



POET TECHNOLOGIES INC.

Management's Discussion
and Analysis
For the Three Months Ended March 31, 2016



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MANAGEMENT’S DISCUSSION AND ANALYSIS FOR THE THREE MONTHS ENDED MARCH 31, 2016

The following discussion and analysis of the operations, results, and financial position of POET Technologies Inc., (the “Company”) for the three months ended March 31, 2016 (the “Period”) should be read in conjunction with the Company’s condensed unaudited consolidated financial statements for the period ended March 31, 2016 and the Company’s audited consolidated financial statements for the year ended December 31, 2015 and the related notes thereto where applicable both of which were prepared in accordance with International Financial Reporting Standards (“IFRS”). The effective date of this report is April 30, 2016. All financial figures are in United States dollars (“USD”) unless otherwise indicated. The abbreviation “U.S.” used throughout refers to the United States of America.

Forward-Looking Statements

This management discussion and analysis contains forward-looking statements that involve risks and uncertainties. It uses words such as “may”, “would”, “could”, “will”, “likely”, “expect”, “anticipate”, “believe”, “intend”, “plan”, “forecast”, “project”, “estimate”, and other similar expressions to identify forward-looking statements. Forward-looking statements are subject to a variety of risks and uncertainties which could cause actual events or results to differ from those reflected in the forward-looking statements, including, without limitation, risks and uncertainties relating to the early stage of the Company’s development and the possibility that future development of the Company’s technology and business will not be consistent with management’s expectations, difficulties in achieving commercial production or interruptions in such production if achieved, the inherent uncertainty of cost estimates and the potential for unexpected costs and expenses, the uncertainty of profitability and failure to obtain adequate financing on a timely basis. The Company undertakes no obligation to update forward-looking statements if circumstances or Management’s estimates or opinions should change, except to the extent required by law. The reader is cautioned not to place undue reliance on forward-looking statements.

Business Overview

We continue to depend on electronics for day-to-day functioning. As that dependency grows, so does the need for smaller, faster and more power efficient devices. Accordingly, photonics is seeing a second wave of growth fuelled by these consumers (social networking, cloud computing, Software as a Service (“SaaS”) etc.) and consumer devices.

The tangible impact of the current smart phone revolution is the explosion in the use of SaaS – this manifests itself in the form of “apps” on the cell phone, but drives the need for significant background computations, typically carried out in the “cloud”. Social Networking, Cloud Computing, Internet of Things and the growth of mega-datacenters are galvanizing a renewed spurt of growth in photonics. Investments by Web2.0 companies in mega-datacenters and supporting networking infrastructure have created a new and very dynamic segment in the optical components and modules market.

Moore’s Law continues to drive progress in silicon technology at the leading edge, although with diminishing returns. A flurry of so called “More than Moore” technologies are now augmenting conventional silicon technologies in continuing to provide the means for functional integration inherent in the thesis called Moore’s Law. Optical technologies are now entering the realm of “More than Moore” technologies with a promise to unlock the interconnect bottlenecks that are increasingly impacting scaled silicon technologies. Specifically, copper interconnects (commonly used in leading edge semiconductor technologies and printed circuit boards) are increasingly challenged to sustain the ever increasing bandwidth requirements and are limited reach and power hungry. New optical solutions are being sought to address this imminent issue.

Any processing solution requires two fundamental functions – computation and communication. Computational efficiencies are addressed with Moore’s Law advances in silicon technologies. However, communications, and more specifically high bandwidth data communications, are increasingly addressed using optical technology. To lower the power consumption of leading edge silicon, the industry is in need of new optical technology that augments existing silicon technologies and provides high bandwidth with low cost optical interconnects, thus unlocking the full potential of the silicon transistors.

Just as cost and power reductions in the world of silicon have been driven by “integration” – or the ability to put multiple functions on a single chip – similarly, the world of optics requires an “integration approach” to break the traditional

barriers of cost and scalability. Currently, there have been few technologies that have demonstrated the capability to integrate multiple optical functions on a single chip.

The Company has developed a unique, proprietary process that addresses the deficiencies of size, integration, power and cost efficiency associated with current opto-electronic semiconductor manufacturing technologies. The novel process can be accommodated in existing semiconductor fabs with minimum re-tooling, thus potentially reducing capital expenditures required to adopt POET's process technologies.

The Company has a number of issued patents and patents pending related to the semiconductor Planar Opto-Electronic Technology ("POET"). Currently, the Company's focus is on the design of III-V semiconductor devices, processes, and products for data communication applications in the consumer, data center and high performance computing segments. The POET platform also enables applications in adjacent segments in military, industrial and mobility.

The Company is positioned as an opto-electronic product and Intellectual Property ("IP") Company, with an aim to leverage existing and potential relationships in establishing a POET design and manufacturing value chain, and in commercializing POET IP.

The Company is incorporated under the laws of the Province of Ontario. The Company's shares trade under the symbol "PTK" on the TSX Venture Exchange in Canada and under the symbol "POETF" on the OTCQX in the U.S.

The following sections discuss its business in more detail.

Semiconductor Technology Process IP

The Company is conducting research and development related to expansion of the POET platform by adding processes to the POET IP portfolio. It is also engaged in developmental work related to existing POET processes for data communications applications in potential consumer, data center, high performance computing, industrial, military and mobility segments. The Company continues to develop gallium arsenide-based processes having several potential market applications, including: (i) infrared sensor arrays for defense as well as domestic monitoring and imaging applications, (ii) the unique combination of analog, mixed-signal, digital and optical functions on the same chip for potential use in high volume short reach and very short reach data communication transceivers and (iii) exploring the use of POET's unique VCSEL technology as smart pixels for application in display applications for Augmented Reality. The Company believes that the POET process has the potential to fundamentally alter the landscape of optical data communications for a broad range of applications by offering unique integrated optical and electronic components with dramatically lower solutions cost together with increased density, reliability and lower power consumption through integration.

The Company:

1. Has successfully produced numerous distinct devices using the POET process, including on-chip continuous-wave lasers and switching lasers with the potential for eliminating chip-to-chip metallic interconnects, complementary hetero-structure field effect transistors (HFETs), optical thyristors, and resonant cavity detectors.
2. Continues to establish Process Design Kits ("PDKs") with an initial focus on the components essential for the design of monolithically integrated VCSEL based optical transceivers. PDKs comprise a library of design rules and parameters for the POET technology that can eventually enable POET and its partners to implement the POET fabrication process into their preferred products.
3. Is utilizing Synopsys' and Coventor's tools and services to help develop POET PDKs. PDKs will initially be used by POET and its 3rd party chip developers to create integrated opto-electronic transceiver product prototypes.
4. Is continuing to consider foundry relationships with commercial pure-play 6" foundry suppliers. In 2015, the Company signed a VCSEL Manufacturing Services agreement for early prototyping and initial development with Wavetek Microelectronics Corporation ("Wavetek") for long term manufacturing. Wavetek, which is a wholly owned subsidiary of United Microelectronics Corporation ("UMC"), is a pure-play semiconductor foundry based in Taiwan. In addition, the Company has signed an epitaxial wafer supply agreement with Epiworks Inc. ("Epiworks"), which is a leading provider of MOCVD wafers to the electronics and optical industry. These relationships are helping to accelerate the "Lab-to-Fab" transition of the POET technology to a 6" wafer scale. These engagements will provide the baseline process flow in a manufacturing environment and enable the demonstration of product prototypes.
5. Has successfully validated POET's process technology transfer to a high volume production foundry facility. The Company also demonstrated resonant cavity detector performance that exceeds the performance of detectors currently in the market.

With an immediate view to commercialization, the management team is focused on exploiting existing high growth markets where the disruptive power of the POET platform IP provides sustained competitive differentiation.

Industry Outlook

Social networking, Mobile, Analytics and Cloud Computing (“SMAC”) are driving a continuous need for improvements in bandwidth and data handling capacity. This has driven and continues to drive significant growth in Data Centers. The Cloud Data Center traffic growth is over 25%¹ compound annual growth rate (“CAGR”) and is expected to continue to grow at this rate for the next few years. Power consumption in Data Centers has now become a significant issue. There is a need to proliferate low power computing and communications technology in the Data Centers – and enable the conversion of the power hungry copper based communication links to Fiber Optics.

The Company believes that our POET technology is applicable to a large portion of the opto-electronic semiconductor market as it represents an integrated comprehensive solution to increasing the performance potential of semiconductors in an economical and functional manner. The technology may particularly be capable of addressing the power challenges currently faced in Data Centers. POET may provide the potential for revolutionary innovation that enables it to manage more data at the performance of light but at near the cost points of copper. Based on the Company’s interactions with potential customers POET may provide significant value in applications where it addresses the need for lower power consumption, solution size, and cost efficiency.

Data centers today are enduring an excruciating pain point in terms of power. Energy management costs for US data centers alone had approached US\$9 billion in 2013 according to the National Resources Defense Council and are forecast to rise to \$13.7 Billion by 2020. Each watt of heat that does not have to be rejected from the rack could be worth savings in outright direct energy but also in indirect energy related to cooling costs. A single copper direct attach cable consumes about 3W of power per end. Let’s take a single mega datacenter with between 10,000-100,000 servers and a rough estimate of potentially 100,000 copper links. If you can save 5W of power per copper link used in this one Data Center, this can easily translate into 500 Kilowatts of saved energy translating into significant savings in operating expenses for a single mega data center. We believe data communications are primed for an integrated opto-electronic device and process platform that can enable low power, minimized size and component cost. This is the opportunity that POET is targeting to address, with its patented process that integrates digital, high-speed analog and optical devices on the same chip. We believe that the process can enable managing data at the speed of light and the cost of copper.

The POET platform may provide the following advantages to the industry:

- **Up to 10X power savings improvement** over existing copper technologies (especially for high speed data communication links)
- **Up to 5X cost improvement over existing optical component solutions**
- **Performance and Power of optical solutions at the price points competitive to that of copper, thus potentially accelerating a transition to optical communications from cumbersome copper links**
- **Flexible and integrated solution** that can be applied to virtually any technical application that commands an optical IO for high bandwidth, including chip to chip communications, on-board optics and on-chip optical communications

The Company’s strategy is to complete development of its VCSEL based integrated optical platform and monetize this technology with a mix of product and licensing revenue, while continuing research towards the expansion of the IP portfolio.

The disruptive potential of the POET technology was first recognized within the military community, and this recognition has remained strong. Applications in this market include infra-red sensor arrays and high frequency RF Monolithic Microwave Integrated Circuits (“MMIC’s”).

Key Success Drivers

The POET platform, which is covered by numerous patents and patents pending, if and when fully developed may make possible the economic production of fully-integrated optoelectronic semiconductor devices with lower cost, smaller form factors and reduced power consumption compared to conventional photonics technologies. The Company will continue to drive research, as the expansion of the IP portfolio is important to the future of POET. The currently developed integrated VCSEL technology is in its early development stage and has been transferred to a commercial manufacturing source where development and qualification is expected to be completed in 2016. The success of early stage semiconductor companies is highly dependent on their ability to identify milestones that push the limit of existing technology and the achievement of those milestones in a timely fashion. The Company has demonstrated such

¹ Source: Cisco Global Cloud Index 2014

successes in the past and continues to establish and achieve significant milestones. Significant milestones achieved over the last 3 years include:

- 1) Achieving radio frequency and microwave operation of both n-channel and p-channel transistors. By reaching this milestone, 3-inch POET wafers fabricated at BAE Systems (Nashua, NH) yielded submicron n-channel and micron-sized p-channel transistors operating at frequencies of 42 GHz and 3 GHz respectively.
- 2) The integration of the complementary inverter. Specifically, the Company successfully demonstrated complementary heterostructure field effect transistor based inverter operation using the POET process.
- 3) The fabrication of infrared (IR) detectors, using its proprietary planar optoelectronic technology (POET) platform. Adding to its significance is the fact that the POET wafers used for the IR devices were fabricated within an independent foundry, BAE Systems' Microelectronics Center in Nashua, New Hampshire. This milestone represents the integration by a third party of the optoelectronic process previously demonstrated in POET laboratories.
- 4) Demonstration of a two terminal Thyristor VCSEL – which is a key optical engine in the creation of single chip opto-electronic transceivers and changes the current paradigm of analog lasers and detectors.
- 5) Most recent demonstration of a best in class two terminal resonant cavity detector – which is also a critical device component used in its optical transceiver products.

The Company has successfully raised over CA\$17.5 million in equity financing through private placements and an additional CA\$29.1 million through the exercise of stock options and warrants since June 2012 of which CA\$2.7 million was raised through the exercise of stock options and warrants during the period.

In 2014, the University of Connecticut converted certain royalty rights into a significant investment in the Company. The parties agreed to restructure the payment provisions of the licensing agreement between the Company and the University of Connecticut regarding certain aspects of the POET technology (the "License Agreement") by reducing royalty payments to three percent (3%) of amounts received from unaffiliated third parties in respect of the exploitation of the Intellectual Property defined in the License Agreement, in consideration for 2,000,000 common shares of the Company.

The Company's future success will also depend on critical human capital. In this regard, the Company appointed a Chief Executive Officer, Chief Operating Officer and other key members of the operations team in 2015. Three new board members were also appointed in 2015 with unique industry insight and experience. The Company has also launched a recruitment drive for other key executives and engineering personnel.

Significant Events and Milestones During 2016

In 2016, the Company continued to execute on its stated strategic plan. The Company has achieved the following significant milestones in 2016:

1. On February 16, 2016, the Company hosted an investor conference call in which it provided an update on the Company's operational roadmap.
2. On March 22, 2016, the Company and the Institute of Micro Electronics Engineering, a Singapore Agency for Science, Technology and Research launched a joint 18-month development initiative for smart pixel applications. The project is designed to adapt the POET platform to potential applications in smart pixel technology for the burgeoning augmented reality market.
3. On April 4, 2016, the Company announced the following:
 - i) The Company demonstrated a resonant cavity detector fabricated at the Company's foundry supplier with performance that exceeds best in class.
 - ii) The Company successfully validated its process transfer to a 6-inch high volume production foundry.
 - iii) Due to health reasons, Dr. Geoff Taylor, the founder of the POET process, announced his retirement, effective April 30, 2016.

Summary of Quarterly Results

Following are the highlights of financial data of the Company for the most recently completed eight quarters which have been derived from the Company's consolidated financial statements prepared in accordance with IFRS:

	<u>Mar. 31/16</u>	<u>Dec. 31/15</u>	<u>Sep. 30/15</u>	<u>Jun. 30/15</u>	<u>Mar. 31/15</u>	<u>Dec. 31/14</u>	<u>Sep. 30/14</u>	<u>Jun. 30/14</u>
Other (income)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ (85,204)
Shares issued for the reduction of license fee	-	-	-	-	-	-	-	1,439,898
Research and development	530,469	932,618	767,124	715,732	564,602	457,470	504,131	362,848
Depreciation and amortization	87,844	83,526	82,022	79,587	74,728	70,222	66,050	50,276
Professional fees	140,200	225,118	110,389	353,892	122,716	134,339	325,695	146,057
Wages and benefits	483,169	414,857	423,214	269,015	198,965	578,071	405,012	366,368
Management and consulting fees	157,805	156,154	160,303	168,700	180,614	140,040	290,327	65,084
Stock-based compensation ⁽¹⁾	1,259,051	1,491,713	1,621,751	1,110,758	593,898	1,044,330	2,613,335	368,558
General expenses and rent	260,764	353,399	285,802	241,088	364,316	204,857	192,935	224,892
Impairment and other loss	80,453	-	-	-	-	-	-	-
Investment (income), including interest	(20,802)	(20,188)	(18,979)	(22,793)	(14,471)	-	-	-
Net loss	\$ 2,978,953	\$ 3,637,197	\$ 3,431,626	\$ 2,915,979	\$ 2,085,368	\$ 2,629,329	\$ 4,397,485	\$ 2,938,777

(1) Stock based compensation allocated between General and Administrative and Research and Development issuances is combined for MD&A purposes. For financial statement presentation purposes, stock based compensation is split between *General and Administrative & Research and Development*.

Explanation of Quarterly Results for the three months ended March 31, 2016 ("Q1 2016")

During Q1 2016, the Company reported a loss of \$2,978,953 as compared to a loss of \$2,085,368 for the same period in 2015. The following discusses the significant variances between Q1 2016 and the three months ended March 31, 2015 ("Q1 2015").

Research and development ("R&D") decreased marginally by 6% or \$34,133 from \$564,602 in Q1 2015 to \$530,469 in Q1 2016. The Company is progressing towards the monetization of the POET process. The expense was greater in Q1 2015 due to high subcontract fees and wages paid in rectifying faulty equipment installation by a third party. R&D expense in Q1 2016 is consistent with the expectations of the Company. The move to an outsourced R&D model with companies like Wavetek and Epiworks has resulted in the Company achieving a milestone with its resonant cavity detector. The Company has demonstrated a detector that exceeds the performance of the best detectors currently on the market.

Professional fees in Q1 2016 increased by \$17,484 from \$122,716 in Q1 2015 to \$140,200. This marginal increase is consistent with the activities of the Company during the quarter and consistent with Company's Q1 2016 expectations. There were no unusual items in Q1 2016 that contributed to the increase over Q1 2015.

The 143% increase of \$284,204 in wages and benefits from \$198,965 in Q1 2015 to \$483,169 in Q1 2016 was a result of the addition of the COO and CEO in June 2015. These two appointments were new to the Company which resulted in the comparative increase year over year. The expense does not normalize period to period until Q3.

General expenses and rent decreased in Q1 2016 as compared to Q1 2015 by \$103,552. The expense was \$364,316 in Q1 2015 and \$260,764 in Q1 2016. The expense was unusually high in Q1 2015 due to the increased investor relations, travel and promotion. In 2015, the Company embarked on a promotion program of the POET Process which included certain TV advertisements. Additionally, in 2015, maintenance and repair costs, included in general expenses, associated with the improper installation of new equipment by a third party resulted in additional costs. The Company consulted with specialists in the field to assist with correcting the issues related to the faulty equipment installation. The issues relating to the faulty installation were rectified in Q1 2015. The Company did not have any unusual expenses in Q1 2016 which resulted in the 28% decrease from Q1 2015 to Q1 2016.

Non-cash stock-based compensation had the most significant increase from Q1 2015 to Q1 2016. This expense increased by \$665,153 from \$593,898 in Q1 2015 to \$1,259,051 in Q1 2016. The valuation of stock options is driven by a number of factors including the number of options granted, the strike price and the volatility of the Company's stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options

as they vest. The stock options vest in accordance with the policies determined by the Board of Directors from time to time consistent with the provisions of the 2015 Plan which grants discretion to the Board of Directors.

The Company had a reduction in consulting fees due to discontinuing services that the Company felt were no longer required. In addition, some business consultants were replaced by experienced executives with similar skillsets. This resulted in the 13% or \$22,809 reduction in management and consulting fees.

During Q1 2016, the Company reclassified \$98,522 from prepaid and other current assets to property and equipment. This equipment was purchased in December 2015 but was not placed in use. During the period management determined that the equipment would not be used to generate future cash flows and committed to a plan to dispose of the equipment by June 30, 2016. Management used a market approach to determine the equipment's fair value less cost of sell. Key assumptions included the cost of similar assets, the impact of customization and unique use. The fair value less cost to sell was determined to be \$35,000 which is greater than its value in use. The Company recorded an impairment loss of \$63,522 on the equipment.

Additionally, the Company reduced its operations in Toronto. The Company sold some of its property and equipment and recorded a loss of \$16,931 on the sale. Cumulative impairment loss and loss on the sale of property and equipment was \$80,453 in Q1 2016 as compared to nil in Q1 2015.

Explanation of Material Variations by Quarter for the Last Eight Quarters

Q1 2016 compared to Q4 2015

R&D decreased by \$402,149 from Q4 2015 to Q1 2016. In Q4 2015, the Company made a commitment to transition to an outsourcing model as the most effective manner to monetize the POET process. During Q4 2015, the Company incurred additional upfront costs associated with establishing new foundry and technology development relationships with companies like Anadigics Inc., Epiworks, Wavetek and Intelligent Epitaxy Technology to expedite the technology development. In Q1 2016, the Company received positive information on its detectors produced by Wavetek. The Company's detectors have better performance than any detectors currently on the market.

Professional fees decreased by \$84,918 from \$225,118 in Q4 2015 to \$140,200 in Q1 2016. In Q4 2015, the Company paid additional legal fees associated with the expansion of the Company's patent portfolio coverage in a number of foreign jurisdictions. The Company also spent additional fees on professional services involved in testing the efficiency of the Company's internal controls as required by the Sarbanes Oxley Act of 2002.

In Q1 2016, the Company paid a \$25,000 performance bonus to the COO. In addition to this payment the differential increase of \$43,312 in wages and benefits over Q4 2015 was partially due to marginal increase in salaries and higher director fees paid in Q1 2016 than Q4 2015. Cumulative increase in wages and benefits over Q4 2015 was \$68,312.

General expenses decreased by \$92,635 from Q4 2015 to Q1 2016 due primarily to the costs of closing the UConn lab facilities in Q4 2015 and the investor relations and travel costs associated with the Company's road show in November 2015 to generate interest in the Company and its technology.

In Q1 2016, non-cash stock-based compensation decreased by \$232,662 from Q4 2015. This is a result of the timing of stock based compensation expense relative to the vesting date of the historical granted stock options. The valuation of stock options is driven by a number of factors including the quantity of options granted, the strike price and the volatility of the Company's stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest.

Q4 2015 compared to Q3 2015

In Q4 2015, professional fees increased by \$114,729 over Q3 2015 due to the legal fees incurred relating to the expanded coverage of the Company's patent portfolio and additional fees related to testing the effectiveness of the Company's internal controls as required by the Sarbanes Oxley Act.

General and administrative increased by \$67,557 in Q4 2015 as compared to Q3 2015 due to the increase in investor relations and travel during the quarter. The Company engaged in a European road show in November 2015 to generate interest in the Company and its technology. Additionally, the Company incurred moving and travel costs associated with the closure of the Uconn facilities.

In Q4 2015, the costs associated with new established foundry and technology development relationships with companies like Anadigics Inc., Epiworks and Intelligent Epitaxy Technology to expedite the technology development were incurred. The Company incurred costs of \$449,200 relating to these new parties on the expedited technology work being done as compared to \$290,215 in Q3 2015.

In Q4 2015, non-cash stock-based compensation decreased by \$130,038 from Q3 2015. This is a result of the timing of stock based compensation expense relative to the vesting date of the historical granted stock options. The valuation of stock options is driven by a number of factors including the quantity of options granted, the strike price and the

volatility of the Company's stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest.

Q3 2015 compared to Q2 2015

In Q3 2015, professional fees decreased by \$243,503 from Q2 to Q3 2015. The Company successfully recruited two high profile executive officers (CEO and COO). The Company paid \$200,000 in recruitment fees related to Drs. Deshmukh's and Venkatesan's employment in Q2. Both executives were appointed in June 2015. No recruitment fees were paid in Q3 2015.

Wages and benefits increased by \$154,199 due to the addition of the new CEO and COO. Wages and benefits will be higher over the short term as the transition of responsibilities continues from the former interim CEO to the new CEO as both salaries are incurred by the company in the transition period.

Non-cash stock-based compensation in Q3 2015 was \$510,993 higher than the expense in Q2 2015. The increase was impacted by timing of the expense related to the 10,430,000 stock options granted throughout calendar 2015. The Company granted 7,857,000 stock options to new executives (CEO and COO). The valuation of stock options is driven by a number of factors including the quantity of options granted, the strike price and the volatility of the Company's stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest.

Q2 2015 compared to Q1 2015

In Q2 2015, professional fees increased by \$231,176 over Q1 2015. The Company successfully recruited two high profile executive officers (CEO and COO). The Company paid \$200,000 in recruitment fees in Q2 related to Drs. Deshmukh's and Venkatesan's employment. Both executives were appointed in June 2015.

In Q2 2015, the Company increased its R&D efforts. Additional consultants were engaged by the Company. The \$151,130 increase in R&D, is partially comprised of an additional \$60,000 in consulting fees during Q2 in excess of Q1. The remaining increase was a result of the expanded scope of BAE's foundry services to the Company.

General and administrative in Q2 2015 was \$241,088 as compared to \$364,316 in Q1 2015, a decrease of \$123,228. In Q1 2015, the Company increased its investor relations, travel and promotion. The Company implemented a promotion program for POET which included advertisements on Bloomberg TV and the Fox News Network, which was expensed solely in Q1. Additionally, there were increases in maintenance and repair costs, resulting from the improper installation of new equipment by a third party and the purchasing of \$15,000 of specialized software required to optimize the optical elements of the POET process.

Non-cash stock-based compensation in Q2 2015 was \$516,860 in excess of the expense in Q1 2015. The increase was impacted by 9,930,000 stock options granted in Q2 as compared to 500,000 granted in Q1 2015. The Company granted 7,857,000 stock options to new executives (CEO and COO) in Q2. The valuation of stock options is driven by a number of factors including the quantity of options granted, the strike price and the volatility of the Company's stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest.

Q1 2015 compared to Q4 2014

In Q1 2015, research and development expenses increased by \$107,132 over Q4 2014 due to the addition of a Program Manager in Q1 2015 along with substantial overtime incurred during the quarter in connection with the rectification of improper installation of new equipment as previously discussed. The issues relating to the improper installation were rectified in Q1 2015.

Wages and benefits in Q1 2015 were \$198,965 compared to \$578,071 in Q4 2014. Q4 2014 included \$230,000 paid in bonuses and \$165,000 paid in directors' fees. No bonuses were paid in Q1 2015 and director fees consisted of \$39,981 in Q1 2015. The director fees in Q4 2014 included an expense for two quarters (Q3 payment and Q4 accrual).

In Q1 2015, non-cash stock-based compensation decreased by \$450,432 from Q4 2014. This is a result of the timing of stock based compensation expense relative to the vesting date of the historical granted stock options. The valuation of stock options is driven by a number of factors including the quantity of options granted, the strike price and the volatility of the Company's stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest.

In Q1 2015, general and administrative increased by \$159,459 over Q4 2014 due to increased investor relations, travel and promotion in this period. The Company implemented a promotion program for POET which included advertisements on Bloomberg TV and the Fox News Network which was expensed solely in Q1. Additionally, increases were incurred in maintenance and repair costs, resulting from the improper installation of new equipment by a third party and the leasing of specialized software required to optimize the optical elements of the POET process.

Q4 2014 compared to Q3 2014

Stock-based compensation and professional fees both decreased significantly from Q3 2014 to Q4 2014. Stock based compensation was \$2,613,335 in Q3 2014 compared to \$1,044,330 in Q4 2014. The valuation of stock options is driven by a number of factors including the quantity of options granted, the strike price and the volatility of the Company's stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest.

Professional fees were \$325,695 in Q3 2014 compared to \$134,339 in Q4 2014. In Q3, the Company incurred expenses for the updated Pellegrino valuation report. Additionally, professional fees were incurred in recruiting the new Executive Co-Chairman in Q3 2014.

Wages and benefits increased by \$173,059 from Q3 2014 to Q4 2014, due primarily to a performance bonus of \$230,000 paid to the former interim CEO and former COO of the Company.

Q3 2014 compared to Q2 2014

Professional fees increased by \$179,638 from Q2 2014 to Q3 2014. The increase was primarily due costs related to the updated Pellegrino valuation report and the professional fees incurred in recruiting the new Executive Co-Chairman.

In Q3 2014, non-cash stock-based compensation increased by \$2,244,777 over Q2 2014 as a result of the 3,940,000 annual Company stock options granted in Q3 compared to 215,000 granted in Q2 2014. The valuation of stock options is driven by a number of factors including the quantity of options granted, the strike price and the volatility of the Company's stock. The stock option expense is dependent on the timing of the stock option grant and the amortization of the options as they vest.

In Q2 2014, the Company had a one-time non-cash issuance of 2,000,000 common shares to the University of Connecticut valued at \$1,439,898 for the reduction of certain royalty rights in exchange for an investment in the Company. The parties agreed to restructure the payment provisions of the License Agreement by reducing royalty payments to three percent (3%) of amounts received from unaffiliated third parties in respect of the exploitation of the Intellectual Property defined in the License Agreement, in consideration for 2,000,000 common shares of the Company.

In Q3 2014, management and consulting fees increased by \$225,243 due primarily to the consulting services provided by a firm for the recruitment of the executive co-chair.

Segment Disclosure

The Company and its subsidiaries currently operate in a single segment - the design of semi-conductor products for military and industrial applications. The Company's sole operating and reporting segment reflects the management reporting structure of the organization and the manner in which the chief operating decision maker regularly assesses information for decision making purposes, including the allocation of resources. A summary of the Company's operating segment is below:

ODIS Inc. ("ODIS")

ODIS is the developer of the POET platform semiconductor process IP for monolithic fabrication of integrated circuit devices containing both electronic and optical elements on a single die.

The Company operates geographically in the United States and Canada. Geographical information is as follows:

As of March 31,	US	Canada	Consolidated
Current assets	\$ 6,501,111	\$ 8,771,055	\$ 15,272,166
Non current assets held for sale	35,000	-	35,000
Property and equipment	932,739	3,538	936,277
Patents and licenses	415,882	-	415,882
Total Assets	\$ 7,884,732	\$ 8,774,593	\$ 16,659,325

	US	Canada	Consolidated
For the three months ended March 31,			
General and administration	\$ 1,843,363	\$ 406,120	\$ 2,249,483
Research and development	669,819	-	669,819
Impairment loss	63,522	-	63,522
Loss on disposal of property and equipment	-	16,931	16,931
Investment income	-	(20,802)	(20,802)
Net Loss	\$ 2,576,704	\$ 402,249	\$ 2,978,953

2015			
As of March 31,	US	Canada	Consolidated
Current assets	\$ 4,964,912	\$ 10,052,943	\$ 15,017,855
Property and equipment	990,025	22,005	1,012,030
Patents and licenses	274,174	-	274,174
Total Assets	\$ 6,229,111	\$ 10,074,948	\$ 16,304,059

For the three months ended March 31,	US	Canada	Consolidated
General and administration	\$ 907,137	\$ 528,098	\$ 1,435,235
Research and development	664,604	-	664,604
Other income	-	(14,471)	(14,471)
Net Loss	\$ 1,571,741	\$ 513,627	\$ 2,085,368

Note: Certain prior amounts have been reclassified to conform to the current year's presentation

Liquidity and Capital Resources

The Company had working capital of \$14,968,238 on March 31, 2016 as compared to \$14,045,498 on December 31, 2015. The increase and maintenance of the higher working capital was due to the approximately \$1.9 million dollars raised through the exercise of stock options and warrants during the period.

The Company's balance sheet as at March 31, 2016 reflects assets with a book value of \$16,659,325 (2015 - \$15,934,839) of which 92% (2015 - 91%) or \$15,307,166 (2014 - \$14,560,919) is current and consists primarily of cash totaling \$14,729,382 (2015 - \$14,409,996). The Company's liquidity and unencumbered balance sheet will allow for investments in capital equipment and valuable human capital which are necessary to enable the Company to achieve its technical and operational milestones.

Based on current plans and cash utilization, we believe we have sufficient liquidity to support our operations and technological programs beyond 2016, which include acquisitions (see Subsequent Events), further development of the POET semiconductor process and increasing the POET intellectual property portfolio to enable us to exploit POET, through licenses and collaborative arrangements.

The Company expects to increase its research and development program in the short term to advance the POET process, this will result in increased subcontractor fees expense for 2016.

The Company is embarking on an aggressive plan of attempting to monetize POET while simultaneously improving shareholder value. The focus, therefore, is to remain sufficiently capitalized to facilitate this.

Subsequent Events

On April 28, 2016, the Company signed a definitive agreement (the "Agreement") to acquire all the shares of DenseLight Semiconductors Pte. Ltd. ("DenseLight"), a private designer, manufacturer and provider of photonic sensing and optical light source products. Upon completion of this transaction which is subject to applicable regulatory reviews and approvals, including approval of the TSX Venture Exchange, the Company will own 100% of DenseLight and its global photonics business and assets, including fabrication facility, intellectual property and technologies.

The Company is executing this acquisition via a combination of stock and cash. The US\$10,500,000 purchase price for the issued and outstanding shares of DenseLight will be executed through the issuance of common stock of the Company representing US\$10,500,000 at a deemed price of the USD equivalent of CDN\$1.00 per share. The number of shares to be issued will be affected by the USD/CAD exchange rate on the day prior to closing as determined by the bank of Canada.

The Company has also committed to issuing shares representing US\$1,000,000 to the DenseLight shareholders in the event that DenseLight meets or exceeds a pre-determined revenue target during calendar 2016.

All salaries, fees or debts of any kind owing by DenseLight to management shareholders and accrued or incurred prior to 2016, and past due obligations owed to current and past DenseLight employees, will be surrendered and cancelled at the Closing. In return, it is anticipated that, on an operational basis, the current and past employees will receive shares of the Company and cash on a settled basis. The sum total of common shares issued to cover debt will be the equivalent of about S\$2,537,368 in addition to approximately S\$1,689,353 in cash to be paid over a 9 month period.

The issuance of the Company's shares must be in compliance with all United States and Canada Federal and State or Provincial securities laws and regulations, and the rules of the TSX Venture Exchange. The shares will be restricted and subject to resale restrictions as established by the TSX Venture Exchange and U.S. Securities laws, including shares issued to non-management shareholders of DenseLight in satisfaction of outstanding indebtedness. All management shareholders of DenseLight shall agree not to sell, transfer, pledge or otherwise dispose of the POET Shares for a period of six months, at which time such shareholders may each sell up to 25% of the shares received by them. Management Shareholders may sell an additional 25% of the shares received by them after twelve months. Thereafter, all management shareholders shall be able to sell the remaining shares after 24 months from Closing. All non-management shareholders of DenseLight shall agree not to sell, transfer, pledge or otherwise dispose of the shares received by them for six months, at which time such shareholders may sell up to 25% of the shares received by them. Thereafter, such non-management shareholders may sell the remaining shares after 12 months from Closing.

DenseLight, a Singapore-based privately held photonics company, designs, manufactures, and delivers leading photonic optical light source products and solutions to the communications, medical, instrumentations, industrial, defense, and security industries. DenseLight processes III-V based optoelectronic devices and photonic integrated circuits through its in-house wafer fabrication and assembly & test facilities. The company is recognized worldwide for its technological innovations in high performance semiconductor infrared super-luminescent light sources and lasers, with a proven track record in deployed applications.

Related Party Transactions

Compensation to key management personnel were as follows:

	Three Months Ended March 31,	
	2016	2015
Salaries	\$ 554,290	\$ 372,174
Share-based payments (1)	908,463	502,371
Total	\$ 1,462,753	\$ 874,545

(1) Share-based payments are the fair value of options granted to key management personnel and expensed during the year as calculated using the Black-Scholes model.

The Company paid or accrued \$27,337 in fees and disbursements for the three months ended March 31, 2016 (2015 - \$23,802) to a law firm, of which a director is counsel, for legal services rendered to the Company.

All transactions with related parties have occurred in the normal course of operations and are measured at the exchange amounts, which are the amounts of consideration established and agreed to by the related parties.

Critical Accounting Estimates

Stock-based Compensation

Stock options and warrants awarded to non-employees are accounted for using the fair value of the instrument awarded or service provided, whichever is considered more reliable. Stock options and warrants awarded to employees are accounted for using the fair value method. The fair value of such stock options and warrants granted is recognized as an expense on a proportionate basis consistent with the vesting features of each tranche of the grant. The fair value is calculated using the Black-Scholes option pricing model with assumptions applicable at the date of grant.

Other stock-based payments

The Company accounts for other stock-based payments based on the fair value of the equity instruments issued or service provided, whichever is more reliable.

Cumulative Translation Adjustment

IFRS requires certain gains and losses such as certain exchange gains and losses arising from the translation of the financial statements of a self-sustaining foreign operation to be included in comprehensive income.

Recent Accounting Pronouncements

The Company has considered all recently issued accounting pronouncements and does not believe the adopting of such pronouncements will have a material impact on its consolidated financial statements. Please see note 3 of the financial statements for additional information.

Financial Instruments and Risk Management

The Company's financial instruments consist of cash and accounts payable and accrued liabilities. Unless otherwise noted, it is management's opinion that the Company is not exposed to significant interest or credit risks arising from these financial instruments. The Company estimates that the fair value of these instruments approximate the carrying values due to their short term nature.

Exchange Rate Risk

The Company is exposed to foreign currency risk with the Canadian dollar. The Company maintains bank accounts and cash reserves in both currencies with the majority of reserves currently in Canadian dollars which has exposure to currency fluctuations. Most of the company's operations are transacted in US dollars. A 10% change in the Canadian dollar would increase or decrease other comprehensive loss by \$867,136.

Interest Rate Risk

Cash equivalents bear interest at fixed rates, and as such, are subject to interest rate risk resulting from changes in fair value from market fluctuations in interest rates. The Company does not depend on interest from its investments to fund its operations.

World Economic Risk

Like many other companies, the world economic climate could have an impact on the Company's business and the business of many of its current and prospective customers. A slump in demand for electronic-based devices, due to a world economic crisis, may impact any anticipated licensing revenue.

Liquidity Risk

The Company predominately relies on equity funding for liquidity to meet current and foreseeable financial requirements.

Strategy and Outlook

There are a number of projects planned for 2016 which the Company expects will address the short-term and long-term growth plans of the Company including, but not limited to the following:

- Continue to expand and develop the POET technology platform.
- Expand the POET executive team, through an ongoing executive recruiting program.
- Procure additional equipment which may be required for the continuing development and expansion of the POET platform.
- Continue to develop and expand the IP patent portfolio.
- Facilitate the adoption of the POET process into opto-electronic products by providing ease of access to the platform with initiatives such as the development of the PDKs.
- Continue the lab-fab transition through ongoing evaluation of external partners for both the epi stack growth and commercial foundry fabrication.
- Actively search out opportunities to monetize POET.

Outstanding Share Data

Common Shares

As of March 31, 2016 and April 30, 2016, there were respectively, 200,412,762 and 200,732,762 outstanding common shares of the Company.

Stock Options and Warrants

As of March 31, 2016 and April 30, 2016, there were 1,116,051 compensation warrants outstanding to purchase common shares at an exercise price of CA\$0.23.

Total stock options outstanding as at March 31, 2016 and April 30, 2016 were 26,375,500 and 26,065,500 priced between CA\$0.23 and CA\$1.99 per common share.

Additional detailed share data information is available the Company's Notes to Consolidated Financial Statement.

Off-Balance Sheet Arrangements

The Company has not entered into any off-balance sheet arrangements.

Key Business Risks and Uncertainties

Dependence Upon Key Personnel – The Company depends on its senior management and technical staff. If the Company is unable to attract and retain key personnel, it may have a material adverse effect on the Company. In an effort to manage this risk, the Company is establishing a competitive compensation grid for all staff that includes certain benefits and stock options. The Company is in the process of benchmarking its rates of pay to similar companies and the compensation package that would normally be offered to senior individuals within the industry.

Technology Development – Delays in either technology development or the transition to large scale application of the technology may cause a material adverse effect to the Company. Technology development in the Company follows a strict path of concept, research, business analysis, design, beta testing and technical implementation. These milestones are reviewed regularly with the head of technology development to ensure timely completion of the technological milestones.

Financial Liquidity – The Company has not earned profits, so its ability to finance operations is chiefly dependent on equity financings. While the Company has been successful in raising equity financing in the past to support the POET initiative, there are no assurances that the Company will be able to continue to raise further equity financing on favourable terms or at all.

Ability to Reach Profitability – The Company has no history of profitability and may not be able to monetize POET.

Market Acceptance of New Products – The Company's POET technology is a new technology which currently does not have an installed base and may not be embraced for use by the semiconductor industry. Branding is a key to creating market acceptance. There is no assurance that these risks can be mitigated through public announcements, demonstrations and advertisements about the competitive advantage of the Company's high efficiency technology.

Technology Changes – The Company's technology is highly reliant upon staying ahead of technological changes, particularly in other competing semiconductor processes. If the Company cannot keep pace, it may have a material adverse effect on the Company. Retaining qualified engineers and scientists has been identified as a key success driver for the Company. Qualified personnel will continue to ensure that the Company is not only keeping in touch with technological developments but is also implementing these new developments as appropriate.

Major Competitors – The Company may face several competitors before or after it brings its technology to market which could result in the lack of acceptance thereby having a material adverse effect on the Company. Through research and competitive data, the Company feels that these markets are ready for a new entrant especially with the efficiency of the POET technology. Staying ahead of the curve with R&D, and consistency in process development and technology transfer will be key to developing, keeping and maintaining industry share.

Please refer to the Company's Annual Information Forms filed on SEDAR for a detailed discussion of Risk and Uncertainties most recently filed on March 18, 2016.

Additional Information

Additional information relating to the Company is available on SEDAR at www.sedar.com including the information contained in the Company's Annual Information Form filed on SEDAR on March 18, 2016.



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