



PYROGENESIS CANADA INC.
MANAGEMENT'S DISCUSSION AND ANALYSIS

For the three and nine months ended September 30th, 2015.

(All figures are expressed in Canadian dollars unless otherwise stated.)

November 25th, 2015

This management's discussion and analysis ("MD&A") of PyroGenesis Canada Inc. ("PCI", "PyroGenesis", or the "Company") has been prepared by Management and should be read in conjunction with the unaudited financial statements and related notes thereto of the Company for the three and nine months ended September 30th, 2015 which were prepared in accordance with International Financial Reporting Standards ("IFRS"). This MD&A is the responsibility of Management and has been reviewed and approved by the Board of Directors of the Company. The Board of Directors is responsible for ensuring that the Company fulfills its responsibilities for financial reporting and is ultimately responsible for reviewing and approving the MD&A. The Board of Directors carries out this responsibility principally through its Audit Committee. The Audit Committee is appointed by the Board of Directors and is comprised of independent and financially literate directors. The Audit Committee reports its findings to the Board of Directors for its consideration when it approves the MD&A and financial statements for issuance to shareholders.

The MD&A was prepared as of November 25th, 2015. Additional information regarding the Company is available on SEDAR (www.sedar.com), OTC Markets (www.otcmarkets.com) and on the Company's website at www.pyrogenesis.com.

FORWARD-LOOKING STATEMENTS

This MD&A contains forward-looking statements. All statements other than statements of historical fact contained in this MD&A are forward-looking statements, including, without limitation, the Company's: statements regarding its products and services; relations with suppliers and customers; future financial position; business strategies; potential acquisitions; potential business partnering; litigation; and plans and objectives. In certain cases, forward-looking statements can be identified by the use of words such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or state that certain actions, events or results "may", "could", "would", "might" or "will be taken", "occur" or "be achieved" and similar words or the negative thereof. Although Management of the Company believes that the expectations represented in such forward-looking statements are reasonable, there can be no assurance that such expectations will prove to be correct.



In particular, this MD&A contains forward-looking statements that relate, but are not limited, to:

- the business strategies of the Company;
- the capital resources of the Company;
- the ability of the Company to increase sales, including the results of the successful completion of the Company's current projects;
- Management's expectation that the Company will achieve sustained annual growth and profitability, and that gross margins will increase as a result of a decrease in cost of sales as a percentage of revenue; and
- the Company's overall financial performance.

By their nature, forward-looking statements require assumptions and are subject to inherent risks and uncertainties including those discussed herein. In particular, forward-looking statements relating to future sales, growth and profitability are based on the assumption that current projects will be completed and the Company will be awarded certain anticipated contracts pursuant to recent negotiations with, and statements made by, third parties. There is significant risk that forecasts and other forward-looking statements will not prove to be accurate. Readers are cautioned to not place undue reliance on forward-looking statements made herein because a number of factors could cause actual future results, conditions, actions or events to differ materially from the targets, expectations, estimates or intentions expressed in the forward-looking statements.

The future outcomes that relate to forward-looking statements may be influenced by many factors, including, but not limited to, the strength of the Canadian, US and Asian economies; operational, funding, and liquidity risks; unforeseen engineering and environmental problems; delays or inability to obtain required financing and/or anticipated contracts; risks associated with licenses, permits and regulatory approvals; supply interruptions or labor disputes; foreign exchange fluctuations and collection risk; competition from other suppliers or alternate less capital intensive energy solutions; and the risk factors described under the heading "Risk Factors" in the Company's annual information report for the fiscal year ended December 31st, 2014. We caution that the foregoing list of factors is not exhaustive, and that, when relying on forward-looking statements to make decisions with respect to the Company, investors and others should carefully consider these factors, as well as other uncertainties and potential events, and the inherent uncertainty of forward-looking statements.

Although the Company has attempted to identify significant factors that could cause actual actions, events or results to differ materially from those described in forward-looking statements, there may be other factors that cause actions, events or results not to



be as anticipated, estimated or intended. There can be no assurance that forward-looking statements will prove to be accurate, as actual results and future events could differ materially from those anticipated in such statements. Accordingly, readers should not place undue reliance on forward-looking statements. Forward-looking statements are provided as of the date of this MD&A, and the Company assumes no obligation to update or revise such forward-looking statements to reflect new events or circumstances except as required under applicable securities laws.

The forward-looking statements contained herein are expressly qualified in their entirety by this cautionary statement. The forward-looking statements included in this MD&A are made as of the date of this MD&A or such other date specified herein.

OVERVIEW

PyroGenesis Canada Inc., a TSX Venture 50® company, is the world leader in the design, development, manufacturing and commercialization of advanced plasma processes. The Company provides engineering and manufacturing expertise, cutting-edge contract research, as well as turnkey process equipment packages to the defense, metallurgical, mining, advanced materials (specifically 3D printing), oil & gas, and environmental industries. With a team of experienced engineers, scientists and technicians working from its Montreal office and its 3,800m² production facility, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. PyroGenesis' core competencies allows the Company to be a leader in providing innovative plasma torches, plasma waste processes, high-temperature metallurgical processes, and engineering services, to the global marketplace. PyroGenesis' operations are ISO 9001:2008 certified, and have been certified under ISO standards since 1997. PyroGenesis is a publicly-traded Canadian company whose common shares trade on the TSX Venture Exchange (Ticker symbol PYR.V) and on the OTCQB in the United States (Ticker symbol PYRNF).

BUSINESS SEGMENTS - UPDATE

For over 20 years, PyroGenesis has been manufacturing plasma torch systems for some of the most demanding applications in the world. As a cleantech alternative to burning fossil fuel, PyroGenesis' electricity-driven plasma torch systems are easy to operate and offer a high level of safety, reliability and service life. PyroGenesis' plasma torch systems are the backbone of the solutions that the Company has developed to resolve problems plaguing niche markets within the industries served. These industries have been organised into five, clearly defined, business segments: Defense; Environmental; Oil & Gas; Additive Manufacturing (3D Printing); and Mining & Metals.

DEFENSE SEGMENT

PyroGenesis' recent activities within its defense business segment include the design, manufacture and supply of a second PAWDS-Marine system to the US Navy, and the



design and manufacture of the first Tactical PACWADS (for the destruction of chemical warfare agents) for an International Military Consortium.

PAWDS-Marine

Recognized by the US Navy as the premier shipboard waste processing technology in the market, the Plasma Arc Waste Destruction System - Marine (PAWDS-Marine) is the world's most compact, easy-to-operate, high temperature, plasma-based waste treatment system. With one-button rapid start-up and shutdown capabilities, PAWDS-Marine effectively destroys combustible wastes such as paper, plastics, food, oily rags, and waste oil, all with minimal segregation. Developed by PyroGenesis in partnership with the US Department of Defense, PAWDS-Marine has been specified into the design of all of the Gerald R. Ford Class supercarriers, and the first two ships in this class, the CVN-78 USS Gerald R. Ford and the CVN-79 USS John F. Kennedy have been ordered and delivered to the contracted shipyard by PyroGenesis.

The US Navy plans to commission the USS Gerald R. Ford in June 2016, following which PyroGenesis will start to supply consumables and spare parts, estimated at hundreds of thousands of dollars for each PAWDS-Marine system, , thus creating a significant recurring revenue stream.

In the lead-up to commissioning, PyroGenesis recently executed an agreement to train US Navy sailors on its PAWDS Engineering Design Model at its manufacturing facility in Montreal. The first group of sailors, to be trained on mechanical and electrical maintenance as well as system operations, arrived for training in November 2015.

PyroGenesis delivered the second PAWDS-Marine system, intended for CVN-79, in the second quarter of 2015 and anticipates receiving the next order in 2018.

Tactical PACWADS

The growing list of terrorist organisations and conflict zones around the world, together with the apparent increased willingness to deploy Chemical Warfare Agents (“CWA”), has brought to the forefront the striking need for a safe, versatile, and efficient mobile system, deployable at a moment's notice, to eliminate CWA stockpiles.

Using, the US Navy-selected PAWDS-Marine process for waste destruction on board the Gerald R. Ford Class aircraft carriers as a platform, the Tactical Plasma Arc Chemical Warfare Agents Destruction System, (“Tactical PACWADS”) is designed to rapidly and safely destroy a wide range of CWAs, as well as their precursor reagents, in the field. As opposed to the risky proposition of transporting enemy CWAs to another location, putting soldiers and civilians at risk of ambush as well as the risk of the catastrophic release of these highly toxic chemicals, the Tactical PACWADS would be used in situ to destroy CWAs such as Sarin (GB), Mustard (HD), and VX nerve agent.

PyroGenesis completed the design and manufacture of the first Tactical PACWADS for an International Military Consortium in the third quarter of 2015. The project has now moved on to an initial testing phase which, once completed, is expected to be followed by



extensive field testing using simulated and actual chemical warfare agents. Testing costs, which are covered by the Consortium, are expected to total over \$100 million, which demonstrates their commitment to validate this technical solution.

Upon successful demonstration testing of the Tactical PACWADS ability to destroy chemical warfare agents, the Company believes that there is the potential for orders for additional systems in the future.

ENVIRONMENTAL SEGMENT

The human influence on the health of the planet continues to place a tremendous pressure on the global ecosystem through climate change, population growth, and urban sprawl. Advanced waste management practices through Reduction, Re-use and Recycling (the “3Rs”) have condensed the amount of waste that society needs to dispose of, but landfills are often inadequately constructed and are near capacity, greenhouse gases are being released daily from fossil fuel consumption, and more complex, and often toxic, chemical residues are accumulating in our food chain. Simply burning, or burying, such residual waste merely amplifies the damage caused to the planet.

Using plasma technology to create smart alternatives to incinerators and landfills, PyroGenesis represents tomorrow’s waste management cleantech standard. Through innovation, collaboration and partnerships, PyroGenesis has developed a suite of highly advanced, easy-to-operate, processes that not only integrate well with the 3Rs, but also maximize the energy and/or resource recovery from a vast range of waste streams.

PyroGenesis remains extremely active in the environmental business segment, recently signing an exclusive marketing license with Yasui Facilities, Inc. of Japan, terminating a customer’s rights to PyroGenesis’ technology and recovering the SPARC™ System for redeployment in a fully commercial environment in either Asia or the United States, finalising negotiations for the final phase of a \$2.2 million plasma torch contract previously announced to an Asian company, and progressing negotiations for the delivery of a 10 tons per day (“TPD”) Plasma Waste to Energy system to Europe.

Exclusive Marketing License, Japan

In the third quarter of 2015, PyroGenesis entered into an exclusive marketing agreement with Yasui Facilities, Inc. (“Yasui”), one of Japan’s preeminent Architectural/Engineering firms, providing much needed local engineering and permitting expertise that is expected to expedite the conclusion of various multi-million dollar contracts under discussion in Japan.

Under the terms of the agreement, Yasui will exclusively market PyroGenesis’ line of plasma waste processing systems in Japan for a period of five years with the option for an automatic five year renewal, based on certain performance milestones. In exchange, Yasui will pay all costs associated with the Japanese permitting process, which has already commenced and is estimated to run into the \$100,000’s, and to reimburse PyroGenesis for certain costs incurred in developing the Japanese market. Furthermore,



upon receipt of the permit, which is expected in the first half of 2016, Yasui will pay PyroGenesis a onetime exclusivity fee of \$1.5M.

Current negotiations include potential contracts for groupings of 50 TPD waste treatment systems, hospital/low level radioactive waste systems, multiple small transportable mobile systems, as well as several niche applications including an opportunity to process 100 TPD of a specialty waste stream, with each 25 TPD system costing approximately \$15M. The end-user visited Montreal in November 2015 to witness a successful demonstration of the destruction of their waste stream and contract negotiations are now progressing to the next stage.

Recovery and Redeployment of SPARC™ System

PyroGenesis recently reached mutual agreement with one of its customers to terminate a Development Use and Commercialization Agreement related to PyroGenesis' SPARC™ technology. Under the terms of the agreement, PyroGenesis recovered a system that utilises the patented PyroGenesis SPARC™ technology, designed to destroy ozone depleting substances such as end-of-life refrigerants like CFCs, HCFs, and HFCs, which have high global warming potential. Furthermore, PyroGenesis maintains all intellectual property rights, preventing the customer from commercialising the technology

PyroGenesis paid the customer \$300,000 in consideration for the SPARC™ System and provided an undertaking not to destroy ozone depleting substances in Canada before July 7th, 2017, unless for research and development purposes. As a result of the termination of this agreement, Management recorded an inventory of \$846,241.

PyroGenesis plans to redeploy this system in a fully commercial environment in either Asia, or with an international oil and gas company in the US. Negotiations are progressing well and the Company expects to execute a contract before the end of this fiscal year. The redeployment is expected to realise a significant gross margin for PyroGenesis and, upon successful installation and operation of this system, PyroGenesis anticipates receiving follow-on orders for additional systems commencing in 2016.

\$2.2 million Plasma Torch Contract

In the autumn of 2012, PyroGenesis was awarded a contract by a customer in Asia to design, manufacture and deliver a fully automated plasma torch system comprised of eight air plasma torches to be used for waste gasification. The first phase of this contract was successfully completed and shipped in 2014. Customer-generated delays subsequently stalled the second, and final, phase of the project. Recently, however, PyroGenesis received confirmation for the second phase of the project, together with the full, and final, payment. This project is expected to be completed in the first half of 2016.



OIL & GAS SEGMENT

PyroGenesis has been working extensively with the Oil & Gas Industry and is not only leading the way in clean energy development, but also with finding innovative ways of reducing the sector's carbon footprint in the production and distribution of their products.

Most recently, PyroGenesis completed the initial phases of two projects and was able to clearly demonstrate major improvements to the carbon footprint, together with significant financial savings, in each project. Despite these successes, amid fears that the current downturn in oil prices could last for several years, the oil industry has slashed costs, deferred research projects indefinitely, reduced capital investments, and sold assets, in an effort to strengthen their balance sheets. . As a result, it is impossible for PyroGenesis to predict when, if at all, these projects will progress to the next stage.

Recovering Valuable Metals from Waste Streams

In 2014, under a Master Services Agreement with a global oil and gas company, PyroGenesis successfully conducted a preliminary engineering study, followed by laboratory scale tests, to determine that valuable metals can be recovered by plasma processing of oil and gas waste streams. Throughout these tests, it was noted that PyroGenesis had not only established that plasma processing of these waste streams can recover valuable metals, but that there is also a significant 50:1 volume reduction, which decreases disposal costs by more than 90%.

In early 2015 the project proceeded to the pilot plant stage, which involved the adaptation of an existing plant at PyroGenesis' facility to test and further demonstrate the economics of PyroGenesis' proprietary technology. Pilot plant testing was successfully concluded in October 2015, confirming that for an initial investment of approximately \$20M in a PyroGenesis system, the client could save over \$40M/year in disposal costs and value from recovered metal. PyroGenesis also expects to create an additional recurring revenue stream with this project via a royalty payable on the value of recovered metal. The results achieved with this project exceeded all expectations and Management remains optimistic that, when the oil industry recovers, this project will progress to the commercialisation stage.

Oil extraction from oil fields

PyroGenesis was engaged on a project to develop a plasma-based process designed to enhance and accelerate oil extraction from oil fields. The testing phase of this project was successfully completed in the third quarter of 2015. The patent pending process costs less than 20% of that currently used, and is a clean, zero emissions technology utilizing electricity as its only heat source. PyroGenesis remains optimistic that, when the oil industry recovers, this project will progress to the commercialisation stage.



ADDITIVE MANUFACTURING (3D PRINTING) SEGMENT

Developed by our team of engineers, scientists and technicians, the Plasma Atomization Process (“PAP”) is an enabling technology for 3D Printing as well as other additive manufacturing and powder metallurgy applications. Recognized as THE standard technology for producing 3D Printing Grade reactive metal powders, our PAP units can address the exacting requirements in terms of chemistry and properties required by the biomedical and aerospace industries. The PAP has the distinction of producing highly flowable and very pure spherical metallic powders. Using wire as the feedstock to the PAP allows for a high level of traceability and unparalleled control of the particle size, a critical requirement for the industries that the process addresses.

3D printing

In the summer of 2014, PyroGenesis announced that it had won a contract for the design, manufacture and supply of ten powder production systems for 3D printing, for a total contract value of \$12.5 million. The contract calls for progress payments to be made for the first system that is to be delivered and commissioned at the customer’s site in Asia, following which production output will be scaled-up to pre-specified levels. Thereafter, the customer is obliged to confirm the order for the remaining nine systems with payment of a substantial deposit.

During the design and testing phases at its Montreal manufacturing facility, PyroGenesis successfully developed an improved process that enables the Company to produce metallic powders at higher production rates, whilst at the same time controlling powder size distribution. The need to produce particles of a specific particle size distribution at increasingly higher production rates is driven by the growing demand created by the additive manufacturing industry, particularly 3D printing. PyroGenesis' technology has the distinction of producing very small, spherical, and uniform powders which, as a result, allows them to flow like a liquid; a highly sought after characteristic within the additive manufacturing industry. PyroGenesis filed a provisional patent for this new Plasma Atomization Process and expects to file a world-wide patent application by Q3, 2016.

With the newly developed PAP process fully integrated, the first system was subsequently shipped to the customer in the summer of 2015. As of today, PyroGenesis’ engineers and technicians have completed the assembly/commissioning phase and are currently scaling up the volume of powder output. Scale-up is expected to be completed in the coming weeks, followed by commencement of the manufacturing of the remaining nine systems. PyroGenesis expects to deliver, assemble and commission the remaining nine systems during fiscal 2016.

As each powder production system becomes operational, PyroGenesis will be required to supply consumables and spare parts, estimated at hundreds of thousands of dollars per system, thereby creating a significant recurring revenue stream. Furthermore, upon completion of this initial phase, the same customer has indicated a potential requirement



for up to 40 additional systems to be delivered in the coming years. In addition, PyroGenesis is exploring additional revenue streams for this technology, including producing highly flowable and very pure spherical metallic powders from Titanium, Niobium, Nitinol, Aluminum and other reactive metals, including alloys.

METALS & MINING SEGMENT

With plasma operating on “greenhouse gas-friendly” electricity only, PyroGenesis can provide real cleantech solutions to industry. Through innovation, collaboration and partnerships, the team at PyroGenesis has developed an array of plasma processing approaches which bring value to organizations in the fields of mineral, metallurgical and materials processing.

PyroGenesis has enjoyed further success in this segment with the recent signing of a contract to supply its first DROSRITE™ system for optimizing metal recovery from dross, and a separate contract to evaluate the feasibility of using Plasma for the purpose of refining ore into pure metal.

DROSRITE™

DROSRITE™ is a salt-free, cost-effective, sustainable process for maximizing metal recovery from dross, a waste generated in the metallurgical industry. DROSRITE™ avoids costly loss of metal, while reducing a smelter's carbon footprint and energy consumption, providing an impressive return on investment. PyroGenesis' patented DROSRITE™ process increases aluminum alloy recovery from dross and reduces operating costs. In comparison, competing processes have significantly higher operating costs and produce a hazardous waste that has to be disposed of at additional cost.

Earlier this year PyroGenesis entered into an agreement with a North American automobile parts manufacturer to supply a commercial DROSRITE™ Furnace System by the end of 2015. PyroGenesis is on track to fulfill the delivery requirement and believes that the supply and installation of this system will be the first of 3 potential sales to the same customer. More importantly, however, as this system represents the first sale of a DROSRITE™ system in North America, PyroGenesis plans to leverage this reference site to generate a continued flow of orders for additional systems from primary and/or secondary aluminum smelters, together with large finished goods manufacturers, primarily in the transportation sector.

Ore refining

In the summer of 2015, PyroGenesis was contracted by Uragold Bay Resources Inc. (“Uragold”) to evaluate the feasibility of using Plasma for the purpose of refining ore into pure metal; in this case converting quartz into pure silicon metal. The study is expected to be completed within seven months and, once successful, is expected to result in an order to design, manufacture and supply a pilot plant.



Within 3 months of starting the project, PyroGenesis filed a provisional patent for a one step process using plasma for producing high purity silicon from silica. The PUREVAP™ Quartz Vaporisation Process is a proprietary process that uses a plasma arc within a vacuum furnace to produce high purity, metallurgical grade silicon (MG-Si), solar grade silicon (UMG Si) and polysilicon from quartz. According to Uragold, this technology could revolutionize the making of solar panels into a more competitive source of renewable energy.

PyroGenesis has granted Uragold exclusive rights to the PUREVAP™ process, solely for the transformation of quartz. In exchange, PyroGenesis will receive royalties based upon 10% of sales of silicon metal refined by the process, with set minimums. According to Roskill's Global Industry Markets & Outlook report (2014) for Silicon and Ferrosilicon, the world consumption of silicon metal in 2014 exceeded US\$6B.

PyroGenesis plans to further develop this process towards refining other high grade and valuable metals.



SELECTED FINANCIAL INFORMATION

| | Three months ended Sept 30, | | | % Change 2015vs2014 | Nine months ended Sept 30, | | | % Change 2015vs2014 |
|---|-----------------------------|--------------|--------------|------------------------|----------------------------|----------------|----------------|------------------------|
| | 2015 | 2014 | 2013 | | 2015 | 2014 | 2013 | |
| Revenue | \$ 1,363,077 | \$ 1,215,261 | \$ 1,394,255 | 12% | \$ 4,013,221 | \$ 3,980,220 | \$ 3,877,216 | 1% |
| Cost of sales and services before amortization of intangible assets | 989,362 | 722,860 | 818,793 | | 3,012,263 | 2,039,701 | 2,246,505 | |
| Gross margin before amortization of intangible assets | 373,715 | 492,401 | 575,462 | | 1,000,958 | 1,940,519 | 1,630,711 | |
| Amortization of intangible assets | 349,268 | 349,268 | 349,268 | | 1,047,805 | 1,047,805 | 1,047,805 | |
| Gross margin | 24,447 | 143,133 | 226,194 | | (46,847) | 892,714 | 582,906 | |
| Selling, general and administrative | 1,121,932 | 1,082,803 | 1,013,214 | | 3,421,520 | 3,109,362 | 3,021,782 | |
| Research and development | 32,743 | 36,102 | 35,382 | | 88,862 | 164,802 | 129,204 | |
| Financing charges | 137,907 | 19,970 | 94,202 | | 286,765 | 197,274 | 279,557 | |
| | 1,292,582 | 1,138,875 | 1,142,798 | | 3,797,147 | 3,471,438 | 3,430,543 | |
| Loss from operations | (1,268,135) | (995,742) | (916,604) | 27% | (3,843,994) | (2,578,724) | (2,847,637) | 49% |
| Other income | 387 | 47 | 1,448 | | 1,046 | 1,148 | 2,869 | |
| Impairment loss on property and equipment | - | - | - | | - | - | - | |
| Comprehensive loss | \$ (1,267,748) | \$ (995,695) | \$ (915,156) | 27% | \$ (3,842,948) | \$ (2,577,576) | \$ (2,844,768) | 49% |
| Basic and diluted loss per share | \$ (0.01) | \$ (0.01) | \$ (0.01) | | \$ (0.05) | \$ (0.04) | \$ (0.04) | |
| Adjusted EBITDA (loss) | \$ (666,314) | \$ (531,629) | (275,859) | 25% | \$ (2,129,586) | \$ (1,024,660) | (932,160) | 108% |

Adjusted EBITDA (loss) is not a performance measure defined under IFRS and it is not considered an alternative to Income (Loss) from operations or Comprehensive Earnings (Loss) in the context of measuring a Company's performance. Management believes that providing certain non-GAAP performance measures, in addition to IFRS measures provides users of the Company's financial statements with an enhanced understanding of their results and related trends, and as such increases transparency and clarity. Adjusted EBITDA is an important measure of operating performance because it allows Management, investors and others to evaluate and compare the Company's core operating results, including return on capital and operating efficiencies, from period to period, by removing the impact of its capital structure (interest expense to service outstanding debt), asset base (depreciation and amortization), tax consequences, and other non-operating items not requiring cash outlays, including share-based compensation.

Extract from Statement of Financial Position at :

| | Sept 30, 2015 | Dec 31, 2014 | Dec 31, 2013 |
|--------------------------|---------------------|-----------------|-----------------|
| Current assets | 4,278,214 | 3,497,020 | 2,247,261 |
| Non-current assets | 2,300,837 | 3,438,312 | 4,923,611 |
| Total assets | \$ 6,579,052 | \$ 6,935,332 | \$ 7,170,872 |
| Current liabilities | 2,972,237 | 1,994,218 | 3,621,024 |
| Non-current liabilities | 3,777,090 | 2,062,862 | 8,159,862 |
| Total liabilities | \$ 6,749,327 | \$ 4,057,080 | \$ 11,780,886 |



RESULTS OF OPERATIONS

Revenue

PyroGenesis recorded revenue of \$1,363,077 for the third quarter of 2015 (“Q3, 2015”), representing an increase of 12% compared to the \$1,215,261 recorded in the same period of the previous year.

During the first nine months of 2015 the Company recorded revenue of \$4,013,221, representing an increase of 1% over revenue of \$3,980,220 recorded during the first nine months of 2014.

Revenue for the first nine months of 2014 benefitted from a one-time credit of \$620,000 related to the termination of a project due to a customer’s breach of contract. This one-time credit was not repeated in the first nine months of 2015. Excluding this one-time credit, PyroGenesis recorded an adjusted revenue growth of \$653,001, or 19%, for the first nine months of 2015.

Revenue recorded in the first nine months of 2015 was generated primarily from:

- (i) work completed under PyroGenesis’ project to design, manufacture and supply ten plasma-based powder production systems for 3D printing to an Asian client,
- (ii) advances made on two R&D projects incorporating novel plasma based technologies in the oil and gas industrial sector,
- (iii) progress made on various contracts in the defense sector, specifically:
 - a) work completed on the tactical mobile plasma system for destruction of chemical warfare agents under contract with an international military consortium, and
 - b) support services related to PAWDS Marine systems supplied to the US Navy.

PyroGenesis’ strategic programme to reduce dependence upon long-cycle projects within the defense and environmental industries and diversify into problem areas plaguing niche markets within the 3 additional business sectors that it now serves (Additive Manufacturing, Oil & Gas, and Metals & Mining), has resulted in 2015 revenue to date being generated from a more diverse client, technology, and geographical base. Management plans to maintain this strategic programme and, as a result, expects the diversity of its client base to continue to expand.

However, in July 2015 PyroGenesis reached mutual agreement with a customer to terminate a Development Use and Commercialization Agreement related to PyroGenesis’



SPARC™ technology. The SPARC™ technology is a patented PyroGenesis process designed to destroy ozone depleting substances such as end-of-life refrigerants like CFCs, HCFs, and HFCs, which have high global warming potential. The termination of this agreement prevented, contrary to budgeted expectations, the Company from generating revenue from this project during the first nine months of 2015.

Terms of the termination include, amongst other things, the purchase by PyroGenesis of the customer's exclusive rights in a SPARC™ System for \$300,000, and an undertaking by PyroGenesis not to destroy ozone depleting substances in Canada before July 7th, 2017, unless for research and development purposes. As a result of the termination of this agreement, Management recorded an inventory of \$846,241 in Q3, 2015. Management is in discussions to redeploy the SPARC™ System in a fully commercial environment, either in Asia or with an international oil and gas company in the United States, and expects to complete a transaction in the coming months.

Cost of Sales and Services and Gross Margin

| Cost of Sales and Services | Three months ended Sept 30, | | | Nine months ended Sept 30, | | |
|---|-----------------------------|---------------------|------------------------|----------------------------|---------------------|------------------------|
| | 2015 | 2014 | % Change 2015vs2014 | 2015 | 2014 | % Change 2015vs2014 |
| Employee compensation | \$ 458,437 | \$ 367,551 | 25% | \$ 1,386,330 | \$ 894,708 | 55% |
| Subcontracting | 45,844 | 30,352 | 51% | 265,139 | 42,503 | 524% |
| Direct materials | 329,640 | 216,669 | 52% | 1,118,762 | 769,171 | 45% |
| Manufacturing overhead & other | 207,728 | 131,890 | 58% | 446,431 | 370,631 | 20% |
| Foreign exchange loss | (44,799) | (5,596) | 701% | (74,626) | 16,013 | -566% |
| Investment tax credits | (7,488) | (18,006) | -58% | (129,773) | (53,325) | 143% |
| Sub-total before amortization of intangible assets | 989,362 | 722,860 | 37% | 3,012,263 | 2,039,701 | 48% |
| Amortization of intangible assets | 349,268 | 349,268 | 0% | 1,047,805 | 1,047,805 | 0% |
| Total Cost of Sales and Services | \$ 1,338,630 | \$ 1,072,128 | 25% | \$ 4,060,068 | \$ 3,087,506 | 31% |

| Gross Margin | Three months ended Sept 30, | | Nine months ended Sept 30, | |
|---|-----------------------------|--------------|----------------------------|--------------|
| | 2015 | 2014 | 2015 | 2014 |
| Revenue | \$ 1,363,077 | \$ 1,215,261 | \$ 4,013,221 | \$ 3,980,220 |
| Cost of Sales and Services before amortization of intangible assets | 989,362 | 722,860 | 3,012,263 | 2,039,701 |
| Gross Margin before amortization of intangible assets | 373,715 | 492,401 | 1,000,958 | 1,940,519 |
| Gross Margin % before amortization of intangible assets | 27.4% | 40.5% | 24.9% | 48.8% |
| Amortization of intangible assets | 349,268 | 349,268 | 1,047,805 | 1,047,805 |
| Gross Margin after amortization of intangible assets | \$ 24,447 | \$ 143,133 | \$ (46,847) | \$ 892,714 |
| Gross Margin % after amortization of intangible assets | 1.8% | 11.8% | -1.2% | 22.4% |

Gross margin before amortization of intangible assets is not a performance measure defined under IFRS and it is not considered an alternative to gross margin in the context of measuring the Company's performance. Management believes that providing certain non-GAAP performance measures, in addition to IFRS measures provides users of the Company's financial statements with an enhanced understanding of its results and related trends, and increases transparency and clarity. Gross margin before amortization of intangible assets is an important measure of operating performance as it allows Management, investors and others to evaluate and compare the Company's core operating results, including its return on capital and operating efficiencies, from period to period, by removing the impact of non-operating items not requiring cash outlays.

In Q3, 2015 cost of sales and services before amortization of intangible assets amounted to \$989,362, representing an increase of 37% over the \$722,860 recorded in Q3, 2014. On a year-to-date basis, the cost of sales and services before amortization of intangible



assets increased by 48% to \$3,012,263 compared with \$2,039,701 during the same period of the previous year.

Various factors, including, but not limited to, mix of long and short-term manufacturing projects, project complexity and scale, and R&D content, may significantly impact both the composition and overall level of cost of sales and services reported in a given period, as the mix of labour, materials and equipment may be significantly different.

During the first nine months of 2015 employee compensation, subcontracting costs, and the cost of direct materials increased to \$1,386,330 (2014: \$894,708), \$265,139 (2014: \$42,503) and \$1,118,762 (2014: \$769,171) respectively. The costs incurred in 2015 are directly attributable to the work completed under PyroGenesis' project to design, manufacture and supply ten plasma-based powder production systems for 3D printing to an Asian client, together with advances made on two R&D projects incorporating novel plasma based technologies in the oil and gas industrial sector, work completed on the tactical mobile plasma system for destruction of chemical warfare agents under contract with an international military consortium, and support services related to PAWDS Marine systems supplied to the US Navy.

Throughout the first nine months of 2015, many of PyroGenesis' engineering and R&D resources were concentrated on accelerating progress on the Company's revenue generating projects, as opposed to research and development activities. As a result, costs of goods sold for the year-to date increased significantly and, whilst this has negatively impacted gross margins in fiscal 2015 thus far, Management believes that upon completion of these projects, gross margins will be in line with previous estimates. Furthermore, Management believes that the Company will gain significant future financial benefit from the additional intellectual property generated through the investment in this project acceleration programme, with the filing of:

- a) a provisional patent for a one step process using plasma for producing high purity silicon from silica, PUREVAP™, a proprietary process that uses a plasma arc within a vacuum furnace to produce high purity, metallurgical grade silicon (MG-Si), solar grade silicon (UMG Si) and polysilicon from quartz, and
- b) a provisional patent for a new Plasma Atomization Process ("PAP"), a new process enabling PyroGenesis to produce metallic powders at higher production rates whilst, at the same time, controlling powder size distribution. PyroGenesis expects to file a world-wide patent application for its PAP by the end of Q2, 2016.

The amortization of intangible assets of \$349,268 in Q3, 2015 (2014: \$349,268) relates to licenses and know-how purchased in 2011 from a company under common control. This expense is a non-cash item and the underlying asset will be fully amortized by the end of 2016.

In Q3, 2015 the Company generated a gross margin before amortization of intangible assets of \$373,715, representing 27.4% of revenue. This compares with a gross margin before amortization of intangible assets of \$492,401, representing 40.5% of revenue, in Q3, 2014.



Year-to-date gross margin before amortization of intangible assets for 2015 and 2014 were \$1,000,958 (24.9%) and \$1,940,519 (48.8%) respectively. Included in the gross margin achieved in the first nine months of 2014 is the revenue recognition of \$620,000 related to billings in excess of costs and profits on uncompleted contracts in respect of the termination of a project due to a customer's breach of contract. No costs were applicable against this one-time revenue benefit and the one-time benefit was not repeated in the first nine months of 2015. Excluding this one-time benefit, the gross margin achieved in the first nine months of 2014 was \$1,320,519, or 39.8%.

It should be noted that although Management continues to target gross margins of 40%, various factors such as those already mentioned, together with the innovative nature of the Company's projects, as well as one-time events, may positively or negatively impact gross margins in any given period.

Selling, General and Administrative Expenses

| | Three months ended Sept 30, | | | Nine months ended Sept 30, | | |
|--|-----------------------------|---------------------|------------------------|----------------------------|---------------------|------------------------|
| | 2015 | 2014 | % Change 2015vs2014 | 2015 | 2014 | % Change 2015vs2014 |
| Employee compensation | \$ 517,875 | \$ 588,872 | -12% | \$ 1,493,398 | \$ 1,673,717 | -11% |
| Professional fees | 260,234 | 220,984 | 18% | 918,952 | 602,378 | 53% |
| Office and general | 126,869 | 76,655 | 66% | 331,604 | 235,731 | 41% |
| Travel | 53,245 | 46,243 | 15% | 171,236 | 127,746 | 34% |
| Depreciation on property and equipment | 41,203 | 44,828 | -8% | 122,604 | 129,337 | -5% |
| Government grants | (4,500) | (10,843) | -58% | (44,224) | (20,843) | 112% |
| Other expenses | 53,950 | 66,064 | -18% | 171,762 | 182,796 | -6% |
| Sub-total before Share-based payments | 1,048,876 | 1,032,803 | 2% | 3,165,332 | 2,930,862 | 8% |
| Share-based payments | 73,056 | 50,000 | 46% | 256,188 | 178,500 | 44% |
| Total selling, general and administrative | \$ 1,121,932 | \$ 1,082,803 | 4% | \$ 3,421,520 | \$ 3,109,362 | 10% |

Included within SG&A are costs associated with corporate administration, business development, expenses related to the preparation of proposals, operations administration, investor relations and employee training.

In Q3, 2015 selling, general and administrative expenses ("SG&A") totalled \$1,121,932, representing an increase of 4% compared to \$1,082,803 recorded in Q3, 2014. Excluding costs associated with share-based compensation (a non-cash item in which options vest over a four year period) SG&A increased by 2%, from \$1,032,803 in Q3, 2014 to \$1,048,876 in Q3, 2015.

Year-to-date SG&A totalled \$3,421,520 in 2015, compared with \$3,109,362 in the same period of 2014, representing an increase of 10%. Excluding the costs associated with share-based compensation, SG&A increased by 8%, from \$2,930,862 in the first nine months of 2014 to \$3,165,332 in the first nine months of 2015. The increase in year-to-date SG&A is attributable to the net effect of:

- a decrease of 11% in employee compensation, primarily due to the departure of two senior executives previously employed in administrative functions,



- an increase of 53% for professional fees, primarily due to increased levels of external investor relations services, business development, and accounting services,
- an increase of 41% in office and general costs, primarily due to an increase in rent and related taxes, together with increased communications expenses,
- Travel costs increased 34%, primarily due to increased Business Development activities in international markets,
- Government grants increased by 112% due to the improved volume of the Company's projects that are eligible for grants, and
- Other expenses decreased 6%, primarily due to lower insurance premiums.

Separately, share based payments increased 44% as a result of the vesting structure of the stock option plan and for new options that were issued throughout the first nine months of 2015.

Management has dedicated the Company's business development resources to high value niche markets, other than those within the US military, for more than 2 years. As a result, PyroGenesis has diversified into 3 additional business sectors (Additive Manufacturing, Oil & Gas, and Metals & Mining) operating in multiple geographical locations. The benefits of this strategic diversification have generated a backlog of signed contracts totalling \$16.0 million that Management expects to be recorded as revenue prior to the end of fiscal 2016.

Research and Development ("R&D") Costs

| Internal R&D Project Costs | Three months ended Sept 30, | | % Change | Nine months ended Sept 30, | | % Change |
|---|------------------------------------|------------------|-------------------|-----------------------------------|-------------------|-------------------|
| | 2015 | 2014 | 2015vs2014 | 2015 | 2014 | 2015vs2014 |
| Employee compensation | \$ 47,515 | \$ 43,664 | 9% | \$ 102,257 | \$ 196,062 | -48% |
| Subcontracting | (6,800) | 7,349 | -193% | 2,200 | 23,459 | -91% |
| Materials and equipment | 15,332 | 6,092 | 152% | 19,934 | 24,879 | -20% |
| Other expenses | 317 | 943 | -66% | 1,916 | 2,731 | -30% |
| Sub-total before government grants | 56,364 | 58,048 | -3% | 126,307 | 247,131 | -49% |
| Government grants | (23,621) | (21,946) | 8% | (37,445) | (82,329) | -55% |
| Total net R&D costs | \$ 32,743 | \$ 36,102 | -9% | \$ 88,862 | \$ 164,802 | -46% |

In Q3, 2015 the Company incurred \$32,743 on internal R&D project costs, net of grants. This compares with \$36,102 for Q3, 2014 and represents a decrease of 9%. For the nine months ended September 30th, 2015, net spending on internal R&D projects was \$88,862 versus \$164,802 during the same period of fiscal 2014, representing a decrease of 46%. The decrease in both the third quarter and year-to-date R&D expenditure is, as previously noted, primarily attributable to the fact that many of the Company's resources were concentrated on accelerating progress on the Company's revenue generating projects, as opposed to research and development activities.



In addition to internally funded R&D projects, the Company incurred R&D eligible expenditures on the execution of external client funded projects. R&D tax credits on external client funded projects were applied against Cost of Sales and Services (see below).

Investment Tax Credits

| | Three months ended Sept 30, | | % Change | Nine months ended Sept 30, | | % Change |
|------------------------|-----------------------------|-------------|------------|----------------------------|-------------|------------|
| | 2015 | 2014 | 2015vs2014 | 2015 | 2014 | 2015vs2014 |
| Investment tax credits | \$ (7,488) | \$ (18,006) | -58% | \$ (129,773) | \$ (53,325) | 143% |

Investment tax credits of \$7,488 were accrued in Q3, 2015 compared with \$18,006 in Q3, 2014, representing a decrease of 58%. Year-to-date investment tax credits increased from \$53,325 in the first 9 months of 2014 to \$129,773 in the same period of fiscal 2015, representing an increase of 143%. The increased level of investment tax credits in 2015 is in line with the level of qualifying costs on external R&D projects.

The Company continues to make investments in research and development projects incorporating strategic partners and government bodies.

Financing Charges

| | Three months ended Sept 30, | | % Change | Nine months ended Sept 30, | | % Change |
|-------------------|-----------------------------|-----------|------------|----------------------------|------------|------------|
| | 2015 | 2014 | 2015vs2014 | 2015 | 2014 | 2015vs2014 |
| Financing charges | \$ 137,907 | \$ 19,970 | 591% | \$ 286,765 | \$ 197,274 | 45% |

Financing charges in Q3, 2015 totalled \$137,907 compared with \$19,970 for Q3, 2014. Year-to-date financing charges were \$286,765 in the first nine months of 2015, compared with \$197,274 in the same period of 2014.

The increase in year-to-date financing charges relates primarily to the quarterly interest payable on the convertible debenture, together with the accretion and amortisation of financing costs of the convertible debenture, since March 30th, 2015.

Financing charges would have decreased significantly in Q3, 2015 due to the conversion of \$6,000,000 of debt to equity which took place in May 2014 (see note 15(i) of the 2014 Audited Financial Statements) but was offset by the interest, accretion and financing costs associated with the new convertible debentures issued on March 30th, 2015.



Depreciation on Property and Equipment

| | Three months ended Sept 30, 2015 | Sept 30, 2014 | % Change 2015vs2014 | Nine months ended Sept 30, 2015 | Sept 30, 2014 | % Change 2015vs2014 |
|--|----------------------------------|---------------|---------------------|---------------------------------|---------------|---------------------|
| Depreciation on property and equipment | \$ 41,203 | \$ 44,828 | -8% | \$ 122,604 | \$ 129,337 | -5% |

Depreciation on property and equipment decreased by 8% to \$41,203 in Q3, 2015 compared with \$44,828 in Q3, 2014. The decrease reflects a reduced level of investments in machinery and equipment since 2010, when major acquisitions were made.

Comprehensive Loss

| | Three months ended Sept 30, 2015 | Sept 30, 2014 | % Change 2015vs2014 | Nine months ended Sept 30, 2015 | Sept 30, 2014 | % Change 2015vs2014 |
|----------------------|----------------------------------|---------------|---------------------|---------------------------------|----------------|---------------------|
| Loss from operations | \$ (1,268,135) | \$ (995,742) | 27% | \$ (3,843,994) | \$ (2,578,724) | 49% |
| Comprehensive loss | \$ (1,267,748) | \$ (995,695) | 27% | \$ (3,842,948) | \$ (2,577,576) | 49% |

The comprehensive loss in Q3, 2015 totalled \$1,267,748 compared with a comprehensive loss of \$995,695 in Q3, 2014, representing an increase of 27%. The comprehensive loss for the first nine months of 2015 amounted to \$3,842,948, compared with a loss of \$2,577,576 for the first nine months of 2014, representing an increase of 49%.

The increase of \$1,265,372 in the comprehensive loss for the first nine months of fiscal 2015 is primarily attributable to:

- (i) a one-time benefit of \$620,000 in 2014 in respect of the termination of a project due to a customer's breach of contract, which increased revenue at 100% gross margin,
- (ii) a reduction in gross margin of \$319,561 arising from increased costs of goods sold, which is partly attributable to the mix of projects under construction, but also due to the fact that many of the Company's engineering and R&D resources were concentrated on accelerating progress on the Company's revenue generating projects, as opposed to research and development activities.
- (iii) an increase in SG&A expenses of \$312,158, primarily related to increased professional fees, increased travel expenses and an increase in office and general costs, partly offset by decreases in employee compensation and higher government grants,
- (iv) a decrease in R&D expense \$75,940, primarily due to the fact that many of the Company's engineering and R&D resources were concentrated on accelerating progress on the Company's revenue generating projects, as opposed to research and development activities.
- (v) an increase in financing charges of \$89,491 that is primarily due to interest payable and an accretion expense in respect of the convertible debenture



financing of March 2015, partly offset by reduced interest due to the conversion of \$6,000,000 of debt to equity in May 2014.

EBITDA

| | Three months ended Sept 30, | | % Change | Nine months ended Sept 30, | | % Change |
|--|-----------------------------|---------------------|------------|----------------------------|-----------------------|-------------|
| | 2015 | 2014 | 2015vs2014 | 2015 | 2014 | 2015vs2014 |
| Comprehensive loss | \$ (1,267,748) | \$ (995,695) | 27% | \$ (3,842,948) | \$ (2,577,576) | 49% |
| Depreciation on property and equipment | 41,203 | 44,828 | | 122,604 | 129,337 | |
| Amortization of intangible assets | 349,268 | 349,268 | | 1,047,805 | 1,047,805 | |
| Financing charges | 137,907 | \$ 19,970 | | 286,765 | \$ 197,274 | |
| EBITDA (loss) | \$ (739,370) | \$ (581,629) | 27% | \$ (2,385,774) | \$ (1,203,160) | 98% |
| Other non-cash items: | | | | | | |
| Share-based payments | 73,056 | 50,000 | | 256,188 | 178,500 | |
| Adjusted EBITDA (loss) | \$ (666,314) | \$ (531,629) | 25% | \$ (2,129,586) | \$ (1,024,660) | 108% |

EBITDA is defined as Earnings (from operations) Before Interest, Taxes, Depreciation and Amortization and Adjusted EBITDA is defined as Earnings (from operations) Before Interest, Taxes, Depreciation, Amortization, and other non-cash items including share-based payment costs.

EBITDA and Adjusted EBITDA are not performance measures defined under IFRS and they are not considered an alternative to income (loss) from operations or comprehensive earnings (loss) in the context of measuring a Company's performance. Management believes that providing certain non-GAAP performance measures, in addition to IFRS measures, presents users of the Company's financial statements with an enhanced understanding of its results and related trends and increases transparency and clarity. Management believes Adjusted EBITDA is an important measure of operating performance because it allows Management, investors and others to evaluate and compare the Company's operating results, including its return on capital and operating efficiencies, from period-to-period, by removing the impact of the capital structure (interest expense to service outstanding debt), asset base (depreciation and amortization), tax consequences, and other non-operating items not requiring cash outlays including share-based compensation.

Other companies may calculate Adjusted EBITDA differently, and therefore the Company's Adjusted EBITDA may not be comparable to similarly titled measures of other companies.

The EBITDA loss for Q3, 2015 was \$739,370 compared with an EBITDA loss of \$581,629 for Q3, 2014, representing an increase of 27%. The year-to-date EBITDA loss was \$2,385,774 compared with an EBITDA loss of \$1,203,160 for the first 9 months of 2014, representing an increase of 98%.

The increase of \$1,182,614 in the EBITDA loss for the first nine months of fiscal 2015 is attributable to the increase in comprehensive loss of \$1,265,372 for the period, as previously described, plus the reduction for the depreciation on property and equipment of \$6,733 and less the increased financing charges of \$89,491.



The Adjusted EBITDA loss for Q3, 2015 was \$666,314 compared with an Adjusted EBITDA loss of \$531,629 for Q3, 2014. The Adjusted EBITDA loss for the first nine months of 2015 was \$2,129,586 compared with an Adjusted EBITDA loss of \$1,024,660 for the first nine months of 2014. The increase of \$1,104,926 in the Adjusted EBITDA loss for the first nine months of fiscal 2015 is attributable to the increase in EBITDA loss of \$1,182,614 for the period, as previously described, less the increased cost of other non-cash items, specifically share-based payments, of \$77,688.

LIQUIDITY AND CAPITAL RESOURCES

During the first nine months of 2015, the primary sources of funding for the Company have been cash generated from projects and private placements. In March 2015, the Company completed a private placement which resulted in the net proceeds (gross proceeds minus cash commissions and convertible debentures issue costs) of \$2,957,804. The proceeds from these offerings have been used to fund operations and strengthen the Company's working capital position.

At September 30th, 2015, the Company had cash on hand of \$268,704 and positive working capital of \$1,005,977 compared with a cash balance of \$362,183 and positive working capital of \$1,502,802 at December 31st, 2014.

Although the Company has significantly increased its backlog of new projects, this is not expected to have a positive impact on cash flow until the end of 2015 or early 2016; the active projects during the first nine months of 2015 have not produced sufficient positive cash flow to fund operations. Based upon the current backlog, together with the pipeline of prospective new projects, cash flows from operations are expected to be positive in the near future.

On March 30th, 2015, the Company completed a financing and raised \$4 million through an issuance of convertible debentures, which mature 3 years from the date of issuance and bear interest, paid quarterly, at 7.5% per annum. As part of this offering, \$755,000 of existing debt was converted into convertible debentures, thereby further strengthening the balance sheet.

Since the Company went public in July 2011, the primary sources of funding have been cash generated from projects, together with the issuance of shares via public offerings. The Company's ability to raise additional funds from the equity markets will largely depend upon general market conditions and the Company's ability to secure contracts.

In July 2014, PyroGenesis announced that it had won a contract for the design, manufacture and supply of ten powder production systems for 3D printing, for a total contract value of \$12.5 million. The contract calls for progress payments to be made for the first system that is to be delivered and commissioned at the customer's site in Asia, following which production output will be scaled-up to pre-specified levels. Thereafter, the customer is obliged to confirm the order for the remaining nine systems with payment of a substantial deposit.



The first system was shipped to the customer in the summer of 2015. As of today, PyroGenesis' engineers and technicians have completed the assembly/commissioning phase and are currently scaling up the volume of powder output. Scale-up is expected to be completed in the coming weeks, followed by commencement of the manufacturing of the remaining nine systems, which are expected to be delivered, assembled and commissioned during fiscal 2016.

As each powder production system becomes operational, PyroGenesis will be required to supply consumables and spare parts, estimated at hundreds of thousands of dollars per system, thereby creating a significant recurring revenue stream.

In April 2015, the Company substantially completed the final phase of the \$5.6 million reorder for a plasma waste destruction system to be installed in US Navy air craft carrier John F. Kennedy (CVN 79). In July 2015, PyroGenesis shipped the system to the shipbuilder, Newport News Shipbuilding, a division of Huntington Ingalls Industries. The first system was installed on the Gerald R. Ford (CVN-78). Both ships are future-generation aircraft carriers of the Gerald R Ford Class.

The US Navy plans to commission the USS Gerald R. Ford in June 2016, following which PyroGenesis will start to supply consumables and spare parts, estimated at hundreds of thousands of dollars per system, for the PAWDS-Marine, thus creating another recurring revenue stream.

In the lead-up to commissioning, PyroGenesis recently executed an agreement to train US Navy sailors on its PAWDS Engineering Design Model at its manufacturing facility in Montreal. The first group of sailors, to be trained on mechanical and electrical maintenance as well as system operations, arrived for training in November 2015.

PyroGenesis completed the design and manufacture of the first Tactical PACWADS for an International Military Consortium in the third quarter of 2015. The project has now moved on to an initial testing phase which, once completed, is expected to be followed by extensive field testing at a cost to the Consortium over \$100 million, using simulated and actual chemical warfare agents, which demonstrates their commitment to validate this technical solution.

Upon successful demonstration testing of the Tactical PACWADS ability to destroy chemical warfare agents, the Company believes that there is the potential for orders for additional systems in the future.

The Company is also working on several other strategic mandates in the oil and gas, metals and mining, and environmental industries.

These orders provide the Company with a solid foundation of contracted backlog at the close of Q3, 2015. As of November 25th, 2015, the backlog of signed contracts stood at \$16.0 million, all of which Management expects to be recorded as revenue prior to the end of fiscal 2016.



SUMMARY OF CASH FLOWS

| | Three months ended Sept 30, | | Nine months ended Sept 30, | |
|---|-----------------------------|--------------|----------------------------|----------------|
| | 2015 | 2014 | 2015 | 2014 |
| Cash provided by (used in) operating activities | \$ (817,954) | \$ (563,715) | \$ (2,239,160) | \$ (3,987,817) |
| Cash provided by (used in) investing activities | (1,596) | (42,919) | (32,935) | (83,415) |
| Cash provided by (used in) financing activities | (120,650) | (68,360) | 2,178,615 | 2,966,400 |
| Increase (decrease) in cash | (940,200) | (674,994) | (93,479) | (1,104,832) |
| Cash - end of period | 268,704 | 78,003 | 268,704 | 78,003 |

For the three months ended September 30th, 2015, cash flows from operating activities resulted in a net use of cash of \$817,954 compared to a net use of cash from operating activities of \$563,715 for the same period of the previous year.

For the nine months ended September 30th, 2015, cash flows from operating activities resulted in a net use of cash of \$2,239,160 compared to a net use of cash from operating activities of \$3,987,817 for the first nine months of 2014. The use of cash during the first nine months of 2015 consists of the comprehensive loss of \$3,842,948 (2014: \$2,577,576) less non-cash items totalling \$1,550,521 (\$2014: \$1,488,198) plus a positive net change in non-cash operating working capital items of 53,267 (2014: negative net change in non-cash operating working capital items of \$2,898,439). The net change in non-cash operating working capital items was primarily driven by an increase in billings in excess of costs and profits on uncompleted contracts of \$1,216,027 during the first nine months of 2015, compared with a decrease in billings in excess of costs and profits on uncompleted contracts of \$1,723,592 during the first nine months of 2014.

Investing activities in Q3, 2015 resulted in use of cash of \$1,596 compared with \$42,919 in Q3, 2014. Cash used for investment activities in Q3, 2015 was related to machinery.

Financing activities in Q3, 2015 resulted in a use of funds of \$120,650 compared with a use of funds of \$68,360 in Q3, 2014. Financing activities during Q3, 2015 consist of the repayment of long term debt.

The details of these variances in cash flows from financing activities are outlined in detail in Note 15 of the Company's Q3, 2015 Unaudited Financial Statements.

On December 16th, 2013, the Company signed an amending agreement to amend the terms and conditions of the balance of sale with a company under common control. Based upon the amending agreement, payments starting on October 1st, 2013 and ending May 1st, 2014, plus other past due payments, were deferred until April 1st, 2015, except for a payment of \$178,175 to be made on or before December 31st, 2013 and for a payment of \$30,000 to be made on or before January 31st, 2014. As per the terms of the amending agreement, as the Company concluded a financing in excess of \$3,000,000 before April



1st, 2015, all deferred amounts became immediately due and payable on the closing date of the financing.

On December 1st, 2014, the Company signed an additional amending agreement to amend the terms and conditions of the deferred payments, whereby the balance of the deferred payments as at December 31st, 2014 is completely deferred until June 30th, 2016. However, in the event of any change within the Company that would be considered material by the holder of the balance of sale, such as a significant financial development, any and all amounts outstanding will become immediately due and payable on the date of the material change.

Although instalment payments were to begin in June 2016, Management has agreed to make instalment payments and, during the nine months ended September 30th, 2015, had repaid a total amount of \$400,000

On December 1st, 2014, the Company signed an additional amending agreement to amend the terms and conditions of the payments, whereby complete balance of the amounts payable to a trust beneficially owned by a shareholder as at December 31st, 2014, is completely deferred until June 30th, 2016. On March 31st, 2015, Management agreed to make these payments early resulting in a payment of \$405,467 to a trust beneficially owned by a shareholder. The loan is now fully paid.

For the three month period ended September 30th, 2015, the net cash position of the Company decreased by \$940,200 as compared to a decrease of \$674,994 for the same period in the prior year.

The Company remains committed to raising additional cash from operations and / or to seek additional cash from equity issuances as it continues to further increase its business volume and improve its technical offerings.

CAPITAL STOCK INFORMATION

The Authorized share capital of the Company consists of an unlimited number of Class A common shares without par value. As at September 30th, 2015 and at November 25th, 2015 PCI had 84,831,729 Class A common shares issued. As at September 30th, 2015 and at November 25th, 2015, PCI had 9,604,655 warrants issued. As at September 30th, 2015, PCI had 6,356,000 outstanding options issued and 3,646,100 exercisable options and at November 25th, 2015 had 6,356,000 outstanding options issued and 3,646,100 exercisable options.



GOING CONCERN

Cash generated from projects has historically been insufficient to meet the overall cash requirements of the Company and to cover operating costs. For the Company to generate sufficient positive cash flows from operations and meet ongoing cash requirements, the level of business must exceed that recorded during the nine months ended September 30th, 2015. Management expects that the investments currently being made in accelerating development projects, together with executing on the \$16.0 million backlog that has arisen primarily from the Company's successful diversification into niche markets of the oil & gas, additive manufacturing (including 3D printing), and metals & mining business sectors, will continue to improve the Company's cash position.

In the future, it may be necessary for the Company to raise additional capital to fund its operations and the continued development and introduction of new lines to its family of products. To date, the Company has raised financing through successive issuances of equity and convertible debenture. There is no certainty that the Company will continue to be able to raise additional financing, or expand its sales to fund its operations, although Management is confident that it will be able to do so.

The financial statements as at September 30th, 2015 have been prepared using International Financial Reporting Standards ("IFRS") applicable to a going concern, which contemplates the realization of assets and settlement of liabilities in the normal course of business as they become due.

RELATED PARTY TRANSACTION

On March 30th, 2015, the Company closed a private placement of unsecured subordinated convertible debentures of the Company (the "Debentures") in the amount of \$4 million. \$755,000 of the Debentures were purchased from the settlement of \$755,000 of the carrying value of a loan made by a related party.

In 2014, the Company completed a share for debt transaction by issuing 7,500,000 common shares at a deemed price of \$0.80 per common share to settle \$6,000,000 of the carrying value of the Balance of Sale, being the last two-hundred and eight-five and a half monthly payments owed by the Company under the purchase agreement. Note 15 (i) and Note 19 of the Company's December 31, 2014 Audited Financial Statements, more fully describe the nature of this conversion as well as the related party involved.

In Q3, 2015 office rent was charged by a trust beneficially owned by a shareholder of the Company in the amount of \$47,149 (Q3, 2014 - \$33,830) and for the nine month period ended September 30th, 2015 in the amount of \$134,832 (2014 - \$89,519). A balance due of \$54,209 (December 31st, 2014 - \$16,609) is included in accounts payable and accrued liabilities. In accordance with the lease agreement, the lease term terminates on January 31st, 2017.



During the three and nine month period ended September 30th, 2015, interest on two amounts payable was charged by a trust beneficially owned by a shareholder of the Company in the amount of \$Nil and \$Nil respectively (2014 - \$5,904 and \$17,451). The balance of interest that has not been paid of \$Nil (December 31st, 2014 - \$125,384) is included in loans - other. On March 31st, 2015, Management agreed to make these payments early resulting in a payment of \$405,467 to a trust beneficially owned by a shareholder. The loan is now fully paid.

During the three and nine month period ended September 30th, 2015, interest on balance of sale was charged by a company under common control in the amount of \$94 and \$12,841 respectively (2014 - \$14,066 and \$179,823). An unpaid amount of interest was added to the Balance of Sale in the amount of \$Nil (December 31st, 2014 - \$115,105). Balance of sale – company under common control (“Balance of Sale”) arose from the purchase of the intangible assets in March 2011. It bears an implicit interest rate of 4.753% per annum. The implicit rate of interest was based on the present value of cash flows having the same value as the intangible assets at the time of sale. All payments have been completely deferred until June 30th, 2016. Although instalment payments were to begin in June 2016, Management agreed, prior to this date, to make instalment payments during the three and nine month period ended September 30th, 2015 for a total amount of \$120,000 and \$400,000 respectively.

During the three and nine month period ended September 30th, 2015, interest on convertible debenture was charged by a shareholder of the Company in the amount of \$14,156 and \$28,312 respectively.

During the three and nine month period ended September 30th, 2015, fees of \$32,000 and \$74,000 respectively were charged for services rendered by the independent directors who are members of the Company’s Board of Directors (2014 - \$23,000 and \$74,000). A balance of \$11,000 (December 31st, 2014 - \$Nil) is included in accounts payable and accrued liabilities.

During the three and nine month period ended September 30th, 2015, total compensation to key management consisted of salaries of \$176,313 and \$439,874 respectively (2014 - \$264,417 and \$674,849), pension contributions of \$2,005 and \$5,918 respectively (2014 - \$2,128 and \$6,550) and other benefits of \$14,576 and \$35,113 (2014 - \$35,012 and \$37,834). A balance of \$141,443 (December 31st, 2014 - \$164,782) is included in accounts payable and accrued liabilities.

OUTLOOK

PyroGenesis is focused on reducing its dependency on long-cycle projects by developing a strategic portfolio of volume driven, high margin / low risk “standard” products that resolve problem areas within niche markets in the industries that it serves: defense, environmental, oil & gas, additive manufacturing (including 3D printing), and metals & mining.



At the same time, the Company is targeting “recurring revenue” opportunities from, for example:

- a) royalties on the sale of metals refined from ore through utilisation of PyroGenesis’ technologies, and
- b) the supply of consumables and spare parts required to support the operation of systems once delivered and installed, such as 3D printing systems, Marine PAWDS, and Tactical PACWADS.

As the Company expands its client base, the sale of consumables and spare parts are expected to generate a significant level of recurring revenue, at very attractive margins.

Such focus is expected to continue to generate an improved mix of short and longer term projects that will, in turn, facilitate improved operational and financial planning. Repeat orders for the same, or similar, products will further result in the standardisation of certain manufacturing processes, yielding higher gross margins. Examples of such products are:

- a) powder production systems for 3D printing,
- b) systems to maximise metal recovery from dross,
- c) systems to destroy chemical warfare agents, and
- d) SPARC™.

Management believes that the current backlog of \$16.0 million, due to be converted into revenue prior to the end of fiscal 2016, is testament to the success of its recent focus.

In addition, PyroGenesis plans to build and operate its own powder production system, utilising its recently developed Plasma Atomization Process (“PAP”) to produce specialty powders for the additive manufacturing industry, specifically for 3D printing. PyroGenesis’ PAP is an enabling technology for 3D Printing as well as other additive manufacturing and powder metallurgy applications and this technology has the distinction of producing highly flowable and very pure spherical metallic powders, all highly sought after characteristics in additive manufacturing applications.

This first system would also be used to develop next generation Plasma Atomization Systems capable of making powders from various metals being used in 3D printing, as well as from composites.

Management is confident that the strategic plan adopted by the Board and which has given effect to the realignment and de-risking of the Company’s business, has thus far been successful and Management will continue to execute against this plan as the Company achieves its stated initiatives in the coming years.

Additional information regarding the Company can be found on SEDAR at www.sedar.com or at www.otcmarkets.com.