



Micromem Technologies Inc.
Unaudited Condensed Interim Consolidated Financial Statements
For the three months ended January 31, 2020 and 2019
(Expressed in United States Dollars)

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(Expressed in United States Dollars)

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Micromem Technologies Inc.
Unaudited Condensed Interim Consolidated Financial Statements
Notice of no auditor review of the condensed interim consolidated financial statements

Under National Instrument 51-102, Part 4, subsection 4.3(3)(a), if an auditor has not performed a review of the condensed interim consolidated financial statements, they must be accompanied by a notice indicating that the condensed interim consolidated financial statements have not been reviewed by an auditor.

The accompanying unaudited condensed interim consolidated financial statements of Micromem Technologies Inc. (the "Company") have been prepared by and are the responsibility of the Company's management and approved by the Board of Directors.

The Company's independent auditor has not performed a review of these condensed interim consolidated financial statements in accordance with the standards established by the Chartered Professional Accountants of Canada, for a review of condensed interim consolidated financial statements by an entity's auditor.

March 26, 2020

Micromem Technologies Inc.
Unaudited Condensed Interim Consolidated Statements of Financial Position
As at January 31, 2020 and October 31, 2019
(Expressed in United States dollars)

	<u>Notes</u>	<u>As at January 31, 2020</u>	<u>As at October 31, 2019</u>
Assets			
Current			
Cash	18	\$ 180,920	\$ 46,056
Prepaid expenses and other receivables		27,290	14,751
Total current assets		208,210	60,807
Property and equipment	6	70,046	2,677
Patents	7	18,000	20,000
Total assets		\$ 296,256	\$ 83,484
Liabilities			
Current			
Trade payables and other liabilities	18(c)	\$ 848,869	\$ 997,632
Current lease liability	8	36,442	-
Convertible debentures	9.,18	2,624,713	2,599,074
Derivative liabilities	9.,18	2,086,140	765,425
Total current liabilities		5,596,164	4,362,131
Long-term lease liability	8	31,573	-
Total liabilities		5,627,737	4,362,131
Shareholders' Deficiency			
Share capital	10	84,826,885	84,153,696
Contributed surplus		27,765,169	27,757,639
Equity component of convertible debentures	9.	42,617	50,147
Accumulated deficit		(117,966,152)	(116,240,129)
Total shareholders' deficiency		(5,331,481)	(4,278,647)
Total liabilities and shareholders' deficiency		\$ 296,256	\$ 83,484
Going concern	2		
Contingencies	17		
Subsequent events	21		

The accompanying notes are an integral part of these unaudited condensed interim consolidated financial statements

Approved on behalf of the Board of Directors:

"Joseph Fuda"
Director

"Alex Dey"
Director

Micromem Technologies Inc.**Unaudited Condensed Interim Consolidated Statements of Operations and Comprehensive Loss****For the three months ended January 31, 2020 and 2019**

(Expressed in United States dollars)

	Notes	Three months ended January 31,	
		2020	2019
Operating expenses			
General and administrative	14(a)	\$ 23,270	\$ 53,371
Professional, other fees and salaries	14(b)	200,761	148,529
Travel and entertainment		10,796	10,942
Amortization of property and equipment	6	6,938	794
Amortization of patents	7	2,000	38,457
Foreign exchange gain	18(a)	<u>(11,846)</u>	<u>(8,258)</u>
Total operating expenses		<u>231,919</u>	<u>243,835</u>
Other expenses			
Accretion expense	9.	180,073	394,195
Interest expense	9.	125,124	133,963
Financing costs	9.	1,500	50,766
Loss on revaluation of derivative liabilities	9.	1,152,124	267,580
Loss on conversion of convertible debentures	9.	41,856	17,490
Loss (gain) on extinguishment of convertible debentures	9.	<u>(6,573)</u>	<u>2,474</u>
Total other expenses		<u>1,494,104</u>	<u>866,468</u>
Loss before income tax provision		(1,726,023)	(1,110,303)
Income tax provision	13	<u>-</u>	<u>-</u>
Net loss and comprehensive loss		<u>\$ (1,726,023)</u>	<u>\$ (1,110,303)</u>
Weighted average number of outstanding shares,			
basic and diluted	12	357,017,768	267,841,754
Basic and diluted loss per share	12	\$ -	\$ -

The accompanying notes are an integral part of these unaudited condensed interim consolidated financial statements

Micromem Technologies Inc.

Unaudited Condensed Interim Consolidated Statements of Changes in Equity

For the three months ended January 31, 2020 and 2019

(Expressed in United States dollars)

	<u>Notes</u>	<u>Number of shares</u>	<u>Share capital</u>	<u>Contributed surplus</u>	<u>Equity component of convertible debentures</u>	<u>Accumulated deficit</u>	<u>Total</u>
Balance at November 1, 2019		346,952,721	\$ 84,153,696	\$ 27,757,639	\$ 50,147	\$ (116,240,129)	\$ (4,278,647)
Subscription for private placement	10	-	346,221	-	-	-	346,221
Convertible debentures converted into common shares	9.	15,927,765	326,968	-	-	-	326,968
Expiry of convertible debenture conversion option	9.	-	-	7,530	(7,530)	-	-
Net loss		-	-	-	-	(1,726,023)	(1,726,023)
Balance at January 31, 2020		<u>362,880,486</u>	<u>\$ 84,826,885</u>	<u>\$ 27,765,169</u>	<u>\$ 42,617</u>	<u>\$ (117,966,152)</u>	<u>\$ (5,331,481)</u>
Balance at November 1, 2018		259,602,699	\$ 82,282,903	\$ 27,630,909	\$ 70,283	\$ (113,407,265)	\$ (3,423,170)
Private placements of shares for cash	10	1,315,789	50,000	-	-	-	50,000
Financing costs converted into common shares		350,000	21,000	-	-	-	21,000
Convertible debentures converted into common shares	9.	12,382,097	324,991	-	-	-	324,991
Expiry of convertible debenture conversion option	9.	-	-	21,669	(21,669)	-	-
Renewal of convertible debentures	9.	-	-	-	21,669	-	21,669
Net loss		-	-	-	-	(1,110,303)	(1,110,303)
Balance at January 31, 2019		<u>273,650,585</u>	<u>\$ 82,678,894</u>	<u>\$ 27,652,578</u>	<u>\$ 70,283</u>	<u>\$ (114,517,568)</u>	<u>\$ (4,115,813)</u>

The accompanying notes are an integral part of these unaudited condensed interim consolidated financial statements

Micromem Technologies Inc.
Unaudited Condensed Interim Consolidated Statements of Cash Flows
For the three months ended January 31, 2020 and 2019
(Expressed in United States dollars)

	Notes	Three months ended January 31,	
		2020	2019
Operating activities			
Net loss		\$ (1,726,023)	\$ (1,110,303)
Items not affecting cash:			
Amortization of property and equipment	6	6,938	794
Amortization of patents	7	2,000	38,457
Accretion expense	9.,15	180,073	394,195
Accrued interest on convertible debentures	15	38,749	40,733
Shares issued for financing costs	9.,15	-	21,000
Loss on revaluation of derivative liabilities	9.,15	1,152,124	267,580
Loss on conversion of convertible debentures	9.	41,856	17,490
Loss (gain) on extinguishment of convertible debentures	9.,15	(6,573)	2,474
Foreign exchange loss (gain)	18	(14,986)	7,300
		<u>(325,842)</u>	<u>(320,280)</u>
Net changes in non-cash working capital:			
Decrease in development costs receivable		-	81,841
Increase in prepaid expenses and other receivables		(12,539)	(11,146)
Decrease in trade payables and other liabilities		(148,763)	(78,396)
Cash flows used in operating activities		<u>(487,144)</u>	<u>(327,981)</u>
Investing activity			
Patents	7	-	(6,748)
Cash flows used in investing activity		<u>-</u>	<u>(6,748)</u>
Financing activities			
Repayment of lease liability	8	(9,111)	-
Private placements of shares for cash	10	-	50,000
Subscription for private placement		346,221	-
Proceeds from issuance of convertible debentures	15	340,177	306,000
Repayments of convertible debentures	15	(55,279)	(155,633)
Cash flows provided by financing activities		<u>622,008</u>	<u>200,367</u>
Net change in cash		<u>134,864</u>	<u>(134,362)</u>
Cash - beginning of period		<u>46,056</u>	<u>206,832</u>
Cash - end of period		<u>\$ 180,920</u>	<u>\$ 72,470</u>
Supplemental cash flow information			
Interest paid (classified in operating activities)	9.	\$ 86,375	\$ 93,230
Income taxes paid	13	\$ -	\$ -
Carrying amount of convertible debentures converted into common shares	15	\$ 326,968	\$ 307,501

The accompanying notes are an integral part of these unaudited condensed interim consolidated financial statements

Micromem Technologies Inc.
Notes to Unaudited Condensed Interim Consolidated Financial Statements
For the three months ended January 31, 2020 and 2019
(Expressed in United States dollars, unless otherwise noted)

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. Micromem is a publicly traded company with its head office located at 121 Richmond Street West, Suite 304, Toronto, Ontario, Canada. The Company's common shares are currently listed on the Canadian Securities Exchange under the trading symbol "MRM" and on the Over the Counter Venture Market under the trading symbol "MMTIF".

The Company develops, based upon proprietary technology, customized sensor applications for companies (referred to as "development partners") operating internationally in various industry segments. The Company has not generated commercial revenues through January 31, 2020 and is devoting substantially all its efforts to securing commercial revenue opportunities.

2. Going concern

These unaudited condensed interim consolidated financial statements have been prepared with the assumption 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 and ultimately on the appropriateness of the use of the accounting principles applicable to a going concern. During the three months ended January 31, 2020, the Company reported a net loss and comprehensive loss of \$1,726,023 (2019 - \$1,110,303) and negative cash flow from operations of \$487,144 (2019 - \$327,981). The Company's working capital deficiency as at January 31, 2020 was \$5,387,954 (October 31, 2019 – \$3,828,503).

The Company's success depends on the profitable commercialization of its proprietary 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 2020; 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 unaudited condensed interim 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.

The Covid-19 pandemic creates additional risk for the Company if there is a prolonged industry slowdown in those sectors where the Company currently operates including the oil and gas sectors in particular. To date, the Company has not encountered any significant impact on its business as a result of the pandemic. This situation could change in future.

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

3. Basis of presentation

These unaudited condensed interim consolidated financial statements for the three months ended January 31, 2020 and 2019 have been prepared in accordance with International Accounting Standard ("IAS") 34 Interim financial reporting. The accounting policies and methods of computation adopted in the preparation of the unaudited condensed interim consolidated financial statements are consistent with those followed in the preparation of the Company's audited annual consolidated financial statements for the year ended October 31, 2019. The Company applied, as of November 1, 2019, International Financial Reporting Standard ("IFRS") 16 Leases and IFRS Interpretations Committee ("IFRIC") 23 Uncertainty over income tax treatments. As required by IAS 34, the nature and effect of those changes are disclosed in Note 4. The Company has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

These unaudited condensed interim consolidated financial statements were authorized for issuance and release by the Company's Board of Directors on March 26, 2020.

Micromem Technologies Inc.
Notes to Unaudited Condensed Interim Consolidated Financial Statements
For the three months ended January 31, 2020 and 2019
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3. Basis of presentation (continued)

(a) Basis of consolidation

These unaudited condensed interim consolidated financial statements include the accounts of Micromem Technologies Inc. and its subsidiaries. All intercompany transactions and balances have been eliminated upon consolidation. The Company applies the acquisition method to account for business combinations. Acquisition-related costs are expensed as incurred.

The Company's wholly-owned subsidiaries include:

- (i) Micromem Applied Sensors Technology Inc. ("MAST") which was incorporated in November 2007 and is domiciled in Delaware, United States. MAST has previously had the primary responsibility for the exploitation of the Company's technologies in conjunction with various strategic partners and customers.
- (ii) 7070179 Canada Inc. which was 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)	<u>Inactive subsidiaries</u>	<u>Domiciled in</u>
	Memtech International Inc.	Bahamas
	Memtech International (USA) Inc., Pageant Technologies (USA) Inc.	United States
	Pageant Technologies Inc., Micromem Holdings (Barbados) Inc.	Barbados

(b) Basis of measurement

These unaudited condensed interim 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 measured at their fair value.

(c) Functional and presentation currency

These unaudited condensed interim consolidated financial statements are presented in United States dollars ("USD"), which is the functional currency of the Company and all of its subsidiaries.

(d) Use of estimates and judgments

The preparation of these unaudited condensed interim consolidated financial statements in conformity with IFRSs requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the unaudited condensed interim consolidated financial statements, and the reported amounts of revenues and expenses during the reporting period. These estimates are reviewed periodically and adjustments are made as appropriate in the reporting period they become known. Items for which actual results may differ materially from these estimates are described in the following section.

(i) Fair value of options and conversion features

The Company makes estimates and utilizes assumptions in determining the fair value for stock options and derivative liabilities based on the application of the Black-Scholes option pricing model or the binomial option pricing model, depending on the circumstances. These pricing models require management to make various assumptions and estimates that are susceptible to uncertainty, including the volatility of the share price, expected dividend yield, expected term, expected risk-free interest rate, and exercise price in the binomial option pricing model.

(ii) Useful lives and recoverability of long-lived assets

Long-lived assets consist of property and equipment and patents. Amortization is dependent upon estimates of useful lives and impairment is dependent upon estimates of recoverable amounts. These are determined through the exercise of judgment and are dependent upon estimates that take into account factors such as economic and market conditions, frequency of use, anticipated changes in laws, and technological improvements.

Micromem Technologies Inc.
Notes to Unaudited Condensed Interim Consolidated Financial Statements
For the three months ended January 31, 2020 and 2019
(Expressed in United States dollars, unless otherwise noted)

3. Basis of presentation (continued)

(d) Use of estimates and judgments (continued)

(iii) Income taxes

Income taxes and tax exposures recognized in the unaudited condensed interim consolidated financial statements reflect management's best estimate of the outcome based on facts known at the reporting date. When the Company anticipates a future income tax payment based on its estimates, it recognizes a liability. The difference between the expected amount and the final tax outcome has an impact on current and deferred taxes when the Company becomes aware of this difference.

When the Company incurs losses for income tax purposes, it assesses the probability of taxable income being available in the future, based on budgeted forecasts. These forecasts are adjusted for certain non-taxable income and expenses and specific rules on the use of unused credits and tax losses. When the forecasts indicate that sufficient future taxable income will be available to deduct the temporary differences, a deferred tax asset is recognized for all deductible temporary differences.

(iv) Going concern assumption

The Company applies judgment in assessing whether material uncertainties exist that would cause doubt as to the whether the Company could continue as a going concern.

(v) Expected credit losses on financial assets

Determining an allowance for expected credit losses ("ECLs") for all debt financial assets not held at fair value through profit or loss requires management to make assumptions about the historical patterns for the probability of default, the timing of collection and the amount of incurred credit losses, which are adjusted based on management's judgment about whether economic conditions and credit terms are such that actual losses may be higher or lower than historical patterns suggest.

4. Adoption of new accounting pronouncements

(a) IFRS 16 Leases

IFRS 16 replaces the previous guidance on leases. This standard provides a single recognition and measurement model to be applied by lessees to leases, with required recognition of assets and liabilities for most leases. This standard is effective for annual periods beginning on or after January 1, 2019, with early adoption permitted. The Company has adopted this new standard as of its effective date, in accordance with the transitional provisions specified in IFRS 16. The Company has applied the following practical expedients:

(i) The Company applied the simplified transition approach and did not restate comparative information. As a result, the Company recognized the cumulative effect of initially applying IFRS 16 as an adjustment to the accumulated deficit as at November 1, 2019.

(ii) The Company elected to apply IFRS 16 only to contracts that were previously identified as leases. Contracts that were not identified as leases under IAS 17 and IFRIC 4 - Determining whether an arrangement contains a lease, were not reassessed for whether there is a lease. The Company applied the definition of a lease under IFRS 16 to contracts entered into or changed on or after November 1, 2019.

(iii) The present value of remaining minimum lease payments is capitalized as an asset and offsetting lease liability recognized. As the interest rate implicit in the lease cannot be readily determined, management applied the Company's incremental borrowing rate (based on recent non-convertible debentures) of 24% per annum as the discount rate.

Micromem Technologies Inc.
Notes to Unaudited Condensed Interim Consolidated Financial Statements
For the three months ended January 31, 2020 and 2019
(Expressed in United States dollars, unless otherwise noted)

4. Adoption of new accounting pronouncements (continued)

(a) IFRS 16 Leases (continued)

In accordance with the practical expedients applied, the Company has recognized lease liabilities and right-of-use assets at the date of initial application for leases previously classified as operating leases in accordance with IAS 17. There were no onerous lease contracts that would have required an adjustment to the right-of-use assets at the date of initial application. The Company has elected not to recognize right-of-use assets and lease liabilities for short-term leases (lease term of 12 months or less) and leases for which the underlying asset is of low value. The Company has recognized right-of-use assets of \$74,307, current lease liabilities of \$36,442, and non-current lease liabilities of \$37,865. There were no adjustments to opening accumulated deficit as at November 1, 2019. The Company expects that comprehensive loss will increase by \$4,374 in the current fiscal year as a result of the application of IFRS 16.

The following is the Company's policy for accounting for lease contracts in accordance with IFRS 16:

At the inception of a contract, the Company assesses whether a contract is, or contains a lease. A contract is, or contains a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Company recognizes a right-of-use asset and a lease liability at the commencement date of the lease. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset, less any lease incentives received. The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the right-of-use asset or the end of the lease term. In addition, the right-of-use assets are adjusted for impairment losses, if any. The estimated useful lives and recoverable amounts of right-of-use assets are determined on the same basis as those of property and equipment. The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the Company's incremental borrowing rate. The lease liability is subsequently measured at amortized cost using the effective interest method. The Company has elected not to recognize right-of-use assets and lease liabilities for short-term leases (lease term of 12 months or less) and leases for which the underlying asset is of low value. The Company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

(b) IFRIC 23 Uncertainty over income tax treatments

IFRIC 23 clarifies the application of recognition and measurement requirements in IAS 12, Income Taxes, when there is uncertainty over income tax treatments. It specifically addresses whether an entity considers each tax treatment independently or collectively, the assumptions an entity makes about the examination of tax treatments by taxation authorities, how an entity determines taxable profit (tax loss), tax bases, unused tax losses, unused tax credits and tax rates, and how an entity considers changes in facts and circumstances. IFRIC 23 became effective for the annual periods beginning on or after January 1, 2019, with earlier application permitted. The Company has adopted this interpretation as of its effective date and assessed no significant impact as a result of the adoption of this interpretation.

5. New and revised standards and interpretations issued but not yet effective

Certain pronouncements were issued by the IASB or the IFRIC that are mandatory for accounting periods commencing on or after January 1, 2020. Many are not applicable or do not have a significant impact to the Company and have been excluded. The following have not yet been adopted and are being evaluated to determine their impact on the Company.

(a) IAS 1 Presentation of Financial Statements and IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors

IAS 1 and IAS 8 were amended in October 2018 to refine the definition of materiality and clarify its characteristics. The revised definition focuses on the idea that information is material if omitting, misstating or obscuring it could reasonably be expected to influence decisions that the primary users of general purpose financial statements make on the basis of those financial statements. The amendments are effective for annual reporting periods beginning on or after January 1, 2020, with earlier adoption permitted. The Company will adopt this interpretation as of its effective date. The Company has performed a preliminary analysis and has not assessed any significant impacts as a result of the adoption of these amendments.

6. Property and equipment

Micromem Technologies Inc.
Notes to Unaudited Condensed Interim Consolidated Financial Statements
For the three months ended January 31, 2020 and 2019
(Expressed in United States dollars, unless otherwise noted)

		As at November 1, 2019	Additions	As at January 31, 2020
Cost				
Computers		\$ 32,040	\$ -	\$ 32,040
Right-of-use assets	Note 4(a)	74,307	-	74,307
		<u>106,347</u>		<u>106,347</u>
Accumulated amortization				
Computers		29,363	183	29,546
Right-of-use assets	Note 4(a)	-	6,755	6,755
		<u>29,363</u>		<u>36,301</u>
Net book value		<u>\$ 76,984</u>		<u>\$ 70,046</u>
		As at November 1, 2018	Additions	As at January 31, 2019
Computers				
Cost		\$ 55,723	\$ -	\$ 55,723
Accumulated amortization		46,495	794	47,289
Net book value		<u>\$ 9,228</u>		<u>\$ 8,434</u>

7. Patents

		As at November 1, 2019	Additions	As at January 31, 2020
Cost		\$ 681,288	\$ -	\$ 681,288
Accumulated amortization		661,288	2,000	663,288
Net book value		<u>\$ 20,000</u>		<u>\$ 18,000</u>
		As at November 1, 2018	Additions	As at January 31, 2019
Cost		\$ 904,431	\$ 6,748	\$ 911,179
Accumulated amortization		508,326	38,457	546,783
Net book value		<u>\$ 396,105</u>		<u>\$ 364,396</u>

Micromem Technologies Inc.
Notes to Unaudited Condensed Interim Consolidated Financial Statements
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8. Leases

(a) Maturity analysis of lease obligations

The following represents a maturity analysis of the Company's undiscounted contractual lease obligations as at January 31, 2020.

	<u>CDN</u>
Less than one year	\$ 48,060
Two to five years	<u>68,085</u>
	<u>\$ 116,145</u>

(b) Supplemental disclosure

For the three months ended January 31, 2020, the Company recognized \$2,819 of interest expense on lease obligations in the unaudited condensed interim consolidated statements of operations and comprehensive loss. The Company further recognized total cash outflow of \$9,111 relating to leases.

9. Convertible debentures

The Company issues three types of convertible debentures: USD denominated convertible debentures with an equity component, Canadian dollar ("CDN") denominated convertible debentures with an embedded derivative due to variable consideration payable upon conversion caused by foreign exchange, and USD denominated convertible debentures with an embedded derivative caused by variable conversion prices.

During the three months ended January 31, 2020, the Company the incurred \$1,500 (2019 - \$21,000) financing costs which primarily consist of early repayment premiums and administrative fees relating to the convertible debentures, all of which were converted into common shares. All loan principal amounts and conversion prices are expressed in original currency and all remaining dollar amounts are expressed in USD.

(a) Current period information presented in the unaudited condensed interim consolidated financial statements

Convertible debentures outstanding as at January 31, 2020:

	<u>USD (equity component)</u>	<u>CDN (embedded derivative)</u>	<u>USD (embedded derivative)</u>	<u>Total</u>
Loan principal outstanding	\$ 931,000	\$ 2,173,253	\$ 690,250	
Terms of loan				
Annual stated interest rate	12% - 24%	12% - 24%	4% - 24%	
Effective annual interest rate	24% - 36%	13% - 160%	139% - 5368%	
Conversion price to common shares	\$0.04 - \$0.07	\$0.05 - \$0.14	(i) - (ii)	
Remaining life (in months)	0 - 4	0 - 9	6 - 12	
Unaudited condensed interim consolidated statement of financial position				
Carrying value of loan principal	\$ 919,671	\$ 1,465,970	\$ 58,105	\$ 2,443,746
Interest payable	<u>20,161</u>	<u>139,338</u>	<u>21,468</u>	<u>180,967</u>
Convertible debentures	\$ 939,832	\$ 1,605,308	\$ 79,573	\$ 2,624,713
Derivative liabilities	\$ -	\$ 1,302,161	\$ 783,979	\$ 2,086,140
Equity component of convertible debentures	\$ 42,617	\$ -	\$ -	\$ 42,617

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(Expressed in United States dollars, unless otherwise noted)

9. Convertible debentures (continued)

(a) Current period information presented in the unaudited condensed interim consolidated financial statements (continued)

For the three months ended January 31, 2020:

	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	Total
Unaudited condensed interim consolidated statement of operations and comprehensive loss				
Accretion expense	\$ 12,678	\$ 124,009	\$ 43,386	\$ 180,073
Interest expense	\$ 48,807	\$ 58,575	\$ 8,594	\$ 115,976
Loss on revaluation of derivative liabilities	\$ -	\$ 1,092,247	\$ 59,877	\$ 1,152,124
Loss on conversion of convertible debentures	\$ -	\$ -	\$ 41,856	\$ 41,856
Gain on extinguishment of convertible debentures	\$ -	\$ (6,573)	\$ -	\$ (6,573)
Unaudited condensed interim consolidated statement of changes in equity				
Amount of principal converted to common shares	\$ 20,000	\$ 35,000	\$ 119,000	\$ 174,000
Amount of interest converted to common shares	\$ 447	\$ 1,194	\$ 10,196	\$ 11,837
Number of common shares issued on conversion of convertible debentures	511,175	731,440	14,685,150	15,927,765
Unaudited condensed interim consolidated statement of cash flows				
Amount of principal repaid in cash	\$ -	\$ 55,279	\$ -	\$ 55,279
Amount of interest repaid in cash	\$ 46,860	\$ 39,515	\$ -	\$ 86,375

(i) Conversion price defined as 75% multiplied by the average of the lowest 3 closing stock prices for the 10 trading days prior to conversion date.

(ii) Conversion price defined as 75% multiplied by the lowest stock price for the 20 trading days prior to conversion date.

(b) Comparative information presented in the unaudited condensed interim consolidated financial statements

Convertible debentures outstanding as at October 31, 2019:

	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	Total
Loan principal outstanding	\$ 931,000	\$ 2,271,017	\$ 425,000	
Terms of loan				
Annual stated interest rate	12% - 24%	12% - 24%	4% - 10%	
Effective annual interest rate	24% - 36%	13% - 645%	139% - 5368%	
Conversion price to common shares	\$0.04 - \$0.07	\$0.05 - \$0.15	(i) - (ii)	
Remaining life (in months)	1 - 6	0 - 12	3 - 12	
Unaudited condensed interim consolidated statement of financial position				
Carrying value of loan principal	\$ 906,993	\$ 1,464,416	\$ 63,422	\$ 2,434,831
Interest payable	18,661	121,444	24,138	164,243
Convertible debentures	\$ 925,654	\$ 1,585,860	\$ 87,560	\$ 2,599,074
Derivative liabilities	\$ -	\$ 204,366	\$ 561,059	\$ 765,425
Equity component of convertible debentures	\$ 50,147	\$ -	\$ -	\$ 50,147

(i) Conversion price defined as 75% multiplied by the average of the lowest 3 closing stock prices for the 10 trading days prior to conversion date.

(ii) Conversion price defined as 75% multiplied by the lowest stock price for the 20 trading days prior to conversion date.

9. Convertible debentures (continued)

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(b) Comparative information presented in the unaudited condensed interim consolidated financial statements (continued)

For the three months ended January 31, 2019:

	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	Total
Unaudited condensed interim consolidated statement of operations and comprehensive loss				
Accretion expense	\$ 31,263	\$ 204,583	\$ 158,349	\$ 394,195
Interest expense	\$ 49,301	\$ 57,032	\$ 27,630	\$ 133,963
Loss on revaluation of derivative liabilities	\$ -	\$ 173,395	\$ 94,185	\$ 267,580
Loss on conversion	\$ -	\$ -	\$ 17,490	\$ 17,490
Loss on extinguishment of convertible debentures	\$ -	\$ 255	\$ 2,219	\$ 2,474
Unaudited condensed interim consolidated statement of changes in equity				
Amount of principal converted to common shares	\$ -	\$ -	\$ 550,119	\$ 550,119
Amount of interest converted to common shares	\$ -	\$ 61,163	\$ 17,864	\$ 79,027
Number of common shares issued on conversion of convertible debentures	-	-	12,382,097	12,382,097
Unaudited condensed interim consolidated statement of cash flows				
Amount of principal repaid in cash	\$ -	\$ 80,033	\$ 75,600	\$ 155,633
Amount of interest repaid in cash	\$ 46,860	\$ 40,397	\$ 5,973	\$ 93,230

(c) Fair value of derivative liabilities outstanding

The fair value of the derivative liabilities is determined in accordance with the Black-Scholes or binomial option-pricing models, depending on the circumstances. The underlying assumptions are as follows:

	As at January 31, 2020	As at October 31, 2019
Share price	\$0.06	\$0.02
Exercise price	\$0.02 - \$0.11	\$0.01 - \$0.11
Volatility factor (based on historical volatility)	75% - 246%	173% - 321%
Risk free interest rate	1.60% - 1.64%	1.67% - 1.69%
Expected life of conversion features (in months)	0 - 12	0 - 12
Expected dividend yield	0%	0%
CDN to USD exchange rate (as applicable)	0.7641	0.7582
Call value	\$0.00 - \$0.05	\$0.00 - \$0.02

Volatility was estimated using the historical volatility of the Company's stock prices for common shares.

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10. Share capital

(a) Authorized and outstanding shares

The Company has two classes of shares as follows:

- (i) Special redeemable voting preference shares - 2,000,000 authorized, nil issued and outstanding.
- (ii) Common shares without par value – an unlimited number authorized. The holders of the common shares are entitled to receive dividends which may be declared from time to time, and are entitled to one vote per share at shareholder meetings of the Company. All common shares are ranked equally with regards to the Company's residual assets.

(b) Private placements

During the three months ended January 31, 2020, received subscriptions for private placements totalling \$346,221 which were settled subsequent to January 31, 2020. During the three months ended January 31, 2019, the Company completed a private placement with an investor consisting of common shares, pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$50,000 and issued a total of 1,315,789 common shares.

11. Stock options

(a) 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.

(b) Summary of changes

	Number of options	Weighted average exercise price
Outstanding at November 1, 2019	5,730,000	\$ 0.25
Granted	-	-
Expired	-	-
Outstanding at January 31, 2020	5,730,000	\$ 0.25
Outstanding at November 1, 2018	6,250,000	\$ 0.29
Granted	-	-
Expired	-	-
Outstanding at January 31, 2019	6,250,000	\$ 0.29

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11. Stock options (continued)

(c) Stock options outstanding at January 31, 2020

Date of issue	Expiry date	Number of options	Weighted average	
			Exercise price	Remaining contractual life (years)
June 4, 2015	June 4, 2020	300,000	\$ 0.49	0.3
August 20, 2015	August 20, 2020	940,000	0.46	0.6
September 30, 2015	September 30, 2020	250,000	0.40	0.7
December 30, 2016	December 30, 2021	2,040,000	0.25	1.9
June 29, 2018	June 29, 2023	2,200,000	0.10	3.4
Outstanding and exercisable at January 31, 2020		5,730,000	\$ 0.25	2.1

12. Earnings (loss) per share

Basic and diluted income (loss) per share are calculated using the following numerators and denominators:

Numerator	Three months ended January 31,	
	2020	2019
Net income (loss) attributable to common shareholders	\$ (1,726,023)	\$ (1,110,303)
Net income (loss) used in computation of basic and diluted income (loss) per share	\$ (1,726,023)	\$ (1,110,303)
Denominator		
Weighted average number of common shares for computation of basic and diluted income (loss) per share	357,017,768	267,841,754

For the three months ended January 31, 2020 and 2019, all stock options and conversion features were anti-dilutive and, therefore, are excluded from the calculation of diluted income (loss) per share.

13. Income taxes

Deferred income taxes reflect the net tax effect of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and amounts used for income tax purposes.

As at October 31, 2019, the Company has non-capital losses of approximately \$30.5 million, \$25.7 million in Canada and \$4.8 million in other foreign jurisdictions, available to reduce future taxable income. Non-capital losses expire commencing in 2026. In addition, the Company has available capital loss carry forwards of approximately \$1.3 million to reduce future taxable capital gains. Capital losses carry forward indefinitely.

As at January 31, 2020 and October 31, 2019, the Company 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 recognized in the unaudited condensed interim consolidated statements of financial position for such assets.

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14. Operating expenses

(a) General and administration

The components of general and administration expenses are as follows:

	Three months ended January 31,	
	2020	2019
General and administration	\$ 3,467	\$ 13,217
Rent and occupancy	7,806	15,861
Office insurance	574	13,052
Investor relations, listing and filing fees	10,439	10,222
Telephone	984	1,019
	<u>\$ 23,270</u>	<u>\$ 53,371</u>

(b) Professional, other fees and salaries

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

	Three months ended January 31,	
	2020	2019
Professional fees	\$ 30,436	\$ 56,050
Consulting fees	114,925	27,327
Salaries and benefits	55,400	65,152
	<u>\$ 200,761</u>	<u>\$ 148,529</u>

15. Supplemental cash flow information

The following provides a reconciliation of the cash flows from convertible debentures and derivative liabilities :

	Three months ended January 31,	
	2020	2019
Balance - beginning of period	\$ 3,364,499	\$ 3,126,687
Cash flows from financing activities:		
Proceeds from issuance of convertible debentures	340,177	306,000
Repayments of convertible debentures	(55,279)	(155,633)
Non-cash changes:		
Accretion expense	180,073	394,195
Accrued interest on convertible debentures	38,749	40,733
Loss on revaluation of derivative liabilities	1,152,124	267,580
Loss (gain) on extinguishment of debt	(6,573)	2,474
Convertible debentures converted into common shares	(285,112)	(307,501)
Renewal of convertible debentures	(7,530)	(21,669)
Foreign exchange loss (gain)	(10,275)	7,300
Balance - end of period	<u>\$ 4,710,853</u>	<u>\$ 3,660,166</u>

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16. Key management compensation and related party transactions

The Company reports the following related party transactions:

(a) Key management compensation

Key management personnel are persons responsible for planning, directing and controlling activities of the Company, including officers and directors. Compensation paid or payable to these individuals (or companies controlled by such individuals) are summarized as follows:

	Three months ended January 31,	
	2020	2019
Professional, other fees, and salaries	\$ 2,355	\$ 74,840
Stock-based compensation	-	-
	<u>\$ 2,355</u>	<u>\$ 74,840</u>

During the three months ended January 31, 2020 and 2019, these parties were not awarded any options.

(b) Trade payables and other liabilities

As at January 31, 2020 and October 31, 2019, the Company reports in trade payables and other liabilities, a balance owing to the former President of MAST of \$193,174 which represents alleged outstanding wages payable, see Note 17(b).

As at January 31, 2020 and October 31, 2019, the Company reports \$167,000 in trade payables and other liabilities owing to a company whose major shareholder is a director of the Company and who has also previously served as its Chief Technology Officer. This individual was elected as a director on February 19, 2014. The balance reported relates to alleged services provided in 2015; there have been no invoices submitted by this related party after October 31, 2015.

(c) Convertible debentures

In May 2019, the CEO of the Company subscribed for a short-term loan of \$15,000 CDN (\$11,450 USD). At January 31, 2020, the loan principal was fully repaid (October 31, 2019 - \$10,000 CDN, \$7,582 USD).

In January 2018, the CEO of the Company subscribed for a convertible debenture of \$150,000 CDN (\$114,086 USD). At January 31, 2020, \$30,601 CDN (\$23,125 USD)(October 31, 2019 - \$52,319 CDN, \$39,756 USD) in loan principal remains outstanding.

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17. Contingencies

- (a) 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.
- (b) On October 7, 2018, the former President of MAST, Inc. (a wholly-owned subsidiary), Mr. Steven Van Fleet, filed a lawsuit against Micromem and MAST in New York State Supreme Court, Dutchess County. In the action, Mr. Van Fleet is seeking payment of \$214,574 plus interest relating to alleged remuneration and expense reimbursements due to him prior to his resignation as an officer and director of Micromem and MAST on August 17, 2018. The Company answered the complaint on December 7, 2018 by denying the material allegations in Mr. Van Fleet's claims. In addition, the Company interposed 7 counterclaims against Mr. Van Fleet seeking, among other things: (i) damages of not less than \$2.75 million, (ii) specific performance to compel Mr. Van Fleet to comply with his contractual obligations which were required for the period of time that he served as an officer and director through to his resignation date; (iii) repayment of certain salary and expenses paid to Mr. Van Fleet; (iv) a direction for Mr. Van Fleet to turn over all Company property in his possession or control; (v) an accounting to determine all money and property belonging to the Company and/or MAST. On January 24, 2019, the Company amended its original answer and counterclaims to include, among other things, a demand for additional damages based on new information that had come to light. On February 8, 2019, Mr. Van Fleet, through his counsel, replied to and denied the material allegations in Micromem's counterclaims. The Company reports an accrual of \$205,788 at October 31, 2019 with respect to alleged remuneration and expense reimbursements claimed by Mr. Van Fleet but, nonetheless, has denied the allegations in Mr. Van Fleet's claims. The matter is currently at the pre-trial stage, pending discoveries and remains as a contingency at March 24, 2020.

18. Financial risk management

- (a) Currency risk

Currency risk is the risk that the fair value of, or future cash flows from, the Company's financial instruments will significantly fluctuate due to changes in foreign exchange rates. The Company is exposed to currency risk to the extent that it incurs expenses and issues convertible debentures denominated in CDN. The Company manages currency risk by monitoring the Canadian position of these monetary financial instruments on a periodic basis throughout the course of the reporting period.

As at January 31, 2020, balances that are denominated in CDN are as follows:

	<u>CDN</u>
Cash	\$ 223,241
Prepaid expenses and other receivables	\$ 27,290
Trade payables and other liabilities	\$ 236,643
Convertible debentures	\$ 2,100,867
Derivative liabilities	\$ 1,704,138

A 10% strengthening of the US dollar against the CDN would decrease accumulated deficit by \$263,351 as at January 31, 2020 (October 31, 2019 - decrease accumulated deficit by \$126,371). A 10% weakening of the USD against the CDN would have had the opposite effect of the same magnitude.

- (b) Interest rate risk

Interest rate risk is the risk that the fair value of, or future cash flows from, the Company's financial instruments will significantly fluctuate due to changes in market interest rates. The Company is exposed to interest rate risk on its interest-bearing convertible debentures. This exposure is limited due to the short-term nature of the convertible debentures.

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18. Financial risk management (continued)

(c) Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they become due. The Company's policy is to review liquidity resources and ensure that sufficient funds are available to meet financial obligations as they become due. Further, the Company's management is responsible for ensuring funds exist and are readily accessible to support business opportunities as they arise. The Company's funding is provided in the form of capital raised through the issuance of shares on conversion of convertible debentures. All financial liabilities are due within 1 year as at January 31, 2020.

(i) Trade payables

The following represents an analysis of the maturity of trade payables:

	As at January 31, 2020	As at October 31, 2019
Less than 30 days past billing date	\$ 35,810	\$ 18,201
31 to 90 days past billing date	-	13,259
Over 90 days past billing date	<u>697,389</u>	<u>781,230</u>
	<u>\$ 733,198</u>	<u>\$ 812,690</u>

As at January 31, 2020, trade payables include \$540,000 (October 31, 2019 - \$334,000) of invoices which the Company has disputed and/or are stale-dated. The Company does not anticipate that it will be required to discharge such amounts.

(ii) Convertible debentures and derivative liabilities

The following represents an analysis of the maturity of the convertible debentures and derivative liabilities:

	As at January 31, 2020		As at October 31, 2019	
	<u>Convertible debentures</u>	<u>Derivative liabilities</u>	<u>Convertible debentures</u>	<u>Derivative liabilities</u>
Less than three months	\$ 1,606,350	\$ 491,828	\$ 754,799	\$ 75,528
Three to six months	811,588	730,120	1,168,349	71,326
Six to twelve months	<u>206,775</u>	<u>864,192</u>	<u>675,926</u>	<u>618,571</u>
	<u>\$ 2,624,713</u>	<u>\$ 2,086,140</u>	<u>\$ 2,599,074</u>	<u>\$ 765,425</u>

(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, development costs receivable, and other receivables. The maximum exposure to credit risk is the carrying value of these financial assets, which amounted to \$180,920 as at January 31, 2020 (October 31, 2019 - \$46,056). The Company reduces its credit risk by assessing the credit quality of counterparties, taking into account their financial position, past experience and other factors.

(i) Cash

The Company held cash of \$180,920 at January 31, 2020 (October 31, 2019 - \$46,056). The cash is held with central banks and financial institution counterparties that are highly rated. The Company has assessed no significant change in credit risk and an insignificant loss allowance, which was not recognized in these unaudited condensed interim consolidated financial statements.

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19. Fair value hierarchy

Assets and liabilities recorded at fair value in the unaudited condensed interim consolidated statements of financial position are classified using a fair value hierarchy that reflects the significance of the inputs used in making the measurements. The fair value hierarchy has the following levels:

Level 1 - valuation based on quoted prices (unadjusted) in active markets for identical assets and liabilities. There are no assets or liabilities in this category in these unaudited condensed interim consolidated financial statements.

Level 2 - valuation techniques based on inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. In these unaudited condensed interim consolidated financial statements, derivative liabilities are included in this category.

Level 3 - valuation techniques using the inputs for the asset or liability that are not based on observable market data. There are no assets or liabilities in this category in these unaudited condensed interim consolidated financial statements.

The Company's policy for determining when transfers between levels of fair value hierarchy occur is based on the date of the event or changes in circumstances that caused the transfer. During the three months ended January 31, 2020 and 2019, there were no transfers between levels.

20. Capital risk management

The Company's objectives when managing capital are to (i) maintain its ability to continue as a going concern in order to provide returns for shareholders and benefits for other stakeholders, (ii) ensure it has sufficient cash resources to further develop and market its technologies and (iii) maintain its ongoing operations. The Company defines its capital as its net assets, total assets less total liabilities. In order to secure the additional capital necessary to pursue these objectives, the Company may attempt to raise additional funds through the issuance of equity or convertible debentures 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 three months ended January 31, 2020.

21. Subsequent events

Subsequent to January 31, 2020:

- (a) The Company secured private placements with investors consisting of common shares with no warrants pursuant to prospectus and registrations set forth in applicable securities law. It realized net proceeds of \$402,161 and issued a total of 10,008,491 common shares.
- (b) The Company secured a \$61,000 convertible debenture with a 12 month term. This loan has a conversion features which becomes effective six months after initiation date.
- (c) The Company repaid \$10,600 CDN and \$80,000 USD in convertible debentures.
- (d) The Company extended convertible debentures that were within 2 months of maturity date from January 31, 2020. Extension terms ranged from 3 months to 6 months.