exercise Prices	Weighted- Average Remaining Life
Outstanding at January 1, 2014	605,702	\$33.75	\$ 33.75	3.4
Outstanding at December 31, 2014	605,702	\$33.75	\$ 33.75	2.4
Issued	298,910	\$0.15 - \$7.36	\$ 3.02	4.1
Exchanged	(601,861)	\$33.75	\$ 33.75	
Outstanding at December 31, 2015	302,751	\$0.15 - \$33.75	\$ 3.41	4.1

The warrants outstanding at December 31, 2015 had an aggregate intrinsic value of approximately \$967,200.

11. STOCK OPTION PLAN

The Company granted options under an Employee Option Plan (the “Old Plan”), which authorized the granting of options to employees, directors and consultants to purchase common stock. Option grants are no longer authorized under the Old Plan which had 1,370 vested options remained outstanding at December 31, 2014 and no vested options outstanding at December 31, 2015.

On March 14, 2007, the Company’s stockholders approved the 2007 Equity Incentive Plan (the “2007 Plan”). Generally, stock options vest and become exercisable over a two to four-year period from the date of grant; however during 2015 certain options granted provided for immediate vesting or were milestone based. Stock options expire no later than ten years after the grant date. In addition, non-vested shares that are released from or reacquired by the Company from outstanding awards under the 2007 Plan become available for grant under the 2007 Plan and may be reissued as new awards. The 2007 Plan is authorized to issue up to 613,333 shares as of December 31, 2015.

A summary of the activity under the Old and the 2007 Plans for the years ended December 31, 2015 and 2014 is as follows:

	Number of Shares	Range of Exercise Prices	Weighted- Average Exercise Prices	Weighted- Average Remaining Contractual Term (In Years)
Outstanding at January 1, 2014	188,257	\$2.55 - \$187.50	\$ 36.75	7.3
Cancelled	(6,765)	\$59.10 - \$187.50	\$ 65.40	
Outstanding at December 31, 2014	181,492	\$2.55 - \$187.50	\$ 35.70	6.5
Exercisable at December 31, 2014	178,159	\$2.55 - \$187.50	\$ 35.70	6.4
Non-vested at December 31, 2014	3,333	\$33.75	\$ 33.75	7.2
Vested and expected to vest at December 31, 2014	181,333	\$2.55 - \$187.50	\$ 35.70	6.5
	Number of Shares	Range of Exercise Prices	Weighted- Average Exercise Prices	Weighted- Average Remaining Contractual Term (In Years)
Outstanding at December 31, 2014	181,492	\$2.55 - \$187.50	\$ 35.70	6.5
Granted	519,498	\$5.70 - \$6.60	\$ 6.06	9.5
Cancelled	(23,515)	\$6.60 - \$187.50	\$ 15.24	
Exchanged (Note 9)	(166,230)	\$2.55 - \$187.50	\$ 34.11	
Outstanding at December 31, 2015	511,245	\$5.70 - \$59.10	\$ 7.05	9.4
Exercisable at December 31, 2015	199,544	\$6.60 - \$59.10	\$ 9.16	8.8
Non-vested at December 31, 2015	311,701	\$5.70 - \$6.60	\$ 5.70	9.8
Vested and expected to vest at December 31, 2015	496,376	\$5.70 - \$59.10	\$ 7.09	9.4

The total number of options available for future grant was 102,088 and 159,379 as of December 31, 2015 and 2014, respectively.

A summary of the status of the Company's non-vested stock options as of December 31, 2015 and 2014 and changes during the years then ended is as follows:

Non-vested at December 31, 2013	6,833
Vested	(3,500)
Non-vested at December 31, 2014	3,333
Granted	519,498
Vested	(187,782)
Forfeited	(21,682)
Exchanged	(1,666)
Non-vested at December 31, 2015	311,701

The following table summarizes the stock-based compensation expense recorded in the Company's results of operations during the years ended December 31:

	2015	2014
General and administrative	\$ 294,797	\$ -
Research and development	137,096	78,325
	<u>\$ 431,893</u>	<u>\$ 78,325</u>

The Company records compensation expense for employee awards with graded vesting using the straight-line method. The Company records compensation expense for non-employee awards with graded vesting using the accelerated expense attribution method. The Company recognizes compensation expense over the requisite service period applicable to each individual award, which generally equals the vesting term. Estimated prospective forfeitures are incorporated in the determination of compensation cost to be recognized. The Company applied an expected forfeiture rate of 4.77% to non-vested stock options for which expense was recognized. The options outstanding at December 31, 2015 had no intrinsic value in the aggregate.

The Company estimates the fair value of each option award using the Black-Scholes-Merton option pricing model.

The fair values of options granted during the year ended December 31, 2015 were calculated using the following assumptions:

Weighted average grant date fair value	\$2.14
Assumptions:	
Expected volatility	43.94%
Weighted average expected term (in years)	5.4
Risk-free interest rate	1.31% – 1.75%
Expected dividend yield	0%

The risk-free interest rate was obtained from U.S. Treasury rates for the applicable periods. The Company's expected volatility was based upon the historical volatility for industry peers and used an average of those volatilities. The expected life of the Company's options was determined using the simplified method as a result of limited historical data regarding the Company's activity. The dividend yield considers that the Company has not historically paid dividends, and does not expect to pay dividends in the foreseeable future.

The fair value of the common stock was determined by the board of directors based on a variety of factors, including valuations prepared by third parties, the Company's financial position, the status of development efforts within the Company, the current climate in the marketplace and the prospects of a liquidity event, among others.

As of December 31, 2015, there was approximately \$673,000 of total unrecognized compensation expense related to non-vested share-based compensation arrangements that are expected to vest. This cost is expected to be recognized over a weighted-average period of 3.79 years. No options were granted during the year ended December 31, 2014.

12. 401(K) PLAN

During 2002, the Company established a plan under Section 401(k) of the Internal Revenue Code (the 401(k) Plan). The 401(k) Plan covers substantially all of its employees who have attained 18 years of age. Employees may elect to contribute part of their annual compensation to the 401(k) Plan, up to the maximum deferral allowance for individuals by the Internal Revenue Service under Code Section 401(k), and the Company may make a matching contribution. During 2015 and 2014, there were no matching contributions made by the Company.

13. INCOME TAXES

The Company had no income tax expense due to operating losses incurred for the year ended December 31, 2015. The Company accounts for income taxes in accordance with authoritative guidance. Under authoritative guidance, a deferred tax asset or liability is recorded for all temporary differences between book and tax reporting of assets and liabilities. A deferred tax valuation allowance is required if it is more likely than not that all or a portion of any deferred tax asset will not be realized. The Company provided a full valuation allowance at December 31, 2015. The valuation allowance increased by approximately \$3,158,000 from December 31, 2014.

At December 31, 2015, the Company had net operating loss carryforwards of approximately \$25,018,000 and \$8,038,000 to offset future federal and state income taxes, respectively, if any. These carryforwards expire for federal purposes beginning in 2028 and began to expire for state purposes in 2017. The future utilization of these net operating loss carryforwards may be subject to limitation in the event of a change in ownership as described in Internal Revenue Code Section 382. Due to the fact that the Company believes that it is more likely than not that the Company's net deferred tax assets will not be realized, the Company has provided a full valuation allowance against its net deferred tax assets.

A reconciliation of the expected income tax benefit to actual follows:

	2015	2014
Computed “expected” US tax benefit at federal statutory rate	\$ (3,234,128)	\$ (1,298,030)
Change resulting from:		
State and local income tax, net of federal income tax benefit	(452,569)	72,577
Valuation allowance	3,158,286	1,274,843
Non-deductible items	566,405	1,577
Change in research & development credits	(37,994)	(50,967)
Income tax expense (benefit)	<u>\$ -</u>	<u>\$ -</u>

The approximate effect of each type of temporary difference is as follows:

Deferred tax assets:	2015	2014
Net operating loss carryforwards	\$ 8,981,824	\$ 8,153,320
Research and development credit	986,971	929,688
Stock and warrant based compensation	2,724,699	1,942,259
Accrued expense	672,032	141,955
Capitalized start-up expenses	11,129,683	10,164,901
Property and equipment	1,628	6,409
Section 1231 loss carryforwards	27,277	27,296
Alternative minimum tax credits	11,771	11,771
Total deferred tax assets	<u>24,535,885</u>	<u>21,377,599</u>
Valuation allowance	(24,535,885)	(21,377,599)
Net deferred tax asset	<u>\$ -</u>	<u>\$ -</u>

Upon the adoption, and at December 31, 2015, the Company did not have any material uncertain tax positions. No interest and penalties related to uncertain tax positions were accrued at December 31, 2015.

14. LEGAL MATTER

During May 2013, the Company brought a lawsuit against another company (the “Defendant”) alleging patent infringement. During December 2014, the court entered an order granting summary judgment in favor the Defendant on the issue of whether Defendant is infringing the Company’s patents, and on December 14, 2015, a final judgment was entered and the Company agreed to pay the Defendant approximately \$47,000 for costs related to the lawsuit; such amount is included in accrued expenses at December 31, 2015 in the accompanying balance sheets. In January 2015, Defendant filed a motion with the court to recover from the Company its attorney’s fees and costs. The court denied Defendant’s motion for reimbursement of fees and costs in December 2015.

Other

The Company is subject to various legal claims arising in the normal course of business. Based on the information currently available, it is the opinion of management that the ultimate resolution of pending and threatened legal proceedings will not have a material adverse effect on the Company’s financial position or the results of future operations.

15. SUPPLEMENTAL CASH FLOW INFORMATION

The accompanying statement of cash flows for the year ended December 31, 2015 excludes the effect of \$156,487 of non-cash financing activities related to the NSC warrant, which was recorded as a debt discount on the Secured Notes.

The accompanying statement of cash flows for the year ended December 31, 2015 excludes the effect of \$7,349,226 of non-cash financing activities related to the exchange of unsecured convertible promissory notes for Secured Notes (Note 7).

The accompanying statement of cash flows for the year ended December 31, 2014 excludes the effect of \$4,676,664 of non-cash financing activity related to the exchange of bridge loans for unsecured convertible promissory notes upon maturity.

Net cash flows from operating activities as reported in the accompanying statements of cash flows for the year ended December 31, 2014 reflect cash payments for interest of \$1,544. There were no cash payments for interest for the year ended December 31, 2015.

16. SUBSEQUENT EVENTS

Effective as of January 13, 2016, the Company awarded an officer a bonus in the amount of \$187,500, payable in the form of the Company's cancellation of the outstanding principal amount of \$187,500 under a Promissory Note made by the officer in favor of the Company (see Note 8). As of the date of the award, there was accrued and unpaid interest under the Promissory Note in the amount of \$7,050, which the officer repaid during January 2016. In return for the cancellation of the principal amount under the Promissory Note, the officer was required to reimburse the Company for withholding taxes payable by the Company, in the amount of \$13,998, in connection with the \$187,500 award.

In January 2016 the Company filed an appeal with the United States Court of Appeals for the Federal Circuit of the trial court's judgment in favor of the Defendant in the patent infringement lawsuit described in Note 14 and in the same month the Defendant filed an appeal with the United States Court of Appeals for the Federal Circuit of the trial court's denial of their motion to recover attorney's fees and costs.

In January 2016, the Company entered into employment agreements with three officers. The agreements call for an annual base salary of \$250,000 and a bonus of up to 30% of base salary for one officer and annual base salaries of \$220,000 and a bonus of up to 15% of base salary for the other two officers. In the event of involuntary termination, each officer is entitled to six months of severance pay. In June 2016, the Company terminated one of the officers effective as of June 30, 2016.

During January 2016, the Company issued 2,742 stock options to various directors, officers and employees at an exercise price of \$5.70. These options vested immediately.

During January 2016, the Company entered into a standby letter of credit for \$37,186 related to the real estate lease agreement for its new corporate headquarters in Los Gatos, California (Note 6).

In February 2016, the Company entered into an employment agreement with an officer. The agreement calls for an annual base salary of \$225,000 and a bonus of up to 30% of base salary. In the event of involuntary termination, the officer is entitled to six months of severance pay.

During February 2016, the Company issued 27,495 stock options with an exercise price of \$5.70. These options vest as follows: one-fourth on the first anniversary of the grant date, then ratably over the next 36 months.

During February 2016, the Company extended the period for the Company to complete an IPO and be listed on the NASDAQ stock exchange under the incentive bonus agreements (Note 6) to May 31, 2017.

During February 2016, the Company entered into an agreement with another company (“the Evaluator”) whereby the Company’s technology will be tested by the Evaluator for possible inclusion in future products. There is no revenue associated with this agreement.

During March 2016, the maturity date of the Secured Notes (Note 7) was extended to May 31, 2017. All other terms of the Secured Notes remained the same.

During April 2016, the Company issued additional Secured Notes with certain investors in the aggregate principal amount of \$5,958,433, of which \$2,630,820 is from existing investors. These notes have the same terms as the previous Secured Notes (Note 7) and mature on May 31, 2017. NSC acted as placement agent and the Company paid NSC a brokerage commission in the amount of ten percent of the proceeds from the Secured Notes placed by NSC, or \$437,778, and issued to NSC a warrant to purchase ten percent of the common shares issuable upon conversion of Secured Notes in the principal amount of \$4,377,781 at an exercise price equal to the conversion price of the Secured Notes. In June 2016, and prior to any exercise of the warrant, NSC elected to cancel the warrant in full and for no consideration.

During April 2016, the Board of Directors of the Company resolved that upon the completion of an IPO the 2007 Stock Incentive Plan shall be amended to increase common shares issuable thereunder to 20% of the total issued and outstanding shares of Common Stock on a fully-diluted basis immediately after the IPO.

Atomera Incorporated
Condensed Balance Sheets

	March 31, 2016	December 31, 2015
	(Unaudited)	
<u>ASSETS</u>		
Current Assets:		
Cash	\$ 1,501,384	\$ 3,196,943
Restricted Investment	15,000	15,000
Prepaid expenses and other current assets	44,009	48,137
Total current assets	<u>1,560,393</u>	<u>3,260,080</u>
Property and equipment, net	21,784	15,533
Deferred offering costs	180,442	144,669
Security Deposit	<u>37,186</u>	<u>-</u>
Total assets	<u>\$ 1,799,805</u>	<u>\$ 3,420,282</u>
<u>LIABILITIES AND STOCKHOLDERS' DEFICIT</u>		
Current liabilities:		
Accounts payable	\$ 408,028	\$ 301,517
Accrued expenses	99,342	144,642
Senior secured convertible promissory notes payable, net	<u>16,657,046</u>	<u>16,094,877</u>
Total liabilities	<u>17,164,416</u>	<u>16,541,036</u>
Stockholders' deficit:		
Preferred stock, \$0.001 par value, authorized 2,500,000 shares; none issued and outstanding at March 31, 2016 and December 31, 2015	-	-
Common stock, \$0.001 par value, authorized 47,500,000 shares; issued and outstanding 1,617,313 shares at March 31, 2016 and December 31, 2015, respectively	1,617	1,617
Additional paid-in capital	70,508,581	70,451,752
Subscription receivable	-	(187,500)
Accumulated deficit	<u>(85,874,809)</u>	<u>(83,386,623)</u>
Total stockholders' deficit	<u>(15,364,611)</u>	<u>(13,120,754)</u>
Total liabilities and stockholders' deficit	<u>\$ 1,799,805</u>	<u>\$ 3,420,282</u>

See accompanying notes to the condensed financial statements

Atomera Incorporated
Condensed Statements of Operations
(Unaudited)
For the Three months ended March 31,

	2016	2015
OPERATING EXPENSES		
Research and development	\$ 945,891	\$ 519,452
General and administrative	861,119	1,698,781
Selling and marketing	119,015	11,394
Total operating expenses	<u>1,926,025</u>	<u>2,229,627</u>
Loss from operations	(1,926,025)	(2,229,627)
OTHER INCOME (EXPENSE)		
Interest expense, net	<u>(562,161)</u>	<u>(231,122)</u>
Net Loss	<u>\$ (2,488,186)</u>	<u>\$ (2,460,749)</u>
Net loss per common share, basic and diluted	<u>\$ (1.54)</u>	<u>\$ (2.00)</u>
Weighted average number of common shares outstanding, basic and diluted	<u>1,617,313</u>	<u>1,233,268</u>

See accompanying notes to the condensed financial statements

Atomera Incorporated
Condensed Statement of Stockholders' Deficit
For the Three Months Ended March 31, 2016
(Unaudited)

	<u>Preferred Stock</u>		<u>Common Stock</u>		<u>Additional</u>	<u>Subscription</u>	<u>Accumulated</u>	<u>Total</u>
	<u>Shares</u>	<u>Amount</u>	<u>Shares</u>	<u>Amount</u>	<u>Paid-in</u>	<u>Receivable</u>	<u>Deficit</u>	<u>Stockholders'</u>
					<u>Capital</u>			<u>Deficit</u>
Balance, January 1, 2016	-	\$ -	1,617,313	\$ 1,617	\$70,451,752	\$ (187,500)	\$ (83,386,623)	\$ (13,120,754)
Compensation in exchange for settlement of subscription receivable	-	-	-	-	-	187,500	-	187,500
Stock-based compensation	-	-	-	-	56,829	-	-	56,829
Net loss	-	-	-	-	-	-	(2,488,186)	(2,488,186)
Balance, March 31, 2016	-	\$ -	1,617,313	\$ 1,617	\$70,508,581	\$ -	\$ (85,874,809)	\$ (15,364,611)

See accompanying notes to the condensed financial statements

Atomera Incorporated
Condensed Statements of Cash Flows
(Unaudited)
For the Three Months Ended March 31,

	2016	2015
CASH FLOWS FROM OPERATING ACTIVITIES		
Net Loss	\$ (2,488,186)	\$ (2,460,749)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	2,961	2,209
Non-cash warrant fair value for services rendered	-	1,015,848
Non-cash interest expense	562,168	232,869
Stock-based compensation	56,829	313,176
Compensation in exchange for settlement of subscription receivable	187,500	
Changes in operating assets and liabilities	-	
Prepaid expenses and security deposit	(33,058)	(26,851)
Accounts payable	106,511	6,141
Accrued expenses	(45,300)	(49,051)
Net cash used in operating activities	<u>(1,650,576)</u>	<u>(966,408)</u>
NET CASH USED IN INVESTING ACTIVITIES		
Acquisition of property and equipment	(9,210)	(2,170)
Net cash used in investing activities	<u>(9,210)</u>	<u>(2,170)</u>
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from unsecured convertible promissory notes payable	-	1,096,560
Net proceeds from senior secured convertible promissory notes payable	-	6,615,031
Payment of offering costs	(35,773)	-
Net cash (used in) / provided by financing activities	<u>(35,773)</u>	<u>7,711,591</u>
Net (decrease) / increase in cash	\$ (1,695,559)	\$ 6,743,013
Cash at beginning of period	<u>3,196,943</u>	<u>20,980</u>
Cash at end of period	<u>\$ 1,501,384</u>	<u>\$ 6,763,993</u>

See Note 8 for supplemental cash flow information.

See accompanying notes to the condensed financial statements

ATOMERA INCORPORATED
NOTES TO THE CONDENSED FINANCIAL STATEMENTS
Periods Ended March 31, 2016 and 2015
(unaudited)

1. NATURE OF OPERATIONS

Atomera Incorporated (the Company) (formerly known as MEARS Technologies, Inc.) was incorporated in the state of Delaware in March 2007 under the name MEARS Technologies, Inc. and is engaged in the development, commercialization and licensing of proprietary processes and technologies for the semiconductor industry. On January 12, 2016, the Company changed its name to Atomera Incorporated.

The Company is in the development stage, having not yet started planned principal operations, and is devoting substantially all of its efforts toward technology research and development.

2. LIQUIDITY, GOING CONCERN AND MANAGEMENT PLANS

At March 31, 2016 the Company had cash of approximately \$1.5 million and a working capital deficit of approximately \$15.6 million. The Company has incurred recurring operating losses and at March 31, 2016 had an accumulated deficit of approximately \$85.9 million. The Company has primarily financed operations through the sale of equity and debt securities. Because of recurring and expected future losses and its cash balance on hand, there is a substantial doubt about the Company's ability to continue as a going concern.

The Company believes that it requires a minimum of \$15 million of capital over the next 12 months from the date of filing this report in order to fund its current business plans and start full-scale industrial production of a device that incorporates the Company's technology. The Company endeavors to acquire additional funds through various financing sources, including private placement of its equity and debt securities, initial public offering of its equity securities, licensing fees for its technology and joint ventures with industry partners. In addition, the Company will consider alternatives to its current business plans that may enable the Company to achieve revenue producing operations and meaningful commercial success with a smaller amount of capital. However, there can be no assurance that such financing will be available on terms favorable to the Company, if at all. The Company's ability to continue as a going concern is dependent upon its ability to (1) obtain additional financing as may be required, (2) generate sufficient cash flow to meet its obligations on a timely basis and (3) ultimately attain profitability. The financial statements do not include any adjustments relating to the recoverability and classification of asset carrying amounts or the amount and classification of liabilities that might be necessary should the Company be unable to continue as a going concern.

ATOMERA INCORPORATED
NOTES TO THE CONDENSED FINANCIAL STATEMENTS
Periods Ended March 31, 2016 and 2015
(unaudited)

3. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accompanying condensed financial statements reflect the application of certain significant accounting policies as described in this note and elsewhere in this prospectus.

Basis of Presentation

The accompanying condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP) for interim financial information and the rules and regulations of the SEC. Accordingly, since they are interim financial statements, the accompanying condensed financial statements do not include all of the information and notes required by GAAP for annual financial statements, but reflect all adjustments consisting of normal, recurring adjustments, that are necessary for a fair presentation of the financial position, results of operations and cash flows for the interim periods presented. In the opinion of the Company's management, all adjustments, consisting of only normal and recurring adjustments, necessary for a fair presentation of the Company's financial position and the results of operations for the periods presented have been included. Interim results are not necessarily indicative of results for a full year. The condensed financial statements and notes should be read in conjunction with the financial statements and notes for the year ended December 31, 2015 which are included elsewhere in this prospectus.

Deferred Offering Costs

The Company complies with the requirements of the ASC 340, *Other Assets and Deferred Costs* . Deferred offering costs of \$180,442 consist principally of legal, accounting, and filing fees incurred through the balance sheet date that are related to the proposed offering and that will be charged to capital upon the receipt of the capital raised or charged to expense if the proposed offering is not completed.

Common Stock Warrants

The Company classifies as equity any warrants that (i) require physical settlement or net-share settlement or (ii) provide the Company with a choice of net-cash settlement or settlement in its own shares (physical settlement or net-share settlement). The Company classifies as assets or liabilities any contracts that (i) require net-cash settlement (including a requirement to net cash settle the contract if an event occurs and if that event is outside the Company's control), (ii) gives the counterparty a choice of net-cash settlement or settlement in shares (physical settlement or net-share settlement) or (iii) that contain reset provisions that do not qualify for the scope exception. The Company assesses classification of its common stock warrants and other freestanding derivatives at each reporting date to determine whether a change in classification between assets and liabilities is required. The Company's freestanding derivatives consist of warrants to purchase common stock that were issued in connection with its notes payable. The Company evaluated these warrants to assess their proper classification and determined that the common stock warrants meet the criteria for equity classification in the balance sheet. Such warrants are measured at fair value, which the Company determines using the Black-Scholes-Merton option-pricing model.

ATOMERA INCORPORATED
NOTES TO THE CONDENSED FINANCIAL STATEMENTS
Periods Ended March 31, 2016 and 2015
(unaudited)

Stock-Based Compensation

The Company computes stock-based compensation in accordance with authoritative guidance. The Company uses the Black-Scholes-Merton option-pricing model to determine the fair value of its stock options. The Black-Scholes-Merton option-pricing model includes various assumptions, including the fair market value of the common stock of the Company, expected life of stock options, the expected volatility and the expected risk-free interest rate, among others. These assumptions reflect the Company's best estimates, but they involve inherent uncertainties based on market conditions generally outside the control of the Company.

As a result, if other assumptions had been used, stock-based compensation cost, as determined in accordance with authoritative guidance, could have been materially impacted. Furthermore, if the Company uses different assumptions on future grants, stock-based compensation cost could be materially affected in future periods.

The Company accounts for the fair value of equity instruments issued to non-employees using either the fair value of the services received or the fair value of the equity instrument, whichever is considered more reliable. The Company utilizes the Black-Scholes-Merton option-pricing model to measure the fair value of options issued to non-employees.

The Company recorded \$56,829 and \$313,176 of compensation expense related to stock options awarded for the three months ended March 31, 2016 and 2015, respectively.

Use of Estimates

The preparation of condensed financial statements in conformity with GAAP requires the Company's 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 expenses during the reporting period. Significant estimates include the fair value of stock-based compensation and warrants, valuation allowance against deferred tax assets and related disclosures. Actual results could differ from those estimates.

Basic and Diluted Net Loss per Share

Basic net loss per share is calculated by dividing the net loss by the weighted-average number of shares outstanding for the period. Diluted net loss per share is computed by dividing the net loss by the weighted-average number of shares and dilutive share equivalents outstanding for the period, determined using the treasury-stock and if-converted methods. Since the Company has had net losses for all periods presented, all potentially dilutive securities are anti-dilutive. Accordingly, basic and diluted net loss per share are equal.

ATOMERA INCORPORATED
NOTES TO THE CONDENSED FINANCIAL STATEMENTS
Periods Ended March 31, 2016 and 2015
(unaudited)

The following potential common stock equivalents were not included in the calculation of diluted net loss per common share because the inclusion thereof would be anti-dilutive:

	March 31, 2016	March 31, 2015
Stock Options	538,014	387,955
Warrants	302,751	302,751
Conversion of Notes Payable	2,280,274	2,079,372
	<u>3,121,039</u>	<u>2,770,078</u>

Recent Accounting Pronouncements Adopted

In April 2015, the FASB issued ASU No. 2015-03, *Interest—Imputation of Interest (Subtopic 835-30): Simplifying the Presentation of Debt Issuance Costs*, which requires that debt issuance costs related to a recognized debt liability be presented in the balance sheet as a direct deduction from the carrying amount of the related debt liability, consistent with debt discounts. ASU 2015-03 is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2015. The application of ASU 2015-03 did not have a material effect on the condensed financial statements.

Other Recently Issued Accounting Pronouncements

The Company has considered all recently issued accounting pronouncements and is in the process of evaluating the potential impact of these recent accounting pronouncements on its condensed financial statements.

4. NOTES PAYABLE

From January 9, 2015 through February 5, 2015, the Company issued promissory notes to certain investors in the aggregate principal amount of \$1,096,560, of which \$596,560 was from existing investors.

ATOMERA INCORPORATED
NOTES TO THE CONDENSED FINANCIAL STATEMENTS
Periods Ended March 31, 2016 and 2015
(unaudited)

On March 17, 2015, the Company issued Senior Secured Convertible Notes ("Secured Notes") to certain investors under which the Company borrowed \$7,400,774, of which \$28,217 was from existing investors. The Company paid brokerage commissions to National Securities Corporation ("NSC") of \$785,700. The brokerage commissions are being amortized as interest expense over the life of the loan. During the three months ended March 31, 2016, the Company recognized interest expense of \$194,428 related to the brokerage commissions which is included in interest expenses in the condensed statements of operations. The Company also issued a warrant to NSC in connection with this financing. The aggregate unamortized balance of the brokerage commissions and warrant value at March 31, 2016 is classified as debt discount of \$130,331.

In addition, on March 17, 2015, the Company exchanged all of its existing Unsecured Convertible Promissory Notes for Secured Notes with an aggregate principal balance of \$7,349,226. During the three months ended March 31, 2015, the interest expense on the Unsecured Convertible Promissory Notes was approximately \$144,000 and total accrued interest on the 2014 Unsecured Convertible Promissory Notes was approximately \$499,000 at March 17, 2015. The total closing represented \$14,750,000. The Secured Notes are due on May 31, 2016 and accrue interest at a rate of 10% per annum, except in any event of default in which case the interest rate shall be 12% per annum. During March 2016, the maturity date of the Secured Notes was extended to May 31, 2017. All other terms of the Secured Notes remained the same. The Secured Notes automatically convert to common stock in the event of an IPO of the Company and are optionally convertible upon a subsequent placement of equity other than an IPO or at the discretion of the note holder. Based on the method of conversion, the Secured Notes are converted into common stock at the Conversion Price, as defined in the agreement. As of March 31, 2016, accrued interest associated with the Secured Notes was \$2,037,377 and was included in the balance outstanding in the accompanying condensed balance sheet.

As of the date of this prospectus, the Company is in compliance with all covenants of the Secured Notes.

At March 31, 2016, the Secured Notes payable consisted of the following:

Senior Notes	\$ 14,750,000
Accrued interest	2,037,377
Debt Discount	<u>(130,331)</u>
 Senior secured convertible promissory notes payable, net	 <u><u>\$ 16,657,046</u></u>

ATOMERA INCORPORATED
NOTES TO THE CONDENSED FINANCIAL STATEMENTS
Periods Ended March 31, 2016 and 2015
(unaudited)

5. RELATED PARTY TRANSACTIONS

On January 14, 2005, the Company executed a Secured Promissory Note (the Promissory Note) with an officer of the Company. Under the Promissory Note, the officer borrowed \$187,500 from the Company. The Promissory Note bore interest at a fixed rate of 3.76% per annum, with interest-only payments due annually through the maturity date of January 14, 2014. In December 2015, the Company agreed to extend the term of the note to January 14, 2019, subject to acceleration in the event of the sale of the sale or liquidation of the Company, bankruptcy or like event. Effective January 2016 the Company cancelled the outstanding principal of the note in the amount of \$187,500. The cancellation of this note was recognized as a bonus to the officer and included in general and administrative expenses in the accompanying condensed statement of operations for the three month period ended March 31, 2016. As of the date of the cancellation of the Promissory Note, there was accrued and unpaid interest under the note in the amount of \$7,050, which amount has been repaid by the officer. In return for the cancellation of the note, the officer was required to reimburse the Company for withholding taxes payable by the Company, in the amount of \$13,998.

During the three month periods ended March 31, 2016 and 2015, a director, who is also a shareholder of the Company, was paid \$3,000 and \$4,000, respectively, for his work as a consultant for the Company.

A director and shareholder of the Company is a partner of a law firm that serves as legal counsel for the Company. During the three months ended March 31, 2016 and 2015, this law firm billed the Company \$0 and \$18,104, respectively. Included in current liabilities on the accompanying condensed balance sheets at March 31, 2016 and December 31, 2015, is \$1,310 and \$1,310, respectively owed to this law firm.

6. WARRANTS

The Company had no warrant activity in the three months ended March 31, 2016. As of March 31, 2016, warrants to purchase an aggregate of 302,751 shares of common stock were outstanding with a weighted average exercise price of \$23.58 per share and have weighed average remaining life of 2.6 years.

The warrants outstanding at March 31, 2016 had an aggregate intrinsic value of \$967,200.

ATOMERA INCORPORATED
NOTES TO THE CONDENSED FINANCIAL STATEMENTS
Periods Ended March 31, 2016 and 2015
(unaudited)

7. STOCK OPTION PLAN

A summary of the activity under the Employee Stock Option Plan and 2007 Equity Incentive Plan for the three months ended March 31, 2016 is as follows:

	Number of Shares	Weighted- Average Exercise Prices	Weighted- Average Remaining Contractual Term (In Years)
Outstanding at January 1, 2016	511,245	\$ 7.05	9.4
Granted	26,776	\$ 5.70	9.9
Cancelled	(7)	\$ 5.70	-
Outstanding at March 31, 2016	538,014	\$ 6.98	9.2
Exercisable at March 31, 2016	202,280	\$ 6.15	8.6
Vested and expected to vest at March 31, 2016	527,788	\$ 5.81	9.1

During the three months ended March 31, 2016, the Company granted options under its Employee Stock Option Plan to purchase 26,776 shares of its common stock to its employees. The fair value of these options granted was \$70,649.

The total number of options available for grant was 75,312 as of March 31, 2016.

The following table summarizes the stock-based compensation expense recorded in the Company's results of operations during the three months ended March 31, 2016 and 2015:

	Three Months Ended	
	2016	2015
General and administrative	\$ 47,816	\$ 236,429
Research and development	9,013	76,747
	<u>\$ 56,829</u>	<u>\$ 313,176</u>

The Company records compensation expense for employee awards with graded vesting using the straight-line method. The Company records compensation expense for nonemployee awards with graded vesting using the accelerated expense attribution method. The Company recognizes compensation expense over the requisite service period applicable to each individual award, which generally equals the vesting term. Estimated prospective forfeitures are incorporated in the determination of compensation cost to be recognized. The Company applied an expected forfeiture rate of 4.77% to non-vested stock options for which expense was recognized during the periods ended March 31, 2016 and 2015.

ATOMERA INCORPORATED
NOTES TO THE CONDENSED FINANCIAL STATEMENTS
Periods Ended March 31, 2016 and 2015
(unaudited)

The Company estimates the fair value of each option award using the Black-Scholes-Merton option pricing model.

The fair values of options granted during the three months ended March 31, 2016 were calculated using the following assumptions:

Assumptions:	
Expected volatility	46.54%
Weighted average expected term (in years)	6.12
Risk-free interest rate	1.62%
Expected dividend yield	0%

The risk-free interest rate was obtained from U.S. Treasury rates for the applicable periods. The Company's expected volatility was based upon the historical volatility for industry peers and used an average of those volatilities. The expected life of the Company's options was determined using the simplified method as a result of limited historical data regarding the Company's activity. The dividend yield considers that the Company has not historically paid dividends, and does not expect to pay dividends in the foreseeable future.

The fair value of the common stock was determined by the board of directors based on a variety of factors, including valuations prepared by third parties, the Company's financial position, the status of development efforts within the Company, the current climate in the marketplace and the prospects of a liquidity event, among others.

As of March 31, 2016, there was approximately \$684,000 of total unrecognized compensation expense related to non-vested share-based compensation arrangements that are expected to vest. This cost is expected to be recognized over a weighted-average period of 3.5 years.

8. COMMITMENTS AND CONTINGENCIES

Incentive Bonus

During September 2015, the Board of Directors resolved to pay an incentive bonus to certain directors and officers contingent upon the Company being listed on the NASDAQ stock exchange before May 31, 2016 (subsequently extended to May 31, 2017 by the Board of Directors during February 2016) in connection with an initial public offering (IPO) with net proceeds of at least \$15 million and a post-IPO valuation of at least \$50 million and that the directors and officers continue to be in service with the Company until the IPO is closed. If these circumstances are met, a total bonus of \$1,651,369 will be paid to employees in the form of common stock, convertible at the greater of the IPO price to the public or \$3.681 per share. These incentive agreements also provide that an officer or director may continue to be eligible for the incentive bonus if their service with the Company terminates without cause or the officer or director resigns with good reason.

ATOMERA INCORPORATED
NOTES TO THE CONDENSED FINANCIAL STATEMENTS
Periods Ended March 31, 2016 and 2015
(unaudited)

Litigation

In May 2013, the Company initiated a civil action in U.S. federal court against another company (the “Defendant”), alleging patent infringement. During December 2014, the court entered an order granting summary judgment in favor of the Defendant on the issue of whether the Defendant is infringing on the Company’s patents, and on December 14, 2015 a final judgment was entered and the Company agreed to pay the Defendant approximately \$47,000 for costs related to the lawsuit, which was paid in January 2016. In January 2015, the Defendant filed a motion with the court to recover from the Company its attorney’s fees and costs. The court denied the Defendant’s motion for reimbursement of fees and costs in December 2015.

In January 2016 the Company filed an appeal with the United States Court of Appeals for the Federal Circuit of the trial court’s judgment in favor of the Defendant and in the same month the Defendant filed an appeal with the United States Court of Appeals for the Federal Circuit of the trial court’s denial of their motion to recover attorney’s fees and costs. The Defendant has not asserted any amount of fees or costs it is seeking on appeal.

Operating Leases

On November 5, 2014, the Company entered a lease agreement for the use of 1,730 square feet of office space in Wellesley Hills, Massachusetts. The lease with monthly payments of \$4,613 commenced on December 1, 2014 and expires on November 30, 2016.

On January 19, 2016, the Company entered into a real estate lease agreement for a 3,396 square foot office facility in Los Gatos, California as its new corporate headquarters. The lease commenced on February 1, 2016 and expires on January 31, 2018. The lease rate is \$12,395 per month, which will increase to \$13,074 per month commencing February 1, 2017.

Rent expense was \$39,606 and \$13,840 during the three months ended March 31, 2016 and 2015, respectively.

ATOMERA INCORPORATED
NOTES TO THE CONDENSED FINANCIAL STATEMENTS
Periods Ended March 31, 2016 and 2015
(unaudited)

Approximate future minimum lease payments required under the operating leases are as follows:

Years ending December 31,	Amount
Remaining period in 2016	\$ 148,500
2017	156,200
2018	13,100
Total	<u>\$ 317,800</u>

Officer Compensation

In January 2016, the Company entered into employment agreements with three officers. The agreements call for an annual base salary of \$250,000 and a bonus of up to 30% of base salary for one officer and annual base salaries of \$220,000 and a bonus of up to 15% of base salary for the other two officers. In the event of involuntary termination, each officer is entitled to six months of severance pay. In June 2016, the Company terminated one of the officers effective as of June 30, 2016.

In February 2016, the Company entered into an employment agreement with an officer. The agreement calls for an annual base salary of \$225,000 and a bonus of up to 30% of base salary. In the event of involuntary termination, the officer is entitled to six months of severance pay.

9. SUPPLEMENTAL CASH FLOW INFORMATION

The accompanying condensed statement of cash flows for the three months ended March 31, 2015 excludes the effect of \$7,349,226 of non-cash financing activities related to the exchange of unsecured convertible promissory notes for Secured Notes (Note 4).

10. SUBSEQUENT EVENTS

During April 2016, the Company issued additional Secured Notes with certain investors in the aggregate principal amount of \$5,958,433, of which \$2,630,820 is from existing investors. These notes have the same terms as the previous Secured Notes (Note 4) and mature on May 31, 2017. NSC acted as placement agent and the Company paid NSC a brokerage commission in the amount of ten percent of the proceeds from the Secured Notes placed by NSC, or \$437,778, and issued to NSC a warrant to purchase ten percent of the common shares issuable upon conversion of Secured Notes in the principal amount of \$4,377,781 at an exercise price equal to the conversion price of the Secured Notes. In June 2016, and prior to any exercise of the warrant, NSC elected to cancel the warrant in full and for no consideration.

During April 2016, the Board of Directors of the Company resolved that upon the completion of an IPO the 2007 Stock Incentive Plan shall be amended to increase common shares issuable thereunder to 20% of the total issued and outstanding shares of Common Stock on a fully-diluted basis immediately after the IPO.

In July 2016, the Company and certain officers and directors with whom the Company had agreed to grant certain incentive share bonuses (Note 8) agreed to cancel the share bonuses in return for the Company's agreement to grant each recipient, upon the close of the Company's initial public offering, shares of the Company's restricted common stock pursuant to restricted stock agreements. The restricted stock agreements provided that the Company will issue to the recipients an aggregate of 440,364 shares of the Company's common stock and that all shares remain subject to forfeiture, until the prescribed vesting date, in the event the recipient fails to remain in service to the Company for any reason other than the Company's termination without cause or the recipient's resignation for good reason. The restricted stock agreements provide that 15% of the share award will vest upon the six month anniversary of the date of grant and that 15% of the share award will vest on each monthly anniversary of the initial vesting date until the award is fully vested on the one year anniversary of the date of grant.

3,200,000 Shares of Common Stock

Atomera Incorporated

PROSPECTUS

National Securities Corporation

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

ITEM 13. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION

The following table sets forth the various expenses to be incurred in connection with the sale and distribution of our common stock being registered hereby, all of which will be borne by us (except any underwriting discounts and commissions and expenses incurred for brokerage, accounting, tax or legal services or any other expenses incurred in disposing of the shares). All amounts shown are estimates except the SEC registration fee.

SEC Filing Fee	\$ 3,126.74
FINRA Fee	\$ 4,640.00
Underwriter's Legal Fees and Expenses.	\$ 185,000.00
Nasdaq Fee	\$ 50,000.00
Printing Expenses	\$ 15,000.00
Accounting Fees and Expenses	\$ 175,000.00
Legal Fees and Expenses	\$ 225,000.00
Transfer Agent and Registrar Expenses	\$ 15,000.00
Miscellaneous	\$ 27,233.26
Total	\$ 700,000.00

ITEM 14. INDEMNIFICATION OF DIRECTORS AND OFFICERS

The following summary is qualified in its entirety by reference to the complete text of any statutes referred to below and the certificate of incorporation of Atomera Incorporated, a Delaware corporation.

Section 145 of the General Corporation Law of the State of Delaware (the "DGCL") permits a Delaware corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe the person's conduct was unlawful.

In the case of an action by or in the right of the corporation, Section 145 of the DGCL permits a Delaware corporation to indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees) actually and reasonably incurred by the person in connection with such action, suit or proceeding if the person acted in good faith and in a manner the person reasonably believed to be in or not opposed to the best interests of the corporation and except that no indemnification shall be made in respect of any claim, issue or matter as to which such person shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses that the Court of Chancery or such other court shall deem proper.

Section 145 of the DGCL also permits a Delaware corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against such person and incurred by such person in any such capacity, or arising out of such person's status as such, whether or not the corporation would have the power to indemnify such person against such liability under Section 145 of the DGCL.

Article Sixth of our Amended and Restated Certificate of Incorporation states that to the fullest extent permitted by the DGCL our directors shall not be personally liable to us or to our stockholders for monetary damages for breach of fiduciary duty as a director. If the DGCL is amended after the date hereof to authorize corporate action further eliminating or limiting the personal liability of directors, then the liability of our directors shall be eliminated or limited to the fullest extent permitted by the DGCL, as so amended.

Article Seventh of our Amended and Restated Certificate of Incorporation requires us, to the fullest extent permitted by applicable law, to provide indemnification of (and advancement of expenses to) our directors and officers, and authorizes us, to the fullest extent permitted by applicable law, to provide indemnification of (and advancement of expenses to) to other employees and agents (and any other persons to which the DGCL permits us to provide indemnification) through bylaw provisions, agreements with such directors, officers, employees, agents or other persons, vote of stockholders or disinterested directors or otherwise, subject only to limits created by the DGCL with respect to actions for breach of duty to our corporation, our stockholders and others.

Article Seventh of our Amended and Restated Certificate of Incorporation provides that we shall, to the maximum extent and in the manner permitted by the DGCL, indemnify each of our directors and officers against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was a director of the Company. Article Seventh of our Amended and Restated Certificate of Incorporation also provides that we may, to the maximum extent and in the manner permitted by the DGCL, indemnify each of our employees, officers and agents against expenses (including attorneys' fees), judgments, fines, settlements and other amounts actually and reasonably incurred in connection with any proceeding, arising by reason of the fact that such person is or was an employee, officer or agent of the Company. The right to indemnification conferred by Article Seventh includes the right to be paid by us the expenses incurred in defending any action or proceeding for which indemnification is required or permitted following authorization thereof by the board of directors shall be paid in advance of the final disposition of such action or proceeding upon receipt of an undertaking by or on behalf of the indemnified party to repay such amount if it shall ultimately be determined by final judicial decision from which there is no further right to appeal that the indemnified party is not entitled to be indemnified as authorized in Article Seventh of our Amended and Restated Certificate of Incorporation. We may maintain insurance, at our expense, to protect the Company and any of our directors, officers, employees or agents against any such expense, liability or loss, whether or not we have the power to indemnify such person.

Prior to the closing of this offering we plan to enter into an underwriting agreement, which will provide that the underwriters are obligated, under some circumstances, to indemnify our directors, officers and controlling persons against specified liabilities.

ITEM 15. RECENT SALES OF UNREGISTERED SECURITIES

Since November 1, 2012, we issued the following securities without registration under the Securities Act of 1933, as amended.

In December 2012 through February 2013, we sold 411,090 shares of our common stock to 53 accredited investors at a price of \$3.75 per share. The issuances were exempt pursuant to Section 4(a)(2) of the Securities Act and Rule 506 thereunder.

On February 9, 2015, we issued to Liquid Patent Consulting, LLC warrants to purchase 198,767 shares of our common stock at an exercise price of \$0.15 per share over a five-year term. The issuance was exempt pursuant to Section 4(a)(2) of the Securities Act.

From 2012 through 2014, we conducted an offering of convertible promissory notes, which we refer to as our previously issued promissory notes, to 59 accredited investors for cash consideration of \$6,666,828. On March 17, 2015, we consummated an offering of \$14.75 million in principal amount of our senior secured convertible promissory notes for cash consideration of \$7.4 million and an exchange of the previously issued promissory notes, which at the time of exchange represented of \$7.35 million of indebtedness, including \$689,381 of accrued interest. On April 1, 2016, we completed the private placement of an additional \$5.96 million in senior secured convertible notes on the same terms as the promissory notes placed in March 2015. We refer to these promissory notes as the "convertible notes." Interest accrues on the unpaid principal amount under the convertible notes at the rate of ten percent (10%) per year, except during any event of default under the convertible notes in which case the interest rate shall be twelve percent (12%) per year. All principal and interest under the convertible notes are due and payable on May 31, 2017. All principal and interest under the convertible notes are convertible into shares of our common stock upon the close of the offering to which this registration statement relates at a conversion price equal to 50% of the public offering price. The notes were issued pursuant to Section 4(a)(2) of the Securities Act and Rule 506 thereunder. All of the investors were accredited investors as such term is defined in Rule 501 under the Securities Act.

National Securities Corporation acted as placement agent in connection with the March 2015 and April 2016 placements of convertible notes. We paid National Securities Corporation a 10% selling commission on all convertible notes sold by National Securities. We also issued to National Securities warrants to purchase shares of our common stock equal to 10% of our common stock issuable upon conversion of the convertible notes in the original principal amount of \$11,750,338, our representing the notes sold by National Securities in the March 2015 and April 2016 placements at an exercise price equal to the note conversion price of \$3.75 per share. The warrant issuances were exempt pursuant to Section 4(a)(2) of the Securities Act. In June 2016, and prior to any exercise of the warrants, National Securities elected to cancel the warrant to purchase 116,741 shares of common stock, in full and for no consideration, issued to National Securities in connection with the April 2016 placement.

We believe the offers, sales and issuances of the above securities by us were exempt from registration under the Securities Act by virtue of Section 4(a)(2) of the Securities Act as transactions not involving a public offering. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates, notes and warrants issued in these transactions. All recipients had adequate access, through their relationships with us, to information about our Company. The sales of these securities were made without any general solicitation or advertising.

Between October 28, 2015 and December 7, 2015, we conducted an offer to exchange with the holders of our outstanding options and warrants pursuant to which we offered to issue to such holders one share of our common stock for every option or warrant to purchase two shares of our common stock. In the exchange, the holders of options representing the right to purchase 166,231 shares of our common stock exchanged those options for 83,115 shares of our common stock (after adjustments for fractional shares) and the holders of warrants to purchase 602,103 shares of our common stock exchanged those warrants for 301,052 shares of our common stock (after adjustments for fractional shares). The offer to exchange was conducted by our management and no commissions or other remuneration was paid to our management or anyone else in the offer to exchange. The holders of options and warrants were not required to provide any consideration other than the options or warrants delivered in the exchange. The offer to exchange and the issuance of shares of common stock in the exchange were exempt pursuant to Section 3(a)(9) of the Securities Act.

ITEM 16. EXHIBITS

Exhibit No.	Description of Document
1.1	Form of Underwriting Agreement
3.1*	Amended and Restated Certificate of Incorporation of the Registrant
3.2*	Amended and Restated Bylaws of the Registrant
3.3*	Certificate of Amendment to Certificate of Incorporation of the Registrant
3.4*	Certificate of Amendment to Certificate of Incorporation of the Registrant
4.1	Specimen Certificate representing shares of common stock of Registrant
4.2*	Warrant dated February 9, 2015 issued to Liquid Patent Advisors, LLC
4.3*	Form of Senior Secured Convertible Promissory Note issued by the Registrant to investors in the offering completed on March 17, 2015
4.4*	Warrant dated March 17, 2015 issued to National Securities Corporation
4.5*	Form of Senior Secured Convertible Promissory Note issued by the Registrant to investors in the offering completed on April 1, 2016
4.6	Form of Underwriter's Warrant
5.1	Opinion of Greenberg Traurig, LLP regarding the validity of the common stock being registered
10.1*	Secured Promissory Note dated January 14, 2005 made by Dr. Robert Mears
10.2*	Pledge and Security Agreement dated January 14, 2005 between Dr. Robert Mears and the Registrant
10.3*	Assignment of Patent Rights dated April 3, 2009 between Dr. Robert Mears and the Registrant
10.4*	License Agreement dated December 22, 2006 between ASM International, NV and the Registrant
10.5+*	2007 Stock Incentive Plan
10.6*	Exclusive License and Collaboration Agreement dated March 3, 2010 between K2 Energy Limited and the Registrant
10.7*	Letter Agreement dated June 6, 2014 between K2 Energy Limited and the Registrant
10.8*	Amendment No. 1 dated March 11, 2015 to Third Amended and Restated Investor Rights Agreement dated November 11, 2011
10.9*	Engagement Agreement dated October 10, 2014 between Liquid Venture Partners, LLC and the Registrant
10.10*	Engagement Agreement dated February 9, 2015 between Liquid Patent Advisors, LLC and the Registrant
10.11*	Securities Purchase Agreement dated March 17, 2015 between the Purchasers of Senior Secured Convertible Promissory Notes and the Registrant

II-3

Exhibit No.	Description of Document
10.12*	Registration Rights Agreement dated March 17, 2015 between the Purchasers of Senior Secured Convertible Promissory Notes and the Registrant
10.13*	Security Agreement dated March 17, 2015 between the Purchasers of Senior Secured Convertible Promissory Notes and the Registrant
10.14+*	Executive Employment Agreement dated October 16, 2015 between Scott Bibaud and the Registrant
10.15*	Allonge to Secured Promissory Note dated December 4, 2015 between Dr. Robert Mears and the Registrant
10.16+*	Employment Agreement dated January 1, 2016 between Erwin Trautmann and the Registrant
10.17+*	Employment Agreement dated January 1, 2016 between Ron Cope and the Registrant
10.18+*	Employment Agreement dated January 13, 2016 between Dr. Robert Mears and the Registrant
10.19+*	Letter Agreement regarding loan forgiveness dated January 13, 2016 between Dr. Robert Mears and the Registrant
10.20*	Lease Agreement dated January 19, 2016 between 750 University, LLC and the Registrant
10.21+*	Employment Agreement dated February 23, 2016 between Francis Laurencio and the Registrant
10.22+*	Amendment No. 1 dated February 26, 2016 to Employment Agreement dated October 12, 2015 between Scott Bibaud and the Registrant
10.23*	Consent and Amendment Agreement dated April 1, 2016 between the Purchasers of the March 2015 Senior Secured Convertible Promissory Notes and the Registrant
10.24*	Securities Purchase Agreement dated April 1, 2016 between the Purchasers of Senior Secured Convertible Promissory Notes and the Registrant
10.25*	Amended and Restated Registration Rights Agreement dated April 1, 2016 between the Purchasers of Senior Secured Convertible Promissory Notes and the Registrant
10.26*	Amended and Restated Security Agreement dated April 1, 2016 between the Purchasers of Senior Secured Convertible Promissory Notes and the Registrant
10.27+	Form of Restricted Stock Agreement
21.1*	List of Subsidiaries
23.1	Consent of Marcum LLP, Independent Registered Public Accounting Firm

23.2	Consent of Greenberg Traurig, LLP (included in Exhibit 5.1)
24.1*	Power of Attorney (included on page II-5)

* Previously filed

+ Indicates management compensatory plan, contract or arrangement

ITEM 17. UNDERTAKINGS

The undersigned registrant hereby undertake to provide to the underwriter at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriters to permit prompt delivery to each purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant undertakes that:

- (1) For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus as filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
- (2) For the purpose of determining any liability under the Securities Act, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Amendment No. 1 to Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Los Gatos, California, on this 29th day of July 2016.

ATOMERA INCORPORATED

/s/ Scott A. Bibaud

Scott A. Bibaud
Chief Executive Officer and Director
(Principal Executive Officer)

POWER OF ATTORNEY

Each person whose signature appears below constitutes and appoints Scott A. Bibaud, his true and lawful attorney-in-fact and agent, each with full power of substitution and resubstitution, severally, for him and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this registration statement on Form S-1, any subsequent registration statements pursuant to Rule 462 of the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof. This power of attorney may be executed in counterparts.

Pursuant to the requirements of the Securities Act of 1933, this Amendment No. 1 to Registration Statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ *</u> John Gerber	Chairman of the Board of Directors	July 29, 2016
<u>/s/ Scott A. Bibaud</u> Scott A. Bibaud	Chief Executive Officer and Director (Principal Executive Officer)	July 29, 2016
<u>/s/ Francis Laurencio</u> Francis Laurencio	Chief Financial Officer (Principal Financial and Accounting Officer)	July 29, 2016
<u>/s/ *</u> Erwin Trautmann	Director	July 29, 2016
<u>/s/ *</u> C. Rinn Cleavelin, Ph.D.	Director	July 29, 2016
<u>/s/ *</u> Rolf Stadheim	Director	July 29, 2016

*By: /s/ Scott A. Bibaud
Scott A. Bibaud
Attorney-in-fact

ATOMERA INCORPORATED
UNDERWRITING AGREEMENT

New York, New York
August __, 2016

National Securities Corporation,
As Representative of the Several Underwriters
410 Park Avenue, 14th Floor
New York, NY 10022

Ladies and Gentlemen:

The undersigned, Atomera Incorporated (f/k/a Mears Technologies, Inc.), a company formed under the laws of the Delaware (“**Company**”), hereby confirms its agreement with National Securities Corporation (hereinafter referred to as “**you**” (including its correlatives) or the “**Representative**”) and with the other underwriters named on Schedule 1 hereto for which the Representative is acting as representative (the Representative and such other underwriters being collectively called the “**Underwriters**” or, individually, an “**Underwriter**”) as follows:

1. Purchase and Sale of Securities.

1.1. Firm Securities.

1.1.1. Nature and Purchase of Firm Securities.

(i) On the basis of the representations and warranties herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell, severally and not jointly, to the several Underwriters, an aggregate of [●] shares (“**Firm Shares**”) of the Company’s common stock, par value \$0.001 per share (the “**Common Stock**”).

(ii) The Underwriters, severally and not jointly, agree to purchase from the Company the number of Firm Shares set forth opposite their respective names on Schedule 1 attached hereto and made a part hereof at a purchase price (net of discounts and commissions) of \$ ____ per Share [*91.5% of the per Share offering price*]. The Firm Shares are to be offered initially to the public (the “**Offering**”) at the offering price set forth on the cover page of the Prospectus (as defined in Section 2.1.1 hereof).

1.1.2. Shares Payment and Delivery.

(i) Delivery and payment for the Firm Shares shall be made at 10:00 a.m., Eastern time, on the third (3rd) Business Day following the effective date (the “**Effective Date**”) of the Registration Statement (as defined in Section 2.1.1 below) (or the fourth (4th) Business Day following the Effective Date, if the Registration Statement is declared effective on or after 4:30 p.m.) or at such earlier time as shall be agreed upon in writing by the Representative and the Company at the offices of Golenbock Eiseman Assor Bell & Peskoe LLP, counsel to the Underwriters (“**GEAB&P**”), or at such other place (or remotely by facsimile or other electronic transmission) as shall be agreed upon in writing by the Representative and the Company. The hour and date of delivery and payment for the Firm Shares is called the “**Closing Date**.”

(ii) Payment for the Firm Shares shall be made on the Closing Date by wire transfer in Federal (same day) funds, payable to the order of the Company upon delivery of the certificates (in form and substance satisfactory to the Underwriters) representing the Firm Shares (or through the facilities of the Depository Trust Company (the “**DTC**”)) for the account of the Underwriters. The Firm Shares shall be registered in such name or names and in such authorized denominations as the Representative may request in writing at least two (2) full Business Days prior to the Closing Date. The Company shall not be obligated to sell or deliver the Firm Shares except upon tender of payment by the Representative for all the Firm Shares. The term “**Business Day**” means any day other than a Saturday, a Sunday or a legal holiday or a day on which banking institutions are authorized or obligated by law to close in New York City.

1.2. Over-allotment Option.

1.2.1. Option Shares. For the purposes of covering any over-allotments in connection with the distribution and sale of the Firm Shares, the Underwriters are hereby granted, an option to purchase up to [●] shares of Common Stock representing fifteen percent (15%) of the Firm Shares sold in the offering from the Company (the “**Over-allotment Option**”). Such additional Over-allotment Option shares of Common Stock, the net proceeds of which will be deposited with the Company’s account, are hereinafter referred to as “**Option Shares**.” The purchase price to be paid for the Option Shares will be the same price per Option Share as the price per Firm Shares set forth in Section 1.1.1 hereof. The Firm Shares and the Option Shares are hereinafter referred to collectively as the “**Public Securities**.”

1.2.2. Exercise of Option. The Over-allotment Option granted pursuant to Section 1.2.1 hereof may be exercised by the Representative as to all (at any time) or any part (from time to time) of the Option Shares within 45 days after the Effective Date. The Underwriters will not be under any obligation to purchase any Option Shares prior to the exercise of the Over-allotment Option. The Over-allotment Option granted hereby may be exercised by the giving of oral notice to the Company from the Representative, which must be confirmed in writing by overnight mail or facsimile or other electronic transmission setting forth the number of Option Shares to be purchased and the date and time for delivery of and payment for the Option Shares (the “**Option Closing Date**”), which will not be later than five (5) full Business Days after the date of the notice or such other time as shall be agreed upon in writing by the Company and the Representative, at the offices of GEAB&P or at such other place (including remotely by facsimile or other electronic transmission) as shall be agreed upon in writing by the Company and the Representative. If such delivery and payment for the Option Shares does not occur on the Closing Date, the Option Closing Date will be as set forth in the notice. Upon exercise of the Over-allotment Option, the Company will become obligated to convey to the Underwriters, and, subject to the terms and conditions set forth herein, the Underwriters will become obligated to purchase, the number of Option Shares specified in such notice.

1.2.3. Payment and Delivery. Payment for the Option Shares will be made on the Option Closing Date by wire transfer in Federal (same day) funds as follows: \$[____] per Option Share, [*91.5% of the per Option Share offering price*], payable to the order of the Company upon delivery of certificates (in form and substance satisfactory to the Underwriters) representing the Option Shares (or through the facilities of DTC) for the account of the Underwriters. The Option Shares shall be registered in such name or names and in such authorized denominations as the Representative may request in writing at least two (2) full Business Days prior to the Option Closing Date. The Company shall not be obligated to sell or deliver the Option Shares except upon tender of payment by the Representative for applicable Option Shares.

1.3. Underwriters' Warrants. The Company hereby agrees to issue and sell to the Representative on the Closing Date and Option Closing Date warrants to purchase that number of shares of Common Stock equal to an aggregate of 10% of the amount of Firm Shares and Options Shares, respectively, sold in the Offering (the "**Underwriters' Warrants**"). The Underwriters' Warrants as evidenced by the Underwriters' Warrant Agreement, in the form attached hereto as Exhibit A, shall be exercisable, in whole or in part, commencing twelve (12) months after the Effective Date and expiring five (5) years after the Effective Date at an initial exercise price per share of \$[] [*125% of the per Share offering price*]. The Underwriters' Warrants and the shares of Common Stock issuable upon exercise thereof ("**Warrant Shares**") are sometimes referred to herein collectively as the "**Warrant Securities**." The Representative understands and agrees that there are significant restrictions pursuant to FINRA Rule 5110 against transferring the Warrant Securities and by its acceptance thereof shall agree that it will not, sell, transfer, assign, pledge or hypothecate the Warrant Securities, or any portion thereof, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of such securities other than in accordance with FINRA Rule 5110. Notwithstanding anything in this Agreement to the contrary, the Warrant Securities may not be sold, transferred, assigned, pledged or hypothecated prior to the date that is three hundred sixty-five (365) days immediately following the Effective Date.

2. Representations and Warranties of the Company. The Company represents and warrants to the Underwriters as of the Applicable Time (as defined below) and as of the Closing Date and as of the Option Closing Date, if any, as follows:

2.1. Filing of Registration Statement.

2.1.1. Pursuant to the Act. The Company has filed with the Securities and Exchange Commission (the "**Commission**") a registration statement and an amendment or amendments thereto, on Form S-1 (File No. 333-xxxxxx), including any related preliminary prospectus or prospectuses, including those that omitted information pursuant to Rule 430A, for the registration of the Public Securities under the Securities Act of 1933, as amended (the "**Act**"), which registration statement and amendment or amendments have been prepared by the Company in all material respects in conformity with the requirements of the Act and the rules and regulations of the Commission under the Act (the "**Regulations**"). Except as the context may otherwise require, such registration statement on file with the Commission at the time the registration statement becomes effective (including the prospectus, financial statements, schedules, exhibits and all other documents filed as a part thereof or incorporated therein by reference pursuant to Item 12 of Form S-1 and all information deemed to be a part thereof as of the Effective Date pursuant to paragraph (b) of Rule 430A of the Regulations and any registration statement filed pursuant to Rule 462(b)) is referred to herein as the "**Registration Statement**." As used herein, the term "**Preliminary Prospectus**" shall mean the preliminary prospectus dated [], 2016 made part of the Registration Statement. The final prospectus in the form first furnished to the Underwriters for use in the Offering is hereinafter called the "**Prospectus**." The Registration Statement has been declared effective by the Commission on the date hereof. "**Applicable Time**" means 5:00 p.m. on the Effective Date or such other time as agreed to in writing by the Company and the Representative.

2.1.2. Pursuant to the Exchange Act. The Company has filed with the Commission a Form 8-A (File Number) providing for the registration under the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"), of the Firm Shares, and the Option Shares. The registration of the Firm Shares and the Option Shares under the Exchange Act has been declared effective by the Commission on the date hereof.

2.2. No Stop Orders, etc. Neither the Commission nor, to the Company's knowledge, any state regulatory authority has issued any order preventing or suspending the use of the Preliminary Prospectus, the Prospectus or the Registration Statement or has instituted or, to the Company's knowledge, threatened to institute any proceedings with respect to such an order.

2.3. Disclosures in Registration Statement.

2.3.1. 10b-5 Representation. At the respective times of use of the Preliminary Prospectus and Prospectus and the effectiveness of the Registration Statement and any post-effective amendments thereto (and at the Closing Date and the Option Closing Date, if any):

(i) The Preliminary Prospectus, Prospectus, Registration Statement and any post-effective amendments thereto did and will contain all material statements that are required to be stated therein in accordance with the Act and the Regulations, and will in all material respects conform to the requirements of the Act and the Regulations;

(ii) Neither the Preliminary Prospectus, the Prospectus nor the Registration Statement, nor any amendment or supplement thereto, on such dates, do or will contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading. The representation and warranty made in this Section 2.3.1(ii) does not apply to statements made or statements omitted in reliance upon and in conformity with written information furnished to the Company with respect to the Underwriters by the Representative expressly for use in the Preliminary Prospectus, the Prospectus or the Registration Statement or any amendment thereof or supplement thereto. The parties acknowledge and agree that such information provided by or on behalf of any Underwriter consists solely of the names of the Underwriters appearing in the “Underwriting” section of the Prospectus and the following additional disclosure contained in the “Underwriting” section of the Prospectus: (i) the [**fourth and sixth**] paragraphs under “Underwriting,” (ii) the statements in “Underwriting - Determination of Offering Price,” and (iii) the [**first**] paragraph under “Underwriting - Short Positions and Penalty Bids.” (the “**Underwriters’ Information**”).

2.3.2. Disclosure of Agreements. The agreements and documents described in the Preliminary Prospectus, the Prospectus and the Registration Statement conform to the descriptions thereof contained therein and there are no agreements or other documents required by the Act and the Regulations to be described therein or to be filed with the Commission as exhibits to the Registration Statement, that have not been so described or filed. Each agreement or other instrument (however characterized or described) to which the Company is a party or by which it is or may be bound or affected and (i) that is referred to in the Preliminary Prospectus or the Prospectus, or (ii) is material to the Company’s business, has been duly authorized and validly executed by the Company, is in full force and effect in all material respects and is enforceable against the Company and, to the Company’s knowledge, the other parties thereto, in accordance with its terms, except (x) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors’ rights generally, (y) as enforceability of any indemnification or contribution provision may be limited under the federal or state securities laws, and (z) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefore may be brought. None of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the Company’s knowledge, any other party is in default thereunder and, to the Company’s knowledge, no event has occurred that, with the lapse of time or the giving of notice, or both, would constitute a default thereunder. To the Company’s knowledge, performance by the Company of the material provisions of such agreements or instruments will not result in a violation of any existing applicable law, rule, regulation, judgment, order or decree of any governmental agency or court, domestic or foreign, having jurisdiction over the Company or any of its assets or businesses, including, without limitation, those relating to environmental laws and regulations.

2.3.3. Prior Securities Transactions. No securities of the Company that are required to be “integrated” pursuant to the Act or the regulations thereunder with the offer and sale of the shares of Common Stock pursuant to the Registration Statement have been offered or sold, either prior to the initial filing of the Registration Statement or the Effective Date, by the Company or, to the Company’s knowledge, any of its affiliates or by or on behalf of, or for the benefit of, any person or persons controlling, controlled by, or under common control with the Company, except as disclosed in the Registration Statement.

2.4. Changes After Dates in Registration Statement.

2.4.1. No Material Adverse Change. Since the respective dates as of which information is given in the Registration Statement and the Prospectus, except as otherwise specifically stated therein: (i) there has been no material adverse change in the condition, financial or otherwise, of the Company taken as a whole; (ii) there have been no material transactions entered into by the Company required to be disclosed in the Prospectus or the Registration Statement, other than as contemplated pursuant to this Agreement; and (iii) no officer or director of the Company has resigned from any position with the Company.

2.4.2. Recent Securities Transactions, etc. Subsequent to the respective dates as of which information is given in the Registration Statement and the Prospectus, and except as may otherwise be indicated or contemplated herein or disclosed in the Registration Statement and the Prospectus, the Company has not: (i) issued any securities or incurred any liability or obligation, direct or contingent, for borrowed money; or (ii) declared or paid any dividend or made any other distribution on or in respect to its capital stock.

2.5. Independent Accountants. To the knowledge of the Company, Marcum LLP (“**Marcum**”), whose report is filed with the Commission as part of the Registration Statement, are independent registered public accountants as required by the Act and the Regulations. Marcum has not, during the periods covered by the financial statements included in the Prospectus, provided to the Company any non-audit services, as such term is used in Section 10A(g) of the Exchange Act.

2.6. Financial Statements. The financial statements, including the notes thereto and supporting schedules, if any, included in the Preliminary Prospectus, the Prospectus and the Registration Statement fairly present the financial position and the results of operations of the Company at the dates and for the periods to which they apply; and such financial statements have been prepared in conformity with generally accepted accounting principles (“**GAAP**”), consistently applied throughout the periods involved; and the supporting schedules included in the Registration Statement, if any, present fairly the information required to be stated therein. The Preliminary Prospectus, the Prospectus and the Registration Statement discloses all material off-balance sheet transactions, arrangements, obligations (including contingent obligations), and other relationships of the Company with unconsolidated entities or other persons required to be disclosed under Item 303(a)(4) of Regulation S-K.

2.7. Authorized Capital; Options, etc. The Company had, at the date or dates indicated in the Preliminary Prospectus, the Prospectus and the Registration Statement, the duly authorized, issued and outstanding capitalization as set forth therein. Based on the assumptions stated in the Preliminary Prospectus, the Prospectus and the Registration Statement, the Company will have on the Closing Date the adjusted stock capitalization set forth therein (as such adjusted stock capitalization may be further adjusted for the final determination of the shares of Common Stock to be issued upon conversion of the Company’s Senior Secured Convertible Notes (“**Convertible Notes**”). Except as set forth in, or contemplated by, the Registration Statement and the Prospectus, on the Effective Date and on the Closing Date, there will be no options, warrants, or other rights to purchase or otherwise acquire any authorized, but unissued shares of Common Stock of the Company or any security convertible into shares of Common Stock of the Company, or any contracts or commitments on the part of the Company to issue or sell shares of Common Stock or any such options, warrants, rights or convertible securities.

2.8. Valid Issuance of Securities, etc.

2.8.1. Outstanding Securities. All issued and outstanding securities of the Company issued prior to the transactions contemplated by this Agreement have been duly authorized and validly issued and are fully paid and non-assessable; the holders thereof have no rights of rescission with respect thereto, and are not subject to personal liability by reason of being such holders; and none of such securities were issued in violation of the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company. The authorized Common Stock of the Company conforms in all material respects to all statements relating thereto contained in the Preliminary Prospectus, the Prospectus and the Registration Statement. The offers and sales of the outstanding shares of Common Stock were at all relevant times either registered under the Act and the applicable state securities or Blue Sky laws or, based in part on the representations and warranties of the purchasers of such shares of Common Stock, exempt from such registration requirements.

2.8.2. Securities Sold Pursuant to this Agreement. The Public Securities have been duly authorized for issuance and sale and, when issued and paid for, will be validly issued, fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability by reason of being such holders; the Public Securities are not and will not be subject to the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company; and all corporate action required to be taken for the authorization, issuance and sale of the Public Securities has been duly and validly taken. The Public Securities conform in all material respects to all statements with respect thereto contained in the Preliminary Prospectus, the Prospectus and the Registration Statement. The Warrant Shares issuable upon exercise of the Underwriters' Warrants have been reserved for issuance upon the exercise thereof and, when issued in accordance with the terms of such securities will be validly issued, fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability by reason of being such holders; and all corporate action required to be taken for the authorization, issuance and sale of the Warrant Securities has been duly and validly taken. The Warrant Securities conform in all material respects to all statements with respect thereto contained in the Registration Statement.

2.9. Registration Rights of Third Parties. Except as set forth in the Preliminary Prospectus, the Prospectus and the Registration Statement, no holders of any securities of the Company or any rights exercisable for or convertible or exchangeable into securities of the Company have the right to require the Company to register any such securities of the Company under the Act or to include any such securities in a registration statement to be filed by the Company.

2.10. Validity and Binding Effect of Agreements. This Agreement has been duly and validly authorized by the Company, and, when executed and delivered, will constitute, a valid and binding obligation of the Company, enforceable against the Company in accordance with its respective terms, except: (i) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally; (ii) as enforceability of any indemnification or contribution provision may be limited under the federal or state securities laws; and (iii) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

2.11. No Conflicts, etc. The execution, delivery, and performance by the Company of this Agreement and all ancillary documents, the consummation by the Company of the transactions herein and therein contemplated and the compliance by the Company with the terms hereof and thereof do not and will not, with or without the giving of notice or the lapse of time or both: (i) result in a material breach of, or conflict with any of the terms and provisions of, or constitute a material default under, any agreement or instrument to which the Company is a party; (ii) result in any violation of the provisions of the Certificate of Incorporation of the Company (as the same may be amended from time to time, the "**Certificate of Incorporation**"); or (iii) result in the Company's violation of any existing applicable law, rule, regulation, judgment, order or decree of any governmental agency or court, domestic or foreign, having jurisdiction over the Company or any of its properties or business constituted as of the date hereof.

2.12. No Defaults; Violations. No material default exists in the due performance and observance of any term, covenant or condition of any material license, contract, indenture, mortgage, deed of trust, note, loan or credit agreement, or any other agreement or instrument evidencing an obligation for borrowed money, or any other material agreement or instrument to which the Company is a party or by which the Company may be bound or to which any of the properties or assets of the Company is subject. The Company is not in violation of any term or provision of its Certificate of Incorporation, or in violation of any franchise, license, permit, applicable law, rule, regulation, judgment or decree of any governmental agency or court, domestic or foreign, having jurisdiction over the Company or any of its properties or businesses.

2.13. Corporate Power; Licenses; Consents.

2.13.1. Conduct of Business. Except as described in the Preliminary Prospectus, the Prospectus and the Registration Statement, the Company has all requisite corporate power and authority, and has all necessary authorizations, approvals, orders, licenses, certificates and permits of and from all governmental regulatory officials and bodies that it needs as of the date hereof to conduct its business purpose as described in the Preliminary Prospectus and the Prospectus. The disclosures in the Preliminary Prospectus, the Prospectus and the Registration Statement concerning the effects of Federal, state, local and foreign regulation on this Offering and the Company's business purpose as currently contemplated are correct in all material respects.

2.13.2. Transactions Contemplated Herein. The Company has all corporate power and authority to enter into this Agreement and to carry out the provisions and conditions hereof, and all consents, authorizations, approvals and orders required in connection therewith have been obtained. No consent, authorization or order of, and no filing with, any court, government agency or other body is required for the valid issuance, sale and delivery of the securities and the consummation of the transactions and agreements contemplated by this Agreement and as contemplated by the disclosures in the Preliminary Prospectus and the Prospectus, except with respect to applicable Federal and state securities laws and regulations and the rules and regulations of the Financial Industry Regulatory Authority, Inc. ("FINRA").

2.14. D&O Questionnaires. To the Company's knowledge, all information contained in the questionnaires (the "**Questionnaires**") completed by each of the Company's officers and directors immediately prior to the Offering, as well as in the Lock-Up Agreement provided to the Underwriters, is true and correct in all material respects and the Company has not become aware of any information which would cause the information disclosed in the Questionnaires completed by each such officer or director to become inaccurate and incorrect.

2.15. Litigation; Governmental Proceedings. There is no action, suit, proceeding, inquiry, arbitration, investigation, litigation or governmental proceeding pending or, to the Company's knowledge, threatened against, or involving the Company or, to the Company's knowledge, any executive officer or director that is required to be disclosed in the Preliminary Prospectus, the Prospectus and the Registration Statement which has not been disclosed therein or in connection with the Company's listing application for the listing of the shares of Common Stock on the Nasdaq Capital Market.

2.16. Good Standing. The Company has been duly organized and is validly existing as a corporation and is in good standing under the laws of the Delaware as of the date hereof, and is duly qualified to do business and is in good standing in each jurisdiction in which its ownership or lease of property or the conduct of business requires such qualification, except where the failure to qualify would not have a Material Adverse Effect (as defined in Section 2.20).

2.17. Transactions Affecting Disclosure to FINRA.

2.17.1. Finder's Fees. Except as described in the Preliminary Prospectus, the Prospectus and the Registration Statement, there are no claims, payments, arrangements, agreements or understandings relating to the payment of a finder's, consulting or origination fee by the Company or any of its officers or directors with respect to the sale of the securities hereunder or any other arrangements, agreements or understandings of the Company or, to the Company's knowledge, any of its shareholders that may affect the Underwriters' compensation, as determined by FINRA.

2.17.2. Payments Within Twelve Months. Except as described in the Preliminary Prospectus, the Prospectus and the Registration Statement, the Company has not made any direct or indirect payments (in cash, securities or otherwise) to: (i) any person, as a finder's fee, consulting fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who raised or provided capital to the Company; (ii) to any FINRA member; or (iii) to the Company's knowledge, to any person or entity that has any direct or indirect affiliation or association with any FINRA member, within the twelve months prior to the Effective Date, other than payments to the Underwriters as provided hereunder in connection with the Offering.

2.17.3. Use of Proceeds. None of the net proceeds of the Offering will be paid by the Company to any participating FINRA member or its affiliates, except as specifically authorized herein.

2.17.4. FINRA Affiliation. To the Company's knowledge, no officer, director or any beneficial owner of the Company's unregistered securities (other than the record or beneficial holders of the Convertible Notes) has any direct or indirect affiliation or association with any FINRA member (as determined in accordance with the rules and regulations of FINRA) except as set forth in the Registration Statement. The Company will advise the Representative if it learns that any officer, director or owner of at least 5% of the Company's outstanding shares of Common Stock (or securities convertible into shares of Common Stock) is or becomes an affiliate or associated person of a FINRA member participating in the Offering.

2.18. Foreign Corrupt Practices Act. Neither the Company nor any of the directors, employees or officers of the Company or, to its knowledge, any other person acting on behalf of the Company has, directly or indirectly, given or agreed to give any money, gift or similar benefit (other than legal price concessions to customers in the ordinary course of business) to any customer, supplier, employee or agent of a customer or supplier, or official or employee of any governmental agency or instrumentality of any government (domestic or foreign) or any political party or candidate for office (domestic or foreign) or any political party or candidate for office (domestic or foreign) or other person who was, is, or may be in a position to help or hinder the business of the Company (or assist it in connection with any actual or proposed transaction) that (i) might subject the Company to any damage or penalty in any civil, criminal or governmental litigation or proceeding, (ii) if not given in the past, might have had a Material Adverse Effect as reflected in any of the financial statements contained in the Preliminary Prospectus, the Prospectus or (iii) if not continued in the future, might have a Material Adversely Effect. The Company has taken reasonable steps to ensure that its accounting controls and procedures are sufficient to cause the Company to comply in all material respects with the Foreign Corrupt Practices Act of 1977, as amended.

2.19. Officers' Certificate. Any certificate pursuant to this Agreement signed by any duly authorized officer of the Company and delivered to the Representative shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

2.20. Possession of Licenses and Permits. The Company (A) possesses the licenses, permits, certificates, authorizations, consents and approvals (collectively, “**Governmental Licenses**”) issued by the appropriate governmental entities necessary to conduct its business as currently conducted as described in the Preliminary Prospectus, the Prospectus and the Registration Statement, and (B) has obtained all necessary Governmental Licenses from other persons necessary to conduct its business, except, in each case of clauses (A) and (B), (i) as described in the Preliminary Prospectus, the Prospectus and the Registration Statement or (ii) to the extent that any failure to possess any Governmental Licenses, provide any notice, make any filing, or obtain any Governmental Licenses would not, individually or in the aggregate, reasonably be expected to have a material adverse effect on the assets, business or operations of the Company or its subsidiaries taken as a whole (“**Material Adverse Effect**”); none of the Company and subsidiaries is in violation of, or in default under, any Governmental License, as except as would not reasonably be expected to have a Material Adverse Effect. All of the Governmental Licenses are valid and in full force and effect, except when the invalidity of such Governmental Licenses or the failure of such Governmental Licenses to be in full force and effect would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company has not received any notice of proceedings relating to the revocation or modification of any Governmental Licenses which, individually or in the aggregate, if the subject of an unfavorable decision, ruling or finding, would have a Material Adverse Effect.

2.21. Title to Property. The Company has legal and valid title to all assets and properties described as owned by it in the Preliminary Prospectus, the Prospectus and the Registration Statement (whether through fee ownership, mineral estates or similar rights of ownership), in each case free and clear of all liens, except for a first priority lien on all of the assets of the Company securing the Company’s obligations under the Convertible Notes or as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, and any real property or personal property held under lease by the Company is held under a lease that is valid, existing and enforceable by the Company with such exceptions as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, and the Company has not received any written notice of any material claim that is adverse to the rights of the Company under any the lease.

2.22. Possession of Intellectual Property. The Company owns or possesses all licenses or other rights to use all patents, trademarks, service marks, trade names, copyrights, software and design licenses, trade secrets, manufacturing processes, other intangible property rights and know-how as are necessary for the conduct of its business as described in the Preliminary Prospectus, the Prospectus and the Registration Statement (collectively, “**Intellectual Property**”), except where the failure to own or possess such Intellectual Property would not reasonably be expected to have a Material Adverse Effect. The Company has not received written notice of any infringement of or conflict with (and the Company does not know of any such infringement of or conflict with) any asserted rights of others with respect to any Intellectual Property that would reasonably be expected to have a Material Adverse Effect.

2.23. Company IT Systems. The Company owns or has a valid right to access and use all computer systems, networks, hardware, software, databases, websites and equipment used to process, store, maintain and operate data, information and functions necessary for the conduct of its business (the “**Company IT Systems**”), except where the failure to own or have right to access the Company IT Systems would not reasonably be expected to have a Material Adverse Effect. The Company IT Systems are adequate for, and operate and perform in all material respects as required in connection with, the operation of the business of the Company as currently conducted, except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

2.24. Environmental Laws. Except as described in the Preliminary Prospectus, the Prospectus and the Registration Statement, (A) the Company is not in violation of any federal, state, local or foreign statute, law, rule, regulation, ordinance, code, policy or rule of common law or any judicial or administrative interpretation thereof, including any judicial or administrative order, consent, decree or judgment, relating to pollution or protection of human health, the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or wildlife, including, without limitation, laws and regulations relating to the release or threatened release of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum or petroleum products, asbestos-containing materials or mold (collectively, “**Hazardous Materials**”) or to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials (collectively, “**Environmental Laws**”), except for those violations that would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect, (B) the Company has all permits, authorizations and approvals required under any applicable Environmental Laws and is in compliance in all material respects with their requirements, (C) there are no pending or, to the Company’s knowledge, threatened administrative, regulatory or judicial actions, suits, demands, demand letters, claims, liens, notices of noncompliance or violation, investigations or proceedings relating to any Environmental Law against the Company, and (D) to the Company’s knowledge, there are no events or circumstances that would reasonably be expected to form the basis of an order for clean-up or remediation, or an action, suit or proceeding by any private party or governmental body or agency, against or affecting the Company relating to Hazardous Materials or any Environmental Laws.

2.25. Payment of Taxes. Except as would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect or where such matters are the result of a pending bona fide dispute with taxing authorities, (A) the Company has accurately prepared and timely filed all federal, state, foreign and other tax returns or other statements that are or were required to be filed by it, if any, and has paid or made provision for the payment of all taxes, assessments, governmental or other similar charges, including without limitation, all sales and use taxes and all taxes which it is obligated to withhold from amounts owing to employees, creditors and third parties, with respect to the periods covered by such tax returns (whether or not such amounts are shown as due on any tax return), (B) no deficiency assessment with respect to a proposed adjustment of the Company’s federal, state, local or foreign taxes is pending or, to the Company’s knowledge, threatened, (C) since the date of the most recent audited financial statements, the Company has not incurred any liability for taxes other than in the ordinary course of its business, and (D) there is no tax lien, whether imposed by any federal, state, foreign or other taxing authority, outstanding against the assets, properties or business of the Company.

2.26. Insurance. The Company carries, or is covered by, insurance (issued by insurers of recognized financial responsibility) in such amounts and covering such risks as is appropriate for the conduct of its entire business and the value of its assets, all of which insurance is in full force and effect in all material respects.

2.27. Investment Company Act. The Company is not, nor upon the sale of the Public Securities as contemplated herein and the application of the net proceeds therefrom as described in the Preliminary Prospectus, the Prospectus and the Registration Statement under the caption “Use of Proceeds”, will the Company be, an “investment company” or an entity “controlled” by an “investment company” (as such terms are defined in the Investment Company Act of 1940, as amended, and the rules and regulations promulgated thereunder).

2.28. Employment Laws Compliance. The Company has not violated, or received any notice of any violation with respect to, any law, rule, regulation, order, decree or judgment applicable to it and its business, including those relating to transactions with affiliates, environmental, safety or similar laws, federal or state laws relating to discrimination in the hiring, promotion or pay of employees, federal or state wages and hours law, the Employee Retirement Income Security Act of 1974, as amended, or the rules and regulations promulgated thereunder, except for those violations that would not reasonably be expected, individually or in the aggregate, to have a Material Adverse Effect.

2.29. Money Laundering Laws. The Company has not, and, to the Company's knowledge, none of the officers, directors, employees or agents purporting to act on behalf of the Company or a subsidiary, as applicable, has, made any payment of funds of the Company or a subsidiary or received or retained any funds in violation of any law, rule or regulation relating to the "know your customer" and anti-money laundering laws of any jurisdiction (collectively, the "**Money Laundering Laws** ") and no action, suit or proceeding by or before any governmental entity involving the Company with respect to the Money Laundering Laws is pending or, to the Company's knowledge, threatened.

2.30. OFAC. The Company has not, and, to the Company's knowledge, none of its directors, officers, agents or employees purporting to act on behalf of the Company is currently the target of or reasonably likely to become the target of any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury ("**OFAC** "); and the Company will not directly or indirectly use the proceeds of the offering of the Public Securities hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently the target of any U.S. sanctions administered by OFAC.

2.31. Lock-up Agreements. Each of the Company's officers, directors, employees, stockholders and Convertible Note holders (the "**Lock-Up Parties** ") have agreed that (A) with respect to officers and directors, for a period of one year from the Effective Date of the Registration Statement, and (B) with respect to employees, stockholders and Convertible Note holders, for a period of one hundred eighty days from the Effective Date of the Registration Statement (the "**Lock-Up Period** "), such persons and their affiliated parties shall not sell, contract to sell, grant any option for the sale or otherwise dispose of any of our equity securities, or any securities convertible into or exercisable or exchangeable for our equity securities, without the consent of the Representative; *provided* ; *however* , that with respect to employees, stockholders and Convertible Note holders only, commencing on the 181st day following the Effective Date and on every subsequent 31st day thereafter, fifteen percent (15%) of the securities held by such Lock-Up Parties shall be released from the restrictions of this Section 2.31 until the 366th day following the Effective Date when all of the securities held by such Lock-Up Parties shall be released from the restrictions of this Section 2.31. The Representative may consent to an early release from the Lock-Up period if, in its opinion, the market for shares of Common Stock would not be adversely impacted by sales and in cases of financial emergency of an officer, director or other stockholder. The Company has caused each of the Lock-Up Parties to deliver to the Representative the agreements of each Lock-Up Parties to the foregoing effect prior to the date that the Company requests that the Commission declare the Registration Statement effective under the Act.

2.32. Subsidiaries. The Company has no subsidiary that is a "significant subsidiary" of the Company within the meaning of Rule 1.01 of Regulation S-X under the Act.

2.33. Related Party Transactions. Except as disclosed in the Prospectus and the Registration Statement, there are no business relationships or related party transactions involving the Company or any other person required to be described in the Prospectus that have not been described as required.

2.34. Board of Directors. The Board of Directors of the Company is comprised of the persons set forth under the heading of the Prospectus captioned "Management". The qualifications of the persons serving as board members and the overall composition of the board comply with the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder applicable to the Company and the rules of the Nasdaq Capital Market. At least one member of the Board of Directors of the Company qualifies as a "financial expert" as such term is defined under the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder and the rules of the Nasdaq Capital Market. In addition, at least a majority of the persons serving on the Board of Directors qualify as "independent" as defined under the rules of the Nasdaq Capital Market.

2.35. Sarbanes-Oxley Compliance.

2.35.1. Disclosure Controls. The Company has developed and currently maintains disclosure controls and procedures that will comply with Rule 13a-15 or 15d-15 of the Exchange Act, and such controls and procedures are effective to ensure that all material information concerning the Company will be made known on a timely basis to the individuals responsible for the preparation of the Company's Exchange Act filings and other public disclosure documents.

2.35.2. Compliance. On the Effective Date, the Company was in material compliance with the provisions of the Sarbanes-Oxley Act of 2002 applicable to it, and has implemented such programs and taken reasonable steps to ensure the Company's future compliance (not later than the relevant statutory and regulatory deadlines therefore) with all the material provisions of the Sarbanes-Oxley Act of 2002.

3. Covenants of the Company. The Company covenants and agrees as follows:

3.1. Amendments to Registration Statement. The Company will deliver to the Representative, prior to filing, any amendment or supplement to the Registration Statement or Prospectus proposed to be filed after the Effective Date, and it will not file any such amendment or supplement to which the Representative shall reasonably object in writing.

3.2. Federal Securities Laws.

3.2.1. Compliance. During the time when a Prospectus is required to be delivered under the Act, the Company will use its best efforts to comply with all requirements imposed upon it by the Act, the Regulations and the Exchange Act and by the regulations under the Exchange Act, as from time to time in force, so far as necessary to permit the continuance of sales of or dealings in the Public Securities in accordance with the provisions hereof and the Prospectus. If at any time when a Prospectus relating to the Public Securities is required to be delivered under the Act, any event shall have occurred as a result of which, in the opinion of counsel for the Company or counsel for the Underwriters, the Prospectus, as then amended or supplemented, includes an untrue statement of a material fact or omits to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, or if it is necessary at any time to amend the Prospectus to comply with the Act, the Company will notify the Representative promptly and prepare and file with the Commission, subject to Section 3.1 hereof, an appropriate amendment or supplement in accordance with Section 10 of the Act.

3.2.2. Filing of Final Prospectus. The Company will file the Prospectus (in form and substance satisfactory to the Representative) with the Commission pursuant to the requirements of Rule 424 of the Regulations.

3.2.3. Exchange Act Registration. For a period of three years from the Effective Date, the Company will use its best efforts to maintain the registration of the shares of Common Stock under the provisions of the Exchange Act. The Company will not deregister the shares of Common Stock under the Exchange Act without the prior written consent of the Representative. The foregoing requirements shall automatically terminate in the event that the Company, directly or indirectly, in one or more related transactions, (1) sells, transfers or otherwise disposes of all or substantially all of its assets to any other person, or (2) consummates a stock or share purchase agreement or other business combination (including, without limitation, a merger, consolidation, reorganization, recapitalization, spin-off or scheme of arrangement) with any other person whereby such other person acquires more than 50% of the outstanding shares of the Company's voting stock and the Company is not the surviving entity.

3.2.4. Free Writing Prospectuses. The Company represents and agrees that it has not made and will not make any offer relating to the Public Securities that would constitute an issuer free writing prospectus, as defined in Rule 433 of the 1933 Act, without the prior consent of the Representative. Any such free writing prospectus consented to by the Representative is hereinafter referred to as a “**Permitted Free Writing Prospectus**.” The Company represents that it will treat each Permitted Free Writing Prospectus as an “issuer free writing prospectus” as defined in Rule 433, and has complied and will comply with the applicable requirements of Rule 433 of the 1933 Act, including timely Commission filing where required, legending and record keeping.

3.3. Delivery to Underwriters of Prospectuses. The Company will deliver to each of the several Underwriters, without charge, from time to time during the period when the Prospectus is required to be delivered under the Act or the Exchange Act such number of copies of each Prospectus as such Underwriters may reasonably request and, as soon as the Registration Statement or any amendment or supplement thereto becomes effective, deliver to the Representative two original executed Registration Statements, including exhibits, and all post-effective amendments thereto and copies of all exhibits filed therewith or incorporated therein by reference and all original executed consents of certified experts.

3.4. Effectiveness and Events Requiring Notice to the Representative. The Company will notify the Representative immediately and confirm the notice in writing: (i) of the effectiveness of the Registration Statement and any amendment thereto; (ii) of the issuance by the Commission of any stop order or of the initiation, or the threatening, of any proceeding for that purpose; (iii) of the issuance by any state securities commission of any proceedings for the suspension of the qualification of the Public Securities for offering or sale in any jurisdiction or of the initiation, or the threatening, of any proceeding for that purpose; (iv) of the mailing and delivery to the Commission for filing of any amendment or supplement to the Registration Statement or Prospectus; (v) of the receipt of any comments or request for any additional information from the Commission; and (vi) of the happening of any event during the period described in this Section 3.4 hereof that, in the judgment of the Company, makes any statement of a material fact made in the Registration Statement or the Prospectus untrue or that requires the making of any changes in the Registration Statement or the Prospectus in order to make the statements therein, in light of the circumstances under which they were made, not misleading. If the Commission or any state securities commission shall enter a stop order or suspend such qualification at any time, the Company will make every reasonable effort to obtain promptly the lifting of such order.

3.5. Financial Public Relations Firm. As of the Effective Date, the Company shall have retained a financial public relations firm (“I.R.”) reasonably acceptable to the Representative, and the Company shall retain such firm or another firm for a period of not less than two years after the Effective Date.

3.6. Reports to the Representative.

3.6.1. Periodic Reports, etc. For a period of three years from the Effective Date, the Company will furnish to the Representative copies of such financial statements and other periodic and special reports as the Company from time to time furnishes generally to holders of any class of its securities and also promptly furnish to the Representative: (i) a copy of each periodic report the Company shall be required to file with the Commission; (ii) a copy of every press release and every news item and article with respect to the Company or its affairs which was released by the Company; (iii) a copy of each Form 8-K prepared and filed by the Company; (iv) five copies of each Registration Statement; (v) such additional documents and information with respect to the Company and the affairs of any future subsidiaries of the Company as the Representative may from time to time reasonably request; provided the Representatives shall sign, if requested by the Company, a Regulation FD compliant confidentiality agreement which is reasonably acceptable to the Representative in connection with the Representative’s receipt of such information. Documents filed with the Commission pursuant to its EDGAR system shall be deemed to have been delivered to the Representative pursuant to this Section.

3.6.2. Transfer Sheets. For a period of three years from the Effective Date, the Company shall retain a transfer and registrar agent acceptable to the Representative (the “**Transfer Agent**”) and will furnish to the Representatives at the Company’s sole cost and expense such transfer sheets of the Company’s securities as the Representative may reasonably request, including the daily and monthly consolidated transfer sheets of the Transfer Agent and DTC. VStock Transfer, LLC is acceptable to the Underwriters to act as Transfer Agent for the Company’s shares of Common Stock.

3.6.3. Trading Reports. During such time as the Public Securities are listed on Nasdaq Capital Market the Company shall provide to the Representative, at its expense, such reports published by the Nasdaq Capital Market relating to price trading of the Public Securities, as the Representative shall reasonably request.

3.7. Payment of Expenses.

3.7.1. General Expenses Related to the Offering. The Company hereby agrees to pay on each of the Closing Date and the Option Closing Date, if any, to the extent not paid at the Closing Date, all expenses incident to the performance of the obligations of the Company under this Agreement, including, but not limited to: (i) all filing fees and communication expenses relating to the registration of the Public Securities to be sold in the Offering with the Commission; (b) all filing fees associated with the review of the Offering by FINRA; (c) all fees and expenses relating to the listing of the shares of Common Stock on NASDAQ and such other stock exchanges as the Company and the Underwriter together determine; (d) all fees, expenses and disbursements relating to the registration or qualification of the Public Securities under the “blue sky” securities laws of such states and other jurisdictions as the Representative may reasonably designate; (e) all fees, expenses and disbursements relating to the registration, qualification or exemption of the Public Securities under the securities laws of such foreign jurisdictions as the Underwriters may reasonably designate; (f) the costs of all mailing and printing of the Registration Statements, Preliminary Prospectuses, Prospectuses and all amendments, supplements and exhibits thereto and as many preliminary and final Prospectuses as the Underwriters may reasonably deem necessary; (g) the costs and expenses of its public relations firm, if any; (h) the costs of preparing, printing and delivering certificates representing the Public Securities and fees and expenses of the Transfer Agent for the shares of Common Stock; (i) stock transfer and/or stamp taxes, if any, payable upon the transfer of securities from the Company to the Underwriters; (j) the fees and expenses of the Company’s accountants; (k) the fees and expenses of the Company’s legal counsel and other agents and representatives; and (l) the Company’s actual “road show” expenses for the Offering. The Representative has the right to deduct from the net proceeds of the Offering any advance made by the Underwriters to pay for the expenses of the Company.

3.7.2. Non-accountable Expenses. The Company further agrees that, in addition to the expenses payable pursuant to Section 3.7.1, on the Closing Date it will pay to the Representative a non-accountable expense allowance equal to \$185,000 by deduction from the proceeds of the Offering contemplated herein.

3.8. Application of Net Proceeds. The Company will apply the net proceeds from the Offering received by it in a manner consistent with the application described under the caption “Estimated Use Of Proceeds” in the Prospectus.

3.9. Delivery of Earnings Statements to Security Holders. The Company will make generally available to its security holders as soon as practicable, but not later than the first day of the fifteenth full calendar month following the Effective Date, an earnings statement (which need not be certified by independent public or independent certified public accountants unless required by the Act or the Regulations, but which shall satisfy the provisions of Rule 158(a) under Section 11(a) of the Act) covering a period of at least twelve consecutive months beginning after the Effective Date.

3.10. Stabilization. Neither the Company, nor, to its knowledge, any of its employees, directors or stockholders (without the consent of the Representative) has taken or will take, directly or indirectly, any action designed to or that has constituted or that might reasonably be expected to cause or result in, under the Exchange Act, or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Common Stock.

3.11. Internal Controls. The Company will maintain a system of internal accounting controls sufficient to provide reasonable assurances that: (i) transactions are executed in accordance with management's general or specific authorization; (ii) transactions are recorded as necessary in order to permit preparation of financial statements in accordance with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

3.12. Accountants. As of the Effective Date, the Company shall retain Marcum or other independent public accountants reasonably acceptable to the Representative, and the Company shall continue to retain a nationally recognized independent certified public accounting firm for a period of at least three years after the Effective Date.

3.13. No Fiduciary Duties. The Company acknowledges and agrees that the Underwriters' responsibility to the Company is solely contractual in nature and that none of the Underwriters or their affiliates or agents shall be deemed to be acting in a fiduciary capacity, or otherwise owes any fiduciary duty to the Company or any of its affiliates in connection with the Offering and the other transactions contemplated by this Agreement.

4. Conditions of Underwriters' Obligations. The obligations of the several Underwriters to purchase and pay for the Public Securities, as provided herein, shall be subject to the continuing accuracy of the representations and warranties of the Company as of the date hereof and as of each of the Closing Date and the Option Closing Date, if any, to the accuracy of the statements of officers of the Company made pursuant to the provisions hereof and to the performance by the Company of its obligations hereunder and to the following conditions:

4.1. Regulatory Matters.

4.1.1. Effectiveness of Registration Statement. The Registration Statement shall have become effective not later than 5:00 P.M., Eastern time, on the date of this Agreement or such later date and time as shall be consented to in writing by you, and, at each of the Closing Date and the Option Closing Date, no stop order suspending the effectiveness of the Registration Statement shall have been issued and no proceedings for that purpose shall have been instituted or shall be pending or contemplated by the Commission and any request on the part of the Commission for additional information shall have been complied with to the reasonable satisfaction of the Representative.

4.1.2. FINRA Clearance. By the Effective Date, the Representative shall have received oral clearance from FINRA as to the amount of compensation allowable or payable to the Underwriters as described in the Registration Statement.

4.1.3. Nasdaq Clearance. On the Closing Date, the Company's shares of Common Stock, including the Public Securities, shall have been approved for listing on the Nasdaq Capital Market.

4.2. Company Counsel Matters.

4.2.1. Closing Date Opinion of Counsel. On the Closing Date, the Representative shall have received the favorable opinion of Greenberg Traurig, LLP, counsel to the Company (“GT”), dated the Closing Date, addressed to the Representative, in form and substance reasonably satisfactory in all respects to the Representative. The opinion of GT shall include a statement to the effect that such counsel has participated in conferences with officers and other representatives of the Company, the Underwriters and the independent registered public accounting firm of the Company, at which conferences the contents of the Preliminary Prospectus, the Prospectus and Registration Statement contained therein and related matters were discussed and, although such counsel is not passing upon and does not assume any responsibility for the accuracy, completeness or fairness of the statements contained in the Preliminary Prospectus, the Prospectus and the Registration Statement contained therein, solely on the basis of the foregoing without independent check and verification, no facts have come to the attention of such counsel which lead them to believe that the Registration Statement or any amendment thereto, at the time the Registration Statement or amendment became effective, contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statements therein not misleading or the Prospectus or any amendment or supplement thereto, at the time they were filed pursuant to Rule 424(b) or at the date of such counsel’s opinion, contained an untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary to make the statement therein, in light of the circumstances under which they were made, not misleading (except that such counsel need express no view and shall not be deemed to have rendered an opinion with respect to the financial information and statistical data). The Registration Statement and the Prospectus and any post-effective amendments or supplements thereto (other than the financial statements including notes and schedules, financial data and statistical data included therein, as to which no opinion need be rendered) each as of their respective dates complied as to form in all material respects with the requirements of the Act and Regulations.

4.2.2. Option Closing Date Opinion of Counsel. On the Option Closing Date, if any, the Representative shall have received the favorable opinion of GT, dated the Option Closing Date, addressed to the Representative and in form and substance reasonably satisfactory to the Representative, confirming as of the Option Closing Date, the statements made by such counsel in its opinion delivered on the Closing Date.

4.2.3. Reliance. In rendering its opinion, GT may rely: (i) as to matters involving the application of laws other than the laws of the United States and jurisdictions in which they are admitted, to the extent such counsel deems proper and to the extent specified in such opinion, if at all, upon an opinion or opinions (in form and substance reasonably satisfactory to the Representative) of other counsel reasonably acceptable to the Representative, familiar with the applicable laws; and (ii) as to matters of fact, to the extent they deem proper, on certificates or other written statements of officers of the Company and officers of departments of various jurisdictions having custody of documents respecting the corporate existence or good standing of the Company, provided that copies of any such statements or certificates shall be delivered to GEAB&P if requested. The opinion of GT and any opinion relied upon by GT shall include a statement to the effect that it may be relied upon by counsel for the Underwriters in its opinion delivered to the Underwriters.

4.3. Cold Comfort Letter. At the time this Agreement is executed, and at each of the Closing Date and the Option Closing Date, if any, the Representative shall have received a letter in form and substance satisfactory in all respects (including the non-material nature of the changes or decreases, if any, referred to in clause (iii) below) to the Representative and to GEAB&P from Marcum dated, respectively, as of the date of this Agreement and as of the Closing Date and the Option Closing Date, if any:

(i) Confirming that they are independent public accountants with respect to the Company within the meaning of the Act and the applicable Regulations and that they have not, during the periods covered by the financial statements included in the Prospectus, provided to the Company any non-audit services, as such term is used in Section 10A(g) of the Exchange Act;

(ii) Stating that in their opinion the financial statements of the Company included in the Registration Statement and Prospectus comply as to form in all material respects with the applicable accounting requirements of the Act and the published Regulations thereunder;

(iii) Stating that, on the basis of a limited review which included a reading of the latest available unaudited interim financial statements of the Company (with an indication of the date of the latest available unaudited interim financial statements), a reading of the latest available minutes of the stockholders and board of directors and the various committees of the board of directors, consultations with officers and other employees of the Company responsible for financial and accounting matters and other specified procedures and inquiries, nothing has come to their attention which would lead them to believe that: (a) the unaudited financial statements of the Company included in the Registration Statement do not comply as to form in all material respects with the applicable accounting requirements of the Act and the Regulations or are not fairly presented in conformity with GAAP applied on a basis substantially consistent with that of the audited financial statements of the Company included in the Registration Statement; (b) at a date not later than five days prior to the Effective Date, Closing Date or Option Closing Date, as the case may be, there was any change in the capital stock or long-term debt of the Company, or any decrease in the shareholders' equity of the Company as compared with amounts shown in the December 31, 2015 balance sheet included in the Registration Statement, other than as set forth in or contemplated by the Registration Statement, or, if there was any decrease, setting forth the amount of such decrease, and (c) during the period from December 31, 2015 to a specified date not later than five days prior to the Effective Date, Closing Date or Option Closing Date, as the case may be, there was any decrease in revenues, net earnings or net earnings per share, in each case as compared with the corresponding period in the preceding year and as compared with the corresponding period in the preceding quarter, other than as set forth in or contemplated by the Registration Statement, or, if there was any such decrease, setting forth the amount of such decrease;

(iv) Setting forth, at a date not later than five days prior to the Effective Date, the amount of liabilities of the Company (including a breakdown of commercial paper and notes payable to banks and related parties);

(v) Stating that they have compared specific dollar amounts, numbers of shares, percentages of revenues and earnings, statements and other financial information pertaining to the Company set forth in the Prospectus in each case to the extent that such amounts, numbers, percentages, statements and information may be derived from the general accounting records, including work sheets, of the Company and excluding any questions requiring an interpretation by legal counsel, with the results obtained from the application of specified readings, inquiries and other appropriate procedures (which procedures do not constitute an examination in accordance with generally accepted auditing standards) set forth in the letter and found them to be in agreement;

(vi) Stating that they have not since the Company's formation brought to the attention of the Company's management any control deficiencies related to internal structure, design or operation as defined in the Statement on Auditing Standards No. 325 "Communications About Control Deficiencies in an Audit of Financial Statements," in the Company's internal controls; and

(vii) Statements as to such other matters incident to the transaction contemplated hereby as you may reasonably request.

4.4. Officers' Certificates.

4.4.1. Officers' Certificate. At each of the Closing Date and the Option Closing Date, if any, the Representative shall have received a certificate of the Company signed by the Chairman of the Board and Chief Executive Officer of the Company, who can be the same person, dated the Closing Date or the Option Closing Date, as the case may be, respectively, to the effect that the Company has performed all covenants and complied with all conditions required by this Agreement to be performed or complied with by the Company prior to and as of the Closing Date, or the Option Closing Date, as the case may be, and that the conditions set forth in Section 4.5 hereof have been satisfied as of such date and that, as of the Closing Date and the Option Closing Date, as the case may be, the representations and warranties of the Company set forth in Section 2 hereof are true and correct. In addition, the Representative will have received such other and further certificates of officers of the Company as the Representative may reasonably request.

4.4.2. Secretary's Certificate. At each of the Closing Date and the Option Closing Date, if any, the Representative shall have received a certificate of the Company signed by the Secretary or Assistant Secretary of the Company, dated the Closing Date or the Option Date, as the case may be, respectively, certifying: (i) that the Certificate of Incorporation is true and complete, has not been modified and is in full force and effect; (ii) that the resolutions of the Company's Board of Directors relating to the public offering contemplated by this Agreement are in full force and effect and have not been modified; (iii) all correspondence between the Company or its counsel and the Commission; and (iv) as to the incumbency of the officers of the Company. The documents referred to in such certificate shall be attached to such certificate.

4.5. No Material Changes. Prior to and on each of the Closing Date and the Option Closing Date, if any: (i) there shall have been no material adverse change or development involving a prospective material adverse change in the condition or the business activities, financial or otherwise, of the Company from the latest dates as of which such condition is set forth in the Registration Statement and Prospectus taken as a whole; (ii) no action suit or proceeding, at law or in equity, shall have been pending or threatened against the Company or any officers or directors before or by any court or federal or state commission, board or other administrative agency wherein an unfavorable decision, ruling or finding may materially adversely affect the business, operations, or financial condition or income of the Company, except as set forth in the Registration Statement and Prospectus; (iii) no stop order shall have been issued under the Act and no proceedings therefore shall have been initiated or threatened by the Commission; and (iv) the Registration Statement and the Prospectus and any amendments or supplements thereto shall contain all material statements which are required to be stated therein in accordance with the Act and the Regulations and shall conform in all material respects to the requirements of the Act and the Regulations, and neither the Registration Statement nor the Prospectus nor any amendment or supplement thereto shall contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

4.6. Delivery of Agreements.

4.6.1. Effective Date Deliveries. On the Effective Date, the Company shall have delivered to the Representative executed copies of this Agreement, the Underwriters' Warrant Agreement and the Lock-Up Agreement.

4.6.2. Closing Date Deliveries. On the Closing Date, the Company shall have delivered to the Underwriters the Firm Shares, and on the Option Closing Date, if any, the Company shall have delivered to the Underwriters the Option Shares.

5. Indemnification.

5.1. Indemnification of Underwriters.

5.1.1. General. Subject to the conditions set forth below, the Company agrees to indemnify and hold harmless each of the Underwriters, and each dealer selected by the Representative that participates in the offer and sale of the Public Securities (each a “**Selected Dealer**”) and each of their respective directors, officers and employees and each person, if any, who controls any such Underwriter (“**Controlling Person**”) within the meaning of Section 15 of the Act or Section 20(a) of the Exchange Act, against any and all loss, liability, claim, damage and expense whatsoever (including but not limited to any and all legal or other expenses reasonably incurred in investigating, preparing for or defending against any litigation, commenced or threatened, or any claim whatsoever, whether arising out of any action between any of the Underwriters and the Company or between any of the Underwriters and any third party or otherwise) (collectively, “**Loss**”) to which they or any of them may become subject under the Act, the Exchange Act or any other statute or at common law or otherwise or under the laws of foreign countries, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in (i) the Preliminary Prospectus, the Registration Statement or the Prospectus (as from time to time each may be amended and supplemented); (ii) any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the offering of the Public Securities, including any “road show” or investor presentations made to investors by the Company (whether in person or electronically); or (iii) any application or other document or written communication (in this Section 5, collectively called “application”) executed by the Company or based upon written information furnished by the Company in any jurisdiction in order to qualify the Public Securities under the securities laws thereof or filed with the Commission, any state securities commission or agency, Nasdaq Capital Market or any securities exchange; or the omission or alleged omission therefrom of a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading, unless such statement or omission was made in reliance upon and in conformity with the Underwriters’ Information. The Company agrees promptly to notify the Representative of the commencement of any litigation or proceedings against the Company or any of its officers, directors or controlling persons in connection with the issue and sale of the Public Securities or in connection with the Registration Statement or Prospectus.

5.1.2. Procedure. If any action is brought against an Underwriter, a Selected Dealer or a Controlling Person in respect of which indemnity may be sought against the Company pursuant to Section 5.1.1, such Underwriter or such Selected Dealer shall promptly notify the Company in writing of the institution of such action and the Company shall assume the defense of such action, including the employment and fees of counsel (subject to the reasonable approval of such Underwriter or such Selected Dealer, as the case may be) and payment of actual expenses. Such Underwriter, such Selected Dealer or Controlling Person shall have the right to employ its or their own counsel in any such case, but the fees and expenses of such counsel shall be at the expense of such Underwriter, such Selected Dealer or Controlling Person unless (i) counsel for the Representative reasonably determines that it would be inappropriate under the applicable rules of professional responsibility for the same counsel to represent both the Company and the party being indemnified, or (ii) the employment of such counsel at the expense of the Company shall have been authorized in writing by the Company in connection with the defense of such action, or (iii) the Company shall not have employed counsel to have charge of the defense of such action, or (iv) such indemnified party or parties shall have reasonably concluded that there may be defenses available to it or them which are different from or additional to those available to the Company (in which case the Company shall not have the right to direct the defense of such action on behalf of the indemnified party or parties), in any of which events the reasonable fees and expenses of not more than one additional firm of attorneys selected by the Underwriter, Selected Dealer and/or Controlling Person shall be borne by the Company. Notwithstanding anything to the contrary contained herein, if any Underwriter, Selected Dealer or Controlling Person shall assume the defense of such action as provided above, the Company shall have the exclusive right to settle the claim or proceeding provided that the Company will not settle any such claim, action or proceeding without the prior written consent of the Representative, which will not be unreasonably withheld. The Company shall not be liable under this Section 5.1 for any settlements entered into by an Underwriter, Selected Dealer or Controlling Person without the Company’s prior written consent, which shall not be unreasonably withheld, delayed or conditioned.

5.2. Indemnification of the Company. Each Underwriter, severally and not jointly, agrees to indemnify and hold harmless the Company, its directors, officers and employees and agents who control the Company within the meaning of Section 15 of the Act or Section 20 of the Exchange Act against any and all Loss, as incurred, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions made in the Preliminary Prospectus, the Registration Statement or Prospectus or any amendment or supplement thereto or in any application, in reliance upon, and in strict conformity with the Underwriters' Information. In case any action shall be brought against the Company or any other person so indemnified based on the Preliminary Prospectus, the Registration Statement or Prospectus or any amendment or supplement thereto or any application, and in respect of which indemnity may be sought against any Underwriter, such Underwriter shall have the rights and duties given to the Company, and the Company and each other person so indemnified shall have the rights and duties given to the several Underwriters by the provisions of Section 5.1.2.

5.3. Contribution.

5.3.1. Contribution Rights. In order to provide for just and equitable contribution under the Act in any case in which (i) any person entitled to indemnification under this Section 5 makes claim for indemnification pursuant hereto but it is judicially determined (by the entry of a final judgment or decree by a court of competent jurisdiction and the expiration of time to appeal or the denial of the last right of appeal) that such indemnification may not be enforced in such case notwithstanding the fact that this Section 5 provides for indemnification in such case, or (ii) contribution under the Act, the Exchange Act or otherwise may be required on the part of any such person in circumstances for which indemnification is provided under this Section 5, then, and in each such case, the Company and the Underwriters shall contribute to the aggregate Losses of the nature contemplated by said indemnity agreement incurred by the Company and the Underwriters, as incurred, in such proportions that the Underwriters are responsible for that portion represented by the percentage that the underwriting discount appearing on the cover page of the Prospectus bears to the initial offering price appearing thereon and the Company is responsible for the balance; provided, that, no person guilty of a fraudulent misrepresentation (within the meaning of Section 11(f) of the Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. Notwithstanding the provisions of this Section 5.3.1, no Underwriter shall be required to contribute any amount in excess of the amount by which the total price at which the Public Securities underwritten by it and distributed to the public were offered to the public exceeds the amount of any damages that such Underwriter has otherwise been required to pay in respect of such Losses. For purposes of this Section, each director, officer and employee of an Underwriter or the Company, as applicable, and each person, if any, who controls an Underwriter or the Company, as applicable, within the meaning of Section 15 of the Act shall have the same rights to contribution as such Underwriter or the Company, as applicable.

5.3.2. Contribution Procedure. Within fifteen days after receipt by any party to this Agreement (or its representative) of notice of the commencement of any action, suit or proceeding, such party will, if a claim for contribution in respect thereof is to be made against another party (" **contributing party** "), notify the contributing party of the commencement thereof, but the omission to so notify the contributing party will not relieve it from any liability which it may have to any other party other than for contribution hereunder. In case any such action, suit or proceeding is brought against any party, and such party notifies a contributing party or its representative of the commencement thereof within the aforesaid fifteen days, the contributing party will be entitled to participate therein with the notifying party and any other contributing party similarly notified. Any such contributing party shall not be liable to any party seeking contribution on account of any settlement of any claim, action or proceeding affected by such party seeking contribution on account of any settlement of any claim, action or proceeding affected by such party seeking contribution without the written consent of such contributing party. The contribution provisions contained in this Section are intended to supersede, to the extent permitted by law, any right to contribution under the Act, the Exchange Act or otherwise available. Each Underwriter's obligations to contribute pursuant to this Section 5.3 are several and not joint.

6. Default by an Underwriter.

6.1. Default Not Exceeding 10% of Firm Shares or Option Shares. If any Underwriter or Underwriters shall default in its or their obligations to purchase the Firm Shares or the Option Shares, if the Over-allotment Option is exercised, hereunder, and if the number of the Firm Shares or Option Shares with respect to which such default relates does not exceed in the aggregate 10% of the number of Firm Shares or Option Shares that all Underwriters have agreed to purchase hereunder, then such Firm Shares or Option Shares to which the default relates shall be purchased by the non-defaulting Underwriters in proportion to their respective commitments hereunder.

6.2. Default Exceeding 10% of Firm Shares or Option Shares. In the event that the default addressed in Section 6.1 relates to more than 10% of the Firm Shares or Option Shares, you may in your discretion arrange for yourself or for another party or parties to purchase such Firm Shares or Option Shares to which such default relates on the terms contained herein. If, within one (1) Business Day after such default relating to more than 10% of the Firm Shares or Option Shares, you do not arrange for the purchase of such Firm Shares or Option Shares, then the Company shall be entitled to a further period of one (1) Business Day within which to procure another party or parties satisfactory to you to purchase said Firm Shares or Option Shares on such terms. In the event that neither you nor the Company arrange for the purchase of the Firm Shares or Option Shares to which a default relates as provided in this Section 6, this Agreement will automatically be terminated by you or the Company without liability on the part of the Company (except as provided in Sections 3.10 and 5 hereof) or the several Underwriters (except as provided in Section 5 hereof); *provided, however*, that if such default occurs with respect to the Option Shares, this Agreement will not terminate as to the Firm Shares; and provided further that nothing herein shall relieve a defaulting Underwriter of its liability, if any, to the other Underwriters and to the Company for damages occasioned by its default hereunder.

6.3. Postponement of Closing Date. In the event that the Firm Shares or Option Shares to which the default relates are to be purchased by the non-defaulting Underwriters, or are to be purchased by another party or parties as aforesaid, you or the Company shall have the right to postpone the Closing Date or Option Closing Date for a reasonable period, but not in any event exceeding five (5) Business Days, in order to effect whatever changes may thereby be made necessary in the Registration Statement or the Prospectus or in any other documents and arrangements, and the Company agrees to file promptly any amendment to the Registration Statement or the Prospectus that in the opinion of counsel for the Underwriter may thereby be made necessary. The term "Underwriter" as used in this Agreement shall include any party substituted under this Section 6 with like effect as if it had originally been a party to this Agreement with respect to such securities.

7. Additional Covenants.

7.1. Board Composition and Board Designations. The Company shall ensure that: (i) the qualifications of the persons serving as board members and the overall composition of the board comply with the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder and with the listing requirements of the NYSE, the NYSE MKT, NASDAQ or any other national securities exchange or national securities association, as the case may be, in the event the Company seeks to have its Public Securities listed on another exchange or quoted on an automated quotation system, and (ii) if applicable, at least one member of the board of directors qualifies as a “financial expert” as such term is defined under the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder.

7.2. Prohibition on Press Releases and Public Announcements. The Company will not issue press releases or engage in any other publicity, without the Representative’s prior written consent, for a period ending at 5:00 p.m. Eastern time on the first business day following the 25th day following the Closing Date, other than normal and customary releases issued in the ordinary course of the Company’s business.

7.3. Blue Sky Compliance. The Company shall be responsible for the qualification or registration of the Public Securities for sale under (or obtain exemptions from the application of) the state securities or blue sky laws of those jurisdictions in the United States designated by the Representative, shall comply with such laws and shall continue such qualifications, registrations and exemptions in effect so long as required for the distribution of the shares of Common Stock, if such filings are so required. The Company shall not be required to qualify as a foreign corporation or to take any action that would subject it to general service of process in any such jurisdiction where it is not presently qualified or where it would be subject to taxation as a foreign corporation. The Company will advise the Representative promptly of the suspension of the qualification or registration of (or any such exemption relating to) the Public Securities for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company shall use its best efforts to obtain the withdrawal thereof at the earliest possible moment. The Company, at its expense, will cause its counsel to provide to the Representative a Preliminary Blue Sky Memorandum no later than the date first public version of the Registration Statement is filed with the Commission and a Final Blue Sky Memorandum at the Effective Date, in such quantities as the Underwriter reasonably request, for its use and the use of the selling members in connection with the offer and sale of the Public Securities. The Company will, from time to time, prepare and file such statements, reports, certificates, notices and other forms and documents as are or may be required to continue such qualifications in effect for so long as the Representative may request for the distribution of the Public Securities.

7.4. Free Writing Prospectuses. Each Underwriter severally covenants with the Company not to take any action that would result in the Company being required to file with the Commission under Rule 433(d) a free writing prospectus prepared by or on behalf of such Underwriter that otherwise would not be required to be filed by the Company thereunder, but for the action of the Underwriter. Any such free writing prospectus consented to by the Company is hereinafter referred to as an “**Underwriter Free Writing Prospectus**.”

8. Effective Date of this Agreement and Termination Thereof.

8.1. Effective Date. This Agreement shall become effective when both the Company and the Representative have executed the same and delivered counterparts of such signatures to the other party.

8.2. Termination. You shall have the right to terminate this Agreement at any time prior to any Closing Date, (i) if any domestic or international event or act or occurrence has materially disrupted, or in your opinion will in the immediate future materially disrupt, general securities markets in the United States; or (ii) if trading on the NYSE Euronext, the NASDAQ Global Market or the NASDAQ Capital Market shall have been suspended or materially limited, or minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required by FINRA or by order of the Commission or any other government authority having jurisdiction, or (iii) if the United States shall have become involved in a new war or an increase in major hostilities, or (iv) if a banking moratorium has been declared by a New York State or federal authority, or (v) if a moratorium on foreign exchange trading has been declared which materially adversely impacts the United States securities markets, or (vi) if the Company shall have sustained a material loss by fire, flood, accident, hurricane, earthquake, theft, sabotage or other calamity or malicious act which, whether or not such loss shall have been insured, will, in your opinion, make it inadvisable to proceed with the delivery of the Firm Shares or Option Shares, or (vii) if the Company is in material breach of any of its representations, warranties or covenants hereunder, or (viii) if the Representative shall have become aware after the date hereof of such a material adverse change in the conditions or prospects of the Company, or such adverse material change in general market conditions as in the Representative’s reasonable judgment would make it impracticable to proceed with the offering, sale and/or delivery of the securities or to enforce contracts made by the Underwriters for the sale of the securities.

8.3. Expenses. Except in the case of a default by the Underwriters pursuant to Section 6.2 above, in the event that this Agreement shall not be carried out for any reason whatsoever, within the time specified herein or any extensions thereof pursuant to the terms herein, the Company shall be obligated to pay to the Underwriters their actual and accountable out of pocket expenses related to the transactions contemplated herein up to a maximum of \$185,000 for all such expenses.

8.4. Indemnification. Notwithstanding any contrary provision contained in this Agreement, any election hereunder or any termination of this Agreement, and whether or not this Agreement is otherwise carried out, the provisions of Section 5 shall not be in any way effected by, such election or termination or failure to carry out the terms of this Agreement or any part hereof.

9. Miscellaneous.

9.1. Notices. All communications hereunder, except as herein otherwise specifically provided, shall be in writing and shall be mailed (registered or certified mail, return receipt requested), personally delivered or sent by either facsimile transmission or electronic mail and in either case confirmed and shall be deemed given when so delivered or faxed or emailed and confirmed or if mailed, two days after such mailing.

If to the Representative:

National Securities Corporation
410 Park Avenue, 14th Floor
New York, NY 10022
Attn: Jonathan Rich
Fax No.:
Email: jrich@nationalsecuritiesib.com

Copy to (which shall not constitute notice):

Golenbock Eiseman Assor Bell & Peskoe LLP
437 Madison Avenue, 40th Floor
New York, NY 10022
Attn: Andrew D. Hudders, Esq.
Fax: (212) 754-0330
Email: ahudders@golenbock.com

If to the Company:

Atomera Incorporated
750 University Avenue, Suite 280
Los Gatos, CA 95032
Attn: Scott Bibaud
Fax: (408) 560-9556

Email: sbibaud@atomera.com

Copy to (which shall not constitute notice):

Greenberg Traurig, LLP
3161 Michelson Drive, Suite 1000
Irvine, CA 92612
Attn: Daniel K. Donahue, Esq.
Fax: (949) 732-6501
Email: donahued@gtlaw.com

9.2. Headings. The headings contained herein are for the sole purpose of convenience of reference, and shall not in any way limit or affect the meaning or interpretation of any of the terms or provisions of this Agreement.

9.3. Amendment. This Agreement may only be amended by a written instrument executed by each of the parties hereto.

9.4. Entire Agreement. This Agreement (together with the other agreements and documents being delivered pursuant to or in connection with this Agreement) constitutes the entire agreement of the parties hereto with respect to the subject matter hereof and thereof, and supersedes all prior agreements and understandings of the parties, oral and written, with respect to the subject matter hereof.

9.5. Binding Effect. This Agreement shall inure solely to the benefit of and shall be binding upon the Representative, the Underwriters, the Company and the controlling persons, directors and officers referred to in Section 5 hereof, and their respective successors, legal representatives and assigns, and no other person shall have or be construed to have any legal or equitable right, remedy or claim under or in respect of or by virtue of this Agreement or any provisions herein contained. The term "successors and assigns" shall not include a purchaser, in its capacity as such, of securities from any of the Underwriters.

9.6. Governing Law. This Agreement shall be governed by and construed and enforced in accordance with the laws of the State of New York, without giving effect to conflict of laws. The Company hereby agrees that any action, proceeding or claim against it arising out of, or relating in any way to this Agreement shall be brought and enforced in the courts of the State of New York of the United States of America for the Southern District of New York, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. The Company hereby waives any objection to such exclusive jurisdiction and that such courts represent an inconvenient forum. Any such process or summons to be served upon the Company may be served by transmitting a copy thereof by registered or certified mail, return receipt requested, postage prepaid, addressed to it at the address set forth in Section 9.1 hereof. Such mailing shall be deemed personal service and shall be legal and binding upon the Company in any action, proceeding or claim. The Company agrees that the prevailing party(ies) in any such action shall be entitled to recover from the other party(ies) all of its reasonable attorneys' fees and expenses relating to such action or proceeding and/or incurred in connection with the preparation therefor.

9.7. Execution in Counterparts. This Agreement may be executed in one or more counterparts, and by the different parties hereto in separate counterparts, each of which shall be deemed to be an original, but all of which taken together shall constitute one and the same agreement, and shall become effective when one or more counterparts has been signed by each of the parties hereto and delivered to each of the other parties hereto. Delivery of a signed counterpart of this Agreement by facsimile or email/pdf transmission shall constitute valid and sufficient delivery thereof.

9.8. Waiver, etc. The failure of any of the parties hereto to at any time enforce any of the provisions of this Agreement shall not be deemed or construed to be a waiver of any such provision, nor to in any way effect the validity of this Agreement or any provision hereof or the right of any of the parties hereto to thereafter enforce each and every provision of this Agreement. No waiver of any breach, non-compliance or non-fulfillment of any of the provisions of this Agreement shall be effective unless set forth in a written instrument executed by the party or parties against whom or which enforcement of such waiver is sought; and no waiver of any such breach, non-compliance or non-fulfillment shall be construed or deemed to be a waiver of any other or subsequent breach, non-compliance or non-fulfillment.

[SIGNATURE PAGE FOLLOWS]

If the foregoing correctly sets forth the understanding between the Underwriters and the Company, please so indicate in the space provided below for that purpose, whereupon this letter shall constitute a binding agreement between us.

Very truly yours,
ATOMERA INCORPORATED
By: _____
Name: _____
Title: _____

Accepted on the date first above written.

NATIONAL SECURITIES CORPORATION,
as Representative of the several Underwriters

By: _____
Name: _____
Title: _____

SCHEDULE 1

Name of Underwriter	Number of Firm Shares
National Securities Corporation	[]

NUMBER	Atomera Incorporated	SHARES
CERT.9999	INCORPORATED UNDER THE LAWS OF THE STATE OF DELAWARE	*****9,000,000*****
	\$0.001 PAR VALUE COMMON STOCK	CUSIP: 04965B100
		COMMON STOCK
THIS CERTIFIES THAT	* SPECIMEN *	
Is The Owner of	* NINE MILLION *	
	FULLY PAID AND NON-ASSESSABLE SHARES OF COMMON STOCK OF	
	Atomera Incorporated	
Transferable on the books of the Corporation in person or by duly authorized attorney upon surrender of this Certificate properly endorsed. This Certificate is not valid until countersigned by the Transfer Agent and registered by the Registrar.		
Dated:	JANUARY 01, 2009	
COUNTERSIGNED AND REGISTERED:		
VSTOCK TRANSFER, LLC		
Transfer Agent and Registrar		
By: _____		
AUTHORIZED SIGNATURE	President & Chief Executive Officer	Chief Financial Officer & Secretary

#P-2 • Copyright 2007 Reginald Oglethorpe, Inc. • Salt Lake City, Utah



The following abbreviations, when used in the inscription on the face of this certificate, shall be construed as though they were written out in full according to applicable laws or regulations.

TEN COM	- as tenants in common	UNIF GIFT MIN ACT.....Custodian.....
TEN ENT	- as tenants by the entirety	(Cust) (Minor)
JT TEN	- as joint tenants with the right of survivorship and not as tenants in common	Act..... (State)

Additional abbreviations may also be used though not in the above list.

For value received, _____ *hereby sell, assign and transfer unto*

PLEASE INSERT SOCIAL SECURITY OR OTHER IDENTIFYING NUMBER OF ASSIGNEE:

(PLEASE PRINT OR TYPEWRITE NAME AND ADDRESS, INCLUDING ZIP CODE, OF ASSIGNEE)

_____ shares

of the capital stock represented by the within Certificate, and do hereby irrevocably constitute and appoint

_____, *Attorney to transfer the said stock on the books of the within named Corporation with full power of substitution in the premises.*

Dated _____

X _____

THE SIGNATURE TO THIS ASSIGNMENT MUST CORRESPOND WITH THE NAME AS WRITTEN UPON THE FACE OF THIS CERTIFICATE. THE SIGNATURE(S) MUST BE GUARANTEED BY AN ELIGIBLE GUARANTOR INSTITUTION (Banks, Stockbrokers, Savings and Loan Associations and Credit Unions).

SIGNATURE GUARANTEED:

TRANSFER FEE WILL APPLY

THIS WARRANT AND THE SECURITIES ISSUABLE UPON EXERCISE HEREOF HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR ANY OTHER SECURITIES LAWS AND MAY NOT BE OFFERED FOR SALE, SOLD, TRANSFERRED, PLEDGED OR HYPOTHECATED IN THE ABSENCE OF (1) AN EFFECTIVE REGISTRATION STATEMENT COVERING SUCH SECURITIES UNDER THE SECURITIES ACT AND ANY OTHER APPLICABLE SECURITIES LAWS, OR (2) AN OPINION OF COUNSEL REASONABLY SATISFACTORY TO THE COMPANY THAT SUCH REGISTRATION IS NOT REQUIRED .

IN ADDITION, THIS WARRANT AND THE SECURITIES ISSUABLE UPON EXERCISE HEREOF MAY NOT BE SOLD, TRANSFERRED, ASSIGNED, PLEDGED, OR HYPOTHECATED, OR BE THE SUBJECT OF ANY HEDGING, SHORT SALE, DERIVATIVE, PUT, OR CALL TRANSACTION THAT WOULD RESULT IN THE EFFECTIVE ECONOMIC DISPOSITION OF SUCH SECURITIES BY ANY PERSON FOR A PERIOD OF ONE HUNDRED EIGHTY (180) DAYS IMMEDIATELY FOLLOWING THE DATE OF EFFECTIVENESS OF THE PUBLIC OFFERING OF THE COMPANY’S SECURITIES PURSUANT TO REGISTRATION STATEMENT NO.: 333-[] AS FILED WITH THE SECURITIES AND EXCHANGE COMMISSION, EXCEPT IN ACCORDANCE WITH FINRA RULE 5110(G)(2).

ATOMERA INCORPORATED

UNDERWRITER WARRANT

[] shares of Common Stock

[], 2016

This **UNDERWRITER WARRANT** (this “**Warrant**”) of Atomera Incorporated (f/k/a Mears Technologies, Inc.), a corporation, duly organized and validly existing under the laws of the State of Delaware (the “**Company**”), is being issued pursuant to that certain Underwriting Agreement, dated [], 2016 (the “**Underwriting Agreement**”), between the Company and National Securities Corporation (the “**Underwriter**”) relating to a firm commitment public offering (the “**Offering**”) of shares of common stock, \$0.001 par value, of the Company (the “**Common Stock**”) underwritten by the Underwriter.

FOR VALUE RECEIVED, the Company hereby grants to National Securities Corporation and its permitted successors and assigns (collectively, the “**Holder**”) the right to purchase from the Company up to [] shares of Common Stock (such shares underlying this Warrant, the “**Warrant Shares**”), at a per share purchase price equal to \$[●] (the “**Exercise Price**”), subject to the terms, conditions and adjustments set forth below in this Warrant.

1. Date of Warrant Exercise. This Warrant shall become exercisable twelve (12) months after the Base Date (the “**Exercise Date**”). As used in this Warrant, the term “**Base Date**” shall mean [], 2016 (the effective date of the registration statement). Except as permitted by applicable rules of the Financial Industry Regulatory Authority, Inc. (“**FINRA**”), this Warrant and the underlying Warrant Shares shall not be sold, transferred, assigned, pledged or hypothecated prior to the date that is one hundred eighty (180) days immediately following the Base Date pursuant to FINRA Rule 5110(g)(1), except as permitted under FINRA Rule 5110(g)(2).

2. Expiration of Warrant. This Warrant shall expire on the five (5) year anniversary of the Base Date (the “**Expiration Date**”).
3. Exercise of Warrant. This Warrant shall be exercisable pursuant to the terms of this Section 3.

3.1 Manner of Exercise.

(a) This Warrant may only be exercised by the Holder hereof on or after the Exercise Date and on or prior to the Expiration Date, in accordance with the terms and conditions hereof, in whole or in part (but not as to fractional shares) with respect to any portion of this Warrant, during the Company’s normal business hours on any day other than a Saturday or a Sunday or a day on which commercial banking institutions in New York, New York are authorized by law to be closed (a “**Business Day**”), by surrender of this Warrant to the Company at its office maintained pursuant to Section 10.2(a) hereof, accompanied by a written exercise notice in the form attached as Exhibit A to this Warrant (or a reasonable facsimile thereof) duly executed by the Holder, together with the payment of the aggregate Exercise Price for the number of Warrant Shares purchased upon exercise of this Warrant. Upon surrender of this Warrant, the Company shall cancel this Warrant document and shall, in the event of partial exercise, replace it with a new Warrant document in accordance with Section 3.3.

(b) Except as provided for in Section 3.1(c) below, each exercise of this Warrant must be accompanied by payment in full of the aggregate Exercise Price in cash by check or wire transfer in immediately available funds for the number of Warrant Shares being purchased by the Holder upon such exercise.

(c) The aggregate Exercise Price for the number of Warrant Shares being purchased may also, in the sole discretion of the Holder, be paid in full or in part on a “cashless basis” at the election of the Holder:

- (i) in the form of Common Stock owned by the Holder (based on the Fair Market Value (as defined below) of such Common Stock on the date of exercise);
- (ii) in the form of Warrant Shares withheld by the Company from the Warrant Shares otherwise to be received upon exercise of this Warrant having an aggregate Fair Market Value on the date of exercise equal to the aggregate Exercise Price of the Warrant Shares being purchased by the Holder; or
- (iii) by a combination of the foregoing, provided that the combined value of all cash and the Fair Market Value of any shares surrendered to the Company is at least equal to the aggregate Exercise Price for the number of Warrant Shares being purchased by the Holder.

For purposes of this Warrant, the term “**Fair Market Value**” means with respect to a particular date, the average closing price of the Common Stock for the five (5) trading days immediately preceding the applicable exercise herein as officially reported by the principal securities exchange on which the Common Stock is then listed or admitted to trading, or, if the Common Stock is not listed or admitted to trading on any securities exchange as determined in good faith by resolution of the Board of Directors of the Company, based on the best information available to it.

To illustrate a cashless exercise of this Warrant under Section 3.1 (c)(ii) (or for a portion thereof for which cashless exercise treatment is requested as contemplated by Section 3.1(c)(iii) hereof), the calculation of such exercise shall be as follows:

$$X = Y (A-B)/A$$

where:

X = the number of Warrant Shares to be issued to the Holder (rounded to the nearest whole share).

Y = the number of Warrant Shares with respect to which this Warrant is being exercised.

A = the Fair Market Value of the Common Stock.

B = the Exercise Price.

(d) For purposes of Rule 144 and sub-section (d)(3)(ii) thereof, it is intended, understood, and acknowledged that the Common Stock issuable upon exercise of this Warrant in a cashless exercise transaction as described in Section 3.1(c) above shall be deemed to have been acquired at the time this Warrant was issued. Moreover, it is intended, understood, and acknowledged that the holding period for the Common Stock issuable upon exercise of this Warrant in a cashless exercise transaction as described in Section 3.1(c) above shall be deemed to have commenced on the date this Warrant was issued.

3.2 When Exercise Effective. Each exercise of this Warrant shall be deemed to have been effected immediately prior to the close of business on the Business Day on which this Warrant shall have been duly surrendered to the Company as provided in Sections 3.1 and 12 hereof, and, at such time, the Holder in whose name any certificate or certificates for Warrant Shares shall be issuable upon exercise as provided in Section 3.3 hereof shall be deemed to have become the holder or holders of record thereof of the number of Warrant Shares purchased upon exercise of this Warrant.

3.3 Delivery of Common Stock Certificates and New Warrant. As soon as reasonably practicable after each exercise of this Warrant, in whole or in part, and in any event within three (3) Business Days thereafter, the Company, at its expense (including the payment by it of any applicable issue taxes), will cause to be issued in the name of and delivered to the Holder hereof or, subject to Sections 9 and 10 hereof, as the Holder (upon payment by the Holder of any applicable transfer taxes) may direct:

(a) a certificate or certificates (with appropriate restrictive legends, as applicable) for the number of duly authorized, validly issued, fully paid and non-assessable Warrant Shares to which the Holder shall be entitled upon exercise; and

(b) in case exercise is in part only, a new Warrant document of like tenor, dated the date hereof, for the remaining number of Warrant Shares issuable upon exercise of this Warrant after giving effect to the partial exercise of this Warrant (including the delivery of any Warrant Shares as payment of the Exercise Price for such partial exercise of this Warrant).

4. Certain Adjustments. For so long as this Warrant is outstanding:

4.1 Mergers or Consolidations. If at any time after the date hereof there shall be a capital reorganization (other than a combination or subdivision of Common Stock otherwise provided for herein) resulting in a reclassification to or change in the terms of securities issuable upon exercise of this Warrant (a “ **Reorganization**”), or a merger or consolidation of the Company with another corporation, association, partnership, organization, business, individual, government or political subdivision thereof or a governmental agency (a “ **Person**” or the “ **Persons**”) (other than a merger with another Person in which the Company is a continuing corporation and which does not result in any reclassification or change in the terms of securities issuable upon exercise of this Warrant or a merger effected exclusively for the purpose of changing the domicile of the Company) (a “ **Merger**”), then, as a part of such Reorganization or Merger, lawful provision and adjustment shall be made so that the Holder shall thereafter be entitled to receive, upon exercise of this Warrant, the number of shares of stock or any other equity or debt securities or property receivable upon such Reorganization or Merger by a holder of the number of shares of Common Stock which might have been purchased upon exercise of this Warrant immediately prior to such Reorganization or Merger. In any such case, appropriate adjustment shall be made in the application of the provisions of this Warrant with respect to the rights and interests of the Holder after the Reorganization or Merger to the end that the provisions of this Warrant (including adjustment of the Exercise Price then in effect and the number of Warrant Shares) shall be applicable after that event, as near as reasonably may be, in relation to any shares of stock, securities, property or other assets thereafter deliverable upon exercise of this Warrant. The provisions of this Section 4.1 shall similarly apply to successive Reorganizations and/or Mergers.

4.2 Splits and Subdivisions; Dividends. In the event the Company should at any time or from time to time effectuate a split or subdivision of the outstanding shares of Common Stock or pay a dividend in or make a distribution payable in additional shares of Common Stock or other securities, or rights convertible into, or entitling the holder thereof to receive, directly or indirectly, additional shares of Common Stock (hereinafter referred to as “ **Common Stock Equivalents** ”) without payment of any consideration by such holder for the additional shares of Common Stock or Common Stock Equivalents (including the additional shares of Common Stock issuable upon conversion or exercise thereof), then, as of the applicable record date (or the date of such distribution, split or subdivision if no record date is fixed), the per share Exercise Price shall be appropriately decreased and the number of Warrant Shares shall be appropriately increased in proportion to such increase (or potential increase) of outstanding shares; provided, however, that no adjustment shall be made in the event the split, subdivision, dividend or distribution is not effectuated.

4.3 Combination of Shares. If the number of shares of Common Stock outstanding at any time after the date hereof is decreased by a combination of the outstanding shares of Common Stock, the per share Exercise Price shall be appropriately increased and the number of shares of Warrant Shares shall be appropriately decreased in proportion to such decrease in outstanding shares.

4.4 Adjustments for Other Distributions. In the event the Company shall declare a distribution payable in securities of other Persons, evidences of indebtedness issued by the Company or other Persons, assets (excluding cash dividends or distributions to the holders of Common Stock paid out of current or retained earnings and declared by the Company’s Board of Directors) or options or rights not referred to in Sections 4.2 or 4.3 then, in each such case for the purpose of this Section 4.4, upon exercise of this Warrant, the Holder shall be entitled to a proportionate share of any such distribution as though the Holder was the actual record holder of the number of Warrant Shares as of the record date fixed for the determination of the holders of Common Stock of the Company entitled to receive such distribution.

5. No Impairment. The Company will not, by amendment of its certificate of incorporation or by-laws or through any consolidation, merger, reorganization, transfer of assets, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all of the terms and in the taking of all actions necessary or appropriate in order to protect the rights of the Holder against impairment.

6. Notice as to Adjustments. With respect to each adjustment pursuant to Section 4 of this Warrant, the Company, at its expense, will promptly compute the adjustment or re-adjustment in accordance with the terms of this Warrant and furnish the Holder with a certificate certified and confirmed by the Secretary or Chief Financial Officer of the Company setting forth, in reasonable detail, the event requiring the adjustment or re-adjustment and the amount of such adjustment or re-adjustment, the method of calculation thereof and the facts upon which the adjustment or re-adjustment is based, and the Exercise Price and the number of Warrant Shares or other securities purchasable hereunder after giving effect to such adjustment or re-adjustment, which report shall be mailed by first class mail, postage prepaid to the Holder.

7. Reservation of Shares. The Company shall, solely for the purpose of effecting the exercise of this Warrant, at all times during the term of this Warrant, reserve and keep available out of its authorized shares of Common Stock, free from all taxes, liens and charges with respect to the issue thereof and not subject to preemptive rights of shareholders of the Company, such number of its shares of Common Stock as shall from time to time be sufficient to effect in full the exercise of this Warrant. If at any time the number of authorized but unissued shares of Common Stock shall not be sufficient to effect in full the exercise of this Warrant, in addition to such other remedies as shall be available to Holder, the Company will promptly take such corporate action as may, in the opinion of its counsel, be necessary to increase the number of authorized but unissued shares of Common Stock to such number of shares as shall be sufficient for such purposes, including without limitation, using its Reasonable Commercial Efforts (as defined in Section 14 hereof) to obtain the requisite shareholder approval necessary to increase the number of authorized shares of Common Stock. The Company hereby represents and warrants that all shares of Common Stock issuable upon proper exercise of this Warrant shall be duly authorized and, when issued and paid for upon proper exercise, shall be validly issued, fully paid and nonassessable.

8. Registration and Listing.

8.1 Definition of Registrable Securities; Majority. As used herein, the term “ **Registrable Securities** ” means any shares of Common Stock issuable upon the exercise of this Warrant until the date (if any) on which such shares shall have been transferred or exchanged and new certificates for them not bearing a legend restricting further transfer shall have been delivered by the Company and subsequent disposition of the shares shall not require registration or qualification under the Securities Act or any similar state law then in force. For purposes of this Warrant, the term “ **Majority Holders** ” shall mean in excess of fifty percent (50%) of the then outstanding Warrant Shares.

8.2 Demand Registration Rights.

(a) The Company, upon written demand (“**Demand Notice**”) of the Majority Holders, agrees to register on one occasion all of the Registrable Securities (a “**Demand Right**”). On such occasion, the Company will file a registration statement or a post-effective amendment to the Registration Statement covering the Registrable Securities within forty-five (45) days after receipt of a Demand Notice and use its Reasonable Commercial Efforts to have such registration statement or post-effective amendment declared effective as soon as possible thereafter; provided, however, that the Company shall not be required to comply with a Demand Notice if the Company has filed a registration statement with respect to which the Holder is entitled to piggyback registration rights pursuant to Section 8.3 hereof and either: (i) the Holder has elected to participate in the offering covered by such registration statement or (ii) if such registration statement relates to an underwritten primary offering of securities of the Company, until the offering covered by such registration statement has been withdrawn or until thirty (30) days after such offering is consummated. The demand for registration may be made at any time during a period of four years beginning one (1) year from the Base Date. The Company covenants and agrees to give written notice of its receipt of any Demand Notice to all other registered Holders of the Warrants and/or the Registrable Securities within ten days from the date of the receipt of any such Demand Notice.

(b) The Company shall bear all fees and expenses attendant to registering the Registrable Securities pursuant to Section 8.2(a), but the Holders shall pay any and all underwriting commissions and the expenses of any legal counsel selected by the Holders to represent them in connection with the sale of the Registrable Securities. The Company agrees to use its Reasonable Commercial Efforts to qualify or register the Registrable Securities in such states as are reasonably requested by the Majority Holder(s); provided, however, that in no event shall the Company be required to register the Registrable Securities in a state in which such registration would cause (i) the Company to be obligated to register, license or qualify to do business in such state, submit to general service of process in such state or would subject the Company to taxation as a foreign corporation doing business in such jurisdiction or (ii) the principal stockholders of the Company to be obligated to escrow their shares of capital stock of the Company. The Company shall cause any registration statement or post-effective amendment filed pursuant to the Demand Right granted under Section 8.2(a) to remain effective for a period of nine consecutive months from the effective date of such registration statement or post-effective amendment. The Holders shall only use the prospectuses provided by the Company to sell the Registrable Securities covered by such registration statement, and will immediately cease to use any prospectus furnished by the Company if the Company advises the Holder that such prospectus may no longer be used due to a material misstatement or omission.

8.3 Incidental Registration Rights.

(a) If the Company, for a period of six (6) years commencing one (1) year after the Base Date, proposes to register any of its securities under the Securities Act (other than in connection with a transaction contemplated by Rule 145(a) promulgated under the Securities Act or pursuant to registration on Form S-4 or S-8 or any successor forms) whether for its own account or for the account of any holder or holders of its shares other than Registrable Securities (any shares of such holder or holders (but not those of the Company and not Registrable Securities) with respect to any registration are referred to herein as, “**Other Shares**”), the Company shall at each such time give prompt (but not less than thirty (30) days prior to the anticipated effectiveness thereof) written notice to the holders of Registrable Securities of its intention to do so. The holders of Registrable Securities shall exercise the “piggy-back” rights provided herein by giving written notice within ten (10) days after the receipt of any such notice (which request shall specify the Registrable Securities intended to be disposed of by such holder). Except as set forth in Section 8.3(b), the Company will use its Reasonable Commercial Efforts to effect the registration under the Securities Act of all of the Registrable Securities which the Company has been so requested to register by such holder, to the extent required to permit the disposition of the Registrable Securities so to be registered, by inclusion of such Registrable Securities in the registration statement which covers the securities which the Company proposes to register. The Company will pay all Registration Expenses in connection with each registration of Registrable Securities pursuant to this Section 8.3.

(b) If the Company at any time proposes to register any of its securities under the Securities Act as contemplated by this Section 8.3 and such securities are to be distributed by or through one or more underwriters, the Company will, if requested by a holder of Registrable Securities, use its Reasonable Commercial Efforts to arrange for such underwriters to include all the Registrable Securities to be offered and sold by such holder among the securities to be distributed by such underwriters, provided that if the managing underwriter of such underwritten offering shall inform the Company by letter of its belief that inclusion in such registration statement and/or distribution of all or a specified number of such securities proposed to be distributed by such underwriters would interfere with the successful marketing of the securities being distributed by such underwriters (such letter to state the basis of such belief and the approximate number of such Registrable Securities, such Other Shares and shares held by the Company proposed so to be registered which may be distributed without such effect), then the Company may, upon written notice to such holder, the other holders of Registrable Securities, and holders of such Other Shares, reduce pro rata in accordance with the number of shares of Common Stock desired to be included in such registration statement and/or distribution (if and to the extent stated by such managing underwriter to be necessary to eliminate such effect) the number of such Registrable Securities and Other Shares the registration and/or distribution of which shall have been requested by each holder thereof so that the resulting aggregate number of such Registrable Securities and Other Shares so included in such registration and/or distribution, together with the number of securities to be included in such registration and/or distribution for the account of the Company, shall be equal to the number of shares stated in such managing underwriter's letter.

8.4 Registration Procedures. Whenever the holders of Registrable Securities have properly requested that any Registrable Securities be registered pursuant to the terms of this Warrant, the Company shall use its Reasonable Commercial Efforts to effect the registration for the sale of such Registrable Securities in accordance with the intended method of disposition thereof, and pursuant thereto the Company shall as expeditiously as possible:

(a) prepare and file with the SEC a registration statement with respect to such Registrable Securities and use its Reasonable Commercial Efforts to cause such registration statement to become effective;

(b) notify such holders of the effectiveness of each registration statement filed hereunder and prepare and file with the SEC such amendments and supplements to such registration statement and the prospectus used in connection therewith as may be necessary to (i) keep such registration statement effective and the prospectus included therein usable for a period commencing on the date that such registration statement is initially declared effective by the SEC and ending on the earlier of (A) the date when all Registrable Securities covered by such registration statement have been sold pursuant to the registration statement or cease to be Registrable Securities, or (B) nine months from the effective date of the registration statement; and (ii) comply with the provisions of the Securities Act with respect to the disposition of all securities covered by such registration statement during such period in accordance with the intended methods of disposition by the sellers thereof set forth in such registration statement;

(c) furnish to such holders such number of copies of such registration statement, each amendment and supplement thereto, the prospectus included in such registration statement (including each preliminary prospectus) and such other documents as such seller may reasonably request in order to facilitate the disposition of the Registrable Securities owned by such holders;

(d) use its Reasonable Commercial Efforts to register or qualify such Registrable Securities under such other securities or blue sky laws of such jurisdictions as such holders reasonably request and do any and all other acts and things which may be reasonably necessary or advisable to enable such holders to consummate the disposition in such jurisdictions of the Registrable Securities owned by such holders; provided, however, that the Company shall not be required to: (i) qualify generally to do business in any jurisdiction where it would not otherwise be required to qualify but for this subparagraph; (ii) subject itself to taxation in any such jurisdiction; or (iii) consent to general service of process in any such jurisdiction;

(e) notify such holders, at any time when a prospectus relating thereto is required to be delivered under the Securities Act, of the happening of any event as a result of which the prospectus included in such registration statement contains an untrue statement of a material fact or omits any material fact necessary to make the statements therein, in light of the circumstances in which they are made, not materially misleading, and, at the reasonable request of such holders, the Company shall prepare a supplement or amendment to such prospectus so that, as thereafter delivered to the purchasers of such Registrable Securities, such prospectus shall not contain an untrue statement of a material fact or omit to state any material fact necessary to make the statements therein, in light of the circumstances in which they are made, not materially misleading;

(f) provide a transfer agent and registrar for all such Registrable Securities not later than the effective date of such registration statement;

(g) make available for inspection by any underwriter participating in any disposition pursuant to such registration statement, and any attorney, accountant or other agent retained by any such underwriter, all financial and other records, pertinent corporate documents and properties of the Company, and cause the Company's officers, directors, managers, employees and independent accountants to supply all information reasonably requested by any such underwriter, attorney, accountant or agent in connection with such registration statement;

(h) otherwise use its Reasonable Commercial Efforts to comply with all applicable rules and regulations of the SEC, and make available to its security holders, as soon as reasonably practicable, an earnings statement of the Company, which earnings statement shall satisfy the provisions of Section 11(a) of the Securities Act and, at the option of the Company, Rule 158 thereunder;

(i) in the event of the issuance of any stop order suspending the effectiveness of a registration statement, or of any order suspending or preventing the use of any related prospectus or suspending the qualification of any Registrable Securities included in such registration statement for sale in any jurisdiction, the Company shall use its Reasonable Commercial Efforts promptly to obtain the withdrawal of such order; and

(j) if the offering is underwritten, use its Reasonable Commercial Efforts to furnish on the date that Registrable Securities are delivered to the underwriters for sale pursuant to such registration, an opinion dated such date of counsel representing the Company for the purposes of such registration, addressed to the underwriters covering such issues as are reasonably required by such underwriters.

8.5 Listing. The Company shall secure the listing of the Common Stock underlying this Warrant upon each national securities exchange or automated quotation system upon which shares of Common Stock are then listed or quoted (subject to official notice of issuance) and shall maintain such listing of shares of Common Stock. The Company shall at all times comply in all material respects with the Company's reporting, filing and other obligations under the by-laws or rules of The NASDAQ Stock Market (or such other national securities exchange or market on which the Common Stock may then be listed, as applicable).

8.6 Expenses. The Company shall pay all Registration Expenses relating to the registration and listing obligations set forth in this Section 8. For purposes of this Warrant, the term “ **Registration Expenses** ” means: (a) all registration, filing and FINRA fees, (b) all reasonable fees and expenses of complying with securities or blue sky laws, (c) all word processing, duplicating and printing expenses, (d) the fees and disbursements of counsel for the Company and of its independent public accountants, including the expenses of any special audits or “cold comfort” letters required by or incident to such performance and compliance, (e) premiums and other costs of policies of insurance (if any) against liabilities arising out of the public offering of the Registrable Securities being registered if the Company desires such insurance, if any, and (f) fees and disbursements of one counsel for the selling holders of Registrable Securities; provided however, that, in any case where Registration Expenses are not to be borne by the Company, such expenses shall not include (and such expenses shall be borne by the Company): (i) salaries of Company personnel or general overhead expenses of the Company, (ii) auditing fees, or (iii) other expenses for the preparation of financial statements or other data, to the extent that any of the foregoing either is normally prepared by the Company in the ordinary course of its business or would have been incurred by the Company had no public offering taken place. Registration Expenses shall not include any underwriting discounts and commissions which may be incurred in the sale of any Registrable Securities and transfer taxes of the selling holders of Registrable Securities.

8.7 Information Provided by Holders. Any holder of Registrable Securities included in any registration shall furnish to the Company such information as the Company may reasonably request in writing, including, but not limited to, a completed and executed questionnaire requesting information customarily sought of selling security holders, to enable the Company to comply with the provisions hereof in connection with any registration referred to in this Warrant. The Holder agrees to suspend all sales of Registrable Securities pursuant to a registration statement filed under Section 8.3 in the event the Company notifies Holder pursuant to Section 8.4(e) that the prospectus relating thereto is no longer current and will not resume sales under such registration statement until advised by the Company that the prospectus has been appropriately supplemented or amended.

8.8 FINRA Public Offering System Filings. In the event that a registration statement covering the Registrable Securities is filed, within one (1) Business Day of the filing of such registration statement, the Company will prepare and file the selling stockholder resale offering described in such registration statement for review by FINRA via the FINRA’s Public Offering System filing system (“ **Public Offering System Filing** ”) for the purpose of having the prospectus contained within such registration statement treated as a “base prospectus” in connection with such resale offering. The Company will use its Reasonable Commercial Efforts to have the Public Offering System Filing approved by FINRA within thirty (30) days of such filing date. The Company shall bear all expenses of the Public Offering System Filing, including fees and expenses of one counsel or other advisor to the Holder. In all circumstances, the Company shall pay for all FINRA filing fees associated with the Public Offering System Filing.

8.9 Effectiveness Period. The Company shall use its Reasonable Commercial Efforts to keep each registration statement contemplated hereunder continuously effective under the Securities Act until the date which is the earlier date of when (i) all Registrable Securities covered by such Registration Statement have been sold, (ii) all Registrable Securities covered by such Registration Statement may be sold immediately without registration under the Securities Act and without volume restrictions pursuant to Rule 144 under the Securities Act, as determined by the counsel to the Company pursuant to a written opinion letter to such effect, addressed and reasonably acceptable to the Company’s transfer agent and the affected holders of Registrable Securities, or (iii) nine months from the effective date of such registration statement.

8.10 Net Cash Settlement. Notwithstanding anything herein to the contrary, in no event will the Holder hereof be entitled to receive a net-cash settlement as liquidated damages in lieu of physical settlement in shares of Common Stock, regardless of whether the Common Stock underlying this Warrant is registered pursuant to an effective registration statement; provided, however, that the foregoing will not preclude the Holder from seeking other remedies at law or equity for breaches by the Company of its registration obligations hereunder.

9. Restrictions on Transfer.

9.1 Restrictive Legends. This Warrant and each Warrant issued upon transfer or in substitution for this Warrant pursuant to Section 10 hereof, each certificate for Common Stock issued upon the exercise of the Warrant and each certificate issued upon the transfer of any such Common Stock shall be transferable only upon satisfaction of the conditions specified in this Section 9. Each of the foregoing securities shall be stamped or otherwise imprinted with a legend reflecting the restrictions on transfer set forth herein and any restrictions required under the Securities Act or other applicable securities laws.

9.2 Notice of Proposed Transfer. Prior to any transfer of any securities which are not registered under an effective registration statement under the Securities Act (“ **Restricted Securities**”), which transfer may only occur if there is an exemption from the registration provisions of the Securities Act and all other applicable securities laws, the Holder will give written notice to the Company of the Holder’s intention to effect a transfer (and shall describe the manner and circumstances of the proposed transfer). The following provisions shall apply to any proposed transfer of Restricted Securities:

(i) If in the opinion of counsel for the Holder reasonably satisfactory to the Company the proposed transfer may be effected without registration of the Restricted Securities under the Securities Act (which opinion shall state in detail the basis of the legal conclusions reached therein), the Holder shall thereupon be entitled to transfer the Restricted Securities in accordance with the terms of the notice delivered by the Holder to the Company. Each certificate representing the Restricted Securities issued upon or in connection with any transfer shall bear the restrictive legends required by Section 9.1 hereof.

(ii) If the opinion called for in (i) above is not delivered, the Holder shall not be entitled to transfer the Restricted Securities until either: (x) receipt by the Company of a further notice from such Holder pursuant to the foregoing provisions of this Section 9.2 and fulfillment of the provisions of clause (i) above, or (y) such Restricted Securities have been effectively registered under the Securities Act.

9.3 Certain Other Transfer Restrictions. Notwithstanding any other provision of this Warrant: (i) prior to the Exercise Date, this Warrant or the Restricted Securities thereunder may only be transferred or assigned to the persons permitted under FINRA Rule 5110(g), and (ii) subject at all times to FINRA Rule 5110(g), no opinion of counsel shall be necessary for a transfer of Restricted Securities by the holder thereof to any Person employed by or owning equity in the Holder, if the transferee agrees in writing to be subject to the terms hereof to the same extent as if the transferee were the original purchaser hereof and such transfer is permitted under applicable securities laws.

9.4 Termination of Restrictions. Except as set forth in Section 9.3 hereof and subject at all times to FINRA Rule 5110(g), the restrictions imposed by this Section 9 upon the transferability of Restricted Securities shall cease and terminate as to any particular Restricted Securities: (a) which shall have been effectively registered under the Securities Act, or (b) when, in the opinion of counsel for the Company, such restrictions are no longer required in order to insure compliance with the Securities Act or Section 10 hereof. Whenever such restrictions shall cease and terminate as to any Restricted Securities, the Holder thereof shall be entitled to receive from the Company, without expense (other than applicable transfer taxes, if any), new securities of like tenor not bearing the applicable legends required by Section 9.1 hereof.

10. Ownership, Transfer, Sale and Substitution of Warrant.

10.1 Ownership of Warrant. The Company may treat any Person in whose name this Warrant is registered in the Warrant Register maintained pursuant to Section 10.2(b) hereof as the owner and holder thereof for all purposes, notwithstanding any notice to the contrary, except that, if and when any Warrant is properly assigned in blank, the Company may (but shall not be obligated to) treat the bearer thereof as the owner of such Warrant for all purposes, notwithstanding any notice to the contrary. Subject to Sections 9 and 10 hereof, this Warrant, if properly assigned, may be exercised by a new holder without a new Warrant first having been issued.

10.2 Office; Exchange of Warrant.

(a) The Company will maintain its principal office at the location identified in the prospectus relating to the Offering or at such other offices as set forth in the Company's most current filing (as of the date notice is to be given) under the Securities Exchange Act of 1934, as amended, or as the Company otherwise notifies the Holder.

(b) The Company shall cause to be kept at its office maintained pursuant to Section 10.2(a) hereof a Warrant Register for the registration and transfer of the Warrant. The name and address of the holder of the Warrant, the transfers thereof and the name and address of the transferee of the Warrant shall be registered in such Warrant Register. The Person in whose name the Warrant shall be so registered shall be deemed and treated as the owner and holder thereof for all purposes of this Warrant, and the Company shall not be affected by any notice or knowledge to the contrary.

(c) Upon the surrender of this Warrant, properly endorsed, for registration of transfer or for exchange at the office of the Company maintained pursuant to Section 10.2(a) hereof, the Company at its expense will (subject to compliance with Section 9 hereof, if applicable) execute and deliver to or upon the order of the Holder thereof a new Warrant of like tenor, in the name of such holder or as such holder (upon payment by such holder of any applicable transfer taxes) may direct, calling in the aggregate on the face thereof for the number of shares of Common Stock called for on the face of the Warrant so surrendered (after giving effect to any previous adjustment(s) to the number of Warrant Shares).

10.3 Replacement of Warrant. Upon receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of any such loss, theft or destruction of this Warrant, upon delivery of indemnity reasonably satisfactory to the Company in form and amount or, in the case of any mutilation, upon surrender of this Warrant for cancellation at the office of the Company maintained pursuant to Section 10.2(a) hereof, the Company will execute and deliver, in lieu thereof, a new Warrant of like tenor and dated the date hereof.

10.4 Opinions. In connection with the sale of the Warrant Shares by Holder, the Company agrees to cooperate with the Holder, and at the Company's expense, to have its counsel provide any legal opinions required to remove the restrictive legends from the Warrant Shares in connection with a sale, transfer or legend removal request of Holder.

11. No Rights or Liabilities as Stockholder. No Holder shall be entitled to vote or be deemed the holder of any equity securities which may at any time be issuable on the exercise hereof, nor shall anything contained herein be construed to confer upon the Holder, as such, any of the rights of a stockholder of the Company or any right to vote for the election of directors or upon any matter submitted to stockholders at any meeting thereof, or to give or withhold consent to any corporate action (whether upon any recapitalization, issuance of stock, reclassification of stock, change of par value, consolidation, merger, conveyance, or otherwise) or to receive notice of meetings until the Warrant shall have been exercised and the shares of Common Stock purchasable upon the exercise hereof shall have become deliverable, as provided herein.

12. Notices. Any notice or other communication in connection with this Warrant shall be given in writing and directed to the parties hereto as follows: (a) if to the Holder, at the address of the holder in the warrant register maintained pursuant to Section 10 hereof, or (b) if to the Company, to the attention of its Chief Executive Officer at its office maintained pursuant to Section 10.2(a) hereof; *provided*, that the exercise of the Warrant shall also be effected in the manner provided in Section 3 hereof. Notices shall be deemed properly delivered and received when delivered to the notice party (i) if personally delivered, upon receipt or refusal to accept delivery, (ii) if sent via facsimile, upon mechanical confirmation of successful transmission thereof generated by the sending telecopy machine, (iii) if sent by a commercial overnight courier for delivery on the next Business Day, on the first Business Day after deposit with such courier service, or (iv) if sent by registered or certified mail, five (5) Business Days after deposit thereof in the U.S. mail.

13. Payment of Taxes. The Company will pay all documentary stamp taxes attributable to the issuance of shares of Common Stock underlying this Warrant upon exercise of this Warrant; *provided, however*, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the transfer or registration of this Warrant or any certificate for shares of Common Stock underlying this Warrant in a name other than that of the Holder. The Holder is responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving shares of Common Stock underlying this Warrant upon exercise hereof.

14. Miscellaneous. This Warrant and any term hereof may be changed, waived, discharged or terminated only by an instrument in writing signed by the party against which enforcement of the change, waiver, discharge or termination is sought. This Warrant shall be construed and enforced in accordance with and governed by the laws of the State of New York. Each of the parties consents to the exclusive jurisdiction of the Federal or state courts whose districts encompass any part of the County of New York located in the City of New York, New York in connection with any dispute arising under this Agreement and hereby waives, to the maximum extent permitted by law, any objection, including any objection based on *forum non conveniens*, to the bringing of any such proceeding in such jurisdictions. Each party to this Agreement irrevocably consents to the service of process in any such proceeding by any manner permitted by law. The section headings in this Warrant are for purposes of convenience only and shall not constitute a part hereof. When used herein, the term “ **Reasonable Commercial Efforts**” means, with respect to the applicable obligation of the Company, reasonable commercial efforts for similarly situated, publicly-traded companies.

(Signature on Following Page)

IN WITNESS WHEREOF, the Company has caused this Underwriter Warrant to be duly executed as of the date first above written.

ATOMERA INCORPORATED

By:

Name:

Title:

EXHIBIT A
FORM OF EXERCISE NOTICE
[To be executed only upon exercise of Warrant]

To ATOMERA INCORPORATED:

The undersigned registered holder of the within Warrant hereby irrevocably exercises the Warrant pursuant to Section 3.1 of the Warrant with respect to [_____] Warrant Shares, at an exercise price of \$[_____] per share, and requests that the certificates for such Warrant Shares be issued, subject to Sections 9 and 10, in the name of and delivered to:

The undersigned is hereby making payment for the Warrant Shares in the following manner:
[check one]

☐ by cash in accordance with Section 3.1(b) of the Warrant

☐ via cashless exercise in accordance with Section 3.1(c) of the Warrant in the following manner:

The undersigned hereby represents and warrants that it is, and has been since its acquisition of the Warrant, the record and beneficial owner of the Warrant.

Dated: _____

Print or Type Name

(Signature must conform in all respects to name of
holder as specified on the face of Warrant)

(Street Address)

(City) (State) (Zip Code)

EXHIBIT B
FORM OF ASSIGNMENT

[To be executed only upon transfer of Warrant]

For value received, the undersigned registered holder of the within Warrant hereby sells, assigns and transfers unto _____ [include name and addresses] the rights represented by the Warrant to purchase _____ shares of Common Stock of ATOMERA INCORPORATED to which the Warrant relates, and appoints _____ Attorney to make such transfer on the books of ATOMERA INCORPORATED maintained for the purpose, with full power of substitution in the premises.

Dated:

(Signature must conform in all respects to name of holder as specified on the face of Warrant)

(Street Address)

(City) (State) (Zip Code)

Signed in the presence of:

(Signature of Transferee)

(Street Address)

(City) (State) (Zip Code)

Signed in the presence of:

GREENBERG TRAURIG, LLP
3161 Michelson Drive, Suite 1000
Irvine, California 92612

July 29, 2016

Atomera Incorporated
750 University Avenue, Suite 280
Los Gatos, California 95032

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to Atomera Incorporated, a Delaware corporation (the “**Company**”), in connection with the Registration Statement on Form S-1 (File No. 333-212353) (the “**Registration Statement**”) filed with the Securities and Exchange Commission under the Securities Act of 1933, as amended, for the registration of (i) up to 3,680,000 shares (the “**Common Shares**”) of the Company’s \$0.001 par value common stock (“**Common Stock**”); (ii) a warrant to purchase up to 368,000 shares of Common Stock to be issued to the underwriter (the “**Underwriter’s Warrant**”); and (iii) up to 368,000 shares of Common Stock underlying the Underwriter’s Warrant (the “**Underlying Shares**”).

You have requested our opinion as to the matters set forth below in connection with the Registration Statement. For purposes of rendering this opinion, we have examined the Registration Statement, forms of the Amended and Restated Certificate of Incorporation and Amended and Restated By-laws of the Company currently in effect, the Underwriter’s Warrant, and the corporate action of the Company that provides for the issuance of the Common Shares and execution of the Underwriter’s Warrant, and we have made such other investigation as we have deemed appropriate. We have examined and relied upon certificates of public officials and, as to certain matters of fact that are material to our opinion, we have also relied on a certificate of an officer of the Company. We have not independently verified the matters set forth in such certificates.

We express no opinion herein as to the laws of any state or jurisdiction other than the General Corporation Law of the State of Delaware and the federal laws of the United States of America.

Based upon and subject to the foregoing, it is our opinion that the Common Shares are duly authorized for issuance by the Company and, when issued and paid for as described in the Registration Statement, will be validly issued, fully paid and non-assessable.

Based upon and subject to the foregoing, it is our opinion that the Underwriter’s Warrant has been duly authorized for issuance by the Company and, when issued in conformity with and pursuant to the Registration Statement, will be validly issued, fully paid and non-assessable.

Based upon and subject to the foregoing, it is our opinion that the Underlying Shares have been duly authorized for issuance by the Company and, upon exercise and payment of the exercise price therefor in accordance with the terms of the Underwriter’s Warrant, will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to our name under the caption “Legal Matters” in the prospectus made part of the Registration Statement.

Very truly yours,

/s/ GREENBERG TRAURIG, LLP

[Form of] RESTRICTED STOCK AGREEMENT

THIS RESTRICTED STOCK AGREEMENT (“*Agreement*”) is entered into on July __, 2016 by and between Atomera Incorporated a Delaware corporation (the “*Company*”), and _____ (the “*Recipient*”).

RECITALS

- A. Recipient currently serves as an [officer/director] of the Company.
- B. The Company and Recipient have previously entered into that certain Key Participant Bonus Agreement dated September 23, 2016 (“*Bonus Agreement*”).
- C. The Company and Recipient wish to terminate the Bonus Agreement effective as of the date hereof and, in consideration of the Recipient’s agreement to terminate the Bonus Agreement, the Company wishes to grant to Recipient _____ shares of the Company’s \$.001 par value common stock (“*Common Stock*”) pursuant to the Company’s 2007 Stock Incentive Plan, on the terms and subject to the conditions set forth below.

AGREEMENT

It is hereby agreed as follows:

1. Grant of Restricted Stock. The Company hereby agrees to grant to Recipient, subject to and effective upon a Trigger Event (as defined below) (the “*Date of Grant*”), _____ shares of restricted Common Stock (collectively the “*Restricted Stock*”). The Restricted Stock shall be subject to the terms, conditions and restrictions set forth in this Agreement. Except as otherwise determined by the board of directors (“*Board*”) of the Company, this Agreement and the Restricted Stock granted hereby shall be administered on behalf of the Company by a compensation committee (“*Committee*”) established under Rule 5605(d) of the Nasdaq Listing Rules or, if none, by the majority vote of the independent members of the Board (“*Independent Directors*”), as independence is defined under Rule 5605(a)(2) of the Nasdaq Listing Rules. Notwithstanding the foregoing, for convenience this Agreement refers to the body administering this Agreement on behalf of the Company as the “Committee”.

2. Vesting of Restricted Stock.

(a) The shares of Restricted Stock shall become vested in the following amounts, at the following times and upon the following conditions, provided that the Recipient remains in continuous service of the Company through and on the applicable vesting date, except as otherwise provided in Section 4:

- (i) _____ Shares shall vest on the six month anniversary of the Date of Grant (“*Initial Vesting Date*”);

- (ii) _____ Shares shall vest on each of the five successive monthly anniversaries of the Initial Vesting Date; and
- (iii) _____ Shares shall vest on the sixth month anniversary of the Initial Vesting Date.

There shall be no proportionate or partial vesting of shares of Restricted Stock in or during the months, days or periods prior to each vesting date, and all vesting of shares of Restricted Stock shall occur only on the applicable vesting date.

(b) The Restricted Stock also shall become vested at such earlier times, if any, as shall be provided in this Agreement or as shall otherwise be determined by the Committee in its sole and absolute discretion.

(c) For purposes of this Agreement, the following terms shall have the meanings indicated:

- (i) “ **Cause** ” shall have the same meaning given to it in the Bonus Agreement.
- (ii) “ **Good Reason** ” shall have the same meaning given to it in the Bonus Agreement.
- (iii) “ **Non-Vested Shares** ” means any portion of the Restricted Stock subject to this Agreement that has not become vested pursuant to this Section 2.
- (iv) “ **Trigger Event** ” shall have the same meaning given to it in the Bonus Agreement.
- (ii) “ **Vested Shares** ” means any portion of the Restricted Stock subject to this Agreement that is and has become vested pursuant to this Section 2.

3. Delivery of Restricted Stock.

(a) One or more stock certificates evidencing the Restricted Stock shall be issued in the name of the Recipient but shall be held and retained by the Secretary of the Company until the date (the “ **Applicable Date** ”) on which the shares (or a portion thereof) subject to this Restricted Stock award become Vested Shares pursuant to Section 2 hereof, subject to the provisions of Section 4 hereof. All such stock certificates shall bear the following legends, along with such other legends that the Committee shall deem necessary and appropriate or which are otherwise required or indicated pursuant to any applicable stockholders agreement:

THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO SUBSTANTIAL VESTING AND OTHER RESTRICTIONS AS SET FORTH IN THE RESTRICTED STOCK AGREEMENT BETWEEN THE ISSUER AND THE ORIGINAL HOLDER OF THE SHARES, A COPY OF WHICH MAY BE OBTAINED AT THE PRINCIPAL OFFICE OF THE ISSUER. SUCH RESTRICTIONS ARE BINDING ON TRANSFEREES OF THESE SHARES, AND INCLUDE VESTING CONDITIONS WHICH MAY RESULT IN THE COMPLETE FORFEITURE OF THE SHARES.

(b) Recipient shall deposit with the Company stock powers or other instruments of transfer or assignment, duly endorsed in blank with signature(s) guaranteed, corresponding to each certificate representing shares of Restricted Stock until such shares become Vested Shares. If Recipient shall fail to provide the Company with any such stock power or other instrument of transfer or assignment, Recipient hereby irrevocably appoints the Secretary of the Company as his attorney-in-fact, with full power of appointment and substitution, to execute and deliver any such power or other instrument which may be necessary to effectuate the transfer of the Restricted Stock (or assignment of distributions thereon) on the books and records of the Company.

(c) On or after each Applicable Date, upon written request to the Company by Recipient, the Company shall promptly cause a new certificate or certificates to be issued for and with respect to all shares that become Vested Shares on that Applicable Date, which certificate(s) shall be delivered to Recipient as soon as administratively practicable after the date of receipt by the Company of Recipient's written request. The new certificate or certificates shall not bear the legend set forth in Section 3(a) but shall continue to bear those other legends and endorsements that the Company shall deem necessary or appropriate (including those relating to restrictions on transferability and/or obligations and restrictions under the Securities Act of 1933, as amended).

4. Effect of Termination of Employment or Other Relationship. In the event Recipient's [directorship/employment] with the Company terminates for any reason other than termination by the Company without Cause or termination by the Recipient for Good Reason, (i) prior to a Trigger Event, then this Agreement and all of Recipient's rights hereunder shall terminate effective as of the termination of service and (ii) after a Trigger Event, then all Non-Vested Shares then held by Recipient shall be forfeited immediately upon such termination of service and shall revert back to the Company without any payment to Recipient. In the event Recipient's employment with the Company terminates due to termination by the Company without Cause or termination by the Recipient for Good Reason, (iii) prior to a Trigger Event, then upon a Trigger Event taking place on or before May 31, 2017, all shares of Restricted Stock shall be issued to Recipient upon such Trigger Event as Vested Shares and (iv) after a Trigger Event, all Non-Vested Shares shall remain outstanding and shall become vested. The Committee shall have the power and authority to enforce on behalf of the Company any rights of the Company under this Agreement in the event of Recipient's forfeiture of Non-Vested Shares pursuant to this Section 4.

5. Rights with Respect to Restricted Stock.

(a) Except as otherwise provided in this Agreement, the Recipient shall have, with respect to all of the shares of Restricted Stock, whether Vested Shares or Non-Vested Shares, all of the rights of a holder of shares of Common Stock of the Company, including without limitation (i) the right to vote such Restricted Stock, (ii) the right to receive dividends, if any, as may be declared on the Restricted Stock from time to time, and (iii) the rights available to all holders of shares of Common Stock of the Company upon any merger, consolidation, reorganization, liquidation or dissolution, stock split-up, stock dividend or recapitalization undertaken by the Company; provided, however, that all of such rights shall be subject to the terms, provisions, conditions and restrictions set forth in this Agreement (including without limitation conditions under which all such rights shall be forfeited). Any shares of Common Stock issued to the Recipient as a dividend with respect to shares of Restricted Stock shall have the same status and bear the same legend as the shares of Restricted Stock and shall be held by the Company, if the shares of Restricted Stock that such dividend is attributed to is being so held, unless otherwise determined by the Committee. In addition, notwithstanding any provision to the contrary herein, any cash dividends declared with respect to shares of Restricted Stock subject to this Agreement shall be held in escrow by the Committee until such time as the shares of Restricted Stock that such cash dividends are attributed to shall become Vested Shares, and in the event that such shares of Restricted Stock are subsequently forfeited, the cash dividends attributable to such portion shall be forfeited as well.

(b) If at any time while this Agreement is in effect (or shares of Restricted Stock granted hereunder shall be or remain unvested and outstanding), there shall be any increase or decrease in the number of issued and outstanding shares of Common Stock of the Company through the declaration of a stock dividend or through any recapitalization resulting in a stock split-up, combination or exchange of such shares of Common Stock, then and in that event, in view of such change, the number of shares of Restricted Stock then subject to this Agreement shall be appropriately adjusted. If any such adjustment shall result in a fractional share, such fraction shall be disregarded.

(c) Notwithstanding any term or provision of this Agreement to the contrary, the existence of this Agreement, or of any outstanding Restricted Stock awarded hereunder, shall not affect in any manner the right, power or authority of the Company to make, authorize or consummate: (i) any or all adjustments, recapitalizations, reorganizations or other changes in the Company's capital structure or its business; (ii) any merger, consolidation or similar transaction by or of the Company; (iii) any offer, issue or sale by the Company of any capital stock of the Company, including any equity or debt securities, or preferred or preference stock that would rank prior to or on parity with the Restricted Stock and/or that would include, have or possess other rights, benefits and/or preferences superior to those that the Restricted Stock includes, has or possesses, or any warrants, options or rights with respect to any of the foregoing; (iv) the dissolution or liquidation of the Company; (v) any sale, transfer or assignment of all or any part of the stock, assets or business of the Company; or (vi) any other corporate transaction, act or proceeding (whether of a similar character or otherwise).

6. Non-Transferability of Non-Vested Shares. Non-Vested Shares shall not be pledged, hypothecated or otherwise encumbered or subject to any lien, obligation or liability of Recipient to any party (other than the Company), or assigned or transferred by Recipient otherwise than by will or the laws of descent and distribution or to a beneficiary upon the death of Recipient. A beneficiary or other person claiming any rights under this Agreement from or through Recipient shall be subject to all of the terms and conditions of this Agreement, except as otherwise determined by the Committee, and to any additional terms and conditions deemed necessary or appropriate by the Committee.

7. Tax Matters; Section 83(b) Election.

(a) If Recipient properly elects, within thirty (30) days of the Date of Grant, to include in gross income for federal income tax purposes an amount equal to the fair market value (as of the Date of Grant) of the Restricted Stock pursuant to Section 83(b) of the Internal Revenue Code of 1986, as amended (the “*Code*”), Recipient shall make arrangements satisfactory to the Company to pay to the Company any federal, state or local income taxes required to be withheld with respect to the Restricted Stock. If Recipient shall fail to make such tax payments as are required, the Company shall, to the extent permitted by law, have the right to deduct from any payment of any kind otherwise due to Recipient any federal, state or local taxes of any kind required by law to be withheld with respect to the Restricted Stock.

(b) If Recipient does not properly make the election described in Subsection 7(a) above, Recipient shall, no later than the date or dates as of which the restrictions referred to in this Agreement hereof shall lapse, pay to the Company, or make arrangements reasonably satisfactory to the Committee, including Recipient’s sale of the Vested Shares, for payment of, any federal, state or local taxes of any kind required by law to be withheld with respect to the Restricted Stock (including without limitation the vesting thereof), and the Company shall, to the extent permitted by law, have the right to deduct from any payment of any kind otherwise due to Recipient, including the transfer of Vested Shares upon the Vesting Date, an amount equal in value to, any federal, state, or local taxes of any kind required by law to be withheld with respect to the Restricted Stock. The Company shall cooperate with the Recipient in connection with the Recipient’s sale of any Vested Shares for purposes of Recipient’s payment of any withholding taxes.

(c) Tax consequences on Recipient (including without limitation federal, state, local and foreign income tax consequences) with respect to the Restricted Stock (including without limitation the grant, vesting and/or forfeiture thereof) are the sole responsibility of Recipient. Recipient shall consult with his or her own personal accountant(s) and/or tax advisor(s) regarding these matters, the making of a Section 83(b) election, and Recipient’s filing, withholding and payment (or tax liability) obligations.

8. Miscellaneous.

8.1 No Right to (Continued) Employment or Service. This Agreement and the grant of Restricted Stock hereunder shall not confer, or be construed to confer, upon Recipient any right to employment or service, or continued employment or service, with the Company.

8.2 No Limit on Other Compensation Arrangements. Nothing contained in this Agreement shall preclude the Company from adopting or continuing in effect other or additional compensation plans, agreements or arrangements, and any such plans, agreements and arrangements may be either generally applicable or applicable only in specific cases or to specific persons.

8.3 No Trust or Fund Created. Neither this Agreement nor the grant of Restricted Stock hereunder shall create or be construed to create a trust or separate fund of any kind or a fiduciary relationship between the Company and Recipient or any other person. To the extent that Recipient or any other person acquires a right to receive payments from the Company pursuant to this Agreement, such right shall be no greater than the right of any unsecured general creditor of the Company.

8.4 Binding Effect. This Agreement shall bind and inure to the benefit of the successors, assigns, transferees, agents, personal representatives, heirs and legatees of the respective parties.

8.5 Further Acts. Each party agrees to perform any further acts and execute and deliver any documents which may be necessary to carry out the provisions of this Agreement.

8.6 Amendment. This Agreement may be amended at any time by the written agreement of the Company and Recipient.

8.7 Syntax. Throughout this Agreement, whenever the context so requires, the singular shall include the plural, and the masculine gender shall include the feminine and neuter genders. The headings and captions of the various Sections hereof are for convenience only and they shall not limit, expand or otherwise affect the construction or interpretation of this Agreement.

8.8 Choice of Law. The parties hereby agree that this Agreement has been executed and delivered in the State of California and shall be construed, enforced and governed by the laws thereof. This Agreement is in all respects intended by each party hereto to be deemed and construed to have been jointly prepared by the parties and the parties hereby expressly agree that any uncertainty or ambiguity existing herein shall not be interpreted against either of them.

8.9 Severability. In the event that any provision of this Agreement shall be held invalid or unenforceable, such provision shall be severable from, and such invalidity or unenforceability shall not be construed to have any effect on, the remaining provisions of this Agreement.

8.10 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of (a) the date of transmission, if such notice or communication is delivered via email at the email address set forth below prior to 3:30 p.m. (California time) on any day except Saturday, Sunday and any day which shall be a federal legal holiday in the United States (“Business Day”), (b) the next Business Day after the date of transmission, if such notice or communication is delivered via email at the email address set forth below on a day that is not a Business Day or later than 3:30 p.m. (California time) on any Business Day, (c) the 2nd Business Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto. All notices and demands to Recipient or the Company may be given to them at the following addresses:

If to Recipient:

Email: _____

If to Company:

Atomera Incorporated
750 University Avenue, Suite 280
Los Gatos, California 95032

Attn: _____

Email: _____

Such parties may designate in writing from time to time such other place or places that such notices and demands may be given.

8.11 Entire Agreement. This Agreement constitutes the entire agreement between the parties hereto pertaining to the subject matter hereof, this Agreement supersedes all prior and contemporaneous agreements and understandings of the parties, and there are no warranties, representations or other agreements between the parties in connection with the subject matter hereof except as set forth or referred to herein. No supplement, modification or waiver or termination of this Agreement shall be binding unless executed in writing by the party to be bound thereby. No waiver of any of the provisions of this Agreement shall constitute a waiver of any other provision hereof (whether or not similar) nor shall such waiver constitute a continuing waiver.

8.12 Attorneys’ Fees. In the event that any party to this Agreement institutes any action or proceeding, including, but not limited to, litigation or arbitration, to preserve, to protect or to enforce any right or benefit created by or granted under this Agreement, the prevailing party in each respective such action or proceeding shall be entitled, in addition to any and all other relief granted by a court or other tribunal or body, as may be appropriate, to an award in such action or proceeding of that sum of money which represents the attorneys’ fees reasonably incurred by the prevailing party therein in filing or otherwise instituting and in prosecuting or otherwise pursuing or defending such action or proceeding, and, additionally, the attorneys’ fees reasonably incurred by such prevailing party in negotiating any and all matters underlying such action or proceeding and in preparation for instituting or defending such action or proceeding.

8.13 Counterparts. This Agreement may be executed in two or more separate counterparts, each of which shall be an original, and all of which together shall constitute one and the same agreement.

8.14 Termination of Bonus Agreement. The parties hereby agree that the Bonus Agreement and all of Recipient's rights thereunder are terminated as of the date of this Agreement.

IN WITNESS WHEREOF, the parties have entered into this Agreement as of the date first written above.

“ **Company** ”

Atomera Incorporated ,
a Delaware corporation

By: _____

Scott A. Bibaud, Chief Executive Officer

“ **Recipient** ”

INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM'S CONSENT

We consent to the inclusion in this Registration Statement of Atomera Incorporated (f/k/a Mears Technologies, Inc.) on Amendment No. 1 to Form S-1 (File No. 333-212353) of our report, which includes an explanatory paragraph as to the Company's ability to continue as a going concern, dated June 17, 2016, with respect to our audits of the financial statements of Atomera Incorporated as of December 31, 2015 and 2014 and for the years then ended, which report appears in the Prospectus, which is part of this Registration Statement. We also consent to the reference to our Firm under the heading "Experts" in such Prospectus.

/s/ Marcum LLP

Marcum LLP
New York, NY
July 28, 2016
