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**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

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

For The Fiscal Year Ended **October 31, 2016**

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)

**Ontario, Canada**

(Jurisdiction of incorporation or organization)

**121 Richmond Street West, Suite 304**

**Toronto, Ontario M5H 2K1, Canada**

**Tel: (416) 364-6513**

**Fax: (416) 360-4034**

(Address of principal executive offices)

**Joseph Fuda; 416-364-6513, jfuda@micromeminc.com, 121 Richmond Street West, Suite 304 Toronto, ON  
M5H 2K1**

(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**

Securities registered or to be registered pursuant to Section 12(g) of the Act:

**Common Shares without par value**

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:

**204,388,569 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

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

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  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

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 Standards as issued by the International Accounting Standards Board

Other

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

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**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,” “plans,” “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 2016, 2015, 2014, 2013 and 2012*

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, 2016, October 31, 2015, October 31, 2014, October 31, 2013 and October 31, 2012. 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 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, 2016, 2015, 2014, 2013 and 2012 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)

	2016	2015	2014	2013	2012
Working capital (deficiency)	(\$4,316,730)	(\$2,049,302)	\$ 1,034,921	\$ 425,888	(\$1,793,217)
Capital Assets	10,988	15,592	21,483	13,998	5,787
Total Assets	736,043	3,667,866	5,636,605	2,166,455	1,180,278
Capital Stock	75,855,139	74,083,975	70,802,776	57,755,613	54,728,239
Shareholders' equity (deficiency)	(3,902,142)	1,403,888	4,862,773	1,536,319	(904,030)

**Selected statement of operations and deficit information**

(all amounts in U.S. dollars)

	2016	2015	2014	2013	2012
Interest and other income	\$ -	\$ -	\$ -	\$ -	\$ -
Research and development expenses	3,635,613	2,649,019	703,671	160,920	229,840
General and administrative and other expenses	3,169,922	2,703,650	3,081,947	2,198,466	2,618,792
(Gain) Loss on revaluation of embedded derivatives (1)	-	-	-	3,205,752	(1,504,423)
Stock compensation expense (2)	-	1,163,941	379,253	368,790	430,856
Loss before income taxes	(6,805,535)	(6,516,610)	(4,164,871)	(5,933,928)	(1,775,065)
Provision for income taxes (recovery)	-	-	-	-	-
Net loss	(6,805,535)	(6,516,610)	(4,164,871)	(5,933,928)	(1,775,065)
Loss per share-basic and diluted	(0.03)	(0.03)	(0.02)	(0.04)	(0.01)
Weighted average number of basic and diluted shares	199,572,966	192,629,666	171,534,969	146,814,466	123,375,510
Dividends	-	-	-	-	-

- 1) (Gain) loss on revaluation of embedded derivatives 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) Stock compensation expense is a non cash expense calculated in accordance with the Black Scholes option pricing model.

## 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 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.

	2016	2015	2014	2013	2012
High for period	0.7972	0.8501	0.9422	1.0164	1.0281
Low for period	0.6854	0.7141	0.8589	0.9348	0.9783
End of period	0.7461	0.7233	0.8620	0.9402	0.9872
Average for period	0.7538	0.7793	0.9054	0.9710	1.0046

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 2016	March 2016	April 2016	May 2016	June 2016	July 2016
High	1.3567	1.3009	1.2588	1.3135	1.3016	1.3185
Low	1.3481	1.2859	1.2497	1.3016	1.2914	1.3002
	August 2016	September 2016	October 2016	November 2016	December 2016	January 2017
High	1.3145	1.3189	1.3424	1.3462	1.3465	1.3084
Low	1.3092	1.3088	1.3376	1.3360	1.3401	1.2969

On February 28, 2017 the noon buying rate for one Canadian dollar, as quoted by the Bank of Canada, was CDN \$1.3248 = 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, 2016 we had \$288,128 cash on hand and our current monthly cash expenses were approximately \$175,000. Our working capital position is (\$4,316,730) at October 31, 2016. Subsequent to October 31, 2016, through to the date of the filing of this Annual Report on Form 20-F, we have raised an additional \$788,600 through the issuance of convertible debentures and \$143,365 through a series of private placements. Additionally, we collected \$200,000 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 2016 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.

*The depressed oil and gas sector places our development projects at risk.*

Certain of our development partners are engaged primarily in the oil and gas sector. With the recent depressed market conditions 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 15c-2 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 66 $\frac{2}{3}$ % 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 OTC QX 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 [www.micromeminc.com](http://www.micromeminc.com). 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, 2015 several of our active projects had advanced to the stage where the proof of concept and the prototype units were completed. We ended our fiscal year in preparation to advance to field trials of our production units in 2016.

## 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, 2016

**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.

The significant developments in fiscal year 2016 are presented as below:

- a) 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. These tests provided positive results in the demonstration. We invoiced Chevron for \$193,901 and received payment in the first quarter of 2016.
- b) Our follow up discussions with Chevron continued through to late March 2016 as to the go forward steps. At that point, Chevron indicated that they wanted to pursue certain specific tracers in the go forward work as the next phase of the development project.
- c) 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.
- d) 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.
- e) We received an additional \$100,000 for this work from Chevron in December.
- f) In early February 2017, this round of testing was completed and we believe that these testing results were successful. Chevron is continuing to evaluate these test results. We anticipate initial commercial orders once this evaluation is completed.
- g) During 2016, we engaged in discussions with a large U.S. based process control manufacturing company as a candidate to take forward the production of the ultimate commercial units. These discussions continue.

- h) We previously executed a development contract with Chevron in April 2015 for the development of a cement integrity sensor platform. Given the Company's cash constraints in 2016, this development initiative was not substantially pursued in 2016, but continues to form part of our go forward pipeline in 2017.

**Castrol:** We entered into a JPDA with Castrol in December 2014. The development project is 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.

At October 31, 2015, we reported \$926,777 of deferred development costs relating to this project. We have filed provisional patents associated with this development work with the USPTO.

The significant developments in fiscal year 2016 are as presented below:

- a) 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.
- b) We worked with our subcontractor 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. This amount was paid in December, 2016.
- c) We have since engaged with Castrol's commercialization teams and are pursuing Castrol's marine diesel division for the fieldable units.
- d) In September 2016, we met with a large manufacturer/marketer of process control equipment and have engaged in discussions with that group as a leading candidate to manufacture and market the eventual miniaturized end product for the automotive sector.
- e) We have developed with Castrol a critical path towards completion of the miniaturized product for automotive use over the course of 2017-2018. The budgets were established and our subcontractor is working with us to execute this development program.
- f) As a direct result of our Castrol dealings on the fieldable units, in November 2016, we were approached by a large European energy company who has expressed a direct interest in our fieldable units. These discussion and negotiations continue.

**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 GM.

The development contract that was established with Flextronics in 2014 remains in place. The Company has contracted with Flextronics to conduct specific work.



It is anticipated that we will engage with Flextronics in the second quarter of fiscal 2017 to identify the timing for the completion of the work going forward.

**Other projects:**

In our fiscal year 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 writedown of our investment of \$2.27 million against these projects in the fiscal year ending October 31, 2015. The Company believes that there is substantial opportunity to further develop these technology applications in future. It retains the intellectual property on the work that it has completed. While there were no substantive developments or new progress in 2016, these projects remain as active in our 2017 pipeline, perhaps with Eversource or with other utilities.

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

	S.A.	Chevron	Castrol	Northeast	Flextronics	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	-	-	-	-	-	-	-

On July 31, 2016, we reserved the total balance of deferred development costs and recorded a writedown of \$3,638,118. The Company continues to pursue all of our active projects and our product pipeline opportunities; however, the decision to reserve these balances was made due to the uncertainty of timing of realization of these assets.

### **Intellectual Property**

We believe that protection of our intellectual property is important to our ability to generate revenues from our technology in the future. We hold issued patents and pending patent applications have also entered into confidentiality and other agreements with third parties and our employees to protect our intellectual property and trade secrets. We intend to continue to actively 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.

The Company has been active in building its intellectual property portfolio during 2016 as it has furthered the above-noted development projects. We have engaged a Washington, DC based law firm to assist us in these efforts. The Company incurred \$192,873 of patent related costs in 2016.

We believe that the Company has broad and valuable interests in its intellectual property that it has developed through October 31, 2016. Specifically, we note that:

- a) Four patents have been issued to date by the U.S. patent office for our Multimodal condition sensor platform and system thereof. We expect two additional patents to be awarded in 2017. We also have provisional patents filed in various international jurisdictions for this intellectual property.
- b) U.S. patent filings have also been submitted and are pending for:
  - i. System and method to monitor power lines. We have also filed provisional patents in several international jurisdictions for the system and method to monitor power lines.
  - ii. System for real time monitoring of power line transformers.
  - iii. MEMS sensor and methods to determine cement integrity.
  - iv. MEMS implementation of a LIBS detection of wear metals in lubricants.
- c) 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.

In 2015 the Company wrote off its residual investment of approximately \$67,000 that related to the original memory related patents that it holds but which it has not pursued since it abandoned further development efforts on its memory related technology in 2008.

With respect to our memory related patents for which we have no future plans to further develop, we began in 2013 to attempt to monetize these through the potential sale of such patents. We wrote down our net investment in these patents to nominal value in 2015.

## **Share Capital**

At October 31, 2016 the Company had 204,388,569 common shares outstanding (2015: 197,176,368). Additionally, the Company has 4,395,000 stock options outstanding with a weighted average exercise price of \$0.45 per share (2015: 9,817,000 options outstanding with a weighted average exercise price of \$0.31 per share).

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

Our 2015 Annual Meeting of Shareholders was held on April 26, 2016. 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. Salvatore Fuda did not stand for reelection to our Board of Directors. Craig Carlson resigned as a Director of the Company in June 2015. Messrs. Joseph Fuda, Dan Amadori and Steven Van Fleet continue to serve as officers of the Company.

## **Equity Financing Transactions:**

In the fiscal year ending October 31, 2016, the Company completed two private placements for cash and received gross proceeds of \$110,000 and issued a total of 366,668 common shares.

In the fiscal year ending October 31, 2016, the Company raised \$751,273 from the exercise by officers, directors and employees of 3,756,366 common share options.

During the 2016 fiscal year, the Company 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. These loans are outstanding at October 31, 2016 with new maturity dates ranging from June 2017 to November 2017.

In 2016 the Company issued 1,517,143 common shares to two (2) 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.

During 2015, the Company raised \$565,777 from the exercise by warrant holders of 2,988,876 common share purchase warrants. On October 31, 2015, there were no remaining warrants outstanding.

In the fiscal year ending October 31, 2015, the Company raised \$1,153,007 from the exercise by officers, directors and employees of 4,428,000 common share options.

In the fiscal year ending October 31, 2015, the Company completed two private placements and received gross proceeds of \$175,000 and issued a total of 422,768 common shares.

Between August to October 2015, the Company secured a series of bridge loans from investors totaling \$1,287,500 CDN (\$976,673 US). These loans are secured by a floating charge on the assets of the Company. The maturity date of the loans were originally set as 30 days in each case and have been renewed by the investors through November 2015. The interest rate on the loans ranges from 2% to 3% per month. These bridge loans were not convertible into common shares as at October 31, 2015. One of the bridge loans obtained in the amount of \$300,000 CDN (\$229,446 US) plus accrued interest of \$6,000 CDN (\$4,588 US) was repaid on September 4, 2015. In 2016 these bridge loans were extended with revised terms. At October 31, 2016 the total amount outstanding is \$1,196,638 with an interest rate of 2% per month, convertible to common shares at a price of \$0.25 CDN (\$0.19 USD) per share. The loans have been extended to October 31, 2017.

In August 2015, the Company secured a bridge loan of \$200,000 from an investor. The loan is secured by a floating charge on the assets of the Company within a maturity date of November 1, 2015. The interest rate on the loan is calculated at 3% per month, payable in arrears. This bridge loan was not convertible into common shares at October 31, 2015. In 2016 this bridge loan was extended with revised terms. At October 31, 2016, the total amount outstanding is \$205,828 with an interest rate of 2% per month, convertible to common shares at a price of \$0.30 per share. This loan has been extended to November 2, 2017.

In 2014 the Company realized \$6,801,619 from the exercise of 27,410,717 common share purchase warrants.

In 2014 the Company settled \$8,353 of third party accounts payable balances through the issuance of 17,081 common shares.

In 2014 the Company extended for a period of six months the expiration date for 1,405,026 common share purchase warrants which would have otherwise expired in 2014. The exercise price for 1,105,026 of these warrants was changed from \$0.41 and \$0.45 per warrant to \$0.50 per warrant. The strike price remained unchanged for the balance of the warrants at \$0.55 per warrant.

**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.

**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 made nil capital expenditures in 2016; \$1,274 of capital expenditures in 2015; and \$16,508 of capital expenditure in 2014.

**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, 2016, October 31, 2015 and October 31, 2014. 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

	2016	2015	2014
Administration	\$ 395,340	\$ 389,647	\$ 302,933
Professional and other fees and salaries	1,739,401	1,952,302	2,360,867
Travel and entertainment	180,767	193,861	329,779
Other expenses	4,490,027	2,816,859	792,039
Stock compensation expense	-	1,163,941	379,253
Loss for the year	6,805,535	6,516,610	4,164,871
Loss per share - basic and diluted	0.03	0.03	0.02

### Selected balance sheet information

	2016	2015	2014
Working capital (deficiency)	\$ (4,316,730)	\$ (2,049,302)	\$ 1,034,921
Other Assets	414,588	3,453,190	3,827,852
Total Assets	736,043	3,667,866	5,636,605
Shareholders' equity (deficiency)	(3,902,142)	1,403,888	4,862,773

### 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:

- 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.
- 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.
- 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).
- Salaries and benefits expenses were \$381,951 in 2016 versus \$446,565 in 2015. Staff bonuses were \$20,000 in 2016 versus \$55,000 in 2015.
- Travel and entertainment expenses were \$180,767 in 2016 versus \$193,861 in 2015.
- Other expenses in 2016 totaled \$4,490,027 (2015 - \$2,816,859). The largest components of this increase include an impairment reserve on development costs of \$3,638,118 (2015: \$2,395,425), interest expense on the bridge loans of \$561,608 (2015: \$36,714), accretion expense of \$514,560 on the bridge loans (2015: nil), and other development costs, net of recoveries of (\$2,505) (2015: \$250,594).

- g. Stock compensation expense was nil in 2016 versus \$1,163,941 in 2015 which related to the issuance of stock options in 2015.

#### **Fiscal 2015 Compared to Fiscal 2014**

The Company reported a loss of \$6,516,610 in 2015 versus a loss of \$4,164,871 in 2014.

The change in loss from operations in 2015 from 2014 resulted from several components including:

- (a) Professional fees including audit and legal expenses were \$466,411 in 2015 (2014: \$420,902). Our costs were higher in 2015 as a result of the audit of our internal controls over financial reporting required by the Sarbanes-Oxley Act, additional legal costs incurred with respect to contract negotiations with our development partners, and the pending litigation matter discussed below in ITEM 8 – Financial Information below.

Consulting fees totaled \$1,039,316 in 2015 (2014: \$1,535,522); in 2014 the Company paid additional compensation to the CEO of \$542,615 above the CEO's base compensation (in 2015: nil).

Salaries expense was \$446,575 in 2015 (2014: \$404,445).

The advance reported at October 31, 2014 to Mr. Steven Van Fleet, the President of MAST, in the amount of \$244,074 was converted in February 2015 to performance based additional compensation. There were no outstanding advances to the senior management team at October 31, 2015 (2014: \$244,074).

In 2015, other expenses included an impairment reserve of \$2,270,329 relating to one of the Company's deferred development projects. The Company also incurred additional development costs of \$178,000 pertaining to one specific project that it initiated in 2015, but which project did not ultimately go forward.

In 2014 the Company had an impairment reserve of \$639,158 (\$764,158 of costs incurred less recoveries of \$125,000) on one of its deferred development projects.

- (b) The remaining costs categorized as other expenses include:
- (i) Amortization expense of \$7,177 (\$7,357 in 2014) on property and equipment and amortization of \$67,263 (2014 - nil) relating to the balance of its investment in its original memory patents, and
- (ii) Foreign currency expense of \$59,687 (\$58,491 in 2014).
- (c) Travel and entertainment expense decreased to \$193,861 in 2015 from \$329,779 in 2014. The Company incurred significantly more travel related costs in 2014 relating to the increased level of activity that it was engaged in at that time with its current clients. The Company incurred reduced travel expenses in 2015 through a concerted effort to reduce its operating costs.
- (d) Stock compensation expense, calculated in accordance with the Black Scholes option pricing model, was \$1,163,941 in 2015 relating to the issuance of 2,165,000 stock options awarded to directors, officers and staff (2014: expense of \$379,253 relating to the issuance of 630,000 stock options).
- (e) Administration costs include rent, communication costs, insurance, filing fees and costs associated with the Annual General meeting. These costs were comparable in 2015 and 2014. The Company also reported interest expense of \$36,714 (\$28,640 in 2014).

**Balance Sheet Data:**

- (a) At October 31, 2016, the Company had working capital of (\$4,316,730) compared to (\$2,049,302) at October 31, 2015. The increase in working capital deficiency was primarily the result of the writedown of \$3,613,118 in deferred development costs.
- (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 2016, 2015 and 2014 as summarized in ITEM 4.B.- Business Overview above.

**Unaudited quarterly financial information**

Three months ended (unaudited)	Revenues \$	Expenses \$	Loss in period \$	Loss per share \$
January 31, 2015	-	638,088	(638,088)	-
April 30, 2015	-	1,102,664	(1,102,664)	(0.01)
July 31, 2015	-	1,175,706	(1,175,706)	(0.01)
October 31, 2015	-	3,600,152	(3,600,152)	(0.01)
January 31, 2016	-	611,687	(611,687)	-
April 30, 2016	-	750,938	(750,938)	-
July 31, 2016	-	4,610,433	(4,610,433)	(0.02)
October 31, 2016	-	832,477	(832,477)	-

**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, 2016 we had a working capital deficiency of \$4,316,730 (2015: \$2,049,302) including cash on hand of \$288,128 (2015: \$158,568) and our monthly overhead cash expenses approximate \$175,000. Since October 31, 2016 we have raised an additional \$788,600 of bridge loan financing and \$143,365 of financing from six private placements. We have also received \$200,000 of additional funding from our development partners.



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 had nil capital expenditures in 2016; in 2015, we made \$1,287 of capital expenditures; and in 2014 we made \$16,508 of capital expenditures.

**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 all milestones in the development contracts that we have renewed to date, obtaining additional development contracts with new customers 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, 2016 is as below:

	Total	Payments due by period			
		Less than 1 year	1-3 years	3-5 years	More than 5 years
Operating lease obligations	\$ 204,652	\$ 25,523	\$ 97,325	\$ 81,804	-
Purchase obligations	4,023,776	2,899,593	1,124,183	-	-
Total:	\$ 4,228,428	\$ 2,925,116	\$ 1,221,508	\$ 81,804	-

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, 2016 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 (\$9,438 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 which, in our case conforms in all material respects with U.S. GAAP except for the accounting for development expenditures reported, for intangible assets, warrant modification and modification of the conversion feature of bridge loans reported in the fiscal years ended October 31, 2016, 2015 and 2014.

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. Under U.S. GAAP all development expenditures are expensed as incurred. As at October 31, 2016, the Company capitalized \$nil (2015: \$3,070,299) of development costs and capitalized nil (2015: \$58,057) 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, 2017 are set forth below:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Joseph Fuda	55	President, Chief Executive Officer and Director
Dan Amadori	65	Chief Financial Officer
Steven Van Fleet	62	Director and President of MAST, Inc.
David Sharpless	66	Director
Larry Blue	60	Director
Oliver Nepomuceno	49	Director
Alex Dey	73	Director
Brian Von Herzen	57	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 Generation Inc until June 2004.

**Dan Amadori** has served as Chief Financial Officer of Micromem since June 2004. 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.

**Larry Blue** is an independent consultant on emerging technologies. Currently he serves as Executive Vice President and Chief Operating Officer of Bell and Howell Ltd. Previously he was the President of New Vision Display, Inc., responsible for Global Sales and Marketing. NVD was spun out of Multek Technologies Inc., a subsidiary of Flextronics, where he was a Vice President and General Manager of their Printed Electronics business. Previously he was President of Hi-G-Tek Inc. a privately-held technology company based in Maryland. Previously he was the Vice President and General Manager of Symbol Technologies Inc. Previously Mr. Blue had senior management roles with Hughes Network Systems and with IBM in Research Triangle Park. He has served as a Director of the Company since 2005.

**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 Prototypes, 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 hardware 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**

Name and Principal Position	Annual Compensation			Long-Term Compensation Awards	
	Fiscal Year	Salary (US\$)	Bonus (US\$)	Other Annual Compensation (US\$)	Securities Under Options Granted (#)
Joseph Fuda Chief Executive Officer	2014	234,107	534,398	-	-
	2015	150,786	-	-	22,500 <sup>(3)</sup>
	2016	353,787	-	-	-
Salvatore Fuda, Former Chairman of the Board of Directors (5)	2014	137,172	-	-	-
	2015	119,707	-	-	187,500 <sup>(3)</sup>
	2016	113,266	-	-	-
David Sharpless Director	2014	-	-	-	25,000 <sup>(1)</sup>
	2015	-	-	110,250	375,000 <sup>(4)</sup>
	2016	-	-	-	-
Steven Van Fleet Director and President of MAST, Inc.	2014	230,193	-	-	35,000 <sup>(1)</sup>
	2015	227,648	244,074	-	-
	2016	231,309	-	-	-
Dan Amadori Chief Financial Officer	2014	151,063	53,982	-	20,000 <sup>(1)</sup>
	2015	119,707	-	-	-
	2016	113,266	-	-	-
Larry Blue Director	2014	23,877	-	-	25,000 <sup>(1)</sup>
	2015	-	-	-	300,000 <sup>(4)</sup>
	2016	-	-	-	-
Oliver Nepomuceno Director	2014	-	-	-	25,000 <sup>(1)</sup>
	2015	-	-	61,250	-
	2016	-	-	-	-
Alex Dey Director	2014	-	-	-	30,000 <sup>(1)</sup>
	2015	-	-	49,000	-
	2016	-	-	-	-
Craig Carlson Director (7)	2014	14,866	-	-	25,000 <sup>(1)</sup>
	2015	34,705	-	-	-
	2016	-	-	-	-
Brian Von Herzen Director (2)	2014	(2)	-	-	325,000 <sup>(6)</sup>
	2015	(2)	-	-	-
	2016	-	-	-	-

**Notes:**

1. Each option entitles the holder to purchase one common share at a price of \$0.64 per share prior to expiration in April 2019.
2. 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 2016 the total charges invoiced to the Company by Rapid Prototypes was nil; (2015 - \$1,049,524; 2014 - \$1,843,643).
3. Each option entitles the holder to purchase one common share at a price of \$0.46 per share prior to expiration in August 2020.
4. Each option entitles the holder to purchase one common share at a price of \$0.49 per share prior to expiration.
5. Salvatore Fuda did not stand for reelection to the Board of Directors at the Annual General Meeting held at April 26, 2016.
6. Consists of 300,000 options to purchase one common share at a price of \$0.85 per share prior to expiration in February 2019 and 25,000 options to purchase one common share at a price of \$0.64 per share prior to expiration in April 2019.
7. Craig Carlson resigned as a Director of the Company in June 2015.

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 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.

In 2014 a total of 630,000 stock options were granted to officers, directors, employees and outside consultants. The exercise price for 350,000 options granted in February 2014 was \$0.85 per share; the exercise price for 280,000 options issued in April 2014 was \$0.64 per share.

**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 met formally in April 2016. The Board was also convened informally as of each quarter end.

Our Audit Committee met regularly during fiscal 2016 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 2016 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 2016 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 2016 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 2016.

#### ***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	747,478	22,500	\$0.46	08/20/2020	0.37% (769,978)
David Sharpless Director	325,000	375,000	\$0.49	06/04/2020	0.34 % (700,000)
Steven Van Fleet Director and President of MAST, Inc.	-	500,000 75,000 65,000 35,000	\$0.35 \$0.30 \$0.27 \$0.64	04/10/2017 01/22/2018 09/16/2018 04/25/2019	0.33 % (675,000)
Dan Amadori Chief Financial Officer	612,517 <sup>2</sup>	75,000 65,000 20,000	\$0.30 \$0.27 \$0.64	01/22/2018 09/16/2018 04/25/2019	0.38 % (772,517)
Larry Blue Director	193,600	25,000 300,000	\$0.64 \$0.49	04/25/2019 06/04/2020	0.25% (518,600)
Oliver Nepomuceno Director	1,078,572	190,000 75,000 65,000 25,000	\$0.35 \$0.30 \$0.27 \$0.64	04/10/2017 01/22/2018 09/16/2018 04/25/2019	0.70% (1,433,572)
Alex Dey Director	776,373 <sup>3</sup>	75,000 65,000 30,000	\$0.30 \$0.27 \$0.64	01/22/2018 09/16/2018 04/25/2019	0.46% (946,373)
Brian Von Herzen	-	300,000 25,000	\$0.85 \$0.64	02/10/2019 04/25/2019	0.16% (325,000)

1 Calculated based on shares owned plus options held as a percentage total of shares outstanding as of October 31, 2016, 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) Mr. Salvatore Fuda: Our Former Chairman of the Board received cash compensation on a month to month basis calculated at an annual rate of \$150,000. Mr. Fuda did not stand for reelection to the Board of Directors in April, 2016.

In 2016, Mr. Fuda was granted nil stock options; in 2015 he was granted 187,500 stock options at an average exercise price of \$0.46; he was not granted any stock options in 2014.

The total compensation paid to our Former Chairman during the year ended October 31, 2016 was \$113,266 of cash compensation (2015 - \$119,707 of cash compensation and \$64,721 stock based compensation; 2014 - \$137,172 of cash compensation and nil of stock based compensation).

- (b) 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:

	2016
Cash compensation	\$ 845,510
Less portion capitalized to deferred development costs	<u>(4,869)</u>
	840,641
Share compensation	-
Stock based compensation	<u>-</u>
	<u>\$ 840,641</u>

In 2016 these parties were awarded a total of nil stock options (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; 2014 – 540,000 stock options at an average exercise price of \$0.76 CDN per share).

In 2016 the Company was invoiced nil (2015: \$1,049,324; 2014: \$1,843,634 ) 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 and who also serves as our Chief Technology Officer. These charges have been capitalized as deferred development costs. Included in accounts payable at October 31, 2016 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, 2016, 2015 and 2014 have been prepared in accordance with IFRS.

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

In June 2016, we settled the litigation with 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. Additionally, the Company issued 312,500 common shares with a value of \$62,500 as partial consideration of the settlement.

### **B. Significant Changes**

Significant Changes since October 31, 2016 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 OTC QX. 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.

<b>Period</b>	<b>High</b>	<b>Low</b>
<b>Last six months:</b>		
February 2017	0.30	0.25
January 2017	0.31	0.21
December 2016	0.25	0.17
November 2016	0.26	0.18
October 2016	0.27	0.21
September 2016	0.33	0.18
<b>Last eight quarters:</b>		
Q4 2016	0.33	0.18
Q3 2016	0.38	0.16
Q2 2016	0.45	0.24
Q1 2016	0.45	0.22
Q4 2015	0.55	0.34
Q3 2015	0.64	0.41
Q2 2015	0.60	0.41
Q1 2015	0.80	0.47
<b>Last five years:</b>		
2016	0.45	0.16
2015	0.80	0.34
2014	1.50	0.40
2013	1.33	0.16
2012	0.49	0.10

On February 24, 2017, the last reported sale price for our common shares on the OTC QX was \$0.36.

#### **ITEM 10. ADDITIONAL INFORMATION**

##### **A. Share Capital**

Our authorized capital consists of an unlimited number of common shares, of which 204,388,569 shares were issued and outstanding as of October 31, 2016, and 2,000,000 special, redeemable, voting preference shares, referred to herein as special shares, none of which were outstanding, as of October 31, 2016.

Additionally, the Company has 4,395,000 stock options outstanding with a weighted average exercise price of \$0.45 (2015: 9,817,000 options outstanding with a weighted average exercise price of \$0.31)

##### **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. 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, 2016. Under the terms of the contract, Mr. Amadori receives \$12,500 CDN (\$9,438 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 continue at October 31, 2016. Under the terms of the contract, in 2016 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, 2016. 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 \$68,771 at October 31, 2016.

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. He also serves as the Company's Chief Technology Officer. RPI has invoiced the Company for professional engineering design and product development services since 2011; since becoming a director of the Company, RPI has invoiced the Company total fees of \$3,893,167.

**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.

**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 15% in taxable years beginning on or before December 31, 2013. 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.

#### **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](http://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](http://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 [www.micromeminc.com](http://www.micromeminc.com). 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, 2016. Based on management’s evaluation in 2016, our Chief Executive Officer and Chief Financial Officer concluded that, as of October 31, 2016, 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 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, 2016. 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, 2016, our internal control over financial reporting were effective.

Attestation Report of the Registered Public Accounting Firm.

Micromem's internal control over financial reporting as of October 31, 2016 has been audited by Collins Barrow Toronto LLP, an independent registered public accounting firm in Toronto, Canada, as stated in their report which is included under "Item 18—Financial Statements" of this Annual Report.

Changes in Internal Control Over Financial Reporting

No changes in our internal controls over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act, occurred during the fiscal year ended October 31, 2016 that has materially affected or is reasonably likely to materially affect our internal controls over financial reporting.

**ITEM 16. [Reserved]**

Not applicable.

**ITEM 16A. Audit Committee Financial Expert**

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 16C. Principal Accountant Fees and Services**

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, 2016 and 2015, and fees billed for other services rendered by our auditors including our offerings of securities and tax services.

	<u>Fiscal 2016</u>	<u>Fiscal 2015</u>
Audit Fees	\$ 160,000	\$ 150,133
Audit Related Fees	-	-
Tax Fees	\$ 4,000	\$ 4,000
All Other Fees	-	-

Audit Fees

In 2016, we incurred a total of \$160,000 to Collins Barrow Toronto LLP for audit services; in 2015 we incurred a total of \$150,133 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 2016 and \$4,000 of tax related fees in 2015 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 16D. Exemptions from the Listing Standards for Audit Committees**

Not applicable.

**ITEM 16E. Purchases of Equity by the Issuer and Affiliated Purchasers.**

None.

**ITEM 16F. Change in Registrants Certifying Accountant.**

None.

**ITEM 16G. Corporate Governance**

Not applicable.

**ITEM 16H. Mine Safety Disclosure**

Not applicable.

**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, 2016 and 2015

(Expressed in United States Dollars)

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## **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.

#### *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.

*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.

*Collins Barrow Toronto LLP*

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





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**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.

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.

*Collins Barrow Toronto LLP*

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

**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, 2016	October 31, 2015
<b>Assets</b>		
<b>Current assets:</b>		
Cash	\$ 288,128	\$ 158,568
Deposits and other receivables (Note 8)	33,327	56,108
	<u>321,455</u>	<u>214,676</u>
Property and equipment, net (Note 9)	10,988	15,592
Deferred development costs (Note 10)	-	3,070,299
Intangible assets, net (Note 11)	-	58,057
Patents, net (Note 11)	403,600	309,242
	<u>\$ 736,043</u>	<u>\$ 3,667,866</u>
<b>Liabilities and Shareholders' Equity</b>		
Current liabilities:		
Accounts payable and accrued liabilities	\$ 917,179	\$ 1,297,390
Bridge loans (Note 14)	3,637,008	966,588
Derivative liability (note 14)	83,998	-
	<u>\$ 4,638,185</u>	<u>\$ 2,263,978</u>
<b>Shareholders' Equity (Deficit)</b>		
Share capital: (Note 12)		
Authorized:		
2,000,000 special preference shares, redeemable, voting Unlimited common shares without par value		
Issued and outstanding:		
204,388,569 common shares (2015: 197,176,368) (Note 12)	\$ 75,855,139	\$ 74,083,975
Equity component of bridge loans (note 14)	23,075	-
Contributed surplus (Note 15)	26,918,470	27,213,204
Deficit	<u>(106,698,826)</u>	<u>(99,893,291)</u>
	<u>(3,902,142)</u>	<u>1,403,888</u>
	<u>\$ 736,043</u>	<u>\$ 3,667,866</u>

Going Concern (Note 2)  
Commitments (Note 19)  
Contingencies (Note 20)  
Subsequent events (Note 23)

"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,

	2016	2015	2014
<b>Costs and expenses :</b>			
Administration (Note 17)	\$ 395,340	\$ 389,647	\$ 302,933
Professional, other fees and salaries (Note 17)	1,739,401	1,952,302	2,360,867
Stock based compensation (Note 12)	-	1,163,941	379,253
Development costs (Note 17)	3,635,613	2,646,019	703,671
Travel and entertainment	180,767	193,861	329,779
Amortization of property and equipment (Note 9)	5,270	7,177	7,357
Amortization of patents (Note 11)	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)	(1,478)	59,687	58,491
<b>Loss from operations</b>	<b>6,024,983</b>	<b>6,479,896</b>	<b>4,142,351</b>
<b>Other income and expenses</b>			
Interest expense (Note 14)	561,608	36,714	22,520
Accretion expense (Note 14)	514,560	-	-
Gain on revaluation of derivative liability (Note 14)	(295,616)	-	-
<b>Net loss before income taxes</b>	<b>(6,805,535)</b>	<b>(6,516,610)</b>	<b>(4,164,871)</b>
Income taxes (Note 16)	-	-	-
<b>Net loss and comprehensive loss</b>	<b>\$ (6,805,535)</b>	<b>\$ (6,516,610)</b>	<b>(4,164,871)</b>
Loss per share - basic and diluted (Note 12)	<b>\$ (0.03)</b>	<b>\$ (0.03)</b>	<b>\$ (0.02)</b>
Weighted average number of shares (Note 12)	<b>199,572,966</b>	<b>192,629,666</b>	<b>171,534,969</b>

See accompanying notes.

**MICROMEM TECHNOLOGIES INC.**  
**CONSOLIDATED STATEMENTS OF CASH FLOWS**  
(Expressed in United States dollars)

For the years ended October 31,

	2016	2015	2014
<b>Cash flows from operating activities:</b>			
Net loss	\$ (6,805,535)	\$ (6,516,610)	\$ (4,164,871)
Adjustments to reconcile loss for the period to net cash used in operating activities:			
Amortization of patents intangible assets	31,365	-	-
Amortization of property and equipment	5,270	7,177	7,357
Write-down of intangible assets	38,705	-	-
Development costs	3,638,118	2,395,425	676,790
Accounts payable and accrued liabilities relating to development costs	(374,539)	-	-
Accretion expense	514,560	-	-
Bridge loan interest accrued	172,744	-	-
Bridge loan interest added to principal	413,245	19,361	-
Gain on revaluation of derivative liabilities	(295,616)	-	-
Stock based compensation	-	1,163,941	379,253
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	608	-	-
Increase (decrease) in deposits and other receivables	5,899	455,265	(235,757)
Increase in accounts payable and accrued liabilities	350,263	523,558	454,149
<b>Net cash used in operating activities</b>	<b>(2,303,036)</b>	<b>(1,640,400)</b>	<b>(2,883,079)</b>
<b>Cash flows from investing activities:</b>			
Purchase of property and equipment	(1,274)	(1,286)	(14,842)
Patents	(192,873)	(213,820)	(176,381)
Deferred development costs	(1,125,218)	(3,662,271)	(3,872,635)
Recovery of deferred development costs	643,901	1,783,632	662,290
Recovery of patents costs	-	18,140	-
<b>Net cash used in investing activities</b>	<b>(675,464)</b>	<b>(2,075,605)</b>	<b>(3,401,568)</b>
<b>Cash flows from financing activities:</b>			
Issue of common shares	861,273	1,893,784	6,801,619
Bridge loans advances	2,490,333	1,176,673	-
Bridge loan repayments	(260,428)	(229,446)	-
Short-term loan advance	180,000	-	-
Short-term loan repayment	(180,000)	-	-
Advances to related parties	(50,952)	(981,395)	(480,304)
Repayments from related parties	67,834	1,078,970	78,036
<b>Net cash provided by financing activities</b>	<b>3,108,060</b>	<b>2,938,586</b>	<b>6,399,351</b>
Increase (decrease) in cash	129,560	(777,419)	114,704
Cash, beginning of year	158,568	935,987	821,283
<b>Cash, end of year</b>	<b>\$ 288,128</b>	<b>\$ 158,568</b>	<b>\$ 935,987</b>
Supplemental cash flow information:			
Interest paid (classified in operating activities)	\$ 200,428	\$ 17,354	\$ 17,071
Income taxes paid	\$ -	\$ -	\$ -
Shares issued on settlement of account payable	\$ 295,312	\$ -	\$ -
Shares issued on settlement of legal claim	\$ 62,500	\$ -	\$ -
Shares issued on conversion of bridge loan	\$ 107,000	\$ -	\$ -

See accompanying notes.

**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
<b>Balance at November 01, 2013</b>	<b>158,491,425</b>	<b>\$ 57,755,613</b>	<b>\$ 32,822,327</b>	<b>\$ 1,557</b>	<b>\$ (89,043,178)</b>	<b>\$ 1,536,319</b>
Stock based compensation (Note 12)	-	-	379,253	-	-	379,253
Warrants extended (Note 13)	-	-	168,632	-	(168,632)	-
Warrants exercised	27,410,717	6,801,619	-	-	-	6,801,619
Fair value of warrants exercised	-	6,078,497	(6,078,497)	-	-	-
Bridge loan converted	2,517,501	302,100	1,557	(1,557)	-	302,100
Warrants issued on conversion of bridge loan	-	(143,406)	143,406	-	-	-
Shares issued on settlement of accounts payable	17,081	8,353	-	-	-	8,353
Net loss and comprehensive loss	-	-	-	-	(4,164,871)	(4,164,871)
<b>Balance at October 31, 2014</b>	<b>188,436,724</b>	<b>\$ 70,802,776</b>	<b>\$ 27,436,678</b>	<b>\$ -</b>	<b>\$ (93,376,681)</b>	<b>\$ 4,862,773</b>
Private placements of shares for cash (Note 13)	422,768	175,000	-	-	-	175,000
Share compensation (Note 12)	900,000	387,000	-	-	-	387,000
Warrants exercised (Note 13)	2,988,876	565,777	-	-	-	565,777
Fair value of warrants exercised	-	271,553	(271,553)	-	-	-
Options exercised (Note 12)	4,428,000	1,153,007	-	-	-	1,153,007
Fair value of options exercised	-	728,862	(728,862)	-	-	-
Stock options compensation (Note 12)	-	-	776,941	-	-	776,941
Net loss and comprehensive loss	-	-	-	-	(6,516,610)	(6,516,610)
<b>Balance at October 31, 2015</b>	<b>197,176,368</b>	<b>\$ 74,083,975</b>	<b>\$ 27,213,204</b>	<b>\$ -</b>	<b>\$ (99,893,291)</b>	<b>\$ 1,403,888</b>
Private placements of shares for cash (Note 13)	366,668	110,000	-	-	-	110,000
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 (Note 12)	1,517,143	295,312	-	-	-	295,312
Shares issued on settlement of legal claim (Note 12)	312,500	62,500	-	-	-	62,500
Shares issued on conversion of bridge loan (Note 12)	509,524	108,827	-	(1,827)	-	107,000
Equity component of bridge loans (Note 14)	-	-	-	173,420	-	173,420
Expiry of bridge loan equity conversion option (Note 14)	-	-	148,518	(148,518)	-	-
Treasury shares to be cancelled (Note 12)	750,000	-	-	-	-	-
Net loss and comprehensive loss	-	-	-	-	(6,805,535)	(6,805,535)
			<b>26,918,470</b>			
<b>Balance at October 31, 2016</b>	<b>204,388,569</b>	<b>\$ 75,855,139</b>	<b>\$ -</b>	<b>\$ 23,075</b>	<b>\$ (106,698,826)</b>	<b>\$ (3,902,142)</b>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**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, 2016 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, 2017.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**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, 2016, the Company reported a net loss and comprehensive loss of \$6,805,535 (2015 - \$6,516,610; 2014 - \$4,164,871) and negative cash flow from operations of \$2,303,036 (2015 - \$1,640,400; 2014 - \$2,883,079). The Company’s working capital deficiency as at October 31, 2016 is \$4,316,730 (2015 – \$2,049,302).

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 2017; 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.



NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**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 and interest rates for compound instruments).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)For the years ended October 31, 2016, 2015 and 2014

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**3. BASIS OF PRESENTATION (Cont'd)**

- d) Use of estimates and judgments: (Cont'd)
  - ii) The Company makes estimates related to the recovery of deferred development costs based on the expectation and assumption of realizing revenues from future commercial agreements that it anticipates will develop with the companies for whom these projects have been undertaken. Changes in these expectations and assumptions could result in a change in the recoverable amount calculated.
  - iii) The Company applies judgment when establishing whether the capitalization criteria under IAS 38, Intangible Assets, for internally developed intangible assets, have been met.
  - iv) 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
  - v) 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, 2016, 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.
  - vi) 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.
  - vii) The Company applies judgment in assessing the functional currency of each entity consolidated in these financial statements.
  - viii) The Company applies judgement in determining whether a joint arrangement exists and is classified as a joint operation or joint venture.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**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.

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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)**

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.

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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)**

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.

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").

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)For the years ended October 31, 2016, 2015 and 2014

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**4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)**

## e) Hybrid Financial Instruments: (Cont'd)

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.

## 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 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 date are recorded in the statement of loss and comprehensive loss as (gain) loss on revaluation 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.

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**4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)**

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

## 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 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)).

## 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) Joint Arrangements:

Joint arrangements are classified as either joint operations or joint ventures. The determination of whether an arrangement is a joint operation or joint venture is based on the rights and obligations arising from the contractual obligations between the parties to the arrangement. Joint arrangements that provide a company with the rights to the individual assets and obligations arising from the arrangement are classified as joint operations and joint arrangements that provide an entity with rights to the net assets of the arrangement are classified as joint ventures. A joint arrangement that is not structured through a separate vehicle is a joint operation.

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**4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)**

g) Joint Arrangements: (Cont'd)

The interests in joint arrangements that are classified as joint operations are accounted for by the Company recording its pro rata share of the assets, liabilities, revenues, costs and cash flows.

The interests in joint arrangements that are classified as joint ventures are accounted for using the equity method and presented as an investment in the consolidated statement of financial position.

h) 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.

i) 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



NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
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**4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)**

j) 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
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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.

**4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)**

k) 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.

l) 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.

m) 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.

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**4. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (Cont'd)**

n) 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.

o) 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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
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**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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
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**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.

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**5. NEW STANDARDS AND INTERPRETATIONS ISSUED BUT NOT YET ADOPTED (Cont'd)**

- c) IAS 7 – *Disclosure Initiative (Amendments to IAS 7 Statement of Cash Flows)* – these amendments require that the following changes in liabilities arising from financing activities are disclosed (to the extent necessary): (i) changes from financing cash flows; (ii) changes arising from obtaining or losing control of subsidiaries or other businesses; (iii) the effect of changes in foreign exchange rates; (iv) changes in fair values; and (v) other changes. One way to fulfil the new disclosure requirement is to provide a reconciliation between the opening and closing balances in the statement of financial position for liabilities arising from financing activities. Finally, the amendments state that changes in liabilities arising from financing activities must be disclosed separately from changes in other assets and liabilities. These amendments are effective for reporting periods beginning on or after January 1, 2017.
- d) 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.

**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.

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**6. FAIR VALUE DISCLOSURES (Cont'd)**

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 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, 2016.

**8. DEPOSITS AND OTHER RECEIVABLES**

The balance reported as Deposits and Other Receivables consists of:

	<b>2016</b>	<b>2015</b>
Advances to employees	7,586	26,060
Prepaid insurance and other	25,741	30,048
	\$ 33,327	\$ 56,108

As at October 31, 2016, advances to employees consisted of an advance to an employee of \$7,586 (2015: two employees, \$26,060). These advances are non-interest-bearing, unsecured and due on demand.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**9. PROPERTY AND EQUIPMENT**

	<b>Computers</b>	<b>Furniture and Equipment</b>	<b>Total</b>
<b>Cost</b>			
<b>At November 1, 2013</b>	\$ 49,213	\$ 25,989	\$ 75,202
Additions	16,508	-	16,508
Disposals	(13,436)	-	(13,436)
<b>Year ended October 31, 2014</b>	\$ 52,285	\$ 25,989	\$ 78,274
<b>At November 1, 2014</b>	\$ 52,285	25,989	\$ 78,274
Additions	1,286	-	\$ 1,286
<b>Year ended October 31, 2015</b>	\$ 53,571	\$ 25,989	\$ 79,560
<b>At November 1, 2015</b>	\$ 53,571	25,989	\$ 79,560
Additions	1,274	-	\$ 1,274
Disposals	(1,582)	-	\$ (1,582)
<b>Year ended October 31, 2016</b>	\$ 53,263	\$ 25,989	\$ 79,252
<b>Accumulated amortization</b>			
<b>At November 1, 2013</b>	\$ 35,215	\$ 25,989	\$ 61,204
Amortization for the year	7,357	-	\$ 7,357
Adjustment for disposals	(11,770)	-	(11,770)
<b>Year ended October 31, 2014</b>	\$ 30,802	\$ 25,989	\$ 56,791
<b>At November 1, 2014</b>	\$ 30,802	25,989	\$ 56,791
Amortization for the year	7,177	-	7,177
<b>Year ended October 31, 2015</b>	\$ 37,979	\$ 25,989	\$ 63,968
<b>At November 1, 2015</b>	\$ 37,979	25,989	\$ 63,968
Amortization for the year	5,270	-	5,270
Adjustment for disposals	(974)	-	(974)
<b>Year ended October 31, 2016</b>	\$ 42,275	\$ 25,989	\$ 68,264
<b>Net book value at October 31, 2014</b>	\$ 21,483	-	\$ 21,483
<b>Net book value at October 31, 2015</b>	\$ 15,592	-	\$ 15,592
<b>Net book value at October 31, 2016</b>	\$ 10,988	-	\$ 10,988



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**10. DEFERRED DEVELOPMENT COSTS**

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

	<b>2016</b>		2015	
Opening balance	\$	<b>3,070,299</b>	\$	3,525,456
Additional project costs incurred		<b>1,211,720</b>		3,723,900
Recovery of development costs		<b>(643,901)</b>		(1,783,632)
Write-off of project costs		<b>(3,638,118)</b>		(2,395,425)
Closing balance		<u>-</u>	\$	<u>3,070,299</u>

Additions to deferred development costs include patent amortization of \$71,989 (2015 - \$58,105; 2014 - \$44,472), and also includes intangible asset amortization of \$14,514 (2015 - \$19,352; 2014 - \$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.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**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.

**Intangible Assets**

**Cost**

At November 01, 2013	\$	135,465
Additions		-
<b>Year ended October 31, 2014</b>	<b>\$</b>	<b>135,465</b>

At November 1, 2014	\$	135,465
Additions		-
<b>Year ended October 31, 2015</b>	<b>\$</b>	<b>135,465</b>

At November 1, 2015	\$	135,465
Additions		-
<b>Year ended October 31, 2016</b>	<b>\$</b>	<b>135,465</b>

**Accumulated amortization**

At November 01, 2013	\$	38,704
Amortization for the year		19,352
<b>Year ended October 31, 2014</b>	<b>\$</b>	<b>58,056</b>

At November 1, 2014	\$	58,056
Amortization for the year		19,352
<b>Year ended October 31, 2015</b>	<b>\$</b>	<b>77,408</b>

At November 1, 2015	\$	77,408
Amortization for the year		19,352
Write-off		38,705
<b>Year ended October 31, 2016</b>	<b>\$</b>	<b>135,465</b>

<b>Net book value at October 31, 2014</b>	<b>\$</b>	<b>77,409</b>
<b>Net book value at October 31, 2015</b>	<b>\$</b>	<b>58,057</b>
<b>Net book value at October 31, 2016</b>	<b>\$</b>	<b>-</b>

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.

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**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.

**Patents**

**Cost**

<b>At November 1, 2013</b>	\$	134,172
Additions		176,381
<b>Year ended October 31, 2014</b>	\$	<b>310,553</b>
<b>At November 1, 2014</b>	\$	310,553
Additions		213,820
Writedown of costs incurred		(77,925)
Recovered from development partner		(18,140)
<b>Year ended October 31, 2015</b>	\$	<b>428,308</b>
<b>At November 1, 2015</b>	\$	428,308
Additions		192,873
<b>Year ended October 31, 2016</b>	\$	<b>621,181</b>

**Amortization**

<b>At November 1, 2013</b>	\$	62,577
Amortization for the year		44,472
<b>Year ended October 31, 2014</b>	\$	<b>107,049</b>
<b>At November 1, 2014</b>	\$	107,049
Adjust for writedown		(46,088)
Amortization for the year		58,105
<b>Year ended October 31, 2015</b>	\$	<b>119,066</b>
<b>At November 1, 2015</b>	\$	119,066
Amortization for the year		98,515
<b>Year ended October 31, 2016</b>	\$	<b>217,581</b>
<b>Net book value at October 31, 2014</b>	\$	<b>203,504</b>
<b>Net book value at October 31, 2015</b>	\$	<b>309,242</b>
<b>Net book value at October 31, 2016</b>	\$	<b>403,600</b>

Amortization of patents 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.

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

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**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.

**Share Capital**

	<b>Number of Shares</b>		<b>Amount \$</b>
<b>Balance at November 1, 2014</b>	188,436,724	\$	70,802,776
Private placement of shares for cash (Note 13)	422,768		175,000
Warrants exercised (Note 13)	2,988,876		565,777
Fair value of warrants exercised	-		271,553
Options exercised	4,428,000		1,153,007
Fair value of options exercised	-		728,862
Share compensation <sup>(i)</sup>	900,000		387,000
<b>Balance at October 31, 2015</b>	197,176,368	\$	74,083,975
Private placement of shares for cash (Note 13)	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 <sup>(ii)</sup>	1,517,143		295,312
Shares issued on settlement of legal claim <sup>(iii)</sup>	312,500		62,500
Shares issued on settlement of bridge loan <sup>(iv)</sup>	509,524		107,000
Equity component of bridge loan <sup>(iv)</sup>	-		1,827
Treasury shares to be cancelled <sup>(v)</sup>	750,000		-
<b>Balance at October 31, 2016</b>	204,388,569	\$	75,855,139

**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.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
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**12. SHARE CAPITAL, STOCK OPTIONS AND LOSS PER SHARE (Cont'd)****a) Share Capital (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.
- iii) 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.

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

**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.

In April 2015 the Company filed an S-8 Registration Statement with the U.S. Securities and Exchange Commission with respect to its outstanding stock options, which registered up to 18,840,000 common shares issuable upon the exercise of options granted under the Company's 2014 Directors, Officers and Employees Stock Option Plan, and the resale of up to 10,340,000 of such shares under the U.S. Securities Act of 1933. This filing permits the holders of the securities registered for resale under the S-8 to resell such securities without any required U.S. Federal holding period.

A summary of the status of the Company's fixed stock option plan through October 31, 2016 and changes during the periods is as follows:

	<b>Options (000)</b>	<b>Weighted average exercise price \$</b>	<b>Proceeds realized \$</b>
<b>Outstanding, November 01, 2014</b>	12,105	0.27	
Granted	2,165	0.47	
Exercised	(4,428)	(0.27)	1,153,007
Expired	(25)	(0.64)	
<b>Outstanding, October 31, 2015</b>	9,817	0.31	
Granted	-	-	
Exercised	(3,756)	(0.20)	\$ 751,273
Expired	(1,666)	(0.21)	
<b>Outstanding, October 31, 2016</b>	4,395	0.45	

The weighted average share price on the dates of exercise was \$0.27 (2015 - \$0.48) .

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

**b) Stock Options (Cont'd)**

During the year ended October 31, 2016 the Company issued a total of nil stock options.

During the year ended October 31, 2015 the Company issued a total of 2,165,000 stock options. All options vest immediately upon issuance. This total consisted of 1,185,000 stock options issued to directors and officers, 730,000 stock options issued to employees and 250,000 stock options to a third party advisor.

The Company has the following stock options outstanding at October 31, 2016:

<u>Date of issue</u>	<u># Issued</u>	<u>Strike Price</u>	<u>Weighted average remaining life (in years)</u>	<u>Expiry Date</u>
April 10, 2012	690,000	0.35	0.4	April 10, 2017
January 22, 2013	440,000	0.30 CDN	1.2	January 22, 2018
September 16, 2013	520,000	0.27 CDN	1.9	September 16, 2018
February 10, 2014	350,000	0.85	2.3	February 10, 2019
April 25, 2014	230,000	0.64	2.5	April 25, 2019
June 4, 2015	975,000	0.49	3.6	June 4, 2020
August 20, 2015	940,000	0.46	3.8	August 20, 2020
September 30, 2015	250,000	0.40	3.9	September 30, 2020
	<u>4,395,000</u>			

All outstanding options at October 31, 2016 are exercisable. In 2016, the Company recorded a total expense of \$nil (2015 - \$776,941; 2014 - \$379,253) 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:

	2015		2014	
Share price	\$	0.37 - 0.49	\$	0.63 - 0.85
Volatility factor (based on historical volatility)		109% - 114%		112% - 113%
Risk free interest rate		0.73% - 0.90%		1.60%
Expected life		5 years		5 years
Dividend yield		0%		0%
Forfeiture rate		0%		0%

Subsequent to October 31, 2016 the Company issued additional stock options to certain directors, officers and employees (Note 23).

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**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, 2016 was based on the loss attributable to common shareholders of \$6,805,535 (2015 - \$6,516,610; 2014 - \$4,164,871) divided by the weighted average number of common shares outstanding of 199,572,966 (2015 - 192,629,666; 2014 - 171,534,969).

Diluted loss per share does not include the effect of 4,395,000 stock options outstanding as they are anti-dilutive.

**13. PRIVATE PLACEMENTS AND COMMON SHARE PURCHASE WARRANTS**

**a) Private Placements**

i) The Company did not complete any private placements in 2014.

ii) In 2014 the Company extended the expiry date on a total of 1,405,026 common share purchase warrants which would have otherwise expired in the period. These warrants were extended for a period of three to six months in each case. The strike price of 1,105,026 of these warrants was changed from \$0.41 and \$0.45 per warrant to \$0.50 per warrant. The strike price remained unchanged for the balance of the warrants at \$0.55 per warrant.

The Company calculated the charge associated with the extension of warrants in accordance with the Black Scholes option-pricing model. The Company reported a total charge to deficit of \$168,632 and an offsetting charge to contributed surplus of \$168,632 for warrants extended.

The incremental fair value of these warrants extended was estimated using the Black Scholes option-pricing model with the following assumptions:

	2014
Share price	\$ 0.50
Volatility factor (based on historical volatility)	124 - 157%
Risk free interest rate	1.01 - 1.02%
Dividend yield	0%
Expected life	0.25-0.53 year



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**13. PRIVATE PLACEMENTS AND COMMON SHARE PURCHASE WARRANTS (Cont'd)**

**a) Private Placements (Cont'd)**

- iii) 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.
- iv) 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.

Subsequent to October 31, 2016 the Company completed additional private placement financings (Note 23).

**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	-	-	
<b>Balance at October 31, 2015 and 2016</b>	<b>-</b>	<b>-</b>	<b>-</b>

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

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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For the years ended October 31, 2016, 2015 and 2014

**14. BRIDGE LOANS**

**2015 Bridge Loans:**

- (1) Between August - October 2015, the Company secured a series of bridge loans from investors totaling \$1,287,500 CDN (\$976,673 USD). The loans are secured by a floating charge on the assets of the Company. The maturity dates of the bridge loans were originally set as 30 days in each case and have been renewed by the investors through November 2015. The interest rate on the bridge loans ranges from 2% to 3% per month. These bridge loans were not convertible into common shares as at October 31, 2015. One of the bridge loans obtained in the amount of \$300,000 CDN (\$229,446 USD), plus accrued interest of \$6,000 CDN (\$4,588USD), was repaid on September 4, 2015. The maturity dates on this series of bridge loans has since been extended.
- (2) In August 2015, the Company secured a bridge loan of \$200,000 from an investor. The loan is secured by a floating charge on the assets of the Company with a maturity date of November 1, 2015. The interest rate on the loan is calculated at 3% per month, payable monthly in arrears. This bridge loan was not convertible into common shares as at October 31, 2015. The maturity date of the bridge loan has since been extended.

A breakdown of the outstanding bridge loans as at October 31, 2015 is summarized as follows:

Principal	\$	1,176,673
Interest Accrued		36,715
Interest Paid		(17,354)
Repayments		(229,446)
Carrying value at October 31, 2015	\$	<u>966,588</u>

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For the years ended October 31, 2016, 2015 and 2014

**14. BRIDGE LOANS (Cont'd)**

**2016 Bridge Loans:**

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

	<b>October 31, 2016</b>		
	\$USD denominated loans (\$US)	\$CDN denominated loans (\$US)	Total
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

	<b>Year ended October 31, 2016</b>		
	\$USD denominated loans (\$US)	\$CDN denominated loans (\$US)	Total
Accretion expense	87,184	427,377	514,561
Interest expense	193,254	368,354	561,608
(Gain)/loss on foreign exchange	-	8,323	8,323
Gain/(loss) on revaluation of derivatives	-	(295,616)	(295,616)

- (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.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

**14. BRIDGE LOANS (Cont'd)****2016 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:

**\$ USD Bridge Loans**

	2015 Loan	2016 Loans							
		#1	#2	#3	#4	#5	#6	#7	#8
Date of origination	8/31/2015	11/30/2015	12/2/2015	12/31/2015	1/8/2016	3/15/2016	3/24/2016	3/24/2016	3/31/2016
Principal amount at origination	\$ 200,000	\$ 250,000	\$ 250,000	\$ 100,000	\$ 100,000	\$ 1,077,862	\$ 30,000	\$ 30,000	\$ 30,000
Monthly interest rate	3.00%	2.00%	2.00%	1.00%	2.00%	1.00%	1.00%	1.00%	1.00%
Effective annual interest rate	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%	40.00%
Conversion price to common shares	0.3 <sup>1</sup>	0.21	0.21	0.21 <sup>2</sup>	0.20	0.30 <sup>3</sup>	0.21 <sup>4</sup>	0.21	0.30 <sup>5</sup>
Current maturity date	11/2/2017 <sup>6</sup>	6/2/2017 <sup>6</sup>	6/2/2017 <sup>6</sup>		11/1/2017 <sup>6</sup>			11/25/2017 <sup>6</sup>	
<b>Outstanding at October 31/2016:</b>									
Principal	\$ 200,025	\$ 245,389	\$ 245,389	\$ -	\$ 106,000	\$ -	\$ -	\$ 27,867	\$ -
Interest	5,803	5,027	4,904	-	14,000	-	-	70	-
	\$ 205,828	\$ 250,416	\$ 250,293	\$ -	\$ 120,000	\$ -	\$ -	\$ 27,937	\$ -

(1) This loan was not convertible until November 2, 2015.

(2) This loan was converted to shares on August 2, 2016.

(3) This loan was converted to \$CDN on July 15, 2016. It is presented as \$CDN loan #4 in 2016 as of July 15, 2016.

(4) This loan was repaid on Oct 24, 2016.

(5) This loan was repaid on August 2, 2016.

(6) These loans were extended subsequent to year end.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**14. BRIDGE LOANS (Cont'd)****2016 Bridge Loans: (Cont'd)**

(3) (Cont'd)

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

	2015 Loan	2016 Loans								
		#1	#2	#3	#4	#5	#6	#7	#8	Total
Accretion expense	\$ 3,625	\$ 37,346	\$ 10,495	\$ 12,268	\$ 13,839	\$ -	\$ 3,676	\$ 3,802	\$ 2,133	\$ 87,184
Interest Paid	66,000	35,000	50,000	-	-	7,040	2,100	-	1,210	161,350
Accrued	5,803	5,027	4,904	-	14,000	-	-	2,170	-	31,904
	\$ 71,803	\$ 40,027	\$ 54,904	\$ -		\$ 7,040	\$ 2,100	\$ 2,170	\$ 1,210	\$ 193,254

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

	2015 Loan	2016 Loans								
		#1	#2	#3	#4	#5	#6	#7	#8	Total
Debt obligation	200,025\$	245,389	\$245,389	\$ -	\$ 106,000	\$ -	\$ -	27,867	\$ -	\$ 824,670
Equity portion of bridge loan	3,600	8,671	8,671	-	-	-	-	2,133	-	23,075
Interest payable	5,803	5,027	4,904	-	14,000	-	-	70	-	29,804

MICROMEM TECHNOLOGIES INC.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
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For the years ended October 31, 2016, 2015 and 2014

14. BRIDGE LOANS (Cont'd)

**2016 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.

	2015 Loan	2016 Loans						
		#1	#2	#3	#4	#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	2
Current maturity date	1	10/31/17	11/2/17	6/2/17	10/31/17	9/26/17	10/24/17	11/1/17
<b>Outstanding at October 31/2016:</b>								
Principal	-	427,444	228,164	70,776	1,118,248	41,317	544,948	230,035
Interest	-	20,587	6,605	2,894	78,390	429	1,288	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.**

	2016 Loans							Total
	#1	#2	#3	#4	#5	#6	#7	
Accretion Expense	\$ 181,963	\$ 62,666	\$ 3,327	\$ 178,705	\$ 534	\$ 182	\$ -	\$ 427,377
(Gain)Loss on revaluation of derivative liability	(180,503)	(69,845)	6,885	(100,000)	(2,753)	50,600	-	(295,616)
(Gain) loss on foreign exchange	10,626	(4,421)	(2,203)	5,391	(483)	(587)	-	8,323
Interest expense								
Paid	11,307	33,921	-	-	-	-	-	45,228
Accrued	55,639	6,854	2,943	244,331	435	1,290	11,634	323,126
Total	\$ 66,946	\$ 40,775	\$ 2,943	\$ 244,331	\$ 435	\$ 1,290	\$ 11,634	\$ 368,354

MICROMEM TECHNOLOGIES INC.

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14. BRIDGE LOANS (Cont'd)

2016 Bridge Loans: (Cont'd)

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

	2016 Loans							Total
	#1	#2	#3	#4	#5	#6	#7	
Derivative liability	\$ -	\$ -	\$ 14,211	\$ -	\$ 4,362	\$ 65,425	\$ -	\$ 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	\$ 20,587	\$ 6,605	\$ 2,894	\$ 78,390	\$ 429	\$ 1,288	\$ 11,409	\$ 121,602

15. CONTRIBUTED SURPLUS

<b>Balance outstanding at November 01, 2014</b>	<b>\$ 27,436,678</b>
Stock based compensation expense relating to stock options issued (Note 12(b))	776,941
Fair value of options exercised	(728,862)
Fair value of warrants exercised	(271,553)
<b>Balance at October 31, 2015</b>	<b>\$ 27,213,204</b>
Fair value of options exercised	(443,252)
Expiry of bridge loan conversion option (Note 14)	148,518
<b>Balance at October 31, 2016</b>	<b>\$ 26,918,470</b>

MICROMEM TECHNOLOGIES INC.

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16. INCOME TAXES

- (a) The Company has non-capital losses of approximately \$23.9 million available to reduce future taxable income, the benefit of which has not been recognized in these consolidated financial statements. As of October 31, 2016 the tax losses expire as follows:

	Canada	Other foreign	Total
2022	-	7,301	7,301
2023	-	9,667	9,667
2025	-	14,471	14,471
2026	1,791,571	5,254	1,796,825
2027	1,506,571	3,459	1,510,030
2028	7,812	55,519	63,331
2029	1,544,035	463,610	2,007,645
2030	2,083,306	1,886,778	3,970,084
2031	1,255,127	48,808	1,303,935
2032	1,391,007	333,962	1,724,969
2033	1,686,037	160,550	1,846,587
2034	2,439,124	682,878	3,122,002
2035	2,827,284	573,235	3,400,519
2036	2,574,031	580,898	3,154,929
	<u>\$ 19,105,905</u>	<u>\$ 4,826,390</u>	<u>\$ 23,932,295</u>

- (b) In addition the Company has available capital loss carry forwards of approximately \$1.2 million to reduce future taxable capital gains, the benefit of which has not been recognized in these consolidated financial statements. These losses carry forward indefinitely.



**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**16. INCOME TAXES (Cont'd)**

- (c) Deferred income taxes reflect the net tax effect of temporary differences between carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's deferred tax assets and liabilities are as follows:

	<b>October 31, 2016</b>		October 31, 2015		October 31 2014
Non-capital losses and other	\$ 7,139,329	\$	7,963,343	\$	7,792,685
Capital losses	165,164		169,395		196,505
Property ,equipment ,intangibles, patents and deferred costs	1,769,064		602,246		661,960
Share issue costs	1,881		4,633		9,095
	\$ 9,075,438		8,739,617		8,660,245
Deferred tax assets not recognized	(9,075,438)		(8,739,617)		(8,660,245)
	\$ -	\$	-	\$	-

- (d) The reconciliation of income tax attributed to continuing operation computed at the statutory tax rates to income tax expense is as follows:

	<b>October 31, 2016</b>		October 31, 2015		October 31 2014
Loss before income taxes	\$ 6,805,535	\$	(6,516,610)	\$	(4,164,871)
Statutory rate	26.50%		26.50%		26.50%
Expected income tax recovery	(1,803,467)		(1,726,902)		(1,103,691)
Non-deductible expenses and other items	130,211		270,214		112,727
Effect of exchange rate on future tax assets carried forward from previous years	142,518		978,598		572,542
Expiry of non-capital losses	-		755,041		259,122
Effect of higher tax rates in foreign jurisdiction	(446,821)		(356,323)		(11,247)
Adjustment to non-capital losses	1,641,738		-		-
Change in deferred tax assets not recognized	335,821		79,371		170,547
	\$ -	\$	-	\$	-

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**17. EXPENSES****Administration**

The components of general and administration expenses are as follows:

	2016		2015		2014
General and administrative	\$ 177,725	\$	141,721	\$	69,122
Rent and occupancy cost	72,317		74,524		84,816
Office insurance	60,195		58,835		61,578
Telephone	12,187		17,740		22,537
Investor relations, listing and filling fees	72,916		96,826		64,880
	<b>\$ 395,340</b>	\$	<b>389,646</b>	\$	<b>302,933</b>

**Professional, Other Fees and Salaries**

The components of professional, other fees and salaries expenses are as follows:

	2016		2015		2014
Professional fees	\$ 328,850	\$	466,411	\$	420,902
Consulting fees	1,028,600		1,039,316		1,535,520
Salaries and benefits	381,951		446,575		404,445
	<b>\$ 1,739,401</b>	\$	<b>1,952,302</b>	\$	<b>2,360,867</b>

**Development Costs**

The components of development expenses reported are as follows:

	2016		2015		2014
Expenses incurred, net	(2,505)		250,594		26,882
Write-off of deferred development (Note 10)	3,638,118		2,395,425		676,789
	<b>3,635,613</b>		<b>2,646,019</b>		<b>703,671</b>

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
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**18. MANAGEMENT COMPENSATION AND RELATED PARTY TRANSACTIONS**

The Company reports the following related party transactions:

(a) Chairman:

The Chairman's term expired on April 26, 2016; his compensation for services rendered was extended until October 31, 2016 and was then terminated. He received cash compensation on a month to month basis totaling \$113,266 (\$CDN 150,000) in 2016.

In 2016 the Chairman was not awarded any stock options (2015 the Chairman was awarded a total of 187,500 stock options an average price of \$0.46 per share; 2014: the Chairman was not granted any stock options).

The total compensation paid to the Chairman during the year ended October 31, 2016 was \$113,266 of cash compensation (2015 - \$119,707 of cash compensation and \$64,271 of stock based compensation; 2014 - \$137,172 of cash compensation).

The Company provided short term non-interest bearing advances of \$198,673 to the Chairman during 2015 and the Chairman made repayments totaling \$236,757 to leave no outstanding advances receivable as at October 31, 2015.

In 2016 the Chairman exercised 700,000 stock options and the Company realized proceeds of \$140,000.

(b) Management and consulting fees:

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:

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
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**18. MANAGEMENT COMPENSATION AND RELATED PARTY TRANSACTIONS (Cont'd)**

(b) Management and consulting fees (Cont'd):

	2016		2015		2014
Cash compensation	\$ 845,510	\$	936,199	\$	1,482,153
Less portion capitalized to deferred development costs	(4,869)		(122,804)		(169,664)
	<b>840,641</b>		813,395		1,312,489
Share compensation	-		220,500		-
Stock based compensation	-		524,583		325,074
	<b>\$ 840,641</b>	\$	1,558,478	\$	1,637,563

In 2016, these parties were awarded a total of nil options (2015: 975,000 options at an exercise price of \$0.49 per share and 412,500 options at an exercise price of \$0.46; 2014: 540,000 options at an average exercise price of \$0.76CDN per share).

In 2016, officers, directors and a senior employee exercised 3,056,366 options resulting in proceeds to the Company of \$611,273.

In 2015, officers, directors and a senior employee exercised 4,088,000 options resulting in proceeds to the Company of \$1,055,491.

In 2015, 450,000 common shares were issued to three directors as compensation for services provided, these common shares were valued at \$220,500.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**18. MANAGEMENT COMPENSATION AND RELATED PARTY TRANSACTIONS (Cont'd)**

(c) Related party deferred development cost:

In 2015, the Company was invoiced \$1,049,524 (2014: \$1,843,643) by a company whose major shareholder is a director of the Company and who also serves as its Chief Technology Officer. This individual was elected as a director on February 19, 2014 and these related party transactions disclosed are transactions incurred from that date forward. These charges had been capitalized as deferred development costs.

In 2016, no invoices were submitted to the Company by this party.

As at October 31, 2016 the Company includes \$167,000 in accounts payable and accrued liabilities owing to this company (2015: \$227,215).

(d) Advances:

In 2015 the following advances were provided to officers, directors and employees of the Company:

- (1) The CEO was provided short term non-interest bearing advances of \$550,972 during the year and made repayments totaling \$542,615 and the remaining \$8,357 was settled through the allocation of compensation due to the CEO. There are no advances receivable from the CEO as at October 31, 2015.
- (2) The President of MAST met performance targets in February 2015 settling his advances receivable from 2014 of \$244,074, the advance receivable was converted to salaries at that time. There were no advances to the President of MAST during 2015.
- (3) A senior employee was provided short term non-interest bearing advances of \$166,366 during the year and made repayments totaling \$247,252 resulting in no outstanding advances receivable as at October 31, 2015.

In 2016, the CEO was provided short term non-interest bearing advances of \$42,144 between November 1, 2015 and January 31, 2016. These advances were settled at January 31, 2016 through the allocation of compensation due to the CEO.

In all cases the advances were provided as advances against expenses incurred or compensation due to these individuals.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**18. MANAGEMENT COMPENSATION AND RELATED PARTY TRANSACTIONS (Cont'd)**

(d) Accounts payable:

At October 31, 2016 the Company reports in accounts payable and accrued liabilities a balance owing to the President of MAST of \$120,332 which amount represents outstanding expense reports and a short term non-interest bearing advance provided to the Company.

(e) Bridge loan:

The CEO of the Company provided a bridge loan of \$100,000 CDN on September 2, 2016; this bridge loan is included in Note 14 as 2016 Bridge loan CDN, Loan No. 3.

(f) Subsequent event:

In December 2016 the Company issued stock options to certain officers, directors and employees (note 23).

**19. COMMITMENTS**

The Company has extended its lease for premises through July 2022. The lease term is for 5 years and stipulates base monthly rental expenses of \$4,005 CDN. Lease commitments are as follows – commitments less than one year of \$34,202 CDN, years 2-5: \$206,136 CDN, thereafter \$36,051.

The Company has certain outstanding commitments to 3<sup>rd</sup> party subcontractors with respect to deferred development costs. These commitments are as follows – commitments less than one year of \$2,899,593; commitments between years 2-5 total of \$1,124,183.

**20. CONTINGENCIES**

(a) Legal matters:

On June 29, 2016 the lawsuit that was initiated in 2014 between the Company and Dreifus Associates Limited and Henry Dreifus (“Defendants”) was settled through arbitration. Under the terms of settlement:

- i) The Company made a series of payments between July 29, 2016 and October 31 (Note 12(a)), 2016 totaling \$50,000 and issued 312,500 common shares with a value of \$62,500 to the Defendants.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**20. CONTINGENCIES (Cont'd)**

- (a) Legal matters: (Cont'd)
  - ii) The Defendants dropped their counterclaims of approximately \$270,000 of disputed charges for services allegedly rendered. The Defendants also dropped all previously alleged claims of inventorship status on one of the Company's patents and assigned to the Company any and all of their future entitlements to the Company's patents.
- (b) The Company has agreed to indemnify its directors and officers and certain of its employees in accordance with the Company's by-laws. The Company maintains insurance policies that may provide coverage against certain claims.
- (c) In addition to the above, 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 accrues 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.

**21. FINANCIAL RISK MANAGEMENT**

- (a) Financial Risk Management:

The Company is exposed to a variety of financial risks by virtue of its activities: market risk (including foreign exchange risk and interest rate risk) and liquidity risk. The overall risk management program focuses on the unpredictability of financial markets and seeks to minimize potential adverse effects on financial performance. Risk management is carried out under policies approved by the Board of Directors. Management is charged with the responsibility of establishing controls and procedures to ensure that financial risks are mitigated in accordance with the approved policies.
- (b) Market Risk:
  - i. Foreign Exchange Risk:

The Company currently incurs expenses in Canadian dollars. Management monitors the Canadian position of these monetary financial instruments on a periodic basis throughout the course of the year.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
**(Expressed in United States dollars)**

For the years ended October 31, 2016, 2015 and 2014

**21. FINANCIAL RISK MANAGEMENT (Cont'd)**

(b) Market Risk: (Cont'd)

i. Foreign Exchange Risk: (Cont'd)

The consolidated financial statements include balances that are denominated in Canadian dollars as follows:

	\$	CDN	\$	CDN
		2016		2015
Cash	\$	377,534	\$	148,767
Deposits and other receivables		44,695		73,361
Accounts payable and accrued liabilities		289,099		335,813
Bridge loans		3,405,824		1,002,313

A 10% strengthening of the US dollar against the Canadian dollar would serve to decrease the loss by \$438,726 at October 31, 2016 (2015 – decrease the loss by \$132,625). A 10% weakening of the US dollar against the Canadian dollar at October 31, 2016 would have had the equal but opposite effect.

ii. Interest Rate Risk:

Cash flow interest rate risk is the risk that the future cash flow of a financial instrument will fluctuate because of changes in market interest rates.

Financial assets and financial liabilities with variable interest rates expose the Company to cash flow interest rate risk. The Company's cash and promissory note receivable earn interest at market rates. The Company manages its interest rate risk by maximizing the interest income earned on excess funds while maintaining the liquidity necessary to conduct operations on a day-to-day basis. Fluctuations in market rates of interest may have an impact on the Company's results of operations.

The Company is exposed to interest price risk on its interest bearing bridge loans and related party advances. This exposure is limited due to the short-term nature of the bridge loans and related party advances.



NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**21. FINANCIAL RISK MANAGEMENT (Cont'd)**

(c) Liquidity Risk:

Liquidity risk is the risk that the Company will not be able to meet its obligations as they fall due.

The Company manages its liquidity risk by forecasting cash flows from operations and anticipated investing and financing activities. Senior management is actively involved in the review and approval of planned expenditures.

All financial liabilities are due within 1 year from the balance sheet at October 31, 2016.

As at October 31, 2016, the Company reports a working capital deficiency of \$4,316,730 and has certain financial commitments (Note 19), the majority of which are due within one year. It must continue to raise financing in order to meet its current obligations (Note 23).

(d) Credit Risk:

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Company's cash and deposits and other receivables. The carrying amount of financial assets represents maximum credit exposure. The Company reduces its credit risk by maintaining its primary bank accounts at large financial institutions and assesses the credit quality of counterparties, taking into account their financial position, past experience and other factors.

**NOTES TO CONSOLIDATED FINANCIAL STATEMENTS**  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

**22. SEGMENTED INFORMATION**

There is one operating segment of the business being the development and commercialization efforts with respect to the Company's proprietary sensor applications. Currently, the predominant market segment that the Company is pursuing is the North American market for such technology.

Geographic information – Non-current assets

	<b>October 31, 2016</b>		<b>October 31, 2015</b>	
Canada	\$	408,985	\$	784,713
United States		5,603		2,668,477
	\$	<u>414,588</u>	\$	<u>3,453,190</u>

**23. SUBSEQUENT EVENTS**

- On December 30, 2016, the Company issued 2,890,000 common stock options to certain officers, directors and employees. The options vest upon issuance and have a five year term. The exercise price was set at a strike price of \$0.25 USD (\$0.34 CDN).
- The Company secured 11 additional \$CDN bridge loans between November 1, 2016 and March 2, 2017. The total additional financing raise was \$1,048,000 CDN (\$788,660).

A summary of the terms of these bridge loans is provided as below:

**2017 \$ CDN Bridge Loans.**

	<b>Loan 1</b>	<b>Loan 2</b>	<b>Loan 3</b>	<b>Loan 4</b>	<b>Loan 5</b>	<b>Loan 6</b>	<b>Loan 7</b>	<b>Loan 8</b>	<b>Loan 9</b>	<b>Loan 10</b>	<b>Loan 11</b>	<b>Total Loan</b>
Date of Origination	11/02/16	12/02/16	12/21/16	01/13/17	01/13/17	01/20/17	01/20/17	01/20/17	01/26/17	01/26/17	02/09/17	
Principal amount at origination (\$CDN)	\$ 200,000	\$ 30,000	\$ 160,000	\$ 60,000	\$ 50,000	\$ 150,000	\$ 30,000	\$ 133,000	\$ 30,000	\$ 25,000	\$ 180,000	\$ 1,048,000
(\$US)	\$ 149,365	\$ 22,560	\$ 119,394	\$ 45,679	\$ 38,066	\$ 112,452	\$ 22,490	\$ 99,708	\$ 22,893	\$ 19,078	\$ 136,975	\$ 788,660
Monthly interest rate	1.00%	1.00%	1.00%	1.00%	2.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%	1.00%
Conversion price to common shares	0.30 CDN	0.30 CDN	0.30 CDN	0.30 CDN	N/A	0.30 CDN	0.30 CDN	0.30 CDN	0.30CDN	0.30 CDN	0.30 CDN	0.30
Current maturity date	11/02/17	12/02/17	12/21/17	01/31/18	01/13/18	01/20/18	01/20/18	01/20/18	01/26/18	01/26/18	02/09/18	

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS  
(Expressed in United States dollars)

For the years ended October 31, 2016, 2015 and 2014

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**23. SUBSEQUENT EVENTS (Cont'd)**

- (3) On November 1, 2016, the 2016 \$CDN bridge loan #7 (Note 14(4)), which was a non- convertible loan at October 31, 2016, was amended to include a conversion feature at a price of \$0.30 CDN. Additionally, the interest rate was reduced from 2% to 1% per month and the loan was extended to November 1, 2017.
- (4) The Company completed six 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 \$143,365 (\$CDN 191,150) and issued a total of 651,666 common shares.
- (5) On November 7, 2016, the Company issued 26,667 common shares to settle accounts payable of \$5,983 (\$CDN 8,000).

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**ITEM 19. Exhibits**

The following exhibits are filed as part of this Annual Report:

- Exhibit No. 1.1 Articles of Incorporation of Micromem Technologies Inc. and amendments thereto in effect as of January 11, 2000, (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on January 11, 2000).
- Exhibit No. 1.2 Articles of Incorporation of Amendment of Micromem Technologies Inc. dated as of October 17, 2001 amending the Articles of Incorporation of Micromem Technologies Inc. to increase the number of directors to a minimum of three and a maximum of ten (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on March 26, 2003).
- Exhibit No. 1.3 Articles of Incorporation of Amendment of Micromem Technologies Inc. dated as of June 24, 2002 amending the Articles of Incorporation of Micromem Technologies Inc. to increase the number of directors to a minimum of 3 and a maximum of 12 (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on March 26, 2003).
- Exhibit No. 1.5 By-Laws of Micromem Technologies Inc. in effect as of January 11, 2002, (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on January 11, 2000).
- Exhibit No. 1.6 Amendment to the By-Laws of Micromem Technologies Inc. approved by shareholders on June 29, 2000, deleting the requirement from the By-Laws that the President shall be appointed from amongst the directors (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on March 26, 2003).
- Exhibit No. 4.1 Employment Agreement by and between Micromem Technologies, Inc. and Salvatore Fuda dated May 29, 2005. (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on February 28, 2006).
- Exhibit No. 4.2 Employment Agreement by and between Micromem Technologies and Joseph Fuda dated May 28, 2008 (Incorporated by reference to the Company's Form 20-F filed with the Commission on February 24, 2009).
- Exhibit No. 4.3 Employment Agreement by and between Micromem Technologies and Dan Amadori dated May 28, 2008 (Incorporated by reference to the Company's Form 20-F filed with the Commission on February 24, 2009).
- Exhibit No. 4.4 Employment Agreement by and between Micromem Technologies and Steven Van Fleet dated May 28, 2008 (Incorporated by reference to the Company's Form 20-F filed with the Commission on February 24, 2009).
- Exhibit No. 8.1 List of Subsidiaries (Incorporated by reference to the Company's Annual Report on Form 20-F filed with the Commission on March 1, 2010)
- [Exhibit No. 12.1 Officer's Certification pursuant to Section 302 of the Sarbanes Oxley Act, 2002 \(filed herewith\).](#)
- [Exhibit No. 12.2 Officer's Certification pursuant to Section 302 of the Sarbanes Oxley Act, 2002 \(filed herewith\).](#)
- [Exhibit No. 13.1 Officer's Certification pursuant to Section 906 of the Sarbanes Oxley Act, 2002 \(filed herewith\).](#)
- [Exhibit No. 13.2 Officer's Certification pursuant to Section 906 of the Sarbanes Oxley Act, 2002 \(filed herewith\).](#)
- [Exhibit No. 15.1 Consent of Collins Barrow LLP \(filed herewith\)](#)

**SIGNATURES**

The Registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on Form 20-F on its behalf.

**MICROMEM TECHNOLOGIES INC.**

By: /s/ Joseph Fuda  
Name: Joseph Fuda  
Title: Chief Executive Officer

By: /s/ Dan Amadori  
Name: Dan Amadori  
Title: Chief Financial Officer

Dated: March 10, 2017

**SECTION 302 CERTIFICATION  
CERTIFICATION OF CHIEF EXECUTIVE OFFICER**

I, Joseph Fuda, certify that:

1. I have reviewed this annual report on Form 20-F of Micromem Technologies Inc. for the Fiscal Year Ended October 31, 2016;
  2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
  3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
  4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
  5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
-

- a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 10, 2017

/s/ Joseph Fuda  
Joseph Fuda  
Chief Executive Officer  
(Principal executive officer)

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**SECTION 302 CERTIFICATION  
CERTIFICATION OF CHIEF FINANCIAL OFFICER**

I, Dan Amadori, certify that:

1. I have reviewed this annual report on Form 20-F of Micromem Technologies Inc. for the Fiscal Year Ended October 31, 2016;
  2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
  3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
  4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
    - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
    - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
    - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
    - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
  5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
-



- a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
- b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 10, 2017

/s/ Dan Amadori  
Dan Amadori  
Chief Financial Officer  
(Principal financial officer)

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**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Micromem Technologies Inc. (the "Company") on Form 20-F for the Fiscal Year Ended October 31, 2016 (the "Report"), I, Joseph Fuda, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, based on my knowledge, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: March 10, 2017

/s/ Joseph Fuda  
\_\_\_\_\_  
Joseph Fuda  
Chief Executive Officer  
(Principal executive officer)

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**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Micromem Technologies Inc. (the "Company") on Form 20-F for the Fiscal Year Ended October 31, 2016 (the "Report"), I, Dan Amadori, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, based on my knowledge, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: March 10, 2017

/s/ Dan Amadori  
\_\_\_\_\_  
Dan Amadori  
Chief Financial Officer  
(Principal financial officer)

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T: 416.480.0160  
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**Consent of Independent Registered Public Accounting Firm**

We hereby consent to the incorporation by reference in the Registration Statement on Form S-8 (No. 333-203466) of Micromem Technologies Inc. of our report dated March 2, 2017 relating to the financial statements and the effectiveness of internal control over financial reporting, which appears in this Form 20-F.

*Collins Barrow Toronto LLP*

Collins Barrow Toronto LLP  
Toronto, Canada

March 10, 2017

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