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 months ended March 31, 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 May 25, 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 May 30, 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 3,800m^2 production facility, PyroGenesis maintains its competitive advantage by remaining at the forefront of technology development and commercialization. PyroGenesis' core competencies allow the Company to be a leader in providing innovative plasma torches, plasma waste processes, plasma atomisation processes including powder production for additive manufacturing, 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 Mar 31, 2018		2017		% Change 2018vs2017
Revenue	$	2,060,602	$	1,696,138	$	21%
Cost of sales and services before amortization of intangible assets		1,354,696		820,264		65%
Gross profit		705,906		875,874		
Expenses						
Selling, general and administrative		1,358,369		1,148,916		18%
Research and development		52,498		68,064		-23%
Net finance costs		323,834		(42,496)		-862%
		1,734,701		1,174,483		48%
Comprehensive loss	$	(1,028,795)	$	(298,610)	$	245%
Basic and diluted loss per share	$	(0.01)	$	(0.01)	$	
Modified EBITDA (loss)	$	(545,281)	$	(177,757)		207%

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 (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. The exclusion of items in adjusted EBITDA does not imply that they are necessarily non-recurring. Accordingly, they should not be considered in isolation or a substitute for financial measures prepared in accordance with IFRS. See 'Reconciliation of non-IFRS financial measures-EBITDA and Adjusted EBITDA' in this MD&A for a reconciliation of this measure to the most comparable IFRS measure.

Extract from Statement of Financial Position at:

		Mar 31, 2018		Dec 31, 2017
Current assets		4,567,657		2,498,913
Non-current assets		3,704,919		3,270,037
Total assets	$	8,272,576	$	5,768,950
Current liabilities		9,855,190		11,902,283
Non-current liabilities		1,356,164		10,290
Total liabilities	$	11,211,354	$	11,912,573
Shareholders' deficiency	$	(2,938,778)	$	(6,143,623)

RESULTS OF OPERATIONS

Revenue

PyroGenesis recorded revenue of $2,060,602 in the first quarter of 2018 (“Q1, 2018”), representing an increase of 21% compared with $1,696,138 recorded in the first quarter of 2017 (“Q1, 2017”).

Revenues recorded in the first quarter of 2018 were generated primarily from:

(i) the development of a vacuum arc reducing 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 Mar 31,				% Change
		2018		2017	2018vs2017
Employee compensation	$	542,541	$	483,051	12%
Subcontracting		37,478		23,391	60%
Direct materials		699,215		315,721	121%
Manufacturing overhead & other		141,394		127,312	11%
Foreign exchange loss		22,465		3,035	640%
Investment tax credits		(88,397)		(132,246)	-33%
Total Cost of Sales and Services	$	1,354,696	$	820,264	65%

Gross Margin

		Three months ended Mar 31, 2018		2017
Revenue	$	**2,060,602**	$	1,696,138
Cost of Sales and Services before amortization of intangible assets		**1,354,696**		820,264
Gross Margin before amortization of intangible assets		**705,906**		875,874
Gross Margin % before amortization of intangible assets		**34.3%**		51.6%
Amortization of intangible assets		**-**		-
Gross Margin after amortization of intangible assets	$	**705,906**	$	875,874
Gross Margin % after amortization of intangible assets		**34.3%**		51.6%

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 or a substitute for financial measures prepared in accordance with IFRS.

Cost of sales and services before amortization of intangible assets was $1,354,696 in Q1, 2018, representing an increase of 65% compared with $820,264 in Q1, 2017.

In Q1, 2018 cost of direct materials increased to $699,215 (Q1, 2017: $315,721), while employee compensation, subcontracting and manufacturing overhead and other increased to, $542,541 (Q1, 2017 - $483,051), $37,478 (Q1, 2017 – $23,391), $141,394 (Q1, 2017 – $127,312), respectively.

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 $88,397 in Q1, 2018, compared with $132,246 in Q1, 2017. This represents a decrease of 33%. The Company continues to make investments in research and development projects involving strategic partners and government bodies.

The gross margin for Q1, 2018, was $705,906, or 34.3% of revenue. This compares with a gross margin of $875,874 (51.6% of revenue) for Q1, 2017.

Selling, General and Administrative Expenses

	Three months ended Mar 31, 2018	2017	% Change 2018vs2017
Employee compensation	$ **621,190**	$ 524,397	18%
Professional fees	**226,350**	247,909	-9%
Office and general	**159,622**	113,447	41%
Travel	**124,870**	42,502	194%
Depreciation on property and equipment	**29,717**	25,198	18%
Government grants	**(10,894)**	-	-100%
Other expenses	**77,551**	57,312	35%
Sub-total before Share-based payments	**1,228,406**	1,010,765	22%
Share-based payments	**129,963**	138,151	-6%
Total selling, general and administrative	$ **1,358,369**	$ 1,148,916	18%

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 Q1,2018 excluding the costs associated with share-based compensation (a non-cash item in which options vest over a four-year period), were $1,228,406, representing an increase of 22% compared with $1,010,765 reported for Q1, 2017.

The increase in SG&A expenses in Q1, 2018 over the same period in 2017 is attributable to the net effect of:

- an increase of 18% in employee compensation,
- a decrease of 9% for professional fees, primarily due to decrease in investor relations,
- an increase of 41% in office and general expenses, due to an increase in rent, municipal taxes and computer software expenses,
- travel costs increased by 194%, due to an increase in travel abroad,
- depreciation on property and equipment increased by 18%, the asset under development in Q1, 2018 totaling $2,356,374 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 35%, primarily due to an increase in insurance expense and computer service subcontract expense.

Separately, share based payments decreased by 6% in Q1, 2018 over the same period in 2017 as a result of the vesting structure of the stock option plan including the stock options granted on November 3, 2017 and February 9, 2018.

Research and Development ("R&D") Costs

	Three months ended Mar 31, 2018	2017	% Change 2018vs2017
Employee compensation	$ **50,012**	$ 59,994	-17%
Subcontracting	**-**	3,364	100%
Materials and equipment	**226**	4,492	-95%
Other expenses	**2,260**	214	956%
Total net R&D costs	$ **52,498**	$ 68,064	-23%

The Company incurred $52,498 of R&D costs in Q1, 2018, compared with $68,064 in Q1, 2017, representing a decrease of 23%.

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 Mar 31, 2018	2017	% Change 2018vs2017
Adjustment to the fair value of investments	$ **219,000**	$ (200,343)	209%
Finance expenses	**104,834**	157,847	-34%
Net finance costs	$ **323,834**	$ (42,496)	862%

Finance expenses for Q1, 2018 totaled $104,834 as compared with $157,847 for Q1, 2017, representing a decrease of 34% The increase in net finance costs in Q1 2018, is primarily due to the adjustment to the fair value of investments.

Depreciation on Property and Equipment

	Three months ended Mar 31, 2018	2017	% Change 2018vs2017
Depreciation on property and equipment	$ **29,717**	$ 25,198	18%

The depreciation on property and equipment increased to $29,717 in Q1, 2018, compared with $25,198 in Q1, 2017. The 18% increase reflects an increased level of investments in machinery and equipment. The asset under development in Q1, 2018 totaling $2,356,374 will begin to be depreciated when the asset is available or ready for use,

Settlement of a claim related to the long-term debt

	Three months ended Mar 31, 2018	2017	% Change 2018vs2017
Settlement of long-tebt debt	**$ 1,885,644**	$ 3,215,643	-41%

In 2018 Q1, 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, 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 a value of $0.70 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 $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 Mar 31, 2018	2017	% Change 2018vs2017
Net comprehensive loss	**$ (1,028,795)**	$ (298,610)	245%

The net comprehensive loss from operations for Q1, 2018 of $1,028,795 compared to $298,610, in Q1, 2017, representing an increase in loss of $730,185 (245%) primarily attributable to the factors described above, which have been summarized as follows:

(i) an increase in product and service related revenue of $364,464 arising in Q1, 2018,
(ii) an increase in cost of sales and services totaling $534,432 in Q1, 2018,
(iii) an increase in SG&A expenses of $209,453 arising in Q1, 2017 as explained above,
(iv) a decrease in R&D expenses of $15,566 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.
(v) an increase in net finance costs of $366,330.

EBITDA and Adjusted EBITDA

	Three months ended Mar 31, 2018		2017	% Change 2018vs2017
Comprehensive loss	$ (1,028,795)	$	(298,610)	245%
Depreciation on property and equipment	29,717		25,198	18%
Amortization of intangible assets	-		-	
Financing charges	104,834	$	157,847	-34%
EBITDA (loss)	$ (894,244)	$	(115,565)	674%
Other non-cash items:				
Share-based payments	129,963		138,151	-6%
Settlement of a claim related to the long-term debt	-		-	
Write-Off of Inventories	-		-	
Write-off of costs and profits in excess of billings on uncompleted contracts	-		-	
Adjusted EBITDA (loss)	(764,281)		22,586	-3484%
Change in fair value of investments	219,000		(200,343)	209%
Modified EBITDA (loss)	$ (545,281)	$	(177,757)	207%

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 change in fair value of investments.

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 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. The exclusion of items in adjusted EBITDA does not imply that they are necessarily non-recurring. Accordingly they should not be considered in isolation or a substitute for financial measures prepared in accordance with IFRS.

The EBITDA loss in Q1, 2018 was $894,244 compared with an EBITDA loss of $115,565 for Q1, 2017, representing an increase of 674%. The increase in the EBITDA loss in Q1, 2018 compared with Q1, 2017 is primarily attributable to the lower gross margin in Q1, 2018.

Adjusted EBITDA loss in Q1, 2018 was $764,281 compared with an Adjusted EBITDA of $22,586 for Q1, 2017. The increase of $786,867 in the Adjusted EBITDA loss in Q1, 2018 is mainly attributable to the increased comprehensive loss of $730,185, an increase in depreciation on property and equipment of $4,519, a decrease of $53,013 in finance charges, and a decrease of $8,188 in share-based payments.

The Modified EBITDA loss in Q1, 2018 was $545,281 compared with a Modified EBITDA loss of $177,757 for Q1 2017, representing an increase of 207%. The increase in the Modified EBITDA loss in Q1 2018 is attributable to the increase as mentioned above in the Adjusted EBITDA and a decrease in change of fair value of investments of $419,343.

SUMMARY OF QUARTERLY RESULTS

	2018	2017			
	Q1	Q4	Q3	Q2	Q1
Revenues	**$ 2,060,602**	$ 1,296,768	$ 2,026,557	$ 2,173,397	$ 1,696,138
Gross margin Gross margin %	**705,906** **34.3%**	51,786 4.0%	1,156,205 57.1%	1,043,102 48.0%	875,874 51.6%
Comprehensive loss	**(1,028,795)**	(4,907,028)	(360,082)	(608,584)	(298,610)
Net loss per share - basic and diluted	**(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 March 31, 2018.

	Total	**6 months or less**	**6 to 12 months**	**1-3 years**
	$	**$**	**$**	**$**
Accounts payable and accrued liabilities	**2,978,332**	**2,978,332**	**-**	**-**
Capital lease obligations	**17,330**	**4,521**	**4,521**	**8,288**
Term loan	**247,200**	**-**	**247,200**	**-**
Long-term debts	**111,928**	**111,928**	**-**	**-**
Convertible debentures	**5,510,000**	**4,000,000**	**-**	**1,510,000**
	8,864,790	**7,094,781**	**251,721**	**1,518,288**

The Company has incurred, in the last several years, operating losses and negative cash flows from operations, resulting in an accumulated deficit of $44,229,503 as at March 31, 2018. Furthermore, as at March 31, 2018, the Company's current liabilities and expected level of expenses for the next twelve months exceed cash on hand of $2,584,988. 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 March 31, 2018, the Company had cash on hand of $2,584,988 and negative working capital of $5,287,533 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 $5.2MM at May 30, 2018 (more than 70% of 2017 revenues), 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 March 31, 2018.

SUMMARY OF CASH FLOWS

	Three months ended Mar 31,	
	2018	2017
Cash provided by (used in) operating activities	**$ (1,183,696)**	$ 908,600
Cash provided by (used in) investing activities	**(683,599)**	(392,514)
Cash provided by (used in) financing activities	**3,829,437**	377,104
Increase (decrease) in cash	**1,962,142**	893,190
Cash - end of period	**2,584,988**	1,278,447

For the three months ended Q1, 2018, cash flow from operating activities used cash of $1,183,696 compared to a net use of $908,600 for the same period in the prior year.

The use of cash during Q1, 2018 consists of the comprehensive loss of $1,028,795 (Q1, 2017 - $298,610) plus adjustment for non-cash items totalling $483,514 (Q1, 2017 - $120,853) less a net change in non-cash operating working capital items of $637,926 (Q1, 2017 - negative net change in non-cash operating working capital items of $1,169,774) plus interest paid of $489 (Q1, 2017 - interest paid of $83,417).

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

a) an increase in accounts receivable of $18,163 in Q1, 2018, compared to a decrease of $617,489 in Q1, 2017;
b) a decrease in costs and profits in excess of billings on uncompleted contracts of $74,938 in Q1, 2018, compared to an increase of $467,255 in Q1, 2017;
c) an increase of inventory of $101,618 in Q1, 2018, compared to $Nil in Q1, 2017;
d) an increase in investment tax credits receivable of $345,445 in Q1, 2018, compared to an increase of $132,246 in Q1, 2017;
e) an increase in prepaid expenses of $314,548 in Q1, 2018, compared to a decrease of $63,826 in Q1, 2017;
f) an increase in accounts payable and accrued liabilities of $712,730 in Q1, 2018, compared to an increase of $81,304 in Q1, 2017;
g) an increase in billings in excess of costs and profits on uncompleted contracts of $1,223,160 in Q1, 2018, compared with a decrease of $1,434,776 in Q1, 2017.

Investing activities resulted in a use of cash of $683,599 in Q1, 2018, compared to a use of cash of $392,514 in Q1, 2017 resulting from the purchase of property and equipment.

Financing activities in Q1, 2018 resulted in a net source of funds of $3,829,437, compared with a net source of funds of $377,104 in Q1, 2017. In Q1, 2018, the Company issued common shares upon the completion of a Private placement, exercise of warrants and options for a cash proceeds of $2,653,836, net of share issue expenses of $128,790, raised for general working capital purposes and repaid $292,280 in loans and capital lease obligations. The Company also received $1,467,881 as partial proceeds (net of issuance expenses of $42,119 from the placement in secured convertible debentures completed in April 2018. In Q1, 2017, the Company received a net proceed of $417,857 from the issuance of shares upon exercise of warrants and repaid $40,753 in loans and capital lease obligations.

For Q1, 2018, the net cash position of the Company increased by $1,962,142, compared to a net increase of $893,190 for the same period 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 May 25, 2018, PyroGenesis had 122,720,342 Class A Common Shares, 8,141,762 share purchase warrants, 9,921,000 outstanding stock options issued, and 8,010,000 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 $5.2MM backlog at May 30, 2018, (more than 70% of 2017 revenues) 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 March 31, 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 months ended March 31, 2018, the company concluded the following transactions with related parties:

Rent was charged by a trust beneficially owned by the controlling shareholder and CEO of the Company in the amount of $51,946 (2017 - $43,452). A balance due of $91,550 (2017 - $17,008) is included in accounts payable and accrued liabilities.

Interest of $Nil (2017 - $14,174) was paid on the $755,000 convertible debentures held by company under common control of the controlling shareholder and CEO. Accreted interest related to the convertible debenture held by a company under common control amounted to $11,623 (2017 - $11,234).

A balance due to the controlling shareholder and CEO of the Company amounted to $193,842 (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).

As discussed above in the settlement of a claim related to the long-term debt, 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.

The key management personnel of the Company are the members of the Board of Directors and certain executive officers. During the three months ended March 31, 2018, total compensation to key management consisted of the following:

	Three months ended March 31,	
	2018	2017
	$	$
Salaries	**124,000**	121,954
Pension contributions	**2,040**	1,979
Other benefits	**3,381**	10,350
Total compensation	**129,421**	134,283

A balance of $287,207 of key management compensation is included in accounts payable and accrued liabilities as at March 31, 2018 (December 31, 2017 - $72,617).

SUBSEQUENT EVENTS

On April 2, 2018, the Company completed a $3,000,000 non-brokered private placement of 9.5% secured convertible debentures. The convertible debentures bear interest at the rate of 9.5% per annum, with interest payable in cash on a quarterly basis, and mature on March 29, 2020. Each Debenture is convertible into common shares of the Company at a conversion price of $0.80 per common share. The convertible debentures and the common shares issuable on conversion of the Debentures will be subject to a statutory hold period of four months and one day from the closing date of the Offering. In connection with the convertible debenture, the Company paid finder fees in the amount of $180,000 to the agent.

On April 2, 2018 the Company redeemed $3,245,000 of the $4,000,000 unsecured convertible debenture. The subordinated unsecured convertible debenture matured on March 30, 2018 and had an interest component of 7.5% per annum, payable quarterly. The unsecured convertible debenture was convertible into common shares of the Company at any time at the option of the holder at a conversion price of $0.80 per common share.

On April 3, 2018, the Company granted 500,000 stock options to a consultant, to promote the business interests of the Company worldwide. The stock options have an exercise price of $0.70 per Common Share and are exercisable over a period of 18 months. The stock options are granted in accordance with the Company's stock option plan.

On April 19, 2018, the Company issued an amount of 1,258,333 units to a company under common control of the controlling shareholder and CEO to redeem the remaining balance of 755,000 of the $4,000,000 unsecured convertible debenture. The Company also issued 1,850,000 units to an unrelated party at a price of $0.60 per unit, for gross proceeds of $1,110,000. Each unit consists of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder thereof to purchase one common share at a price of $0.85 until April 19th, 2020. Each unit will be subject to a statutory hold period of four months and one day from the date of closing. In connection with the private placement, the Company paid finder fees in the amount of $89,478 to the agents

On April 30, 2018 the Company issued an amount of 3,385,715 units to a company under common control of the controlling shareholder and CEO under a settlement agreement. Each unit consists of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder thereof to purchase one common share at a price of $0.85 until April 19, 2020. Each unit will be subject to a statutory hold period of four months and one day from the date of closing.

On May 10, 2018 the Company granted 250,000 stock options to its newest independent member and Audit Committee Chair. The stock options have an exercise price of $0.52 per Common Share and are exercisable over a period of 60 months. The stock options are granted in accordance with the Company's stock option plan.

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 19 of the 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 May 25, 2018, 9,921,000 stock options are currently issued and outstanding, together with 8,141,762 share purchase warrants and 3,000,000 convertible debentures. The exercise of stock options and/or share purchase 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

2017 was a year in which all key indicators of operational performance posted significant gains and positioned the Company for profitability in the future. Building upon the successes of 2016, which saw the establishment of healthy gross margins, in excess of 40% that continued and improved throughout 2017, as the Company put in place the infrastructure and personnel to ensure that these margins, not only continue into the foreseeable future, but improve once powder production is in full commercialization.

The following is a non-exhaustive review of PyroGenesis' main commercial activities:

A) Powder Production:

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.

During this period, not only, 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 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 should be fully operational during the summer 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 valid 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 our build out strategy for the better.

The Company's recent press release dated May 17th, 2018, which announced a contract for a minimum order of 10,000 kg over two years from Asia, came sooner than expected and, as such, highlighted the need to have the optimum industrialization plan in place to be executed on the back of a significant take-or-pay contract. The Company has already taken steps to have an industrialization plan at the ready for multiple units (1, 3, and 5 units), and is now looking 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 September, 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. PyroGenesis is aggressively targeting both primary aluminum smelters in Asia and the Middle East where the market is estimated to be in excess of 1 million tonnes of dross[1], as well as tertiary casting producers worldwide. The Company has recently added zinc recovery from dross as a target market. These markets alone represent a potential market for DROSRITE™ systems numbering in the hundreds of units.

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 for demonstrations in Q3 2018. There is a high probability that PyroGenesis will be profitable in 2018 from DROSRITE™ system sales when combined with existing backlog.

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 $6MM, but now it seems that the interest is for two, for an estimated value of between $10-12 MM.

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.

[1] http://www.world-aluminium.org/statistics/primary-aluminium-production/

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.

D) HPQ:

On August 2, 2016, PyroGenesis announced that it had signed contracts totalling CAN$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 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 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 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.

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