

# **Dundee Sustainable Technologies Inc.**

Management's Discussion and Analysis

For the nine months ended September 30, 2016

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# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

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# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2016

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### BACKGROUND

This Management's Discussion and Analysis ("MD&A") of Dundee Sustainable Technologies Inc. ("DST" or the "Corporation") constitutes management's review of the factors that affected the Corporation's financial and operating performance for the nine months ended September 30, 2016.

This MDA should be read in conjunction with the Corporation's audited consolidated financial statements, including the notes thereto, as at and for the year ended December 31, 2015 (the "2015 Audited Consolidated Financial Statements"), together with the accompanying MD&A for the year then ended, and with the unaudited condensed interim consolidated financial statements of the Corporation as at and for the nine months ended September 30, 2016 (the "September 2016 Interim Consolidated Financial Statements"), all of which have been prepared using International Financial Reporting Standards ("IFRS").

Unless otherwise noted, all figures are in Canadian dollars, the presentation and functional currency.

### INCORPORATION AND NATURE OF OPERATIONS

#### Incorporation

The Corporation was incorporated under the Canada Business Corporations Act on July 22, 1997. The Corporation's head office is located at 1002 Sherbrooke West, Suite 2750, Montréal, Quebec, Canada, H3A 3J2.

The authorized capital of the Corporation consists of an unlimited number of subordinate voting shares and multiple voting shares, each multiple voting share having 10 votes.

Dundee Corporation ("Dundee") retains multiple voting shares of the Corporation, which are convertible, at the option of Dundee, into subordinate voting shares of the Corporation, for no additional consideration. The multiple voting shares of the Corporation are not listed on a stock exchange.

At September 30, 2016, Dundee owned 178.1 million subordinate voting shares and 50.0 million multiple voting shares of the Corporation giving Dundee a 66% equity interest and an 85% voting interest in the Corporation.

#### Nature of Operations

The Corporation is engaged in the development of environment-friendly technologies for the treatment of materials in the mining industry. Through the development of patented, proprietary processes, DST extracts precious and base metals from ores, concentrates and tailings, while stabilizing contaminants such as arsenic, which could not otherwise be extracted or stabilized with conventional processes because of metallurgical issues or environmental considerations. Currently, the Corporation is focused on two primary processes:

#### *Gold Extraction by Chlorination*

At present, DST's most advanced proprietary process is associated with the extraction of precious metals using chlorination to provide a cyanide-free alternative for the exploitation of gold deposits. The primary benefits of this innovative technology are shorter processing times, and a closed-loop operation, eliminating the need for costly tailing ponds and reducing the environmental footprint of the inert and stable cyanide-free tailings.

The chlorination process developed by DST is a recognized "green technology" for which it was awarded a \$5 million grant by the Government of Canada, through its Sustainable Development Technology Fund ("SDTC"), for the construction and operation of a demonstration plant. The plant serves as a demonstration platform for the chlorination process on an industrial scale and under continuous operating conditions.

The Corporation has received, from Environment Canada, through the Canadian Environmental Technology Verification Program ("ETV"), an independent certification of the performance of its cyanide-free gold extraction process.

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### *Arsenic Stabilization by Vitrification*

In 2015, DST completed the construction of a pilot plant designed to demonstrate its arsenic stabilization process, which is designed for the sequestration of this contaminant in a stable glass form. This process involves a technique to segregate arsenic and therefore provides opportunities to process materials considered too toxic to be exploited or stabilized using conventional mining methods.

These processes are subject to all risks inherent in their development and may require significant additional development, testing and investment prior to final commercialization. There can be no assurance that such technologies will be successfully developed, or that output from any use of the Corporation's processes could be produced at a commercial level at reasonable costs or successfully marketed. To date, the Corporation has not earned significant revenues and is considered to be in the development stage.

## CORPORATE OVERVIEW

### *Metallurgy Processes Development*

Cyanidation, a commonly used process for gold extraction, typically produces large amounts of highly contaminated tailings. DST has developed a cyanide-free alternative for the recovery of precious metals applicable to both oxide (metals combined with oxygen) and sulfide (metals combined with sulfur) ores. In addition to environmental benefits, the cyanide-free chlorination process allows the exploitation of gold deposits that face metallurgical constraints or environmental permitting issues associated with the use of cyanide.

The DST hydrometallurgical process applied to sulfide ores commences with an oxidation stage in order to remove the sulfur and other impurities such as arsenic in the ore. The completion of this oxidation step transforms the sulfide into an oxide with the removal of the sulfur from the metal and its replacement by oxygen. When this transformation is complete, the newly formed oxide is subjected to the DST treatment, using acid leaching to collect base metals (Copper and Zinc) and hypochlorite to collect the precious metals (Gold and Silver).

The arsenic collected during the oxidation stage is then stabilized and rendered inert in a glass form, using DST's second patented novel methodology. The DST method has a more stable outcome and is less costly than current industrial practices. This approach to stabilize arsenic in glass is a technique to segregate arsenic in the extraction process and therefore provides opportunities for deposits or concentrates considered too toxic with arsenic to be exploited using conventional methods. It also represents an opportunity for existing copper smelting operators who are looking for a technology to stabilize the arsenic bearing flue dust, which are inherent in such operations.

Arsenical flue dust is produced through the smelting of arsenic bearing copper ores. During the copper smelting-converting process, most of the arsenic is vaporized and appears in the flue dust as arsenic trioxide along with fine particles of metal or metallic compounds. The arsenic trioxide in the flue dust is then captured in the filters of the smelter and converted into a stabilized inert glass form.

Few facilities in the world are capable of treating material containing high levels of arsenic. For this reason, DST has developed various approaches, which allow the removal of arsenic contained in the ore and the sequestration of the removed arsenical product. This implies that contaminated material can be subject to an arsenic removal pre-treatment generating a stable insoluble arsenic product prior to being sent to traditional smelters.

### *Intellectual Property*

DST has protected its intellectual property by filing patents during the development of its technologies. To date, DST has patents granted, published or pending on 13 different processes for its technologies. The Corporation has 18 patents granted or published and 39 patents pending or filed in 16 countries. The patents to which the Corporation currently has rights expire between 2022 and 2034.

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### Green Technology and Government Support

DST's chlorination process has been recognized as a "green technology", for which it has been awarded a \$5 million grant by SDTC, for the construction and operation of the demonstration plant.

Given the significant economic benefits of its technologies, the Corporation has attracted strong government support. In addition to the Government of Canada's support, during 2015, Investissement Quebec ("IQ") completed a \$5 million private placement of equity and debt.

Since June 2016, the performance claims of DST' *"Cyanide-Free Gold Extraction Process has been verified by Canadian Environmental Technology Verification"*. ETV provides an independent evaluation of new technologies with a view to validate environmental claims so that users, developers, regulators, and other parties can make informed decisions about purchasing, applying and regulating innovative technologies. Verification builds vendor credibility and buyer confidence by providing assurance that environmental performance claims are valid, credible and supported by high quality, independent test data and information. ETV was introduced in Canada in 1997 to support the implementation of innovative environmental technologies. ETV is delivered by GLOBE Performance Solutions under a license agreement from Environment Canada.

### **DEMONSTRATION PLANT AND PROCESSING FOR THE CHLORINATION TECHNOLOGY**

The current stage of DST's chlorination process is the result of 16 years of efforts in combined laboratory development and pilot scale validation. The results obtained at a laboratory scale led to the construction and operation of a pilot plant between 2010 and 2012 in order to pursue the development of DST's chlorination extraction technology. With successful piloting results, the next stage was the development of the technology at an industrial scale. This required the construction of a demonstration plant which could operate on a continuous basis.

Construction of the plant commenced in 2013, and commissioning was successfully completed in late 2015 enabling the Corporation to proceed with the demonstration phase of the project. When operating at full capacity, the demonstration plant can process approximately 5,000 tonnes of concentrate per year.

#### Construction phase

The demonstration plant has a nominal capacity of 15 tonnes per day of concentrate in order to assess DST's chlorination extraction technology under continuous operating conditions. The demonstration plant offers the first test of DST's chlorination extraction technology in an operating environment with industrial conditions. The scale-up factor is in the order of 15:1 compared to the pilot installation. Although the size of the demonstration plant seems modest according to references in the mining industry, it is large enough to establish the credibility of the process on an industrial scale. This demonstration plant serves as a reference for the establishment of full-scale plants operating with the same technology.

The construction and operation of the demonstration plant, which commenced in June 2013, was budgeted at \$25 million. This budget included a contingency of approximately 15%. The construction has been completed on budget and its construction plan, with no major issues and the contingency has not been used. The construction and commissioning of the plant were completed in June 2015 and October 2015 respectively.

#### Processing phase

In order to establish the proof of concept of the Corporation's chlorination technology, the Corporation established a consortium agreement with SDTC and Dundee Precious Metals Inc. ("DPM") in June 2013. SDTC agreed to financially assist the Corporation in developing and demonstrating its technology by contributing up to \$5 million upon meeting certain conditions.

DPM agreed to supply concentrate, from its Bulgarian mining operations for processing. Processing commenced at the demonstration plant in November 2015 and was completed in March 2016. Under the terms of the arrangement with DPM, costs associated with providing the concentrate to the Corporation were absorbed by DPM, and all extracted metals from the concentrate will be returned to DPM.

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DST processed 170 tonnes of a gold and copper bearing refractory concentrate and the extraction yield obtained by the DST technology was 14% higher on average than cyanidation. The Corporation has also submitted these results to the ETV external validation program, in order to obtain an independent review. ETV issued its certification in June 2016.

The certification confirms that the DST *Cyanide-Free Gold Extraction Process* successfully extracted an average of 81%, with a maximum of 90%, of the gold content from a refractory gold bearing pyrite concentrate, while the cyanide extraction process achieved an average of 71% on the same material. This material is from a jurisdiction which has restricted the use of cyanide within its territory. This refractory concentrate was chosen due to the difficulty of extracting its gold using conventional processes, hence demonstrating the effectiveness of the DST gold process.

The processing of concentrate also allowed the Corporation to confirm the efficiencies of the components of the demonstration plant which responded well and according to the expectations. In that regards, the oxidation circuit successfully removed 99% of the sulfide content while keeping full control over the gases. The chlorination circuit delivered the anticipated copper and gold recoveries which were 14% higher on average than cyanide yields on same samples. Finally, the process successfully demonstrated its closed circuit operation with the recycling and regeneration of the reagents and all solid residues met environmental norms.

The performance test sampling was conducted at DST's demonstration plant according to the test protocol developed by STS Canada Inc. and under its supervision. Samples were submitted for analysis to SGS Canada – Mineral Services – Lakefield, an accredited laboratory.

In addition to the processing of concentrate received from DPM, in September 2015, the Corporation announced that it had entered into an agreement with Empresa Nacional de Minería, Chile (ENAMI) for the processing of two tonnes of gold concentrate using the chlorination process. In March 2016, the Corporation announced that through the chlorination process, it achieved a gold recovery of 98.8% from its piloting campaign on the ENAMI concentrate. These results enabled DST to move forward on to the next stage of the arrangement with ENAMI, which involved the processing of a larger quantity of material at the demonstration plant starting August 2016. Dundee Technologies will continue with the processing of this material in the demonstration plant in the coming weeks and, if successful, will be followed by an independent technical-economic study, with the objective of building a processing facility in Chile.

The concentrate contains an estimated 115 g/tonne of gold, 9.0% copper and mercury content in excess of 600 g/tonne. This complex material is difficult to process using conventional processing methods without the associated environmental liabilities and metallurgical challenges.

Up to September 30, 2016, the Corporation has expended \$18.4 million towards the construction and operation of the demonstration plant and it intends to incur a further \$0.5 million in processing costs during 2016.

#### **PILOT PLANT FOR THE ARSENIC STABILIZATION TECHNOLOGY**

During 2015, DST constructed a pilot plant for its arsenic stabilization process, which calls for the sequestration of the contaminants in a stable glass form.

In February 2016, the Corporation entered into an agreement with an international gold mining company to evaluate the feasibility of integrating DST stabilization process to arsenical matter produced by that company's operations.

The first stage of the agreement, completed during the third quarter of 2016, confirmed, on a pilot plant scale, that the technology can be successfully implemented on the matter targeted for stabilization by the gold mining company. During the course of the piloting program, DST reached optimal processing conditions for the successful vitrification of arsenical matter provided by this company. Several piloting runs allowed for arsenical material to be processed and to generate 670 kg of vitrified arsenical matter. This program demonstrated the stability of the produced glass, which contained up to 20.4% arsenic, by passing the United States

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Environmental Protection Agency's (EPA) toxicity characterization leaching procedure (TCLP, Method 1311) with 2.09 mg of arsenic per litre (limit of 5 mg/L).

DST is in discussion with the gold mining company to evaluate the technical and economic implication of an arsenic vitrification demonstration plant, to be located at the site of the gold mining company's operations.

In addition to the use of this process in extraction activities, the same technology presents an opportunity to copper smelting operations that are looking to stabilize the arsenic-bearing flue dust, which is inherent in such operations. In September 2015, the Corporation entered into an agreement with EcoMetales, a 100% Codelco subsidiary, to test the DST technology in order to go ahead with a collaboration agreement and process residues arsenical flue dust produced by Chilean operations, using DST's technology.

The Corporation received one tonne of flue dust from EcoMetales, in March 2016, to be used for the testing program. This program is to demonstrate that flue dust can be successfully treated, to recover the metallic units contained as sulphide in the flue dust and to stabilize the arsenic using DST's vitrification technology as a complement to EcoMetales technology (scorodite). The Corporation completed the preliminary testing during the third quarter of 2016.

This program is part of a phased approach established between DST and EcoMetales with the objective of implementing a processing facility, utilizing DST's patented technology, in Chile.

### **BUSINESS STRATEGY**

The growing pressure from communities and government authorities over the use of cyanide in various jurisdictions around the world is forcing developing gold projects to seek alternative processes that can extract the gold without the environmental liabilities associated with cyanide.

DST offers a competitive alternative to the cyanidation process. The technology is at the forefront of the mining industry's innovative extraction processes and caters to the worldwide growing need for extractive technologies capable of processing refractory and arsenic bearing material. This alternative provides DST leverage to access quality material including material from metallurgically or environmentally constrained deposits.

In the short term, the business model encompasses the implementation of its technology under arrangements with mine owners and operators.

DST's business plan is focused on keeping ownership of both of its technologies and leveraging it to become a major player in the industry. The Corporation has a unique opportunity to emerge as a major stakeholder in multiple mining projects without having to commit to a large financial footprint. In the immediate term, DST is focused on advancing its discussions with major gold and copper producing companies on building arsenic vitrification plants to treat flue dust. The Corporation is currently processing test material for a number of customers. Assuming successful results, the next step is to negotiate the business terms with those customers for commercializing its technologies.

The Corporation believes that, upon first adoption by a major company, a significant percentage of the industry will be motivated to evaluate the technology both for treating flue dust as well as concentrate.

The technology that the Corporation has developed with respect to toxic deposits will allow for the development and or advancement of mining projects that would not be viable without its patented technology. DST has identified over 100 gold projects that could face significant concerns due to cyanide use, environmental and/or metallurgical constraints. These include some of the largest gold projects on the planet. The commercialization of the Corporation's technology would enable mining companies to advance those projects which are currently constrained because of the toxic nature of their deposits and discussions have commenced with a number of mining companies to help advance these otherwise stranded deposits.

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**INFORMATION ON EQUITY**

The authorized capital of the Corporation consists of an unlimited number of subordinate voting shares and multiple voting shares, without nominal or par value. The holders of subordinate voting shares are entitled to one vote for each subordinate voting share and the holders of multiple voting shares are entitled to ten votes for each multiple voting share. The holders of subordinate voting shares and multiple voting shares shall be entitled to receive and to participate equally as to dividends, share for share, in an equal amount on all the subordinate voting shares and multiple voting shares at the time outstanding. The holder of multiple voting shares shall be entitled at any time and from time-to-time to have any or all of the multiple voting shares converted into subordinate voting shares based on one subordinate voting share for each multiple voting share. In all other respects, the holders of subordinate voting shares and multiple voting shares shall rank equally and the same rights and restrictions.

	<b>October 26, 2016</b>
Subordinate voting shares issued	297,090,816
Options	11,077,500
<b>Total – fully diluted subordinate voting shares</b>	<b>308,168,316</b>
<b>Multiple voting shares issued (each multiple voting shares have 10 votes)</b>	<b>50,000,000</b>

(1) At October 26, 2016, Dundee owned 178,068,497 subordinate voting shares of the Corporation (60%) and all of the outstanding multiple voting shares.

**STOCK OPTION PLAN**

The Board of Directors of the Corporation has full and final discretion to designate the persons who are to be granted options and to determine such number of options as well as their exercise price and vesting period. The exercise price shall not be less than that permitted under the rules of any stock exchange on which the subordinate voting shares are listed. The purpose of the stock option plan is to serve as an incentive for the directors, officers, employees and service providers who will be motivated by the Corporation's success as well as to promote ownership of common shares of the Corporation by these people. There is no performance indicator relating to profitability or risk attached to the plan.

**FINANCING ACTIVITIES**

*Nine months period ended September 30, 2016*

*IQ loan*

As part of the convertible debenture loan ("IQ Loan") approved in an amount of up to \$4,000,000, IQ advanced \$1,500,000 to the Corporation in April 2016 and \$600,000 in September 2016 bringing the total loan to \$4,000,000.

This loan was advanced to the Corporation during the construction and operation of its demonstration plant, based on the Corporation's liquidity needs, subject to a number of conditions.

The IQ Loan, which is evidenced by a secured convertible debenture, will mature in five years, bears interest at a rate of 8% per annum, payable quarterly, and can be converted after one year at the holder's option into subordinate voting shares of the Corporation at a conversion price equal to the closing market price of the shares on the day prior to conversion. After the first anniversary of the IQ Loan, the Corporation has the right to redeem the IQ Loan subject to a 10% premium.

The IQ Loan is secured by a hypothec, *pari passu* with Dundee's Loans and Canada Economic Development for Quebec Regions' ("CED") contribution, over all of the Corporation's property other than its intellectual property and is guaranteed by Dundee, in an amount of up to \$1.5 million.

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In connection with the IQ financing, the Corporation has entered into an agreement with IQ granting IQ the right to appoint one member of the Board of Directors of the Corporation. Consequently, at the annual general meeting of the shareholders held in July 2016, Mr. Mario Jacob was elected as new member of the Board. He is a graduate from the Faculty of Law of Laval University and a member of the Quebec Bar since 1995. Mr. Jacob has more than twenty years of corporate finance, mergers and advisory experience and has been involved as lead advisor in numerous transactions including mergers and acquisition, going public transactions, financing and governance best practices implementation. Mr. Jacob has experience as board member of several public companies.

#### *Bridge Loan*

In August 2016, an unsecured bridge loan, payable on demand, of \$200,000 was advanced to the Corporation. The loan was reimbursed in September 2016 including interest of \$3,000.

#### *Nine months period ended September 30, 2015*

#### *Private placement*

In May 2015, the Corporation completed a \$5 million financing with Investissement Quebec ("IQ") consisting of a secured convertible loan (the "IQ Loan") in an amount of up to \$4 million and the issuance of 15,384,615 subordinate voting shares at a price of \$0.065 per share, for proceeds to the Corporation of \$1 million. The financing was used to fund completion and operation of its demonstration plant, the installation of a concentrator and for working capital purposes. Issuance cost of \$64,876 relating to this financing consisted mainly of legal fees.

#### *Warrants exercise*

In July 2015, all of the 50,000,000 warrants held by Dundee have been exercised for an equal number of subordinate voting shares at a price of \$0.10 per warrant, for aggregate proceeds to the Corporation of \$5,000,000.

#### *IQ Loan*

IQ advanced \$1.9 million in July 2015. Transaction costs in the amount of \$92,201 incurred in connection with the IQ loan consist mainly of legal fees.

#### *Short-term loan with a related party*

In 2014, Dundee Resources Limited, a wholly-owned subsidiary of Dundee, agreed to loan (the "Short-term Loan") up to \$6,000,000 to the Corporation. In February 2015, the aggregate amount of the loan facility was increased by \$1,650,000.

During the first nine months of 2015, an amount of \$2 million was advanced bringing the total advance to \$7,650,000 as at September 30, 2015.

The secured loans bear interest at the rate of 12.68% per annum and mature on the earlier of November 30, 2015 and the date at which the Corporation raises the sum of \$10 million or greater by way of debt or equity.

#### *Bridge loan*

In April 2015, an unsecured bridge loan, payable on demand, of \$200,000 was advanced to the Corporation. The loan was reimbursed in May 2015 including interest of \$4,000.

In June, 2015, an unsecured bridge loan, payable on demand, of \$300,000 was advanced to the Corporation. The loan was reimbursed in July 2015 including interest of \$6,000.

### **LIQUIDITY AND WORKING CAPITAL**

On September 30, 2016, the working capital of the Corporation was at negative \$9,719,273 (a negative \$7,454,566 as at December 31, 2015). This working capital deficiency includes a \$9,754,986 (\$9,027,586 as at December 31, 2015) short-term loan (principal and accrued interest) from Dundee. Management estimates that the Corporation will not have sufficient funds to meet its obligations and budgeted expenditures through

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to September 30, 2017. The Corporation will therefore periodically have to raise additional funds to continue operations. The Corporation is pursuing financing alternatives to fund its operations and to continue its activities as a going concern. Although there is no assurance that the Corporation will be successful in these actions, management believes, based on previous fund raising experience, that it will be able to secure the necessary financing through the issuance of debt or new equity in public or privately negotiated equity offering. While it has been successful in doing so in the past, there can be no assurance that it will be able to do so in the future.

### DISCUSSION AND ANALYSIS OF OPERATIONS

The Corporation reported a loss of \$1,068,247 and \$4,192,711 during the three and nine months ended September 30, 2016, versus a loss of \$1,687,264 and \$5,391,248 in the same period of the prior year.

For the first time in its history, the Corporation reported revenues starting in the second quarter of 2016. During the three and nine months ended September 30 2016 revenues totalled \$610,680 and \$1,164,432 respectively.

The Corporation's total operating expenses amounted to \$1,035,647 and \$3,810,583 during the three and nine months ended September 30, 2016 as compared to \$1,399,460 and \$4,652,626 in the same period of 2015.

#### Revenues

During the third quarter of 2016, the Corporation has processed test material for a number of customers including major gold and copper producers as well as exploration companies.

DST provided its technical expertise and its facilities to these companies to evaluate the development of their projects using the Corporation's chlorination process for precious metal extraction and/or its arsenic stabilization technology. The technical services may serve to demonstrate the efficiency of the Corporation's technologies at the laboratory and/or pilot scales on specific projects in need of viable processing alternative and initiate engineering studies required for an industrial implementation.

#### Operating expenses

The major components of the operating expenses are as follows:

#### Research and development

During the first nine months of 2016, the Corporation incurred \$3,040,051 (\$4,197,518 in the same period of 2015) in research and development expenses in respect of its chlorination and arsenic stabilization processes. These costs relate primarily to the operation of the chlorination process demonstration plant in 2016 and its construction in 2015.

Since 2013, the Corporation has spent a total of \$18,400,056 for the construction and operation of the demonstration plant of which a total of \$2,411,870 was incurred during the nine months ended September 30, 2016. The remaining expenses relate to research activities conducted in the pilot plant and the laboratory.

The Corporation periodically receives financial assistance under government incentive programs. Assistance that compensates DST for expenses incurred are normally recognized as a reduction to research and development expense on a systematic basis in the same periods in which the expenses are incurred. On a net-of-assistance basis, research and development costs represented \$2,404,628 during the first nine months of 2016 (\$2,972,109 in the same period in 2015).

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FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2016

	Three months ended		Nine months ended	
	September 30,		September 30,	
	2016	2015	2016	2015
	\$	\$	\$	\$
Chlorination process	840,674	1,492,323	2,892,936	4,197,518
Arsenic stabilization process	45,299	-	147,115	-
Research and development expenses	885,973	1,492,323	3,040,051	4,197,518
Government assistance and tax credits	(229,141)	(604,320)	(635,423)	(1,225,409)
<b>Research and development expenses, net</b>	<b>656,832</b>	<b>888,003</b>	<b>2,404,628</b>	<b>2,972,109</b>

	Three months ended		Nine months ended	
	September 30, 2016		September 30, 2016	
	Chlorination	Arsenic	Chlorination	Arsenic
	\$	\$	\$	\$
Wages and compensation	322,611	45,192	1,087,618	87,260
Contractors	166,428	36	479,391	14,429
Building maintenance	147,853	-	422,993	994
Equipment	84,481	558	440,331	34,482
Consumables	104,312	-	241,613	9,039
Other	14,989	(487)	220,990	911
<b>Research and development expenses</b>	<b>840,674</b>	<b>45,299</b>	<b>2,892,936</b>	<b>147,115</b>

	Three months ended		Nine months ended	
	September 30, 2015		September 30, 2015	
	Chlorination	Chlorination	Chlorination	Chlorination
	\$	\$	\$	\$
Wages and compensation	431,587	1,200,588		
Contractors	282,521	896,784		
Building maintenance	129,325	380,719		
Equipment	324,289	892,631		
Consumables	125,683	303,815		
Other	198,918	522,981		
<b>Research and development expenses</b>	<b>1,492,323</b>	<b>4,197,518</b>		

### *Professional and consulting fees*

	Three-month period		Nine months ended	
	ended September 30		September 30,	
	2016	2015	2016	2015
	\$	\$	\$	\$
Legal	23,109	14,152	88,567	53,528
Audit, audit related work and tax compliance	-	7,350	126,068	167,350
Accounting	41,895	75,183	145,990	274,215
Consulting administration	62,431	60,000	182,431	180,000
Consulting geology	-	427	-	25,434
Business development	-	27,531	-	101,617
<b>Professional and consulting fees</b>	<b>127,435</b>	<b>184,643</b>	<b>543,056</b>	<b>802,144</b>

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Accounting: the Corporation hired the Controller, paid through a consulting company until mid-2015, as a full-time employee. His fees were recorded under *Professional fees - Accounting* until mid-2015 as compared to *Wages and Compensation* in 2016.

Consulting administration fees relates to the President and Chief Executive Officer's (CEO) compensation. Refer to the "Related Party Transaction" section for further details.

Consulting geology consist of fees and services rendered in relation with the testing of minerals from Central America. The fees were from a company controlled by the President of Nichromet Dominicana and Nichromet Guatemala. In addition, business development expenses relate mainly to development activities in Central and South America and include fees paid to the General Manager of Nichromet Guatemala for business development in Central America.

During the fourth quarter of 2015, the Corporation sold its three foreign subsidiaries, Nichromet Guatemala, Rio Nickel and Nichromet Dominicana, for a nominal amount and the development activities of the Corporation are conducted directly by the head-office's management.

### Administrative expenses

	Three-month period ended September 30		Nine months ended September 30,	
	2016	2015	2016	2015
				\$
Insurance	57,912	30,009	166,596	79,556
Rent	20,459	42,678	84,637	96,767
Website and technical support	24,512	17,051	53,863	46,675
Transportation and accommodation	35,209	73,847	95,926	138,065
Telecommunications and others	21,184	42,938	61,109	142,736
<b>Administrative expenses</b>	<b>159,276</b>	<b>206,523</b>	<b>462,131</b>	<b>503,799</b>

Insurance premium has increased after the start of operations at the chlorination demonstration plant and the arsenic pilot plant.

Transportation and accommodation expenses relate mainly to business development activities conducted in South America, in particular in Chile, Argentina and Peru in order to secure feed material for the demonstration plant, and to implement the DST technology under arrangements with mine owners.

### Other Gains and Losses

During the nine months ended September 30, 2016, finance costs relates to interest expenses on the Dundee short-term loan (\$727,400), the IQ Loan (\$167,835 paid and \$62,142 accretion expense), the bridge loan (\$3,000) and other (\$57). During the nine months ended September 30, 2015, finance costs relates to the interest expense on the Dundee short-term loan (\$677,616), the IQ loan (\$41,605), the bridge loan (\$10,000) and other (\$49).

## SELECTED QUARTERLY INFORMATION

The following table sets forth selected historical financial information for the Corporation from the last eight quarters. Such information is derived from the Corporation's interim unaudited financial statements prepared in accordance with IFRS.

	Q3-16	Q2-16	Q1-16	Q4-15
	\$	\$	\$	\$
Total revenue	610,680	553,752	Nil	Nil
Net loss and comprehensive loss	1,068,247	1,365,395	1,759,069	2,257,245
Basic and diluted net loss per share	0.003	0.004	0.005	0.007

# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2016

	Q3-15	Q2-15	Q1-15	Q4-14
	\$	\$	\$	\$
Total revenue	Nil	Nil	Nil	Nil
Net loss and comprehensive loss	1,687,264	1,904,649	1,799,335	23,966,684
Basic and diluted net loss per share	0.005	0.006	0.006	0.093

For the first time in its history, the Corporation reported revenues starting in the second quarter of 2016.

The variation in net loss and comprehensive loss is attributable to the level of research and development activities from one quarter to the other. An impairment charge of the *Exploration & Evaluation Assets* of \$22,245,407 was recorded in Q4-2014.

### OFF BALANCE SHEET ARRANGEMENTS

The Corporation did not enter into any off-balance sheet arrangements during the nine months ended September 30, 2016 and 2015.

### CONTRACTUAL OBLIGATIONS AND COMMITMENTS

The contractual obligations of the Corporation include lease payments for the Thetford Mines facilities and the head office in Montreal (Refer to Note 14.2 to the September 2016 Interim Financial Statements).

### RELATED PARTY TRANSACTIONS

In addition to the transactions discussed in the financing and investing sections, details of related party transactions with the officers and directors of the Corporation and companies they control are as follows:

	Three-month period ended September 30		Nine months ended September 30,	
	2016	2015	2016	2015
			\$	\$
Professional and consulting fees				
Administration <sup>(1)</sup>	62,431	60,000	182,431	180,000
Legal <sup>(2)</sup>	11,323	14,152	28,306	41,259
Accounting <sup>(3)</sup>	41,895	74,628	143,681	265,670
Geology <sup>(4)</sup>	-	-	-	15,922
Professional <sup>(5)</sup>	-	-	-	19,519
Research and development <sup>(6)</sup>	-	-	-	5,040
	<b>115,649</b>	<b>148,780</b>	<b>354,418</b>	<b>527,410</b>

(1) Fees from a private company controlled by Brian Howlett, President and CEO for August and September 2016, for a total amount of \$22,431, in addition to fees charged by Dundee for the compensation of John W. Mercer, former President and CEO until August 2016 for a total amount of \$160,000 (\$180,000 during the same period in 2015).

(2) Fees paid to a private company controlled by Luce Saint-Pierre, Corporate Secretary for a total amount of \$23,791 (\$41,259 in 2015) in addition to an amount of \$4,515 in legal fees paid to a law firm of which Brahm Gelfand, a Director is a counsel.

(3) Remuneration of Vatche Tchakmakian, Chief Financial Officer, in the amount of \$118,256 from a private company controlled by him (\$140,766 in 2015). In addition, his company charged fees of \$25,425 for support staff in respect of accounting, bookkeeping and administrative services (\$124,904 in 2015).

(4) Fees from a company controlled by Salvador Brouwer, the President of Nichromet Dominicana and Nichromet Guatemala for his services until February 2015 in relation with the testing of minerals from Central America.

(5) Fees paid to Alfredo Galvez, the General Manager of Nichromet Guatemala, until February 2015 for business development in Central America.

# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2016

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- (6) Fees from a company controlled by Jean-Marc Lalancette, Director and Vice-President, Research and Development, are disclosed as a related party until February 2015, date of his resignation as Director and Officer of the Corporation.

### SUBSEQUENT EVENTS

#### **CED contribution agreement**

On October 12, 2016, Canada Economic Development for Quebec Regions ("CED") amended its contribution agreement, originally entered into on June 16, 2015, pursuant to which the Corporation will receive up to \$397,000 repayable contribution. The CED contribution ("CED Contribution") will be used by the Corporation for the acquisition of equipment for its Thetford Mines plant (the "Project"). Payments by CED will be made over the term of the Project, which must be completed at the latest by March 31, 2017. The CED Contribution is non-interest bearing, secured and repayable in equal monthly installments over seven years starting three years after the end of the Project. At the date of release of these condensed interim consolidated financial statements, the Corporation hasn't drawn from the CED Contribution.

The CED Contribution is secured by a hypothec, *pari passu* with Dundee's and IQ's loans, over all of the Corporation's property other than its intellectual property.

#### **Bridge loan from a non-related party**

On October 24, 2016, an unsecured bridge loan, payable on demand, of \$300,000 was advanced to the Corporation.

### ACCOUNTING POLICY CHANGES, CRITICAL ESTIMATES, JUDGMENTS AND ASSUMPTIONS

The preparation of financial statements in conformity with IFRS requires management to make estimates and assumptions that affect amounts reported in the financial statements and accompanying notes. There is a full disclosure and description of the Corporation's critical accounting policies, estimates, judgments, assumptions in the financial statements as at September 30, 2016 and December 31, 2015 in notes 1, 2 and 3.

### FINANCIAL INSTRUMENTS AND OTHER INSTRUMENTS

The Corporation is exposed to various financial risks resulting from both its operations and its investments activities. The Corporation does not enter into financial instrument agreements including derivative financial instruments for speculative purposes. The Corporation's main financial risk exposure and its financial risk management policies are disclosed in Note 19 to the annual consolidated financial statements for the years ended December 31, 2015 and 2014.

### RISKS AND UNCERTAINTIES

Except as otherwise disclosed in this MD&A, there have been no significant changes to the nature and scope of the risks faced by the Corporation from those described in the 2015 MD&A of the Corporation. These business risks should be considered by interested parties when evaluating the Corporation's performance and its outlook.

### FORWARD LOOKING STATEMENTS

DST's public communications may include written or oral forward looking statements. Statements of this type are included in this MD&A, and may be included in other filings with the Canadian regulators, stock exchanges or in other communications. All such statements constitute forward looking information within the meaning of securities law and are made pursuant to the "safe harbour" provisions of applicable securities laws. Forward looking statements may include, but are not limited to, statements about anticipated future events or results including comments with respect to the Corporation's objectives and priorities for 2016 and beyond, and strategies or further actions with respect to the Corporation, its products and services, business operations, financial performance and condition. Forward looking statements are statements that are predictive in nature, depend upon or refer to future events or conditions or include words such as "expects", "anticipates", "intends",

# DUNDEE SUSTAINABLE TECHNOLOGIES INC.

## MANAGEMENT'S DISCUSSION AND ANALYSIS

FOR THE NINE MONTHS ENDED SEPTEMBER 30, 2016

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"plans", "believes", "estimates" or similar expressions concerning matters that are not historical facts. Such statements are based on current expectations of the Corporation's management and inherently involve numerous risks and uncertainties, known and unknown, including economic factors and those affecting the technology and resources industries generally. The forward looking information contained in this MD&A is presented for the purpose of assisting shareholders in understanding business and strategic priorities and objectives as at the periods indicated and may not be appropriate for other purposes.

A number of risks, uncertainties and other factors may cause actual results to differ materially from the forward looking statements contained in this MD&A, including, among other factors and without limitation, those referenced in the section above entitled "Risks and Uncertainties". The preceding list is not exhaustive of all possible risk factors that may influence actual results, and is compiled based upon information available as of the issuance date of this MDA.

Forward looking statements contained in this MD&A are not guarantees of future performance and, while forward looking statements are based on certain assumptions that the Corporation considers reasonable, actual events and results could differ materially from those expressed or implied by forward looking statements made by the Corporation. Prospective investors are cautioned to consider these and other factors carefully when making decisions with respect to the Corporation and not place undue reliance on forward looking statements. Circumstances affecting the Corporation may change rapidly. Except as may be required by applicable law, the Corporation does not undertake any obligation to update publicly or revise any such forward looking statements, whether as a result of new information, future events or otherwise.

### INFORMATION CONCERNING DUNDEE SUSTAINABLE TECHNOLOGIES

Additional information relating to Dundee Sustainable Technologies may be found on SEDAR at [www.sedar.com](http://www.sedar.com) and the Corporation's website at [www.dundeetechnologies.com](http://www.dundeetechnologies.com).

October 26, 2016

*(s) Brian Howlett*

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Brian Howlett  
President and CEO

*(s) Vatche Tchakmakian*

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Vatche Tchakmakian  
CFO