

# NXT ENERGY SOLUTIONS INC.

Management's Discussion and Analysis

For the three and nine month periods ended September 30, 2018

# **Management's Discussion and Analysis**

The following management's discussion and analysis ("MD&A") was prepared by management based on information available as at November 14, 2018 unless otherwise stated, has been approved by the Board of Directors of the Company (the "Board"), and should be reviewed in conjunction with the unaudited condensed consolidated interim financial statements and related notes for the period ended September 30, 2018. This MD&A covers the unaudited three months ("Q3-18") and the nine months year-to-date ended September 30, 2018 ("2018 YTD"), with comparative totals for the three months ("Q3-17") and the nine months year-to-date ended September 30, 2017 ("2017 YTD").

As used in this MD&A, the terms "we", "us", "our", "NXT" and the "Company" mean NXT Energy Solutions Inc.

Our functional and reporting currency is the Canadian dollar. All references to "dollars" or "\$" in this MD&A refers to Canadian or CDN dollars ("CDN\$") unless specific reference is made to United States or US dollars ("US\$").

NXT and Stress Field Detector ("SFD<sup>®</sup>") in Canada and the United States are the registered trademarks of NXT.

# **Forward-looking Information**

Certain statements in this MD&A constitute forward-looking information under applicable securities laws. These statements typically contain words such as "intends", "plans", "anticipates", "expects", "scheduled", "estimates", "believes", "forecasts" or other variations, (including negative 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 relate primarily to:

- the anticipated use of proceeds from the Private Placement (as defined below);
- the timing and extent of potential future growth opportunities in new international markets including the potential securing of SFD<sup>®</sup> contracts, new business ventures, and the satisfaction by third-parties of certain necessary conditions related thereto including obtaining financing and government and regulatory approvals;
- estimates related to our future financial position and liquidity;
- estimated minimum annual commitments for our leased premises and equipment; and
- general business strategies and objectives.

This forward-looking information is based on a number of assumptions which may prove to be incorrect. Assumptions have been made with respect to the following matters, in addition to any other assumptions identified in this document:

- our ability to source personnel and equipment in a timely manner and at an acceptable cost;
- our ability to obtain all permits and approvals required;
- general business, economic and market conditions (including global commodity prices);
- the ability to obtain insurance to mitigate the risk of default on client billings; and
- foreign currency exchange and interest rates.

These forward-looking statements are based on current expectations and are subject to a wide range of known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Known risks include:

- our ability to generate sufficient ongoing cash flow from operations or to raise adequate capital to allow us to grow the business and continue operations;
- conducting operations in international markets;
- the emergence of alternative competitive technologies;
- protection of our intellectual property and rights to our SFD<sup>®</sup> technology;
- the loss of key personnel;
- our dependence on a limited number of clients;
- foreign currency and interest rate fluctuations may affect our financial position;
- changes in, or in the interpretation of, laws, regulations or policies; and
- volatility in oil and natural gas commodity prices may reduce demand for our services.

Although the Company has attempted to identify important factors and risks that could cause actual actions, events or results to differ materially from those described in the forward-looking statements, there may be other factors that cause actions, events or results to differ from those anticipated, estimated or intended.

For more information relating to risks, see the section titled "Risk Factors" in NXT's current annual information form. Except as required by law, NXT assumes no obligation to update forward-looking information should circumstances or the Company's estimates or opinions change. Accordingly, the reader is cautioned not to place undue reliance on forward-looking statements.

# Non-GAAP Measures

NXT's accompanying unaudited condensed interim consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States of America ("US GAAP"). This MD&A includes references to net working capital which does not have a standardized meaning prescribed by US GAAP and may not be comparable to similar measures presented by other entities. Net working capital is the net result of the difference of current assets less current liabilities. Management of NXT uses this non-GAAP measure to improve its ability to assess liquidity at a point in time.

# **Description of the Business**

NXT utilizes its proprietary and patented SFD<sup>®</sup> survey method to provide airborne, gravity-based geophysical surveys to companies involved in oil and gas exploration and production globally.

The discussion in this MD&A focuses on the highlights of NXT's ongoing business development activities, and any significant changes arising prior to the filing of our MD&A for the three and nine month periods ended September 30, 2018.

These condensed consolidated interim financial statements have been prepared on a going concern basis. The going concern basis of presentation assumes that NXT will continue in operation for the

foreseeable future and will be able to realize its assets and discharge its liabilities and commitments in the normal course of business.

The events described in the following paragraphs highlight that there is substantial doubt about NXT's ability to continue as a going concern within one year after the date that these financial statements have been issued.

As a result of the new contract negotiations taking longer periods of time than expected, NXT's working capital has declined since the closing of the Private Placement on July 3, 2018. The Company's current and forecasted cash position is not expected to be sufficient to meet its obligations for the 12 month period beyond the date that these financial statements have been issued.

While short-term SFD<sup>®</sup> survey prospects are expected to provide positive contributions to the Company's liquidity position, there is no certainty that these prospects will convert into executed contracts. The Company has taken steps to reduce corporate costs including a rationalization of professional fees and new Human Resource policies to reduce staffing costs. Management is also considering further actions which include alternatives to reduce aircraft and office lease costs, a possible greater emphasis on stock based compensation for board of director's fees, and an indefinite suspension of the Advisory Board. If required, further financing options that may be available to the Company include issuance of new equity, debentures or bank credit facilities. The need for any of these options will be dependent on the timing of securing new contracts and obtaining financing terms that are acceptable to both the Company and the financier.

NXT continues to develop its pipeline of opportunities to secure new revenue contracts. However, the Company's long-term success remains dependent upon its ability to convert these opportunities into successful contracts and to continue to attract new client projects and expand the revenue base to a level sufficient to exceed fixed operating costs and generate positive cash flow from operations. The occurrence and timing of these events cannot be predicted with certainty, as improved industry conditions and acceptance of revenue contracts are not within the control of management. These proposed resolutions may not be sufficient to permit the Company to continue operations beyond the immediate future.

The consolidated financial statements do not reflect adjustments that would be necessary if the going concern basis was not appropriate. If the going concern basis was not appropriate for these consolidated financial statements, then significant adjustments would be necessary in the classification and carrying value of assets and liabilities and the reported revenues and expenses.

# **Financial and Operational Highlights**

Key financial and operational highlights for the third quarter of 2018 include:

Following the Company's participation at the Upstream West Africa Summit in Senegal in Q2, NXT management traveled twice to Africa to meet with representatives of the Nigerian National Petroleum Corporation ("NNPC") and the Ghana National Petroleum Corporation ("GNPC") to discuss the benefits SFD<sup>®</sup> would bring to their current exploration programs.

- Discussions with NNPC and GNPC have continued in the fourth quarter of 2018 and NXT is providing SFD<sup>®</sup> due diligence material to facilitate their review of our technology for the potential utilization of SFD<sup>®</sup>.
- In September we were invited by BGP Inc., a subsidiary of China National Petroleum Corporation, to participate at its biannual "2018 BGP Technical Seminar" in Beijing, where over 200 industry experts came together. NXT has been in discussion with BGP executives and geoscientists for the last three years and has visited their respective headquarters. BGP also invited NXT to consider further business opportunities and has introduced NXT to their country managers. BGP operates in over 40 countries worldwide and is the largest seismic acquisition company in the world. NXT's forward strategy is to secure SFD<sup>®</sup> contracts with BGP and its affiliates.
- As a result of recent political changes in the government of Sri Lanka, our contract negotiations have been put on hold. We will assess the situation as to when discussions can be renewed.
- Following the signing of a MOU between Generation Resource Discoveries ("GRD"), NXT's regional representative, and the Government of Aceh, Indonesia on February 22, 2018, GRD has extended discussions, previously expected to conclude in August, to secure funding and the required permits for a geophysical survey over an area of up to 20,000 km<sup>2</sup> in the North Sumatra basin offshore Aceh, Indonesia. NXT management is planning to join GRD for meetings during the fourth quarter with the aim of successfully concluding financing and permit discussions. Upon successful completion of both components, NXT will work with GRD to design an SFD<sup>®</sup> survey to be included as part of the larger geophysical survey.
- NXT presented at the National Oil Company Assembly held in Amsterdam during September, 2018 which has generated new interest from certain oil and gas companies in attendance at the conference. NXT is following up with these companies directly.
- In September, 2018, NXT received a United States patent for its new sensor design we term the "Cascade" configuration.
  - The Cascade sensor is the result of NXT's continued research & development efforts and builds upon our existing US patent. Management believes the Company's Cascade sensors will provide enhanced ability for identifying trapped fluid bodies indicative of potential hydrocarbon accumulations along with improved reliability and flexibility during SFD<sup>®</sup> survey operations.
- NXT completed a private placement financing on July 3, 2018 of \$9,484,810 through the issuance of an aggregate of 10,264,946 units at \$0.924 per unit, marginally less than the original target of \$10,076,416 and the issuance of 10,905,212 units that was announced in the first quarter (the "Private Placement"). Each unit consists of one common share and one-third of one common share purchase warrant (each whole warrant, a "Warrant"), and each Warrant entitles the holder to acquire one common share at an exercise price of \$1.20 for twelve (12) months from closing of the first tranche of the Private Placement on February 16, 2018.
- NXT entered into an Investor Rights Agreement with Alberta Green Ventures Limited Partnership (the "Subscriber" or "AGV") in conjunction with the completion of the Private Placement. The Subscriber now holds approximately 20.0% of the Company's 68,573,558 outstanding common shares (including common shares issuable through the exercise of its warrants).
- No survey revenues were recorded for the first three quarters of 2018.
- A net loss of \$1.66 million was recorded for Q3-18, including amortization expense of \$0.45 million and stock-based compensation expense of \$0.11 million.
- A net loss of \$5.58 million was recorded for 2018 YTD, including amortization expense of \$1.34 million and stock-based compensation expense of \$0.56 million.

- Operating activities used \$1.60 million of cash during Q3-18 and net cash proceeds provided from financing activities was \$0.81 million.
- Losses per common share were \$0.02 for Q3-18 and \$0.09 for 2018 YTD (basic and diluted).
- Operating activities used \$4.88 million as at 2018 YTD and net cash from financing activities was \$9.19 million.
- General and administrative costs for 2018 YTD as compared to 2017 YTD have been reduced by \$0.59 million or 16% mostly due to a reduction in headcount and partially offset by increased business development activity.
- Cash and short-term investments at the end of the Q3-18 were \$5.41 million.

# **Private Placement Closing**

On July 3, 2018, the Company closed the final portion of the Private Placement, issuing 1,054,449 units for gross proceeds of \$974,311. The total amount raised in connection with the Private Placement was \$9,484,810 through the issuance of an aggregate of 10,264,946 units. Each unit was comprised of three (3) common shares and one (1) Warrant and as such an aggregate of 10,264,946 common shares and 3,421,646 Warrants were issued. And each Warrant entitles the holder to acquire one common share at an exercise price of \$1.20 for twelve (12) months from closing of the first tranche of the Private Placement on February 16, 2018. As a result of its investment in the Private Placement, AGV now holds approximately 20.0% of the Company's 68,573,558 outstanding common shares (including common shares issuable through the exercise of its Warrants).

In connection with the closing on the final amount of the Private Placement, the Company and AGV entered into an Investor Rights Agreement pursuant to which: (a) AGV has the right to nominate one director for election to the Board (subject to AGV maintaining an equity ownership of at least 10% in the Company); (b) AGV is entitled to participate in future equity or convertible security offerings of the Company in order to maintain its *pro rata* equity interest in the Company (subject to AGV maintaining an equity ownership of at least 10% in the Company); (c) AGV is entitled to a similar equity offering participation right in connection with certain new entities that may be created by the Company to expand the application of its proprietary technologies; and (d) AGV has agreed to a 18 month standstill from July 3, 2018 and a 12 month restriction on dispositions of 75% of the securities acquired in the Private Placement.

In Q3-18 there was no change in the intended use of proceeds from this Private Placement. Proceeds will continue to be critical in providing NXT with the capital necessary to finalize ongoing SFD<sup>®</sup> contract negotiations for the deployment of our SFD<sup>°</sup> technology.

# **Summary of Quarterly Results**

A summary of operating results for each of the trailing eight quarters (including a comparison of certain key categories to each respective prior quarter) follows.

	Q3-18 Sep 30	Q2-18 Jun 30		Q1-18 Mar 31		Q4-17 Dec 31
Survey revenue	\$ -	\$ -	\$	-	\$	-
Net loss	(1,660,031)	(1,961,114)	(1	L,954,650)	(2,	096,360)
Loss per share - basic	\$ (0.02)	\$ (0.03)	\$	(0.03)	\$	(0.04)
Loss per share - diluted	\$ (0.02)	\$ (0.03)	\$	(0.03)	\$	(0.04)

		Q3-17 Sep 30	Q2-17 Jun 30		Q1-17 Mar 31		Q4-16 Dec 31
Survey revenue	\$	-	\$ -	\$	-	\$	-
Net loss	(	1,935,356)	(2,723,956)	(2	,214,726)	(2,3	356,848)
Loss per share - basic	\$	(0.04)	\$ (0.05)	\$	(0.04)	\$	(0.04)
Loss per share - diluted	\$	(0.04)	\$ (0.05)	\$	(0.04)	\$	(0.04)

## Significant or Unusual Items Impacting Net Earnings:

There have been no revenues in the last eight quarters. The extent of the net loss in each quarter is mainly due to survey costs (related to aircraft lease and aircraft maintenance costs), G&A costs, and non-cash items like stock-based compensation expense ("SBCE"), which can be a significant expense in any given quarter. In addition net loss was effected by the impacts of changes in the following one-time adjustments and following events:

- In Q3-18 a gain of \$185,661 has been recognized on the extinguishment of the liability. Also interest income of \$26,171 was earned on cash received from the Private Placement.
- In Q1-18 G&A costs were lower as NXT began to recognize the full extent of cost reductions started in the prior quarter.
- In Q4-17 costs G&A costs were higher due to severance and other costs incurred to implement cost reduction plans.
- In Q2-17 all costs related to an SFD<sup>®</sup> multi-client survey conducted in the Gulf of Mexico were expensed.

#### **Summary of Operating Results**

	Q3-18	Q3-17	2018 YTD	2017 YTD
Survey revenue	\$-	\$-	\$-	\$-
Expenses:				
Survey costs	271,337	261,658	788,771	1,037,217
General and administrative	1,031,346	1,013,148	3,123,384	3,712,780
Stock-based compensation	110,446	162,724	559,521	497,005
Amortization of property & equipment	447,942	454,163	1,342,325	1,443,413
	1,861,071	1,891,693	5,814,001	6,690,415
Other Expenses (income):				
Interest Expense (income), net	(26,171)	199	(40,378)	4,925
Foreign exchange (gain) loss	10,614	9,507	478	26,788
Other expense (recovery)	(185,483)	33,957	(198,306)	79,323
	(201,040)	43,663	(238,206)	111,036
Income (loss) before income taxes	(1,660,031)	(1,935,356)	(5,575,795)	(6,801,451)
Income tax expense :	-	-	-	72,587
Net Income (loss) for the period	\$ (1,660,031)	\$ (1,935,356)	(5,575,795)	(6,874,038)
Net Income (loss) per share - basic	\$ (0.02)	\$ (0.04)	\$ (0.09)	\$ (0.13)
Net Income (loss) per share - diluted	\$ (0.02)	\$ (0.04)	\$ (0.09)	\$ (0.13)

Net loss for Q3-18 compared to Q3-17 decreased by \$275,325 (14%) or \$0.02 per share. This was mostly driven by clearing liabilities from before 2005 which were no longer payable, significant interest income of investing cash reserves and a reduction in stock-based compensation as previous option grants have been fully vested.

Net loss for 2018 YTD compared to 2017 YTD decreased by \$1,298,243 (19%) or \$0.04 per share. This was the result of cost reduction efforts in G&A, the Q2-17 Gulf of Mexico survey which was fully expensed, interest income and the extinguishment of the liability as described above. There were no revenues in any of the periods.

## Summary of Survey Expenses

	Q3-18	Q3-17	2018 YTD	2017 YTD
Aircraft lease costs	\$ 154,571	\$ 152,795	\$ 455,632	\$ 259,846
Amortization of deferred gain	(38 <i>,</i> 825)	(38,826)	(116,475)	(64,709)
Aircraft operations	155,532	146,624	449,441	470,843
Survey projects	59	1,066	173	371,237
Total Survey Expenses, net	271,337	261,659	788,771	1,037,217

During Q3-18, survey expenses related entirely to the aircraft lease and maintenance costs, net of charter hire revenue. Though aircraft operation costs were similar to the previous year, increased charter hours reduced the effect of increased scheduled maintenance in Q3-18.

During Q2-17, the Company entered into a sale and leaseback transaction of its aircraft (the "Leaseback Transaction"). Accordingly, subsequent to entering into the Leaseback Transaction in April 2017, survey expenses include the net costs related to this operating lease. The monthly lease payments are net of the amortized deferred gain on sale that was realized upon completion of the Leaseback Transaction.

In comparing 2018 YTD with 2017 YTD, costs for aircraft operations are lower because of increased charter hours which reduced the offset against operating costs. Aircraft lease costs in 2018 YTD are \$195,786 higher than 2017 YTD as the lease payments started in May 2017, which resulted in 4 months less of lease costs in 2017. Likewise, amortization costs are lower in 2018 YTD. During Q2-17, NXT completed its first ever SFD<sup>®</sup> multi-client survey in the Gulf of Mexico. There have been no sales for the SFD<sup>®</sup> data recorded and therefore the direct costs of the survey were expensed during the quarter. Survey costs only represent the direct costs that were incurred during operations of this survey and exclude any indirect costs associated with the use of the technology.

The aircraft is available for charter to third parties through our aircraft manager when it is not being used by NXT. Any charter fees received are used to offset aircraft costs.

<u>General and administrative expense</u> – all salaries and overhead costs related to SFD<sup>®</sup> data interpretation staff are included in G&A and not included with direct survey expenses. The categories of costs included in G&A are as follows:

G&A Expenses	Q3-18	Q3-17	net change	%
Salaries, benefits and consulting charges	\$ 513,220	\$ 548,582	\$ (35,362)	(6%)
Board, professional fees, & public company costs	180,188	217,666	(37,478)	(17%)
Premises and administrative overhead	192,642	192,340	302	(0%)
Business development	134,329	35,917	98,412	274%
Bolivian overhead	10,967	18,643	(7,676)	(41%)
Total G&A Expenses	1,031,346	1,013,148	18,198	2%

G&A Expenses	2018 YTD	2017 YTD	net change	%
Salaries, benefits and consulting charges	\$ 1,536,395	\$2,032,678	\$ (496,283)	(24%)
Board, professional fees, & public company costs	648,747	654,768	(6,021)	(1%)
Premises and administrative overhead	562,103	650,330	(88,227)	(14%)
Business development	343,683	167,999	175,684	105%
Bolivian overhead	32,456	207,005	(174,549)	(84%)
Total G&A Expenses	3,123,384	3,712,780	(589,396)	(16%)

G&A Expenses increased 2% or \$18,198 in Q3-18 compared to Q3-17 as the result of the Company increasing its efforts on business development. Increased business development spending was almost offset by successful cost reduction efforts in other areas.

- The main reason that salaries, benefits and consulting charges were lower in Q3-18 when compared to Q3-17 is due to a reduction in corporate headcount and offset by the timing of the refundable credit from the Scientific Research and Experimental Development Tax Incentive Program recognized in Q3-17. In 2018, the credit was recognized in Q2-18.
- Board, professional fees & public company costs, were 17% lower in Q3-18 compared to Q3-17 as the Company incurred costs indirectly related to financing in Q3-17.
- Premises and administrative overhead were flat in Q3-18 compared to the same period the prior year.
- Business development costs increased by \$98,412 as the Company increased marketing efforts for the SFD<sup>®</sup> technology. In Q3-17 the Company effectively suspended all marketing efforts.
- The Bolivian operations and office were closed in 2017, but the branch set up for tax and reporting purposes to satisfy Bolivian government requirements remains in a dormant status as of the end of Q3-18. The Company has decided to formally close the Bolivian branch to reduce any unforeseen liabilities with maintaining the branch in a dormant status. This should be completed in the fourth quarter of 2018. Q3-18 expenses are the estimated costs to complete the closing procedures. As the operations and office in Bolivia ceased in 2017, there is no effect on the financial results of the Company other than the closing costs.

G&A expenses decreased by 16% or \$589,396 in 2018 YTD compared to 2017 YTD.

- The main reason for salaries, benefits and consulting charges being lower in 2018 YTD than 2017 YTD is due to a reduction in corporate headcount. In addition, focus was put on reducing vacation liabilities.
- Board, professional fees and public company costs, were 1% lower in 2018 YTD compared to 2017 YTD as the Company incurred costs indirectly related to the Private Placement and termination costs for contracts as part of cost reduction efforts during 2018. On a year to date basis the Company is now seeing the savings from these cost reduction efforts.
- Premises and administrative overhead was 14% lower in 2018 YTD compared to the prior year, mostly due to lower property taxes and lower maintenance costs. In addition there were no temporary staff in 2018 YTD which reduced overhead spending in several areas like supplies.
- Business development costs increased \$175,684 as the Company increased marketing efforts for the SFD<sup>®</sup> technology during 2018.
- 2018 YTD Bolivian overhead costs of \$32,456 are related to closing of the branch.

<u>Stock-based compensation</u> – this expense varies in any given quarter or year as it is a function of several factors including the number of stock options issued in the period and the period of amortization (based on the term of the contract and/or number of years for full vesting of the options, which is normally three years) of the resultant expense. Also, SBCE is a function of periodic changes in the inputs used in the Black-Scholes option valuation model, such as volatility in NXT's trailing share price.

SBCE in Q3-18 was lower compared to Q3-17 by \$52,278. The expense was lower as headcount reductions caused the forfeiture of options during late 2017.

SBCE in 2018 YTD was higher compared to 2017 YTD by \$62,516. The expense was higher because of the vesting of 333,333 options granted in February 2018. No options were granted in 2017.

<u>Interest income (expense), net</u> – includes interest income earned on short-term investments netted by interest expense from capital lease obligations. Net interest income for Q3-18 was \$26,171 as compared to net interest expense of \$199 for Q3-17. For 2018 YTD net interest income was \$40,378 and for 2017 YTD net interest expense was \$4,925. Proceeds from the Private Placement were placed in short-term investments when they were received and therefore interest income increased versus the prior periods. Short-term investments were minimal in Q3-17 and 2017 YTD.

<u>Loss (gain) on foreign exchange</u> – this total is caused by changes in the relative exchange values of the US\$ and CDN\$. For example, when the CDN\$ trades higher relative to the US\$, cash held in US\$ and monetary assets denominated in US\$ will decline in value. This decline will be reflected as a foreign exchange loss in the period. NXT normally holds its cash and short-term investments in CDN\$ to reduce the effect of market volatility. The security deposit for the aircraft is held in US\$, which has a significant effect on the unrealized foreign exchange gain and loss.

The value of net US\$ monetary assets can vary widely each period, based on such factors as the extent of US\$ revenue contracts in process, and the level of US\$ cash and short-term investments on hand.

The valuation is also affected by the relative strength of the US\$ at each period end, resulting in both realized and unrealized net exchange movements on the net holdings of US\$ cash and other working capital items. The foreign exchange gain for the quarter was primarily caused by the translation of assets and liabilities in the Canadian Company which were held in US\$.

<u>Intellectual property and other expenses</u> – this category includes primarily costs related to intellectual property ("IP") filings and R&D activity related to the SFD<sup>®</sup> technology and costs for certain non-recurring, "project" activities.

Other Expenses	(	Q3-18	Q	3-17	20	18 YTD	201	7 YTD
Interest (income) expense, net	\$	(26,171)	\$	199	\$	(40,378)	\$	4,925
Unrealized foreign exchange loss		10,614		9 <i>,</i> 507		478		26,788
Intellectual property and R&D		1,046		31,916		(9 <i>,</i> 918)		72,943
Gain on extinguishment of liability		(185,661)		-		(185,661)		-
Other, net		(868)		2,041		(2,727)		6,380
Total Other Expenses, net		(201,040)		43,663		(238,206)		111,036

For 2018 YTD, the Company's Intellectual property and R&D expenses were negative as it incurred less costs from a provider of services than originally estimated. In Q3-18 the Company determined that liabilities it had recorded before 2005 were no longer payable. As a result, a gain of \$185,661 was recorded in other income on the extinguishment of the liability. No cash was paid to settle the liability. For 2017 YTD, other expenses consisted primarily of costs incurred to secure a patent for SFD<sup>®</sup> in the United States and to continue to develop SFD<sup>®</sup> technology.

<u>Intellectual property and related amortization expense</u> – NXT finalized its acquisition of specific rights to utilize the proprietary SFD<sup>®</sup> technology from its inventor, NXT's President & CEO, on August 31, 2015. As a result of this acquisition, NXT obtained the exclusive right to utilize the SFD<sup>®</sup> intellectual property in global hydrocarbon exploration applications.

The value attributed to the IP assets acquired in 2015 was \$25.3 million. The IP assets are being amortized on a straight-line basis over a 15-year period (future amortization expense of \$1,685,000 per year) and will also be subject to ongoing tests of potential impairment of the recorded net book value. No impairments were recognized during the three and nine months ended September 30, 2018 and 2017.

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Amortization Expenses	Q3-18	Q3-17	2018 YTD	2017 YTD
Property and equipment	\$ 26,759	\$ 32,980	\$ 78,775	\$ 179,863
Intellectual property	421,183	421,183	1,263,550	1,263,550
Total Amortization Expenses	447,942	454,163	1,342,325	1,443,413

Property and equipment amortization is lower for both the nine month period ending September 30, 2018 versus the same periods in the prior year due to the Leaseback Transaction.

<u>Income tax expense</u> – NXT periodically earns revenues while operating outside of Canada as a non-resident within certain foreign jurisdictions, and services rendered to clients in such countries may be subject to foreign withholding taxes, which are only recoverable in certain limited circumstances. Income tax expense for 2017 is a result of withholding taxes that were incurred on charges related to the Bolivia survey project. There was no income tax expense in Canada or Bolivia during 2018.

# **Liquidity and Capital Resources**

NXT's cash and cash equivalents plus short-term investments at September 30, 2018 was \$5,414,111.

As NXT is operating on a going concern basis, NXT's short term ability to generate sufficient cash depends on the success of signing contracts and receiving advance payments. NXT's longer-term success remains dependent upon our ability to continue to attract new client projects and expand the revenue base to a level sufficient to exceed G&A expenses and generate excess net cash flow from operations. Proceeds from past equity financings have been, and the proceeds from the Private Placement are expected to be, used to provide NXT with funds to pursue, close and implement commercial transactions currently in negotiation, develop additional revenue streams including multi-client data sales and strategic partnerships, and for general corporate and working capital purposes. Please also see Description of Business regarding the Going Concern assumption over the next 12 months.

Risks related to having sufficient ongoing working capital to execute survey project contracts are mitigated through our normal practice of obtaining progress payments from prospective clients throughout the course of the projects, which often span three to four months. In addition, where possible, risk of default on client billings has been mitigated through the use of export insurance programs offered by Export Development Canada.

During Q3-18, NXT continued to make progress in strengthening its liquidity and working capital position through a series of corporate actions described below.

**Reduction in corporate costs:** Following the completion of the Leaseback Transaction, NXT took further steps to reduce corporate costs. The most significant of these steps included a reduction in non-essential staff and new Human Resource policies to reduce staffing costs. Please see the discussion under "Summary of Operating Results – General and administrative expense" for the results of these reductions.

**Private Placement:** As discussed in the section Private Placement Closing, the Company closed the final portion of the Private Placement on July 3, 2018.

With the completion of the Private Placement and at current staffing and spending levels, NXT estimates it will have sufficient funds to meet its ongoing obligations for a period of approximately 11 months. After this period NXT will require additional funds in order to continue to seek revenue contracts, pay salaries, suppliers and to maintain its aircraft obligations.

NXT has no secured debt and had net working capital of \$5,052,393 as at September 30, 2018, as follows:

Net Working Capital Summary	Sept 30, 2018	Dec 31, 2017	net change as at Q3-18
Current assets (current liabilities)			
Cash, cash equivalents and Short-Term			
Investments	\$ 5,414,111	\$ 1,116,618	\$ 4,297,493
Accounts receivable	75,946	60,027	15,919
Prepaid expenses and deposits	100,919	107,363	(6,444)
Accounts payable and accrued liabilities	(496,763)	(1,562,394)	1,065,631
Income taxes payable	-	(201)	201
Current portion of capital lease obligation	(41,820)	(39,579)	(2,241)
Net Working Capital	5,052,393	(318,166)	5,370,559

The increase in working capital was due to the cash provided by the Private Placement, net of cash operating costs during the first three quarters of 2018 and lower liabilities.

The net decrease in accounts payable and accrued liabilities is comprised of the following movements:

Accounts Payable Summary	Sept 30, 2018	Dec 31, 2017	net change as at Q3-18
Trade accounts payable	\$ (50,638)	\$ (430,100)	\$ 379,462
Deferred gain on sale of aircraft	(155,301)	(155,301)	-
Deferred employee salaries	-	(380,548)	380,548
Deferred director /Advisory Board payable	(46,772)	(213,181)	166,409
Accrued liabilities	(208,339)	(212,701)	4,362
Vacation pay accrued	(35,713)	(170,563)	134,850
Total Accounts Payable	(496,763)	(1,562,394)	1,065,631

Trade accounts payable as at September 30, 2018 decreased by \$379,462 compared to those outstanding as at December 31, 2017 as several deferred payables were settled during the first three quarters of 2018.

Deferred employee salaries decreased to \$nil as the salary deferral program ended and employees were paid their outstanding deferred salaries.

Deferred director and Advisory Board fees decreased by \$166,409 as several of these outstanding liabilities were paid or settled upon termination of contracts during 2018.

Accrued liabilities remained consistent between periods as this balance accrues annual professional fees.

Vacation pay accrued decreased by \$134,850 as employees took significant vacation time and any remaining outstanding balances from prior years were settled.

The overall net changes in cash balances in each of the periods noted above is a function of several factors including any inflows (outflows) due to changes in net working capital balances and net of any cash transferred into/out of short-term investments. Further information on the net changes in cash, by each of the operating, financing, and investing activities, is as follows:

Cash Flow Summary - from / (used in)	Q3-18	Q3-17	2018 YTD	2017 YTD
Operating activities	\$(1,599,655)	\$(1,649,092)	\$ (4,881,527)	\$(4,950,496)
Financing activities	811,085	(9,252)	9,189,026	3,079
Investing activities	250,000	1,440,000	(4,060,006)	4,526,623
Net source (use) of cash	(538,570)	(218,344)	247,493	(420,794)
Cash and cash equivalents, start of period	952,681	288,046	166,618	490,496
Cash and cash equivalents, end of period	414,111	69,702	414,111	69,702
Cash and cash equivalents	414,111	69,702	414,111	69,702
Short-term investments	5,000,000	60,000	5,000,000	60,000
Total Cash and Short-Term Investments	5,414,111	129,702	5,414,111	129,702

Operating Activities	Q3-18	Q3-17	2018 YTD	2017 YTD
Net income (loss) for the period	\$(1,660,031)	\$(1,935,356)	\$(5,575,795)	\$(6,874,038)
Total non-cash expense items	356,628	578,833	1,598,400	2,085,702
	(1,303,403)	(1,356,523)	(3,977,395)	(4,788,336)
Change in non-cash working				
capital balances	(296,252)	(292,569)	(904,132)	(162,160)
Total Cash from (used in) Operating				
Activities	(1,599,655)	(1,649,092)	(4,881,527)	(4,950,496)

For all periods, changes in operating cash flow was driven by the lack of revenue and incurred operating costs for the period. Operating cash outflow decreased by \$49,437 when comparing Q3-18 versus Q3-17 as previously deferred liabilities were settled. When comparing 2018 YTD to 2017 YTD cost reduction and cash deferral efforts reduced the operating cash by \$810,941, but payments of deferred liabilities decreased non-cash working capital by \$741,972 resulting in a net improvement of \$68,969.

Financing Activities	Q3-18	Q3-17	2018 YTD	2017 YTD
Proceeds from exercise of stock options	\$-	\$-	\$ 5,067	\$ 30,420
Net proceeds from Private Placement	821,052	-	9,213,384	-
Repayment of capital lease obligation	(9,967)	(9,252)	(29,425)	(27,341)
Total Cash from (used in) Financing Activities	811,085	(9,252)	9,189,026	3,079

NXT recorded a net cash inflow of \$811,085 in Q3-18 and \$9,189,026 in 2018 YTD as a result of proceeds received from the closing of tranches in the Private Placement.

Investing Activities	Q3-18	Q3-17	2018 YTD	2017 YTD
Sale/(purchase) of property and equipment	\$-	\$-	\$ (10,006)	\$3,133,533
Decrease (increase) in short-term investments	250,000	1,440,000	(4,050,000)	1,393,090
Total Cash from (used in) Investing Activities	250,000	1,440,000	(4,060,006)	4,526,623

Short-term investments in Q3-18 decreased by \$250,000 to pay operating costs and clear liabilities, offset with cash received from the Private Placement. 2018 YTD short-term investments increased as a result of the Private Placement. In Q3-17 and 2017 YTD, short-term investments decreased to fund operations. During Q2-17 funds were received from the Leaseback Transaction.

## **Contractual Commitments**

## Aircraft and office premises lease

NXT has an operating lease commitment on its Calgary office space for a 10-year term at an estimated minimum monthly lease payment of \$48,937 (including operating costs).

The leaseback of NXT's aircraft is an operating lease with a minimum term of 60 months and monthly lease payments of approximately US\$39,500.

The estimated minimum annual commitments for these leases are as follows, as at September 30, 2018:

For the period ended December 31	Office Premises			Aircraft
2018	\$	146,811	\$	153,398
2019		587,244		613,593
2020		590,221		613,593
2021		599,153		613,593
2022		599,153		153,398
		2,522,582		2,147,575
Thereafter, 2023 through 2025		1,647,670		-
		4,170,252		2,147,575

#### **Financial Instruments**

The Company's non-derivative financial instruments consist of cash and cash equivalents, short-term investments, accounts receivable, accounts payable and accrued liabilities and capital leases. The carrying value of these financial instruments approximates their fair values due to their short terms to maturity. NXT is not exposed to significant interest or credit risks arising from these financial instruments, though NXT will not be able to meet its obligations for its capital and operating leases NXT is exposed to foreign exchange risk as a result of periodically holding foreign denominated financial instruments. Any unrealized foreign exchange gains and losses arising on such holdings are reflected in earnings at the end of each period.

As at September 30, 2018, the Company held no derivate financial instruments.

# Additional Disclosures – Outstanding Share Capital and Dilutive Securities

			As at
	November 14, 2018	September 30, 2018	December 31, 2017
Common shares issued and outstanding:			
Common shares	68,573,558	68,573,558	58,161,133
Common shares issuable upon exercise:			
Warrants	3,421,646	3,421,646	0
Stock options	2,319,500	2,219,500	1,648,667
Total Share Capital and Dilutive Securities	74,314,704	74,214,704	59,809,800

## **Off-Balance Sheet Arrangements**

The Company has no off-balance sheet arrangements as November 14, 2018 of this MD&A.

## **Other Transactions with Related Parties**

One of the members of NXT's Board of Directors, Thomas Valentine is a partner in the law firm Norton Rose Fulbright, which provides legal advice to NXT. Legal fees (including costs related to share issuance) incurred with this firm were as follows:

		For the three-month period ended September 30		e-month period d September 30
	2018	2017	2018	2017
Legal Fees	\$ 32,266	\$ 11,796	\$ 241,422	\$ 83,263

Accounts payable and accrued liabilities includes a total of \$11,873 (\$120,479 as at December 31, 2017) payable to this law firm. Norton Rose Fulbright continues to provide legal services to NXT.

In addition, accounts payable and accrued liabilities include \$52,285 (\$14,210 as at December 31, 2017) related to re-imbursement of expenses owing to the CEO and CFO of NXT.

#### **Critical Accounting Estimates**

The key elements and assumptions are substantially unchanged from those described in NXT's annual audited consolidated financial statements as at and for the year-ended December 31, 2017.

The following is also important to note:

#### Revenue recognition

Revenue earned on SFD<sup>®</sup> survey contracts (net of any related foreign sales taxes) is recognized on a completed contract basis. This method of revenue recognition is currently deemed appropriate given the complex nature of the end product that is delivered to the client. While the quantity of data acquisition can be measured based on actual line kilometers flown, the acquired SFD<sup>®</sup> data does not realize its full value until it is processed, interpreted in detail, and a recommendations report is generated and reviewed with the client's geological and geophysical staff.

All funds received or invoiced in advance of completion of the contract are reflected as unearned revenue and classified as a current liability on our balance sheet. All survey expenditures and obligations related to uncompleted SFD<sup>®</sup> survey contracts (including directly-related sales commissions) are reflected as work-in-progress and classified as a current asset on our balance sheet. Upon completion of the related contract, unearned revenue and the work-in-progress is moved as appropriate to the statement of earnings (loss) as either revenue or survey cost. Survey costs do not include any salaries and overhead related to SFD<sup>®</sup> data interpretation staff (which is included in G&A expense) or amortization of property and equipment expense.

#### **Changes in Accounting Policies**

#### Issued but not yet adopted: Leases

In February 2016, the FASB issued new guidance on leases. The new guidance requires lessees to recognize most leases, including operating leases, on the balance sheet as lease assets and lease liabilities. In addition, lessees may be required to reassess assumptions associated with existing leases as well as to provide expanded qualitative and quantitative disclosures. The new guidance is effective January 1, 2019. NXT is currently evaluating the impact of the adoption of this new guidance on its consolidated financial statements and thus far has determined it will result in two leases, our aircraft lease, and our office lease, being recognized on the balance sheet as lease assets entry and a corresponding lease liabilities entry. The Company will continue to evaluate its leases to determine the exact impact that the adoption of the standard will also have on interest expense from lease liabilities and depreciation expense within earnings. Once further phases of the review are complete, a more precise quantitative estimate of the impact on the consolidated financial statements will be made.

#### **Risk Factors**

Risk factors facing the Company are described Annual Information Form for the year ended December 31, 2017, dated March 29, 2018, which has been filed electronically by means of the System for Electronic Document Analysis and Retrieval ("SEDAR") located at www.sedar.com.

## Disclosure Controls and Procedures ("DCP") and Internal Controls over Financial Reporting ("ICFR")

NXT's Chief Executive Officer (the "CEO") and Chief Financial Officer (the "CFO"), together the "Responsible Officers") are responsible for establishing and maintaining DCP, or causing them to be designed under their supervision, for NXT to provide reasonable assurance that material information relating to the Company is made known to the Responsible Officers by others within the organization, particularly during the period in which the Company's quarterly and year-end consolidated financial statements and MD&A are being prepared.

DCP and other procedures are designed to ensure that information required to be disclosed in reports that are filed is recorded, summarized and reported within the time periods specified by the relevant security authority in either Canada or the United States of America. DCP include controls and procedures designed to ensure that information required to be disclosed in our reports is communicated to management, including our Responsible Officers, to allow timely decisions regarding required disclosure.

The Company has established and maintains ICFR using the criteria that were set forth by the Committee of Sponsoring Organizations of the Treadway Commission in Internal Control – Integrated Framework (2013). The control framework was designed or caused to be designed under the supervision of the CEO and CFO to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with US GAAP.

In an evaluation of the effectiveness of the Company's DCP as defined under the rules adopted by the Canadian securities regulatory authorities and by the United States Securities and Exchange Commission, the Company's Responsible Officers concluded that there are material weaknesses in the Company's ICFR that have a direct impact on the Company's DCP:

- due to the limited number of staff, it is not feasible to achieve adequate segregation of incompatible duties. NXT mitigates this deficiency by adding management and Audit Committee review procedures over the areas where inadequate segregation of duties are of the greatest concern, and
- NXT does not have a sufficient level of staff with specialized expertise to adequately conduct separate preparation and a subsequent independent review of certain complex or highly judgmental accounting issues. These complex areas have historically included accounting for income taxes and equity related transactions. NXT mitigates this deficiency by preparing financial statements with their best judgments and estimates of the complex accounting matters and relies on reviews by management, external consultants and the Audit Committee for quality assurance.

From time to time to reduce these risks and to supplement a small corporate finance function, the Company engages various outside experts and advisors to assist with various accounting, controls and tax issues in the normal course.

The small size of the Company's finance team has resulted in control deficiencies in maintaining DCP and ICFR that in turn have led to a recurrence of previously identified deficient disclosure and the requirement for refiling of certain disclosure documents. To address this issue and improve ICFR moving forward, management has established a practice of increased engagement of the Company's Disclosure Committee and Audit Committee in reviewing the public disclosure and has increased engagement of external consultants and legal counsel as well.

NXT's efforts to mitigate the risks associated with the above-mentioned deficiencies has resulted in an improvement in its DCP. The CEO and CFO concluded that, as at September 30, 2018, the Company's ICFR have improved, but are still not effective and as a result its DCP are still not sufficiently effective. NXT reached this conclusion based upon its assessment that there is a remote likelihood that its ICFR will not prevent or detect material misstatements if they should exist in the Company's consolidated financial statements. NXT continues a process of continuous improvement in financial reporting and disclosure policies and responsibilities from which the Company expects to see benefits over the remainder of 2018. The Responsible Officers continue to take certain actions to remediate these material weaknesses including: (i) the implementation of new controls with regards to the review procedures surrounding its disclosure and (ii) engagement of third-party specialists. In addition, the Corporation is taking actions to remediate these material weaknesses by taking steps to provide continuity of the Chief Financial Officer role in light of the imminent resignation of the current CFO and recruiting of a full-time Controller in order to better segregate incompatible duties internally. The new controls have been performed over two periods; and are being tested. Material weaknesses cannot be considered remediated until the remedial controls operate for a sufficient period of time and Responsible Officers have concluded through testing, that these controls are operating effectively.

It should be noted that a control system, including the Company's DCP and ICFR procedures, no matter how well conceived, can provide only reasonable, but not absolute assurance that the objectives of the control system will be met and it should not be expected that the DCP and ICFR will prevent all errors or fraud.

# **Additional Information**

Additional information related to the Company including the Company's Annual Information Form is available on NXT's website at www.nxtenergy.com and on SEDAR at www.sedar.com.