PYROGENESIS CANADA INC.

MANAGEMENT'S DISCUSSION AND ANALYSIS

This management's discussion and analysis ("MD&A") is intended to assist readers in understanding the business environment, strategies, performance and risk factors of PyroGenesis Canada Inc. ("PyroGenesis", or the "Company"). The MD&A provides the reader with a view and analysis, from the perspective of management, of the Company's financial results for the fourth quarter and the fiscal year ended December 31, 2015. The MD&A has been prepared in accordance with National Instrument 51-102, Continuous Disclosure Requirements, and should be read in conjunction with the audited financial statements and related notes thereto of the Company for the year ended December 31, 2015.

The consolidated financial statements and MD&A have been reviewed by PyroGenesis' Audit Committee and were approved by its Board of Directors on April 29, 2016. 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 following information takes into account all material events that took place up until April 29, 2016, the date on which the Company's Board of Directors approved this MD&A. Unless otherwise indicated, all amounts are presented in Canadian dollars. The Company's functional and reporting currency is the Canadian dollar.

Additional information regarding PyroGenesis is available on SEDAR (www.sedar.com), OTC Markets (www.otcmarkets.com) and on the Company's website at www.pyrogenesis.com.

REPORTING PERIODS

All references to "Fiscal 2014" and "Fiscal 2015" refer to PyroGenesis' financial year ended December 31, 2014 and December 31, 2015 respectively.

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 clients; 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 Company's business strategies, strategic objectives and growth strategy;
- the Company's current and future capital resources and the need for additional financing;
- the Company's ability 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 resulting in 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 predictions 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 labour disputes; foreign exchange fluctuations and collection risk; competition from other suppliers, or alternative, less capital intensive, energy solutions; and risk factors described elsewhere in this document under the heading "Risk Factors". 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 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. 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 (including 3D printing), oil & gas, and environmental industries. With a team of experienced engineers, scientists and technicians working from its Montreal office and its 3,800m^2 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, plasma atomisation processes, high-temperature metallurgical processes, and engineering services to the global marketplace. PyroGenesis' operations are ISO 9001:2008 certified, and have been since 1997. PyroGenesis is a publicly-traded Canadian company on the TSX Venture Exchange (Ticker symbol: PYR.V) and on the OTCQB in the United States (Ticker symbol: PYRNF).

BUSINESS UPDATE

For over 20 years, PyroGenesis has been manufacturing plasma-based torch systems for some of the most demanding applications in the world. As a clean-tech alternative to burning fossil fuel, PyroGenesis' 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 many of the high value, innovative, solutions that the Company has developed to resolve problems plaguing the multiple industries served by the Company, including: Defense; Environmental; Oil & Gas; Additive Manufacturing (3D Printing); and Mining & Metals.

1. DEFENSE

PyroGenesis' recent activities include the manufacture and supply of a second PAWDS-Marine system to the US Navy, the design and manufacture of the first Tactical PACWADS for the complete eradication of chemical warfare agents ("CWA's") for an International Military Consortium together with follow-on contracts for field-testing and for enhancing the system's capabilities and performance, whilst minimising operator intervention. In addition, the Company was recently awarded a contract with the US Department of Defense to demonstrate the viability of using the existing Tactical PACWADS with locally available materials to reduce the dependency on water; an attribute of particular importance where access to water is limited.

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 new Gerald R. Ford Class supercarriers. PyroGenesis has already delivered PAWDS-Marine systems for the first two ships in this class, the USS Gerald R. Ford (CVN 78), and the USS John F. Kennedy (CVN-79), with the second system being delivered to the shipyard in Q2, 2015.

The US Navy plans to commission the USS Gerald R. Ford in 2016 and the USS John F. Kennedy in 2020, following which PyroGenesis expects to supply consumables and spare parts estimated at approximately US$1 million per year for each system in operation. As more of the

US Navy's ships are fitted with PAWDS-Marine, the supply of consumables and spare parts is expected to create a significant recurring revenue stream for the Company.

In the lead-up to commissioning the USS Gerald R. Ford, PyroGenesis recently completed training US Navy sailors on the PAWDS-Marine system using the PAWDS Engineering Design Model at the Company's manufacturing facility in Montreal. In late 2015 three groups of sailors were trained on mechanical maintenance, electrical maintenance, and system operations. The rotation and/or promotion of US Navy sailors, together with an enlarged fleet of ships equipped with PAWDS-Marine systems, are both expected to lead to an increased volume of future training programmes and resulting recurring revenue stream to PyroGenesis.

The contract to train US Navy sailors is one of a total of 9 follow-on contracts related to the initial orders to supply two PAWDS-Marine systems that PyroGenesis has received to date. The value of these supplemental contracts exceeds US$600 thousand.

The US Navy plans to build a total of 10 Gerald R. Ford Class supercarriers and PyroGenesis expects each vessel to be equipped with a PAWDS-Marine system.

Tactical PACWADS - International Military Consortium

The growing list of terrorist organisations and conflict zones around the world, together with the apparent increased willingness to deploy Chemical Warfare Agents, 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.

For example, the challenges associated with today's chemical destruction methods were overwhelmingly apparent to those tasked with the international effort to destroy 1,300 metric tonnes of Syrian chemical weapons in 2014. It was finally agreed to transport the stockpile from Syria for destruction at sea aboard the US MV Cape Ray, and at land-based facilities in the United Kingdom, Finland and the United States. Furthermore, hazardous waste from the hydrolysis process aboard the MV Cape Ray had to be transported to several countries for post-processing and final destruction.

The costs of the demilitarisation operation are estimated to have totaled several hundred million dollars and include operations aboard the MV Cape Ray, the use of Danish and Norwegian freighters, and a convoy that provided security for the three ships. In addition, although the original plan was to destroy Syria's entire chemical arsenal by June 30, 2014, and to destroy all chemical effluent by December 31, 2014, it was in January 2016 that the Organisation for the Prohibition of Chemical Weapons was finally able to declare that all 1,300 tonnes of Syrian chemical weapons had been destroyed.

A system that is readily deployable and able to neutralise dangerous chemicals and chemical weapons without creating hazardous waste as a by-product is therefore expected to have a major positive impact on US and international efforts for the elimination of CWA's.

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 CWA's, as well as their precursor reagents, in the field. In order to alleviate some of the risks associated with transporting CWA's to another location, including the risk to soldiers and civilians of ambush, as well as the risk of the catastrophic accidental release of these highly toxic chemicals, the Tactical PACWADS would be transported directly to the chemical weapons site to destroy CWA's such as Sarin and Mustard gas, as well as VX nerve agents, in situ.

Under contract by an International Military Consortium, PyroGenesis completed the design and manufacture of the first Tactical PACWADS in Q3, 2015. Although testing was originally planned

to be undertaken by the client at their site, following inspection of the system by the client in September 2015, PyroGenesis was engaged to perform preliminary testing at its facilities in Montreal, Canada. Subsequently, in February 2016 PyroGenesis was awarded a further contract to perform engineering services to expand the system's capabilities and performance, whilst minimising operator intervention.

As stated, the first Tactical PACWADS is currently undergoing preliminary testing, which is expected to be followed by extensive field testing by the International Military Consortium using both simulants and live chemical warfare agents. The consortium is expected to spend in excess of $100 million on testing activities, thereby demonstrating their commitment to validate this technical solution. Management believes that the successful demonstration testing of Tactical PACWADS' ability to destroy chemical warfare agents will lead to orders for multiple additional systems.

Tactical PACWADS - US Department of Defense

In January 2016, PyroGenesis was awarded a contract with the US Department of Defense that recognises the success of, and will leverage, the Tactical PACWADS already designed and manufactured by the Company. This contract is related to a program initiated by the US Department of Defense to identify technology companies capable of developing a transportable disposal system which could convert dangerous chemical warfare agents into a safe end-product, such as soil, while using minimal consumables and creating no hazardous by-products. Ultimately, the goal of the program is to develop a "one size fits all" technology to destroy any chemical warfare agents without requiring water (a scarce resource in many parts of the world) for filtration, or generating waste for post-processing.

2. ENVIRONMENTAL

The human influence on the health of the planet continues to place 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 landfill sites are often inadequately constructed and near capacity. In addition, greenhouse gases are being released daily from fossil fuel consumption and more complex, often toxic, chemical residues are accumulating in our food chain. Simply burning or burying such residual waste merely amplifies the damage caused to the environment.

Using plasma technology to create a smart alternative to incinerators and landfills, PyroGenesis represents tomorrow's waste management clean-tech 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 environmental activities, recently signing an exclusive marketing license with Yasui Facilities, Inc. of Japan, positioning a SPARC™ system for redeployment in a fully commercial environment, concluding negotiations for the final phase of a $2.2 million plasma torch contract with an Asian company, and furthering negotiations for the delivery of an initial 10 tons per day ("TPD") Plasma Waste-to-Energy system to Europe.

Exclusive Marketing License, Japan

In Q3, 2015 PyroGenesis entered into an exclusive marketing agreement with Yasui Facilities, Inc. (“Yasui”), one of Japan's preeminent architectural and engineering firms. The collaboration will provide much needed local engineering expertise and proficiency in obtaining required permits that will expedite the conclusion of various multi-million dollar contracts already under discussion in Japan.

Under the terms of the agreement Yasui will exclusively market PyroGenesis' line of plasma waste processing systems in Japan for five years, with the option for an automatic renewal based on certain performance milestones. In exchange, Yasui will pay all costs associated with the Japanese permitting process (estimated at hundreds of thousands of dollars), and will reimburse PyroGenesis for certain costs incurred in developing the Japanese market. Furthermore, upon receipt of the permits that are expected to be issued in late Q2/early Q3, 2016 Yasui will pay PyroGenesis a one-time licence fee of $1.5 million.

Negotiations with Japanese clients currently include potential contracts for hospital and low level radioactive waste systems, 50 TPD general and specialty waste treatment systems, multiple small transportable mobile systems, as well as several niche applications that include an opportunity to process 100 TPD of a specialty waste stream. It is worth of note that each 25 TPD system is valued at approximately $15 million.

In November 2015, the first group of Japanese executives visited PyroGenesis’ Montreal facility to witness the successful destruction of their specialised waste stream in a pre-planned demonstration. Further demonstrations with other potential clients are expected in the coming months and management expects to commence executing contracts for the construction of waste destruction systems upon issuance of the Japanese import permits.

Recovery and Redeployment of SPARC™ System

In Q3, 2015 PyroGenesis reached mutual agreement with a former client to terminate a Development Use and Commercialization Agreement related to PyroGenesis' SPARC™ technology. Under the terms of the agreement, PyroGenesis acquired a system that utilises the patented SPARC™ technology designed to destroy ozone depleting substances, such as end-of-life refrigerants that have high global warming potential, for example CFC’s (“chlorofluorocarbons”), HCFC’s (“hydrochlorofluorocarbons”) and HFC’s (“hydrofluorocarbons”). Furthermore, PyroGenesis maintains all intellectual property rights and, as such, the former client cannot commercialise the technology.

PyroGenesis plans to redeploy this system in a fully commercial environment and is currently negotiating with a number of interested parties in the US, Europe and Asia. Management expects operation of this system in a commercial environment to lead to orders for additional systems.

$2.2 million Plasma Torch Contract

In Q3, 2012 PyroGenesis was awarded a contract by a client 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 to the client in 2014, however, client-generated delays subsequently stalled the second, and final, phase of the project. Finally, in Q3, 2015 PyroGenesis received confirmation to commence the second phase of the project, accompanied with the full, and final, payment. This project is expected to be completed in the first half of 2016.

3. OIL & GAS

The global oil and gas industry is in the midst of one of the severest downturns in 30 years, with "Big Oil" (7 of the world's largest publicly owned oil and gas companies) reporting sharp declines in revenues and profits of 35% and 92% respectively in 2015. Industry analysts conclude that 2016 will be a year of cutting capital expenditures still further and that focus will remain on restructuring, streamlining operations, increasing M&A activity, and targeting geographies with break-even points low enough to sustain profitability.

PyroGenesis has been working extensively with the Oil & Gas Industry to not only lead the way in clean energy development but to find innovative ways of reducing the sector's carbon footprint in the production and distribution of industry products. Most recently, PyroGenesis completed the initial phases of two independent projects, each of which clearly demonstrate major improvements to the carbon footprint, together with significant financial savings.

In Q1, 2016 the client visited PyroGenesis to discuss various options on moving forward with each project. Throughout the discussions PyroGenesis' client confirmed that it is actively pursuing the sourcing of internal capital in order to take the projects to the next phase. Although confident that sufficient funds will become available at some point in time, PyroGenesis' client is unable to predict a timeline for recommencement of the projects.

Separately, management is exploring alternative scenarios to accelerate each project, including the possibility of establishing joint-ventures or other forms of partnership. Such alternatives would utilise PyroGenesis' technology and enable the Company to offer substantial operational savings with little to no upfront investment to the client, whilst at the same time generating significant recurring revenue streams for PyroGenesis.

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 and laboratory scale tests to demonstrate that valuable metals can be recovered by the plasma processing of oil and gas waste streams. Throughout these tests it was noted that PyroGenesis had not only established that plasma processing can recover valuable metals, but that there is also a significant 50:1 volume reduction in the waste stream, 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 system at PyroGenesis' Montreal facility. Pilot plant testing was successfully concluded in October 2015 and confirmed that for a one-time initial investment of approximately $20 million in a PyroGenesis system, the client could generate annual financial improvements of approximately $40 million from reduced disposal costs and the sale of recovered metal. The results achieved with this project exceeded all expectations and, upon commercialisation of a full-scale system, management expects to create an additional recurring revenue stream of royalties payable to PyroGenesis based upon the value of recovered metal.

Separately, in order to accelerate commencement of the next phase of this project, management is exploring other options that would offer the operational cost savings with little to no capital investment to the client, and generate a significant recurring revenue stream for PyroGenesis. Such alternative scenarios include establishing joint-ventures, or other forms of partnership, that would utilise PyroGenesis' proprietary technology.

Oil Extraction from Oil Fields

PyroGenesis was engaged by a global oil and gas company to develop a plasma-based process designed to enhance and accelerate oil extraction from oil fields. The testing phase of this project

was completed in Q3, 2015 during which PyroGenesis successfully demonstrated that the patent pending process costs less than 20% of the process currently used by the client, and that it is a clean, zero emissions, technology that utilises electricity as its only heat source. PyroGenesis expects that, when the oil industry recovers, this project will progress to the commercialisation stage.

Again, in order to accelerate commencement of the next phase of this project, management is exploring other options that would offer the operational cost savings with little to no capital investment to the client, and generate significant recurring revenue for PyroGenesis.

4. ADDITIVE MANUFACTURING (3D PRINTING)

According to Wohlers Report 2015, additive manufacturing reached its "tipping point", defined as "a moment when an idea or trend crosses a threshold and spreads like wildfire", in the third quarter of 2012. As a result, Wohlers predicts that annual sales of products and services of the additive manufacturing industry will grow from US$4.1 billion in 2014 to US$21.2 billion in 2020, representing a compound annual growth rate of 69.5%. Using this information as a baseline, PyroGenesis' management estimates that the number of 3D printing machines will grow from 1,268 to 14,401 during the same period, whilst the demand for metal powders will increase from approximately 760 tonnes to 8,640 tonnes, representing more than an eleven-fold increase.

Developed by our team of engineers, scientists and technicians, the Plasma Atomisation Process ("PAP") is an enabling technology for 3D Printing as well as other additive manufacturing and powder metallurgy applications. Recognized as a leading technology for producing 3D printing-grade reactive metal powders, PyroGenesis' PAP systems can address the exacting requirements in terms of chemistry and properties required by the biomedical and aerospace industries. PyroGenesis' PAP systems have the distinction of producing highly flowable and very pure spherical metallic powders. Using wire as the feedstock, the PAP system allows for a high level of traceability and unparalleled control of the particle size, a critical requirement for the industries that the process addresses.

PyroGenesis filed a provisional patent for improvements to its existing plasma atomization process in June 2015. Based on these improvements, and the underlying economies resulting from such, PyroGenesis announced its intentions to build its own powder production system in fiscal 2016 and thereafter to commence supplying specialty powders directly to the additive manufacturing industry. Most recently, in April 2016, PyroGenesis announced plans to spin-off additive manufacturing into an independent public company.

Also in 2015 PyroGenesis supplied the first of 10 powder production systems for 3D printing to an Asian client under a $12.5 million commercial order. The original intent was upon the successful acceptance of the first system, the next nine would be ordered and the Company expected to deliver the remaining nine systems in 2016. However, in December 2015, differences between the Company and the customer arose regarding the technical specifications of this contract. At the date of this MD&A, these differences have not yet been resolved and the timing of the resolution remains uncertain. Management believes that the Company has respected the terms of the contract and expect to recover the full amounts owing under the contract from the customer.

3D printing

In Q3, 2014 PyroGenesis was awarded a contract to design, manufacture and supply ten powder production systems for 3D printing. The contract is valued at $12.5 million and calls for progress payments to be made for the first system, reacquired from a previous client in Europe, to be refurbished in Montreal and subsequently commissioned at the client's site in Asia, following

which production output will be scaled-up to pre-specified levels. Thereafter, the client is obliged to confirm the order for the remaining nine systems with payment of a substantial deposit.

During refurbishment of the Plasma Atomisation System at its Montreal manufacturing facility, PyroGenesis successfully developed an improved process that enables the metallic powders to be produced 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 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 Atomisation Process and expects to file a world-wide patent application by Q3, 2016.

With the newly developed Plasma Atomisation Process fully integrated, the refurbished system was shipped to the client in 2015. PyroGenesis' engineers and technicians have completed the assembly and commissioning. Scale-up was expected to be completed in Q2, 2016, followed by production of the remaining nine systems, which were expected to be delivered, assembled and commissioned during fiscal 2016. However, based on the negotiations noted above, the timing of the delivery of the remaining nine units is dependent on the resolution of the differences between the Company and the customer.

PyroGenesis' Specialty Powders for the Additive Manufacturing Industry

Management believes that the recent explosive growth of the additive manufacturing industry, together with PyroGenesis' patent-protected PAP that considerably increases rates of powder production whilst improving powder size distribution, offers the Company a unique and lucrative business opportunity. Accordingly, in Q4, 2015 PyroGenesis announced its intention to commence production of specialty powders for the additive manufacturing industry, specifically for 3D printing.

Products printed from specialty powders for the additive manufacturing industry are predominantly found in the medical, aerospace, defense and automotive industries with a growing number of the world's largest industrial groups adopting the technology to reduce costs. Metallic powders available for additive manufacturing include: tool steels; stainless steels; titanium; titanium alloys; aluminium alloys; nickel-based alloys; cobalt-chromium alloys; copper-based alloys; gold and silver. Titanium metal is highly sought after for its corrosion resistance and high strength-to-weight ratio. Titanium metal powder prices for additive manufacturing currently range from US$200kg to US$1,000kg. Utilising PyroGenesis' provisional patent-protected technology to produce the very small, spherical, and uniform powders that allows them to flow like a liquid will position the Company at the cutting edge of the 3D printing industry and is expected to yield average sales prices towards the top of this range.

Accordingly, in April 2016, PyroGenesis announced its plan to spin-off up to 80% of its additive manufacturing business into an independent publicly-traded company, herein referred to as "3DCo". It is envisaged that 3DCo will have all rights to (i) produce metal and alloy powders for the additive manufacturing industry using PyroGenesis' patented technology and (ii) to distribute powder production systems and equipment under an exclusive world-wide license with PyroGenesis. Furthermore, PyroGenesis will continue to benefit from (i) supplying systems and equipment to 3DCo with traditional margins, and (ii) provide maintenance and technical support services to 3DCo for each system purchased, for up to $750,000 per system per year. Also, in consideration of a non-compete agreement to be entered into between PyroGenesis and 3DCo, PyroGenesis will receive royalty payments of up to 10% of powder production revenues from 3DCo.

3DCo is expected to be in commercial production as early as Q3, 2016, with a second system coming online in Q1, 2017. 3DCo will be a premier provider of high performance, high quality metal powders. This cutting edge, patented technology, also has the ability to revolutionize the 3D printing industry by developing new and innovative powders thereby enabling the industry to consider applications which, until now, were not feasible without such powders. Particularly of note is that PyroGenesis' system is extremely flexible and can be adjusted to process other metal wires, including composites, which until now have not been considered practical to produce by other methods.

5. METALS & MINING

With plasma operating on “greenhouse gas-friendly” electricity only, PyroGenesis can provide real clean-tech 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.

In Q2, 2015 PyroGenesis signed a contract to supply its first commercial DROSRITE™ system for optimizing metal recovery from dross, and signed a separate contract to evaluate the feasibility of using Plasma for the purpose of refining ore into pure metal. Separately, in 2016 the Company signed a new contract for laboratory and engineering studies with a new mining company client.

PyroGenesis continues to develop relationships with clients in industries where plasma technology has not been previously considered. Management expects such relationships to generate significant recurring revenue streams from royalties and/or volume sales.

DROSRITE™

DROSRITE™ is a salt-free, cost-effective, sustainable process for maximizing metal recovery from dross, a waste generated in the aluminum 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.

In 2015 PyroGenesis entered into an agreement with a North American automobile parts manufacturer to supply a commercial DROSRITE™ Furnace System by the end of 2015. In accordance with the contractual timeline, the client inspected the system in Montreal in December 2015 and immediately released it for shipment to one of its facilities in Mexico, where it was installed and commissioned in Q1, 2016. The system is currently undergoing performance testing, which is expected to be completed in Q2, 2016.

Early yields from operating the system exceed expectations. If confirmed during the official performance testing phase, these increased yields would improve upon the already impressive return on investment previously demonstrated. As a result, the client has already indicated the requirement for a further 3 DROSRITE™ systems with purchase orders expected to be confirmed in Q2, 2016, following completion of the performance testing.

Management believes that this first commercial sale will enable the Company to leverage this reference site to generate a continued flow of orders for additional DROSRITE™ systems from primary and/or secondary aluminum smelters, and large finished goods manufacturers, primarily in the transportation sector.

Ore refining

In Q2, 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. Successful completion of this study is expected to lead to 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 patent-protected technology could revolutionize the solar panel industry, thereby making it 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$6 billion.

PyroGenesis plans to develop this process further and aims to refine other high grade and valuable metals.

Laboratory and engineering studies

In February 2016 PyroGenesis was contracted to ascertain whether the value of a product produced by a mining company could be increased through thermal treatment in a commercial-scale solution. PyroGenesis will utilize its Plasma Arc Furnace technology, which uses high temperature plasma to melt the substance, for this project.

The contract consists of laboratory scale testing and completion of an engineering study, both of which are expected to be completed by Q3, 2016. If successful, the project is expected to lead to the design and construction of a commercial system.

SELECTED FINANCIAL INFORMATION

	Three months ended Dec 31			% Change	Twelve months ended Dec 31			% Change
	2015	2014	2013	2015vs2014	2015	2014	2013	2015vs2014
Revenue	**$ 2,228,782**	$ 1,784,676	$ 1,878,793	25%	**$ 6,242,003**	$ 5,764,896	$ 5,756,009	8%
Cost of sales and services before amortization of intangible assets	**1,538,827**	652,041	887,307		**4,551,090**	2,691,742	3,133,812	
Gross margin before amortization of intangible assets	**689,955**	1,132,635	991,486		**1,690,913**	3,073,154	2,622,197	
Amortization of intangible assets	**349,269**	349,268	349,268		**1,397,074**	1,397,073	1,397,073	
Gross margin	**340,686**	783,367	642,218		**293,839**	1,676,081	1,225,124	
Selling, general and administrative	**1,227,999**	1,419,820	1,029,547		**4,648,473**	4,526,886	4,048,460	
Research and development	**47,942**	43,737	81,773		**136,804**	208,539	210,977	
Financing charges	**139,576**	18,795	92,569		**426,341**	216,069	372,126	
	1,415,517	1,482,352	1,203,889		**5,211,618**	4,951,494	4,631,563	
Loss from operations	**(1,074,831)**	(698,985)	(561,671)	54%	**(4,917,779)**	(3,275,413)	(3,406,439)	50%
Impairment loss on property and equipment	**-**	-	(581,638)		**-**	-	(581,638)	
Comprehensive loss	**$ (1,074,831)**	$ (701,034)	$ (1,143,309)	53%	**$ (4,917,779)**	$ (3,278,610)	$ (3,988,077)	50%
Basic and diluted loss per share	**$ (0.01)**	$ (0.01)	$ (0.02)		**$ (0.06)**	$ (0.04)	$ (0.06)	
Adjusted EBITDA (loss)	**$ (473,401)**	$ (156,873)	(473,864)	202%	**$ (2,602,987)**	$ (1,181,533)	(1,406,024)	120%

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 our 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. Securities regulations require that companies caution readers that earnings and other measures adjusted to a basis other than IFRS do not have standardized meanings and are unlikely to be comparable to similar measures used by other companies. Accordingly, they should not be considered in isolation.

Extract from Statement of Financial Position at :

	Dec 31 2015	Dec 31, 2014	Dec 31, 2013
Current assets	**3,343,186**	3,497,020	2,247,261
Non-current assets	**3,778,198**	3,438,312	4,923,611
Total assets	**$ 7,121,384**	$ 6,935,332	$ 7,170,872
Current liabilities	**3,177,091**	1,994,218	3,621,024
Non-current liabilities	**3,328,722**	2,062,862	8,159,862
Total liabilities	**$ 6,505,813**	$ 4,057,080	$ 11,780,886
Shareholders' equity (deficiency)	**$ 615,571**	$ 2,878,252	$ (4,610,014)

RESULTS OF OPERATIONS

Revenue

PyroGenesis recorded revenue of $2,228,782 in the fourth quarter of 2015 ("Q4, 2015"), representing an increase of 25% compared with $1,784,676 recorded in the fourth quarter of 2014 ("Q4, 2014").

Total revenue recorded by the Company for Fiscal 2015 amounted to $6,242,003 and represents an increase of 8% from the $5,764,896 reported for Fiscal 2014.

Revenue recorded in Fiscal 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) the manufacture and supply of PyroGenesis' first DROSRITE™ Furnace System to a North American automobile parts manufacturer,

(iv) work completed on the second, and final, phase to design, manufacture and deliver a fully automated plasma torch system comprised of eight air plasma torches to be used for waste gasification for a client in Asia,

(v) progress made on various contracts in the defense sector, specifically:

a) the design, manufacture and preliminary field testing of Tactical PACWADS, the first 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, including training sailors in the operation and maintenance of the system.

Revenue in Fiscal 2014 benefitted from a one-time settlement gain of $753,965 related to the termination of a project due to a client's breach of contract. Excluding this gain, PyroGenesis recorded an adjusted revenue growth of $1,231,072, or 25%, for Fiscal 2015.

PyroGenesis has pursued a strategic programme to reduce dependency upon long-cycle projects within the defense and environmental industries and to diversify into shorter sales cycle opportunities within 3 additional industries; Additive Manufacturing, Oil & Gas, and Metals & Mining. Management plans to maintain this strategic programme and, as a result, expects the diversity of its client base to continue to expand.

Cost of Sales and Services and Gross Margin

Cost of Sales and Services

	Three months ended Dec 31			Twelve months ended Dec 31		
	2015	2014	**% Change 2015vs2014**	**2015**	2014	**% Change 2015vs2014**
Employee compensation	**$ 541,679**	$ 381,940	42%	**$ 1,928,009**	$ 1,276,648	51%
Subcontracting	**29,192**	81,076	-64%	**294,331**	123,579	138%
Direct materials	**1,119,681**	137,659	713%	**2,238,443**	906,830	147%
Manufacturing overhead & other	**201,796**	131,624	53%	**648,227**	502,255	29%
Foreign exchange loss / (profit)	**61,382**	118,632	-48%	**(13,244)**	134,645	-110%
Investment tax credits	**(414,903)**	(198,890)	109%	**(544,676)**	(252,215)	116%
Sub-total before amortization of intangible assets	**1,538,827**	652,041	136%	**4,551,090**	2,691,742	69%
Amortization of intangible assets	**349,269**	349,268	0%	**1,397,074**	1,397,073	0%
Total Cost of Sales and Services	**$ 1,888,096**	$ 1,001,309	89%	**$ 5,948,164**	$ 4,088,815	45%

Gross Margin

	Three months ended Dec 31		Twelve months ended Dec 31	
	2015	2014	**2015**	2014
Revenue	**$ 2,228,782**	$ 1,784,676	**$ 6,242,003**	$ 5,764,896
Cost of Sales and Services before amortization of intangible assets	**1,538,827**	652,041	**4,551,090**	2,691,742
Gross Margin before amortization of intangible assets	**689,955**	1,132,635	**1,690,913**	3,073,154
Gross Margin % before amortization of intangible assets	**31.0%**	63.5%	**27.1%**	53.3%
Amortization of intangible assets	**349,269**	349,268	**1,397,074**	1,397,073
Gross Margin after amortization of intangible assets	**$ 340,686**	$ 783,367	**$ 293,839**	$ 1,676,081
Gross Margin % after amortization of intangible assets	**15.3%**	43.9%	**4.7%**	29.1%

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 because 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. Securities regulations require that companies caution readers that earnings and other measures adjusted to a basis other than IFRS do not have standardized meanings and are unlikely to be comparable to similar measures used by other companies. Accordingly, they should not be considered in isolation.

Various factors, including, but not limited to, the mix of long and short-term manufacturing projects, project complexity and scale, and project 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.

Cost of sales and services before amortization of intangible assets was $4,551,090 in Fiscal 2015, representing an increase of 69% compared with $2,691,742 in Fiscal 2014. In the fourth quarter of Fiscal 2015, the cost of sales and services before amortization of intangible assets was $1,538,827, representing an increase of 136% compared with $652,041 in Q4, 2014.

In Fiscal 2015 employee compensation, subcontracting costs, and the cost of direct materials increased to $1,928,009 (2014: $1,276,648), $294,331 (2014: $123,579) and $2,238,443 (2014: $906,830) respectively. The costs incurred in 2015 are primarily 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, the manufacture and supply of the Company's first DROSRITE™ Furnace System to a North American automobile parts manufacturer, work completed on the second, and final, phase to design, manufacture and deliver a fully automated plasma torch system comprised of eight air plasma torches to be used for waste gasification for a client is Asia, 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 Fiscal 2015, many of PyroGenesis' engineering and R&D resources were concentrated on activities within projects under construction for clients. As a result, employee compensation within costs of goods sold increased significantly over the previous year, which has negatively impacted gross margins. Management believes, however, that the Company will gain significant future financial benefit from the additional intellectual property generated and with the filing of provisional patents for:

a) 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 new Plasma Atomisation Process ("PAP") 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 by Q3, 2016.

The cost of direct materials increased significantly in Fiscal 2015 compared with Fiscal 2014. The increase is due to a number of factors including: a change in the mix of products being manufactured, resulting in an increased proportion of direct materials required; increased R&D activities within projects under construction for clients, particularly the 3D printing powder production systems for Asia; and the 25% increase in year-on-year revenue generated from product and services (excluding the one-time gain of $753,965 in Fiscal 2014 that incurred no costs and therefore generated a gross margin of 100%). Furthermore, almost 40% of the $2.2 million of direct materials expensed in Fiscal 2015 was denominated and paid for in US$. The foreign exchange impact of the deterioration in the CAD$ versus US$ rate of exchange added

approximately $125 thousand to the cost of direct materials, and accounts for approximately 2% of the reduced gross margin.

Investment tax credits recorded against cost of sales are primarily related to client funded projects that qualify for tax credits from the provincial government of Quebec. Qualifying tax credits increased to $544,676 in Fiscal 2015, compared with $252,215 in Fiscal 2014, primarily as a result of the increased R&D activities within projects under construction for clients. This represents an increase of 116% year-over-year and is in line with the increased level of qualifying costs on external R&D projects. The Company continues to make investments in research and development projects incorporating the involvement of strategic partners and government bodies.

In Fiscal 2015, the gross margin before amortization of intangible assets was $1,690,913, which represents 27.1% of revenue. This compares with a gross margin before amortization of intangible assets of $3,073,154 (53.3% of revenue) for Fiscal 2014. Included in the gross margin of Fiscal 2014 is a one-time gain of $753,965 that is related to revenue recorded as a result of the termination of a project due to a client's breach of contract. No costs were recorded against this one-time gain, leading to a gross margin of 100% on the full revenue amount of $753,965 recorded. Excluding this one-time gain, the adjusted gross margin before amortization of intangible assets in Fiscal 2014 was $2,319,189, or 46.3%.

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

The amortization of intangible assets of $1,397,074 in Fiscal 2015 ($1,397,073 in Fiscal 2014) relates to the 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 December 31, 2016.

Selling, General and Administrative Expenses

	Three months ended Dec 31		% Change	Twelve months ended Dec 31		% Change
	2015	2014	**2015vs2014**	**2015**	2014	**2015vs2014**
Employee compensation	**$ 640,225**	$ 499,420	28%	**$ 2,133,623**	$ 2,173,137	-2%
Professional fees	**208,793**	483,690	-57%	**1,127,745**	1,086,068	4%
Office and general	**118,780**	93,162	27%	**450,384**	328,893	37%
Travel	**83,875**	115,721	-28%	**255,111**	243,467	5%
Depreciation on property and equipment	**41,123**	51,678	-20%	**163,727**	181,015	-10%
Government grants	**(10,000)**	(30,766)	-67%	**(54,224)**	(51,609)	5%
Other expenses	**73,741**	84,544	-13%	**244,457**	266,192	-8%
Sub-total before Share-based payments	**1,156,537**	1,297,449	-11%	**4,320,823**	4,227,163	2%
Share-based payments	**71,462**	124,420	-43%	**327,650**	302,920	8%
Total selling, general and administrative	**$ 1,227,999**	$ 1,421,869	-14%	**$ 4,648,473**	$ 4,530,083	3%

Included within Selling, General and Administrative expenses ("SG&A") are costs associated with corporate administration, business development, project proposals, operations administration, investor relations and employee training.

SG&A expenses for Fiscal 2015 were $4,648,473, representing an increase of 3% compared with $4,530,083 reported for Fiscal 2014. Excluding the costs associated with share-based compensation (a non-cash item in which options vest over a four year period) SG&A expenses increased by 2% in Fiscal 2015 compared with Fiscal 2014.

The increase in SG&A expenses is attributable to the net effect of:

- a decrease of 2% in employee compensation, primarily due to the departure of a senior executive previously employed in an administrative function but partially offset by the continuous commitment in business development activities including additional employees in this area,
- an increase of 4% for professional fees, primarily due to increased levels of external investor relations services, business development and accounting services,
- an increase of 37% in office and general costs, primarily due to an increase in rent and related taxes, together with increased communication expenses,
- travel costs increased by 5%, due to increased business development activities in international markets, as well as travel expenses related to Investor Relations activities,
- depreciation on property and equipment decreased by 10% due to a reduced level of investments in machinery and equipment since 2010, when major acquisitions were made,
- government grants increased by 5% due to improved volume of the Company's projects that are eligible for grants, and
- other expenses decreased by 9%, primarily due to the reduced cost of lower insurance premiums.

Separately, share based payments increased by 8% as a result of the vesting structure of the stock option plan and for new options issued in Fiscal 2015.

Management has dedicated the Company's business development resources to resolving problems within high value niche markets, other than those within the US military, for more than 2 years. As a result, the Company has diversified into three additional industries; Additive Manufacturing (3D Printing), Oil & Gas, and Metals & Mining, and today operates in multiple geographical locations. The benefits of this strategic diversification have generated a backlog of signed contracts totalling $14.5 million as at December 31, 2015. Management expects the majority of the current backlog to be recorded as revenue prior to the end of fiscal 2016. However, depending on the outcome of management's negotiations with the Asian customer for the additional 9 systems, $9.7 million of current backlog would be at risk.

Research and Development ("R&D") Costs

Internal R&D Project Costs

	Three months ended Dec 31		% Change	Twelve months ended Dec 31		% Change
	2015	2014	**2015vs2014**	**2015**	2014	**2015vs2014**
Employee compensation	**$ 32,726**	$ 38,760	-16%	**$ 134,983**	$ 234,822	-43%
Subcontracting	**11,043**	18,120	-39%	**13,243**	41,579	-68%
Materials and equipment	**13,394**	4,898	173%	**33,328**	29,777	12%
Other expenses	**617**	610	1%	**2,533**	3,341	-24%
Sub-total before government grants	**57,780**	62,388	-7%	**184,087**	309,519	-41%
Government grants	**(9,838)**	(18,651)	-47%	**(47,283)**	(100,980)	-53%
Total net R&D costs	**$ 47,942**	$ 43,737	10%	**$ 136,804**	$ 208,539	-34%

The Company incurred $136,804 of costs, net of government grants, on internal R&D projects in Fiscal 2015, compared with $208,539 in Fiscal 2014, representing a decrease of 34% year-over-year. The decrease in expenditure is attributable to the fact that many of the Company's resources were concentrated on R&D activities within projects under construction for clients, with expenditure recorded in cost of sales, as opposed to internal research and development activities.

In addition to internally funded R&D projects, the Company incurred R&D expenditures on the execution of external client funded projects that are eligible for Scientific Research and Experimental Development ("SR&ED") tax credits. SR&ED tax credits on external client funded projects are applied against cost of sales and services (see "Cost of Sales" above).

Finance Costs

	Three months ended Dec 31 2015	2014	% Change 2015vs2014	Twelve months ended Dec 31 2015	2014	% Change 2015vs2014
Finance costs	**$ 139,576**	$ 18,795	643%	**$ 426,341**	$ 216,069	97%

Finance costs for Fiscal 2015 totaled $426,341 compared with $216,069 for Fiscal 2014, representing an increase of 97% year-over-year. Finance costs in Fiscal 2014 relate entirely to the interest component of the Company's debt due to a related party, whereas in Fiscal 2015 they relate primarily to interest on the convertible debenture issued in March 2015, together with the accretion and amortization of the finance costs of the convertible debenture.

The anticipated decrease in finance costs in Fiscal 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 2015 Audited Financial Statements) was offset by the interest, accretion and finance costs associated with the new convertible debentures issued in March 2015.

Depreciation on Property and Equipment

	Three months ended Dec 31 2015	2014	% Change 2015vs2014	Twelve months ended Dec 31 2015	2014	% Change 2015vs2014
Depreciation on property and equipment	**$ 41,123**	$ 51,678	-20%	**$ 163,727**	$ 181,015	-10%

The depreciation on property and equipment decreased to $163,727 in Fiscal 2015, compared with $181,015 in Fiscal 2014. The decrease reflects a reduced level of investments in machinery and equipment since 2010, when major acquisitions were made.

Loss from Operations and Comprehensive loss

	Three months ended Dec 31 2015	2014	% Change 2015vs2014	Twelve months ended Dec 31 2015	2014	% Change 2015vs2014
Net losss and comprehensive loss	**$ (1,074,831)**	$ (701,034)	53%	**$ (4,917,779)**	$ (3,278,610)	50%

The net loss and comprehensive loss for Fiscal 2015 was $4,917,779 compared to a loss of $3,278,610 in Fiscal 2014, representing an increase of 50% year-over-year.
The increase of $1,639,169 in the net loss and comprehensive loss in Fiscal 2015 is primarily attributable to the factors described above, which have been summarized as follows:

(i) an increase in product and service related revenue of $1,231,072, after adjusting for the one-time gain arising on a client's breach of contract,

(ii) a decrease in non product and service related revenue of $753,965 arising in Fiscal 2014,

(iii) an increase in cost of sales and services totaling $1,382,241, primarily due to the concentration of engineering and R&D resources on projects under construction for clients, particularly the 3D printing powder production systems for an Asian client, together with the change in the mix of products being manufactured requiring an increased proportion of direct materials, the 25% increase in year-on-year revenue derived from product and services, and the foreign exchange impact arising from the deterioration in the CAD$ versus US$ rate of exchange,

(iv) an increase in SG&A expenses of $116,318, 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.

(v) a decrease in R&D expenses of $71,735, primarily due to the fact that many of the Company's engineering and R&D resources were concentrated on activities within projects under construction for clients, with such costs being recorded within cost of sales.

(vi) An increase in finance costs of $210,272 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 and Adjusted EBITDA

	Three months ended Dec 31		% Change	Twelve months ended Dec 31		% Change
	2015	2014	**2015vs2014**	**2015**	2014	**2015vs2014**
Net loss and comprehensive loss	**$ (1,074,831)**	$ (701,034)	53%	**$ (4,917,779)**	$ (3,278,610)	50%
Depreciation on property and equipment	**41,123**	51,678		**163,727**	181,015	
Amortization of intangible assets	**349,269**	349,268		**1,397,074**	1,397,073	
Financing charges	**139,576**	$ 18,795		**426,341**	$ 216,069	
EBITDA (loss)	**$ (544,863)**	$ (281,293)	94%	**$ (2,930,637)**	$ (1,484,453)	97%
Other non-cash items:						
Share-based payments	**71,462**	124,420		**327,650**	302,920	
Adjusted EBITDA (loss)	**$ (473,401)**	$ (156,873)	202%	**$ (2,602,987)**	$ (1,181,533)	120%

EBITDA is defined as Earnings (from operations) before Finance Costs, Taxes, Depreciation and Amortization and Adjusted EBITDA is defined as Earnings (from operations) before Finance Costs, 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 or loss from operations, or to comprehensive earnings or 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 its results and related trends and increases transparency and clarity. Management believes that EBITDA and Adjusted EBITDA are important measures 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 Company's 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. Securities regulations require that companies caution readers that earnings and other measures adjusted to a basis other than IFRS do not have standardized meanings and are unlikely to be comparable to similar measures used by other companies. Accordingly, they should not be considered in isolation.

The EBITDA loss in Q4, 2015 was $544,863 compared with an EBITDA loss of $281,293 for the same period last year, representing an increase of 94%. For Fiscal 2015, the EBITDA loss was $2,930,637 compared with an EBITDA loss of $1,484,453 for Fiscal 2014, representing an increase of 97% year-over-year.

The increase of $1,446,184 in the EBITDA loss in Fiscal 2015 compared with Fiscal 2014 is primarily attributable to the increase in loss from operations of $1,639,169, plus the reduction for the depreciation on property and equipment of $17,288 and less the increased finance costs of $210,272.

The Adjusted EBITDA loss in Q4, 2015 was $473,401 compared with an Adjusted EBITDA loss of $156,873 for the same period last year, representing an increase of 202%. The Adjusted EBITDA loss for Fiscal 2015 was $2,602,987 compared with an Adjusted EBITDA loss of $1,181,533 for Fiscal 2014, representing an increase of 120% year-over-year. The increase of $1,421,454 in the Adjusted EBITDA loss for Fiscal 2015 is attributable to the increase in EBITDA loss of $1,446,184 for the period, as previously described, less increased cost of other non-cash items, specifically share-based payments of $24,730.

SUMMARY OF QUARTERLY RESULTS

	2015				2014			
	Q4	Q3	Q2	Q1	Q4	Q3	Q2	Q1
Revenues	**$ 2,228,782**	$ 1,363,077	$ 1,533,667	$ 1,116,477	$ 1,784,676	$ 1,215,261	$ 1,958,534	$ 806,425
Gross margin before amortization of intangible assets	**689,975**	373,715	325,089	302,154	1,132,635	492,401	1,124,834	323,284
gross margin %	**31.0%**	27.4%	21.2%	27.1%	63.5%	40.5%	57.4%	40.1%
Net loss and comprehensive loss	**(1,074,831)**	(1,267,748)	(1,296,111)	(1,279,089)	(701,034)	(995,695)	(417,153)	(1,164,728)
Net loss per share - basic and diluted	**(0.01)**	(0.01)	(0.02)	(0.02)	(0.01)	(0.01)	(0.01)	(0.02)

The majority of PyroGenesis' revenue is recognised using the percentage of completion basis, and is dependent on the timing of project initiation and execution, including project engineering, manufacturing, and testing. As previously reported, the gross margin has been negatively impacted in Fiscal 2015 by increased labour and direct materials as a result of the concentration of engineering and R&D resources on activities within projects under construction for clients, particularly the 3D printing powder production systems for an Asian client, as well as by the change in the mix of products being manufactured, the 25% increase in year-on-year revenue derived from product and services, and the foreign exchange impact arising from the weakened Canadian dollar.

LIQUIDITY AND CAPITAL RESOURCES

The following table summarizes the contractual maturities of financial liabilities as at December 31, 2015.

Financial liability	Total	6 months or less	6 - 12 months	1-2 year	More than 2 year
Accounts payable and accrued liabilities	2,056,881	2,056,881	-	-	-
Loans	472,166	-	-	472,166	-
Convertible debentures	4,975,000	150,000	150,000	600,000	4,075,000
	7,504,047	2,206,881	150,000	1,072,166	4,075,000

The Company has incurred, in the last several years, operating losses and negative cash flows from operations, resulting in an accumulated deficit of $30,074,186 as at December 31, 2015. Furthermore, as at December 31, 2015, the Company's current liabilities and expected level of expenses for the next twelve months exceed cash on hand of $767,368. The Company has relied upon external financings to fund its operations in the past, primarily through the issuance of equity, debt, and convertible debentures, as well as from investment tax credits.

The Company is subject to a number of risks and uncertainty associated with the successful development of its products and with the financing requirements of its operations. The achievement of profitable operations is dependent upon future events, including successful development and introduction of new products to its family of new products and obtaining adequate financing.

The Company's business plan is dependent on raising additional funds to finance operations within and beyond the next 12 months. While the Company has been successful in securing financing in the past, raising additional funds is dependent on a number of factors outside the Company's control, and as such there is no assurance that it will be able to do so in the future. If the Company is unable to obtain sufficient additional financing, it may have to curtail operations and development activities, any of which could harm the business, financial condition and results of operations. Until such financing is secured, there exists a material uncertainty that may cast significant doubt about the Company's ability to continue operating as a going concern and realize its assets and settle its liabilities and commitments in the normal course of business. See "Subsequent events" for details related to a financing completed after the end of the fiscal year.

In Fiscal 2015, the primary sources of funding for the Company was cash generated from projects and from private placements. In March 2015, the Company completed a private placement for gross proceeds of $4 million, which resulted in net cash proceeds (gross proceeds minus cash commissions, convertible debentures issue costs and the conversion of $755,000 of debt into convertible debentures) of $2,957,804. In December 2015, the Company completed a private placement which resulted in gross and net proceeds of $1,767,000 and $1,747,516 respectively. The proceeds from these offerings have been used to fund operations and strengthen the Company's working capital position.

As at December 31, 2015, the Company had cash on hand of $767,368 and positive working capital of $166,095 compared with a cash balance of $362,183 and positive working capital of $1,502,802 as at December 31, 2014.

Revenue generated from active projects is not yet producing sufficient positive cash flow to fund operations. However, based on current backlog, together with the pipeline of prospective new projects, cash flows from operations are expected to become positive in the near future.

The conversion of $6 million of long-term debt to equity in May 2014 strengthened the balance sheet of the Company and resulted in a decrease in interest expense of $156,000 in Fiscal 2014. This conversion and subsequent reduction of interest expense will continue to benefit the

Company for the remaining term of the loan, which is expected to be fully paid by the end of 2016.

On March 30, 2015, the Company completed a financing and raised $4 million through the issuance of convertible debentures. The convertible debentures mature in 3 years from the date of issuance and bear interest, paid quarterly, at 7.5% per annum. As part of this offering, an additional $755,000 of debt was converted to convertible debentures.

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 and private offerings. PyroGenesis' ability to raise additional funds from the equity markets will largely depend upon general market conditions and on the Company's ability to continue to secure cash-generating contracts, such as the following:

i) In the summer of 2014, PyroGenesis was awarded a contract to design, manufacture and supply 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, a system that was reacquired from a previous client in Europe, to be refurbished in Montreal and then commissioned at the client's site in Asia, following which production output will be scaled-up to pre-specified levels. Thereafter, the client is obliged to confirm the order for the remaining nine systems with payment of a substantial deposit.

   The refurbished system was shipped to the client in 2015. As of today, PyroGenesis' engineers and technicians have completed the assembly and commissioning phases and are currently scaling up the volume of powder output. Scale-up was expected to be completed in Q1, 2016, followed by commencement of the manufacturing of the remaining nine systems, which were expected to be delivered, assembled and commissioned during fiscal 2016.. However, in December 2015, differences between the Company and the customer arose regarding the technical specifications of this contract. At the date of this MD&A, these differences have not yet been resolved and the timing of the resolution remains uncertain. Management believes that the Company has respected the terms of the contract and expect to recover the full amounts owing under the contract form the customer.
   As each powder production system becomes operational at the client's site, 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 for the Company.

ii) 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 the US Navy aircraft carrier USS 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 USS 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 2016 and the USS John F. Kennedy in 2020. Following each commissioning, PyroGenesis is expected to supply consumables and spare parts estimated at hundreds of thousands of dollars per year for each PAWDS-Marine system in operation, thus creating a significant recurring revenue stream for the Company.

   It is worthy of note that PyroGenesis has to date received a total of 9 follow-on contracts related to the initial orders to supply the PAWDS-Marine systems and that the value of these supplemental contracts exceeds US$600 thousand. This includes

the recent training of US Navy sailors on PyroGenesis' PAWDS Engineering Design Model at the Company's manufacturing facility in Montreal.

iii) In the third quarter of 2015, PyroGenesis completed the design and manufacture of the first Tactical PACWADS contracted by an International Military Consortium. 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. The Consortium is expected to invest over $100 million in field testing, thereby demonstrating their commitment to validate this technical solution.

PyroGenesis recently received a follow-on order to perform engineering services to enhance the system's capabilities and performance, whilst minimising operator intervention. Separately, management believes that the successful demonstration testing of the Tactical PACWADS ability to destroy chemical warfare agents will lead to orders for multiple additional systems.

iv) In the first quarter of 2016, PyroGenesis was awarded a contract with the US Department of Defense that recognises the success of, and would leverage the Tactical PACWADS already designed and manufactured by the Company. This contract is related to a program initiated by the US Department of Defense to identify technology companies capable of developing a transportable disposal system which could convert dangerous chemical warfare agents into a safe end-product, such as soil, while using minimal consumables and creating no hazardous by-products. Ultimately, the goal of the program is to develop a "one size fits all" technology to destroy any chemical warfare agents without requiring water or generating waste for post-processing.

v) PyroGenesis recently supplied its first commercial DROSRITE™ Furnace System to a North American automobile parts manufacturer. The system was installed and commissioned at the client's facility during the first quarter of 2016 and is currently undergoing performance testing, which is expected to be completed in Q2, 2016. Early yields from operating the system exceed expectations. If confirmed during the official performance testing phase, these increased yields would improve upon the already impressive return on investment previously demonstrated. As a result, the client recently indicated the requirement for a further 3 DROSRITE™ systems with purchase orders expected to be confirmed in Q2, 2016. Furthermore, management believes that the supply and installation of this first commercial sale in North America will enable the Company to leverage this reference site to generate a continued flow of orders for additional DROSRITE™ systems from primary and/or secondary aluminum smelters, and large finished goods manufacturers, primarily in the transportation sector.

The Company is also working on several other strategic mandates in the oil and gas industry, the environmental industry, and in the metals and mining industry, as well as on military related contracts. At the same time, management is pursuing various opportunities to create recurring revenue streams, including the supply of highly flowable and very pure spherical metallic powders to the 3D printing industry; the supply of consumables and spare parts required to support the operation of systems once delivered and installed, such as for 3D printing systems, Marine-PAWDS, and Tactical PACWADS; royalties on the sale of metals refined from ore through utilisation of PyroGenesis' technologies; royalties on the recovery of valuable metals from waste streams within the oil and gas industry; and the creation of joint ventures, and/or other forms of partnership, that would utilise PyroGenesis technology to generate substantial cost savings to clients within the oil and gas industry.

As at December 31, 2015, the Company has a solid foundation of backlog from signed contracts totalling $14.5 million. Management expects the majority of the contracted backlog to be recorded as revenue prior to the end of fiscal 2016. However, depending on the outcome of management's negotiations with the Asian customer for the additional 9 systems, $9.7 million of current backlog would be at risk.

Cash collections during 2015 have been strong with the exception of an outstanding receivable of $250,000 relating to the invoiced deposit on a contracted project.

Despite the March 2015 and December 2015 private placements, cash flow remains challenging as management invests in increased business development, proposal structuring, investor relations, and on the execution of key project milestones.

SUMMARY OF CASH FLOWS

	Three months ended Dec 31		Twelve months ended Dec 31	
	2015	2014	**2015**	2014
Cash provided by (used in) operating activities	**$ (1,202,764)**	$ (838,966)	**$ (3,441,924)**	$ (4,959,339)
Cash provided by (used in) investing actiities	**-**	(9,376)	**(32,935)**	(92,791)
Cash provided by (used in) financing activities	**1,701,429**	1,132,522	**3,880,044**	4,231,478
Increase (decrease) in cash	**498,665**	284,180	**405,185**	(820,652)
Cash - end of period	**767,368**	362,183	**767,368**	362,183

For the three months ended December 31, 2015, cash flows from operating activities resulted in a net use of cash of $ 1,202,764 compared to a net use of cash in operating activities of $838,966 for the same period in the prior year.

For the twelve months ended December 31, 2015, cash flows from operating activities resulted in a net use of cash of $3,441,924 compared to a net use of cash in operating activities of $4,959,339 for the same period in the prior year. The use of cash during Fiscal 2015 consists of the net loss and comprehensive loss of $4,917,779 (2014: $3,278,610) less non-cash items totalling $2,314,792 (2014: $2,097,078) plus a negative net change in non-cash operating working capital items of $475,712 (2014: negative net change in non-cash operating working capital items of $3,697,418) plus a negative net change in interest paid of $363,225 (2014: negative net change in interest paid of $80,389).

The net change in non-cash operating working capital items was driven by:

a) a decrease in accounts receivable of $994,362 in Fiscal 2015, compared to an increase of $992,243 in Fiscal 2014;
b) an increase in sales tax receivable of $123,881 in Fiscal 2015, compared to an increase of $76,461 in Fiscal 2014;
c) an increase in costs and profits in excess of billings on uncompleted contracts of $898,883 in Fiscal 2015, compared to an increase of $647,801 in Fiscal 2014;
d) an increase in inventories of $846,241 in Fiscal 2015, compared to a decrease of $32,668 in Fiscal 2014;
e) an increase in investment tax credits receivable of $356,153 in Fiscal 2015, compared to an increase of $150,278 in Fiscal 2014;
f) an increase in prepaid expenses and deposits of $27,937 in Fiscal 2015, compared to an increase of $236,296 in Fiscal 2014;

g) an increase in accounts payable and accrued liabilities of $909,629 in Fiscal 2015, compared to an increase of $110,945 in Fiscal 2014;
h) a decrease in billings in excess of costs and profits on uncompleted contracts of $76,608 in Fiscal 2015, compared with a decrease of $1,737,952 in Fiscal 2014.

Investing activities resulted in a use of cash of $32,935 in Fiscal 2015, compared to a use of cash of $92,791 in Fiscal 2014. Cash used for investment activities in Fiscal 2015 was related to property and equipment and was required to upgrade computer hardware, software used in the operations of the Company and leasehold improvements of the head office.

Financing activities in Fiscal 2015 resulted in a net source of funds of $3,880,044, compared with a net source of funds of $4,231,478 in Fiscal 2014. In March 2015 and December 2015, the Company completed private placements through which net cash proceeds of $2,957,804 and $1,747,516 were raised for general working capital purposes.

The details of these variances in cash flows from financing activities are outlined in detail in Note 16 and Note 17 of the Company's 2015 Audited Financial Statements.

On December 1, 2014, the Company signed an additional amending agreement to amend the terms and conditions of the deferred payments related to the balance of sale with a company under common control, whereby the balance of the deferred payments as at December 31, 2014 is completely deferred until June 30, 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 agreed to make instalment payments during 2015 and repaid a total amount of $440,000.

On December 1, 2014, the Company signed an additional amending agreement to amend the terms and conditions of the payments, whereby the 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. In March 2015, management agreed to make these payments early resulting in a payment of $405,467. The loan is now fully paid.

For Fiscal 2015, the net cash position of the Company increased by $405,185, compared to a net decrease of $820,652 for the same period in the prior year. For the three month period ended December 31st, 2015, the net cash position of the Company increased by $498,665, compared to an increase of $284,180 for the same period in the prior year.

The Company remains committed to generating cash from operations may raise additional cash from equity issuances or debt 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 December 31, 2015 and at April 29, 2016, PyroGenesis had 93,666,729 Class A common shares issued. As at December 31, 2015 and at April 29, 2016, PyroGenesis had 7,221,774 warrants issued. As at December 31, 2015, PyroGenesis had 6,406,000 outstanding options issued and 3,910,000 exercisable options and at April 29, 2016 had 6,406,000 outstanding options issued and 4,543,000 exercisable options.

GOING CONCERN

Cash generated from contracts and from providing engineering services to clients has historically been insufficient to meet the overall cash requirements of the Company to cover operating costs. For the Company to generate sufficient positive cash flows from operations and meet current cash requirements, the level of business must exceed that recorded to date. Management expects that the investments currently being made in accelerating projects under development for various clients, together with executing on the $14.5 million backlog which is primarily related to the Company's successful diversification into niche markets of the oil & gas, additive manufacturing (including 3D printing), and metals & mining industries, will continue to improve the Company's cash position. However, depending on the outcome of management's negotiations with the Asian customer for the additional 9 systems, $9.7 million of current backlog would be at risk.

It will 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 primarily through successive issuances of equity and convertible debentures. 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. These conditions indicate the existence of a material uncertainty that may cast significant doubt on the Company's ability to continue as a going concern.

The December 31, 2015 financial statements 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. If the going concern assumption were not appropriate for these financial statements then adjustments would be necessary to the carrying value of assets and liabilities, the reported expenses and the statements of financial position classifications used. The impact on the financial statements could be material.

RELATED PARTY TRANSACTIONS

On December 11, 2015 PyroGenesis closed a private placement, in which 8,835,000 units were issued, of which 6,800,000 units were issued to shareholders, key management and directors of the Company at a price of $0.20 each for gross proceeds of $1,360,000.

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

Office rent was charged by a trust beneficially owned by a shareholder of the Company in the amount of $181,980 (2014 - $132,855). A balance due of $72,279 (2014 - $16,609) is included in accounts payable and accrued liabilities. In accordance with the lease agreement, the lease term terminates on January 31, 2017.

Interest on amounts payable was charged by a trust beneficially owned by a shareholder of the Company in the amount of $Nil (2014 - $23,442). The balance of interest that has not been paid of $Nil (2014 - $125,384) is included in loans - other. The loan bore interest at 6% and payments were 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. Also, a balance of $Nil (2014 - $7,943) is included in accounts receivable.

Interest on balance of sale was charged by a company under common control in the amount of $12,841 (2014 – $192,627). An unpaid amount of interest was added to the Balance of Sale in the amount of $Nil (2013 - $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 30, 2016. Although instalment payments were to begin in June 2016, management agreed, prior to this date, to make instalment payments during Fiscal 2015 for a total amount of $440,000.

In Fiscal 2015, interest on the convertible debenture was charged by a shareholder of the Company in the amount of $42,516 (2014 - $Nil).

Fees of $47,000 were charged for services rendered by the independent directors who are members of the Company's Board of Directors (2014 - $53,000).

Total compensation to key management consisted of salaries of $620,573 (2014 - $909,607), bonuses of $Nil (2014 - $25,000), pension contributions of $7,924 (2014 - $8,905) and other benefits of $42,036 (2014 - $23,453). A balance of $171,314 (2014 - $164,782) is included in accounts payable and accrued liabilities.

CRITICAL ACCOUNTING ESTIMATES, NEW AND FUTURE ACCOUNTING POLICIES AND FINANCIAL INSTRUMENTS

For a discussion of critical accounting estimates, new and future accounting policies and financial instruments, please refer to notes 4,5 and 21 of the 2015 Consolidated Financial Statements.

SUBSEQUENT EVENTS

Subsequent to the end of Fiscal 2015, in January 2016 PyroGenesis was awarded a contract with the US Department of Defense as part of its ongoing project to destroy chemical warfare agents. The contract, valued at US$299,886, will leverage the Tactical PACWADS already designed and manufactured by the Company and is related to a program initiated by the US Department of Defense to identify technology companies capable of developing a transportable disposal system that could convert dangerous chemical warfare agents into a safe end-product, while using minimal consumables and creating no hazardous by-products. Ultimately, the goal of the program is to develop a "one size fits all" technology to destroy any chemical warfare agents without requiring water or generating waste for post-processing.

In February 2016 PyroGenesis received an additional contract to provide engineering services on the Tactical PACWADS already under contract with a multi-national military consortium. The contract, valued at of US$159,877, was awarded to further automate the system, more specifically, to develop the system's performance and minimize operator intervention.

In February 2016 PyroGenesis completed a financing in the form of two loans with respect to its scientific research and experimental development credit ("SR&ED Tax Credits") for the Company's fiscal years ending December 31, 2014 and 2015. The loans total $456,200 with terms of 9 months and 12 months, bear interest at 18% per annum and incurred a one-time management fee of 5%. Pursuant to the financing the Company granted R&D Capital Inc. a security interest and movable hypothec on its assets, with a first rank claim on the refundable portion of its SR&ED Tax Credits for the fiscal years ended December 31st, 2014 and 2015.

On April 22, 2016, the Company entered into an agreement with Industrial Alliance Securities for a best-efforts private placement offering for an aggregate cash proceeds of $3,000,000 to be raised from the issuance of secured convertible debentures. The convertible debentures will mature 2 years from the date of issuance and will bear interest at a rate of 12% per annum, paid quarterly. Under the terms of the proposed offering, which is subject to customary closing conditions, the Company will pay the agent 6% of the principal amount received as well as broker warrants, equal to 2.5% of the principal amount raised, exercisable for a period of 24 months from closing. At the date of the financial statements were authorized for issuance, the closing has not yet occurred.

RISK FACTORS

PyroGenesis is subject to a number of risks and uncertainties that could significantly affect the Company's financial condition and performance. This list of risk factors may not be exhaustive as the Company operates in a rapidly changing business environment and new risk factors emerge from time to time. The Company cannot predict such risk factors, nor can the Company assess the impact, if any, of such risk factors or uncertainties on its business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those projected in any forward-looking statements. Accordingly, neither shareholders of the Company nor purchasers of securities of the Company should rely on forward-looking statements as a prediction of actual results. If any of these risks actually occur, the Company's business, results of operations, financial position and cash flows could be adversely affected. In any such case, the market price of the Company's common shares could decline and investors may lose all or part of their investment.

Revenue Risks

PyroGenesis may experience delays in achieving revenues, particularly with plasma gasification projects which have a long sales cycle. Revenues may be delayed or negatively impacted by issues encountered by the Company or its clients including:

(a) unforeseen engineering and/or environmental problems;
(b) delays or inability to obtain required financing, licenses, permits and/or regulatory approvals;
(c) supply interruptions and/or labour disputes;
(d) foreign exchange fluctuations and/or collection risk; and
(e) competition from other suppliers and/or alternative energy solutions that are less capital intensive.

There is no assurance that the business will perform as expected or that returns from the business will support the expenditures needed to develop it.

In addition, as previously explained, the Company has experienced and has been dealing with technical issues under an existing contract with a customer based in Asia since December 31, 2015. At the date of this MD&A, these differences have not yet been resolved and the timing of the resolution remains uncertain. Management believes that the Company has respected the terms of the contract and expect to recover the full amounts owing under the contract from the customer. As such, the timing of the delivery of the remaining nine units, which was initially expected in 2016 for an amount of $9.7 million, is also dependent on the resolution of the differences between the Company and the customer. There is no assurance that the Company will be able to resolve these differences with the customer in its favour either through settlement or litigation. If the Company is unable to resolve these differences with the customer, this will adversely affect the Company's financial position, financial performance and cash flows.

Technology Development and Manufacturing Capability Risks

PyroGenesis recently expanded into new areas of business and, as a result, many of the Company's products are at various stages of the development cycle. The Company may be unable to commercialise such products or it may be unable to manufacture such products in a commercially viable manner. Whilst management is confident in both its technology and in its team of experienced engineers, scientists and technicians, it cannot know with certainty, which of its products will be commercialised, when such products will be commercialised, or whether such products will be able to be manufactured and distributed profitably.

Lack of Product Revenues/History of Losses

PyroGenesis has incurred losses in the majority of years since its inception. The Company's operations have not generated sufficient earnings and cash flows to date to result in consistent profitability or positive cash flow. Consequently, the Company's continued existence is dependent upon its ability to generate profitable operations by establishing and expanding its client base and/or raising adequate long term financing. PyroGenesis has relied primarily on equity financing, debt financing, partner funding and government funding to carry on its business to date. The ability of the Company to achieve profitable sustainable operations in the future is uncertain. PyroGenesis has not yet demonstrated its ability to consistently achieve positive gross margins and its ongoing efforts to improve product gross margins may be insufficient to result in profitability.

Additional financing and dilution

PyroGenesis will require additional financing to support ongoing operations and to undertake capital expenditures. There can be no assurance that additional financing will be available to the Company when needed, or on terms acceptable to the Company. PyroGenesis' inability to raise financing to support ongoing operations or to fund capital expenditures could limit the Company's growth and may have a material adverse effect upon the Company.

The Company does not exclude raising additional funds by equity financing. In addition, 6,356,000 stock options are currently issued and outstanding, together with 7,221,774 warrants and 5,000,000 convertible debentures. The exercise of stock options and/or warrants, together with the conversion of debentures, as well as any new equity financings, represents dilution factors for present and future shareholders.

Sales Cycle and Fixed Price Contracts

PyroGenesis sales cycle is long and the signing of new contracts is subject to delay, over which the Company has little control. The Company also enters into sales contracts with fixed pricing, which may be impacted by changes over the period of implementation. There is no assurance that delays or problems in fulfilling contracts with clients will not adversely affect the Company's activities, operating results or financial position.

Reliance on Technology

PyroGenesis will depend upon continuous improvements in technology to meet client demands in respect of performance and cost, and to explore additional business opportunities. There can be no assurance that the Company will be successful in its efforts in this regard or that it will have the resources available to meet this demand. Whilst management anticipates that the research and development will allow the Company to explore additional business opportunities, there is no guarantee that such business opportunities will be presented or realised. The commercial advantage of the Company will depend to a significant extent on the intellectual property and proprietary technology of PyroGenesis and the ability of the Company to prevent others from copying such proprietary technologies. PyroGenesis currently relies on intellectual property rights and other contractual or proprietary rights, including (without limitation) copyright, trade secrets, confidential procedures, contractual provisions, licenses and patents, to protect its proprietary technology. PyroGenesis may have to engage in litigation in order to protect its patents or other intellectual property rights, or to determine the validity or scope of the proprietary rights of others. This type of litigation can be expensive and time consuming, regardless of whether or not the Company is successful. PyroGenesis may seek patents or other similar protections in respect of particular technology; however, there can be no assurance that any future patent applications will actually result in issued patents, or that, even if patents are issued, they will be of sufficient scope or strength to provide meaningful protection or any commercial advantage to the Company.

Moreover, the process of seeking patent protection can itself be long and expensive. In the meantime, competitors may develop technologies that are similar or superior to PyroGenesis' technology or design around the patents owned by the Company, thereby adversely affecting the Company's competitive advantage in one or more of its areas of business. Despite the efforts of the Company, its intellectual property rights may be invalidated, circumvented, challenged, infringed or required to be licensed to others. It cannot be assured that any steps the Company may take to protect its intellectual property rights and other rights to such proprietary technologies that are central to the Company's operations will prevent misappropriation or infringement of its technology.

Changes to Contracts

PyroGenesis is dependent upon its ability to establish and develop new relationships and to build on existing relationships with current clients. The Company cannot provide assurance that it will be successful in maintaining or advancing its relationships with current clients or procure additional clients. In addition, PyroGenesis cannot provide assurance that the U.S. Military and/or other military clients will continue to provide the Company with business. Sales to governments and governmental entities are subject to specific additional risks, such as delays in funding, termination of contracts or sub-contracts at the convenience of the government, termination, reduction or modification of contracts or sub-contracts in the event of changes in the government's policies or as a result of budgetary constraints, and increased or unexpected costs resulting in losses or reduced profits under fixed price contracts.

Foreign Exchange Exposure

PyroGenesis' products and services are increasingly being sold in markets outside of Canada, whilst most of its operating expenses and capital expenditures are denominated in Canadian dollars. As a result, the Company is exposed to fluctuations in the foreign exchange rates between Canadian dollar and the currency in which a particular sale is transacted, which may result in foreign exchange losses that could affect earnings.

Competition

The industry is competitive and PyroGenesis competes with a substantial number of companies which have greater technical and financial resources. There can be no assurance that such competitors will not substantially increase the resources devoted to the development and marketing of products and services that compete with those of the Company or that new or existing competitors will not enter the various markets in which PyroGenesis is active. There can be no assurance that competitors will not develop new and unknown technologies with which the Company may have difficulty competing. Furthermore, failure to remain cost competitive may result in PyroGenesis losing business to its competitors.

Management and Key Personnel

PyroGenesis depends on the skills and experience of its management team and other key employees. The Company relies heavily on its ability to attract and retain highly-skilled personnel in a competitive environment. PyroGenesis may be unable to recruit, retain, and motivate highly-skilled employees in order to assist the Company's business, especially activities that are essential to the success of the Company. Failure to recruit and retain highly-skilled employees may adversely affect PyroGenesis' business, financial condition and results of operations.

Implementation of a strategic plan

PyroGenesis' commercial strategy aims to leverage its products, consumables, and services whilst focusing on the resolution of problems within niche markets within the industries served by the Company. There can be no assurances as to the success of the Company's strategic plan,

which should be considered under the risks perspective and difficulties frequently encountered by a developing business.

Adverse Decisions of Sovereign Governments

PyroGenesis conducts an increasing portion of its business internationally. There is no assurance that any sovereign government, including Canada's, will not establish laws or regulations that will not be detrimental to the Company's interests or that, as a foreign corporation, it will continue to have access to the regulatory agencies in other countries. Governments have, from time to time, established foreign exchange controls, which could have a material adverse effect on the Company's business, financial condition and results of operations.

Governmental Regulation

PyroGenesis is subject to a variety of federal, provincial, state, local and international laws and regulations relating namely to the environment, health and safety, export controls, currency exchange, labour and employment and taxation. These laws and regulations are complex, change frequently and have tended to become more stringent over time. Failure to comply with these laws and regulations may result in a variety of administrative, civil and criminal enforcement measures, including assessment of monetary penalties, imposition of remedial requirements and issuance of injunctions as to future compliance. The Company may be subject to compliance audits by regulatory authorities in the various countries in which it operates.

Environmental Liability

PyroGenesis is subject to various environmental laws and regulations enacted in the jurisdictions in which it operates, which govern the manufacturing, processing, importation, transportation, handling and disposal of certain materials used in the Company's operations. Management believes that it has adequate procedures in place to address compliance with current environmental laws and regulations. Furthermore, management monitors the Company's practices concerning the handling of environmentally hazardous materials. However, there can be no assurance that the Company's procedures will prevent environmental damage occurring from spills of materials handled by the Company or that such damage has not already occurred. On occasion, substantial liabilities to third parties may be incurred. The Company may have the benefit of insurance maintained by it or the operator, however, the Company may become liable for damages against which it cannot adequately insure or against which it may elect not to insure because of high costs or other reasons. The Company's clients are subject to similar environmental laws and regulations, as well as limits on emissions to the air and discharges into surface and sub-surface waters. While regulatory developments that may follow in subsequent years could have the effect of reducing industry activity, the Company cannot predict the nature of the restrictions that may be imposed. The Company may be required to increase operating expenses or capital expenditures in order to comply with any new restrictions or regulations.

Product Liability and Other Lawsuits

PyroGenesis is subject to a variety of potential product liabilities claims and other lawsuits related with its operations, including liabilities and expenses associated with product defects. The Company maintains product liability and other insurance coverage that management believes is generally in accordance with the market practice in its industry, but there can be no assurance that the Company will always be adequately insured against all such potential liabilities

Market Liquidity

The market price for the common shares of the Company could be subject to wide fluctuations. Factors such as the announcement of significant contracts, technological innovations, new commercial products, patents, a change in regulations, quarterly financial results, future sales of common shares by the Company or current shareholders, and many other factors could have considerable repercussions on the price of the Company's common shares. In addition, the financial markets may experience significant price and value fluctuations that affect the market prices of equity securities of companies that sometimes are unrelated to the operating performance of these companies. Broad market fluctuations, as well as economic conditions generally may adversely affect the market price of the Company's common shares.

Information systems disruptions

The Company's business depends on the efficient and uninterrupted operation of its computer and communications software, hardware systems, and its other information technology. If such systems were to fail, or the Company was unable to successfully expand the capacity of these systems or integrate new technologies into its existing systems, its operations and financial results could be adversely affected.

OUTLOOK

Management remains focused on reducing PyroGenesis' dependency on long-cycle projects by developing a strategic portfolio of volume driven, high margin/low risk, products that resolve specific problems within niche markets, and doing so by introducing these plasma based solutions to industries that have yet had the opportunity to consider such solutions.

The fact that PyroGenesis has one of the largest concentrations of plasma expertise in the world, with over 250 years of accumulated technical experience and 49 patents, combined with unique relationships with major Universities performing cutting edge plasma research and development, positions the company well to execute this strategy.

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

a) Plasma Atomisation Systems for the production of specialty powders for 3D printing,
b) DROSRITE™ systems to maximise metal recovery from dross,
c) Tactical PACWADS for the complete eradication of chemical warfare agents, and
d) SPARC™ systems for the destruction of ozone depleting substances and other environmentally noxious chemicals.

At the same time, management is actively targeting recurring revenue opportunities that will generate a growing, and profitable, regular cash flow to the Company. The first of these recurring revenue streams is expected to be the construction of PyroGenesis' own Plasma Atomisation System that will allow the Company to produce specialty powders for the additive manufacturing industry, specifically for 3D printing. Utilising PyroGenesis' recently developed patent-protected Plasma Atomisation Process ("PAP") technology to produce metallic powders that flow like a liquid, a highly sought after characteristic within the additive manufacturing industry, management expects to commence supplying titanium metal powders to clients in Q4, 2016/Q1, 2017.
PyroGenesis' PAP is an enabling technology for 3D Printing as well as other additive manufacturing and powder metallurgy applications. Accordingly, this first system would also be used to further develop next generation Plasma Atomization Systems capable of making powders from various metals being used in 3D printing, as well as composites.

Other examples of recurring revenue streams being pursued by PyroGenesis include:

a) the supply of consumables and spare parts necessary to support the operation of systems once delivered and operational at PyroGenesis' clients, such as for 3D printing systems, Marine-PAWDS, and Tactical PACWADS.
b) royalties generated from the sale of metals refined from ore through utilisation of PyroGenesis' technologies,
c) royalties generated from the recovery of valuable metals from waste streams within the oil and gas industry.
d) the creation of joint ventures, and/or other forms of partnership, that would utilise PyroGenesis technology to generate substantial cost savings to clients within the oil and gas industry.

As PyroGenesis continues to expand its client base, and the number of PyroGenesis' systems delivered to end users increases, the sale of consumables and spare parts is expected to generate an increasingly significant level of recurring revenue for the Company, at very attractive margins. Of note, each PAWDS-Marine system will require approximately $1 million of consumables and spare parts per annum to remain operational and, depending upon usage, each Plasma Atomisation System is expected to require consumables of up to $750K/year/unit.

Despite the recent slump in the global oil and gas industry and the continued slashing of capital expenditure investment by oil companies, PyroGenesis' client remains committed to move its projects forward and is actively seeking ways to source the necessary capital. Separately, PyroGenesis is exploring ways to accelerate the next phase of each project, including establishing joint-ventures, or other forms of partnership, that would utilise PyroGenesis' technology and enable the Company to offer its client substantial cost savings with little to no upfront investment, whilst at the same time generating significant recurring revenue streams for PyroGenesis.

PyroGenesis also remains active in the environmental sector and is currently completing a contract for waste gasification in Asia, whilst negotiating new multi-million dollar contracts for waste destruction systems in Europe and Asia. Management expects to start receiving contracts from Japan for waste-destruction systems upon approval of the Japanese import permits Q2/Q3, 2016. Of note, approval of the import permits will also trigger a $1.5 million license fee payment from Yasui.

The defense industry continues to form the cornerstone of PyroGenesis' business. Our core relationship with the US Navy continues to expand beyond building Pyrogenesis plasma waste destruction systems (two currently delivered) for each new aircraft carrier commissioned, to providing a regular training program to support staff, as well as plans to provide just-in time inventory support. Discussions to provide in-port land based systems are also underway. Separately, PyroGenesis' Tactical PACWADS for the complete eradication of chemical warfare agents, initially developed for an International Military Consortium, has recently expanded to include preliminary testing of the initial system prior to extensive field testing, and to perform engineering services to enhance the initial system's capabilities and performance. PyroGenesis is now under contract with the US Department of Defense to develop a Tactical PACWADS that could convert dangerous chemical warfare agents into a safe end-product, such as soil, while using minimal consumables and creating no hazardous by-products.

One of the most important developments was the recently announced strategic decision to produce titanium powders for the Additive Manufacturing industry, and to spin out these capabilities to shareholders.

Until recently, PyroGenesis had been a fabricator of plasma-based systems that produced unique titanium powders which are greatly sought after by the Additive Manufacturing industry. These powders are unique in that they are small, spherical, and uniform, allowing them to flow like water; a characteristic that is extremely important in industries such as 3D printing.

In 2015, the Company announced that it made significant improvements to its existing technology, which improvements resulted in the Company filing for a provisional patent and more recently, resulted in, as mentioned previously, the Company's decision to re-enter the Additive Manufacturing industry and become a supplier of titanium powders.

According to Tech Pro Research, as of June 2014, nearly 60% of enterprises were using, or evaluating the need for 3D printers[1]. Moreover, based on Wohlers Report (2015), it is expected that the global demand for 3D printers will exceed 14,000 machines by 2020, generating a demand for metal powders in excess of 8.6MM kg, representing a market value of over $3.45 billion at an average price of $400/kg[2]. The small, spherical, uniform titanium powders, such as those produced by PyroGenesis' patented technology, can immediately address over 30% of this metal powder demand[3].

The Additive Manufacturing market is currently divided into two principal segments of customers: (i) those that require powders between 15µm and 45µm and (ii) those that require powders between 45µm and 106µm. The majority of PyroGenesis' powder production is within these two sweet spots which further validates the Company's recent decision to re-enter the Additive Manufacturing market and spin-off these capabilities to its existing shareholders.

As currently structured, and subject to change, PyroGenesis would still fabricate units and supply maintenance contracts for each system sold to, or through, the spin-off company ("3DCo"). PyroGenesis would further benefit from a royalty arrangement with 3DCo with respect to powders sold by 3DCo. As such PyroGenesis has not only preserved its revenue streams but increased them. 3DCo on the other hand benefits by being the exclusive supplier of these powders, as well as having the exclusive worldwide distribution licence for the systems. Both Companies benefit from 3DCo's ability to attract investment targeted specifically for Additive Manufacturing opportunities thereby accelerating PyroGenesis' original strategic plan, all to the benefit of both companies.

To date PyroGenesis has received significant interest from major players to fund 3DCo and PyroGenesis is currently at the early stage of considering spin-off options.

If successful, and at this point, it has all the signs of being successful, this will be the template for the commercialization of other PyroGenesis products. The Drosrite™ product line as well as the Uragold project are two candidates for future spin-off consideration.

Additional information regarding the Company can be found on SEDAR at www.sedar.com OTC Markets (www.otcmarkets.com) and on the Company's website at www.pyrogenesis.com

[1] Tech Pro Research
[2] Wohlers Report (2015)
[3] Wall Street Research