

Micromem Technologies Inc. Unaudited Condensed Interim Consolidated Financial Statements For the three and nine months ended July 31, 2019 and 2018 (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.

September 24, 2019

Unaudited Condensed Interim Consolidated Statements of Financial Position

As at July 31, 2019 and October 31, 2018

(Expressed in United States dollars)

	Notes	 As at July 31, 2019	Oc	As at tober 31, 2018
Assets				
Current				
Cash	18	\$ 11,228	\$	206,832
Development costs receivable	6	-		81,841
Prepaid expenses and other receivables	18	 21,773		16,731
Total current assets		33,001		305,404
Property and equipment		6,847		9,228
Patents	7	 149,177		396,105
Total assets		\$ 189,025	\$	710,737
Liabilities				
Current				
Trade payables and other liabilities	18	\$ 1,082,328	\$	1,007,220
Convertible debentures	8,18	2,632,267		2,476,571
Derivative liabilities	8,18	 507,946		650,116
Total liabilities		 4,222,541		4,133,907
Shareholders' Deficiency	`			
Share capital	9	83,299,835		82,282,903
Contributed surplus		27,722,861		27,630,909
Equity component of convertible debentures	8	63,977		70,283
Accumulated deficit		 (115,120,189)		(113,407,265)
Total shareholders' deficiency		 (4,033,516)		(3,423,170)
Total liabilities and shareholders' deficiency		\$ 189,025	\$	710,737
Going concern	2			
Commitments	16			
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

Unaudited Condensed Interim Consolidated Statements of Operations and Comprehensive Loss For the three and nine months ended July 31, 2019 and 2018

(Expressed in United States dollars)

	Notes	Three months ended July 31,20192018]	Nine months en 2019		i July 31, 2018		
Operating expenses									
General and administrative	13(a)	\$	42,410	\$	63,119	\$	153,956	\$	213,930
Professional, other fees and salaries	13(b)		113,429		180,528		331,088		571,778
Stock-based compensation	10		-		140,612		-		140,612
Development expense (recovery)	6		(3,920)		(126,170)		(38,286)		(56,884)
Travel and entertainment			18,008		21,075		39,898		69,221
Amortization of property and equipment			792		842		2,381		2,545
Amortization of patents	7		188,113		41,134		265,075		118,253
Foreign exchange loss	18(a)		82,350		44,552		33,343		121,144
Total operating expenses			441,182		365,692		787,455		1,180,599
Other expenses (income)									
Accretion expense	8		298,355		533,494		1,103,438		1,428,108
Interest expense	8		220,229		123,254		473,919		346,232
Financing costs	8		305		33,977		52,562		181,435
Gain on revaluation of derivative liabilities	8		(417,239)		(1,122,960)		(735,242)		(1,079,690)
Loss on conversion of convertible debentures	8		11,701		-		31,499		-
Loss (gain) on extinguishment of convertible									
debentures	8		-		43,832		(707)		4,691
Total other expenses (income)			113,351		(388,403)		925,469		880,776
Net income (loss) before income tax provision			(554,533)		22,711		(1,712,924)		(2,061,375)
Income tax provision	12		-		-		-		-
Net income (loss) and comprehensive income (loss)		\$	(554,533)	\$	22,711	\$	(1,712,924)	\$	(2,061,375)
Weighted average number of outstanding shares,									
basic and diluted	11	2	87,720,884	2	237,596,150	-	277,543,200	2	233,464,703
Basic and diluted income (loss) per share	11	\$	-	\$	-	\$	(0.01)	\$	(0.01)

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

Unaudited Condensed Interim Consolidated Statements of Changes in Equity For the nine months ended July 31, 2019 and 2018

(Expressed in United States dollars)

					Equity component of		
	Notes	Number of shares	Share capital	Contributed surplus	convertible debentures	Accumulated deficit	Total
Balance at November 1, 2017		228,562,711	\$ 80,198,194	\$ 27,360,676	\$ 62,050	\$ (111,045,026)	\$ (3,424,106)
Private placements of shares for cash	9	6,409,009	541,372	-	-	-	541,372
Shares issued on settlement of accounts payable		79,765	10,649	-	-	-	10,649
Renewal of convertible debentures	8	-	-	-	90,006	-	90,006
Convertible debentures converted into common shares	8	9,393,690	614,795	-	-	-	614,795
Stock-based compensation	10			140,612			140,612
Net loss						(2,061,375)	(2,061,375)
Balance at July 31, 2018		244,445,175	\$ 81,365,010	\$ 27,501,288	\$ 152,056	\$ (113,106,401)	\$ (4,088,047)
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	9	2,961,059	112,968	-	-	-	112,968
Financing costs converted into common shares	8	350,000	21,000	-	-	-	21,000
Convertible debentures converted into common shares	8	30,624,739	882,964	-	-	-	882,964
Expiry of convertible debenture conversion option	8	-	-	91,952	(91,952)	-	-
Renewal of convertible debentures	8	-	-	-	85,646	-	85,646
Net loss		-	-	-	-	(1,712,924)	(1,712,924)
Balance at July 31, 2019		293,538,497	\$ 83,299,835	\$ 27,722,861	\$ 63,977	\$ (115,120,189)	\$ (4,033,516)

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 and nine months ended July 31, 2019 and 2018

(Expressed in United States dollars)

	Notes	Three months ended July 31, 2019 2018			Nine months o 2019	ende	nded July 31, 2018		
Operating activities						 			
Net income (loss)		\$	(554,533)	\$	22,711	\$ (1,712,924)	\$	(2,061,375)	
Items not affecting cash:									
Stock-based compensation	10		-		140,612	-		140,612	
Amortization of property and equipment			792		842	2,381		2,545	
Amortization of patents	7		188,113		41,134	265,075		118,253	
Accretion expense	8,14		298,355		533,494	1,103,438		1,428,108	
Accrued interest on convertible debentures	14		140,313		123,254	215,250		346,232	
Shares issued for financing costs	8,14		-		-	21,000		-	
Gain on revaluation of derivative liabilities	8,14		(417,239)		(1,122,960)	(735,242)		(1,079,690)	
Loss on conversion of convertible debentures	8		11,701		-	31,499		-	
Loss (gain) on extinguishment of convertible debentures	8,14		-		43,832	(707)		4,691	
Foreign exchange loss	18		75,187		-	 36,762		-	
			(257,311)		(217,081)	(773,468)		(1,100,624)	
Net changes in non-cash working capital:									
Decrease in development costs receivable	6		-		-	81,841		-	
Decrease (increase) in prepaid expenses and other receivables			20,632		40,880	(5,042)		603,186	
Increase (decrease) in trade payables and other liabilities			120,629		(87,773)	 75,108		(438,535)	
Cash flows used in operating activities			(116,050)		(263,974)	(621,561)		(935,973)	
Investing activity									
Patents	7		(10,932)		(29,588)	 (18,147)		(113,970)	
Cash flows used in investing activity			(10,932)		(29,588)	(18,147)		(113,970)	
Financing activities									
Private placements of shares for cash	9		10,000		270,011	112,968		541,372	
Proceeds from issuance of convertible debentures	14		125,278		453,760	501,799		1,370,036	
Repayments of convertible debentures	14		-		(369,615)	(170,663)		(775,733)	
Repayments from related parties			-		-	 -		(15,000)	
Cash flows provided by financing activities			135,278		354,156	 444,104		1,120,675	
Net change in cash			8,296		60,594	(195,604)		70,732	
Cash - beginning of period			2,932		19,327	 206,832		9,189	
Cash - end of period		\$	11,228	\$	79,921	\$ 11,228	\$	79,921	
Supplemental cash flow information									
Interest paid (classified in operating activities)	8	\$	79,916	\$	84,666	\$ 258,669	\$	237,714	
Income taxes paid	12	\$	-	\$	-	\$ 	\$		
Carrying amount of convertible debentures converted into									
common shares	14	\$	543,964	\$	234,444	\$ 851,465	\$	550,119	

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

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 July 31, 2019 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 nine months ended July 31, 2019, the Company reported a net loss and comprehensive loss of 1,712,924 (2018 - 2,061,375) and negative cash flow from operations of 621,561 (2018 - 953,973). The Company's working capital deficiency as at July 31, 2019 was 4,189,540 (October 31, 2018 - 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 2019; 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.

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 and nine months ended July 31, 2019 and 2018 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, 2018. The Company applied, as of November 1, 2018, International Financial Reporting Standard ("IFRS") 9 Financial instruments. 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 September 24, 2019.

(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.

3. Basis of presentation (continued)

(a) Basis of consolidation (continued)

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 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) Memtech International Inc. domiciled in the Bahamas; Memtech International (USA) Inc. domiciled in Delaware, United States; Pageant Technologies (USA) Inc. domiciled in the United States; Pageant Technologies Inc. domiciled in Barbados; and Micromem Holdings (Barbados) Inc. domiciled in Barbados. All of these entities are inactive.
- (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 or 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.

(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.

3. Basis of presentation (continued)

(d) Use of estimates and judgments (continued)

(iii) Income taxes (continued)

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) Amendments to IFRS 2 Share-based payments

IFRS 2 clarifies how to account for certain types of share-based payment transactions. The amendments provide requirements on the accounting for the effects of vesting and non-vesting conditions on the measurement of cash-settled share-based payments, share-based payment transactions with a net settlement feature for withholding tax obligations, and a modification to the terms and conditions of a share-based payment that changes the classification of the transaction from cash-settled to equity-settled. The effective date of these amendments is for annual periods beginning January 1, 2018. The Company has adopted these amendments as of the effective date and has assessed no significant changes as a result of the adoption of these amendments.

(b) IFRS 9 Financial instruments

IFRS 9 addresses classification and measurement of financial assets and replaces the multiple category and measurement models in IAS 39 for debt instruments with a new mixed measurement model having only two categories: amortized cost, and fair value through profit or loss. IFRS 9 also replaces the models for measuring equity instruments and such instruments are either recognized at fair value through profit or loss or at fair value through other comprehensive income ("FVOCI"). The effective date of this standard is for annual periods beginning January 1, 2018. The Company has adopted this new standard as of its effective date on a retrospective basis with the exception of financial assets that were derecognized at the date of initial application, November 1, 2018. There was no significant impact on the unaudited condensed interim consolidated financial statements as a result of the adoption of this new standard. The new classification and measurement of the Company's financial assets are as follows:

(i) Amortized cost

This category includes financial assets that are held within a business model with the objective to hold the financial assets in order to collect contractual cash flows that meet the solely principal and interest ("SPPI") criterion. Financial assets classified in this category are measured at amortized cost using the effective interest method.

(ii) Fair value through profit or loss ("FVTPL")

This category includes derivative instruments as well as quoted equity instruments which the Company has not irrevocably elected, at initial recognition or initial application date, to classify at FVOCI. This category would also include debt instruments whose cash flow characteristics fail the SPPI criterion or are not held within a business model whose objective is either to collect contractual cash flows, or to both collect contractual cash flows and sell. Financial assets in this category are recorded at fair value with changes recognized in profit or loss.

4. Adoption of new accounting pronouncements (continued)

(b) IFRS 9 Financial instruments (continued)

(iii) Impairment of financial assets

Critical to the determination of ECLs is the definition of default and the definition of a significant increase in credit risk. The definition of default is used in measuring the amount of ECLs and in the determination of whether the loss allowance is based on 12-month or lifetime ECLs. The Company considers the following as constituting an event of default: the borrower is past due more than 90 days on any material credit obligation, or the borrower is unlikely to pay its credit obligations to the Company in full. The Company monitors all financial assets that are subject to the impairment requirements to assess whether there has been a significant increase in credit risk since initial recognition. If there has been a significant increase in credit risk since initial recognition, the Company compares the risk of a default on the financial asset at the current reporting date against the risk of a default that was anticipated when the financial asset was first recognized, adjusted for remaining maturity of the instrument.

The assessment of the Company's business models was made as of the date of initial application, November 1, 2018, and then applied retrospectively to those financial instruments that were not derecognized before November 1, 2018. There was no adjustment to opening accumulated deficit resulting from the retrospective application of IFRS 9 to these financial instruments.

	IFRS 9	IAS 39
Financial assets		
Cash	Amortized cost	FVTPL
Development costs receivable	Amortized cost	Amortized cost
Other receivables	Amortized cost	Amortized cost
Financial liabilities		
Trade payables and other liabilities	Amortized cost	Amortized cost
Convertible debentures	Amortized cost	Amortized cost
Derivative liabilities	FVTPL	FVTPL

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

(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 if the Company is also applying IFRS 15, Revenue from Contracts with Customers. The Company will adopt this new standard 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 this standard.

(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 will be effective for the annual periods beginning on or after January 1, 2019, with earlier application 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 this standard.

6. Development costs receivable

The Company incurs development costs, and recovers from its development partners, a portion of the costs it has incurred in accordance with meeting milestones as stipulated in development contracts. The remaining balances outstanding from its development partners is recorded as development costs receivable on the unaudited condensed interim consolidated statements of financial position.

7. Patents

Notes to Unaudited Condensed Interim Consolidated Financial Statements

For the three and nine months ended July 31, 2019 and 2018

(Expressed in United States dollars, unless otherwise noted)

	No	As at vember 1, 2018	A	dditions	As at July 31, 2019			
Cost Accumulated amortization	\$	904,431 508,326	\$	18,147 265,075	\$	922,578 773,401		
Net book value	\$	396,105			\$	149,177		
		As at November 1, 2017			As at July 31, 2018			
	No	,	A	dditions	J			
Cost Accumulated amortization	No \$,	<u>A</u> \$	dditions 113,970 118,253	J \$			

8. 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 and nine months ended July 31, 2019, the Company expensed \$305 and \$52,562, respectively (2018 - \$33,977 and \$181,435), in financing costs which primarily consist of early payment premium, commitment fees, and administrative fees relating to the convertible debentures. During the nine months ended July 31, 2019, \$21,000 (2018 - \$nil) of total financing costs were settled in the Company's common shares.

All dollar amounts are expressed in USD, unless otherwise specified on a line-by-line basis.

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

Convertible debentures outstanding as at July 31, 2019:

				•			Total
\$	931,000	\$	2,248,060	\$	522,370		
12% - 24% 36% \$0.04 - \$0.07 0 - 4		12% - 24% 14% - 645% \$0.05 - \$0.15 0 - 12		4% - 24% 4023% - (i) - (iii) 0 - 9			
ncial	position						
\$	903,601 32,919	\$	1,329,101 207,884	\$	110,686 48,076	\$	2,343,388 288,879
\$	936,520	\$	1,536,985	\$	158,762	\$	2,632,267
\$ \$	- 63,977	\$ \$	169,107 -	\$ \$	338,839	\$ \$	507,946 63,977
	<u>co</u> \$ 12 \$0. \$ \$ \$ \$	(equity component) \$ 931,000 12% - 24% 36% \$0.04 - \$0.07 0 - 4 mcial position \$ 903,601 32,919 \$ 936,520 \$ -	(equity ()) (1) (1) (2) (2) (2) (2) (2) (2) (2) (2) (2) (2	$\begin{array}{c c} (equity \\ component) \\ \hline \\ $	$\begin{array}{c c} (equity \\ component) \\ \hline \\ & \\ &$	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	$\begin{array}{c c} (equity \\ component) \\ \hline \$ 931,000 \\ \hline \$ 2,248,060 \\ \hline \$ 2,248,060 \\ \hline \$ 522,370 \\ \hline \cr 12\% - 24\% \\ 36\% \\ 14\% - 645\% \\ 4023\% - \\ \$ 0.04 - \$0.07 \\ \$ 0.05 - \$0.15 \\ 0 - 4 \\ \hline \cr 0 - 12 \\ \hline \cr 0 - 9 \\ \hline \cr \mcial position \\ \hline \$ 903,601 \\ \hline \cr 32,919 \\ \hline \cr 936,520 \\ \hline \$ 1,329,101 \\ \hline \cr 110,686 \\ \$ 48,076 \\ \hline \cr 158,762 \\ \hline \cr \cr$

8. Convertible debentures (continued)

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

For the nine months ended July 31, 2019:

		USD (equity mponent)	CDN (embedded derivative)		USD (embedded derivative)			Total		
Unaudited condensed interim consolidated statement of operations and comprehensive loss										
Accretion expense	\$	94,410	\$	650,009	\$	359,019	\$	1,103,438		
Interest expense	\$	156,399	\$	257,218	\$	60,302	\$	473,919		
Gain on revaluation of derivative liabilities	\$	-	\$	(734,162)	\$	(1,080)	\$	(735,242)		
Loss on conversion of convertible debentures	\$	-	\$	-	\$	31,499	\$	31,499		
Loss (gain) on extinguishment of convertible debentures	\$	-	\$	(2,926)	\$	2,219	\$	(707)		
Unaudited condensed interim consolidated statement of cha	nges i	n equity								
Amount of principal converted to common shares	\$	-	\$	-	\$	555,980	\$	555,980		
Amount of interest converted to common shares	\$	-	\$	-	\$	29,373	\$	29,373		
Number of common shares issued on conversion of convertible debentures	e	-		-		30,624,739		30,624,739		
Unaudited condensed interim consolidated statement of cas	h flow	S								
Amount of principal repaid in cash	\$	-	\$	95,063	\$	75,600	\$	170,663		
Amount of interest repaid in cash	\$	138,580	\$	114,116	\$	5,973	\$	258,669		

For the three months ended July 31, 2019:

	(e	USD equity ponent)	CDN (embedded derivative)		USD (embedded derivative)			Total		
Unaudited condensed interim consolidated statement of operations and comprehensive loss										
Accretion expense	\$	30,837	\$	224,431	\$	43,087	\$	298,355		
Interest expense	\$	59,275	\$	145,744	\$	15,210	\$	220,229		
Gain on revaluation of derivative liabilities	\$	-	\$	(327,164)	\$	(90,075)	\$	(417,239)		
Loss on conversion of convertible debentures	\$	-	\$	-	\$	11,701	\$	11,701		
Gain on extinguishment of convertible debentures	\$	-	\$	-	\$	-	\$	-		
Unaudited condensed interim consolidated statement of char	iges in	equity								
Amount of principal converted to common shares	\$	-	\$	-	\$	225,000	\$	225,000		
Amount of interest converted to common shares	\$	-	\$	-	\$	10,406	\$	10,406		
Number of common shares issued on conversion of convertible debentures		-		-		12,193,523		12,193,523		
Unaudited condensed interim consolidated statement of cash	flows									
Amount of principal repaid in cash	\$	-	\$	-	\$	-	\$	-		
Amount of interest repaid in cash	\$	44,860	\$	35,056	\$	-	\$	79,916		

(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.

(iii) Conversion price defined as 75% multiplied by the lowest stock price for the 15 trading days prior to conversion date.

8. Convertible debentures (continued)

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

Convertible debentures outstanding as at October 31, 2018:

	USD (equity component)		CDN (embedded derivative)		(USD mbedded erivative)		Total
Loan principal outstanding (original currency)	\$	931,000	\$	2,234,294	\$	622,850		
Terms of loan Annual stated interest rate Effective annual interest rate Conversion price to common shares (original currency) Remaining life (in months)	12% - 24% 36% - 37% \$0.04 - \$0.21 0 - 7		12% - 24% 23% - 398% \$0.05 - \$0.15 0 - 7		5% - 24% 160% - 6002% (i) - (iv) 1 - 12			
Unaudited condensed interim consolidated statement of fina Carrying value of loan principal	ncial \$	position 894,838 15,100	\$	1,428,616 81,323	\$	27,789 28,905	\$	2,351,243 125,328
Interest payable Convertible debentures	\$	909,938	\$	1,509,939	\$	<u>28,903</u> 56,694	\$	2,476,571
Derivative liabilities Equity component of convertible debentures	\$ \$	- 70,283	\$ \$	151,918 -	\$ \$	498,198 -	\$ \$	650,116 70,283

For the nine months ended July 31, 2018:

		USD (equity mponent)	```	CDN (embedded derivative)		USD (embedded derivative)		Total
Unaudited condensed interim consolidated statement of op	eration	s and compr	ehens	sive loss				
Accretion expense	\$	109,655	\$	1,014,373	\$	304,080	\$	1,428,108
Interest expense	\$	81,716	\$	225,408	\$	39,108	\$	346,232
Loss (gain) on revaluation of derivative liabilities	\$	-	\$	(999,761)	\$	(79,929)	\$	(1,079,690)
Loss (gain) on extinguishment of convertible debentures	\$	-	\$	(87,160)	\$	91,851	\$	4,691
Unaudited condensed interim consolidated statement of cha	anges i	n 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	e							
debentures		-		254,295		9,139,395		9,393,690
Unaudited condensed interim consolidated statement of cas	sh flow	S						
Amount of principal repaid in cash	\$	-	\$	639,615	\$	-	\$	639,615
Amount of interest repaid in cash	\$	116,260	\$	121,454	\$	-	\$	237,714

8. Convertible debentures (continued)

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

For the three months ended July 31, 2018:

	(6	USD equity ponent)	CDN (embedded derivative)		embedded (embedded		Total
Unaudited condensed interim consolidated statement of ope	rations	and compr	ehens	ive loss			
Accretion expense	\$	17,862	\$	380,506	\$	135,126	\$ 533,494
Interest expense	\$	44,332	\$	58,253	\$	20,669	\$ 123,254
Gain on revaluation of derivative liabilities	\$	-	\$	(966,343)	\$	(156,617)	\$ (1,122,960)
Loss (gain) on extinguishment of convertible debentures	\$	-	\$	(4,603)	\$	48,435	\$ 43,832
Unaudited condensed interim consolidated statement of cha	nges in	equity					
Amount of principal converted to common shares	\$	-	\$	-	\$	234,444	\$ 234,444
Amount of interest converted to common shares	\$	-	\$	6,150	\$	9,194	\$ 15,344
Number of common shares issued on conversion of convertible	;						
debentures		-		38,295		4,926,586	4,964,881
Unaudited condensed interim consolidated statement of casl	ı flows						
Amount of principal repaid in cash	\$	-	\$	369,615	\$	-	\$ 369,615
Amount of interest repaid in cash	\$	42,460	\$	42,206	\$	-	\$ 84,666

(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.

(iii) Conversion price defined as 80% multiplied by the lowest 3 closing stock prices for the 10 trading days prior to conversion date.

(iv) Conversion price defined as 75% multiplied by the lowest stock price for the 15 trading days prior to conversion date.

(c) Fair value of derivative liabilities outstanding

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

	As at July 31, 2019	As at October 31, 2018
Share price	\$0.02	\$0.03
Exercise price	\$0.01 - \$0.11	\$0.02 - \$0.11
Volatility factor (based on historical volatility)	168% - 311%	168% - 297%
Risk free interest rate	1.65% - 1.68%	1.74% - 2.22%
Expected life of conversion features (in months)	0 - 12	0 - 12
Expected dividend yield	0%	0%
CDN to USD exchange rate (as applicable)	0.7606	0.7609
Call value	\$0.00 - \$0.02	\$0.00 - \$0.02

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

9. 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 July 31, 2019, the Company completed a private placement (2018 - fifteen private placements), pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$10,000 (2018 - \$270,011) and issued a total of 270,270 (2018 - 3,471,122) common shares.

During the nine months ended July 31, 2019, the Company completed four private placements (2018 - twenty-three private placements), pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$112,968 (2018 - \$541,372) and issued a total of 2,961,059 (2018 - 6,409,009) common shares.

10. 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, 2018 Expired	6,250,000 (520,000)	\$	0.29 0.80		
Outstanding at July 31, 2019	5,730,000	\$	0.25		
Outstanding at November 1, 2017 Granted ⁽ⁱ⁾ Expired	6,595,000 2,200,000 (1,860,000)	\$	0.37 0.10 (0.35)		
Outstanding at July 31, 2018	6,935,000	\$	0.29		

(i) The fair value of the options granted were determined in accordance with the Black-Scholes option-pricing model. The underlying assumptions are as follows:

Share price	\$0.09
Exercise price	\$0.10
Volatility factor (based on historical volatility)	95%
Risk free interest rate	2.07%
Expected life of conversion features (in months)	60
Expected dividend yield	0%
Forfeiture rate	0%

10. Stock options (continued)

(c) Stock options outstanding at July 31, 2019

				Weighte	d average
Date of issue	Expiry date	Number of options	Exer	cise price	Remaining contractual life (years)
June 4, 2015	June 4, 2020	300,000	\$	0.49	0.8
August 20, 2015	August 20, 2020	940,000		0.46	1.1
September 30, 2015	September 30, 2020	250,000		0.40	1.2
December 30, 2016	December 30, 2021	2,040,000		0.25	2.4
June 29, 2018	June 29, 2023	2,200,000		0.10	3.9
Outstanding and exercisable at	t July 31, 2019	5,730,000	\$	0.25	2.6

11. Earnings (loss) per share

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

	Three months ended July 31,					Nine months ended July 31,		
Numerator		2019		2018		2019		2018
Net income (loss) attributable to common shareholders Net income (loss) used in computation of basic and diluted	\$	(554,533)	\$	22,711	\$	(1,712,924)	\$	(2,061,375)
income (loss) per share	\$	(554,533)	\$	22,711	\$	(1,712,924)	\$	(2,061,375)
Denominator								
Weighted average number of common shares for computation of basic and diluted income (loss) per share	28	87,720,884	23	7,596,150		277,543,200	2	233,464,703

For the three and nine months ended July 31, 2019 and 2018, all stock options and conversion features were anti-dilutive and, therefore, are excluded from the calculation of diluted income (loss) per share.

12. 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, 2018, the Company has non-capital losses of approximately \$29.1 million, \$24.3 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 July 31, 2019 and October 31, 2018, 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.

13. Operating expenses

(a) General and administrative

The components of general and administrative expenses are as follows:

	Three months ended July 31,			Nine months ende			ded July 31,	
		2019		2018		2019		2018
General and administrative	\$	13,375	\$	7,848	\$	35,197	\$	30,664
Rent and occupancy		17,492		17,178		48,952		54,052
Office insurance		205		23,308		26,606		79,422
Investor relations, listing and filing fees		10,461		12,634		39,806		41,946
Telephone		877		2,151		3,395		7,846
	\$	42,410	\$	63,119	\$	153,956	\$	213,930

(b) Professional, other fees and salaries

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

	T	Three months ended July 31,				Nine months ended J			
		2019		2018		2019		2018	
Professional fees	\$	42,213	\$	36,425	\$	113,347	\$	125,309	
Consulting fees		14,855		70,163		41,834		244,009	
Salaries and benefits		56,361		73,940		175,907		202,460	
	\$	113,429	\$	180,528	\$	331,088	\$	571,778	

14. Supplemental cash flow information

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

	Th	ree months ended Jul	Nine months y 31, 2019		
Balance - beginning of period	\$	3,241,885	\$	3,126,687	
Cash flows from financing activities:					
Proceeds from issuance of convertible debentures		125,278		501,799	
Repayments of convertible debentures		-		(170,663)	
Non-cash changes:					
Accrued interest on convertible debentures		140,313		215,250	
Accretion expense		298,355		1,103,438	
Gain on extinguishment of debt		-		(707)	
Gain on revaluation of derivative liabilities		(417,239)		(735,242)	
Foreign exchange loss		81,493		43,068	
Convertible debentures converted into common shares		(294,367)		(851,465)	
Renewal of convertible debentures		(35,505)		(91,952)	
Balance - end of period	\$	3,140,213	\$	3,140,213	

15. 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:

	ee months 019	ended	l July 31, 2018	ne months 2019	ended	July 31, 2018
Professional, other fees, and salaries Stock-based compensation	\$ -	\$	57,196 44,740	\$ -	\$	208,938 44,740
	\$ -	\$	101,936	\$ -	\$	253,678

During the three months and nine months ended July 2019, these parties were not awarded any options (2018 - 700,000 options at an exercise price of \$0.10).

(b) Trade payables and other liabilities

As at July 31, 2019 and October 31, 2018, 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 July 31, 2019 and October 31, 2018, 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 served as its Chief Technology Officer. This individual was elected as a director on February 19, 2014. The balance reported relates to services provided in 2015; there have been no invoices submitted by this related party after October 31, 2015.

(c) Convertible debentures

In May 2019, an officer of the Company subscribed for a short-term loan of \$15,000 CDN (\$11,450 USD). At July 31, 2019, \$10,000 CDN (\$9,541 USD) in loan principal remains outstanding.

In January 2018, an officer of the Company subscribed for a convertible debenture of \$150,000 CDN (\$114,086 USD). At July 31, 2019, \$54,362 CDN (\$41,346 USD)(October 31, 2018 - \$100,862 CDN, \$76,713 USD) in loan principal remains outstanding.

16. Commitments

The Company has extended the lease for its 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:

	 CDN
Less than one year	\$ 48,060
Two to five years	 96,120
	\$ 144,180

17. Contingencies

- (a) The Company has agreed to indemnify its directors and officers and certain of its employees in accordance with the Company's bylaws. 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 July 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. This matter remains as a contingency at September 24, 2019.

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 Canadian dollars. 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 July 31, 2019, balances that are denominated in Canadian dollars are as follows:

	 CDN
Cash	\$ 21,738
Prepaid expenses and other receivables	\$ 45,911
Trade payables and other liabilities	\$ 395,273
Convertible debentures	\$ 2,013,604
Derivative liabilities	\$ 221,547

A 10% strengthening of the US dollar against the Canadian dollar would decrease accumulated deficit by \$177,833 as at July 31, 2019 (October 31, 2018 - decrease accumulated deficit by \$158,836). A 10% weakening of the US dollar against the Canadian dollar 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.

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 July 31, 2019.

(i) Trade payables

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

	As at July 31, 2019		As at October 31, 2018	
Less than 30 days past billing date 31 to 90 days past billing date	\$ 27,089 68,340	\$	87,356 12,837	
Over 90 days past billing date	\$ 798,137 893,566	\$	740,131 840,324	

As at July 31, 2019, trade payables include \$540,000 (October 31, 2018 - \$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 July 31, 2019		As at October 31, 2018		
	Convertible	Derivative	Convertible	Derivative		
	debentures	liabilities	debentures	liabilities		
Less than three months	\$ 1,498,146	\$ 67,343	\$ 862,686	\$ 90,142		
Three to six months	730,339	256,951	1,346,315	382,309		
Six to twelve months	403,782	183,652	267,570	177,665		
	\$ 2,632,267	\$ 507,946	\$ 2,476,571	\$ 650,116		

(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 \$11,228 as at July 31, 2019 (October 31, 2018 - \$288,673). 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 \$11.228 at July 31, 2019 (October 31, 2018 - \$206,832). 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.

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 and nine months ended July 31, 2019 and 2018, 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 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 three and nine months ended July 31, 2019.

21. Subsequent events

Subsequent to July 31, 2019:

- (a) The Company secured three convertible debentures amounting to \$160,000 USD and \$25,000 CDN (\$19,083 USD), respectively. All debentures have a one year term.
- (b) The Company issued 29,160,946 common shares to extinguish \$259,049 of convertible debentures.
- (c) The Company extended convertible debentures that were within 3 months of maturity from July 31, 2019. Extension terms ranged from 2 to 6 months.