MICROMEM TECHNOLOGIES INC Form 20-F March 12, 2018

# UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

# FORM 20-F

[ ] REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934

or

[X] ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For The Fiscal Year Ended October 31, 2017

Or

[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

or

[ ] SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Date of event requiring this shell report

Commission File No. 0-26005

# **MICROMEM TECHNOLOGIES INC.**

(Exact name of Registrant as specified in its charter)

<u>Ontario, Canada</u> (Jurisdiction of incorporation or organization)

121 Richmond Street West, Suite 304 Toronto, Ontario M5H 2K1, Canada Tel: (416) 364-6513 <u>Fax: (416) 360-4034</u> (Address of principal executive offices)

Joseph Fuda; 416-364-6513, jfuda@micromeminc.com, 121 Richmond Street West, Suite 304 Toronto, ON

# <u>M5H 2K1</u>

(Name, Telephone, E-Mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act: None

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#### Securities registered or to be registered pursuant to Section 12(g) of the Act: <u>Common Shares without par value</u>

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act: None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report:

# 228,562,711 Common Shares

Indicate by check mark if the registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act: Yes [] No [X]

If this report is an annual or transition report, indicate by check mark if the registration is not required to file a report pursuant to section 13 or 15 of the Securities Exchange Act of 1934: Yes [] No [X]

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days: Yes [X] No [

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes [] No []

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerator filer in Rule 12b-2 of the Exchange Act: Large Accelerated Filer [] Accelerated Filer [] Non-Accelerated Filer [X]

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP [] International Financial Reporting Other [] Standards as issued by the International Accounting Standards Board [X]

1. If Other has been checked in response to the previous question, indicate by check mark which financial statement item the Registrant has elected to follow:

Item 17 [] Item 18 []

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act):

Yes [ ] No [X]

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### PART I

# INTRODUCTION

#### Abbreviations

Throughout this document, Micromem Technologies Inc. and/or its affiliates are referred to as Micromem, the Company, we, us or our.

#### Forward Looking and Cautionary Statements

This Form 20-F contains certain forward-looking statements. These forward-looking statements are based on current expectations, estimates and projections about the business of our company and the industry in which we operate, our management's beliefs, and assumptions made by our management. Words such as expects, anticipates, intends, plan believes, seeks and estimates, variations on such words and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions which are difficult to predict. Our actual results could differ materially from those expressed or forecasted in these forward-looking statements as a result of certain factors, including those set forth under Item 3-Key Information Risk Factors and elsewhere in this Form 20-F.

#### **ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS** Not applicable.

**ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE** Not applicable.

#### **ITEM 3. KEY INFORMATION**

#### A. Selected Financial Data Fiscal Years 2017, 2016, 2015, 2014 and 2013

The following table sets forth our selected consolidated financial data in United States dollars as of and for each of the fiscal years ended October 31, 2017, October 31, 2016, October 31, 2015, October 31, 2014 and October 31, 2013. The selected consolidated financial data has been derived from our audited consolidated financial statements. All information contained in the following table should be read in conjunction with our audited consolidated audited financial statements and the notes thereto in Item 18-Financial Statements and "Item 5 - Operating and Financial Review and Prospects included elsewhere in this Annual Report on Form 20-F.

Our consolidated financial statements for the years ended October 31, 2017, 2016, 2015, 2014 and 2013 have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board.

# **International Financial Reporting Standards**

#### Selected balance sheet information

(all amounts in U.S. dollars)

	2017	2016	2015	2014	2013				
Working capital (deficiency)	(3,865,390)	(\$4,316,730)	(\$2,049,302)	\$ 1,034,921	\$ 425,888				
Capital Assets	9,822	10,988	15,592	21,483	13,998				
Total Assets	916,643	736,043	3,667,866	5,636,605	2,166,455				
Capital Stock	80,198,194	75,855,139	74,083,975	70,802,776	57,755,613				
Shareholders' equity (deficiency)	(3,424,106)	(3,902,142)	1,403,888	4,862,773	1,536,319				
Selected statement of operations and deficit information									

(all amounts in U.S. dollars)

	2017	2016	2015	2014	2013
Interest and other income	\$ -	\$ -	\$ -	\$ -	\$ -
Research and development expenses	147,008	3,635,613	2,649,019	703,671	160,920
General and administrative and other	3,004,027	2,950,978	2,703,650	3,081,947	2,198,466
expenses					
(Gain) Loss on revaluation of (1)	(1,614,822)	(295,616)	-	-	3,205,752
Derivative liabilities					
Loss on conversion of debt (2)	1,009,680	-	-	-	-
Accretion Expense (3)	1,358,101	514,560	-	-	-
Stock compensation expense (4)	442,206	-	1,163,941	379,253	368,790
Loss before income taxes	(4,346,200)	(6,805,535)	(6,516,610)	(4,164,871)	(5,933,928)
Net Loss	(4,346,200)	(6,805,535)	(6,516,610)	(4,164,871)	(5,933,928)

- (Gain) on revaluation of derivative liabilities as reported for 2017 and 2016 above relates to the measurement of the derivative liabilities relating to the outstanding convertible bridge loans. Loss on revaluation of derivatives in 2013 as reported above relates principally to the measurement of the derivative warrant liability relating to outstanding Canadian dollar denominated common share purchase warrants. The (gain) loss as reported is a non-cash charge which is calculated in accordance with IFRS.
- 2) Loss on conversion of debt as reported relates to the inducement of additional common shares issued to the bridge loan lenders who converted their bridge loans to common shares in 2017.
- 3) Accretion expense is a non cash expense calculated in accordance with IFRS and relates to increasing the face value of the debt to the contracted amount over the term of the loan.
- 4) Stock compensation expense is a non cash expense calculated in accordance with the Black Scholes option pricing model.

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#### **Currency and Exchange Rates**

Our financial statements are all expressed in United States dollars. All other financial data appearing in this Form 20-F are expressed in United States dollars with the exception of certain limited cases when reference is made to instruments denominated in Canadian dollars ( CDN \$ ).

Transactions that were conducted in Canadian dollars or other foreign currencies have been converted into United States dollars using the 3 month average rate of exchange per quarter which rate approximates the rate of exchange prevailing at the date of such transactions. Monetary assets and liabilities denominated in Canadian dollars or other foreign currencies but expressed in this Form 20-F in United States dollars have been converted into United States dollars at the rate of exchange prevailing on the date of the applicable financial statement. Non monetary assets and liabilities denominated in Canadian dollars but expressed in this Form 20-F in United States dollars have been converted into united States and liabilities denominated in Canadian dollars but expressed in this Form 20-F in United States dollars have been converted into use the end of the applicable financial statement. Non monetary assets and liabilities denominated in Canadian dollars but expressed in this Form 20-F in United States dollars have been converted into US dollars at the historical exchange rate at the date of the transaction.

The following table sets forth, for the periods indicated, the high, low, end of period and average for period noon buying rates as published by the Bank of Canada, as expressed in the amount of U.S. Dollars equal to one Canadian dollar.

	2017	2016	2015	2014	2013
High for period	0.8245	0.7972	0.8501	0.9422	1.0164
Low for period	0.7276	0.6854	0.7141	0.8589	0.9348
End of period	0.7971	0.7461	0.7233	0.8620	0.9402
Average for period	0.7708	0.7538	0.7793	0.9054	0.9710

The following table sets forth, for each period indicated, the high and low exchange rates for United States dollars expressed in Canadian dollars on the last day of each month during such period, based on the Noon Buying Rate.

	February 2017	March 2017	April 2017	May 2017	June 2017	July 2017
High	1.3249	1.3513	1.3662	1.3743	1.3504	1.2982
Low	1.3016	1.3304	1.3275	1.3446	1.2977	1.2447

	August 2017	September 2017	October 2017	November 2017	December 2017	January 2018
High	1.2482	1.248	1.2893	1.2888	1.2886	1.2535
Low	1.2755	1.2128	1.2472	1.2683	1.2545	1.2293

On February 28, 2018 the noon buying rate for one Canadian dollar, as quoted by the Bank of Canada, was CDN \$1.2809 = U.S. \$1.00.

#### **B.** Capitalization and Indebtedness

Not applicable.

#### C. Reasons for the Offer and Use of Proceeds

Not applicable.

## **D.** Risk Factors

We and our investors face a number of risks, which are described below.

## **Risk Factors Related to Our Business**

#### The financial statements of our company have been prepared on a going concern basis.

We have prepared our financial statements on a going concern basis which presumes that we will be able to realize our assets and discharge our liabilities in the normal course of business for the foreseeable future.

Our ability to continue as a going concern is dependent upon the successful commercialization of our sensor technology platforms that we currently have under development with our industry partners. Ultimately we must achieve a profitable level of operation through licensing fees, royalties and the commercial sale of our products. We will require additional financing in the interim to fund our activity.

Our consolidated financial statements have been prepared on a going concern basis do not include any adjustments to the amounts and classifications of the assets and liabilities that might be necessary should we be unable to continue in business. If the going concern assumption was not appropriate for our financial statements then adjustments would be necessary in the carrying value of assets and liabilities, the reported expenses and the balance sheet classifications used. Such adjustments could be material.

At October 31, 2017 we had \$9,189 cash on hand. Our working capital position is (\$3,865,390) at October 31, 2017. Subsequent to October 31, 2017, through to the date of the filing of this Annual Report on Form 20-F, we have raised an additional \$576,936 through the issuance of convertible debentures (includes 2 Canadian denominated debentures for \$310,000 CDN (\$245,136 USD) and 3 USD denominated debentures for \$331,800) and 5 \$ CDN denominated private placements for \$261,000 CDN (\$207,060 USD). Additionally, we collected \$340,857 from development partners with respect to our ongoing joint product development projects.

#### We currently have no operating revenue.

We have not yet reported commercial revenues from licensing fees, royalties or product sales. If we fail to enter into license agreements or if we do not obtain purchase orders from potential customers, we will have no revenues. If we enter into such agreements the amount of the revenues we receive will depend on the terms we are able to secure from each licensee and the ability of licensees to compete in their particular market.

#### There are market risks relating to the sale of our sensor technology platforms.

We continued to develop applications of our magnetic sensor technology in 2017 working with our technical advisors and our strategic development partners. We are pursuing joint development agreements with potential strategic partners with the expectation that we will jointly develop sensor applications for use by these potential strategic partners. We believe that these current initiatives will result in revenues and cash flow to the Company in the future but there can be no assurance when and if such revenues will be achieved.

We may face competition from larger corporations which also sell sensor technology and who have greater financial resources than the Company.

Our success will in part be determined by the following factors which have not yet been fully and completely tested nor measured: the ability of manufacturers to incorporate the technology into existing manufacturing capabilities without significant retooling and material costs, price competitiveness and the differential performance advantages of our technology.

Additionally our ability to compete successfully will depend on elements outside of our control, including the rate at which customers incorporate our technology into their products, the success of such customers in selling those products, our protection of our intellectual property, the number, nature and success of our competitors and their product introductions and general market and economic conditions. Our success will depend on our ability to protect our intellectual property, to develop, introduce, and license or sell in a timely manner our technology or products incorporating our technology and to compete effectively on the basis of factors such as speed, density, die size and power consumption.

#### Failure to secure continued financing will cause our business to suffer.

Since there is no assurance that commercial revenues will be realized in future, we will need additional financing to continue our development and to successfully market our technology to potential licensees and strategic partners.

There can be no assurance that we will be able to continue to raise sufficient financing in the future and the failure to do so would affect our ability to further develop our technology platforms and to market our products to existing and new potential customers.

# Because much of our success and value depends on our ownership and use of intellectual property, our failure to protect our property could adversely affect our future growth and success.

Our success will depend on our ability to protect our intellectual property. We rely primarily on patent, copyright, trademark and trade secret laws, as well as nondisclosure agreements and other methods to protect our proprietary technology and processes. Despite our efforts to do so, unauthorized parties may attempt to copy or otherwise obtain and use our products or technology, develop similar technology independently or design around our patents. Policing unauthorized use of our products is expensive and difficult, and we cannot be certain that all required steps we have taken will prevent misappropriation or infringement of our intellectual property.

#### Intellectual property claims against us, no matter how groundless, could cause our business to suffer.

Our future success and competitive position depend in part on our ability to retain rights to our technology, including any improvements that may be made on that technology from time to time by us or on our behalf. Our technology is patented or is subject to pending patent applications in the United States and abroad and we know of no challenge that has been made either against our technology or our rights to it. We have no reason to believe that any such challenge might be made or that the grounds for any such challenge exist. If any intellectual property litigation were to be commenced against us, no matter how groundless, the result could be a significant expense to us, adversely affecting further development, licensing and sales, diverting the efforts of our technical and management personnel and, in the event of an adverse outcome, damages and possible restrictions on the further development, licensing and use of our technology. There can be no assurance that any of our pending patent applications will be issued as patents or that any issued patent will not be determined to be invalid at a later date.

#### We have a history of losses, and we may continue to generate losses in future.

To date, we have operated as a product development company and have not been profitable. Unless and until we are able to successfully commercialize our technology applications, we may not be able to generate sufficient revenues in future periods and we may not be able to attain profitability.

The further development of our sensor technology may require significant additional capital which we may have to fund directly if we are unable to secure financing from development partners. Therefore, we may incur expenses without receiving equal and offsetting revenues at least until we are able to license our technology to third parties. This may result in net operating losses until we can generate an acceptable level of revenues. Further, even if we achieve operating revenues, there can be no assurance that such revenues will be sufficient to fund continuing

operations.

The likelihood of the success of our business plan must be considered in light of the problems, expenses, difficulties, complications and delays frequently encountered in connection with developing and expanding early stage businesses and the competitive environment in which we operate.

#### We will be dependent upon the success of a limited range of products.

The range of products we intend to commercialize is currently limited to applications of our sensor technology. If we are not successful in commercializing our technology platforms, or if there is not adequate demand for such technology or the market for such technology develops less rapidly than we anticipate, we may not have the capability to shift our resources to the development of alternative products, on a timely basis. This could limit future revenues and profitability.

# We may not realize income from the licensing of our technologies if our licensees fail to commercialize the products that incorporate these technologies.

In order to generate revenues from our sensor technology platforms, we will need to enter into licensing arrangements with third parties who can integrate our technology into products that will gain acceptance in the market. We have not yet entered into any licensing agreements, and there is no assurance that we will be able to do so on acceptable terms in future. To the extent we are successful in licensing our technology; in general we will seek upfront payments plus ongoing royalties based on anticipated commercial sales of the products into which our technology is incorporated. Our ability to realize royalties will thus depend upon the successful manufacture and commercialization of such products, which will be primarily within the control of the licensee. There is no assurance that such licensees will be successful in marketing and selling such products. In addition, licensees could decide to delay or discontinue the commercialization of products for financial or other business reasons. Even if our licensees succeed in developing products that incorporate our technology, in all likelihood a significant amount of development and testing will be required before such products can be introduced to market. Therefore we may not receive royalty income for a substantial period following the commencement of any licensing arrangements. If our licensees are unable to commercialize products on a timely basis, they may lose market share to competing or alternative technologies. Any failure by the companies to which we license our technologies to successfully develop marketable products would have an adverse effect on our future royalty payments and financial condition.

#### In order to commercialize our future products, we will need to establish a sales and marketing capability.

At present, we have limited sales and marketing capability and our financial resources have been limited. We will need to add marketing and sales expertise and must also develop the necessary supporting distribution channels. Although we believe we can build the required infrastructure either in-house or through strategic relationships, we may not be successful in doing so. Failure to establish a sales force and distribution network would have an adverse effect on our ability to grow our business.

#### We depend on key personnel.

Our senior managers and employees are Joseph Fuda, who serves as our Chief Executive Officer; Steven Van Fleet, who has primary responsibility for business development and who serves as President of our wholly-owned subsidiary, Micromem Applied Sensor Technology Inc (MAST) and Dan Amadori, who serves as our Chief Financial Officer. We have engaged the services of several engineering/technical consulting firms to assist in converting our development efforts to commercialization. Our success depends on our ability to retain certain of our senior management and key technical personnel, our ability to attract and retain additional highly skilled personnel in the future and to maintain our working relationships with our engineering and technical consulting firms with which we subcontract our development work.

#### A depressed oil and gas sector could place our development projects at risk.

Certain of our development partners are engaged primarily in the oil and gas sector. If market conditions are depressed for this sector, there is a risk that such companies could defer or cancel previously established capital expenditure programs or product development initiatives. If these situations arose with our development partners in this sector, our related development projects could be at risk of delays or cancellation.

#### We may be materially affected by global economic and political conditions.

Our ability to generate revenue may be adversely affected by uncertainty in the global economy and could also be affected by unstable global political conditions. Terrorist attacks or acts of war could significantly disrupt our operations and the operations of our future customers, suppliers, distributors, or resellers. We cannot predict the potential impact on our financial condition or our results of operations should such events occur.

#### We may be materially affected by rapid technological change and evolving industry standards.

Short product life cycles are inherent in high-technology companies due to rapid technological change and evolving industry standards. Our future financial condition and results of operations depend on our ability to respond effectively to these changes. There can be no assurance that we will be able to successfully do so or adapt our current products to new technologies or new industry standards. In addition, our customers may be reluctant to adopt new technologies and standards or they may prefer competing technologies and standards. Because the technology market changes so rapidly, it is difficult for us to predict the rate of adoption of our technology.

#### We may be materially affected by risks associated with new product development.

Our new product development is complex and requires us to investigate and evaluate multiple alternatives, as well as plan the design and manufacture of those alternatives selected for further development. Our development efforts could be adversely affected by hardware and software design flaws, product development delays, changes in operating systems and changes in industry standards. The manufacturing of new products involves integrating complex designs and processes, coordinating with suppliers for parts and components and managing manufacturing capacities to accommodate forecasted demand. If we are not successful in meeting these requirements, this could adversely affect our ability to introduce new products on a timely basis.

# Our operations may be materially affected by the risks associated with the continued developments and protection of our intellectual property.

There can be no assurance that we will be able to continue to develop new intellectual property or that we will continue to have it developed for us. We rely on a combination of U.S. patent, copyright, trademark, and trade secret laws to protect our intellectual property rights. We have decided to file patent and trademark registration applications with certain foreign governments but we may not have appropriate coverage in all jurisdictions where we may sell or license our product in future.

We enter into confidentiality and non-disclosure agreements relating to our intellectual property with our employees and consultants. Despite our efforts to protect our intellectual property rights, unauthorized parties may attempt to copy or otherwise obtain or use our intellectual property. Monitoring the unauthorized use of our intellectual property is difficult and we cannot be certain that we will be able to adequately protect our intellectual property in the future.

#### There are foreign exchange risks associated with our Company.

Because we have historically raised funds in both U.S. and Canadian markets and a portion of our costs are denominated in Canadian dollars, our funding is subject to foreign exchange risks. A decrease in the value of the U.S.

dollar relative to the Canadian dollar could affect our costs and potential future profitability. We do not currently hold forward exchange contracts or other hedging instruments to exchange foreign currencies for U.S. dollars so as to offset potential currency rate fluctuations.

#### **Risk Factors Related to Our Common Shares**

# Our stock is subject to the penny stock regulations, which may discourage brokers from effecting transactions in the stock and adversely affect the stock's market price and liquidity.

Our common shares constitute penny stock under applicable regulations of the Securities and Exchange Commission. The penny stock regulations impose significant restrictions on brokers who sell penny stock to persons other than established customers and institutional accredited investors. Broker-dealers participating in sales of our stock will be subject to the so called penny stock regulations covered by Rule 15g-9 under the Exchange Act. Under the rule, broker-dealers must furnish to all investors in penny stocks a risk disclosure document required by the rule, make a special suitability determination of the purchaser and have received the purchaser's written agreement to the transaction prior to the sale. The penny stock regulations may discourage brokers from effecting transactions in the common shares. This would decrease market liquidity, adversely affect market price and make it difficult for you to use the common shares as collateral.

#### The rights of our shareholders may differ from the rights typically afforded to shareholders of a U.S. corporation.

We are incorporated under the Business Corporations Act (Ontario), also referred to herein as the OBCA. The rights of holders of our common shares are governed by the laws of the Province of Ontario, including the OBCA, by the applicable laws of Canada, and by our Articles of Incorporation and all amendments thereto, also referred to herein as the Articles, and our By-laws. These rights differ in certain respects from the rights of shareholders in typical U.S. corporations. The principal differences include without limitation the following:

Under the OBCA, we have a lien on any common share registered in the name of a shareholder or the shareholder's legal representative for any debt owed by the shareholder to us. Under U.S. state law, corporations generally are not entitled to any such statutory liens in respect of debts owed by shareholders.

With regard to certain matters, we must obtain approval of our shareholders by way of at least 662/3% of the votes cast at a meeting of shareholders duly called for such purpose being cast in favor of the proposed matter. Such matters include without limitation: (a) the sale, lease or exchange of all or substantially all of our assets out of the ordinary course of our business; and (b) any amendments to our Articles including, but not limited to, amendments affecting our capital structure such as the creation of new classes of shares, changing any rights, privileges, restrictions or conditions in respect of our shares, or changing the number of issued or authorized shares, as well as amendments changing the minimum or maximum number of directors set forth in the Articles. Under U.S. state law, the sale, lease, exchange or other disposition of all or substantially all of the assets of a corporation generally requires approval by a majority of the outstanding shares, although in some cases approval by a higher percentage of the outstanding shares may be required. In addition, under U.S. state law the vote of a majority of the shares is generally sufficient to amend a company's certificate of incorporation, including amendments affecting capital structure or the number of directors. Under certain circumstances the board of directors may also have the ability to change the number of directors under U.S. state law.

Pursuant to our By-laws, two persons present in person or represented by proxy and each entitled to vote thereat shall constitute a quorum for the transaction of business at any meeting of shareholders. Under U.S. state law, a quorum generally requires the presence in person or by proxy of a specified percentage of the shares entitled to vote at a meeting, and such percentage is generally not less than one-third of the number of shares entitled to vote.

Under rules of the Ontario Securities Commission, a meeting of shareholders must be called for consideration and approval of certain transactions between a corporation and any related party (as defined in such rules). A related party is defined to include, among other parties, directors and senior officers of a corporation, holders of more than 10% of the voting securities of a corporation, persons owning a block of securities that is otherwise sufficient to affect materially the control of the corporation, and other persons that manage or direct, to a substantial degree, the affairs or

operations of the corporation. At such shareholders' meeting, votes cast by any related party who holds common shares and has an interest in the transaction may not be counted for the purposes of determining whether the minimum number of required votes have been cast in favor of the transaction. Under U.S. state law, a transaction between a corporation and one or more of its officers or directors can generally be approved either by the shareholders or a by majority of the directors who do not have an interest in the transaction. Corporations that are listed on a U.S. securities exchange or are quoted on Nasdaq may also be required to have transactions with officers and directors and other related party transactions reviewed by an audit committee comprised of independent directors.

There is no limitation imposed by our Articles or other charter documents on the right of a non-resident to hold or vote our common shares. However, the Investment Canada Act, also referred to herein as the Investment Act, as amended by the World Trade Organization Agreement Implementation Act, also referred to herein as the WTOA Act, generally prohibits implementation of a reviewable investment by an individual, government or agency thereof, corporation, partnership, trust or joint venture that is not a Canadian, as defined in the Investment Act, unless, after review, the minister responsible for the Investment Act is satisfied that the investment is likely to be a net benefit to Canada. An investment in our common shares by a non-Canadian would be reviewable under the Investment Act if it were an investment to acquire direct control of Micromem, and the value of our assets were CDN \$5.0 million or more. However, an investment in our shares by a national of a country (other than Canada) that is a member of the World Trade Organization or has a right of permanent residence in such a country (or by a corporation or other entity that is a

WTO Investor-controlled entity pursuant to detailed rules set out in the Investment Act) would be reviewable at a higher threshold of CDN \$344 million in assets, except for certain economic sectors with respect to which the lower threshold would apply. A non-Canadian, whether a national of a WTO member or otherwise, would acquire control of Micromem for purposes of the Investment Act if he or she acquired a majority of our common shares. The acquisition of less than a majority, but at least one-third of our common shares, would also be presumed to be an acquisition of control of Micromem, unless it could be established that Micromem was not controlled in fact by the acquirer through the ownership of voting shares. The United States is a WTO Member for purposes of the Investment Act. Certain transactions involving our common shares would be exempt from the Investment Act, including:

- an acquisition of our common shares if the acquisition were made in connection with the person's business as a trader or dealer in securities;
- an acquisition of control of Micromem in connection with the realization of a security interest granted for a loan or other financial assistance and not for any purpose related to the provisions of the Investment Act; and
- an acquisition of control of Micromem by reason of an amalgamation, merger, consolidation or corporate reorganization, following which the ultimate direct or indirect control of Micromem, through the ownership of voting interests, remains unchanged. Under U.S. law, except in limited circumstances, restrictions generally are not imposed on the ability of non- residents to hold a controlling interest in a U.S. corporation.

#### U.S. shareholders may not be able to enforce civil liabilities against us.

Micromem is incorporated under the laws of the Province of Ontario. Additionally, a number of our directors and executive officers are non-residents of the U.S., and all or a substantial portion of the assets of such persons are located outside the U.S. As a result, should any investor commence an action in the U.S. against Micromem or its directors or executive officers, Micromem or its directors or officers, as the case may be, may be able to insist that any action against them take place in the jurisdiction of the Province of Ontario. In addition, if an investor were to obtain a U.S. judgment against Micromem or its directors or executive officers, there is doubt as to the enforceability of such U.S. judgment in Canada.

#### We do not anticipate paying dividends.

We have never paid a dividend on our securities and we do not anticipate paying dividends in the foreseeable future.

## We may need to issue additional securities which may cause our shareholders to experience dilution.

Our Board of Directors has the authority to issue additional common shares, without par value, or other of our securities without the prior consent or vote of our shareholders. The issuance of additional common shares would dilute the proportionate equity interest and voting power of our shareholders.

## The price of our common shares and volume of our common shares may be volatile.

Our shareholders may be unable to sell a significant number of our common shares on the OTCQB without a significant reduction in the market price of the shares.

Furthermore, there can be no assurance that we will be able to meet the listing requirements of, or achieve listing on, any other stock exchange. The market price of the common shares may be affected significantly by factors such as fluctuations in our operating results, announcements of technological innovations or new products by us or our competitors, action by governmental agencies against us or the industry in general, developments with respect to patents or proprietary rights, public concern as to the safety of products developed by us or others, the interest of investors, traders and others in public companies such as ours and general market conditions. In recent years, the securities markets in the United States and Canada have experienced a high level of price and volume volatility, and the market price of securities of many companies, particularly small capitalization companies, have experienced fluctuations which have not necessarily been related to the operating performance, underlying asset values or business prospects of such companies.

# ITEM 4. INFORMATION ON THE COMPANY

# A. History and Development of Our Company

Micromem is a corporation formed under the laws of the Province of Ontario, Canada, with principal executive offices at 121 Richmond Street West, Suite 304, Toronto, Ontario M5H 2K1 (416.364.6513). Micromem was incorporated on October 21, 1985 as Mine Lake Minerals Inc. We subsequently changed our name to Avanti Capital Corp. on June 23, 1988, to Avanti Corp International Inc. on April 30, 1992 and to Micromem Technologies Inc. on January 11, 1999 in connection with our acquisition of Pageant Technologies Incorporated, also referred to herein as Pageant International. Our website address is <u>www.micromeminc.com</u>. The information on our website is not part of this Annual Report on Form 20-F. We have included our website address in this document as an inactive textual reference only.

#### The Evolution of Micromem from Memory to Sensor Based Client Solutions

Micromem Applied Sensors Technologies, Inc., our wholly-owned subsidiary (MAST) was incorporated in 2008 in the State of Delaware. MAST was formed in connection with a contract with BAE Systems in Nashua, New Hampshire. BAE Systems is a Department of Defense trusted facility, which can only do business with U.S. entities (ITAR regulations). BAE Systems interest was in the potential to utilize our MRAM technology in a radiation-hardened environment for military applications. At the time of contract, Micromem had not taken the MRAM from the university research environment into a foundry, so the initial contract with BAE Systems was to use the patented MRAM design and manufacture and deliver a memory cell from a GaAs foundry. During this work it was determined that the Hall sensor, which was integral to the MRAM design, had several performance characteristics that by itself, as a product, would potentially create value for MAST.

Frost & Sullivan was contracted by MAST in 2009 to assess the market opportunities for a late entry into the Hall sensor market. The Hall sensor market in 2009 was robust at an estimated \$1.9 billion USD. The market barriers were: mature market, declining margins and heavy competition. A decision was taken to not enter the Hall sensor component market for the above reasons. A decision was taken to explore the market opportunities associated with creating unique sensor based solutions that revolved around our patented Hall sensor technology. The MRAM go

forward strategy remained with Micromem.

An outside marketing firm was hired to promote the Company. It was quickly learned that the uniqueness of our products made a traditional marketing firm relationship ineffective and that relationship was terminated. Promotion of the Company reverted back to the development of a MAST website and word of mouth marketing at regional technical conferences. Through these endeavors, a decision was taken to internally develop, at our own cost, proof of concepts for products that we had gleaned through our marketing to have potential market value. These included a magnetic gold sensor for drilling plug analysis, an oil condition sensor for automotive use and an oil/gas aerial exploration platform. Provisional patents were created on this work.

A potential revenue-generating opportunity emerged in August 2010 when Lux Research contacted us on behalf of their client, a world leader in oil production. They were looking for companies that could create extremely small foot print magnetic sensor solutions for down hole use in production oil fields. MAST was subsequently engaged by this client to develop a sensor platform for detecting four nanometer magnetic particles in a flowing oil stream at a concentration less than 1 ppb. Another revenue generating opportunity came in 2011 from GSI Westwind, a supplier for high speed air bearing motors. MAST replaced the incumbent Hall sensor supplier and delivered a unique circuit board form factor that incorporated the smallest Hall sensor in the world.

It became clear at this point in the genesis of the Company that MAST had to find an effective means to disseminate its message to a larger market audience. It was now evident that a significant market space existed for companies that could leverage MEMS/Nano fabrication methodologies to create unique combinations of sensors to provide new solutions to business problems. In 2011 MAST became aware of the NineSigma Open Innovation model. Nine sigma s core services connect innovation-seeking companies to the best solutions, capabilities and partners around the world. MAST's relationship with NineSigma has provided us common ground access to the Global Fortune 1000 companies and has resulted in a robust future sales proposal pipeline and the first time in the Company's history an ability to forecast revenue.

In 2011 a decision was taken to stop research and development effort in the MRAM market space. This decision was taken in part due to the high capital demand for staying current in the rapidly changing technology and equally important, the MRAM market has not grown at the anticipated growth rates. Micromem has amassed multiple memory patents and in 2013 began efforts to value the patent portfolio and arrange for a sale of these assets. Integral to the MRAM design is our patented Hall sensor. MAST is carrying this device forward in certain of our sensor platforms.

Until 2014, Micromem funded virtually all of its research and development initiatives. Our main priority has been to provide customers with sensor based platform solutions that address their difficult business problems. A recent study by NineSigma states that less than 3% of the Fortune 1000 global companies admit that they have sufficient in house talent and knowledge to be able to take advantage of technologies that can help them improve their business. Our sensor platform solutions address three primary areas of creating value for our clients:

- Using a MEMS and/or Nano scale pallet, we are able to combine disparate sensor modalities into a common, integrated solution that brings the exact tools in play in solving the target issue. Competitive solutions tend to force fit less than optimum sensor combinations in an effort to sell their standard offerings.
- Although our solutions are custom designed for each client, our processes leading to the solution are automated and the end result is a cost effective solution with a differentially higher return on investment for our clients.
- Our Open Innovation approach to solving client problems allows us to bring together already proven sensor technologies in different market spaces allowing us to apply them in new applications in new markets. This significantly reduces the time to revenue generation by both MAST and our client and it reduces risk of project failure.

By 2015 we had advanced a number of our product development initiatives under joint product development agreements with our clients Chevron, Castrol, Flextronics and Eversource Energy. Our pipeline of development

projects expanded. By October 31, 2016 several of our active projects had advanced to the stage where the proof of concept and the prototype units were completed. In 2016 we began the process of advancing our technology in initial field trials of these prototype units.

#### **B.** Business Overview

Prior to 2008 we were engaged in the development of memory technology. We deemphasized these continued efforts at that time and ceased all such activity by 2011. We have been actively developing our sensor technology platforms for multiple commercial applications since 2008. Our technology combines the use of microelectromechanical systems (MEMS) and nanoelectromechanical systems (NEMS) for our sensor platforms.

#### Update of Product Development Activity at October 31, 2017

**Chevron:** We began working with Chevron in 2013 when we entered into a joint project development agreement (JPDA). The proposed development work in that JPDA specified a series of milestones in keeping with our standard development process.

The initial thrust of the work was to develop and test fluorescent magnetic nanoparticles in the application of interwell tracers. We successfully completed the proof of concept and prototype phases. This work progressed in 2014 and the go forward thrust of our development work was to develop a well head real time detection platform for the detection of existing interwell tracer chemicals to measurement levels as low as 300 parts per trillion. By October 31, 2014, Chevron had funded approximately \$175,000 of the development costs we had incurred to that point of time.

In 2015, this work was significantly advanced. Chevron funded a portion of our development activity to the extent of \$1,545,132.

In November 2015, we completed the nanoparticle tracer testing in testing facilities in Texas. We worked extensively with key subcontractors building towards a laboratory demonstration late in 2016 designed to differentiate between 8-9 interwell tracers simultaneously.

In March 2016 Chevron indicated that they wanted to pursue certain specific tracers in the go forward work as the next phase of the development project. Our discussions continued through July 2016, at which point we executed an addendum to our contractual work with Chevron to complete the next round of tracer tests. An initial budget of \$400,000 for this work was established and we received \$200,000 in August, 2016.

We began working with our subcontractor to move forward with this phase of the development work. This work progressed well throughout the fall and a series of status reports were issued continuing through late December. We received an additional \$100,000 for this work from Chevron in December.

In last year s Annual Report, we discussed timing delays encountered with respect to our Chevron development project, attributable to the 2015-2016 slowdown in the North American energy sector.

Throughout 2017, MAST actively engaged with the Chevron team and, through our prime sub-contractor, Entanglement Technologies, have successfully moved forward with pre-commercialization testing protocol. In 2017, we received \$196,000 of funding from Chevron. We recently announced that we anticipated an additional funding of up to \$1 million. We reported an accounts receivable amount of \$340,857 from Chevron at October 31, 2017. We believe that the balance of this funding will be provided shortly.

In the meantime, we are advised that our contract is being transitioned from Chevron s Technology group to its Operations group, which we believe is a pre-cursor to commercialization of the project.

**Castrol:** We entered into a JPDA with Castrol in December 2014. The development project was to develop a MEMS solution for real time detection of wear elements in lubricating fluids for deployment initially in non-automotive markets and thereafter for the automotive market. During 2015 we were successful in completing the initial phases of that agreement whereby we have now provided the initial prototypes to Castrol and these have been accepted. We received \$488,500 as payment from Castrol as of October 31, 2015.

Castrol has commissioned us to produce initial field units for testing. These units are larger than the ultimate product intended for the automotive market.

We continued our development work with Castrol through March 2016. We invoiced Castrol \$250,000 and this amount was collected in January, 2016. We met with the Castrol team in the UK in June 2016. We agreed to move forward in the second half of 2016 with the development of the fieldable units in the immediate term and we agreed to continue the development plans for the miniaturization for automotive use as the final end product. These discussions were again confirmed in a follow-up in-person meeting in July 2016 with Castrol.

We worked with our prime subcontractor, SBM Inc. (SBM), to develop an overall budget for the next phase of the miniaturization work and for the fieldable units. We invoiced Castrol for \$100,000 relating to the fieldable unit work in late fall 2016. This amount was paid in December, 2016.

In 2017, Castrol invested an additional \$100,000 in support of our joint development initiative. This money was used to support the work done by our prime sub-contractor, SBM.

We had ongoing discussions and dialogue with Castrol during fiscal 2017 about the expanded scope of the technical work to be completed and pursued discussions with Castrol about establishing, a more balanced cost sharing arrangement to further these development initiatives.

These matters have not as yet been resolved. The most recent interactions and discussions with Castrol have taken place over the past three months through mid-February 2018. In the meantime, our sub-contractor is paid on an up-to-date basis for work performed.

In 2017, the Company was successful in developing a prototype field unit for infield testing. The Company believes that this technology can be a standalone product for commercial exploitation in future. This could be a separate initiative distinct from the eventual development of an automotive application, which is referenced in our JPDA with Castrol.

In order for this project to proceed, the Company will require additional financing and we intend to continue to pursue current discussions on cost sharing arrangements with Castrol. At this stage, the Company has invested approximately \$2.4 million of financing and, against this total, Castrol has provided financing of approximately \$850,000.

**Flextronics:** In 2014 we executed a JPDA with Flextronics to test, manufacture and, ultimately, to commercialize the Company s patented automotive oil pan plug sensor suite for automotive OEMS. This JPDA developed after we had spent several years pursuing a proof of concept with General Motors.

The work plan called for the Company to invest approximately \$1.9 million of funding with Flextronics on a multistaged development process over several years. That project was initiated and the Company has received partial invoices for work performed to date. In total the Company has to date paid Flextronics \$392,257 and there is an additional amount payable of approximately \$131,000, reported at October 31, 2017. The account has now aged and there has been no activity or new developments with Flextronics in 2017. The Company hopes to resume discussion in future, but, for the moment, does not have the resources to do so. In light of the passage of time, there can be no assurance that Flextronics will move forward with this process.

The ongoing valuable asset that the Company has is its patented technology a series of patents relating to the oil pan plug. We believe that there is broad market opportunity in the automotive sector to exploit this technology in future.

**Other Opportunities:** MAST has been active throughout 2017 in discussions with a number of other substantial companies, to whom it has submitted go-forward development project proposals.

We engaged with Repsol Inc., a Spanish conglomerate, in 2017. Repsol provided an initial \$75,000 of funding to support certain initial development work that SBM is engaged by the Company to complete. The Company s ability to deploy additional resources at the moment is limited; however, the project remains active and viable.

The Company recently announced the launch of its AROMA product in conjunction with its sub-contractor, Entanglement Technologies; we are actively promoting this product to a number of parties who have expressed initial interest and with whom the Company will be meeting shortly.

#### Deferred development costs/development expenses:

The Company's investment in deferred development costs between 2013-2016 is summarized as below.

	S.A.	Chevron	Castrol	trol Northeast Flext		Other	Total
Balance at 10/31/2012	364,870		-	-	205,237	148,057	718,164
Additions	236,960	89,986	-	10,000	208,303	132,195	677,444
Recoveries	(100,000)	(87,290)	-	-	-	(46,000)	(233,290)
Writedowns	-		-	-	-	(234,241)	(234,241)
Balance at 10/31/2013	501,830	2,696	-	10,000	413,540	11	928,077
Additions	262,328	1,622,554	387,519	1,427,634	116,000	120,424	3,936,459
Recoveries	(125,000)	(87,290)	(250,000)	(200,000)	-	-	(662,290)
Writedowns	(639,158)		-	-	-	(37,632)	(676,790)
Balance at 10/31/2014	-	1,537,960	137,519	1,237,634	529,540	82,803	3,525,456
Additions	-	1,321,015	1,027,758	1,032,695	300,139	42,293	3,723,900
Recoveries	-	(1,545,132)	(238,500)	-	-	-	(1,783,632)
Writedowns	-		-	(2,270,329)	-	(125,096)	(2,395,425)
Balance at 10/31/2015	-	1,313,843	926,777	-	829,679	-	3,070,299
Additions	-	451,828	460,403	-	299,489	-	1,211,720
Recoveries	-	(393,901)	(250,000)	-	-	-	(643,901)
Writedowns	-	(1,171,700)	(1,337,250)	-	(1,129,168)	-	(3,638,118)
Balance at 10/31/2016	-	-	-	-	-	-	-

In our 2015 Annual Report we reported that we were working with Northeast Utilities (or Eversource) for the development of a sensor platform design to detect partial discharges inside a transformer. Additionally, we reported that we had begun development work with Northeast Utilities on a low-cost power line conditioning monitoring device designed for transmission power lines. Given the timing to market these opportunities, we reflected a write-down of our investment of \$2.27 million against these projects in the fiscal year ending October 31, 2015.

On July 31, 2016, we wrote down the remaining value of the deferred development costs to nil while we continue to pursue the continued development and ultimate commercialization of these projects.

The Company incurred \$858,865 of project costs in 2017. It recovered \$100,000 from Castrol, \$536,857 from Chevron and \$75,000 from Repsol. The Company reports net development cost of \$147,008 in 2017.

# **Intellectual Property**

In June 2016, we settled the litigation with Dreifus Associates Limited (DAL) which had been pending since late 2014. As part of the settlement, the Company received the full assignment of DAL s alleged interests in our Multimodal condition sensor platform and system thereof.

We incurred \$161,647 of patent related costs in 2017 (2016: \$192,873; 2015: \$213,820). We believe that the Company has valuable interests in its intellectual property that it has developed through October 31, 2017; specifically, we note that:

- a. We have seven published US patents and two US patents pending relating to the multi modal oil pan plug. Additionally, we have filed for PCT patents in other international jurisdictions which are currently under review.
- b. We have one US patent and received notification of publication of one additional US patent for our power line monitoring application as well as three PCT patents under review in international jurisdictions.
- c. We have US patent pending applications filed for our transformer partial discharge technology, our sparkinduced breakdown spectography technology and our cement integrity sensor technology. Additionally, we have PCT patents related thereto filed in several international jurisdictions which are under review.

We have a balance payable to our patent attorneys of \$106,929 at October 31, 2017. Our patent attorneys have stopped any additional work on our behalf until the Company pays down the balance due. The additional work since October 31, 2017 has been organized and managed by the President of MAST, Steven Van Fleet.

We continue to pursue the protection of our intellectual property. Our management will determine from time to time the jurisdictions where protection is appropriate. This determination will be based on a number of factors including the state of development of our technology, the importance of a particular market for our technology, the costs of pursuing patent protection in a jurisdiction and our financial position at the time.

#### **Share** Capital

At October 31, 2017 the Company had 228,562,711 common shares outstanding (2016: 204,388,569). Additionally, the Company has 6,595,000 stock options outstanding with a weighted average exercise price of \$0.37 per share (2016: 4,395,000 options outstanding with a weighted average exercise price of \$0.45 per share).

#### **Changes to Our Board of Directors and Management:**

Our 2016 Annual Meeting of Shareholders was held on July 21, 2017. Joseph Fuda, David Sharpless, Steven Van Fleet, Oliver Nepomuceno, Larry Blue, Alex Dey, and Brian Von Herzen were reelected to serve on our Board of Directors. Messrs Joseph Fuda, Dan Amadori and Steven Van Fleet continue to serve as Officers of the Company. On September 30, 2017, Larry Blue resigned as a director after 12 years of service to the Company.

#### **Equity Financing Transactions:**

In the fiscal year ended October 31, 2017 the Company completed the following transactions:

- (a) It completed 20 private placements for cash and received gross proceeds of \$719,403; and, issued 3,873,223 common shares.
- (b) It issued 547,643 common shares to settle \$107,708 of trade accounts payable. It also issued 132,381 common shares to settle \$21,909 of compensation payable.
- (c) It issued 20,370,895 common shares for the conversion of eight bridge loans totaling \$2,536,963.
- (d) The Company continued its bridge loan financing activity, specifically:
  - (i) Certain of the bridge loans secured in 2016 were extended in 2017, ultimately through October 31, 2017 and thereafter.
  - (ii) The Company secured a total of 15 additional \$CDN denominated bridge loans in 2017 and realized gross proceeds of \$1,233,524. One of these bridge loans was repaid in October 2017.
- (iii) The Company secured three additional \$USD bridge loans in 2017 and realized gross proceeds of \$501,500. A partial repayment of \$75,000 on one of these loans was made in October 2017.
   In the fiscal year ending October 31, 2016 the Company completed the following transactions:
- (a) It completed two private placements for cash and received gross proceeds of \$110,000 and issued a total of 366,668 common shares.
- (b) It raised \$751,273 from the exercise by officers, directors and employees of 3,756,366 common share options.
- (c) It secured additional financing of \$2,490,333 through fourteen (14) bridge loans from investors. The maturity dates of these loans at inception varied from two to six months. The prescribed interest rates vary from 1% to 3% per month. A conversion feature has been provided in each case whereby the investor has the option to convert the loan into common shares at a conversion price prescribed at the inception of the loan. Seven (7) of these bridge loans are denominated in \$CDN and the remaining seven bridge loans are denominated in \$USD. In certain cases the terms of the bridge loans were renegotiated at their maturity dates with new terms established.

Of the bridge loans secured in 2016, two \$USD loans totaling \$60,000 were repaid at their maturity dates and a third bridge loan in the amount of \$107,000 (principal and interest) was converted to common shares at its maturity date. The remaining bridge loans secured were extended at their maturity dates.

(d) It issued 1,517,143 common shares to two creditors to settle outstanding accounts payable due to these creditors in the amount of \$295,312. Additionally, the Company issued 312,500 common shares with a value of \$62,500 as partial consideration of the settlement of the 2014 litigation with DAL. This litigation was settled on June 29, 2016.

#### Intangible Assets:

Intangible assets comprise the costs which the Company has capitalized relating to the technical expertise and knowhow that the Company has developed with respect to the commercialization efforts relating to its sensor technology. In 2012, the Company determined that it had sufficiently advanced its expertise and product knowledge relating to the general commercialization efforts for its sensor technology in multiple industry vertical applications. In 2016, we recorded \$19,352 of amortization expense during the year and reserved the balance of \$38,075 at fiscal year

end, leaving a nil balance at October 31, 2016 and 2017.

#### **Environmental Matters:**

We are subject to various environmental protection regulations imposed by the government in the jurisdiction where we conduct our development work. We are not aware of any current or pending environmental protection laws or regulations that would have a material impact on our capital expenditure requirements or competitive position.

#### C. Organizational Structure

In November, 2007, the Company incorporated Micromem Applied Sensors Technology, Inc. (MAST) as a Delaware-based wholly-owned subsidiary. MAST has an office in New York City and is being managed by Steven Van Fleet, its President and a director of Micromem. MAST is pursuing a number of potential strategic joint development agreements with industry partners.

In October, 2008, the Company incorporated 7070179 Canada Inc. as a wholly-owned subsidiary. On October 31, 2008, the Company assigned its rights, title and interest in certain of its intellectual property which it previously held directly to 707179 Canada Inc. in exchange for common shares of this wholly-owned subsidiary.

We have a wholly-owned subsidiary, Pageant International, which was incorporated under the laws of the Turks & Caicos Islands and continued to Barbados on May 25, 2001. Pageant International has a wholly-owned subsidiary, Pageant Technologies (USA) Inc., a corporation incorporated in the State of Utah. Pageant Technologies USA has been inactive since 2002.

We have a wholly-owned subsidiary, Memtech International Inc., incorporated under the laws of the Bahamas, which in turn has a wholly-owned subsidiary, Memtech International (USA) Inc., a corporation incorporated in the State of Delaware. We also have a wholly-owned subsidiary Micromem Holdings (Barbados) Inc. These subsidiaries have been inactive since inception.

#### D. Property, Plant and Equipment

We maintain our corporate headquarters in Toronto, Ontario, Canada. We occupy 2,500 square feet of commercial office space pursuant to a lease that we extended in February, 2017 for five years through 2021.

The Company incurred \$3,809 of capital expenditures in 2017, \$1,274 in 2016 and \$1,286 in 2015.

# ITEM 4A. UNRESOLVED STAFF COMMENTS None.

#### ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

This section of the Form 20-F has been prepared to provide a more substantive discussion of our business and to assist the reader in analyzing the audited consolidated financial statements for the years ended October 31, 2017, October 31, 2016 and October 31, 2015. This discussion and analysis of financial condition and results of operations should be read in conjunction with the consolidated financial statements and related notes in this Annual Report, which are prepared in accordance with IFRS and are stated in United States dollars.

#### A. Operating Results

The following table sets forth certain selected financial information of our Company:

#### Selected statement of operations and deficit information

		2017		2016		2015
Administration	\$	305,421	\$	395,340	\$ 3	89,647
Professional and other fees and salar	ries	1,433,113		739,401		52,302
Travel and entertainment		118,261		180,767	19	93,861
Development costs		147,008	3	635,613	2,64	46,019
Stock compensation expense		442,206		-	1,10	53,941
Interest expense		666,245		561,608	-	36,714
Accretion expense		1,358,101		514,608		-
Loss on conversion of bridge loans		1,009,680		-		-
Gain on revaluation of derivatives		(1,614,822	) (	(295,616)		-
Other expense		480,987		73,862	1.	34,126
Loss for the year		4,346,200	6	805,535	6,5	16,610
Loss per share basic and diluted		0.02		0.03		0.03
Selected balance sheet information						
	2	017	201	6	2015	
Working capital (deficiency)	\$ (3,865,	390) \$ (4,	316,73	0) \$ (2,0	)49,302)	
Other Assets	441,	284	414,58	8 3,4	453,190	

Other Assets	441,284	414,588	3,453,190
Total Assets	916,643	736,043	3,667,866
Shareholders equity (deficiency)	(3,424,106)	(3,902,142)	1,403,888
Fiscal 2017 Compared to Fiscal 2016			

- a. Administration costs were \$305,421 in 2017 versus \$395,340 in 2016. These expenses principally include rent, insurance, communications, investor relations and filing fees. The decrease in administration costs reported in 2017 is primarily attributable to: (i) in 2016 we incurred approximately \$130,000 (2017: Nil) of costs associated with the DAL legal settlement referenced above in the Intellectual Property section; (ii) insurance expense increased by approximately \$21,000 in 2017 versus 2016, and (iii) interest and penalties costs increased by approximately \$12,000 in 2017 versus 2016.
- b. Professional fees including audit and legal expenses were \$224,139 in 2017 versus \$328,851 in 2016. In 2016 we incurred the costs associated with the attestation report on our internal controls over financial reporting which was not required in 2017. Consulting fees were \$813,735 in 2017 versus \$1,028,600 in 2016 reflecting less use of outside consultants in 2017.
- c. Salaries and benefits were \$395,239 in 2017 versus \$381,950 in 2016. There were no significant changes in staff salaries and benefits on a year over year basis.
- d. Travel and entertainment expenses were \$118,261 in 2017 versus \$180,767 in 2016. The Company curtailed travel related costs in 2017 given the Company s working capital constraints.

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- e. Interest expense was \$666,245 in 2017 versus \$561,608 in 2015. The Company had more bridge loans outstanding in 2017.
- f. Accretion expense was \$1,358,101 in 2017 versus \$514,560 in 2017. This is a non cash expense which relates to the amortization of the derivative liability amount which is determined at the inception of the loan and charged to the face value of the debt amount recorded at inception over the term of the loan. The amount increased significantly in 2017 with the larger number of loans in place and the frequent changes in the terms of loan at renewal dates, causing the additional non cash expense.
- g. The gain on the revaluation of the derivative liabilities was \$1,614,822 in 2017 versus \$295,616 in 2016. The derivative liability is revalued at each quarter end and is reset if the terms of the loan are changed at renewal dates. This is a non cash item; the increase in 2017 was the result of the larger number of loans in place in 2017 and the frequent changes in the terms of the loans at renewal dates.
- h. The loss on conversion of bridge loans to common shares was \$1,009,680 in 2017 versus nil in 2016. A total of eight bridge loans were converted to common shares in 2017. In seven of these conversions the Company provided an inducement to the lender to convert by reducing the originally negotiated conversion price to the lower market price on the day of conversion.
- i. Other expenses were \$480,987 in 2017 versus \$73,892 in 2016. In 2017 the Company reported a foreign exchange loss of approximately \$343,000 (2016: gain of \$1,000); arising principally from the translation of multiple Canadian denominated bridge loans. Patent amortization expense was \$133,785 in 2017 versus \$26,527 in 2016.
- j. Stock compensation expense was \$442,206 in 2017 versus \$Nil in 2016. The Company issued 2,890,000 stock options to officers, directors and employees in 2017 and the cost was calculated using the Black Scholes option pricing model.
- k. Net development costs in 2017 were \$147,008 versus \$3,635,613 in 2016. In 2016, the Company recorded an impairment reserve on deferred development costs of \$3,638,118.

# Fiscal 2016 compared to Fiscal 2015:

The Company reported a loss of \$6,805,535 in 2016 versus a loss of \$6,516,610 in 2015. The change in loss from operations in 2016 from 2015 resulted from several components, including:

- a. Administration expenses were \$395,340 in 2016 versus \$389,647 in 2015. These expenses include rent, insurance, communications, investor relations and filing fees and are comparable between the two years.
- b. Professional fees including audit and legal expenses were \$328,851 in 2016 versus \$466,411 in 2015 primarily as a result of costs incurred in 2015 relating to the DAL litigation which was settled in 2016. Additionally, we incurred higher costs in 2015 relating to contracts with our development partners.
- c. Consulting fees were \$1,028,600 in 2016 versus \$1,039,316 in 2015. In 2016 this included \$110,000 of investor relations fees to a firm hired in 2016 (2015: nil), management bonuses of nil to the President of MAST in 2016 (2015 \$244,000).
- d. Salaries and benefits expenses were \$381,950 in 2016 versus \$446,575 in 2015. Staff bonuses were \$20,000 in 2016 versus \$55,000 in 2015.
- e. Travel and entertainment expenses were \$180,767 in 2016 versus \$193,861 in 2015.

f. Net development costs were \$3,635,613 in 2016 versus \$2,646,018 in 2015. The Company recorded an impairment reserve on deferred development costs of \$3,638,118 in 2016 (2015: \$2,395,425).

- g. Other expenses totaled \$73,862 in 2016 versus \$134,126 in 2015. The difference between years primarily relate to foreign exchange expense and patent amortization expense.
- h. Stock compensation expense was nil in 2016 versus \$1,163,941 in 2015 which related to the issuance of stock options in 2015.

#### **Balance Sheet Data:**

- (a) At October 31, 2017, the Company had working capital of (\$3,865,390) compared to (\$4,316,730) at October 31, 2016.
- (b) The investment in deferred development costs by project for the four-year period from 2013 2016 is summarized in ITEM 4.B. Business Overview above.
- (c) The Company completed equity and bridge loan financings in 2017, 2016 and 2015 as summarized in ITEM 4.B.- Business Overview above.

#### **Unaudited Quarterly Financial Information**

Three months ended (unaudited)	Revenues \$	Expenses \$	Income (Loss) in period \$	(Loss) per share \$
January 31, 2016	-	611,687	(611,687)	-
April 30, 2016	-	750,938	(750,938)	(0.005)
July 31, 2016	-	4,610,433	(4,610,433)	(0.02)
October 31, 2016	-	832,477	(832,477)	(0.005)
January 31, 2017	-	2,431,952	(2,431,952)	(0.01)
April 30, 2017	-	(124,532)	124,532	-
July 31, 2017	-	400,281	(400,281)	-
October 31, 2017	-	1,638,499	(1,638,499)	(0.01)

Included as part of the total quarterly expenses as reported above are the following items which represent significant variations reported between the respective 2016 and 2017 quarters :

	2016	2017
Q3 Development cost expense/write-down	\$ 3,638,118 \$	49,156
Q1 Non-cash loss on revaluation of derivative liabilities	- \$	1,046,968
Q4 Loss on conversion of bridge loans to common shares	- \$	1,009,680
Q4 Non-cash (gain) on revaluation of derivative liabilities	\$ (295,616) \$	(887,075)

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# **B. Liquidity and Capital Resources:**

# Liquidity

We have not yet realized commercial revenues from the exploitation of our technology platforms. We currently do not have positive cash flow from operations and will not realize positive cash flow until we license or directly produce and sell products utilizing our technology platforms.

We currently have no lines of credit available. We have, to date, relied on obtaining equity financing from investors through private placements, through the exercise by shareholders of common share purchase warrants, through the exercise of common stock options by officers and directors, and through bridge loans that the Company has secured in order to meet our cash flow needs until we can generate sustainable revenues. At October 31, 2017 we had a working capital deficiency of \$3,862,390 (2016: \$4,316,730) including cash on hand of \$9,189 (2016: \$288,128). Since October 31, 2017 we have raised an additional \$576,936 of bridge loan financing and \$207,060 of financing from five private placements. We have also received \$340,857 of additional funding from our development partners which we reported as accounts receivable at October 31, 2017.

We have granted to our directors, officers and other employees a number of options to purchase shares at prices that are at or above market price on the date of grant. None of the optionees has any obligation to exercise their options and there can be no guarantee that we will realize any funds from these options.

#### **Capital Resources**

We incurred \$3,809 of capital expenditures in 2017, \$1,274 of expenditures in 2016 and, \$1,286 of expenditures in 2015.

#### C. Research and Development:

Under IFRS, research costs are expensed in the period incurred. Development expenses are expensed as incurred unless they meet the criteria for deferral and amortization under IFRS, which criteria is the translation of research findings or other knowledge into a plan for the technology prior to commercial production or use.

# **D. Trend Information:**

The market applications for smart sensors are expanding; there are potential applications that could be utilized in virtually every industry vertical.

Our prospects for commercial revenues are dependent upon the successful completion of milestones in the development contracts that we have initiated to date and upon the customers deciding to proceed with commercial orders once these development contracts are successfully completed.

#### **E. Off-Balance Sheet Arrangements:**

We are not party to any off-balance sheet arrangements except for operating lease commitments. In addition, we have no unconsolidated special purpose financing or partnership entities.

# F. Tabular Disclosure of Contractual Obligations:

A summary of our financial commitments as of October 31, 2017 is as below:

	Payments due by period (\$CDN)							
Total	Less than 1			1-3 years		3-5 years	More than 5	
		year					years	
<b>Operating lease obligations</b> \$ 228,285	5 \$	48,060	\$	96,120	\$	84,105	-	

	Payments due by period (\$USD)							
	Total		Less than 1		1-3 years		3-5 vears	More than 5
			year				years	years
<b>Operating lease obligations</b>	\$ 181,105	\$	38,127	\$	76,255	\$	66,723	-
Purchase obligations	\$2,235,335	\$	760,001	\$	1,475,334		-	-
Total:	\$2,416,440	\$	798,128	\$	1,551,589	\$	66,723	-

In addition to these financial commitments, the Company has management agreements with its senior executives which are operative on a month to month basis. At October 31, 2017 these agreements stipulate the following monthly obligations for the Company s senior management team:

President	\$21,333 USD
President, MAST	\$19,000 USD
CFO	\$12,500 CDN (\$9,728 USD)

#### **Critical Accounting Policies:**

Our significant accounting policies are set forth in our consolidated financial statements, which should be read in conjunction with management's discussion of our critical accounting policies and estimates set forth below.

Our consolidated financial statements for the period have been prepared in accordance with IFRS .

We have not yet realized commercial revenues from the exploitation of our technology. Under IFRS, research costs are expensed in the period incurred. Development expenses are expensed as incurred unless they meet the criteria for deferral and amortization under IFRS which is the translation of research findings or other knowledge into a plan for the technology prior to commercial production or use. As at October 31, 2017 and the Company capitalized nil of development costs and capitalized nil as intangible assets under IFRS.

Management is required to make estimates and assumptions which can affect the reported balances. In determining estimates of net recoverable amounts and net realizable values, or whether there has been a permanent impairment in value, we rely on assumptions regarding applicable industry performance and prospects, as well as general business and economic conditions that prevail and are expected to prevail. Assumptions underlying asset valuations are limited by the availability of reliable comparable data and the uncertainty of predictions concerning future events.

Accounts recorded in foreign currency have been converted to United States dollars as follows: current assets and current liabilities at the prevailing exchange rates at the end of the year; other assets at historical rates; revenues and expenses are translated at the three month average monthly exchange rate per quarter which rate approximates the rate of exchange prevailing at the transaction dates; and gains and losses resulting from the fluctuation of foreign exchange rates are included in the determination of income.

#### G. Contingencies:

- A. We have agreed to indemnify our directors and officers and certain of our employees in accordance with our By-laws. We maintain insurance policies that may provide coverage against certain claims.
- B. The Company may be subject to litigation, claims and governmental and regulatory proceedings arising in the ordinary course of business. In such cases, the Company would accrue a loss contingency for these matters when it is probable that a loss has been incurred and the amount of the loss can be reasonably estimated.

# **H. Translation of Foreign Currencies:**

Our functional and reporting currency is the United States dollar. Accounts recorded in foreign currency have been converted to United States dollars as follows: Monetary assets and liabilities are translated at exchange rates at the consolidated balance sheet dates; non-monetary assets are translated using the historical rate of exchange in effect at the translation dates; revenues and expenses are translated using the three month average rate of exchange per quarter, which rate approximates the rate of exchange prevailing at the transaction dates; and gains and losses resulting from the translation are included in the determination of net loss for the period.

# ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

# A. Directors and Executive Officers

The Directors and Executive Officers of Micromem as at February 28, 2018 are set forth below:

Name	<u>Age</u>	Position
	FC	
Joseph Fuda	56	President, Chief Executive Officer and Director
Dan Amadori	66	Chief Financial Officer
Steven Van Fleet	63	Director and President of MAST, Inc.
David Sharpless	67	Director
Oliver Nepomuceno	50	Director
Alex Dey	74	Director
Brian Von Herzen	58	Director

**Joseph Fuda** has been President, Chief Executive Officer and Director since February 13, 2002. Previously he served as Manager of Strategic Alliances for Micromem since February 2001. Prior thereto, he served as a consultant to Micromem since November 2000. Prior thereto he served as a Vice-President and a Director of IPO Capital Corp since April 1999. He was a director of Leader Capital Corp. until June 2007 and also served as a director of Echo Energy Canada Inc, and of Echo Power Generational Inc until June 2004.

**Dan Amadori** has served as Chief Financial Officer of Micromem since June 2004. He also currently serves as a director of Invesque, Inc., Enerydynamic Hybrid Technologies Inc. and Nerium Biotech Inc. He has also served as Chief Financial Officer of Leader Capital from June 2004 March 2009. He served as a Director and Chair of the Audit Committee of Ontex Resources between September 2003 and March 2005. He served as CFO of Echo Power Generation Inc. from June 2004 - March 2008. He served as a director of Hydrive Technologies Inc. from 2004-2008 and as Chair of the Audit Committee of Hydrive from 2006-2008. He served as a Director and CFO of XGEN Ventures Inc. between November 2005 and September 2009. He was appointed as Chairman of Kingsway Arms Retirement Residences in August 2011. He is President of Lamerac Financial Corp., a financial advisory firm and has held that position since October 1988. Mr. Amadori is a Chartered Professional Accountant and holds an MBA from the Ivey School of Business.

**Steven Van Fleet** has been President of MAST since 2008 and a director of Micromem since 2002. He is a 1976 graduate of Miami University with a BSc. in Applied Science and held several technical positions in the pulp and paper industry including Reed Paper, MacMillan Bloedel, Weyerhaeuser, Boise Cascade and International Paper. While at International Paper, he managed the corporate research and development group responsible for applying

emerging technology to business issues. Mr. Van Fleet was one of the founding directors for the MIT Auto ID group that was charged with creation of the Internet of Things and the emergence of a global standard for the application of RFID. He held business development positions with Sentrol System, a supplier of paper machine quality systems and the R&V Group, a startup RFID manufacturing company. For six years he was the owner of a company that served IBM with a focus on semiconductor clean room tool analytics and automation.

**David Sharpless** is the Chairman and CEO of Maverick Inc., a private consulting and investment firm and the Chairman and CEO of New Carbon Economy Venture Management Inc., a private company which manages a number of investments in green technology companies. He is also a Director of Verdant Power, Inc., a developer of hydro kinetic energy and Canaccede Financial Group Inc., a consumer finance company. He was the Chairman and CEO of TrustMark Auto Group Inc. a CNSX listed company and the Chairman of Hunter Keilty Muntz and Beatty Limited, a firm of international insurance brokers based in Toronto and the Vice Chairman of its successor, HKMB Hub International Ltd. Prior to joining Hunter Keilty Muntz and Beatty Limited in 2001, his career spanned more than 25 years as a business lawyer with Blake, Cassels & Graydon and as a senior leader in international finance. He has served as a director of Micromem since 2001.

**Oliver Nepomuceno** has served as a director of Micromem since June 26, 2006. He is a resident of Switzerland and continues to serve as a Financial Advisor and is located in Switzerland. He actively assists corporations in the development of new business opportunities in new markets.

Alex Dey is a retired businessman and was elected as a director on September 24, 2010. He was the sole proprietor of Alex Dey, Chartered Accountants until July 31, 2004.

**Brian Von Herzen** Since 1993, Dr. Von Herzen has served as Chief Executive Officer at Rapid Protoypes, Inc. providing turnkey electronic product design services, including commercial product specifications and fully functional engineering product prototypes, frequently using programmable logic devices. Rapid Prototypes is expert in electronic engineering design technologies designed to minimize time to market for new electronic products in networking, consumer electronics and other commercial products. The company has developed some of the world s fastest commercial FPGA applications. Dr. Von Herzen also serves on the board of directors of the Climate Foundation and Bright Energy Storage Technologies, LLP. Dr. Von Herzen has also developed software and hadware systems ranging from apps on smartphones to multi-GHz correlating spectrometers for the Caltech Submillimeter Observatory. He has extensive experience with electronic and optical system development for commercial electronic products.

There are no arrangements or understandings between any director and any other person pursuant to which the director was selected as a director or executive officer. Each director holds office until the next annual meeting of shareholders or until his or her successor is elected or appointed, unless his or her office is earlier vacated according to the provisions of our By-laws or the *Business Corporations Act* (Ontario).

Other than a father/son relationship between Salvatore Fuda (father) and Joseph Fuda (son), there is no family relationship between any director or executive officer and any other director or executive officer.

# B. Compensation

	Annual Compensation			Long-Term Compensation Awards		
Name and Principal Position	Fiscal Year	Salary (US\$)	Bonus (US\$)	Other Annual Compensation (US\$)	Securities Under Options Granted (#)	
Joseph Fuda Chief Executive Officer	2015 2016 2017	150,786 353,787 319,429		- - 99,450	22,500 <sup>(2)</sup> - 650,000 <sup>(6)</sup>	
Salvatore Fuda, Former Chairman of the Board of Directors (4)	2015 2016 2017	119,707 119,707 -		-	187,500 <sup>(2)</sup> - -	
David Sharpless Director	2015 2016 2017			110,250 - 22,950	375,000(3) - 150,000 <sup>(6)</sup>	
Steven Van Fleet Director and President of MAST, Inc.	2015 2016 2017	227,648 231,309 233,694	244,074 -	- - 99,450	- - 650,000 <sup>(6)</sup>	
Dan Amadori Chief Financial Officer	2015 2016 2017	119,707 113,266 114,601		- - 99,450	- - 650,000 <sup>(6)</sup>	
Larry Blue Director (7)	2015 2016 2017		-	- - 7,650	300,000 <sup>(3)</sup> - 50,000 <sup>(6)</sup>	
Oliver Nepomuceno Director	2015 2016 2017	-		61,250 - 22,950	- - 150,000 <sup>(6)</sup>	
Alex Dey Director	2015 2016 2017	-		49,000 - 30,600	- - 200,000 <sup>(6)</sup>	
Craig Carlson Director (5)	2015 2016 2016	34,705	-		-	
Brian Von Herzen Director (1)	2015 2016 2017	-	-		-	

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# Notes:

- Brian Von Herzen became a director in February 2014. Rapid Prototypes, Inc., a company whose major shareholder is Mr. Von Herzen, invoices the Company for engineering, product development and design services. In 2017 and 2016 the total charges invoiced to the Company by Rapid Prototypes was nil; (2015 - \$1,049,524).
- 2. Each option entitles the holder to purchase one common share at a price of \$0.46 per share prior to expiration in August 2020.
- 3. Each option entitles the holder to purchase one common share at a price of \$0.49 per share prior to expiration.
- 4. Salvatore Fuda did not stand for reelection to the Board of Directors at the Annual General Meeting held at April 26, 2016.
- 5. Craig Carlson resigned as a Director of the Company in June 2015.
- 6. Each option entitles the holder to purchase one common share at a price of \$0.34 per share prior to expiration in August 2020.
- 7. Larry Blue resigned as a director on September 30, 2017.

Options are offered to directors, executive officers and employees to purchase our common shares at an exercise price equal to or above the market price for the common shares at the date that the options are granted. These options are approved by the Compensation Committee. None of the directors have agreements that provide for benefits upon termination of service.

In 2017 a total of 2,890,000 stock options were granted to officers, directors and employees. The exercise price was \$0.34 CDN per share.

In 2016 no stock options were issued.

In 2015 a total of 2,165,000 stock options were granted to officers, directors, employees and outside consultants. The exercise price for 975,000 options granted in January 2015 was \$0.49 per share; the exercise price for 940,000 options issued in August 2015 was \$0.46 per share; the exercise price for 250,000 options issued in September 2015 was \$0.40.

# C. Board Practices:

All matters pertaining to our financing, contractual arrangements and Management and Director compensation are approved by the Board of Directors. The members of the Board of Directors are appointed to a one-year term at our Annual General Meeting.

Our Board of Directors meets on an as required basis during the fiscal year. Our Board of Directors did not meet in person in 2017. The Board was convened informally as of each quarter end.

Our Audit Committee met regularly during fiscal 2017 for the purpose of approving and recommending to the Board the quarterly financial statements and our yearend financial statements. In addition, our Audit Committee receives regular periodic reports from management.

Our Compensation Committee met regularly in 2017 and additionally receive regular reports from management. Our Compensation Committee approves Management and Director Compensation and all stock option grants for

recommendation to the Board of Directors.

Our Disclosure Committee met as required in 2017 to review our various press release disclosures and to monitor our general practices relating to our disclosure requirements.

# **Audit Committee**

The Board of Directors has appointed an Audit Committee consisting of three independent directors. The members of the Audit Committee are Alex Dey, Oliver Nepomuceno and David Sharpless (Chairman), each of whom serves in such capacity until the Board of Directors next annual meeting. The Audit Committee is responsible for the integrity of our internal accounting and control systems. The committee receives and reviews our financial statements and makes recommendations thereon to the Board of Directors prior to its approval by the full Board of Directors. The Audit Committee communicates directly with our external auditors in order to discuss audit and related matters whenever appropriate. In 2017 the Audit Committee met formally in January, February March, June, September and October.

# **Compensation Committee**

The Board of Directors has appointed a Compensation Committee which meets on executive compensation matters as and when required. Our Compensation Committee includes Oliver Nepomuceno and Alex Dey as outside directors. The Compensation Committee met on a quarterly basis in 2017.

# Disclosure Committee

The Board of Directors has appointed a Disclosure Committee whose primary responsibility is to ensure timely and accurate disclosure of all relevant information in accordance with the various securities regulations. Our Disclosure Committee includes Joseph Fuda, the Company s CEO, and Alex Dey, an outside director.

# D. Employees

We have six employees, three of which serve in a management capacity and three of which serve in an administrative capacity. This includes the Chief Executive Officer and President, the Chief Financial Officer and the President of MAST and three support staff, all (except for the President of MAST) of whom work from our executive offices in Toronto, Canada. All research and development is outsourced to third parties. We consider our relations with our employees to be satisfactory.

# E. Share Ownership

NAME	SHARES OWNED	OPTIONS HELD	OPTION EXERCISE PRICE	EXPIRATION DATE	% OF TOTAL <sup>1</sup>
Joseph Fuda Chief Executive Officer and Director	1,937,335	22,500 650,000	\$0.46 \$0.34	08/20/2020 12/30/2021	1.14% (2,609,835)
David Sharpless Director	325,000	375,000 150,000	\$0.49 \$0.34	06/04/2020 12/30/2021	0.37 % (850,000)
Steven Van Fleet Director and President of MAST, Inc.	-	75,000 65,000 35,000 650,000	\$0.30 \$0.27 \$0.64 \$0.34	01/22/2018 09/16/2018 04/25/2019 12/30/2021	0.36% (825,000)
Dan Amadori Chief Financial Officer	779,517 <sup>2</sup>	75,000 65,000 20,000 650,000	\$0.30 \$0.27 \$0.64 \$0.34	01/22/2018 09/16/2018 04/25/2019 12/30/2021	0.70 % (1,589,517)
Oliver Nepomuceno Director	1,078,572	75,000 65,000 25,000 150,000	\$0.30 \$0.27 \$0.64 \$0.34	01/22/2018 09/16/2018 04/25/2019 12/30/2021	0.61% (1,393,572)
Alex Dey Director	776,373 <sup>3</sup>	75,000 65,000 30,000 200,000	\$0.30 \$0.27 \$0.64 \$0.34	01/22/2018 09/16/2018 04/25/2019 12/30/2021	0.50% (1,146,373)
Brian Von Herzen	-	300,000 25,000	\$0.85 \$0.64	02/10/2019 04/25/2019	0.14% (325,000)

1 Calculated based on shares owned plus options held as a percentage total of shares outstanding as of October 31, 2017, plus options held.

2 215,716 shares are held by a corporation controlled by Mr. Amadori.

3 254,863 shares are held by a corporation wholly owned by Mr. Dey.

# ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

# A. Major Shareholders:

No shareholder holds greater than 5% of the common shares outstanding. As of the date of this Annual Report approximately 58% of the issued and outstanding common shares are held by Canadian investors; approximately 21% of the issued and outstanding shares are held by U.S. investors; and approximately 21% are held by investors outside of Canada and the U.S.

# **B.** Other Related Party Transactions:

The Company reports the following related party transactions:

(a) Management and consulting fees and advances:

Included in professional fees, other fees and salaries as reported are management fees and consulting fees paid or payable to individuals (or Companies controlled by such individuals) who served as officers, directors and employees of the Company. The total compensation paid to such parties is summarized as:

		2017	2016	2015
Cash Compensation	\$	667,724	\$ 845,510	\$ 936,199
Less portion capitalized to deferred development costs	S	-	(4,869)	(122,804)
		667,724	840,641	813,395
Share Compensation		-	-	220,500
Stock based compensation		382,531	-	524,583
-	\$1	,050,255	\$ 840,641	\$ 1,558,478

In 2017 these parties were awarded a total of 1,950,000 stock options at an exercise price of \$0.34 CDN (2016 nil) (2015 975,000 stock options at an average price of \$0.49 CDN per share; and 412,500 stock options at an average price of \$0.46 per share)

In 2017 and 2016 the Company was invoiced nil (2015: \$1,049,324) by Rapid Prototypes, Inc (RPI), a company whose major shareholder is Brian Von Herzen, who has served as a director of the Company since February 2014. Included in accounts payable at October 31, 2017 is \$167,000 owing to RPI.

Between November 2015 and January 2016 our CEO was provided with short term non-interest bearing advances of \$42,144. These advances were settled at January 31,2016 through the allocation of compensation to the CEO.

# **ITEM 8. FINANCIAL INFORMATION**

# A. Consolidated Statements and Other Financial Information

Our consolidated financial statements for the years ended October 31, 2017, 2016 and 2015 have been prepared in accordance with IFRS as issued by the IASB.

We have never paid a dividend on our securities. We do not anticipate paying dividends in the foreseeable future.

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# **B.** Significant Changes

Significant Changes since October 31, 2017 are as presented in Note 23 to the Company s Consolidated Financial Statements. See ITEM 18 Financial Statements .

#### **ITEM 9. THE OFFER AND LISTING**

Our common shares are traded in the United States and are quoted on the OTCQB. The common shares are quoted under the symbol MMTIF. Our common shares are traded in Canada on the CSE under the symbol MRM.

The table below sets forth the high and low sales prices for common shares in U.S. Dollars as reported for the periods specified. Our fiscal year end October 31.

Period	High	Low
Last six months:		
February 2018	0.27	0.16
January 2018	0.28	0.10
December 2017	0.13	0.09
November 2017	0.14	0.10
October 2017	0.15	0.10
September 2017	0.10	0.10
Last eight quarters:		
Q4 2017	0.17	0.10
Q3 2017	0.25	0.10
Q2 2017	0.31	0.18
Q1 2017	0.34	0.18
Q4 2016	0.33	0.18
Q3 2016	0.38	0.16
Q2 2016	0.45	0.24
Q1 2016	0.45	0.22
Last five years:		
2017	0.31	0.12
2016	0.45	0.16
0015	0.00	0.04

2017	0.01	0.12	
2016	0.45	0.16	
2015	0.80	0.34	
2014	1.50	0.40	
2013	1.33	0.16	
0 5 1	 		

On February 28, 2018, the last reported sale price for our common shares on the OTCQB was \$0.22.

# **ITEM 10. ADDITIONAL INFORMATION**

#### A. Share Capital

Our authorized capital consists of an unlimited number of common shares, of which 228,562,711 shares were issued and outstanding as of October 31, 2017, and 2,000,000 special, redeemable, voting preference shares, referred to herein as special shares, none of which were outstanding, as of October 31, 2017.

Additionally, the Company has 6,595,000 stock options outstanding with a weighted average exercise price of \$0.37 (2016: 4,395,000 options outstanding with a weighted average exercise price of \$0.45)

# **B.** Memorandum and Articles of Incorporation Articles of Incorporation

# Incorporation Details and Objects of Micromem Technologies Inc.

Micromem Technologies Inc. was incorporated under the laws of the Province of Ontario, Canada, on October 21, 1985 as Mine Lake Minerals Inc. We subsequently changed our name to Avanti Capital Corp. by filing Articles of Incorporation of Amendment on June 23, 1988 and to AvantiCorp International Inc. on April 30, 1992 before becoming Micromem Technologies Inc. on January 14, 1999. The Articles of Incorporation of Incorporation place no restrictions on the nature of the business to be carried on by Micromem.

# **Summary of Directors Powers and Authorities**

The rights, duties, powers and authorities of our Board of Directors are set out in the Articles of Incorporation and By-laws and the statutory provisions of the *Business Corporations Act* (Ontario). The following is a selected summary of the Articles of Incorporation, By-laws and applicable provisions of the Business Corporations Act (Ontario) as they relate to selected rights, duties, powers and authorities of our Board of Directors.

The Articles of Incorporation provide for a minimum of three and a maximum of 12 directors. The Business Corporations Act (Ontario) prescribes that an offering corporation must have a minimum of three directors, at least twenty five percent (25%), or if they are less than 4, at least one of whom are Canadian residents and at least one third of whom are not officers or employees of us or our affiliates. The Board of Directors may, between annual shareholders meetings, appoint one or more additional directors to serve until the next annual shareholders meeting provided that the number of directors so added may not exceed by one-third (1/3) the number of directors required to have been elected at the last annual meeting of shareholders.

The Chairman of the Board of Directors or any one director may call a meeting upon the provision of forty-eight hours notice to each director in the manner prescribed in our By-laws. Any such notice shall include the items of business to be considered at the meeting. A majority of the directors constitute a quorum provided that half of those directors present are Canadian residents. Business cannot be transacted without a quorum. A quorum of directors may vote on any matter of business properly brought before the meeting provided that where a director is a party to a material contract or proposed material contract or has a material interest in the matter to be considered, such director must disclose his or her interest at the earliest possible date, request the conflict be noted in the minutes of the meeting, and with a few limited exceptions enumerated in the By-laws, refrain from voting on the matter in which the director has a material interest. There is no limitation on the Board of Directors to vote on matters of their remuneration provided such remuneration is disclosed in the financial statements and annual shareholder proxy materials.

The Board of Directors has broad borrowing powers and may, without authorization from the shareholders:

- borrow money on the credit of Micromem;
- issue, re-issue, sell or pledge debt obligations of Micromem;
- subject to restrictions respecting financial assistance prescribed in the Business Corporations Act (Ontario), give a guarantee on behalf of Micromem to secure the performance of an obligation of any person; and
- mortgage, hypothecate, pledge or otherwise create a security interest in all or any property of Micromem, owned or subsequently acquired, to secure any obligation of Micromem.

A person is qualified to be or stand for election as a director provided such person is at least 18 years of age, is not a bankrupt and is not found to be of unsound mind by a court in Canada or elsewhere. There is no requirement for a director to hold common shares.

#### **Securities of Micromem**

Holders of our common shares will be entitled to receive notice of, attend and vote at all meetings of the shareholders of Micromem. Each common share carries one vote at such meetings. In the event of the voluntary or involuntary liquidation, dissolution or winding-up of Micromem, after payment of all outstanding debts, the remaining assets of Micromem available for distribution will be distributed to the holders of our common shares. Dividends may be declared and paid on our common shares in such amounts and at such times as the directors shall determine in their discretion in accordance with the Business Corporations Act (Ontario). There are no pre-emptive rights, conversion rights, redemption provisions or sinking fund provisions attaching to the common shares. Common shares are not liable to further calls or to assessment by Micromem; provided, however, that pursuant to the provisions of the Business Corporations Act (Ontario), Micromem has a lien on any common share registered in the name of a shareholder or the shareholder's legal representative for a debt owed by the shareholder to Micromem.

Holders of special shares are entitled to receive notice of, attend and vote at all meetings of the shareholders of Micromem. Each special share carries one vote at such meetings. In the event of the voluntary or involuntary liquidation, dissolution or winding-up of Micromem, after payment of all outstanding debts, the holders of the special shares shall be entitled to receive, before any distribution of any part of the assets of Micromem among the holders of any other shares, the amount paid up on the special shares. The special shares are redeemable at the option of Micromem for the amount paid up on the shares. Dividends may not be declared or paid on the special shares and transfer of the Special Shares is restricted without the approval of the Directors of Micromem and the prior written consent of the Ontario Securities Commission. The number of special shares that may be issued and outstanding at any time is limited to 500,000. There are no pre-emptive rights, conversion rights or sinking fund provisions attaching to the special shares are not liable to further calls or to assessment by Micromem; provided, however, that pursuant to the provisions of the Business Corporations Act (Ontario), Micromem has a lien on any special shares registered in the name of a shareholder or the shareholder's legal representative for a debt owed by the shareholder.

#### **Rights and Privileges of Shareholders**

Only the registered holders of our common shares and special preference shares on the record date are entitled to receive notice of and vote at annual and special meetings of shareholders. Where the items of business affect the rights of shareholders other than the holders of common shares, a special majority of two-thirds of the votes cast by the affected shareholders at the meeting called for such purpose is required to approve the item of business. Beneficial holders of common shares and special shares are also entitled to receive proxy materials in respect of meetings of shareholders in accordance with Canadian Securities Administrators National Instrument 54-101, provided that such proxies are limited in scope to instructing the registered shareholder (usually a brokerage house) on how to vote on behalf of the beneficial shareholder. There are no restrictions on the number of shares that may be held by non-residents other than restrictions set out in the *Investment Canada Act* (Canada). See "Additional Information - D. Exchange Controls".

There are no provisions in the By-laws regarding public disclosure of individual shareholdings. Notwithstanding this, applicable Canadian securities legislation requires certain public disclosure of persons owning or acquiring common shares in excess of 10% of a corporation's issued and outstanding share capital.

# C. Material Contracts

In 2010 the Company entered into a month to month contract with Mr. Dan Amadori, its CFO, at the expiration of the employment agreement signed in 2008. These month to month arrangements continue at October 31, 2017. Under the terms of the contract, Mr. Amadori receives \$12,500 CDN (\$9,728 US at current exchange rates) in monthly compensation and additional compensation at the discretion of the Compensation Committee.

In 2010 the Company entered into a month to month contract with Mr. Joseph Fuda, its President and CEO, at the expiration of the employment agreement signed in 2008. In 2014 the base amount was changed to \$21,333 USD per month .These month to month arrangements continued through July 31, 2017; no compensation was paid in the three months ended October 31, 2017. Under the terms of the contract, in 2016 and 2017 Mr. Fuda received \$21,333 USD in monthly compensation and additional compensation at the discretion of the Compensation Committee.

In 2011 the Company entered into a month to month contract with Mr. Steven Van Fleet, the President of MAST at the expiration of the employment agreement signed in 2008. This month to month arrangement continues at October 31, 2017. Under the terms of the contract, Mr. Van Fleet receives \$19,000 USD in monthly compensation and additional compensation at the discretion of the Compensation Committee.

In 2011 the Company entered into a month to month contract with its Chairman of the Board, Mr. Salvatore Fuda, at the expiration of the employment agreement signed in 2005. This month to month arrangement ended on October 31, 2016. Under the terms of the contract, Mr. Fuda received \$12,500 CDN (\$9,438 USD at current exchange rates) in monthly compensation in 2016.

The total continuing monthly commitment under these month to month arrangements is approximately \$49,000 at October 31, 2017.

In 2011-2012 the Company, through its wholly-owned subsidiary, Micromem Applied Sensor Technologies, Inc. entered into consulting and product development agreements with Rapid Prototypes, Inc. (RPI) whose major shareholder is Mr. Brian Von Herzen. Mr. Von Herzen was appointed to the Board of Directors of the Company in February 2014. Between 2011-2015 RPI has invoiced the Company for professional engineering design and product development services since Mr. Von Herzen became a director of the Company, RPI has invoiced the Company total fees of \$3,893,167 through October 31, 2015; no invoices have been submitted to the Company in 2016 or 2017.

# **D.** Exchange Controls

As of the date hereof, we are not aware of any governmental laws, decrees or regulations in Canada that restrict the export or import of capital, including, but not limited to, foreign exchange controls, or that affect the remittance of dividends or other payments to nonresident holders of our common shares.

We are not aware of any limitations under the laws of Canada or the Province of Ontario, or in the Articles of Incorporation or any other of our constituent documents on the right of nonresidents of Canada or persons who are not Canadian citizens to hold and/or vote common shares.

# E. Taxation

# Certain Canadian Income Tax Consequences

This discussion under this heading summarizes the principal Canadian federal income tax consequences of acquiring, holding and disposing of common shares for a shareholder who is not a resident of Canada but is a resident of the United States and who will acquire and hold a common share as capital property for the purposes of the Income Tax Canada, also referred to as the Canadian Tax Act. This summary does not apply to a shareholder who carries on business in Canada through a permanent establishment situated in Canada or performs independent personal services in Canada through a fixed base in Canada if the shareholder is effectively connected with such permanent establishment or fixed base. This summary is based on the provisions of the Canadian Tax Act and the regulations there under and on an understanding of the administrative practices of Canada Customs & Revenue Agency, and takes into account all specific proposals to amend the Canadian Tax Act or regulations made by the Minister of Finance of Canada as of the date hereof. It has been assumed that there will be no other relevant amendments of any governing law although no assurance can be given in this respect. This discussion is general only and is not a substitute for independent advice from a shareholder's own Canadian and US tax advisors.

The provisions of the Canadian Tax Act are subject to income tax treaties to which Canada is a party, including the Canada-United States Income Tax Convention (1980), as amended.

#### Dividends on common shares and Other Income

Under the Canadian Tax Act, a non-resident of Canada is generally subject to Canadian withholding tax at the rate of 25 percent on dividends paid or deemed to have been paid to him or her by a corporation resident in Canada. We are responsible for the withholding of tax at the source. The Canada-United States Income Tax Convention (1980) limits the rate to 15 percent if the shareholder is a resident of the United States and the dividends are beneficially owned by and paid to such shareholder, and to 5 percent if the shareholder is also a corporation that beneficially owns at least 10 percent of the voting stock of the payor corporation.

The amount of a stock dividend (for tax purposes) would generally be equal to the amount of our paid up or stated capital and increased by reason of the payment of such dividend. We will furnish additional tax information to shareholders in the event of such a dividend. Interest paid or deemed to be paid on our debt securities held by non-Canadian residents may also be subject to Canadian withholding tax, depending upon the terms and provisions of such securities and any applicable tax treaty.

The Canada-United States Income Tax Convention (1980) generally exempts from Canadian income tax dividends paid to a religious, scientific, literary, educational or charitable organization or to an organization constituted and operated exclusively to administer a pension, retirement or employee benefit fund or plan, if the organization is a resident of the United States and is exempt from income tax under the laws of the United States.

#### **Dispositions of Common Shares**

Under the Canadian Tax Act, a non-resident of Canada is subject to Canadian tax on taxable capital gains, and may deduct allowable capital losses, realized on a disposition of "taxable Canadian property". common shares will constitute taxable Canadian property of a shareholder at a particular time if the shareholder used the shares in carrying on business in Canada, or if at any time in the five years immediately preceding the disposition 25 percent or more of the issued shares of any class or series in the capital stock of Micromem belonged to one or more persons in a group comprising the shareholder and persons with whom the shareholder did not deal at "arm's length and in certain other circumstances.

The Canada-United States Income Tax Convention (1980) relieves United States residents from liability for Canadian tax on capital gains derived on a disposition of shares unless:

the value of the shares is derived principally from "real property" in Canada, including the right to explore for or exploit natural resources and rights to amounts computed by reference to production, the shareholder was resident in Canada for 120 months during any period of 20 consecutive years preceding, and at any time during the 10 years immediately preceding, the disposition and the shares were owned by them when they ceased to be resident in Canada, or the shares formed part of the business property of a "permanent establishment" that the holder has or had in Canada within the 12 months preceding the disposition.

# **Certain United States Federal Income Tax Consequences**

The following is a general summary of certain United States federal income tax consequences, under current law, generally applicable to a US Holder (as defined below). This summary does not address all potentially relevant United States federal income tax matters and it does not address consequences peculiar to persons subject to special provisions of United States federal income tax law, such as those described below as excluded from the definition of a US Holder. United States alternative minimum tax considerations are not addressed in this summary. In addition, this summary does not cover any state, local or foreign tax consequences, nor any U.S. federal gift, estate or

generation-skipping transfer tax consequences. (Certain, but not all, foreign tax consequences are described above under Taxation - Certain Canadian Income Tax Consequences. )

The following summary is based upon the Internal Revenue Code of 1986, as amended (the Code ), Treasury Regulations, published Internal Revenue Service (IRS) rulings, published administrative positions of the IRS, and court decisions that are currently applicable, any of which could be materially and adversely changed, possibly on a retroactive basis, at any time. This summary does not consider the potential effects, both adverse and beneficial, of any recently proposed legislation which, if enacted, could be applied (possibly on a retroactive basis) at any time (including, without limitation, changes in applicable tax rates).

This summary is for general information only and it is not intended to be, nor should it be construed to be, legal or tax advice to any holder or prospective holder of common shares, and no opinion or representation with respect to the United States federal income tax consequences to any such holder or prospective holder is made. Accordingly, holders and prospective holders of common shares should consult their own tax advisors about the federal, state, local, and foreign tax consequences of purchasing, owning and disposing of common shares of the Company.

On December 22, 2017, President Trump signed into law the Tax Cuts and Jobs Act, effective for 2018. The following summary does not discuss the impact of the new law to U.S. investors with respect to their ownership of our shares. Each U.S. investor should consult its own tax advisor about the consequences of this new legislation with respect to the purchase, ownership and disposition of our shares.

# **CIRCULAR 230 DISCLOSURE**

ANY TAX STATEMENT MADE HEREIN REGARDING ANY U.S. FEDERAL TAX IS NOT INTENDED OR WRITTEN TO BE USED, AND CANNOT BE USED, BY ANY TAXPAYER FOR PURPOSES OF AVOIDING ANY PENALTIES. ANY SUCH STATEMENT HEREIN IS WRITTEN IN CONNECTION WITH THE MARKETING OR PROMOTION OF THE TRANSACTION TO WHICH THE STATEMENT RELATES. EACH TAXPAYER SHOULD SEEK ADVICE BASED ON THE TAXPAYER S PARTICULAR CIRCUMSTANCES FROM AN INDEPENDENT TAX ADVISOR.

# **US Holders**

As used herein, a US Holder means an owner of common shares who is a citizen or individual resident (as defined under United States tax laws) of the United States; a corporation or other entity taxable as a corporation created or organized in or under the laws of the United States or of any political subdivision thereof; an estate the income of which is taxable in the United States irrespective of source; or a trust if (a) a court within the United States is able to exercise primary supervision over the trust's administration and one or more United States persons have the authority to control all of the substantial decisions of the trust or (b) the trust was in existence on August 20, 1996 and has properly elected to continue to be treated as a United States person. This summary does not address the tax consequences to, and US Holder does not include, tax-exempt persons or organizations; qualified retirement plans, individual retirement accounts and other tax-deferred accounts; financial institutions; insurance companies; real estate investment trusts; regulated investment companies; entities subject to the U.S. corporate conversion rules; broker-dealers; U.S. tax expatriates; non-resident alien individuals or entities; persons or entities that have a functional currency other than the US dollar; persons who hold common shares as part of a straddle, hedging or conversion transaction; and persons who acquire their common shares as compensation for services. This summary is limited to US Holders who own common shares as capital assets and who hold the common shares directly (e.g., not through an intermediary entity such as a corporation, partnership, LLC or trust). This summary does not address the consequences to a person or entity of the ownership, exercise or disposition of any options, warrants or other rights to acquire common shares.

# Distributions to US Holders Who Own Common Shares

Subject to the discussion below concerning the potential status of the Company (or any of its subsidiaries that are classified as corporations for United States federal income tax purposes (Related Entities)) as a passive foreign

investment company ( PFIC ), the gross amount of any distribution by the Company (including any Canadian taxes withheld therefrom) with respect to common shares generally should be included in the gross income of a US Holder as foreign source dividend income to the extent such distribution is paid out of current or accumulated earnings and profits of the Company, as determined under United States federal income tax principles. To the extent that the amount of any distribution exceeds the Company's current and accumulated earnings and profits in that taxable year, the distribution is treated as a tax-free return of capital to the extent of the US Holder's adjusted tax basis in the common shares. Thereafter, to the extent that such distribution exceeds the US Holder's adjusted tax basis in the common shares, it is taxed as a capital gain.

Dividends received by non-corporate US Holders may be subject to United States federal income tax at lower rates (generally 15%) than other types of ordinary income in taxable years beginning on or before December 31, 2013, if certain conditions are met. These conditions include neither the Company nor a Related Entity being classified as a PFIC (discussed below), the Company being a qualified foreign corporation , the US Holder's satisfaction of a holding period requirement, and the US Holder not treating the distribution as investment income for purposes of the investment interest deduction rules.

In the case of US Holders that are corporations, distributions from the Company generally are not eligible for the dividends received deduction.

# Dispositions of Common Shares of the Company

Subject to the discussion below regarding PFICs, gain or loss, if any, realized by a US Holder on the sale or other disposition of common shares generally is subject to United States federal income taxation as capital gain or loss in an amount equal to the difference between the US Holder's adjusted tax basis in the common shares and the amount realized on the disposition. Net capital gain (i.e., capital gain in excess of capital loss) recognized by a non-corporate US Holder upon a sale or other disposition of common shares that have been held for more than one year is generally subject to a maximum United States federal income tax rate of 20%. Deductions for capital losses are subject to limitations.

# US Anti-Deferral Regimes

There are two regimes applicable to foreign corporations under United States federal income tax law that potentially may apply to the Company - the controlled foreign corporation (CFC) regime and the PFIC regime.

Generally, a foreign corporation is not a CFC unless more than fifty percent (by vote or value) of its stock is owned by U.S. Shareholders (generally, United States persons who have ten percent or more of the votes of the foreign corporation). This classification generally results in the inclusion of certain income of the CFC in the U.S. Shareholders' income as a deemed dividend. If the Company were a CFC, the United States federal tax consequences summarized herein could be materially and adversely different.

PFIC status is not conditioned on a certain level of ownership of the foreign corporation by United States persons, however. The Company or any Related Entity would be considered a PFIC if during any taxable year, 75% or more of its gross income consists of certain types of passive income, or if the average value during a taxable year of its passive assets (generally, assets that generate passive income) is 50% or more of the average value of all assets held by it. Passive income generally includes items such as dividends, interest, rents and royalties, although there are various look through rules that treat dividends from related persons, for example, as non-passive under certain conditions.

If the Company is classified as a PFIC, a US Holder is subject to increased United States federal income tax liability in respect of gain recognized on the disposition of his, her or its common shares or upon the receipt of certain distributions, unless such person makes a qualified electing fund election to be taxed currently on his, or her or its pro rata portion of the Company's income and gain (whether or not such income or gain is distributed in the form of dividends or otherwise), and the Company provides certain annual statements which include the information necessary to determine inclusions and assure compliance with the PFIC rules. As an alternative to the foregoing rules, a US Holder may make a mark-to-market election to include in income each year as ordinary income an amount equal to the increase in value of his, her or its common shares for that year or to claim a deduction for any decrease in value (but only to the extent of previous mark-to-market gains).

The CFC and PFIC rules are very complex. The Company offers no opinion or representations as to its status as a CFC or PFIC for the current or any prior or future tax years. US Holders should consult their own U.S. tax advisors with respect to the CFC and PFIC issues and their applicability to such Holder s particular situation.

# Foreign Tax Credit

A US Holder who pays (or has withheld from distributions) Canadian income tax with respect to the ownership or disposition of the common shares may be entitled, at the option of the US Holder, to either a deduction or a tax credit for such foreign tax paid or withheld. Generally, it will be more advantageous to claim a credit because a credit reduces United States Federal income taxes on a dollar-for-dollar basis, while a deduction merely reduces the taxpayer s income subject to tax. This election is made on a year-by-year basis and applies to all foreign taxes paid by (or withheld from) the US Holder during that year.

There are significant and complex limitations that apply to the credit, among which is the general limitation that the credit cannot exceed the proportionate share of the US Holder's United States Federal income tax liability that the US Holder's foreign source income bears to his or its worldwide taxable income. In the determination of the application of this limitation, the various items of income and deduction must be classified into foreign and domestic sources. Complex rules govern this classification process. In addition, this limitation is calculated separately with respect to specific baskets of income. Foreign taxes assigned to a particular basket generally cannot offset United States tax on income assigned to another basket. Unused foreign tax credits can generally be carried back one year and carried forward ten years. The availability of the foreign tax credit and the application of the limitations on the credit are fact specific and US Holders should consult their own U.S. tax advisors regarding their ability to utilize foreign tax credits in light of their individual circumstances.

# **Currency Fluctuations**

For United States federal income tax purposes, the amount received by a US Holder as payment with respect to a distribution on, or disposition of common shares, if paid in Canadian dollars, is the US dollar value at the date of the payment, regardless of whether the payment is later converted into US dollars. In such case, the US Holder may recognize additional ordinary income or loss as a result of currency fluctuations between the date on which the payment is made and the date the payment is converted into US dollars.

# Withholding

A U.S. Holder may be subject to backup withholding (at a rate of 28% for 2017, 24% for 2018) with respect to cash dividends and proceed from a disposition of shares. In general, back-up withholding will apply only if a U.S. Holder fails to comply with specified identification procedures. Backup withholding will not apply with respect to payments made to designated exempt recipients, such as corporations and tax-exempt organizations. Backup withholding is not an additional tax and may be claimed as a credit against the U.S. federal income tax liability of a U.S. Holder, provided that the required information is timely furnished to the IRS.

# F. Dividends and Paying Agents

Not applicable.

# G. Statement by Experts

Not applicable.

# H. Documents on Display

We have filed the documents referred to herein and other information with the SEC, the Ontario Securities Commission and the Alberta Securities Commission. You may inspect and copy such material at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of such

material from the SEC at prescribed rates by writing to the Public Reference Section of the SEC, 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms.

The SEC maintains an Internet website at www.sec.gov that contains reports, proxy statements, information statements and other material that are filed through the SEC's Electronic Data Gathering, Analysis and Retrieval (EDGAR) system. Documents filed with the Ontario Securities Commission and the Alberta Securities Commission can be accessed through an Internet website at www.sedar.com that contains reports, proxy statements, information statements and other material that are filed through the System for Electronic Document Analysis and Retrieval (SEDAR).

Additional information is also available on our website at <u>www.micromeminc.com</u>. Such information on our website is not part of this Form 20-F.

# I. Subsidiary Information

Not Applicable.

#### ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in interest rates and foreign currency exchange rates. We do not hold or issue financial instruments for trading purposes. See Note 21 to our consolidated financial statements for our quantitative and qualitative disclosures about market risk.

# ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

Not Applicable.

# PART II

# ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES None.

# ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

None.

# **ITEM 15. CONTROLS AND PROCEDURES**

**Disclosure Controls and Procedures** 

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended, referred to herein as the Exchange Act ) as of October 31, 2017. Based on management's evaluation in 2017, our Chief Executive Officer and Chief Financial Officer concluded that, as of October 31, 2017, our disclosure controls and procedures were effective in that they were designed to ensure that information required to be disclosed by us in our reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in our reports that we file or submit under the Exchange Act are recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in our reports that we file or submit under the Exchange Act are recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms. Exchange Act Rule 13a-15(e) also states that disclosure controls and procedures are designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Act is accumulated and communicated to the issuer s management, including its principal executive and principal financial officers, or person performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

#### Management s Annual Report on Internal Control over Financial Reporting

Micromem s Board of Directors and executive management are responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control system was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of its published consolidated financial statements.

All internal control systems no matter how well designed have inherent limitations. Therefore, even those systems determined to be effective may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our Chief Executive Officer and Chief Financial Officer assessed the effectiveness of Micromem s internal control over financial reporting as of October 31, 2017. In making this assessment, they used the criteria established in Internal Control Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment the Chief Executive Officer and Chief Financial Officer have concluded that, as of October 31, 2017, our internal control over financial reporting were effective.

There was no requirement for an Attestation Report on internal controls over financial reporting for the fiscal year ending October 31, 2017. Our certifying accountants identified one Significant Deficiency in our internal controls for the fiscal year ending October 31, 2017. The Significant Deficiency noted was that the Company did not affect a timely and complete close of its year-end financial statements prior to the commencement of the year end audit conducted by our external auditors. The related risk was that there could be reporting errors that could go undetected by management.

Management s response:

We acknowledge the matter raised by our external auditors. We note the following in this context:

- a) Our changeover in external auditors took place on December 20, 2017. The transition to new auditors took considerable time and effort by our management and staff.
- b) We have limited staff resources and the time and effort required to address the complex reporting issues in our financial statements including the measurement of multiple bridge loans and related derivative liabilities share capital, consolidation and income taxes in accordance with IFRS reporting standards was considerable during the year-end audit process.
- c) Our existing internal procedures and reporting practices result in the production of very detailed (in some cases, line by line) account analyses and reconciliations.
- d) Ultimately, when we completed all of our analysis for submission to our external auditors, we noted that there were only immaterial differences identified by our external auditors. The procedures which we completed were satisfactory and there were no material reporting errors that were detected in the audit work completed by our external auditors.

In 2018, the Company will continue with its existing procedures and will look to augment its in-house resources to ensure timely and complete close of its quarterly and annual reporting requirements. This will be facilitated by the Company securing additional financing in 2018.

# ITEM 16. [Reserved]

Not applicable.

# ITEM Audit Committee Financial Expert

#### 16A.

Our Board of Directors has determined that a member of the Board of Directors, David Sharpless, is an audit committee financial expert and that he is independent, as defined in the Marketplace Rules of the Nasdaq Stock Market.

# **ITEM 16B**.

#### **Code of Ethics**

We have adopted a Code of Ethics to impose certain policies relating to ethical conduct on all of our Directors and employees, including our Chief Executive Officer, Chief Financial Officer, principal accounting officer and persons performing similar functions. We undertake to provide a copy of our Code of Ethics to any holder of our securities upon request, without charge.

# ITEM Principal Accountant Fees and Services

# 16C.

The following table presents fees for professional audit services rendered by our auditors for the audit of our consolidated financial statements for the years ended October 31, 2017 and 2016, and fees billed for other services rendered by our auditors including our offerings of securities and tax services.

	<u>Fiscal</u>	<u>Fiscal</u>
	<u>2017</u>	<u>2016</u>
Audit Fees	\$ 100,000	\$ 160,000
Audit Related Fees	-	-
Tax Fees	\$	\$ 4,000
All Other Fees	-	-

# Audit Fees

In 2017, we incurred a total of \$100,000 to MNP LLP for audit services; in 2016 we incurred a total of \$160,000 to Collins Barrow Toronto LLP for audit services.

# Audit Related Fees

None

# Tax Fees

We paid \$4,000 of tax-related fees for services in 2017 and \$4,000 of tax related fees in 2016 to Chiampou Travis LLP.

# All Other Fees

None

# Pre-approval policies

The Audit Committee assesses and pre-approves all audit and non-audit services.

# ITEM Exemptions from the Listing Standards for Audit Committees

16D.

Not applicable.

# ITEM Purchases of Equity by the Issuer and Affiliated Purchasers.

**16E.** None.

# ITEM Change in Registrants Certifying Accountant.

16F.

On November 30, 2017 the Company dismissed its incumbent Certifying Accountant, Collins Barrow Toronto LLP (as of December 1, 2017, Collins Barrow Toronto LLP operates as RSM Canada), who was previously engaged as the principal accountant to audit the Company s financial statements. Collins Barrow Toronto LLP served as auditors for the fiscal years ended October 31, 2009 through October 31, 2016 and were reappointed for the fiscal year ended October 31, 2017 at the 2016 annual meeting of shareholders held on July 21, 2017.

The report provided by Collins Barrow Toronto LLP on the Company s financial statements for the fiscal years ending October 31, 2016 and 2015 did not contain an adverse opinion or a disclaimer of opinion, it was not qualified or modified as to uncertainty, audit scope or accounting principles.

The decision to dismiss Collins Barrow Toronto LLP was approved by the Company s audit committee.

During the fiscal years ended October 31, 2016 and 2015 the Company had no disagreements with Collins Barrow Toronto LLP on any matter of accounting principles or practices, financial statement disclosure, auditing scopes or procedures.

There were no reportable events of the type listed in item 304(a)(1)(v) of SEC regulation S-K or in the Ontario Securities Commission National Instrument 51-102.

Collins Barrow Toronto LLP was not engaged to perform any services for the Company for any quarterly interim period after October 31, 2016.

On December 20, 2017, the Audit Committee engaged MNP LLP ( MNP ) as the Company s independent registered public accounting firm for the year ending October 31, 2017.

During the two most recent fiscal years ended October 31, 2015 and October 31, 2016 and during the subsequent interim period from November 1, 2016 through December 20, 2017, neither the Company nor anyone on its behalf consulted MNP regarding either (i) the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on the Company s financial statements, and neither a written report nor oral advice was provided to the Company that MNP concluded was an important factor considered by the Company in reaching a decision as to any accounting, auditing or financial reporting issue, or (ii) any matter that was either the subject of a disagreement or a reportable event , each as defined in Regulation S-K Item 304(a)(1)(v), respectively.

# ITEM Corporate Governance 16G.

Not applicable.

ITEMMine Safety Disclosure16H.

Not applicable.

# PART III

**ITEM 17. Financial Statements** 

Not applicable, see Item 18.

**ITEM 18. Financial Statements** 

Consolidated Financial Statements of

# MICROMEM TECHNOLOGIES INC.

For the years ended October 31, 2017, 2016 and 2015

(Expressed in United States Dollars)

#### Independent Auditors Report

To the Shareholders of Micromem Technologies Inc.:

We have audited the accompanying consolidated financial statements of Micromem Technologies Inc., which comprise the consolidated statement of financial position as at October 31, 2017, and the consolidated statements of loss and comprehensive loss, changes in shareholders' equity (deficit) and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

#### Management s Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards as established by the International Accounting Standards Board, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

#### Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audit. We conducted our audit in accordance with Canadian generally accepted auditing standards and Public Company Accounting Oversight Board (PCAOB) standards. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity s preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity s internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audit is sufficient and appropriate to provide a basis for our audit opinion.

#### Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of Micromem Technologies Inc. as at October 31, 2017, and its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

# Emphasis of Matter

Without qualifying our opinion, we draw attention to Note 2 in the consolidated financial statements which describes the material uncertainties that cast significant doubt about Micromem Technologies Inc. s ability to continue as a going concern.

#### Other Matter

The consolidated financial statements as at October 31, 2016 and October 31, 2015 and for the years then ended were audited by Collins Barrow Toronto of Toronto, Canada. Collins Barrow Toronto expressed an unmodified opinion on those consolidated financial statements on March 2, 2017.

Licensed Public Accountants Chartered Professional Accountants

Toronto, Ontario March 2, 2018

#### **Collins Barrow Toronto**

Collins Barrow Place 11 King Street West Suite 700, PO BOX 27 Toronto, Ontario M5H 4C7 Canada T: 416.480.0160 F: 416.480.2646

# toronto.collinsbarrow.com INDEPENDENT AUDITORS REPORT OF REGISTERED PUBLIC ACCOUNTING FIRM

#### To the Shareholders of Micromem Technologies Inc.:

We have audited the accompanying consolidated financial statements of Micromem Technologies Inc. and its subsidiaries, which comprise the consolidated statements of financial position as at October 31, 2016 and October 31, 2015 and the consolidated statements of loss and comprehensive loss, changes in shareholders equity (deficit) and cash flows for the years ended October 31, 2016, October 31, 2015 and October 31, 2014 and notes comprising a summary of significant accounting policies and other explanatory information.

#### Management s Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

### Auditors Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditor s judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity s preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained in our audits is sufficient and appropriate to provide a basis for our audit opinion.

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#### Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of Micromem Technologies Inc. and its subsidiaries as at October 31, 2016 and October 31, 2015, and its consolidated financial performance and its consolidated cash flows for the years ended October 31, 2016, October 31, 2015 and October 31, 2014 in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board.

#### Emphasis of Matter

Without qualifying our opinion, we draw attention to Note 2 in the consolidated financial statements which describes the material uncertainties that cast significant doubt about Micromem Technologies Inc. s ability to continue as a going concern.

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#### Other Matter

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the Company s internal control over financial reporting as of October 31, 2016, based on the criteria established in Internal Control Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), and our report dated March 2, 2017 expressed an unmodified (unqualified) opinion on the effectiveness of the Company s internal control over financial reporting.

Chartered Professional Accountants Licensed Public Accountants Toronto, Canada March 2, 2017 Collins Barrow Toronto Collins Barrow Place 11 King Street West Suite 700, PO BOX 27 Toronto, Ontario M5H 4C7 Canada T: 416.480.0160 F: 416.480.2646

#### toronto.collinsbarrow.com REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

#### To the Shareholders of Micromem Technologies Inc.:

We have audited the internal control over financial reporting of Micromem Technologies Inc. and subsidiaries (the "Company") as of October 31, 2016, based on criteria established in the Internal Control Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included under the heading Disclosure Controls/Internal Controls under the title Compliance Related Reporting Matters in the accompanying Management s Discussion and Analysis. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of the effectiveness of the internal control over financial reporting to future periods are subject to the risk that the controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of October 31, 2016, based on criteria established in the Internal Control Integrated Framework (2013) issued by Committee of Sponsoring Organizations of the Treadway Commission (COSO).

We have also audited, in accordance with Canadian generally accepted auditing standards and the standards of the Public Company Accounting Oversight Board (United States), the consolidated statements of financial position of the Company as at October 31, 2016 and 2015 and the consolidated statements of loss and comprehensive loss, changes in shareholders equity (deficit) and cash flows for the years ended October 31, 2016, October 31, 2015 and October 31, 2014, and notes comprising a summary of significant accounting policies and other explanatory information and our report dated March 2, 2017 expressed an unqualified audit opinion on those consolidated financial statements.

Chartered Professional Accountants Licensed Public Accountants Toronto, Canada March 2, 2017

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#### MICROMEM TECHNOLOGIES INC. NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

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# MICROMEM TECHNOLOGIES INC. CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

(Expressed in United States dollars)

	October 31, 2017	October 31, 2016
Assets		
Current assets:		
Cash	\$ 9,189	\$ 288,128
Deposits and other receivables (Note 8)	466,170	33,327
	475,359	321,455
Property and equipment, net (Note 9)	9,822	10,988
Patents, net (Note 11)	431,462	403,600
	\$ 916,643	\$ 736,043
Liabilities and Shareholders' Equity		
Current liabilities:		
Accounts payable and accrued liabilities (Note 17)	\$ 1,361,998	\$ 917,179
Bridge loans (Note 14)	2,489,017	3,637,008
Derivative liability (Note 14)	489,734	83,998
	\$ 4,340,749	\$ 4,638,185
Shareholders' Deficiency		
Share capital: (Notes 12 and 14)		
Authorized:		
2,000,000 special preference shares, redeemable, voting		
Unlimited common shares without par value		
Issued and outstanding:		
228,562,711 common shares (2016: 204,388,569) (Note 12)	\$ 80,198,194	\$ 75,855,139
Equity component of bridge loans (Note 14)	62,050	23,075
Contributed surplus (Note 15)	27,360,676	26,918,470
Deficit	(111,045,026)	(106,698,826)
	(3,424,106)	(3,902,142)
	\$ 916,643	\$ 736,043

Going Concern (Note 2) Commitments (Note 19) Contingencies (Note 20) Subsequent Events (Note 24)

"Joseph Fuda" (Signed) Joseph Fuda, Director

"David Sharpless" (Signed) David Sharpless, Director See accompanying Notes.

# MICROMEM TECHNOLOGIES INC.

# CONSOLIDATED STATEMENTS OF LOSS AND COMPREHENSIVE LOSS

(Expressed in United States dollars)

# For the years ended October 31,

		2017		2016		2015
Costs and expenses :						
Administration (Note 17)	\$	305,421	\$	395,340	\$	389,647
Professional, other fees and salaries (Note 17)		1,433,113		1,739,401		1,952,302
Stock based compensation (Note 12)		442,206		-		1,163,941
Development costs (Note 17)		147,008		3,635,613		2,646,019
Travel and entertainment		118,261		180,767		193,861
Amortization of property and equipment (Note 9)		3,992		5,270		7,177
Amortization of patents (Note 11)		133,785		26,527		-
Amortization of intangible assets (Note 11)		-		4,838		-
Write-down of patents (Note 11)		-		-		67,262
Write-down of intangible assets (Note 11)		-		38,705		-
Foreign exchange loss (gain)		343,209		(1,478)		59,687
Loss from operations		2,926,996		6,024,983		6,479,896
Other income expenses						
Interest expense (Note 14)		666,245		561,608		36,714
Accretion expense (Note 14)		1,358,101		514,560		-
Loss on conversion (Note 14)		1,009,680		-		-
Gain on revaluation of derivatives liability (Note 14)		(1,614,822)		(295,616)		-
Net loss before income taxes		(4,346,200)		(6,805,535)		(6,516,610)
Income taxes (Note 16)		-		-		-
Net loss and comprehensive loss	\$	(4,346,200)	\$	(6,805,535)		(6,516,610)
	<b>.</b>		<b>.</b>		¢	
Loss per share - basic and diluted (Note 12)	\$	(0.02)	\$	(0.03)	\$	(0.03)
Weighted average number of shares (Note 12)	4	207,131,781		199,572,966		192,629,666
See accompanying Notes.						

# MICROMEM TECHNOLOGIES INC. CONSOLIDATED STATEMENTS OF CASH FLOWS

(Expressed in United States dollars)

# For the years ended October 31,

	2017	2016	2015
Cash flows from operating activities:			
Net loss and comprehensive loss	\$ (4,346,200) \$	(6,805,535)	\$ (6,516,610)
Adjustments to reconcile loss for the period to net cash used in			
operating activities:			
Amortization of patents intangible assets	133,785	31,365	-
Amortization of property and equipment	3,992	5,270	7,177
Write down of intangible assets	-	38,705	-
Development costs	-	3,638,118	2,395,425
Accounts payable and accrued liabilities related to development			
costs	-	(374,539)	-
Accretion expense	1,358,101	514,560	-
Bridge loan interest added to principal	-	-	19,361
Loss on bridge loan conversion	1,009,680		
Gain on revaluation of derivative liabilities	(1,614,822)	(295,616)	-
Stock based compensation	442,206	-	1,163,941
Write down of patents	-	-	67,262
Reversal of patent provision	-	-	(19,598)
Conversion of advances receivables to salaries	-	-	263,819
Shares issued for legal settlement	-	62,500	-
Gain on settlement of accounts payable	-	(60,623)	-
Loss on disposal of property and equipment	983	608	-
Increase (decrease) in deposits and other receivables	(432,843)	5,899	455,265
Increase in accounts payable and accrued liabilities	723,631	350,263	523,558
Net cash used in operating activities	(2,721,487)	(2,889,025)	(1,640,400)
Cash flows from investing activities:		<i></i>	(1
Purchase of property and equipment	(3,809)	(1,274)	(1,286)
Patents	(161,647)	(192,873)	(213,820)
Deferred development costs	-	(1,125,218)	(3,662,271)
Recovery of deferred development costs	-	643,901	1,783,632
Recovery of patents costs	-	-	18,140
Net cash used in investing activities	(165,456)	(675,464)	(2,075,605)
Cash flows from financing activities			
Cash flows from financing activities: Issue of common shares	719,403	961 072	1 002 702
Bridge loans advances	1,788,974	861,273 2,490,333	1,893,783 1,176,673
Bridge loan repayments	(581,618)	(260,428)	(229,446)
Short-term loan advances	(301,010)	(200,428)	(229,440)
Short-term loan repayment		(180,000)	-
Bridge loan interest accrued	666,245	585,989	-
Advances to related parties	000,245	505,909	(981,395)
Advances from related party	- 15,000	16,882	1,078,971
Net cash provided by financing activities	2,608,004	3,694,049	2,938,586
The cash provided by infancing activities	2,000,004	5,094,049	2,950,500

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Increase (decrease) in cash	(278,939)	129,560	(777,419)
Cash, beginning of Year	288,128	158,568	935,987
Cash, end of Year	\$ <b>9,189</b> \$	288,128	\$ 158,568
Supplemental cash flow information:			
Interest paid (classified in operating activities)	321,700	129,987	17,354
Income taxes paid	-	-	-
Shares issued on settlement of accounts payable		295,312	-
Shares issued on settlement of legal claim		62,500	-
Shares issued on conversion of bridge loan See accompanying Notes.		107,000	-

# MICROMEM TECHNOLOGIES INC. Consolidated Statements of Changes in Shareholders' Equity (Deficit) (Expressed in United States dollars)

	Number of shares Shares	Share capital	Contributed surplus	Equity component of Bridge loan	Deficit	Total
Balance at November 01, 2014	188,436,724 \$	5 70,802,776 \$	27,436,678	- \$	(93,376,681) \$	4 862 773
2014	100,430,724 ¢	σ 70,002,770 φ	27,430,070	- <b>φ</b>	(93,370,001) \$	4,002,775
Private placements of shares for cash						
(Note 3)	422,768	175,000	-	-	-	175,000
Share compensation						
(Note 12) Warrants	900,000	387,000	-	-	-	387,000
exercised (Note 13)	2,988,876	565,777	-	-	-	565,777
Fair value of warrants		071 550	(271 552)			
exercised Options	-	271,553	(271,553)	-	-	-
exercised (Note 12)	4,428,000	1,153,007	-	-	-	1,153,007
Fair value of options		729.9/2				
exercised Stock options	-	728,862	(728,862)	-	-	-
compensation Note 12)	-	-	776,941	-	-	776,941
Net loss and comprehensive						
loss	-	-	-	-	(6,516,610)	(6,516,610)
Balance at October 31, 2015	197,176,368 \$	5 74,083,975 \$	27,213,204	- \$	(99,893,291) \$	1,403,888
Private placements of shares for cash (Note 13)	366,668	110,000	-	_	_	110,000
Share compensation adjustment (Note 9)			_		_	
Warrants exercised (Note	-	-	-	-	-	-

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13)						
Fair value of						
warrants						
exercised	-	-	-	-	-	-
Options						
exercised (Note						
12)	3,756,366	751,273	-	-	-	751,273
Fair value of	-,	,				,,
options						
exercised	-	443,252	(443,252)	-	-	-
shares issued			(, . ,			
on settlement						
of accounts						
payable	1,517,143	295,312	-	-	-	295,312
Shares issued	-,	_>=				_>=,===
on settlement						
of legal claim						
(Note 12)	312,500	62,500	-	-	-	62,500
Shares issued	·					0_,2
on conversion						
of bridge loan						
(Note 12)	509,524	108,827	-	(1,827)	-	107,000
Equity		100,02.		(-,~=, )		107,000
component of						
bridge loans						
Note 14)	_	_	-	173,420	-	173,420
Expiry of				1,0,		170,1=0
bridge loan						
equity						
						_
conversion						
conversion option (Note						
option (Note	_	-	148,518	(148,518)	_	-
option (Note 14)	-		148,518	(148,518)		-
option (Note 14) Treasury shares	-	-	148,518	(148,518)	-	-
option (Note 14) Treasury shares to be cancelled	- 750.000	-	148,518	(148,518)	-	-
option (Note 14) Treasury shares to be cancelled (Note 12)	- 750,000	-	- 148,518	(148,518)	-	-
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and	- 750,000	-	- 148,518	(148,518)	-	-
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive	- 750,000	-	-	(148,518) -	- - (6 805.535)	- - (6 805.535)
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss	- 750,000 -		-	(148,518) - -	- - (6,805,535)	- (6,805,535)
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at	- 750,000 -	-	-	(148,518) - -	- - (6,805,535)	- - (6,805,535)
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at October 31,	-	- - - 75.855.139 \$	-	-		
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at	- 750,000 - <b>204,388,569</b> \$	- - 75,855,139 \$	-	-	- (6,805,535) (106,698,826) \$	
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at October 31, 2016	-	- - 75,855,139 \$	-	-		
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at October 31, 2016	-	- - 75,855,139 \$	-	-		
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at October 31, 2016 Private placements of	-	- - 75,855,139 \$	-	-		
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at October 31, 2016 Private placements of shares for cash	- 204,388,569 \$		-	-		(3,902,142)
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at October 31, 2016 Private placements of shares for cash (Note 13)	-	_ _ <b>75,855,139 \$</b> 719,403	-	-		
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at October 31, 2016 Private placements of shares for cash (Note 13) Common	- 204,388,569 \$		-	-		(3,902,142)
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at October 31, 2016 Private placements of shares for cash (Note 13) Common shares issued	<b>204,388,569 \$</b> 3,873,223	719,403	-	-		( <b>3,902,142</b> ) 719,403
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at October 31, 2016 Private placements of shares for cash (Note 13) Common shares issued against payable	- 204,388,569 \$		-	-		(3,902,142)
option (Note 14) Treasury shares to be cancelled (Note 12) Net loss and comprehensive loss Balance at October 31, 2016 Private placements of shares for cash (Note 13) Common shares issued	<b>204,388,569 \$</b> 3,873,223	719,403	-	-		( <b>3,902,142</b> ) 719,403

Common					
shares issued					
against					
compensation	132,381	21,909	-	-	- 21,909
Bridge loan					
converted into					
common shares	20,370,895	2,536,963	-	-	- 2,536,963
Reallocation					
from derivative					
liability for					
loan converted	-	20,970	-	-	- 20,970
Treasury shares					
cancelled	(750,000)	-	-	-	
Conversion of					
bridge loan	-	936,102	-	38,975	- 975,077
Net loss and					
comprehensive					
loss	-	-	-	- (4,3	(4,346,200) (4,346,200)
Balance at					
October 31,					
2017	228,562,711 \$	80,198,194 \$	27,360,676 \$	62,050 \$ (111,0	45,026) \$ (3,424,106)
See accompanying No	otes.				

For the years ended October 31, 2017, 2016 and 2015

# 1. REPORTING ENTITY AND NATURE OF BUSINESS

Micromem Technologies Inc. (Micromem or the Company) is incorporated under the laws of the Province of Ontario, Canada. The principal business address of the Company is 121 Richmond Street West, Suite 304, Toronto, Ontario, Canada.

The Company develops, based upon proprietary technology, customized magnetic sensor applications for companies (referred to as development partners ) operating internationally in various industry segments. The Company has not generated commercial revenues through October 31, 2017 and is devoting substantially all its efforts to securing commercial revenue opportunities.

These consolidated financial statements include the accounts of the Company and its wholly- owned subsidiaries:

- (i) Micromem Applied Sensors Technology, Inc. (MAST) incorporated in November 2007 and domiciled in Delaware, United States. MAST has the primary responsibility for the exploitation of the Company s technologies in conjunction with various strategic partners and customers.
- (ii) 7070179 Canada Inc., incorporated in October 2008 under the Canada Business Corporations Act in Ontario, Canada. The Company has assigned to this entity its rights, title and interests in certain patents which it previously held, directly in exchange for common shares of this entity.
- (iii) Memtech International Inc., Bahamas; Memtech International (USA) Inc., Delaware, United States;
   Pageant Technologies (USA) Inc., United States; Pageant Technologies Inc., Barbados; and Micromem Holdings (Barbados) Inc., Barbados. All of these entities are inactive.

These consolidated financial statements were authorized for issuance and release by the Company s Board of Directors on March 2, 2018.

For the years ended October 31, 2017, 2016 and 2015

# 2. GOING CONCERN

These consolidated financial statements have been prepared on the going concern basis in accordance with International Financial Reporting Standards (IFRS), which presumes that the Company will be able to realize its assets and discharge its liabilities in the normal course of business for the foreseeable future.

There are material uncertainties related to conditions and events that cast significant doubt about the Company s ability to continue as a going concern for a reasonable period of time in future. During the year ended October 31, 2017, the Company reported a net loss and comprehensive loss of \$4,346,200 (2016 - \$6,805,535; 2015 - \$6,516,610) and negative cash flow from operations of \$2,721,488 (2016 - \$2,889,025; 2015 - \$1,640,400). The Company s working capital deficiency as at October 31, 2017 is \$3,865,390 (2016 \$4,316,730).

The Company s success depends on the profitable commercialization of its proprietary magnetic sensor technology. There is no assurance that the Company will be successful in the profitable commercialization of its technology. Based upon its current operating and financial plans, management of the Company believes that it will have sufficient access to financial resources to fund the Company s planned operations through fiscal 2018; however, the ability of the Company to continue as a going concern is dependent upon its ability to secure additional financing and/or profitably commercialize its technology. These consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classifications of liabilities that may result from the possible inability of the Company to continue as a going concern.

If the going concern assumption were not appropriate for these consolidated financial statements then adjustments would be necessary to the carrying value of assets and liabilities, the reported expenses and the balance sheet classifications used; in such cases, these adjustments would be material.

For the years ended October 31, 2017, 2016 and 2015

# 3. BASIS OF PRESENTATION

a) Statement of compliance:

These consolidated financial statements have been prepared in accordance with IFRS and its interpretations adopted by International Accounting Standards Board ( IASB ).

b) Basis of measurement:

The consolidated financial statements have been prepared on the historical cost basis, except for financial instruments designated at fair value through profit and loss, which are stated at their fair value.

c) Functional and presentation currency:

These consolidated financial statements are presented in United States dollars (U.S. dollars), which is also the Company s and wholly-owned subsidiaries functional currency.

d) Use of estimates and judgments:

The preparation of the consolidated financial statements in conformity with IFRS requires management to make judgments, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

Information about judgments, assumptions and estimation uncertainties that have a significant risk of resulting in a material adjustment are as follows:

i) The Company makes estimates and utilizes assumptions in determining the fair value for stock based compensation expense, warrants, the (gain) loss on the revaluation of the derivative liability, and the bifurcation of convertible debt (e.g. inputs to the Black-Scholes option pricing model or the binomial optional pricing model, as appropriate and interest rates for compound instruments).

For the years ended October 31, 2017, 2016 and 2015

# 3. BASIS OF PRESENTATION (Cont d)

- d) Use of estimates and judgments: (Cont d)
  - Long-lived assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset exceeds its recoverable amount or if the long-lived assets are not yet in use. The recoverable amount is determined with reference to the fair value of the long-lived assets less costs to sell or the value-in-use calculations. Where recoverable amount is determined to be less than the carrying amount, an impairment loss may arise. An impairment loss is measured as the difference between the asset's carrying amount and the recoverable amount. Management exercises significant judgment and assumptions when determining the recoverable amount of long-lived assets
  - iii) Deferred income tax assets are recognized for all deductible temporary differences, carry-forward of unused tax assets and unused tax losses, to the extent that it is probable that future taxable profit will be available against which the deductible temporary differences and carry-forward of unused tax assets and unused tax losses can be utilized. At October 31, 2017, the Company has assessed that it is not probable that sufficient taxable profit will be available to use deferred income tax assets based on operating losses in prior years, therefore, there are no balances carried in the consolidated statements of financial position for such assets.
  - iv) The Company applies judgment in assessing whether material uncertainties exist that would cause doubt as to the whether the Company could continue as a going concern.
  - v) The Company applies judgment in assessing the functional currency of each entity consolidated in these financial statements.

### 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

a) Basis of consolidation:

Subsidiaries are legal entities controlled by the Company. Control exists when the Company is exposed, or has rights to variable returns from an investee and has the ability to affect those returns through its power over the investee. The financial statements of the subsidiaries are included in the consolidated financial statements from the date that control commences until the date control ceases.

These consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries. All inter-company transactions and balances have been eliminated. The accounting policies have been consistently applied by the Company s subsidiaries.

For the years ended October 31, 2017, 2016 and 2015

# 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont d)

b) Foreign currency translation:

IFRS requires that the functional currency of each entity in the consolidated entity be determined separately in accordance with specific indicators and should be measured using the currency of the primary economic environment in which the entity operates (the functional currency ). As a result of an assessment of the primary indicators, management assessed the functional currency of the Company and its subsidiaries to be U.S. dollar (USD). The consolidated financial statements of the Company are prepared and presented using the USD.

Foreign currency transactions denominated in other than U.S. dollars are translated into the functional currency on the following basis:

- i) Monetary assets and liabilities are translated at the rates of exchange prevailing at the statement of financial position date.
- ii) Non-monetary assets and liabilities that are measured at historical cost are translated using the exchange rate at the date of the transaction.
- iii) Income and expenses for each income statement line item presented are translated at average exchange rates during the quarter in which they are recognized.

Exchange differences resulting from the settlement of foreign currency transactions are recognized directly in the consolidated statement of loss and comprehensive loss in the period in which incurred.

c) Financial Instruments: Recognition, Measurement, Disclosure and Presentation:

The Company initially recognizes loans and receivables and deposits on the date that they are originated. All other financial assets including assets designated at fair value through profit or loss (FVTPL) are recognized initially on the trade date at which the Company becomes a party to the contractual provisions of the instrument.

The Company derecognizes a financial asset when the contractual rights to the cash flows from the asset expire.

Financial assets and liabilities are offset and the net amount presented in the statement of financial position only when the Company has the legal right to offset the amounts and intends either to settle on a net basis or to realize the asset and settle the liability simultaneously.

For the years ended October 31, 2017, 2016 and 2015

# 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont d)

c) Financial Instruments: Recognition, Measurement, Disclosure and Presentation: (Cont d) The Company s financial assets consist of cash and deposits and other receivables and the Company s financial liabilities consist of accounts payable and accrued liabilities, bridge loans and derivative liability.

The Company classifies cash as FVTPL. Deposits and other receivables are classified as loans and receivables, and are initially measured at fair value and subsequently at amortized cost using the effective interest rate method. Accounts payable and accrued liabilities and the liability portion of bridge loans are classified as other financial liabilities, and initially measured at fair value and subsequently measured at amortized cost using the effective interest rate method. The derivative liability is classified at FVTPL and is measured at fair value with unrealized gains or losses reported in the consolidated statement of loss and comprehensive loss.

Interest, dividends, losses and gains relating to the financial liability are recognized in profit or loss except for borrowing costs on qualifying assets which are added to asset cost.

To the extent there are changes to the terms of outstanding financial liability these changes may be recorded as a modification or an extinguishment of financial liabilities. A substantial modification of the terms of an existing financial liability is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. The terms are substantially different if the discounted present value of the cash flows under the new terms is at least 10% different from the discounted present value of the remaining cash flows of the original financial liability. A modification of the original financial liability is accounted for as an adjustment to the effective interest rate.

For the years ended October 31, 2017, 2016 and 2015

#### d) Compound Financial Instruments:

Compound financial instruments issued by the Company comprise convertible notes (bridge loans) that can be converted to share capital at the option of the holder and the number of shares to be issued does not vary with changes in their fair value.

The liability component of a compound financial instrument is recognized initially at the fair value of a similar liability that does not have an equity conversion option.

The equity component, if the conversion feature of the convertible note is in US dollars, is recognized initially as the difference between the fair value of the compound financial instrument as a whole and the fair value of the liability component. Any directly attributable transaction costs are allocated to the liability and equity components in proportion to their initial carrying amounts.

For the years ended October 31, 2017, 2016 and 2015

### 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont d)

#### d) Compound Financial Instruments: (Cont d)

Subsequent to initial recognition, the liability component of a compound financial instrument is measured at amortized cost using the effective interest rate method. The equity component of a compound financial instrument is not remeasured subsequent to initial recognition.

e) Hybrid Financial Instruments:

Financial instruments with embedded derivative liabilities are accounted for as hybrid financial instruments. The Company has hybrid financial instruments when the embedded derivative conversion option of the convertible notes (bridge loans) gives the right to the holder to convert the convertible note (bridge loan) into common shares in Canadian dollars ( CDN ).

An embedded derivative is a feature within a contract, such that the cash flows associated with that feature behave in a similar fashion as a stand-alone derivative. An embedded derivative is separated from its host contract and accounted for as a derivative only when three criteria are satisfied:

When the economic risks and characteristics of the embedded derivatives are not closely related to those of the host contract;

A separate instrument with the same terms as the embedded derivative would meet the definition of a derivative; and

The entire instrument is not measured at fair value with changes in fair value recognized in the consolidated statement of loss and comprehensive loss.

For the years ended October 31, 2017, 2016 and 2015

# 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont d)

#### f) Derivative Liability:

The Company s derivative financial instruments consist of derivative liabilities in relation to its convertible bridge loans and previously issued share purchase warrants.

i) Derivative Warrant Liability:

The Company has issued share purchase warrants in conjunction with private placements for the purchase of common shares of the Company. Share purchase warrants issued with an exercise price in CDN, rather than USD (the reporting and functional currency of the Company) are considered to be derivative instruments. The Company is required to re-measure the fair value of these at each reporting date. The fair value of these CDN share purchase warrants are re-measured at each financial position date using the Black Scholes option-pricing model or the binomial option pricing model as appropriate using the exchange rates at the financial position date and measured over their remaining life. Adjustments to the fair value of the derivative warrant liability as at the financial position of derivative warrant liability. Share purchase warrants that have expired or have been forfeited are adjusted to the statement of loss and comprehensive loss as (gain) loss on revaluation of derivative warrant liability.

Consideration received upon the exercise of warrants is credited to share capital and the related amount is transferred from contributed surplus (USD warrants) or derivative liability (CDN warrants) to share capital.

ii) Conversion Feature of Bridge Loans:

The conversion feature on the bridge loans allows the holder of the option to convert the outstanding principal and interest from time to time to common shares at CDN conversion rates. The Company, using the Black Scholes or Binomial option-pricing model, accounts for bridge loans as follows:

(ii.1) At date of origination, the bifurcation of the total balance of the loan between the loan and the conversion feature is calculated. If the conversion feature of the bridge loan is in CDN there is no equity component, instead resulting in an embedded derivative liability. Accretion expense is recorded over the term of the loan. If the conversion feature of the loan is in USD, the instrument is accounted for as a compound financial instrument (see Note 4 (d)).

For the years ended October 31, 2017, 2016 and 2015

# 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont d)

#### f) Derivative Liability: (Cont d)

#### ii) (Cont d)

Canadian Conversion Features:

- (ii.2) The total loan proceeds are allocated between the bridge loans and the related embedded derivative liability based on the residual method (i.e. first to the embedded derivative and residual to the bridge loan). The embedded derivative liability conversion feature is shown as a derivative liability in the statement of financial position.
- (ii.3) The embedded derivative liability conversion feature is revalued at the end of the reporting period and any adjustment is reflected in the statement of loss.
- g) Intangible Assets:

Costs for the general development of the Company s sensor technology are expensed unless they meet the criteria for deferral. Expenditures are capitalized if the Company can demonstrate each of the following criteria: (i) the technical feasibility of completing the intangible asset so that it will be available for use or sale, (ii) its intention to complete the intangible asset and use or sell it, (iii) its ability to use or sell the intangible asset, (iv) how the intangible asset will generate probable future economic benefits, (v) the availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset, and (vi) its ability to measure reliably the expenditure attributable to the intangible asset during its development; otherwise, they are expensed as incurred. Amortization is provided on a 7 year straight-line basis. Commencing in 2014, amortization expense of intangible assets is capitalized as deferred development costs as these charges are directly related to development.

h) Property and Equipment:

Property and equipment are recorded at cost and are amortized over their estimated useful lives at the following annual rates and methods:

Computers	30% declining balance basis
Office equipment	30% declining balance basis
	18

For the years ended October 31, 2017, 2016 and 2015

# 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont d)

#### i) Impairment of Long-lived Assets:

Long-lived assets consist of property and equipment, patents, intangible assets, and deferred development costs.

The carrying amounts of property and equipment, patents and intangible assets are reviewed for impairment when events or changes in circumstances indicate that the carrying amounts may not be recoverable. When the carrying amount exceeds the estimated recoverable amount, the assets are written down to their recoverable amount.

Internally generated intangible assets that are under development (deferred development costs) are not amortized and are reviewed for impairment annually by comparing the carrying amount with its recoverable amount. Any impairment loss is recognized in profit or loss when their recoverable amount is less than their net carrying amount.

The recoverable amount of long-lived assets is the greater of fair value less costs to sell and value in use. In assessing value in use, estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. Impairment losses are recognized in the consolidated statements of loss and comprehensive loss.

An assessment is made at each reporting date as to whether there is any indication that previously recognized impairment losses may no longer exist or may have decreased. If such indication exists, the recoverable amount is estimated. A previously recognized impairment loss is reversed only if there has been a change in the estimates used to determine the asset s recoverable amount since the last impairment loss was recognized. If that is the case, the carrying amount of the asset is increased to its recoverable amount. That increased amount cannot exceed the carrying amount that would have been determined, net of amortization, had no impairment loss been recognized for the asset in prior years. Such reversal is recognized in the consolidated statements of loss and comprehensive loss. Following the recognition or reversal of an impairment loss, the amortization charge applicable to the asset is adjusted prospectively in order to systematically allocate the revised carrying amount, net of any residual value, over the estimated useful life.

Gains or losses on the disposal of property and equipment, patents and intangible assets represent the difference between the net proceeds and the carrying value at the date of sale.

For the years ended October 31, 2017, 2016 and 2015

# 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont d)

#### j) Deferred Development Costs:

Research costs are expensed in the period incurred. Development costs are expensed as incurred unless they meet the criteria for deferral. Expenditures during the development phase are capitalized if the Company can demonstrate each of the following criteria: (i) the technical feasibility of completing the asset so that it will be available for use or sale, (ii) its intention to complete the asset and use or sell it, (iii) its ability to use or sell the asset, (iv) how the asset will generate probable future economic benefits, (v) the availability of adequate technical, financial and other resources to complete the development and to use or sell the asset, and (vi) its ability to measure reliably the expenditure attributable to the asset during its development; otherwise, these costs are expensed as incurred. Development costs will be amortized on an appropriate basis at the time each of the developed assets is available for use.

Payments received from development partners on projects are recorded to deferred development costs as a recovery of cost incurred.

k) Patents:

Patents are recorded at cost and are amortized on a straight line basis over their estimated useful lives of 5 years. Patents are recorded net of accumulated amortization with amortization expense capitalized as deferred development costs since the patents are directly related to development. Amortization is expensed if there are no capitalized deferred development costs on the consolidated statement of financial position.

1) Unit Private Placements:

The Company uses the relative fair value approach in accounting for the value assigned to the common shares and the common share purchase warrants which it had made available in the unit private placement financings that it secured, calculated in accordance with the Black Scholes option-pricing model.

For the years ended October 31, 2017, 2016 and 2015

# 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont d)

#### m) Stock based Compensation and Other Stock based Payments:

The Company applies the fair value based method of accounting for all stock based payments to employees and non-employees and all direct awards of stock. Where share based payments are issued to non-employees, they are recorded at the fair value of the goods or services received in the statement of loss and comprehensive loss. If the fair value cannot be estimated reliably the amount is based on the fair value of the equity instrument granted. Stock based compensation is charged to operations over the vesting period and the offset is credited to contributed surplus.

Consideration received upon the exercise of stock options is credited to share capital and the related amount is transferred from contributed surplus.

The fair value of stock options and warrants is determined by the Black Scholes option- pricing model with assumptions for risk free interest rates, dividend yields, volatility factors of the expected market price of the Company s common shares and an expected life of the option or warrant issued. A forfeiture rate is estimated on the grant date and is adjusted to reflect the actual number of options that vest. In the event that vested stock options expire, previously recognized stock based compensation is not reversed. In the event that stock options are forfeited, previously recognized stock based compensation associated with the unvested portion of the stock options forfeited is reversed. The fair value of direct awards of stock is determined by the quoted market price of the Company s common shares.

n) Income Taxes:

Income tax expense comprises current and deferred tax. Current tax and deferred tax are recognized in profit or loss except to the extent that it relates to items recognized directly in equity or in other comprehensive income.

Current tax is the expected tax payable or receivable on the taxable income or loss for the year, using tax rates enacted or substantively enacted at the reporting date and any adjustment to tax payable in respect of previous years.

For the years ended October 31, 2017, 2016 and 2015

# 4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont d)

#### o) Income Taxes: (Cont d)

Deferred tax is recognized in respect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. Deferred tax is not recognized for the following temporary differences: the initial recognition of assets or liabilities in a transaction that is not a business combination and that affects neither accounting nor taxable income or loss and differences relating to investments in subsidiaries and jointly controlled entities to the extent that it is probable that they will not reverse in the foreseeable future. In addition, deferred tax is not recognized for taxable temporary differences arising on the initial recognition of goodwill.

Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they reverse, based on the rates that have been enacted or substantively enacted by the reporting date.

Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets and they relate to income taxes levied by the same tax authority on the same taxable entity, or on different tax entities, but they intend to settle current tax liabilities and assets on a net basis or their tax assets and liabilities will be realized simultaneously.

A deferred tax asset is recognized for unused tax losses, tax credits and deductible temporary differences, to the extent that it is probable that future taxable profits will be available against which they can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

p) Earnings or Loss Per Share:

Basic earnings (loss) per share are computed by dividing net earnings (loss) by the weighted average number of common shares outstanding for the period. Diluted earnings (loss) per share is computed by adjusting the weighted average number of number of common shares outstanding for the effects of all dilutive potential common shares, which are comprised of outstanding warrants, conversion options and vested stock options. Diluted earnings (loss) per common share assume that any proceeds received for in-the-money warrants and options would be used to buy common shares at the average market price for the period.

For the years ended October 31, 2017, 2016 and 2015

# 5. NEW STANDARDS AND INTERPRETATIONS ISSUED BUT NOT YET ADOPTED

Certain new standards, interpretations, amendments and improvements to existing standards were issued by the IASB or the IFRS Interpretations Committee that are mandatory for future accounting periods. The standards impacted that are applicable to the Company are as follows:

a) IFRS 15 Revenue from Contracts with Customers, which will replace IAS 11 Construction Contracts, IAS 18 Revenue, IFRIC 13 Customer Loyalty Programmes, IFRIC 15 Agreements for the Construction of Real Estate, IFRIC 18 Transfer of Assets from Customers, and SIC 31 Revenue Barter Transactions Involving Advertising Services. The new standard will be mandatorily effective for fiscal years beginning on or after January 1, 2018, and interim periods within that year. Earlier application is permitted.

The core principle of the new standard is for companies to recognize revenue to depict the transfer of goods or services to customers in amounts that reflect the consideration to which the Company expects to be entitled in exchange for those goods or services. The new standard will also result in enhanced disclosures about revenue, provide guidance for transactions that were not previously addressed comprehensively and improve guidance for multiple deliverable arrangements.

- b) IFRS 9 *Financial Instruments*, was issued by the IASB in July 2014 and will replace IAS 39, *Financial Instruments: recognition and measurement* (IAS 39). IFRS 9 utilizes a single approach to determine whether a financial asset is measured at amortized cost or fair value and a new mixed measurement model for debt instruments having only two categories: amortized cost and fair value. The approach in IFRS 9 is based on how an entity manages its financial instruments in the context of its business model and the contractual cash flow characteristics of the financial assets. Final amendments released in July 2014 also introduce a new expected loss impairment model and limited changes to the classification and measurement requirements for financial assets. IFRS 9 is effective for annual periods beginning on or after January 1, 2018.
- c) IFRS 16 *Leases* This standard was issued in January 2016 and specifies how an IFRS reporter will recognize, measure, present and disclose leases. The standard provides a single lessee accounting model, requiring lessees to recognize assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a low value. Lessors continue to classify leases as operating or finance, with IFRS 16 s approach to lessor accounting substantially unchanged from its predecessor, IAS 17. This standard is effective for reporting periods beginning on or after January 1, 2019.

The Company is currently assessing the impact of the above standards.

For the years ended October 31, 2017, 2016 and 2015

# 6. FAIR VALUE DISCLOSURES

The following summarizes the methods and assumptions used in estimating the fair value of the Company's financial instruments where measurement is required. The fair value of financial instruments consisting of cash, deposits and other receivables, accounts payable and accrued liabilities and bridge loans approximate their carrying amounts due to the relatively short period to maturity. Fair value amounts represent point-in-time estimates and may not reflect fair value in the future. For derivative liabilities fair value is determined using intrinsic value and/or the Black-Scholes option pricing model. The measurements are subjective in nature, involve uncertainties and are a matter of significant judgment. The methods and assumptions used to develop fair value measurements, for those financial instruments where fair value is recognized in the statement of financial position, have been prioritized into three levels of the fair value hierarchy as follows:

Level 1: Values based on unadjusted quoted prices in active markets that are accessible at the measurement date for identical assets or liabilities.

Level 2: Values based on quoted prices in markets that are not active or model inputs that are observable either directly or indirectly for substantially the full term of the asset or liability.

Level 3: Values based on prices or valuation techniques that require inputs that are both unobservable and significant to the overall fair value measurement.

Cash is measured at Level 1 of the fair value hierarchy. The derivative liability is measured at Level 2 of the fair value hierarchy.

# 7. CAPITAL RISK MANAGEMENT

The Company s objective when managing capital is to maintain its ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders. The Company includes equity, comprised of issued share capital, equity component of bridge loans, contributed surplus and deficit, in the definition of capital. The Company s primary objective with respect to its capital management is to ensure that it has sufficient cash resources to further develop and market its technologies and to maintain its ongoing operations. To secure the additional capital necessary to pursue these plans, the Company may attempt to raise additional funds through the issuance of equity and warrants or by securing strategic partners. The Company is not subject to externally imposed capital requirements and there has been no change with respect to the overall capital risk management strategy during the year ended October 31, 2017.

For the years ended October 31, 2017, 2016 and 2015

# 8. DEPOSITS AND OTHER RECEIVABLES

The balance reported as Deposits and Other Receivables consists of:

	2017	2016
Accounts receivable	\$ 415,857	\$ -
Advances to employees	-	7,586
Prepaid insurance and other	50,313	25,741
_	\$ 466,170	\$ 33,327

As at October 31, 2016 there were \$26,060 of advances outstanding to two employees which were cleared in 2017. These advances were non-interest-bearing, unsecured and due on demand. The allowance for doubtful accounts on deposits and other receivables was \$Nil at October 31, 2017 (2016: \$Nil)

For the years ended October 31, 2017, 2016 and 2015

# 9. PROPERTY AND EQUIPMENT

	C	omputers	I	Furniture and Equipment	Total
Cost					
At November 1, 2014	\$	52,285	\$	25,989	\$ 78,274
Additions		1,286		-	1,286
Year ended October 31, 2015	\$	53,571	\$	25,989	\$ 79,560
At November 1, 2015	\$	53,571	\$	25,989	\$ 79,560
Additions		1,274		-	1,274
Disposals		(1,582)		-	(1,582)
Year ended October 31, 2016	\$	53,263	\$	25,989	\$ 79,252
At November 1, 2016	\$	53,263	\$	25,989	\$ 79,252
Additions		3,809			3,809
Disposals		(3,371)		-	(3,371)
Year ended October 31, 2017	\$	53,701	\$	25,989	\$ 79,690

Accumulated amortization	С	omputers	I	Furniture and		Total
	-	<b>.</b>		Equipment		
At November 1, 2014	\$	30,802	\$	25,989	\$	56,791
Amortization for the year		7,177		-		7,177
Year ended October 31, 2015	\$	37,979	\$	25,989	\$	63,968
44 Normalian 1, 2015	¢	27.070	¢	25.090	¢	(2.0(9
At November 1, 2015	\$	37,979	\$	25,989	\$	63,968
Amortization for the year		5,270				5,270
Adjustment for disposals		(974)		-		(974)
Year ended October 31, 2016	\$	42,275	\$	25,989	\$	68,264
At November 1, 2016	\$	42,275	\$	25,989	\$	68,264
Amortization for the year		3,992				3,992
Adjustment for disposals		(2,388)		-		(2,388)
Year ended October 31, 2017	\$	43,879	\$	25,989	\$	69,868
Net book value at October 31, 2015	\$	15,592	\$	-	\$	15,592
Net book value at October 31, 2016	\$	10,988	\$	-	\$	10,988
Net book value at October 31, 2017	\$	9,822	\$	-	\$	9,822
		26				

For the years ended October 31, 2017, 2016 and 2015

# 10. DEFERRED DEVELOPMENT COSTS

The breakdown of development costs that have been capitalized is as follows:

	2017	2016
Opening balance	\$ -	\$ 3,070,299
Additional project costs incurred	-	1,211,720
Recovery of development costs	-	(643,901)
Writedown of project costs	-	(3,638,118)
Closing balance	\$ -	\$ -

The Company incurred \$518,008 of project related costs in 2017 and recovered \$371,000 from development partners (2016: incurred \$1,211,720 and recovered \$643,901; 2015: incurred \$3,723,900 and recovered \$1,783,632)

Additions to deferred development costs include patent amortization of \$nil (2016 - \$71,989; 2015 - \$58,105), and also includes intangible asset amortization of \$nil (2016 - \$14,514; 2015 - \$19,352).

To date, the Company has recovered from its development partners a portion of the costs it has incurred as development costs coincident with meeting milestones as stipulated in development contracts.

The Company wrote-off the capitalized cost of \$2,395,425 in the fourth quarter of the year ended October 31, 2015 against cumulative development costs incurred on development projects to reduce the carrying value of those projects to nominal value. The reserves were recorded as there were no formal commitments as of October 31, 2015 from development partners to move forward with these projects.

The Company wrote-off the capitalized cost of \$3,638,118 in the third quarter of the year ended October 31, 2016 to reduce the carrying value of those projects to a value of nil. The Company anticipates that it may realize commercial economic benefits from the exploitation of these development projects in the future. However, given the uncertainty of realization of these costs, the Company wrote-off the capitalized costs.

For the years ended October 31, 2017, 2016 and 2015

# 11. INTANGIBLE ASSETS AND PATENTS

Intangible assets comprise the costs which the Company has capitalized relating to the technical expertise and know-how that the Company has developed with respect to the commercialization efforts relating to its sensor technology. In 2011, the Company determined that it had sufficiently advanced its expertise and product knowledge relating to the general commercialization efforts for its sensor technology in multiple industry vertical applications.

Cost		
	<b>.</b>	
At November 1, 2014	\$	135,465
Additions		-
Year ended October 31, 2015	\$	135,465
	*	
At November 1, 2015	\$	135,465
Additions	*	-
Year ended October 31, 2016	\$	135,465
	<b>.</b>	
At November 1, 2016	\$	135,465
Additions	¢	-
Year ended October 31, 2017	\$	135,465
Accumulated amortization		
44 Norman have 1, 2014	¢	50.05(
At November 1, 2014	\$	58,056
Amortization for the year	¢	19,352
Year ended October 31, 2015	\$	77,408
At Name and an 1, 2015	¢	77 400
At November 1, 2015	\$	77,408
Amortization for the year		19,352
Write-off	¢	38,705
Year ended October 31, 2016	\$	135,465
At Namentan 1, 2016	¢	125 465
At November 1, 2016	\$	135,465
Amortization for the year	¢	-
Year ended October 31, 2017	\$	135,465
Not head walks of October 21, 2015	ø	50 AF7
Net book value at October 31, 2015	\$	58,057
Net book value at October 31, 2016	\$	-
Net book value at October 31, 2017	\$	-

Amortization of intangible assets for the year ended October 31, 2015 and up to the third quarter of the year ended October 31, 2016 was capitalized to deferred development costs.

For the years ended October 31, 2017, 2016 and 2015

# 11. INTANGIBLE ASSETS AND PATENTS (Cont d)

The Company wrote-off the capitalized cost carrying value of \$38,705 in the fourth quarter of the year ended October 31, 2016 to reduce the carrying value of intangible assets to a value of nil. The Company anticipates that it may realize commercial economic benefits from the exploitation of these intangible assets in the future. However, given the uncertainty of realization of these costs, the Company wrote-off the capitalized costs.

Cost		
At November 1, 2015	\$	125 165
At November 1, 2015 Additions	Ф	135,465
Year ended October 31, 2016	\$	- 135,465
Tear ended October 51, 2010	Ŷ	155,405
At November 1, 2016	\$	135,465
Additions		-
Year ended October 31, 2017	\$	135,465
, ,		
Accumulated amortization		
At November 1, 2015	\$	77,408
Amortization for the year		19,352
Write-off		38,705
Year ended October 31, 2016	\$	135,465
At November 1, 2016	\$	135,465
Amortization for the year		-
Year ended October 31, 2017	\$	135,465
Net book value at October 31, 2015	\$	58,057
Net book value at October 31, 2016	\$	-
Net book value at October 31, 2017	\$	-

Amortization of patents (\$42,195) for the year ended October 31, 2015 and up to the third quarter of the year ended October 31, 2016 (\$71,988) was capitalized to deferred development costs.

In 2015, the Company wrote down \$67,262 of its original memory related patents to a nominal value. The Company also recovered \$18,140 (2016 and 2017: Nil recoveries) of patent expenditures from a development partner.

For the years ended October 31, 2017, 2016 and 2015

# 12. SHARE CAPITAL, STOCK OPTIONS AND LOSS PER SHARE

#### a) Share Capital

Authorized and outstanding:

The Company has two classes of shares as follows:

- i) Special redeemable voting preference shares, 2,000,000 authorized, none are issued and outstanding.
- ii) Common shares without par value an unlimited number authorized.

	Number of Shares	Amount \$
Balance at November 1, 2015	197,176,368	\$ 74,083,975
Private placement of shares for cash	366,668	110,000
Options exercised	3,756,366	751,273
Fair value of options exercised	-	443,252
Shares issued on settlement of accounts payable	1,517,143	295,312
Shares issued on settlement of legal claim	312,500	62,500
Shares issued on settlement of bridge loan	509,524	107,000
Equity component of bridge loan	-	1,827
Treasury shares to be cancelled	750,000	-
Balance at October 31, 2016	204,388,569	\$ 75,855,139
Private placement of common shares for cash	3,873,223	719,403
	547,643	107,708
Common shares issued on settlement of accounts payable		
Common shares issued on settlement of compensation	132,381	21,909
Treasury shares cancelled	(750,000)	-
Bridge loans converted	20,370,895	2,536,963
Reallocation from derivative liability for loan converted		20,970
Loss on conversion of bridge loan		936,102
Balance at October 31, 2017	228,562,711	\$ 80,198,194

#### 2015 Activity:

i) 450,000 common shares were issued to three directors as compensation for services provided, these common shares were valued at \$220,500. In addition, 450,000 common shares were issued to a consultant as compensation for services provided, these common shares were valued at \$166,500. In the absence of a reliable measurement of the services received from the consultant, the services have been measured at the fair value of the shares granted.

For the years ended October 31, 2017, 2016 and 2015

# 12. SHARE CAPITAL, STOCK OPTIONS AND LOSS PER SHARE (Cont d)

## 2016 Activity:

- ii) A total of 1,517,143 common shares were issued to three arms length service providers as settlement of trade accounts payable totaling \$295,312. The common shares issued were valued based on the trade accounts payable owing to these three arms length service providers.
- 312,500 common shares were issued as part of the settlement of the legal claim as described in Note 20(a). The common shares were valued based on the common shares price of \$0.20 on the date of the settlement agreement.
- iv) 509,524 common shares were issued to an arm s length investor who had provided bridge loan financing to the Company in 2016 and who elected to convert the bridge loan into common shares at the maturity date of the loan (Note 14). The value of the bridge loan at the time of conversion was \$107,000. The equity component of the bridge loan on the date of conversion in the amount of \$1,827 was reclassified from equity component of bridge loans to share capital.
- v) In July 2016, the Company negotiated the settlement of a trade payable with an arm s length service provider as settlement of trade account payable in the amount of \$170,300 (included in (ii) above) through the issuance of 1,000,000 common shares. The Company also issued an additional 1,000,000 common shares to settle up to an additional \$200,000 of services to be rendered by the arm s length service provider between July and December 2016. These 1,000,000 shares were held in trust by the Company to be released in tranches of 250,000 common shares as services were rendered.

Between July and September 2016, \$56,861 of services were provided under this arrangement and the Company released 250,000 common shares as settlement of the services rendered (included in (ii) above).

In October 2016, this settlement arrangement was cancelled by mutual consent. Accordingly, the Company is proceeding to return the remaining 750,000 common shares to treasury for cancellation. The 750,000 common shares remained outstanding as issued but not released as at October 31, 2016. In 2017, the 750,000 shares have been cancelled.

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For the years ended October 31, 2017, 2016 and 2015

# 12. SHARE CAPITAL, STOCK OPTIONS AND LOSS PER SHARE (Cont d)

## 2017 Activity:

- i) A total of 547,643 common shares were issued to three arms length service providers as settlement of trade accounts payable totaling \$107,707. The common shares issued were determined based on the market value of the common shares at the date of settlement for the carrying amount of the account payable.
- ii) 132,381 common shares were issued as part of the settlement of wages totaling \$21,909.
- iii) 20,370,895 common shares were issued to arms length investors who had provided bridge loan financing to the Company in 2017 and who elected to convert the bridge loan into common shares at the maturity date of the loan (Note 14). The value of the bridge loan at the time of conversion was \$2,536,964.

## b) Stock Options

Stock option plan:

The Company has a fixed stock option plan. Under the Company s stock option plan (the Plan ), the Company may grant options for up to 18,840,000 shares of common stock to directors, officers, employees or consultants of the Company and its subsidiaries. The exercise price of each option is equal to or greater than the market price of the Company s shares on the date of grant unless otherwise permitted by applicable securities regulations. An option s maximum term under the Plan is 10 years. Stock options are fully vested upon issuance by the Company unless the Board of Directors stipulates otherwise by Directors resolution.

A summary of the status of the Company s fixed stock option plan through October 31, 2017 and changes during the periods is as follows:

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For the years ended October 31, 2017, 2016 and 2015

	Options (000)	Weighted average exercise price \$	Proceeds realized
Outstanding, November 01, 2015	9,817	0.31	
Granted	-	-	
Exercised	(3,756)	(0.20)	751,273
Expired	(1,666)	(0.21)	
Outstanding, October 31, 2016	4,395	0.45	
Granted	2,890	0.25	
Expired	(690)	(0.35)	
Outstanding, October 31, 2017	6,595	0.37	

## 12. SHARE CAPITAL, STOCK OPTIONS AND LOSS PER SHARE (Cont d)

## b) Stock Options (Cont d)

Stock option plan: (Cont d)

The weighted average share price on the dates of exercise was \$0.37 (2016 - \$0.27).

During the year ended October 31, 2017 the Company issued a total of 2,890,000 stock options. All options vest immediately upon issuance. This total consisted of 2,500,000 stock options issued to directors and officers and 390,000 and stock options issued to employees.

The Company has the following stock options outstanding at October 31, 2017:

Date of issue	# Issued	Strike Price	Weighted average remaining life (in years)	Expiry Date
January 22, 2013	440,000	0.30CDN	0.2	January 22, 2018
				September 16,
September 16, 2013	520,000	0.27CDN	0.9	2018
February 10, 2014	350,000	0.85	1.3	February 10, 2019
April 25, 2014	230,000	0.64	1.5	April 25, 2019
June 4, 2015	975,000	0.49	2.6	June 4, 2020
August 20, 2015	940,000	0.46	2.8	August 20, 2020
				September 30,
September 30, 2015	250,000	0.40	2.9	2020
				December 30,
December 30, 2016	2,890,000	0.25	4.2	2021
	6,595,000			

For the years ended October 31, 2017, 2016 and 2015

All outstanding options at October 31, 2017 are exercisable. In 2017, the Company recorded a total expense of \$442,206 (2016 - \$nil; 2015 - \$776,941) with respect to the issuance of options issued during the year, calculated in accordance with the Black Scholes option-pricing model.

The underlying assumptions in the Black Scholes option-pricing model were as follows:

		2017	2015
Share price	\$	0.21	0.37-0.49
Volatility factor (based on historical volali		102%	109% - 114%
Risk free interest rate		0.72%	0.73%-0.90%
Expected life		5 years	5 years
Dividend yield		0%	0%
Forfeiture rate		0%	0%
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For the years ended October 31, 2017, 2016 and 2015

# 12. SHARE CAPITAL, STOCK OPTIONS AND LOSS PER SHARE (Cont d)

## c) Loss Per Share

The calculation of basic and diluted loss per share for the year ended October 31, 2017 was based on the loss attributable to common shareholders of \$4,346,200 (2016 - \$6,805,535; 2015 - \$6,516,610) divided by the weighted average number of common shares outstanding of 207,131,781 (2016 199,572,966; 2015 - 192,629,666).

Diluted loss per share does not include the effect of 6,595,000 (2016 4,395,000; 2015 9,817,000) stock options outstanding as they are anti-dilutive.

# 13. PRIVATE PLACEMENTS AND COMMON SHARE PURCHASE WARRANTS

# a) **Private Placements:**

- i) In 2015, the Company completed two private placements with investors consisting of common shares, with no warrants, pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received gross proceeds of \$175,000 and issued a total of 422,768 common shares.
- In 2016, the Company completed two private placements with an investor consisting of common shares with no warrants, pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received gross proceeds of \$ 110,000 and issued a total of 366,668 common shares.

# b) Share Purchase Warrants

	Warrants	Weighted average exercise price	Proceeds Realized
Balance outstanding at October 31, 2014	4,485,463	\$ 0.37	
Exercised	(2,988,876)	(\$0.19)	\$ 565,777
Expired	(1,496,587)	(\$0.73)	
Granted	-	-	
Balance at October 31, 2015, 2016 and 2017	-	-	-

The weighted average share price on the date of exercise of the warrants was \$0.60.

For the years ended October 31, 2017, 2016 and 2015

# 14. BRIDGE LOANS

#### 2016 Bridge Loans:

(1) The bridge loans outstanding at October 31, 2016 and for the year then ended are summarized as below.

	\$USD denominated loans	October 31, 2016 \$CDN denominated loans	Total
	(\$US)	(\$US)	
Debt obligations	824,670	2,660,932	3,485,602
Equity portion of bridge loans	23,075	-	23,075
Derivative Liability	-	83,998	83,998
Interest payable at October 31, 2016	29,804	121,602	151,406
	\$USD denominated loans (\$US)	Year ended October 31, 2016 \$CDN denominated loans (\$US)	Total
Accretion expense	87,184	107.077	514,561
	07,104	427,377	514,501
Interest expense	193,254	427,377 368,354	561,608
Interest expense (Gain)/loss on foreign exchange			

- (2) The Company completed the following bridge loan transactions in the 2016 fiscal year:
  - (a) The 2015 bridge loans were extended on several occasions during 2016, ultimately through October 31, 2017.
  - (b) It secured an additional 7 bridge loans denominated in \$USD. These loans were of a short term nature and were extended on several occasions during 2016; these loans have now been extended to June-November 2017.

(c) It secured an additional 6 bridge loans denominated in \$CDN. These loans were of a short term nature and were extended on several occasions during 2016; these loans have now been extended to June-November 2017.

For the years ended October 31, 2017, 2016 and 2015

# 14. BRIDGE LOANS (Cont d)

(3) At October 31, 2016 and for the year ended, the Company reports the following with respect to the outstanding \$USD convertible bridge loans:



For the years ended October 31, 2017, 2016 and 2015

# 14. BRIDGE LOANS (Cont d)

#### (3) (Cont d)

# A) Consolidated Statement of Loss, year ending October 31, 2016

2	015 Loan				2016	<b>Loans</b>				
		#1	#2	#3	# 4	#5	#6	#7	<b>#8</b>	Total
Accretion\$ expense	3,625 \$	37,346 \$ 1	0,495 \$ 1	2,268 \$	13,839 \$	- \$	3,676 \$	3,802 \$	3 2,133	\$ 87,184
Interest										
Paid	66,000	35,000 5	0,000	-	-	7,040	2,100	-	1,210	161,350
Accrued	5,803	-	4,904	-	14,000	-	-	2,170	, -	31,904
\$	,	40,027 \$ 5	· ·	-		7,040 \$	2,100 \$	,	1,210	\$ 193,254
<b>B)</b> Consolidate				at Octob			, ,	, .	,	. ,
						_				
	2015 Loan				201	16 Loans				
		#1	#2	#3	#4	#5	#6	#7	<b>#8</b>	Total
Debt obligation	\$ 200,025	\$ 245,389	\$ 245,389	9\$-	\$ 106,000	\$ - 3	\$ - \$	27,867	\$-\$	824,670
Equity portion of bridge										
loan	3,600	8,671	8,67	1 -	_	_	-	2,133	-	23,075
10411	2,000	0,071	0,07	-				2,100		20,070
Interest										
payable	5,803	5,027	4,904	4 -	14,000	_	-	70	-	29,804
		·	·	38	-					·

For the years ended October 31, 2017, 2016 and 2015

#### 14. BRIDGE LOANS (Cont d)

(4) At October 31, 2016 and for the year then ended, the Company reports the following with respect to the outstanding \$CDN convertible bridge loans.

#### \$ CDN Bridge Loans.

	2015 Loan	#1	#2	#3	2016 Loan #4	s #5	#6	#7
Date of Origination	Aug 15 to Oct 15	2/12/16	5/2/16	9/2/16	7/15/16	9/26/26	10/24/24	June-Oct 16
Principal amount at origination	\$ 973,673	\$ 361,400	\$ 239,082	\$ 76,929	\$ 1,077,862	\$ 37,885	\$ 560,175	\$ 243,026
Monthly interest rate	2-3%	2.00%	3.00%	2.00%	2.00%	1.00%	1.00%	2.00%
Effective annual Interest rate	N/A	522.82%	98.13%	71.74%	38.30%	38.30%	15.08%	-
Conversion price to common shares	none	0.21	0.30	0.21	.25CDN	0.30CDN	0.30CDN	
Current maturity date	;	10/31/17	11/2/17	6/2/17	10/31/17	9/26/17	10/24/17	11/1/17
Outstanding at October 31/2016:	ξ.							
Principal Interest	-	427,444 20,587	228,164 6,605	70,776 2,894	1,118,248 78,390	41,317 429	544,948 1,288	230,035 11,409
Total	\$ -	\$ 448,031	\$ 234,769	\$ 73,670	\$ 1,196,638	\$ 41,746	\$ 546,236	\$ 241,444

(1) This loan was converted to \$USD on March 15, 2016. It is presented as USD loan # 5 in 2016 through July 15, 2016.

(2) This loan was not convertible at October 31,2016.

A) Consolidated Statement of Loss, year ending October 31, 2016.

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					2016 Loa	ns			
	#1	#2	#3	:	#4	#5	<b>#6</b>	#7	Total
Accretion Expense	\$ 181,963	\$ 62,666	\$ 3,327	' \$ 17	8,705 \$	534 \$	\$ 182	\$-	\$ 427,377
(Gain) Loss on revaluation of derivative liability	(180,503)	(69,845)	) 6,885	(10	0,000)	(2,753)	50,600		(295,616)
(Gain) loss on foreign exchange	10,626	(4,421)			5,391	(483)	(587)	-	8,323
Interest expense Paid Accrued	11,307 55,639	33,921 6,854	2,943	. 24	- 4,331	- 435	- 1,290	- 11,634	45,228 323,126
Total	\$ 66,946	\$ 40,775	\$ 2,943	\$ \$ 24 39	4,331 \$ 9	435	\$ 1,290	\$ 11,634	\$ 368,354

For the years ended October 31, 2017, 2016 and 2015

## 14. BRIDGE LOANS (Cont d)

#### (4) (Cont d)

#### **B)** Consolidated Statement of Financial Position at October, 31 2016

	2016 Loans							
	#1	#2	#3	#4	#5	#6	#7	Total
Derivative liability \$	-	\$-	\$ 14,211	\$-	\$ 4,362	\$ 65,425 \$	\$ - \$	5 83,998
Debt obligation	427,444	228,164	70,776	1,117,295	41,317	544,948	230,035	2,659,979
Total obligation	427,444	228,164	84,987	1,117,295	45,679	610,373	230,035	2,743,977
Interest payable \$ <u>2017 Bridge L</u> a	20,587 <u>oans:</u>	\$ 6,605	\$ 2,894	\$ 78,390	\$ 429 \$	§ 1,288 S	\$ 11,409 \$	6 121,602

1) The bridge loans outstanding at October 31, 2017 and for the year then ended are summarized as below. In addition, there is an unsecured advance provided by the CEO to the Company of \$11,689 which is unsecured and outstanding at October 31, 2017. That amount is included in the total debt reported.

	\$USD denominated loans (\$US)	October 31,2017 \$CDN denominated loans (\$US)	Total
Debt obligations	855,297	1,633,720	2,489,017
Equity portion of bridge loans	62,050	-	62,050
Derivative Liability	207,855	281,879	489,734
Interest payable at October 31, 2017	4,034 40	45,829	49,863

For the years ended October 31, 2017, 2016 and 2015

# 14. BRIDGE LOANS (Cont d)

	Ye \$USD denominated loans (\$US)	ear ended October 31, 2017 \$CDN denominated loans (\$US)	Total
Accretion expense	109,895	1,248,206	1,358,101
Interest expense	165,061	501,184	666,245
(Gain)/loss on conversion/ extinguishment of debt	71,059	938,621	1,009,680
(Gain)/loss on revaluation of derivatives	(93,500)	(1,521,322)	(1,614,822)

- 2) The Company completed the following bridge loan transactions in the 2017 fiscal year:
- (a) Certain of the 2016 bridge loans were extended on several occasions during 2017, ultimately through October 31, 2017 and thereafter. These extensions were treated, as appropriate, as either modifications or as extinguishment of the loans with the requisite prescribed accounting measurements reflected.
- (b) Six of the 2016 bridge loans were converted into common shares during 2017. The Company reflected a loss on conversion of the bridge loans as appropriate, with the requisite prescribed accounting measurements reflected.
- (c) The Company secured a total of 15 additional \$CDN denominated bridge loans in 2017 and realized gross proceeds of \$1,223,524. One these bridge loans was repaid in October 2017.
- (d) The Company secured three additional \$USD bridge loans in 2017 and realized gross proceeds of \$501,500.

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For the years ended October 31, 2017, 2016 and 2015

## 14. BRIDGE LOANS (Cont d)

3) At October, 31 2017 and for the year then ended the Company reports the following with respect to the outstanding \$ USD denominated convertible bridge loans.

<u>\$ USD</u>	<b>Bridge</b>	Loans	at	<b>October</b>	<u>31,2017</u>

Data af	#1	#2	#3	#4	#5	#6	#7	#8
Date of origination	8/31/15	11/30/15	12/02/15	12/31/15	3/24/16	7/17/17	8/11/17	10/17/17
Principal amount at origination	\$ 200,000	\$ 250,000	\$ 250,000	\$ 106,000	\$ 30,000	\$ 83,500	\$ 155,000	\$ 263,000
Monthly interest rate	1%	2%	2%	1%	1%	1%	5% (annual)	5% (annual)
Effective annual interest rate	36%	36%	36%	36%	36%	118%	95%	98%
Conversion price to common shares	0.11	0.143	0.143	0.20	0.11	0.15	0.09	0.09
Current maturity date	e 5/02/18	2/02/18	2/02/18	(A)	5/25/18	7/07/18	8/11/18	10/18/18
<u>Outstanding</u> <u>at October</u> <u>31/2017:</u>	1							
Principal Interest	\$ 199,758 - \$ 199,758	\$ 243,152 \$ 243,152	\$ 243,152 \$ 243,152	\$ - (A)	\$ 29,530 (256) \$ 29,274		\$ 17,362 153 \$ 17,515	<ul> <li>\$ 75,560 504</li> <li>\$ 76,064</li> </ul>

(A) Loan was converted on October 6,2017 at a conversion price of \$0.155CDN. With respect to the \$USD bridge loans 6, 7 and 8, these loans were not convertible by the lender at date of origination; however, there was a conversion option provided in each case six months after the date of origination. Loan 6 was ultimately converted in January 2018 at a conversion price of \$0.08. The conversion price of loans 7 and 8 will reflect a discount to market if the loan is converted during the term of the loan.

#### Consolidated Statement of Loss, year ending October 31, 2017

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	#1 #2 #3 #4 #5 #6 #7 #8 Tota											Total				
Accretion expense	\$	38,635	\$11,317	\$	11,222	\$ 18,9	96 \$	\$	5,361	\$	11,095	\$	9,388	\$	3,881 \$	109,895
(Gain) loss on Revaluation of derivatives	l	-	-		-		-		-		(38,396)	(	(64,461)	)	9,357	(93,500)
(Gain) loss on conversion/extinguishmen of debt	t	-	-		-	47,0	530		-		-		23,429		-	71,059
Interest Paid Accrued	\$	23,868 	60,000 - \$ 60,000			11,8 \$ 11,8 \$2	-		3,590 - 3,590	\$	3,377 3,377	\$	1,720 153 1,873	\$	- 504 504 \$	161,027 4,034 165,061

For the years ended October 31, 2017, 2016 and 2015

## 14. BRIDGE LOANS (Cont d)

# 3) (Cont d) Consolidated Statement of Financial Position at October 31, 2017

	#1	#2	#3 #4	#5	#6 #'	7 #8	Total			
Debt obligation \$	199,758 \$ 2	243,152 \$ 24	43,152	- \$ 29,273 \$	46,383 \$ 17,5	515 \$ 76,064	\$ 855,297			
Derivative liability	-	-	-		10,871 41,2	224 155,760	) 207,855			
Equity portion of bridge										
loan	38,127	9,046	9,046	- 5,831	-		- 62,050			
Interest payable	-	-	-		3,377	153 504	4,034			
<ul> <li>At October 31, 2017 and for the year term ended, the Company reports the following with respect to the outstanding \$CDN convertible bridge loans.</li> <li><u>\$CDN Bridge Loans. (in \$USD) (c )</u></li> </ul>										
	#1	#2	#3	#4	#5	#6	#7			
Date of Origination	11/1/16	5/2/16	9/2/16	10/31/16	09/26/16	10/24/17	11/1/17			
Principal amount at origination	\$ 241,444	\$ 239,082	\$ 76,929	\$ 1,117,295	\$ 37,787	\$ 595,027	\$ 427,444			
Monthly interest rate	1%	1%	2%	1%	1%	1%	2%			
Effective annual interest rate	68%	27%	184%	92%	81%	98%	116%			
Current conversion price	0.155CDN	0.13CDN	0.21	.155CDN	0.155CDN	0.13CDN	0.155CDN			

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Current maturity da	te Conver	ted	05/02/18	Conv	erted	Convert	ed	Convert	ed	04/26/18	C	onverted
<u>Outstandir</u> <u>at October</u> <u>31/2017:</u>	- U											
Principa Interest	1	-	232,401 2,289		-		- -		-	404,912 1,339		-
Total	\$ (A)	-	\$ 234,690	\$ (E	- 3)	\$ (A)	-	\$ (A)	-	\$ 406,251	\$	- (A)
(A) Loan was converted to common shares in October 2017												
(B) Loan was converted to common shares in July 2017												
(C) In addition to the detailed information as outlined in this section, there is an unsecured non interest												

included in the total debt reported. This advance was repaid to the CEO in November 2017 43

bearing advances provided by the Company's CEO of \$11,689 outstanding at October 31,2017

For the years ended October 31, 2017, 2016 and 2015

# 14. BRIDGE LOANS (Cont d)

4) (Cont d)

# <u>\$ CDN Bridge Loans. (in \$USD)</u>

#8 #9 #10 #11 #12 #13 #14 #15