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 three and the six months ended June 30, 2018. 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, 2017.

The condensed financial statements and MD&A have been reviewed by PyroGenesis' Audit Committee and were approved by its Board of Directors on August 21, 2018. 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 August 29, 2018, 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.

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 3,800 m^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 ISO certified 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).

SELECTED FINANCIAL INFORMATION

	Three months ended June 30, 2018	2017	% Change 2018vs2017	Six months ended June 30, 2018	2017	% Change 2018vs2017
Revenue	$ **1,421,352**	$ 2,173,397	$ -35%	$ **3,481,954**	$ 3,869,535	$ -10%
Cost of sales and services before amortization of intangible assets	**924,954**	1,130,295	-18%	**2,279,650**	1,950,559	17%
Gross margin	**496,398**	1,043,102	-52%	**1,202,304**	1,918,976	37%
Expenses						
Selling, general and administrative	**1,473,093**	1,133,456	30%	**2,831,462**	2,282,371	24%
Research and development	**404,017**	62,143	550%	**456,515**	130,207	251%
Net finance costs	**154,178**	456,087	-66%	**478,012**	413,591	16%
	2,031,288	1,651,686	23%	**3,765,989**	2,826,169	33%
Comprehensive loss	$ **(1,534,890)**	$ (608,584)	$ 152%	$ **(2,563,685)**	$ (907,193)	$ 183%
Basic and diluted loss per share	$ **(0.012)**	$ (0.006)	$	$ **(0.01)**	$ (0.009)	$
Modified EBITDA (loss)	$ **(1,044,642)**	$ 12,198	-8664%	$ **(1,589,922)**	$ (165,559)	860%

Modified 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. Modified EBITDA (loss) 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 and change in fair value of investment. 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:

	June 30, 2018	Dec 31, 2017
Current assets	**2,671,676**	2,498,913
Non-current assets	**4,058,208**	3,270,037
Total assets	$ **6,729,884**	$ 5,768,950
Current liabilities	**6,489,068**	11,902,283
Non-current liabilities	**2,546,109**	10,290
Total liabilities	$ **9,035,177**	$ 11,912,573
Shareholders' deficiency	$ **(2,305,293)**	$ (6,143,623)

RESULTS OF OPERATIONS

Revenue

PyroGenesis recorded revenue of $1,421,352 in the second quarter of 2018 ("Q2, 2018"), representing a decrease of 35% compared with $2,173,397 recorded in the second quarter of 2017 ("Q2, 2017"). Revenue for the six months of fiscal 2018 was $3,481,954 a decrease of 10% over revenue of $3,869,535 during the same period in 2017.

Revenues recorded in Q2, 2018 and for the six months of fiscal 2018 were generated primarily from:

(i) the development of a process to convert Silica into high purity Silicon metal;
(ii) the manufacture and sale of a DROSRITE™ System;
(iii) support services related to PAWDS-Marine systems supplied to the US Navy.

Cost of Sales and Services and Gross Margin

	Three months ended June 30, 2018	2017	% Change 2018vs2017	Six months ended June 30, 2018	2017	% Change 2018vs2017
Employee compensation	$ 322,220	$ 495,300	-35%	$ 864,761	$ 978,351	-12%
Subcontracting	30,851	43,241	-29%	68,329	66,631	3%
Direct materials	460,542	490,996	-6%	1,159,757	806,717	44%
Manufacturing overhead & other	141,779	221,573	-36%	283,172	348,886	-19%
Foreign exchange loss	8,626	16,179	-47%	31,091	19,215	62%
Investment tax credits	(39,064)	(136,994)	-71%	(127,461)	(269,241)	-53%
Total Cost of Sales and Services	$ 924,954	$ 1,130,295	-18%	2,279,650	1,950,559	17%

Gross Margin

	Three months ended June 30, 2018	2017	Six months ended June 30, 2018	2017
Revenue	$ 1,421,352	$ 2,173,397	$ 3,481,954	$ 3,869,535
Cost of Sales and Services before amortization of intangible assets	924,954	1,130,295	2,279,650	1,950,559
Gross Margin	$ 496,398	$ 1,043,102	$ 1,202,304	$ 1,918,976
Gross Margin %	34.9%	48.0%	34.5%	49.6%

Cost of sales and services was $924,954 in Q2, 2018, representing a decrease of 18% compared with $1,130,295 in Q2, 2017. On a year-to-date basis, the cost of sales was $2,279,650 an increase of 17% as compared to $1,950,559 for the same period in 2017.

In Q2, 2018 cost of direct materials, manufacturing overhead and subcontracting decreased to $460,542 (Q2, 2017: $490,996), $141,779 (Q2, 2017: $221,573) and $30,851 (Q2, 2017 - $43,241) respectively.

On a year-to-date basis, cost of direct materials and subcontracting increased to $1,159,757 (2017: $806,717) and $68,329 (2017: $66,631) respectively, while manufacturing overhead and other decreased to $283,172 (2017 - $348,886).

The type of contracts being executed and the nature of the project activity during any given quarter has a significant impact on both the overall level of cost of sales and services reported in a period, as well as the composition of the cost of sales and services, as the mix between labour, materials and subcontracts may be significantly different.

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 decreased to $39,064 in Q2, 2018, compared with $136,994 in Q2, 2017. This represents a decrease of 71%. On a year-to-date basis, qualifying tax credits decreased to $127,461 in 2018, compared with $269,241 in 2017. The Company continues to make investments in research and development projects involving strategic partners and government bodies.

The gross margin for Q2, 2018, was $496,398, or 34.9% of revenue. This compares with a gross margin of $1,043,102 (48% of revenue) for Q2, 2017. On a year-to-date basis, the gross margin represents 34.5% of revenue versus 49.6% over the same period in 2017.

Selling, General and Administrative Expenses

	Three months ended June 30, 2018	2017	% Change 2018vs2017	Six months ended June 30, 2018	2017	% Change 2018vs2017
Employee compensation	$ 701,924	$ 581,935	21%	$ 1,323,115	$ 1,106,332	20%
Professional fees	165,258	131,951	25%	391,608	379,860	3%
Office and general	100,337	132,571	-24%	259,959	246,018	6%
Travel	72,341	75,474	-4%	197,211	117,977	67%
Depreciation on property and equipment	40,529	29,250	39%	70,246	54,449	29%
Government grants	(9,000)	(4,500)	-100%	(19,894)	(4,500)	342%
Other expenses	106,163	51,331	107%	183,713	108,640	69%
Sub-total before Share-based payments	1,177,552	998,012	18%	2,405,958	2,008,776	20%
Share-based payments	295,541	135,444	118%	425,504	273,595	56%
Total selling, general and administrative	$ 1,473,093	$ 1,133,456	30%	$ 2,831,462	$ 2,282,371	24%

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 Q2,2018 excluding the costs associated with share-based payments (a non-cash item in which options vest over a four-year period), were $1,177,552, representing an increase of 18% compared with $998,012 reported for Q2, 2017. On a year-to-date basis, SG&A expenses before share-based payments were $2,405,958 compared with $2,008,776 in the same period in 2017.

The increase in SG&A expenses in Q2, 2018 over the same period in 2017 is mainly attributable to the net effect of:

- an increase of 21% in employee compensation;
- an increase of 25% for professional fees, primarily due to an increase in patent expenses;
- a decrease of 24% in office and general expenses, due to a decrease in courses, seminar, computers and internet expenses;
- travel costs decreased by 4%, due to less travels abroad;
- depreciation on property and equipment increased by 39%, primarily due to an increase in plant and equipment assets. The asset under development in Q2, 2018 will begin to be depreciated when the asset is available or ready for use;

- government grants increased by 100% due to higher level of activities supported by such grants and;
- other expenses increased by 107%, primarily due to higher cost of freight and shipping.

Separately, share based payments increased by 118% in Q2, 2018 over the same period in 2017 as a result of the vesting structure of the stock option plan including the stock options offered on April 30, 2018 and May 10, 2018.

Research and Development ("R&D") Costs

	Three months ended June 30, 2018	2017	% Change 2018vs2017	Six months ended June 30, 2018	2017	% Change 2018vs2017
Employee compensation	$ **295,893**	$ 60,521	389%	$ **345,905**	$ 120,515	187%
Subcontracting	**7,920**	(1,522)	100%	**7,920**	1,842	100%
Materials and equipment	**83,440**	2,714	2975%	**83,666**	7,206	1061%
Other expenses	**16,764**	430	3801%	**19,024**	644	2856%
Total net R&D costs	$ **404,017**	$ 62,143	550%	$ **456,515**	$ 130,207	251%

The Company incurred $404,017 of R&D costs in Q2, 2018, compared with $62,143 in Q2, 2017, representing an increase of 550%. During the first six months of fiscal 2018, net spending on internal R&D was $456,515 as compared to $130,207 in 2017.

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

Finance Income and Finance Costs

	Three months ended June 30, 2018	2017	% Change 2018vs2017	Six months ended June 30, 2018	2017	% Change 2018vs2017
Adjustment to the fair value of investments	$ **(66,000)**	$ 296,078	122%	$ **153,000**	$ 95,735	-60%
Finance expenses	**220,178**	160,009	38%	**325,012**	317,856	2%
Net finance costs	$ **154,178**	$ 456,087	66%	$ **478,012**	$ 413,591	-16%

Finance expenses for Q2, 2018 totaled $220,178 as compared with $160,009 for Q2, 2017, representing an increase of 38%. The decrease in net finance costs in Q2, 2018 is primarily due to the adjustment to the fair value of investments.

Depreciation on Property and Equipment

	Three months ended June 30, 2018	2017	% Change 2018vs2017	Six months ended June 30, 2018	2017	% Change 2018vs2017
Depreciation on property and equipment	$ **40,529**	$ 29,250	39%	$ **70,246**	$ 54,448	29%

The depreciation on property and equipment increased to $40,529 and $70,246 in Q2, 2018 and the first six months of fiscal 2018, compared with $29,250 and $54,448 in the same periods in 2017. The 39% and 29% increase reflect an increased level of investments in plant and equipment. The asset under development will begin to be depreciated when the asset is available or ready for use.

Inventory

	Three months ended June 30, 2018	2017	% Change 2018vs2017	Six months ended June 30, 2018	2017	% Change 2018vs2017
Inventory	$ **386,006**	$ -	100%	$ **611,359**	$ -	100%

As a result of the Company's strategy to increase powder inventory to meet increased market demand, powder inventory increased to $386,006 and $611,359 in Q2, 2018 and the first six months of fiscal 2018, compared with Nil in the same periods in 2017.

Settlement of a claim related to the long-term debt

	Three months ended June 30, 2018	2017	% Change 2018vs2017	Six months ended June 30, 2018	2017	% Change 2018vs2017
Settlement of long-term debt	$ -	$ -		$ **1,885,644**	$ -	100%

In Q1, 2018, the Company and the company under control of the controlling shareholder and CEO entered into a settlement agreement to resolve a claim in the amount of $5,420,000 made by the company under control of the controlling shareholder and CEO in connection with the share for debt conversion transaction between the parties that that took place in 2014. Under the share for debt conversion, the Company issued 7,500,000 common shares in 2014 to settle $6,000,000 of the carrying value of the Balance of sale payable. The settlement agreement also constitutes the final payment of the Balance of sale of $111,928, and provides for the issuance of units by the Company having a value of $3,327,571 to the company under common control and CEO as follows: (i) on February 9 and March 7, 2018, issuance of 1,899,999 units at $0.70 per unit for a total value of $1,329,999, with each unit consisting of 1 common share of the Company and 1 common share purchase warrant which entitles the holder to purchase 1 common share at a price of $1.25 until August 9th, 2019, and (ii) on April 30, 2018, issuance of 3,385,715 units at a value of $0.59 per unit with each unit consisting of 1 common share of the Company and 1 common share purchase warrant which entitles the holder to purchase 1 common share at a price of $0.85 until April 19, 2020. As the claim related to a dispute that existed at year-end, a liability and related expense of $3,215,643 was recorded as at December 31, 2017. The liability was measured based on the fair value of the units as at their issuance date, which is $0.70 on February 9 and March 7, 2018 and $0.59 on April 30, 2018.

Net comprehensive loss

	Three months ended June 30, 2018	2017	% Change 2018vs2017	Six months ended June 30, 2018	2017	% Change 2018vs2017
Net comprehensive loss	**$ (1,534,890)**	$ (608,584)	152%	**$ (2,563,685)**	$ (907,193)	183%

The loss from operations and comprehensive loss for Q2, 2018 was $1,534,890 compared to $608,584 in Q2, 2017 representing an increase of 152% year-over-year. Year-to-date, loss from operations was $2,563,685 as compared to a loss of $907,193 for the same period in 2017.

The increase in net comprehensive loss in Q2, 2018 compared to the same period in 2017 is primarily attributable to a decrease in revenue of $752,045 and by the factors described above, which have been summarized as follows:

(i) a decrease in cost of sales and services totaling $205,341 in Q2, 2018;
(ii) an increase of SG&A expenses of $339,637 arising in Q2, 2018 as explained above;
(iii) an increase in R&D expenses of $341,874 primarily due to research and development in Q2, 2018 on plasma atomization;
(iv) a decrease in net finance costs of $301,909 in Q2, 2018 due to the increase in the fair value of investments of $362,078.

On a year-to-date basis the increase in net comprehensive loss from operations of $1,656,492 is attributable to a decrease in revenue of $387,581 and by the factors described above, which have been summarized as follows:

(i) an increase in cost of sales and services totaling $329,091 in Q2, 2018;
(ii) an increase of SG&A expenses of $549,091 arising in Q2, 2018 as explained above;
(iii) an increase in R&D expenses of $326,308 primarily due to the increase in research and development on plasma atomization;
(iv) a decrease in net finance costs of $64,421 in Q2, 2018 primarily due to the increase in the fair value of investments of $57,265.

EBITDA, Adjusted EBITDA and Modified EBITDA

	Three months ended June 30, 2018	2017	% Change 2018vs2017	Six months ended June 30, 2018	2017	% Change 2018vs2017
Comprehensive loss	**$ (1,534,890)**	$ (608,584)	152%	**$ (2,563,685)**	$ (907,193)	183%
Depreciation on property and equipment	**40,529**	29,250	39%	**70,246**	54,448	29%
Amortization of intangible assets	**-**	-		**-**	-	
Financing charges	**220,178**	$ 160,009	38%	**325,012**	$ 317,856	2%
EBITDA (loss)	**$ (1,274,183)**	$ (419,325)	204%	**$ (2,168,427)**	$ (534,889)	305%
Other non-cash items:						
Share-based payments	**295,541**	135,444	118%	**425,504**	273,595	56%
Settlement of a claim related to the long-term debt	**-**	-		**-**	-	
Adjusted EBITDA (loss)	**(978,642)**	(283,881)	245%	**(1,742,923)**	(261,294)	567%
Change in fair value of investments	**(66,000)**	296,078	122%	**153,000**	95,735	60%
Modified EBITDA (loss)	**$ (1,044,642)**	$ 12,197	-8665%	**$ (1,589,923)**	$ (165,559)	860%

EBITDA is defined as Earnings (from operations) before Net Financing Charges, Taxes, Depreciation and Amortization, Adjusted EBITDA is defined as Earnings (from operations) before Net Financing Charges, Taxes, Depreciation, Amortization and other non-cash items including share-based payment costs, and Modified EBITDA is defined as Earnings (from operations) before Net Financing Charges, Taxes, Depreciation, Amortization and other non-cash items including share-based payment costs and change in fair value of investments.

EBITDA, Adjusted EBITDA and Modified 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, Adjusted EBITDA and Modified 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 the adjustment to the fair value of investments and 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 Q2, 2018 was $1,274,183 compared with an EBITDA loss of $419,325 for Q2, 2017, representing an increase of 204%. On a year-to-date basis, the EBITDA loss was $2,168,427 in 2018 compared with $534,889 in 2017, representing an increase of 305%. The increase in the EBITDA loss in Q2, 2018 and the first six months of fiscal 2018 compared with the same periods in 2017 is primarily attributable to lower revenues and an increase in comprehensive loss.

Adjusted EBITDA loss in Q2, 2018 was $978,642 compared with an Adjusted EBITDA of $283,881 for Q2, 2017. The increase of $694,761 in the Adjusted EBITDA loss in Q2, 2018 is mainly attributable to the increased comprehensive loss of $926,306, an increase in depreciation on property and equipment of $11,279, an increase in finance charges of $60,169 and an increase of $160,097 in share-based payments.

Modified EBITDA loss in Q2, 2018 was $1,044,642 compared with a Modified EBITDA gain of $12,197 for Q2, 2017. On a year-to-date basis, the Modified EBITDA loss was $1,589,923 in 2018 compared with $165,559 in 2017. The increase of $1,056,839 in the Modified EBITDA loss in Q2, 2018 is mainly attributable to the increase in the Adjusted EBITDA loss of $694,761 and a decrease in the change in fair value of investments of $362,078.

SUMMARY OF QUARTERLY RESULTS

	2018		2017			
	Q2	Q1	Q4	Q3	Q2	Q1
Revenues	**$1,421,352**	**$ 2,060,602**	$ 1,296,768	$ 2,026,557	$ 2,173,397	$ 1,696,138
Gross margin	**496,398**	**705,906**	51,786	1,156,205	1,043,102	875,874
Gross margin %	**34.9%**	**34.3%**	4.0%	57.1%	48.0%	51.6%
Comprehensive loss	**(1,534,890)**	**(1,028,795)**	(4,907,028)	(360,082)	(608,584)	(298,610)
Net loss per share - basic and diluted	**(0.01)**	**(0.01)**	(0.05)	(0.00)	(0.01)	(0.00)

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.

LIQUIDITY AND CAPITAL RESOURCES

The following table summarizes the contractual maturities of financial liabilities as at June 30, 2018.

	Total	6 months or less	6 to 12 months	1-3 year	4-5 year
	$	$	$	$	
Accounts payable and accrued liabilities	**5,652,004**	**5,652,004**	**-**	**-**	**-**
Capital lease obligations	**43,294**	**7,209**	**13,881**	**12,259**	**9,945**
Term loans	**677,533**	**261,200**	**14,000**	**402,333**	**-**
Long-term debts	**111,928**	**111,928**	**-**	**-**	**-**
Convertible debentures	**3,498,750**	**142,500**	**142,500**	**3,213,750**	**-**
	9,983,509	**6,174,841**	**170,381**	**3,628,342**	**9,945**

As at June 30, 2018 an amount of $1,885,644 in accounts payable and accrued liabilities and $111,928 of long term debt will be settled by means of a share for debt conversion transaction as discussed above under; Settlement of a claim related to the long-term debt. In addition, $1,152,726 in accounts payable and accrued liabilities are accrued material expenses related to percent complete revenue recognition.

The Company has incurred, in the last several years, operating losses and negative cash flows from operations, resulting in an accumulated deficit of $45,764,393 and a negative working capital of $3,817,392 as at June 30, 2018 (December 31, 2017 - $46,416,352 and $9,403,371 respectively). Furthermore, as at June 30, 2018, the Company’s current liabilities and expected level of expenses for the next twelve months exceed cash on hand of $84,124 (December 31, 2017 - $622,846). 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.

As at June 30, 2018, the Company had cash on hand of $84,124 and negative working capital of $3,817,392 compared with a cash balance of $622,846 and negative working capital of $9,403,370 as at December 31, 2017.

Revenue generated from active projects does not yet produce sufficient positive cash flow to fund operations. However, based on current backlog of $4.14MM at August 21, 2018, together with the pipeline of prospective new projects, cash flow from operations are expected to become positive in the very near future.

OFF-BALANCE SHEET ARRANGEMENTS

The Company had no off-balance sheet arrangements as at June 30, 2018.

SUMMARY OF CASH FLOWS

	Three months ended June 30, 2018	2017	Six months ended June 30, 2018	2017
Cash provided by (used in) operating activities	**$ (2,956,728)**	$ (736,110)	**$ (4,140,424)**	$ 172,490
Cash provided by (used in) investing activities	**(266,642)**	(555,878)	**(950,241)**	(948,392)
Cash provided by (used in) financing activities	**722,506**	271,679	**4,551,943**	648,783
Increase (decrease) in cash	**(2,500,864)**	(1,020,309)	**(538,722)**	(127,119)
Cash - end of period	**84,124**	258,138	**84,124**	258,138

For the three months ended Q2, 2018, cash flow used by operating activities was $2,956,728 compared to $736,110 for the same period in the prior year. On a year to date basis, cash flow from operating activities net use of $4,140,424 compared to generated cash of $172,490 for the same period in the prior year.

The use of cash during Q2, 2018 consists of the comprehensive loss of $1,534,890 (Q2, 2017 - $608,584) plus adjustment for non-cash items totalling $490,248 (Q2, 2017 - $621,107) less a net change in non-cash operating working capital items of $1,761,529 (Q2, 2017 – 665,047) plus interest paid of $150,557 (Q2, 2017 - interest paid of $83,587).

The net change in non-cash operating working capital items in Q2, 2018 was driven by:

a) an increase in accounts receivable of $73,434 in Q2, 2018, compared to an increase of $382,898 in Q2, 2017;
b) an increase in costs and profits in excess of billings on uncompleted contracts of $225,397 in Q2, 2018, compared to an increase of $322,536 in Q2, 2017;
c) an increase in investment tax credits receivable of $39,064 in Q2, 2018, compared to an increase of $136,994 in Q2, 2017;
d) a decrease in prepaid expenses of $100,148 in Q2, 2018, compared to a decrease of $134,971 in Q2, 2017;
e) a decrease in accounts payable and accrued liabilities of $579,139 in Q2, 2018, compared to an increase of $37,830 in Q2, 2017;
f) a decrease in billings in excess of costs and profits on uncompleted contracts of $558,637 in Q2, 2018, compared with a decrease of $295,420 in Q2, 2017.

Investing activities resulted in a use of cash of $266,642 in Q2, 2018, compared to a use of cash of $555,878 in Q2, 2017 resulting from the purchase of property and equipment and additions to deferred development costs.

Financing activities in Q2, 2018 and the first six month of fiscal 2018 resulted in a net source of funds of $722,506 and $4,551,943 respectively, compared with a net source of funds of $271,679 and $648,783 for the same periods in 2017. In the first six month of fiscal 2018, the Company issued common shares upon exercise of warrants and stock options for cash proceeds of $734,125 raised for general working capital purposes and repaid of $295,337 in loans and capital lease obligations. In 2017, the Company issue common share upon exercise of stock options and warrants for net cash proceeds of $811,797 and repaid loans and capital lease obligations of $163,014.

For Q2, 2018 and the first six months of fiscal 2018, the net cash position of the Company decreased by $2,500,864 and $538,722, compared to a net decreases of $1,020,309 and $127,119 for the same periods in the prior year.

CAPITAL STOCK INFORMATION

The authorized share capital of the Company consists of an unlimited number of Class A common shares (the "Common Shares"). As at August 21, 2018, PyroGenesis had 122,895,343 Class A Common Shares, 8,141,762 warrants, 10,046,000 outstanding options issued, and 8,085,000 exercisable options issued.

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 $4.14MM backlog at Aug 21, 2018, which is primarily related to the Company's successful diversification into niche markets of the additive manufacturing (including 3D printing), and metals & mining industries, will continue to improve the Company's cash position.

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 June 30, 2018 condensed 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

During the three and the six months ended June 30, 2018, the company concluded the following transactions with related parties:

Rent and property taxes were charged by a trust beneficially owned by the controlling shareholder and CEO of the Company in the amount of $78,045 and $130,265 respectively, (2017 - $52,512 and $105,382). A balance due of $151,590 (2017 - $17,008) is included in accounts payable and accrued liabilities.

Interest of $Nil and $14,171, (2017 - $14,171 and $28,342) was charged on the $755,000 convertible debentures held by a related party of the controlling shareholder and CEO. Accreted interest related to the convertible debenture held by a company under common control amounted to $Nil (2017 - $11,234).

A balance due to the controlling shareholder and CEO of the Company amounted to $176,887 (December 31, 2017 - $205,641) and is included in accounts payable and accrued liabilities.

The balance of sale due to a company under common control of the controlling shareholder and CEO, was $111,928 (December 31, 2017 - $111,928), and is included in long term debt. Accreted interest related to the balance of sale amounted to $Nil (2017 - $41,250).

The Company and a company under common control of the controlling shareholder and CEO entered into a settlement agreement with respect to the balance of sale payable. On February 9, 2018, 1,899,999 common shares were issued as a partial settlement of the balance of sale payable. The final settlement occurred on April 30, 2018

During Q2, 2018, three and the six months ended June 30, 2018, the total compensation to key management amounted to $131,180 and $260,601 (2017 - $149,716 and $283.999) respectively.

SUBSEQUENT EVENTS

On July 3, 2018, the Company granted stock options to acquire up to 300,000 common shares of the Company to the Chair of the Audit Committee of the Board of Directors. The stock options have an exercise price of $0.51 per common share and are exercisable over a period of five (5) years. The options are granted in accordance with the Company's stock option plan.

On August 13, 2018, the Company increased its ownership in HPQ Silicon Resources Inc ("HPQ") to 9.6% (12.03% fully diluted) by acquiring 16,250,000 units (the "Unit") of HPQ in a private placement at a price of 0.12$ per Unit for total investment of $1,950,000. Each Unit consists of one common share (a "Common Share") of HPQ and one Common Share purchase warrant (a "Warrant"). Each Warrant entitles the Company to purchase one Common Share at a price of $0.17 for a period of 36 months pursuant from the issue date.

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 annual 2017 Consolidated Financial Statements.

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.

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, at August 21, 2018, 10,046,000 stock options are currently issued and outstanding, together with 8,141,762 warrants and 3,750,000 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

2018, to date, has seen the Company enter into significant commercial discussions in all of its business lines. It is fully expected that these conversations will translate into commercial contracts towards the end of Q3, 2018. In the first six months of 2018, the Company started putting in place the required infrastructure and personnel in order to fulfill this growth.

The following is a summary of PyroGenesis' main activities.

Synopsis:

- Powder Production:
    - nominated "Materials Company of the Year" at the 3D Printing Industry Awards 2018;
    - recently Contracted for an order of 10 tons (minimum) of titanium powders;
    - recommended by leading 3D Printer OEM to their customers as titanium powder supplier;
    - strategic commercial discussions with 3D printer manufacturers, distributors, and end-users continue.

- DROSRITE™:
    - construction of second demonstration unit in progress; Completion expected over the next two (2) months;
    - enters the Zinc Market;
    - second DROSRITE™ Furnace System Completed;
    - embraces Tolling Strategy; Joint Venture discussions in progress.

- HPQ:
  - HPQ secures financing for the balance of the PUREVAP™ Project;
  - Pilot Plant in progress after significant improvements.

- Military:
  - interest for two (2) US Aircraft Carrier systems received (US$10-12MM); Order expected Q1, 2019;
  - seeking to establish a presence in the USA to, amongst other things, better serve the US Military's needs.

- Torch/Equipment Sales:
  - PyroGenesis continues to address interest for plasma torch/equipment;
  - order expected before year end.

<u>A) Powder Production</u>:

2017 became the year in which the Company went from relative obscurity within the additive manufacturing industry, to being nominated "Materials Company of the Year" at the 3D Printing Industry Awards 2018.

Not only, during this period, did the Company successfully assemble and commission its first metal powder production system, but also (i) successfully delivered orders for Titanium and Inconel powders, all while still in the ramp up phase, (ii) generated new, game changing, IP which provides for more control over particle size distribution, with little to no waste, while increasing powder production even further, and (iii) entered into several NDA's with significant players in the industry (end users, printer manufacturers, and distributors) all with a view of providing sample orders, repeat orders, long term orders, contract R&D, and/or strategic partnerships for long term powder supply contracts, some with a view to a possible acquisition. Given the level of activity, and the prospect of significant orders in the near term, management decided to order the long lead items for two powder production systems, both of which were scheduled to be fully operational during the summer 2018; due to summer delays this is now targeted for end of September 2018-beginning of October 2018. These new powder production units will incorporate some of the cutting-edge IP that has recently been developed and/or is in development. We expect these units will cost significantly less to manufacture, generate higher production rates, and provide greater control over particle size distributions.

Of note, although the Company's strategic plan has always been based on its existing IP, know-how, and system (the economics of which remain true to this day), management has decided to leverage off of its significant advantage in plasma technology and dedicate certain limited assets to increasing its IP base with the goal of further significantly reducing capital and operating costs of the powder production system while at the same time improving production rates even further. PyroGenesis is confident that these goals once achieved will significantly impact the build out strategy for the better.

The Company's press release dated May 17th, 2018 (which announced a commercial agreement for a minimum order of 10,000 kg of Titanium powder over two years from Asia), together with those issued on August 14th and 20th (which announced results of powder testing by a top OEM as well as their recommendation to their clients to use such powder), has underscored the need for PyroGenesis to be even more focused than ever before on addressing market demand for its powder.

The Company decided to have, at the ready, an optimum industrialization plan for multiple powder production units (in multiples of 1, 3, and 5 units), to be executed on the back of a significant take-or-pay contract. This has now been completed and the Company is continuing to look at ways to accelerate the technological advances mentioned above.

B) DROSRITE™

As the Company positioned itself, during 2017, to become a significant powder producer to the Additive Manufacturing Industry, it also successfully positioned its DROSRITE™ Furnace System to become a fully commercial product line in and of its own right.

2017 saw the commercial acceptance of PyroGenesis' patented DROSRITE™ System with, not only an acceptance of its first commercial sale, but a subsequent re-order by the same client at a higher price.

During this time, successful demonstrations of the DROSRITE™ System in the Middle East and India has resulted in significant interest from those regions. Of note, the Company's demonstration unit is fully booked in India, to the beginning of October 2018, with paid-for-demonstrations. This flurry of activity and interest for the DROSRITE™ System resulted in the Company hiring a full-time business development manager to market the DROSRITE™ System, and who's role is exclusively to secure DROSRITE™ system sales.

The total worldwide production of Aluminum dross was 3,000,000 TPY (2017)[1]. PyroGenesis has designed systems to process either 500, 3,000 or 5,000 TPY representing a market potential of over $1 billion from Aluminum dross alone.

PyroGenesis is currently aggressively targeting both primary aluminum smelters in Asia and the Middle East where the market is estimated to be in excess of 1 million tons of dross[2], as well as tertiary casting producers worldwide. The Company has recently added zinc recovery from dross as a target market.

Due to this high demand for on-site paid-for demonstrations, the Company is in the process of constructing a second DROSRITE™ demonstration system which is expected to be available in Q3

[1] AlCircle, *Aluminium Dross Processing: A Global Review*, 2017
[2] http://www.world-aluminium.org/statistics/primary-aluminium-production/

2018. There is a high probability that PyroGenesis will be profitable in 2018 from DROSRITE™ system sales when combined with existing backlog.

The Company is also investigating the prospect of providing on-site dross tolling services under long term take-or-pay contracts. The Company has found that there is a large interest for this service from smelter operators who do not want to engage in a different business line but would be open to having on-site tolling under a benefit-sharing arrangement. PyroGenesis is also in discussions with potential partners who would provide local management and support while at the same time accelerate this opportunity.

C) US Military:

Originally it was thought that just one new US Aircraft Carrier would be ordered in 2018, with an estimated value of approximately US$6MM, but now it seems that the interest is for two, for an estimated value of between US$10-12 MM. This contract is now expected Q1 2019.

The chemical warfare destruction unit, that PyroGenesis developed for a consortium involving various groups within the US military, and was in the process of being tested, continues to have its schedule delayed accommodating other unrelated testing needs by the group. This testing timeline is out of the Company's control.

Revenues from military contracts in 2017 were over $4,300,000, mainly related to providing technical support, training services and sale of spare parts. Over the past three years, revenues from military contracts have typically represented more than $2,000,000 per year of PyroGenesis' revenues. As the PAWDS technology becomes fully operational on US Navy ships, management expects the level of recurring revenues from the sale of parts and services to increase over the next 2 to 5 years.

The Company is looking at ways to establish a presence in the USA to, amongst other things, better serve the US Military's needs arising from having multiple systems in operation.

D) HPQ:

On August 2, 2016, PyroGenesis announced that it had signed contracts totaling $8,260,000 with HPQ Silicon Resources Inc., formally Uragold Bay Resources Inc. ("HPQ") for the sale of IP and to provide a pilot system to produce high purity silicon metal directly from quartz. Of particular note, if successful, PyroGenesis benefits from a 10% royalty on all revenues derived from the use of this system by HPQ, subject to annual minimums.

E) Torch/Equipment Sales:

Consistent with the Company's overall strategy to (i) remain 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 technologies to industries that have yet to consider such solutions, and (ii) to actively target recurring revenue opportunities that will generate a growing, and profitable, regular cash flow to the Company, the Company continues to market its torch/equipment capabilities and expects this to start becoming a revenue contributor, with its recurring revenue stream, in the very near future.

PyroGenesis has one of the largest concentrations of plasma expertise in the world, with over 250 years of accumulated technical experience and supporting patents, combined with unique relationships with major Universities performing cutting edge plasma research and development, positions the Company well to execute its strategies.

Management's focus will continue to be to generate an improved mix of short and long-term projects that will, in turn, facilitate operational and financial planning. Repeat orders for the same, or similar, products will further result in the standardization of manufacturing processes which will lead to improved gross margins.

All indications are that 2018 should be a profitable year for the Company given that business lines, other than non-additive manufacturing, continue to contribute significantly to PyroGenesis' revenues. Management expects that the Corporation's non-additive manufacturing business lines will generate enough revenues, on their own in 2018, to make PyroGenesis profitable overall going forward.

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.