



POET TECHNOLOGIES INC.

Management's Discussion
and Analysis
3-months ended March 31, 2015

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**MANAGEMENT'S DISCUSSION AND ANALYSIS
FOR THE THREE MONTHS ENDED MARCH 31, 2015**

The following discussion and analysis of the operations, results, and financial position of POET Technologies Inc., ("PTI" or the "Company") for the three months ended March 31, 2015 (the "Period") should be read in conjunction with the Company's unaudited condensed consolidated financial statements for the period ended March 31, 2015 and the Company's audited consolidated financial statements for the year ended December 31, 2014 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 May 26, 2015. 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", "except", "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

Our world continues 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. Thus, progress in the electronics and semiconductor industry continues to heavily influence day-to-day life in the developed world in the way we work, communicate, transport and entertain ourselves.

The 50th anniversary of Moore's Law has just past and the general consensus of the industry continues to be that silicon-based semiconductor technology is being pushed to its limits. According to IC Insights (2014), R&D spending by the top 10 semiconductor companies has grown to a record-high \$31.8 billion, an 11% increase as compared to 2013 R&D spending or an equivalent of 16.9% of total semiconductor sales, its highest level in 4 to 5 years. Capital investments are high and cash intensive, which in-turn creates cyclical investment in the semiconductor market place. This high capital spending is necessary because the industry is in need of new technology that pushes beyond the boundaries of conventional silicon processes, that is not fab-specific nor highly dependent on current processes or materials.

PTI has developed a unique, proprietary process that addresses the deficiencies of speed, size, integration, power and cost efficiency associated with current semiconductor manufacturing technologies. The development of its solution has been designed in such a manner that the 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 currently has a number of issued patents and patents pending related to the semiconductor Planar Opto-Electronic Technology ("POET"). The Company's focus is on the design of III-V semiconductor devices and processes for commercial, industrial and military applications, including processors, system-on-chip (SoC), optical and opto-electronic devices, infrared sensor arrays and ultra-low-power digital circuits and random access memory. The POET platform enables the monolithic fabrication of integrated circuits containing analog, digital and optical elements, with potential high-speed and power-efficient applications in devices such as smart phones, tablets, servers, computers and IoTs (Internet of Things).

The Company is currently positioned as a semiconductor process 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 based devices.

PTI 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.

a) Semiconductor Technology Process IP

PTI is conducting research related to expansion of the POET platform by adding processes to the POET Intellectual Property ("IP") portfolio. It is also engaged in developmental work related to existing POET processes for a wide array of device IP for potential consumer, commercial, industrial and military applications. PTI continues to develop gallium arsenide-based chip design processes having several potential major market applications, including: (i) infrared sensor arrays for military as well as domestic monitoring and imaging applications, and (ii) the unique combination of analog, mixed-signal, digital and optical functions on the same chip for potential use in various commercial and military applications. The use of III-V material such as gallium arsenide is a key factor in the POET process development for these products. PTI believes that the POET process has the potential to fundamentally alter the landscape of computing for a broad range of applications by offering unique integrated components with dramatically lower solutions cost together with increased speed, density, and reliability.

The Company:

1. Has successfully produced numerous distinct devices under 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, pulsed lasers, super-radiant light emitting devices, and infrared sensors with potential usage for multi-spectral and uncooled operation – all able to be monolithically fabricated through the POET process.
2. Has established Technology Design Kits ("TDK") documentation. TDKs comprise a library of comprehensive design rules and device parameters for the POET technology that will eventually enable customers and partners to implement the POET fabrication process into their preferred foundries.
3. Has actively engaged BAE Systems Inc. ("BAE Systems") to replicate the POET process with greater precision and larger scale using advanced ebeam writing tools. This contractual effort with BAE Systems will accelerate the "Lab-to-Fab" transition of the POET technology to a manufacturing status of 6" wafer scale. The target of the effort is 40-nm dimensions for the critical features. Amongst other objectives this engagement is meant to support the development and verification of the foundation devices and design enablement kits. Additionally, it will provide the baseline FEOL (Front End Of Line) process flow in a manufacturing environment and toolset.
4. Is developing 40-nm Planar Electronic Technology ("PET") Process Design Kits ("PDKs"). PTI is utilizing Synopsys' TCAD tools and services to develop the PET and POET PDKs. PDKs are used by 3rd party chip developers to create IP libraries that would be used to implement System on Chip ("SoC") integrated circuits. Availability of the PDKs will enable early evaluation of the performance advantages of POET technology and design of IP required for SoC implementation.

PTI has also recently applied for several key patents for the development of ancillary devices pertinent to the area of quantum computing. This intellectual property is expected to play a strategic role in long-term development, rather than having an impact on near-term deliverables.

PTI is actively working on multiple fronts related to technology milestones. These include "PET PDK" (originally called the "PET PTK"), the "electrical 100-nm ring oscillator" and the "50 GHz VCSEL" milestones, which are expected to be completed in Q2-2015. There continue to be development risks for the completion of these milestones. Delays in research and development programs, though not desirable, are not uncommon when boundaries of science are expanded.

These milestones continue to be POET's primary focus while, in parallel, advancing on the IP monetization plan. Monetization possibilities are progressing through the work undertaken under the expanded agreement recently signed with BAE Systems, and implementation of the "Technology Roadmap Advisory Committee", amongst other developments.

Industry Outlook ⁽¹⁾

The semiconductor market grew to \$339 billion in 2014 and is projected to grow to over \$358 billion in 2015 and remains a rapidly growing segment of the economy. Samsung and Apple alone consumed \$57.9 billion worth of semiconductors last year, up \$3.9 billion from the previous year, according to the Gartner publication.

Primary semiconductor sales drivers include:

- **Pad, Tablet and Cloud OS-type PC devices** — Demand continues to surge for tablet-class devices, and the market for tablet PCs built on cloud-based services is expanding. Examples of devices key to this market are DRAM and logic circuits. These markets are projected in 2015 at \$43.6 billion and \$97.6 billion, respectively. Within such devices, POET's platform is anticipated to allow analog and digital devices to be integrated in the same die. This is expected to reduce the number of parts on the bill of material (BOM), thereby reducing manufacturing costs, increasing functionality and reducing power usage.
- **Smartphones** — 3G/4G smartphones are set to impact on the future of analog, DSP, logic, and NAND flash memory integrated circuit markets. The mobile phone IC market alone is projected to be \$85.4 billion for 2015. The Company anticipates that the POET platform's performance and power saving boosts will be attractive to manufacturers of intelligent portable devices because of the potential speed, power utilization and space advantages offered by integrating analog, mixed signal and digital functions. The same advantages of reducing the BOM part count, reducing manufacturing costs and reducing power consumption, and thereby prolonging battery life, apply in this market as well.
- **Digital and Smart TVs** — Streaming capability via the Internet has become a must-have technology as evidenced by the launch of various new streaming services to compete with Netflix; this points to increased revenues for LED drivers, power management ICs, and MCUs/MPUs. MPUs/CPUs which are forecast at \$73.5 billion for 2015. Advances in Smart TV technology will require increased bandwidth to the panel technology. POET may enable integration of analog and faster digital device performance and lower total power usage.
- **Smart Grids and Advanced Metering Infrastructure (AMI)** — Residential appliances and related electrical systems are now being designed for interaction with power utilities via the Internet and local networks. Smart grid technology investment is forecast to grow 9.5% annually through 2017. Smart Grids and AMI devices are small and cost sensitive. POET may enable manufacturers to reduce the number of parts in such devices, thereby requiring less assembly time and better final product yields.
- **"Internet of Things"** — The identification, monitoring, and control of objects with an addressable Internet protocol has been gaining momentum for over a decade with no abatement in sight. The sensor and actuator semiconductor market, one of the areas impacted by this sector, is projected to be an \$11.4 billion market in 2015. POET's low power attribute and potential ability to integrate the analog front end with a processor core and an energy harvester in a one-chip solution may be important in the emerging Internet of Things market.

(1) Data was sourced from IC Insights' *IC Market Drivers 2014 Report*. Data in the last bullet (sensors/actuators) was sourced from the 2014 edition of IC Insights' *Opto-Sensor-Discrete (O-S-D) Report*.

PTI's POET technology is applicable to a large portion of the semiconductor market as it represents an integrated comprehensive solution to increasing semiconductor performance in an economical and functional manner. The ability to be adapted to existing fabs with minimum re-tooling requirements, compared to alternatives, is an important differentiator. Business indicators suggest that POET may provide significant value to ever growing markets, where it addresses a need for lower power consumption, speed, solution size, and cost efficiency.

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

- **Application Performance up to 10x faster** than existing technologies
- **Up to 90% power savings improvement** over existing technologies (depending on application)
- **Flexible and integrated application solutions** that can be applied to virtually any technical application, including memory, digital/mobile, sensor/laser and electro-optical, among many others
- **POET process can be deployed into existing silicon fabs** – Since POET is a CMOS friendly technology fabricated using standard lithography techniques; it could be easily integrated into current semiconductor production facilities extending the profitable utilization of fabrication equipment and production lines.

PTI's strategy is to continue research towards the expansion of the IP portfolio and the aggressive development of devices for the POET platform.

The disruptive potential of the POET technology was first recognized within the military community, and this recognition has remained strong. Despite this connection, historical military development work does not constrain the commercial application of the POET Technology.

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 higher speeds and reduced power consumption compared to conventional silicon-based devices. The Company will continue to drive research, as the expansion of the IP portfolio is important to the future of POET. The currently developed technology is still in its early deployment stages. 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. PTI has demonstrated such successes in the past and continues to establish and achieve significant milestones. Significant milestones achieved over the last nineteen months 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, PTI 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 for monolithic fabrication of integrated electronic and optical devices on a single semiconductor wafer. Adding to its significance is the fact that the POET wafer used for the IR devices were fabricated within an independent foundry, BAE Systems' Microelectronics Center in Nashua, New Hampshire. BAE Systems has produced compound semiconductor devices based on gallium arsenide for more than 20 years for use in its defense, radar, and communications systems. This milestone, therefore, represents the integration by a third party of the optoelectronic process previously demonstrated in POET laboratories.

Timely capital investment is also key to the success of semiconductor companies. The Company acquired and installed approximately \$937,860 in new equipment during 2013 and has purchased another \$365,000 in new equipment in 2014. This equipment has resulted in the ability to target milestones further down the development roadmap than previously mapped. It has also enabled the Company to define and develop an important planar electronic technology (PET) subset of the POET platform. The Company has an approved capital investment program approximating \$3 million for 2015. However, the utilization of this budget will depend on management's ongoing assessment of the appropriateness and effectiveness of the expenditures.

The Company has successfully raised over CA\$17.5 million in equity financing through private placements and an additional CA\$18.4 million through the exercise of stock options and warrants since June 2012 of which CA\$15.1 million was raised through the exercise of stock options and warrants over the last 12 months including CA\$7.4 million in the first quarter of 2015.

During 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 recently established a satellite office in Silicon Valley, San Jose, California. It is important for PTI to have a presence in the Valley as it is an area of concentration of the potential customers and partners.

The Company's future success will also be driven by focusing on the foundation of critical human capital. In this regard, the Company appointed a Chief Technology Officer and an Executive Co-Chairman of the Board to the POET team in 2014. The Company also launched a recruitment drive for other key executives in late 2014.

Significant Events and Milestones During 2015

In 2015, PTI continued to execute on its stated strategic plan. The Company has achieved the following significant milestones in 2015:

- On February 10, 2015, the Company announced the completion of its “3rd Party Foundry” (BAE Systems) 40/100-nm transfer milestone which consisted of completing the critical layers of the Transistor Fabrication Process.
- On March 30, 2015, the Company signed an agreement with BAE Systems under which BAE Systems will provide non-exclusive third-party foundry services in support of the Company’s “Lab-to-Fab” transition plan. At present, there has not been any joint process IP development under this agreement, and none is anticipated.
- On April 8, 2015, the Company announced the appointment of two new Directors: Todd A. DeBonis and David E. Lazovsky.
Mr. Debonis was the Vice President of Global Sales and Strategic Development at TriQuint Semiconductor. Mr DeBonis played an integral role in the merger of RFMD and the subsequent creation of Qorvo, Inc. Mr. Debonis was VP Worldwide sales and marketing at Centillum Communications, Ishoni Networks and Infineon Technologies North America.
Mr. Lazovsky is the founder of Intermolecular (NASDAQ: IMI) and served as President and CEO from 2004 to 2014. Mr. Lazovsky raised significant amounts of venture capital and other strategic private investments in Intermolecular’s initial public offering. Mr. Lazovsky held senior management roles at Applied Materials Inc. (NASDAQ: AMAT) from 1995 to 2004. As of March 31, 2014, Mr. Lazovsky held 41 pending or issued U.S. patents.
- On April 27, 2015, the Company announced the appointment of Dr. Subash Deshmukh as Chief Operating Officer effective June 8, 2015. Dr. Deshmukh has been VP Emerging Technologies and Products at Applied Materials Inc. He was also VP and General Manager of the Plasma products Business Unit as well as VP Business Development for Varian Semiconductor Equipment Associates Inc. (NASDAQ: VSEA). Dr. Deshmukh holds a PhD in Chemical Sciences and has authored or co-authored over 55 technical articles. Dr. Deshmukh has been granted over 27 patents and several patents pending.

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. 31/15</u>	<u>Dec. 31/14</u>	<u>Sep. 30/14</u>	<u>Jun. 30/14</u>	<u>Mar. 31/14</u>	Restated <u>Dec. 31/13</u>	Restated <u>Sep. 30/13</u>	Restated <u>Jun. 30/13</u>
Other (income)	\$ -	\$ -	\$ -	\$ (85,204)	\$ (84,628)	\$ (80,890)	\$ (84,628)	\$ (86,269)
Shares issued for the reduction of license fee	-	-	-	1,439,898	-	-	-	-
Research and development	564,602	457,470	504,131	362,848	312,302	438,777	352,486	256,914
Depreciation and amortization	74,728	70,222	66,050	50,276	50,407	27,780	33,027	10,180
Professional fees	122,716	134,339	325,695	146,057	301,703	184,777	241,761	128,758
Wages and benefits	198,965	578,071	405,012	366,368	351,149	229,396	118,865	232,509
Management and consulting fees	180,614	140,040	290,327	65,084	100,216	155,200	155,984	121,594
Stock-based compensation ⁽¹⁾	593,898	1,044,310	2,613,355	368,558	589,774	960,705	1,332,554	993,179
General and administrative	364,316	204,857	192,935	224,892	199,286	67,892	130,055	321,765
Investment (income), including interest	(14,471)	-	-	-	-	(18,371)	-	-
Net loss	\$ 2,085,368	\$ 2,629,309	\$ 4,397,505	\$ 2,938,777	\$ 1,820,209	\$ 1,965,266	\$ 2,280,104	\$ 1,978,630

(1) Stock based compensation includes General and Administrative and Research and Development issuances

Explanation of Quarterly Results Q1 2015

During Q1 2015, the Company reported a loss of \$2,085,368 as compared to a loss of \$1,820,209 for the same period in 2014. The following discusses the significant variances between Q1 2015 and Q1 2014 which contributed to the additional loss between the periods.

The Company has completed all its projects under SBIR grants. As a result there is no SBIR grant income in Q1 2015 as compared to \$84,628 in Q1 2014. During 2014 the Company decided to eliminate its use of SBIR grants in order to focus all of its resources on developing and monetizing the technology.

Research and development increased by 81% or \$252,300 over the same period in 2014 from \$312,302 to \$564,602. The increase is attributed primarily to direct labour costs and subcontract fees related to the Company's research and development program. Direct labour costs increased by \$149,957 and subcontract fees increased by \$77,300 from Q1 2014 to Q1 2015. The period on period increase in wages relate to the addition of a CTO and Program Manager along with additional over-time hours in Q1 2015. The Company's R&D progress was stalled in 2015 due to the improper installation of equipment which was purchased in 2014. The improper installation was conducted by a third party and contributed to the team working significant over time hours to identify the cause of poor test results generated by this piece of equipment. The issues relating to the faulty installation were rectified in Q1 2015.

The Company's "lab-to-fab" transition resulted in increased subcontractor fees. The expanded work with BAE Systems focused on a new phase of the POET roadmap which will result in increased subcontractor fees expense for 2015.

Professional fees decreased by \$178,987 from \$301,703 in Q1 2014 to \$122,716 in Q1 2015. Professional fees in Q1 2014 were unusually high due to the Company's preparation for filing its registration statement, Form 20-F, with the U.S. Securities Exchange in order to have the Company's shares registered under the U.S. Securities Exchange Act of 1934. The majority of the 20-F work was completed in mid-2014.

The decrease of \$152,184 in wages and benefits from Q1 2014 to Q1 2015 was a result of the exit of the former president in September 2014. The compensation to the former president included a one-time debt settlement of \$100,000 which was settled in February 2014.

Management and consulting fees increased in Q1 2015 by \$80,398 over Q1 2014. The increase was mainly due to the introduction of compensation for the Executive Co-Chairman who joined the Company in July 2014, subsequent to Q1 2014.

General and administrative increased by \$165,030 from Q1 2014 mainly due to increased investor relations, travel and promotion, which collectively increased by \$82,373. The Company embarked on a promotion program of the POET Process which included advertisements on Bloomberg TV and the Fox News Network

Additionally maintenance and repair costs, included in general and administrative, associated with the improper installation of new equipment by a third party increased by \$44,925 over Q1 2014. 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 also leased \$15,600 of specialized software that is required to operate the equipment along with optimizing the optical elements of the POET process.

Explanation of Material Variations by Quarter for the Last Eight Quarters

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 over time incurred during the quarter in dealing with installation issues with new equipment. The issues relating to the faulty installation were rectified in Q1 2015.

Wages and benefits in Q1 2015 were \$198,965 as 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 were \$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 \$450,412 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. Only 500,000 stock options were granted in Q1 2015. The expense in Q4 2014 was significantly impacted by 6,155,000 stock options granted in 2014. The valuation of stock options are 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 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. The Company embarked on a promotion program of the POET Process which included advertisements on Bloomberg TV and the Fox News Network. Additionally increases were in maintenance and repair costs, associated with the improper installation of new equipment by a third party increased and the leasing of specialized software required to optimize the optical elements of the POET process.

Stock-based compensation and professional fees both decreased significantly from Q3 2014 to Q4 2014. Stock based compensation was \$2,613,355 in Q3 2014 as compared to \$1,044,330 in Q4 2014. The valuation of stock options are 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 stock option grant and the amortization of the options as they vest.

Professional fees were \$325,695 in Q3 2014 as compared to \$134,339 in Q4 2014. In Q3, the Company updated the Pellegrino valuation report which indicated a median value for the Company of approximately \$2.3 billion. Additionally, professional fees were incurred in recruiting the new Executive Co-Chairman in Q3 2014.

Professional fees increased by \$179,638 from Q2 2014 to Q3 2014. The increase was primarily due 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 \$2,244,797 over Q2 2014 as a result of the 3,940,000 annual Company stock options granted in Q3 as compared to 215,000 granted in Q2 2014. The valuation of stock options are 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 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.

Professional fees decreased from \$301,703 in Q1 2014 to \$146,057 in Q2 2014. The decrease in professional fees was a result of reduced professional services associated with the filing of Form 20-F with the SEC in an attempt to obtain a registration of the Company's shares in the United States, which was subsequently obtained. Additionally, accounting fees associated with the annual financial statements were incurred in Q1. Accounting fees paid in Q2 were primarily tied to the review and filing of the Form 20-F.

In Q4 2013, research and development increased by \$86,291 over Q3 2013. The increased research and development costs contributed to the Company achieving milestone 6 which was the integration of the complementary inverter, the basis of all on-chip logic.

In Q3 2013, professional fees increased over Q2 2013 by approximately \$113,003. The increase was due to the additional legal and accounting fees incurred in preparing the Company's registration statement – Form 20-F for filing with the SEC. The filing of the Form 20-F was the first step in the Company's plan to list the Company's securities on a U.S. exchange. If successful, it is anticipated that this would result in more liquidity for the Company's shares, access to other capital markets and greater visibility to prospective partners during the process of monetization. There can be no assurances that the Company's shares will be registered on a U.S. exchange. Additional legal and other professional costs are required to be incurred to execute on these changes.

In Q3 2013, the Company also had a significant increase of \$339,375 in the stock-based compensation expense. The expense was \$1,332,554 as compared to \$993,179 in Q2 2013. The valuation of stock options are 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 stock option grant and the amortization of the options as they vest.

The Company granted 3,380,000 stock options in Q3 2013, versus only 2,200,000 in Q2 2013.

Research and development costs increased from \$256,914 in Q2 2013 to \$352,486 in Q3 2013. The Company increased its R&D expenses by \$95,572 in an effort to quickly and sustainably monetize POET. The increase in R&D costs has enabled to Company to reach a number of goals as enumerated in the section on Significant Events and Milestones during 2014.

In Q2 2013, the Company disposed of its remaining assets available for sale to a third party in consideration for the assumption of the associated disposal group liabilities relating to its discontinued solar segment. No gain or loss was recorded on the disposal. Also, stock-based compensation increased by \$258,464 in the quarter over Q1 2013. Substantially all of the new option grants were to new Board members and to advisors to the SSC which was subsequently dissolved after presenting its report. The valuation of stock options are driven by a number of factors including the quantity of options granted, the strike price and the volatility of the Company's stock.

Segment Disclosure

The Company and its subsidiary 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:

	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
	US	Canada	Consolidated
For the three months ended March 31,			
General and administration	\$ 585,175	\$ 850,060	\$ 1,435,235
Research and development	664,604	-	664,604
Investment income	-	(14,471)	(14,471)
Net Loss	\$ 1,249,779	\$ 835,589	\$ 2,085,368
	2014		
As of March 31,	US	Canada	Consolidated
Current assets	\$ 2,835,412	\$ 6,492,949	\$ 9,328,361
Property and equipment	881,047	-	881,047
Patents and licenses	37,742	-	37,742
Total Assets	\$ 3,754,201	\$ 6,492,949	\$ 10,247,150
	US	Canada	Consolidated
For the three months ended March 31,			
General and administration	\$ 501,843	\$ 920,932	\$ 1,422,775
Research and development	482,062	-	482,062
Other income	(84,628)	-	(84,628)
Net Loss	\$ 899,277	\$ 920,932	\$ 1,820,209

Liquidity and Capital Resources

The Company had working capital of \$14,636,215 on March 31, 2015 compared to \$11,079,641 on December 31, 2014. The increase and maintenance of the higher working capital was due to the \$5.8 million dollars raised through the exercise of stock options and warrants during the three months ended March 31, 2015.

The Company's balance sheet as at March 31, 2015 reflects assets with a book value of \$16,304,059 (2014 - \$12,850,946) of which 93% (2014 - 90%) or \$15,017,855 (2014 - \$11,531,365) is current and consists primarily of cash totaling \$14,850,680 (2014 - \$11,287,864). 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.

There are 12,066,431 warrants outstanding to purchase common shares at an average exercise price of \$0.35 expiring between June 8, 2015 and September 27, 2015. The Company is confident that those warrants will be exercised. Should those warrants be exercised, there is a potential for an additional CAD \$4.2 million to be raised by the Company. It is important to note, that while the Company is confident that warrants will be exercised, it is dependent on a number of factors that are outside of the Company's control such as stock price and investor confidence or apathy.

Based on current plans and cash utilization, the Company believes it has sufficient liquidity to support its operations and technological programs beyond 2015.

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.

Related Party Transactions

Compensation to key management personnel were as follows:

	2015	2014
Salaries	\$ 372,174	\$ 375,654
Share-based payments (1)	502,371	228,548
Total	\$ 874,545	\$ 604,202

(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 \$23,802 in fees and disbursements (2014 - \$52,984) 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. A 10% change in the Canadian dollar would increase or decrease other comprehensive income by \$994,933. Since the Company's operations predominantly transact business in their respective domestic currencies, the exposure is reduced. Therefore, the Company typically does not hedge accounts receivable and accounts payable that are denominated in a foreign currency. The Company maintains bank accounts and cash reserves in both currencies to reduce its exposure to currency fluctuations.

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 PTI'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

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

Strategy and Outlook

During 2015, there are a number of projects planned which 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 and PET technology platform.
- Expand the ODIS engineering team with placement of additional team members at the ODIS' R&D facility.
- Expand the POET executive team, through an ongoing executive recruiting program, which includes amongst other positions a CEO search.
- 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 mainstream products by providing ease of access to the platform with initiatives such as the documentation of the TDK's and the development of the PDKs in collaboration with Synopsys.
- Continue collaboration with BAE Systems to reproduce and enhance the repeatability of the 100-nm feature size and shrink the PET process to 40-nm scale.
- Actively search out opportunities to monetize POET.

Outstanding Share Data

Common Shares

As of March 31, 2015 and May 26, 2015, there were respectively, 176,369,884 and 180,247,384 outstanding common shares of the Company.

Stock Options and Warrants

As at March 31, 2015 and May 26, 2015, the Company had 21,332,164 and 17,684,663 respectively, warrants and compensation warrants outstanding to purchase common shares at exercise prices ranging from CAD \$0.22 – \$1.00

Total stock options outstanding as at March 31, 2015 and May 26, 2015, there were 24,096,500 and 25,886,500 priced between CAD \$0.22 and \$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 – PTI depends on its senior management and technical staff. If PTI 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 will be 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 PTI 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. Since June 2012, the Company has raised almost US\$32 million dollars in equity financing in support of the POET initiative. However, there are no assurances that the Company will be able to continue to raise further equity financing on favourable terms or at all.

Governmental Incentives – Projects that PTI might participate in directly or through ODIS may not be funded due to reductions, changes in timing, and/or the removal of government incentives. The Company has made a strategic decision to eliminate its use of SBIR grants to concentrate on development and monetization of technology.

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

Market Acceptance of New Products – ODIS' 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 – PTI's technology is highly reliant upon staying ahead of technological changes, particularly in other competing semiconductor processes. If PTI 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 – PTI 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, PTI 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.

Additional Information

Additional information relating to the Company is available on SEDAR at www.sedar.com.

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