

Micromem Technologies Inc. Unaudited Condensed Interim Consolidated Financial Statements

For the three and six months ended April 30, 2020 and 2019 (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.

June 25, 2020

Unaudited Condensed Interim Consolidated Statements of Financial Position As at April 30, 2020 and October 31, 2019

(Expressed in United States dollars)

	Notes	As at April 30, 2020		Oct	As at tober 31, 2019
Assets					
Current					
Cash	19	\$	35,581	\$	46,056
Prepaid expenses and other receivables			27,282		14,751
Total current assets			62,863		60,807
Property and equipment	6		63,120		2,677
Patents	7		15,877		20,000
Total assets		\$	141,860	\$	83,484
Liabilities					
Current					
Trade payables and other liabilities	19(c)	\$	887,191	\$	997,632
Current lease liability	8		36,442		=
Convertible debentures	10,19		2,429,479		2,599,074
Derivative liabilities	10,19		795,424		765,425
Total current liabilities			4,148,536		4,362,131
Long-term lease liability	8		26,442		-
Long-term loan	9		28,454		-
Total liabilities			4,203,432		4,362,131
Shareholders' Deficiency					
Share capital	11		85,022,247		84,153,696
Contributed surplus			27,767,970		27,757,639
Equity component of convertible debentures	10		42,617		50,147
Accumulated deficit			(116,894,406)		(116,240,129)
Total shareholders' deficiency			(4,061,572)		(4,278,647)
Total liabilities and shareholders' deficiency		\$	141,860	\$	83,484
Going concern	2				
Contingencies	18				
Subsequent events	22				

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

Approved on behalf of the Board of Directors:	
"Joseph Fuda"	"Alex Dey"
Director	Director

$Unaudited\ Condensed\ Interim\ Consolidated\ Statements\ of\ Operations\ and\ Comprehensive\ Loss$ For the three and six months ended April 30, 2020 and 2019

(Expressed in United States dollars)

	Notes	Three months e		ended April 30, 2019		• /		ended April 30, 2019	
Operating expenses									
General and administrative	15(a)	\$	32,414	\$	58,175	\$	55,684	\$	111,546
Professional, other fees and salaries	15(b)		91,782		69,130		292,543		217,659
Development costs (recovery)			-		(34,366)		-		(34,366)
Travel and entertainment			8,294		10,948		19,090		21,890
Amortization of property and equipment	6		6,926		795		13,864		1,589
Amortization of patents	7		2,123		38,505		4,123		76,962
Foreign exchange loss (gain)	19(a)		(127,280)		(40,749)		(139,126)		(49,007)
Total operating expenses			14,259		102,438		246,178		346,273
Other expenses (income)									
Accretion expense	10		295,490		410,888		475,563		805,083
Interest expense	10		113,739		119,727		238,863		253,690
Financing costs	10		28,000		1,491		29,500		52,257
Gain on revaluation of derivative liabilities	10		(1,434,549)		(585,583)		(282,425)		(318,003)
Loss on conversion of convertible debentures	10		21,417		2,308		63,273		19,798
Gain on extinguishment of convertible debentures	10		(110,102)		(3,181)		(116,675)		(707)
Total other (income) expenses			(1,086,005)		(54,350)		408,099		812,118
Net income (loss) before income tax provision			1,071,746		(48,088)		(654,277)		(1,158,391)
Income tax provision	14								
Net income (loss) and comprehensive income (loss)		\$	1,071,746	\$	(48,088)	\$	(654,277)	\$	(1,158,391)
Weighted average number of outstanding shares,									
basic and diluted	13		373,233,687	2	277,050,908		365,036,629		272,370,012
Basic and diluted income (loss) per share	13	\$	-	\$	-	\$	-	\$	

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

Unaudited Condensed Interim Consolidated Statements of Changes in Equity

For the three and six months ended April $30,2020\ \text{and}\ 2019$

(Expressed in United States dollars)

	Notes	Number of shares	Share capital	Contributed surplus	Equity component of convertible debentures	Accumulated deficit	Total
Balance at November 1, 2019		346,952,721	\$ 84,153,696	\$ 27,757,639	\$ 50,147	\$ (116,240,129)	\$ (4,278,647)
Private placements of shares for cash	11	9,643,397	389,814	-	-	-	389,814
Convertible debentures converted into common shares	10	20,073,453	464,186	-	-	-	464,186
Expiry of convertible debenture conversion option	10	-	-	10,331	(10,331)	-	-
Renewal of convertible debentures	10	-	-	-	2,801	-	2,801
Shares issued on settlement of accounts payable		365,094	14,551	-	-	-	14,551
Net loss						(654,277)	(654,277)
Balance at April 30, 2020		377,034,665	\$ 85,022,247	\$ 27,767,970	\$ 42,617	\$ (116,894,406)	\$ (4,061,572)
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	11	2,690,789	102,968	-	-	-	102,968
Financing costs converted into common shares		350,000	21,000	-	-	-	21,000
Convertible debentures converted into common shares	10	18,431,216	576,896	-	-	-	576,896
Expiry of convertible debenture conversion option	10	-	-	56,447	(56,447)	-	-
Renewal of convertible debentures	10	-	-	-	56,447	-	56,447
Net loss						(1,158,391)	(1,158,391)
Balance at April 30, 2019		281,074,704	\$ 82,983,767	\$ 27,687,356	\$ 70,283	\$ (114,565,656)	\$ (3,824,250)

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

$Unaudited\ Condensed\ Interim\ Consolidated\ Statements\ of\ Cash\ Flows\\ For\ the\ three\ and\ six\ months\ ended\ April\ 30,2020\ and\ 2019$

(Expressed in United States dollars)

		Three months ended April 30,		Six months ended Ap			April 30,		
	Notes		2020		2019		2020		2019
Operating activities									
Net income (loss)		\$	1,071,746	\$	(48,088)	\$	(654,277)	\$	(1,158,391)
Items not affecting cash:									
Amortization of patents	7		2,123		38,505		4,123		76,962
Amortization of property and equipment	6		6,926		795		13,864		1,589
Accretion expense	10,16		295,490		410,888		475,563		805,083
Accrued interest on convertible debentures	10,16		70,917		34,204		109,666		74,937
Loss on conversion of convertible debentures	10		21,417		2,308		63,273		19,798
Gain on revaluation of derivative liabilities	10,16		(1,434,549)		(585,583)		(282,425)		(318,003)
Gain on extinguishment of convertible debentures	10,16		(110,102)		(3,181)		(116,675)		(707)
Shares issued for financing costs	10,16		-		-		-		21,000
Shares issued on settlement of accounts payable			14,551		-		14,551		-
Foreign exchange gain	19		(143,079)		(45,725)		(158,065)		(38,425)
			(204,560)		(195,877)		(530,402)		(516,157)
Net changes in non-cash working capital:									
Decrease in development costs receivable			-		-		-		81,841
Decrease (increase) in prepaid expenses and other receivables			8		(14,528)		(12,531)		(25,674)
Increase (decrease) in trade payables and other liabilities			38,322		32,875		(110,441)		(45,521)
Cash flows used in operating activities			(166,230)		(177,530)		(653,374)		(505,511)
Investing activity									
Patents	7		-		(467)		-		(7,215)
Cash flows used in investing activity			-		(467)		-		(7,215)
Financing activities									
Repayment of lease liability	8		(2,312)		_		(11,423)		
Proceeds from long-term debt	9		28,454		_		28,454		
Private placements of shares for cash	11		43,593		52,968		389,814		102,968
Proceeds from is suance of convertible debentures	16		90,000		70,521		430,177		376,521
Repayments of convertible debentures	16		(138,844)		(15,030)		(194,123)		(170,663)
Cash flows provided by financing activities			20,891		108,459		642,899		308,826
Net change in cash			(145,339)		(69,538)		(10,475)		(203,900)
Cash - beginning of period			180,920		72,470		46,056		206,832
Cash - end of period		\$	35,581	\$	2,932	\$	35,581	\$	2,932
•		<u> </u>	20,001	<u> </u>	2,732	Ψ	22,201	Ψ.	
Supplemental cash flow information Interest paid (classified in operating activities) Carrying amount of convertible debentures converted into	8,10	\$	42,822	\$	85,523	\$	129,197	\$	178,753
common shares	16	\$	115,801	\$	249,597	\$	400,913	\$	557,098

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 and six months ended April 30, 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 April 30, 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 six months ended April 30, 2020, the Company reported a net loss and comprehensive loss of \$654,277 (2019 - \$1,158,391) and negative cash flow from operations of \$653,374 (2019 - \$505,511). The Company's working capital deficiency as at April 30, 2020 was \$4,085,673 (October 31, 2019 - \$4,301,324).

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 impact of the pandemic has resulted in the layoff of Company staff as of March 27, 2020. The Company has encountered delays of 3 to 6 months in the commercial status plans of its technology with its primary customers. It secured a government backed loan of \$40,000 CDN (\$28,454 USD) which matures in December 2025 (Note 9).

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 six months ended April 30, 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 June 25, 2020.

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)	Inactive subsidiaries	Domiciled
		in
	Memtech International Inc.	Bahamas
	Memtech International (USA) Inc., Pageant Technologies (USA)	United
	Inc.	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.

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.

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.

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

		As at November 1,		As at April 30,
		2019	Additions	2020
Cost Comput		\$	\$	\$
ers	Note	32,040	-	32,040
Right-of-use assets	4(a)	<u>74,307</u> \$	-	74,307 \$
		106,347		106,347
Accumulated				
amortization Comput		\$	\$	\$
ers		29,363	354	29,717
Right-of-use assets	Note 4(a)	-	13,510	13,510
8		\$		\$
		29,363		43,227
		\$		\$
Net book value		76,984		63,120
		As at November 1,		As at April 30,
		2018	Additions	2019
Compu				
ters		\$	\$	\$
Cost		55,723	-	55,723
Accumulated amortization		46,495	1,589	48,084
		\$	1,507	\$
Net book value		9,228		7,639

7. Patents

	As at November 1,		As at April 30,
	2019	Additions	2020
	\$	\$	\$
Cost	681,288	-	681,288
Accumulated amortization	661,288	4,123	665,411

Net book value	\$ 		\$ 15,877
	As at November 1,		As at April 30,
	2018	Additions	2019
	\$	\$	\$
Cost	904,431	7,215	911,646
Accumulated			
amortization	508,326	76,962	585,288
Net book value	\$		\$
	396,105		326,358

8. Leases

(a) Maturity analysis of lease obligations

The following represents a maturity analysis of the Company's undiscounted contractual lease obligations as at April 30, 2020.

	CDN
Less than one year	\$
	48,060
Two to five years	
	56,070
	\$
	104,130

(b) Supplemental disclosure

For the three and six months ended April 30, 2020, the Company recognized \$3,980 and \$6,592 respectively 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 \$2,312 and \$11,423 relating to leases.

9. Long-term loan

On April 15, 2020, the Company obtained a \$40,000 CDN (\$28,454 USD) interest-free loan from the Government of Canada under the Canada Emergency Business Account ("CEBA") program to cover its operating costs. The term loan matures on December 31, 2025. Repaying the balance of the loan on or before December 31, 2022 will result in a loan forgiveness of \$10,000. Effective January 1, 2023, any outstanding balance on the term loan shall bear interest at a rate of 5% per annum.

10. 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 six months ended April 30, 2020, the Company expensed \$28,000 and \$29,500, respectively (2019 - \$1,491 and \$52,257), in financing costs which primarily consist of early repayment premiums and admininistrative fees relating to the convertible debentures. During the six months ended April 30, 2020, \$1,500 (2019 - \$21,000) of total financing costs were settled in the Company's 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 April 30, 2020:

	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	Total
Loan principal outstanding	\$ 931,000	\$ 2,132,653	\$ 602,708	
• •	931,000	2,132,033	002,708	
Terms of loan				
Annual stated interest rate	12% - 24%	12% - 24%	4% - 24%	
Effective annual interest rate	24% - 36%	13% - 1270%	139% - 20559%	
Conversion price to common shares	\$0.04 - \$0.07	\$0.05 - \$0.14	(i) - (ii)	
Remaining life (in months)	0 - 5	0 - 6	3 - 11	
Unaudited condensed interim consolidated statement position	of financial			
Carrying value of loan principal	\$	\$	\$	\$
, g	928,199	1,210,139	30,383	2,168,7 21
Interest payable				
	68,521	157,353	34,884	260,75 8
Convertible	\$	\$	\$	\$
debentures	996,720	1,367,492	65,267	2,429,4 79
Derivative liabilities	\$	\$	\$	\$
	-	292,396	503,028	795,42 4
Equity component of convertible debentures	\$	\$	\$	\$
	42,617	-	-	42,617

10. Convertible debentures (continued)

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

For the six months ended April 30, 2020:

30, 2020.	USD (equity component	CDN (embedded	USD (embedded	
)	derivative)	derivative)	Total
Unaudited condensed interim consolidated statemen	nt of operations and co	mprehensive		
loss				
Accretion expense				\$
	\$	\$	\$	475,56
	24,007	294,585	156,971	3
Interest expense	\$			\$
•	97,167	\$	\$	233,79
		112,605	24,027	9
Gain on revaluation of derivative	\$			\$
liabilities	-	\$	\$	(282,42
		(167,303)	(115,122)	5)
Loss on conversion of convertible debentures	\$	\$	\$	\$
	-	-	63,273	63,273

Gain on extinguishment of convertible debentures	\$ -	\$ (185)	\$ (116,490)	\$ (116,67 5)
Unaudited condensed interim consolidated statement equity	of changes in			
Amount of principal converted to common shares	\$ 20,000	\$ 35,000	\$ 239,063	\$ 294,06 3
Amount of interest converted to common shares	\$ 447	\$ 1,167	\$ 11,514	\$ 13,128
Number of common shares issued on conversion of convertible debentures	511,175	731,440	18,830,838	20,073, 453
Unaudited condensed interim consolidated statement of				
Amount of principal repaid in cash	\$ -	\$ 86,123	\$ 80,000	\$ 166,12 3
Amount of interest repaid in cash	\$ 46,860	\$ 75,505	\$ 1,767	\$ 124,13 2
For the three months ended April 30, 2020:				
	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	_ Total
Unaudited condensed interim consolidated statement of loss	of operations and co	mprehensive		
				\$
Accretion expense	\$	\$	\$	295,49
Accretion expense	\$ 11,329	\$ 170,576	\$ 113,585	295,49 0
Accretion expense Interest expense				295,49 0 \$ 117,82
Accretion expense	11,329 \$	170,576 \$	113,585 \$	295,49 0 \$ 117,82
Accretion expense Interest expense Gain on revaluation of derivative liabilities	\$ 48,360 \$	170,576 \$ 54,030 \$ (1,259,550)	\$ 15,433 \$ (174,999)	295,49 0 \$ 117,82 3 \$ (1,434, 549)
Accretion expense Interest expense Gain on revaluation of derivative	\$ 48,360	170,576 \$ 54,030 \$	\$ 15,433	295,49 0 \$ 117,82 3 \$ (1,434,
Accretion expense Interest expense Gain on revaluation of derivative liabilities	\$ 48,360 \$	170,576 \$ 54,030 \$ (1,259,550)	\$ 15,433 \$ (174,999) \$	295,49 0 \$ 117,82 3 \$ (1,434, 549) \$
Accretion expense Interest expense Gain on revaluation of derivative liabilities Loss on conversion of convertible debentures Loss (gain) on extinguishment of convertible	\$ 48,360 \$ - \$ - \$ -	170,576 \$ 54,030 \$ (1,259,550) \$	\$ 15,433 \$ (174,999) \$ 21,417	295,49 0 \$ 117,82 3 \$ (1,434, 549) \$ 21,417 \$ (110,10
Accretion expense Interest expense Gain on revaluation of derivative liabilities Loss on conversion of convertible debentures Loss (gain) on extinguishment of convertible debentures Unaudited condensed interim consolidated statement of convertible debentures	\$ 48,360 \$ - \$ - \$ -	170,576 \$ 54,030 \$ (1,259,550) \$	\$\\ 113,585\\ \\$\\ 15,433\\ \\$\\ (174,999)\\ \\$\\ 21,417\\ \\$\\ (116,490)\\\$	295,49 0 \$ 117,82 3 \$ (1,434, 549) \$ 21,417 \$ (110,10 2)
Accretion expense Interest expense Gain on revaluation of derivative liabilities Loss on conversion of convertible debentures Loss (gain) on extinguishment of convertible debentures Unaudited condensed interim consolidated statement equity	\$ 48,360 \$ - \$ - \$ - \$ -	170,576 \$ 54,030 \$ (1,259,550) \$ - \$ 6,388	\$ 113,585 \$ 15,433 \$ (174,999) \$ 21,417 \$ (116,490)	295,49 0 \$ 117,82 3 \$ (1,434, 549) \$ 21,417 \$ (110,10 2)
Accretion expense Interest expense Gain on revaluation of derivative liabilities Loss on conversion of convertible debentures Loss (gain) on extinguishment of convertible debentures Unaudited condensed interim consolidated statement equity Amount of principal converted to common shares	\$ 48,360 \$ - \$ - \$ - \$ - \$ -	170,576 \$ 54,030 \$ (1,259,550) \$ - \$ 6,388	\$ 113,585 \$ 15,433 \$ (174,999) \$ 21,417 \$ (116,490) \$ 120,063 \$	295,49 0 \$ 117,82 3 \$ (1,434, 549) \$ 21,417 \$ (110,10 2)
Accretion expense Interest expense Gain on revaluation of derivative liabilities Loss on conversion of convertible debentures Loss (gain) on extinguishment of convertible debentures Unaudited condensed interim consolidated statement equity Amount of principal converted to common shares Amount of interest converted to common shares	\$ 48,360 \$ - \$ - \$ - \$ - \$ - • \$ -	170,576 \$ 54,030 \$ (1,259,550) \$ - \$ 6,388	\$\\ \\$\\ \\$\\ \\$\\ \\$\\ \\$\\ \\$\\ \\$\\	295,49 0 \$ 117,82 3 \$ (1,434, 549) \$ 21,417 \$ (110,10 2) \$ 120,06 3 \$ 1,291
Accretion expense Interest expense Gain on revaluation of derivative liabilities Loss on conversion of convertible debentures Loss (gain) on extinguishment of convertible debentures Unaudited condensed interim consolidated statement equity Amount of principal converted to common shares Number of common shares issued on conversion of convertible debentures	\$ 48,360 \$ - \$ - \$ - \$ - \$ - • \$ -	170,576 \$ 54,030 \$ (1,259,550) \$ - \$ 6,388	\$\\ \\$\\ \\$\\ \\$\\ \\$\\ \\$\\ \\$\\ \\$\\	295,49 0 \$ 117,82 3 \$ (1,434, 549) \$ 21,417 \$ (110,10 2) \$ 120,06 3 \$ 1,291

Amount of interest repaid in cash	\$	\$	\$	\$
	_	35,990	1,767	37,757

⁽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.

10. Convertible debentures (continued)

(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
	\$	\$	\$	10441
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 stateme position	nt of financial			
Carrying value of loan principal	\$	\$	\$	\$
, g	906,993	1,464,416	63,422	2,434,8 31
Interest payable				
	18,661	121,444	24,138	164,24 3
Convertible	\$	\$	\$	\$
debentures	925,654	1,585,860	87,560	2,599,0 74
Derivative liabilities	\$	\$	\$	\$
	-	204,366	561,059	765,42 5
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.

For the six months ended April 30, 2019:

USD	1		
(equi	cy CDN	USD	
compor	ent (embedded	(embedded	
	derivative)	derivative)	Total

Unaudited condensed interim consolidated statement of operations and comprehensive loss

⁽ii) Conversion price defined as 75% multiplied by the lowest stock price for the 20 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.

Accretion expense				\$
•	\$	\$	\$	805,08
	63,573	425,578	315,932	3
Interest expense				\$
	\$	\$	\$	253,69
	97,124	111,474	45,092	0
Gain (loss) on revaluation of derivative liabilities	\$			\$
	-	\$	\$	(318,00
		(406,998)	88,995	3)
Loss on conversion	\$	\$	\$	\$
	-	-	19,798	19,798
Gain (loss) on extinguishment of convertible	\$	\$	\$	\$
debentures	-	(2,926)	2,219	(707)
Unaudited condensed interim consolidated statement equity	of changes in			
Amount of principal converted to common shares				\$
	\$	\$	\$	330,98
	-	-	330,980	0
Amount of interest converted to common shares	\$	\$	\$	\$
	-	-	18,967	18,967
Number of common shares issued on conversion of				18,431,
convertible debentures	-	-	18,431,216	216
Unaudited condensed interim consolidated statement	of cash flows			
Amount of principal repaid in cash	\$	\$	\$	\$
1 1 1	-	95,063	75,600	170,66
		,	,	3
Amount of interest repaid in cash	\$	\$	\$	\$
•	93,720	79,060	5,973	178,75
				3

10. Convertible debentures (continued)

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

For the three months ended April 30, 2019:

	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	Total
Unaudited condensed interim consolidated statement of	f operations and co	mprehensive		
loss				
Accretion expense				\$
	\$	\$	\$	410,88
	32,310	220,995	157,583	8
Interest expense				\$
	\$	\$	\$	119,72
	47,823	54,442	17,462	7
Gain on revaluation of derivative				\$
liabilities	\$	\$	\$	(585,58
	-	(580,393)	(5,190)	3)
Loss on conversion of convertible debentures	\$	\$	\$	\$
	-	-	2,308	2,308
Gain on extinguishment of convertible debentures	\$	\$	\$	\$
	-	(3,181)	-	(3,181)

Unaudited condensed interim consolidated statement of changes in equity

2,65
544
)49,1
,030
,523

⁽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.

(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 April 30,	As at October 31,
	2020	2019
Share		
price	\$0.03	\$0.02
Exercis		
e price	\$0.02 - \$0.10	\$0.02 - \$0.11
Volatility factor (based on historical		
volatility)	62% - 268%	173% - 321%
Risk free interest rate	0.24% - 0.32%	1.67% - 1.69%
Expected life of conversion features (in		
months)	0 - 11	0 - 12
Expected dividend		
yield	0%	0%
CDN to USD exchange rate (as		
applicable)	0.7189	0.7582
Call	\$0.00 - \$0.02	\$0.00 - \$0.02
value		

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

11. 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) 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.

(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 April 30, 2020, the Company completed a private placement (2019 - two private placements), pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$43,593 (2019 - \$52,968) and issued a total of 9,643,397 (2019 - 1,375,000) common shares.

During the six months ended April 30, 2020, the Company completed two private placements (2019 - three private placements), pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$389,814 (2019 - \$102,968) and issued a total of 9,643,397 (2019 - 2,690,789) common shares.

12. 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 April 30, 2020	5,730,000	\$ -
Outstanding at November 1, 2018 Granted	6,250,000	\$ 0.29
Expired	-	-
Outstanding at April 30, 2019	5,730,000	0.80 \$ 0.25

12. Stock options (continued)

(c) Stock options outstanding at April 30, 2020

Date of issue	Expiry date	Number of options	Exercise price	ning contrac tual life (years)
			\$	
June 4, 2015 August 20, 2015	June 4, 2020	300,000	0.49	0.1
	August 20, 2020	940,000	0.46	0.3
September 30, 2015				
	September 30, 2020	250,000	0.40	0.4
December 30, 2016				
	December 30, 2021	2,040,000	0.25	1.7
June 29, 2018	June 29, 2023	2,200,000	0.10	3.2
Julie 29, 2018	June 29, 2023	2,200,000	\$	3.2
Outstanding and exercisable at Ap	ril 30, 2020	5,730,000	0.25	1.9
Outstanding and exercisable at Ap	111 30, 2020	3,730,000	0.23	1.7

Remai

13. Earnings (loss) per share

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

	Three months ended April 30,		Six months ended April 30,	
Numerator	2020	2019	2020	2019
Net income (loss) attributable to common shareholders	\$ 1,071,746	\$ (48,088)	\$ (654,277)	\$ (1,158, 391) \$
Net income (loss) used in computation of basic and diluted income (loss) per share	\$ 1,071,746	\$ (48,088)	\$ (654,277)	(1,158, 391)
Denominator				
Weighted average number of common shares for computation of basic and diluted income (loss) per share	373,233,68 7	277,050,90 8	365,036,62 9	272,37 0,012

For the three and six months ended April 30, 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.

14. 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 April 30, 2020, 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 April 30, 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.

15. Operating expenses

(a) General and administrative

The components of general and administrative expenses are as follows:

	Three months ended April 30,		Six months	ended April 0,
	2020	2019	2020	2019
General and	\$	\$	\$	\$
administrative	2,393	8,605	5,860	21,822
Rent and occupancy	9,539	15,599	17,345	31,460
Office insurance	978	13,349	1,552	26,401
Investor relations, listing and filing fees Teleph	18,405	19,123	28,844	29,345
one	1,099	1,499	2,083	2,518
				\$
	\$	\$	\$	111,54
	32,414	58,175	55,684	6

(b) Professional, other fees and salaries

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

	Three months ended April 30,		Six months ended April 30,	
	2020	2019	2020	2019
	\$	\$	\$	\$
Professional fees Consulting fees	28,797	15,084	59,233	71,134
(recovery)	22,875	(348)	137,800	26,979
				119,54
Salaries and benefits	40,110	54,394	95,510	6
				\$
	\$	\$	\$	217,65
	91,782	69,130	292,543	9

16. Supplemental cash flow information

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

	Three months ended April 30,		Six months ended April 30,	
	2020	2019	2020	2019
Balance - beginning of period Cash flows from financing activities: Proceeds from issuance of	\$ 4,710,853	\$ 3,660,166	\$ 3,364,499	\$ 3,126,6 87
convertible debentures	90,000	70,521	430,177	376,52 1
Repayments of convertible debentures Non-cash changes:	(138,844)	(15,030)	(194,123)	(170,66 3)
Accretion expense	295,490	410,888	475,563	805,08 3

Balance - end of period	\$ 3,224,903	\$ 3,241,885	\$ 3,224,903	3,241,8 85
Foreign exchange gain	(140,259)	(45,725)	(150,534)	(38,425
Renewal of convertible debentures	(2,801)	(34,778)	(10,331)	(56,447)
common shares	(115,801)	(249,597)	(400,913)	(557,09 8)
Gain on extinguishment of debt Convertible debentures converted into	(110,102)	(3,181)	(116,675)	(707)
Gain on revaluation of derivative liabilities	(1,434,549)	(585,583)	(282,425)	(318,00 3)
Accrued interest on convertible debentures	70,917	34,204	109,666	74,937

17. 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 April 30,		Six months ended April 30,	
	2020	2019	2020	2019
	\$	\$	\$	\$
Professional, other fees, and salaries	(6,769)	(9,123)	-	-
Stock-based compensation	-	-	-	-
	\$	\$	\$	\$
	(6,769)	(9,123)		

During the six months ended April 30, 2020 and 2019, these parties were not awarded any options.

(b) Trade payables and other liabilities

As at April 30, 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 18(b).

As at April 30, 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 April 30, 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 April 30, 2020, \$20,001 CDN (\$14,379 USD)(October 31, 2019 - \$52,319 CDN, \$39,756 USD) in loan principal remains outstanding.

18. 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 June 25, 2020.

19. 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 April 30, 2020, balances that are denominated in Canadian dollars are as follows:

	<u>CDN</u>
Cash	\$ 16,929
Prepaid expenses and other receivables	\$ 22,085
Trade payables and other liabilities	\$ 119,216
Convertible debentures	\$1,922,420
Derivative liabilities	\$ 411,050
Long-term loan	\$ 40,000

A 10% strengthening of the US dollar against the CDN would decrease accumulated deficit by \$182,757 as at April 30, 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.

(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. With the exception of the long-term loan, all financial liabilities are due within 1 year as at April 30, 2020.

(i) Trade payables

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

	As at April 30, 2020	As at October 31, 2019
	\$	\$
Less than 30 days past billing date	17,292	18,201
31 to 90 days past	2= 444	10050
billing date	37,641	13,259
Over 90 days past		
billing date	706,380	781,230
	\$	\$
	761,313	812,690

As at April 30, 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.

19. Financial risk management (continued)

(c) Liquidity risk (continued)

Convertible debentures and derivative

(ii) liabilities

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

	As at April 30,		As at October 31,		
	20	2020		2019	
	Convertible debentures	Derivative liabilities	Convertible debentures	Derivat ive liabiliti es	
Less than three	\$	\$	\$	\$	
months	1,315,718	132,388	754,799	75,528	
Three to six months	1,113,337	320,129	1,168,349	71,326	
Six to twelve months					
	424	342,907	675,926	618,57 1 \$	
	\$	\$	\$	765,42	
	2,429,479	795,424	2,599,074	5	

(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 \$35,581 as at April 30, 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.

20. 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 six months ended April 30, 2020 and 2019, there were no transfers between levels.

21. 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 and six months ended April 30, 2020.

22. Subsequent events

Subsequent to April 30, 2020:

- (a) The Company realized net proceeds of \$107,820 and issued a total of 6,774,053 common shares on the conversion of convertible debentures.
- (b) The Company extended convertible debentures that were within 3 months of maturity date from April 30, 2020. Extension terms ranged from 3 months to 12 months.