

Micromem Technologies Inc. Consolidated Financial Statements For the years ended October 31, 2023, 2022 and 2021 (Expressed in United States Dollars)

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Micromem Technologies Inc.

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of financial position of Micromem Technologies Inc. (the "Company") as of October 31, 2023 and 2022, and the related consolidated statements of operations and comprehensive loss, changes in shareholders' deficiency, and cash flows for each of the years in the three-year period ended October 31, 2023, and the related notes (collectively referred to as the consolidated financial statements).

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Company as of October 31, 2023 and 2022, and the results of its consolidated operations and its consolidated cash flows for each of the years in the three-year period ended October 31, 2023, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS").

Material Uncertainty Related to Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the consolidated financial statements, the Company has suffered recurring net losses and comprehensive losses, negative cash flows from operations and working capital deficiencies that raise substantial doubt about its ability to continue as a going concern. Management's plans in regard to these matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty. This matter is also described in the "Critical Audit Matters" section of our report.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matters

The critical audit matters communicated below are matters arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the consolidated financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matters below, providing separate opinions on the critical audit matters or on the accounts or disclosures to which they relate.

Going Concern

Critical Audit Matter Description

As described in Note 2, the Company's operations are mainly funded with debt financing, which is dependent upon many external factors and may be difficult to raise when required. The Company may not have sufficient cash to fund its operations, and therefore, will require additional funding, which if not raised, may result in the delay, postponement or curtailment of some or all of its activities. Management has prepared future cash flow forecasts, which involves judgement and estimation of key variables, such as planned capital expenditures, revenue, production volumes and market conditions. Future economic conditions and effects of key events subsequent to the year end, such as debt financing, also impacted management's judgements and estimates. We identified the Company's ability to continue as a going concern as a critical audit matter because auditing the Company's going concern assessment is complex and involves a high degree of auditor judgment to assess the reasonableness of the cash flow forecasts, planned refinancing actions and other assumptions used in the Company's going concern analysis. This matter is also described in the "Material Uncertainty Related to Going Concern" section of our report.

Audit Response

We responded to this matter by performing procedures over management's assessment of the Company's ability to continue as a going concern. Our audit work in relation to this included, but was not restricted to, the following:

- We evaluated the cash flow forecasts prepared by management and evaluated the integrity and arithmetical accuracy of the model.
- We evaluated the key assumptions used in the model to estimate future cash flows for a reasonable period of time, of at least 12 months from the date of the Statement of Financial Position, by comparing assumptions used by management against historical performance, budgets, economic and industry indicators and publicly available information.
- We evaluated the key assumptions pertaining to estimated cash flows from operating activities and expected cash flows from financing activities, comparing these to available market data, underlying agreements, private placement raises and subsequent events thereafter.
- We assessed the adequacy of the going concern disclosures included in Note 2 of the consolidated financial statements and consider these to appropriately reflect the assessments that management has performed.

Valuation of Financial Instruments

Critical Audit Matter Description

As described in Note 11 to the consolidated financial statements, for the year ended October 31, 2023, the Company has various convertible debentures some of which result in the recognition of derivative liabilities or equity components. Management measured the fair value of the embedded derivative liability and the fair value of host loans using valuation techniques that require management to make several assumptions related to the inputs into those models. Auditing management's fair value calculations was challenging due to the complexity of accounting for the instruments, the related valuation models and the inputs into those models, which are highly sensitive to changes, such as volatility, risk free rates, variable conversion price and discount rate.

Audit Response

We responded to this matter by performing procedures over valuation of debt instruments. Our audit work in relation to this included, but was not restricted to:

- We obtained and reviewed management's analysis of the financial instruments, including the assessment of the accounting for the financial instruments and the valuation methodology.
- We obtained signed copies of all agreements, including renewals, conversions and any new issuances and confirmed the balances and terms for a sample of the financial instruments.
- We obtained support for cash receipts related to a sample of newly issued financial instruments and cash disbursements related to a sample of repayments, and, for a sample of conversions, obtained support such as conversion notices and share issuances as confirmed with the transfer agent.
- We involved internal professionals with specialized skills and knowledge to assist in developing an independent implied interest rate range for a similar liability without a convertible feature and to assess the prepayment option embedded in the loans.



• We tested the mathematical accuracy of the valuation model and agreed certain inputs including volatility, risk free rates, variable conversion rates and discount rate to underlying source information.

MNPLLP

Toronto, Canada January 30, 2024 Chartered Professional Accountants Licensed Public Accountants

We have served as the Company's auditor since 2017



Micromem Technologies Inc.

Consolidated Statements of Financial Position

As at October 31, 2023 and October 31, 2022

(Expressed in United States dollars)

	Notes	00	As at ctober 31, 2023	As at October 31, 2022			
Assets							
Current							
Cash	20	\$	31,584	\$	33,227		
Prepaid expenses and other receivables	19 (b), (d)		103,999		18,200		
Total current assets			135,583		51,427		
Property and equipment	6		32,767		48,092		
Total assets		\$	168,350	\$	99,519		
Liabilities							
Current							
Trade payables and other liabilities	18(b), 20(d)	\$	209,285	\$	287,575		
Deposit liability	19 (d)		63,000		-		
Current lease liability	8		17,036		15,366		
Debenture payable Convertible debentures	10 11,20		37,509 3,548,059		38,001 3,792,064		
Derivative liabilities	11,20		1,079,393		641,299		
Total current liabilities	11,20		4,954,282		4,774,305		
Non-current lease liability	8		12,018		29,418		
Long-term loan	9		43,254		43,796		
Total liabilities			5,009,554		4,847,519		
Shareholders' Deficiency							
Share capital	12		90,471,712		87,784,725		
Contributed surplus			24,868,843		27,459,730		
Equity component of convertible debentures	11		3,220,473		793,140		
Accumulated deficit			(123,402,232)		(120,785,595)		
Total shareholders' deficiency			(4,841,204)		(4,748,000)		
Total liabilities and shareholders' deficiency		\$	168,350	\$	99,519		
Going concern	2						
Commitments and Contingencies	19						
Subsequent events	22						

The accompanying notes are an integral part of these consolidated financial statements.

Approved on behalf of the Board of Directors:

"Joseph Fuda" Director "Alex Dey"

Director

Micromem Technologies Inc.

Consolidated Statements of Operations and Comprehensive Loss

For the years ended October 31, 2023, 2022, and 2021

(Expressed in United States dollars)

			Yea	ars e	rs ended October 31,					
	Notes	2023			2022		2021			
Operating expenses General and administrative	1.5()	٩	140 616	٩	105.000	٩	155 504			
	16(a)	\$	148,616	\$	185,366	\$	155,504			
Professional, other fees and salaries	16(b)		610,052		647,710		424,485			
Statute barred payables	18(b)		-		-		(422,982)			
Stock-based compensation	13		217,965		41,484		360,044			
Travel and entertainment			63,360		59,504		24,903			
Depreciation of property and equipment	6		16,492		25,878		28,033			
Amortization of patents	7		-		3,877		8,000			
Foreign exchange (gain) loss			(62,613)		(176,477)		222,553			
Total operating expenses			993,872		787,342		800,540			
Other expenses (income)										
Accretion expense	11		279,834		1,179,603		1,169,921			
Interest expense on convertible debt	11		540,929		469,425		495,809			
Other finance expenses	11		86,352		13,233		84,478			
Gain on revaluation of derivative liabilities	11		(658,503)		(409,607)		(2,547,192)			
Loss (gain) on conversion of convertible debentures	11		21,120		94,326		(9,506)			
Loss (gain) on repayment of convertible debentures	11		27,243		(47,877)		-			
Loss on extinguishment of convertible										
debentures	11		1,400,823		200,650		1,018,928			
Total other expenses			1,697,798		1,499,753		212,438			
Loss before income tax provision			(2,691,670)		(2,287,095)		(1,012,978)			
Income tax provision	15		-		-		-			
Net loss and comprehensive loss		\$	(2,691,670)	\$	(2,287,095)	\$	(1,012,978)			
Weighted average number of outstanding shares, basic and diluted	14		490,310,376		451,177,796		422,613,046			
Loss per share, basic and diluted	14	\$	(0.01)	\$	(0.01)	\$	-			

The accompanying notes are an integral part of these consolidated financial statements.

Micromem Technologies Inc. Consolidated Statements of Changes in Shareholders' Deficiency For the years ended October 31, 2023, 2022, and 2021

(Expressed in United States dollars)

	Notes	Number of shares	S	bare capital	(Contributed surplus	С	Equity mponent of onvertible ebentures	 Accumulated deficit	 Total
Balance at November 1, 2020		402,552,453	\$	85,463,642	\$	27,810,586	\$	23,952	\$ (117,485,522)	\$ (4,187,342)
Private placements of shares for cash	12	17,573,429		840,564		-		-	-	840,564
Convertible debentures converted into common shares	11	15,611,852		511,630		-		-	-	511,630
Expiry of convertible debenture conversion option	11	-		-		26,752		(26,752)	-	-
Renewal of convertible debentures	11	-		-		-		16,804	-	16,804
Stock-based compensation	12	-		-		360,044		-	-	360,044
Net loss and comprehensive loss						-		-	 (1,012,978)	 (1,012,978)
Balance at October 31, 2021		435,737,734	\$	86,815,836	\$	28,197,382	\$	14,004	\$ (118,498,500)	\$ (3,471,278)
Private placements of shares for cash	12	5,012,450		207,588		-		-	_	207,588
Share issuance costs	12	-		(25,591)		-		-	-	(25,591)
Convertible debentures converted into common shares	11	26,443,820		764,432		-		-	-	764,432
Shares issued on settlement of accounts payable	12	413,674		22,460		-		-	-	22,460
Expiry of convertible debenture conversion option	11	-		-		1,258,388		(1,258,388)	-	-
Renewal of convertible debentures	11	-		-		(2,037,524)		2,037,524	-	-
Stock-based compensation	13	-		-		41,484		-	-	41,484
Net loss and comprehensive loss				-				-	 (2,287,095)	 (2,287,095)
Balance at October 31, 2022		467,607,678	\$	87,784,725	\$	27,459,730	\$	793,140	\$ (120,785,595)	\$ (4,748,000)
Private placements of shares for cash	12	9,864,500		535,525		-		-	-	535,525
Share issuance costs	12	-		(25,586)		-		-	-	(25,586)
Convertible debentures converted into common shares	11	30,346,660		1,742,226		-		(85,804)	-	1,656,422
Exercise of stock options	13	2,550,000		434,822		(220,682)		-	-	214,140
Expiry of stock options		-		-		(75,033)		-	75,033	-
Expiry of convertible debenture conversion option	11	-		-		793,139		(793,139)	_	-
Renewal of convertible debentures	11	-		-		(3,306,276)		3,306,276	-	-
Stock-based compensation	13	-		-		217,965		-	-	217,965
Net loss and comprehensive loss									 (2,691,670)	 (2,691,670)
Balance at October 31, 2023		510,368,838	\$	90,471,712	\$	24,868,843	\$	3,220,473	\$ (123,402,232)	\$ (4,841,204)

The accompanying notes are an integral part of these consolidated financial statements.

Micromem Technologies Inc.

Consolidated Statements of Cash Flows

For the years ended October 31, 2023, 2022, and 2021

(Expressed in United States dollars)

	Notes		Yea 2023	ars e	nded October 2022	31,	2021
Operating activities	110105						2021
Net loss		\$	(2,691,670)	\$	(2,287,095)	\$	(1,012,978)
Items not affecting cash:							
Statute barred payables			-		-		(422,982)
Depreciation of property and equipment	6		16,492		25,878		28,033
Amortization of patents	7		-		3,877		8,000
Accretion expense	11,17		279,834		1,179,603		1,169,921
Accrued interest on convertible debentures	17		471,596		368,280		605,507
Stock-based compensation	13		217,965		41,484		360,044
Loss (gain) on conversion of convertible debentures	11,17		21,120		94,326		(9,506)
Loss (gain) on repayment of convertible debentures	11,17		27,243		(47,877)		-
Gain on revaluation of derivative liabilities	11,17		(658,503)		(409,607)		(2,547,192)
Loss on extinguishment of convertible debentures	11,17		1,400,823		200,650		1,018,928
Foreign exchange (gain) loss			(67,031)		(136,336)		421,937
			(982,131)		(966,817)		(380,288)
Net changes in non-cash working capital:							
(Increase) decrease in prepaid expenses and other							
receivables			(85,799)		5,807		1,414
Increase in deposit liability			63,000		-		-
Decrease in trade payables and other liabilities			(78,290)		(36,021)		(383,892)
Cash flows used in operating activities			(1,083,220)		(997,031)		(762,766)
Investing activity							
Purchase of property and equipment	6		(2,044)		-		(5,271)
Cash flows used in investing activity			(2,044)		-		(5,271)
Financing activities							
Principal payments on lease liability	8		(15,609)		(25,317)		(27,282)
Proceeds from long-term loan			-		-		17,974
Proceeds from private placements of shares	12		535,525		207,588		840,564
Share issuance costs			(25,586)		(25,591)		-
Proceeds from the exercise of options	13		214,140		-		-
Proceeds from issuance of convertible debentures	17		645,151		765,671		510,000
Repayments of convertible debentures	17		(270,000)		(63,490)		(593,301)
Cash flows provided by financing activities			1,083,621		858,861		747,955
Net change in cash			(1,643)		(138,170)		(20,082)
Cash - beginning of period			33,227		171,397		191,479
Cash - end of period		\$	31,584	\$	33,227	\$	171,397
Supplemental cash flow information							
Interest paid (classified in operating activities)	11	\$	64,679	\$	88,465	\$	87,266
Interest converted (classified in operating activities)	11	\$	238,859	\$	12,680	\$	196,964
Interest paid on non-convertible debt (classified in							
operating activities)		\$	9,170	\$	9,604	\$	11,785
Interest paid on lease liability (classified in operating	0			_	2 (2)	<i>•</i>	0.1.60
activities)	8	\$	3,323	\$	3,629	\$	9,160
Carrying amount of convertible debentures converted into							
common shares	17	\$	1,742,226	\$	764,432	\$	521,136
Shares issued on settlement of accounts payable	12	\$, ,	\$	22,460	\$	-
ROU asset and lease liability recognized	8	\$	-	\$	48,408	\$	-

The accompanying notes are an integral part of these 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 602, 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 "MRM".

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 October 31, 2023 and is devoting substantially all its efforts to securing commercial revenue opportunities.

2. Going concern

These 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 substantial 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 year ended October 31, 2023, the Company reported a net loss and comprehensive loss of \$2,691,670 (2022 - \$2,287,095, 2021 - \$1,012,978) and negative cash flow from operations of \$1,083,220 (2022 - \$997,031, 2021 - \$762,766). The Company's working capital deficiency as at October 31, 2023 was \$4,818,699 (October 31, 2022 - \$4,722,878).

The Company's success depends on the profitable commercialization of its proprietary sensor 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 2024; however, the ability of the Company to continue as a going concern is dependent upon its ability to secure additional financing and/or to profitably commercialize its technology. There is no assurance that the Company will be successful in the profitable commercialization of its technology, or will be able to secure the necessary additional financing. These consolidated financial statements do not include any adjustments to reflect the possible future effects on the recoverability and classification of assets or the amounts and classifications of liabilities that may result from the possible inability of the Company to continue as a going concern assumption was not appropriate for these consolidated financial statements then adjustments could 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 could be material.

3. Basis of presentation

These consolidated financial statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") as issued by the International Accounting Standards Board ("IASB") and interpretations issued by the International Financial Reporting Interpretations Committee ("IFRIC"). The Company has not early adopted any other standard, interpretation or amendment that has been issued but is not yet effective.

These consolidated financial statements were authorized for issuance and release by the Company's Board of Directors on January 30, 2024.

(a) Basis of consolidation

These 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's wholly-owned subsidiaries include:

Inactive subsidiaries	Domiciled in
Micromem Applied Sensors Technology Inc. ("MAST")	United States
707019 Canada Inc.	Canada
Memtech International Inc.	Bahamas
Memtech International (USA) Inc., Pageant Technologies (USA) Inc.	United States
Pageant Technologies Inc., Micromem Holdings (Barbados) Inc.	Barbados

3. Basis of presentation (continued)

(b) Basis of measurement

These 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 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 consolidated financial statements in conformity with IFRS 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 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 conversion features 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, 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. Depreciation and 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 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 cash flow 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.

4. Summary of significant accounting policies

The principal accounting policies applied to the preparation of these consolidated financial statements are set out below:

(a) Foreign currency translation

These consolidated financial statements are presented in USD, which is the functional currency of the Company and all of its subsidiaries. At each reporting date, foreign currency denominated monetary assets and liabilities are translated at year-end exchange rates. Non-monetary assets and liabilities that are measured in terms of historical cost in a foreign currency are translated using the exchange rate at the date of the transaction. Income, expenses, and cash flows, are translated into USD using average exchange rates for the year. Exchange differences arising from operating transactions are recorded in operating profit or loss for the period; exchange differences related to financing transactions are recognized in finance income or directly in equity.

(b) Financial instruments

All financial instruments are initially recorded at fair value at the time they are entered into. The Company aggregates its financial instruments in accordance with IFRS 9, *Financial Instruments*, into classes based on their nature and characteristics. Management determines the classification when the instruments are initially recognized, which is normally the date of the transaction. The Company's accounting policy for each class of financial instruments is 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, and financial liabilities which are not required, and for which the Company has not elected to subsequently record at fair value through profit or loss.

Financial instruments in this category are initially recognized at fair value plus directly attributable transaction costs. Subsequently, these instruments are measured at amortized cost using the effective interest method. The effective interest method is a method of calculating the amortized cost of a financial instrument and of allocating interest over the relevant period. The effective interest rate is the rate that discounts estimated future cash receipts through the expected life of the financial instrument, or, where appropriate, a shorter period, to the net carrying amount on initial recognition. Financial assets are adjusted for any expected credit losses ("ECLs").

Financial assets in this category include cash and other receivables. Financial liabilities in this category include trade payables and other liabilities, debenture payable, convertible debentures and long-term loan.

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

This category includes derivative instruments and 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. These financial instruments are initially recognized at fair value; all transaction costs are recognized immediately in profit or loss. Subsequently, these instruments are recognized at fair value at each reporting date. Any changes in fair value, and gains or losses upon disposition of the financial instruments are recognized in profit or loss. Financial liabilities in this category include the derivative liabilities.

(iii) Fair value through other comprehensive income ("FVOCI")

This category only includes equity instruments, which the Company intends to hold for the foreseeable future and which the Company has irrevocably elected to so classify upon initial recognition or transition. Equity instruments in this category are subsequently measured at fair value with changes recognized in other comprehensive income, with no recycling of gains or losses to profit or loss upon derecognition. Dividend income is recognized in earnings. Equity instruments at FVOCI are not subject to an impairment assessment under IFRS 9. The Company has no financial assets in this category.

(c) Convertible debentures and derivative liabilities

The Company issues convertible debentures used as bridge loans, which can be converted into common shares at the option of the holder, into a fixed number of shares for a fixed amount of consideration, or into a fixed number of shares for a variable amount of consideration, or into a variable number of shares.

4. Summary of significant accounting policies (continued)

- (c) Convertible debentures and derivative liabilities (continued)
 - (i) Initial recognition

For convertible debentures which provide conversion into a fixed number of shares, the liability component is recognized initially at the fair value of a similar, non-convertible liability. The equity component is recognized as the difference between the fair value of the instrument as a whole and the fair value of the liability component. Any directly attributable transaction costs are allocated to the liability and equity components in proportion to their initial carrying amounts.

For convertible debentures which provide conversion into a variable number of shares or into a fixed number of shares for a variable amount of consideration, the conversion option is accounted for as an embedded derivative, which is separated from the host contract. Upon initial recognition, the derivative liability is valued at fair value using a Black Scholes or a binomial pricing model. The carrying amount of the convertible debenture is recognized as the difference between the fair value of the instrument as a whole and the fair value of the derivative liability. Any directly attributable transaction costs are allocated to the derivative liability and host contract in proportion to their initial carrying amounts.

(ii) Modifications and extinguishments

To the extent there are changes to the terms of outstanding convertible debentures, these changes may be recorded as a modification or an extinguishment. A substantial change in the terms of an existing financial liability is accounted for as an extinguishment of the original financial liability and the recognition of a new financial liability. The terms are substantially different if the discounted present value of the cash flows at the original effective interest rate under the new terms is at least 10% different from the discounted present value of the remaining cash flows of the original financial liability. For a modification that does not result in derecognition, a gain or loss will be recognised in profit or loss for the difference between the original contractual cash flows and the modified cash flows discounted at the original effective interest rate. For a modification that results in derecognition, a gain or loss will be recognised in profit or loss for the difference between the carrying amount of the financial liability extinguished and the fair value of the modified financial liability.

(d) Fair value

Fair value is the price that would be received to sell an asset, or paid to transfer a liability, in an orderly transaction between market participants at the measurement date.

Fair value measurement for financial instruments are categorized into levels within a fair value hierarchy based on the nature of the valuation inputs (Levels 1, 2 or 3). The three levels are defined based on the observability of significant inputs to the measurement, as follows:

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 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 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 consolidated financial statements.

When one is available, the Company measures the fair value of an instrument using the quoted price in an active market for that instrument.

A market is regarded as "active" if transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. If there is no quoted price in an active market, then the Company uses valuation techniques that maximize the use of relevant observable inputs and minimize the use of unobservable inputs. The chosen valuation technique incorporates all of the factors that market participants would take into account in pricing a transaction.

The derivative liabilities are measured at fair value on a recurring basis and categorized as level 2 in the fair value hierachy. The fair value of the derivative liabilities at October 31, 2023 is \$1,079,393 (2022 - \$641,299). See Note 11 (c).

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 years ended October 31, 2023 and 2022, there were no transfers between levels.

4. Summary of significant accounting policies (continued)

(e) Property and equipment

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

	Method	Rate
Computers	Declining balance	30%
Right-of-use asset	Straight-line	lesser of useful life and lease term (three
		vears)

(f) Impairment of long-lived assets

The Company follows the guidelines prescribed in IAS 36, *Impairment of Assets* with respect to the measurement for impairment of assets. The carrying amounts of property and equipment and patents are reviewed for impairment when events or changes in circumstances indicate that the carrying amounts may not be recoverable. When the carrying amount exceeds the estimated recoverable amount, the assets are written down to their recoverable amount. The recoverable amount of long-lived assets is the greater of fair value less costs to sell and value in use. Impairment losses are recognized in the consolidated statements of operations and comprehensive loss.

(g) Development costs

Research costs are expensed in the period incurred. Development costs are expensed as incurred unless they meet the criteria for capitalization. Expenditures during the development phase are capitalized if the Company can demonstrate each of the following criteria: (i) the technical feasibility of completing the asset so that it will be available for use or sale, (ii) its intention to complete the asset and use or sell it, (iii) its ability to use or sell the asset, (iv) how the asset will generate probable future economic benefits, (v) the availability of adequate technical, financial and other resources to complete the development and to use or sell the asset, and (vi) its ability to measure reliably the expenditure attributable to the asset during its development; otherwise, these costs are expensed as incurred. Costs to be recovered from development partners are recorded to development costs receivable. Payments received from development partners on projects are recorded to income as a recovery of costs incurred and reduce the outstanding receivable. There were no development costs incurred or recovery of such costs in 2023, 2022, or 2021.

(h) Patents

Patents are recorded at cost and are amortized on a straight line basis over their estimated useful lives of 5 years.

(i) Leases

As a lessee

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 currently set at 9%. 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 as there are none. The Company recognizes the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

As a lessor

As a lessor, the Company classifies its leases as either a finance lease or an operating lease. To classify each lease, the Company makes an overall assessment of whether the lease transfers substantially all of the risks and rewards incidental to ownership of the underlying asset. If this is the case, then the lease is a finance lease; if not, then it is an operating lease.

Rental income arising from operating leases is accounted on a straight-line basis over the lease term.

4. Summary of significant accounting policies (continued)

(j) Stock-based compensation and other stock-based payments

Where equity instruments are granted to employees, they are recorded at the fair value of the equity instrument granted at the grant date. The grant date fair value is recognized in net income over the vesting period. Where equity instruments are granted to non-employees, they are recorded at the fair value of the goods or services received. When the value of goods or services received in exchange for the stock-based payment cannot be reliably estimated, the fair value is measured by use of a valuation model. The cost recognized for all equity-settled stock-based payments is reflected in contributed surplus, until the instruments are exercised. Upon exercise, shares are issued from treasury and the amount previously reflected in contributed surplus along with any proceeds paid upon exercise, are credited to share capital.

(k) Government grants

The Company recognises government grants when there is reasonable assurance of compliance with grant conditions and that the grants will be received. Government grants are recognised in profit or loss on a systematic basis over the periods when the related expenses are incurred and are presented in the consolidated financial statements as a reduction of these expenses. A government grant that becomes receivable as compensation for expenses already incurred is recognised in profit or loss of the period in which it becomes receivable.

(1) Provisions

Provision for risks and expenses are recognized for probable outflows of resources that can be estimated and that result from present obligations resulting from past events. In the case where a potential obligation resulting from past events exists, but where occurrence of the outflow of resources is not probable or the estimate is not reliable, these contingencies are disclosed. Provisions, if any, are measured based on management's best estimates of outcomes on the basis of facts known at the reporting date.

(m) Income taxes

The Company accounts for its income taxes using the deferred tax assets and liabilities method. Deferred income tax assets and liabilities are determined based on the difference between the carrying amount and the tax basis of the assets and liabilities. Any change in the net amount of deferred income tax assets and liabilities is included in profit or loss or equity. Deferred income tax assets and liabilities are determined based on enacted or substantively enacted tax rates and laws which are expected to apply to taxable profit for the years in which the assets and liabilities will be recovered or settled. Deferred income tax assets are recognized when it is probable they will be realized. Deferred tax assets and liabilities are not discounted.

(n) Share capital

Share capital is presented at the fair value of the shares issued or the cash amount received. Costs related to the issuance of shares are reported in equity, net of tax, as a deduction from the issuance proceeds.

(o) Earnings or loss per share

The Company presents basic and diluted earnings per share data for its common shares. Basic earnings per share is calculated by dividing the profit or loss attributable to common shareholders of the Company by the weighted average number of common shares outstanding during the period. Diluted earnings per share is determined by adjusting the profit or loss attributable to common shareholders and the weighted average number of common shares outstanding, for the effects of all potentially dilutive common shares, which comprise stock options and convertible debentures.

5. New accounting standards and pronouncements

(a) Amendment to IAS 1, Presentation of Financial Statements, Issued but not yet effective

IAS 1 was amended in January 2020 to address inconsistences with how entities apply the standard over classification of current and non-current liabilities. The amendment serves to address whether, in the statement of financial position, debt and other liabilities with an uncertain settlement should be classified as current or non-current. The amendment is effective for annual reporting periods beginning on or after January 1, 2024. Earlier adoption is permitted. The Company will adopt this amendment as of the effective date, and does not anticipate any material impacts on adoption.

5. New accounting standards and pronouncements (continued)

(b) Amendment to IAS 1, Presentation of Financial Statements, Issued but not yet effective

In February 2021, the IASB issued 'Disclosure of Accounting Policies' with amendments that are intended to help preparers in deciding which accounting policies to disclose in their financial statements. The amendments are effective for year ends beginning on or after January 1, 2023. Earlier adoption is permitted. The Company will adopt this amendment as of the effective date, and does not anticipate any material impacts on adoption.

(c) Amendment to IAS 12 Deferred Tax related to Assets and Liabilities arising from a Single Transaction, Issued but not yet effective

The amendment narrowed the scope of certain recognition exemptions so that it no longer applies to transactions that, on initial recognition, give rise to equal taxable and deductible temporary differences. An entity applies the amendments to transactions that occur on or after the beginning of the earliest comparative period presented. It also, at the beginning of the earliest comparative period presented, recognizes deferred tax for all temporary differences related to leases and decommissioning obligations and recognizes the cumulative effect of initially applying the amendments as an adjustment to the opening balance of retained earnings (or other component of equity, as appropriate) at that date. The amendment is effective for annual periods beginning on or after January 1, 2023. Earlier adoption is permitted. The Company will adopt the amendment as of the effective date, and does not anticipate any material impacts on adoption.

(d) Amendment to IAS 8, Accounting Policies, Changes in Accounting Estimates and Errors, Issued but not yet effective

In February 2021, the IASB issued 'Definition of Accounting Estimates' to help entities distinguish between accounting policies and accounting estimates. The amendment is effective for annual reporting periods beginning on or after January 1, 2023. Earlier adoption is permitted. The Company will adopt the amendment as of the effective date, and is currently assessing the impacts of adoption.

(e) Amendment to IFRS 10, Consolidated Financial Statements and IAS 28, Investments in Associates and Joint Ventures, Issued but not yet

The amendment addresses a conflict between the requirements of IAS 28 and IFRS 10 and clarifies that in a transaction involving an associate or joint venture, the extent of gain or loss recognition depends on whether the assets sold or contributed constitute a business. The effective date of these amendments is yet to be determined, however early adoption is permitted. The Company will adopt the amendment as of the effective date, and does not anticipate any material impacts on adoption.

6. Property and equipment

Cost	Nov	As at ember 1, 2022	Ad	ditions	Dispo	osals		eign ange	Oct	As at ober 31, 2023
Computers	\$	7.466	\$	2,044	\$	_	\$	_	\$	9,510
Right-of-use assets	Ψ	48,408	Ψ	-	Ψ	-	Ψ	-	Ψ	48,408
C		55,874		2,044		-		-		57,918
Accumulated depreciation										
Computers		3,748		1,148	\$	-	\$	85	\$	4,981
Right-of-use assets		4,034		15,344		-		792		20,170
-		7,782		16,492		-		877		25,151
Net book value	\$	48,092							\$	32,767

6. **Property and equipment (continued)**

Cost	Nov	As at rember 1, 2021	Ad	Additions Disposals		Fore excha	0	Oct	As at ober 31, 2022	
	\$	19 570	\$		\$	(11.104)	\$		\$	7 166
Computers	Ф	18,570	Ф	-	Ф	(11,104)	ф	-	Ф	7,466
Right-of-use assets		74,307		48,408		(74,307)		-		48,408
		92,877		48,408		(85,411)		-		55,874
Accumulated depreciation							-			
Computers		12,824		1,723		(10,799)		-		3,748
Right-of-use assets		54,041		24,155		(74,162)		-		4,034
		66,865		25,878		(84,961)		-		7,782
Net book value	\$	26,012							\$	48,092

During the year ended October 31, 2022, the Company's lease agreement pertaining to the right-of-use asset as at October 31, 2021 expired and the asset was fully depreciated and derecognized. A new lease agreement was entered into and is therefore recorded as an addition during the year ended October 31, 2022. Refer to Note 8.

7. Patents

		As at vember 1, 2022	Ad	lditions	Disp	osals	As at tober 31, 2023
Cost Accumulated amortization	\$	681,288 681,288	\$	-	\$	-	\$ 681,288 681,288
Net book value	\$	-	\$	-	\$	-	\$ -
		As at vember 1, 2021	Ad	lditions	Disp	osals	As at tober 31, 2022
Cost Accumulated amortization	\$	681,288 677,411	\$	- 3,877	\$	-	\$ 681,288 681,288
Net book value	· · · · ·	3,877	\$	(3,877)	\$		

The Company holds several patents in the United States for its Multimodal Fluid Condition Sensor Platform. The patents are fully amortized as at October 31, 2023 and 2022.

8. Leases

(a) As a lessee

The lease obligation relates to the use of office space in Toronto, Ontario. The lease agreement in effect for the year ended October 31, 2021 was set to expire on July 31, 2022. On May 26, 2022, a new lease agreement was entered into for a term from August 1, 2022 to July 31, 2025 for office space in another location in Toronto, Ontario. The present value of the lease obligation was calculated using a discount rate of 9%.

8. Leases (continued)

(a) As a lessee

The lease liability is summarized as follows:

Balance, October 31, 2020	\$ 52,070
Interest expense	9,160
Lease payments	 (36,442)
Balance, October 31, 2021	\$ 24,788
New lease agreement	48,408
Interest expense	3,629
Lease payments	(28,946)
Foreign exchange	 (3,095)
Balance, October 31, 2022	 44,784
Interest expense	3,323
Lease payments	(18,932)
Foreign exchange	 (121)
Balance, October 31, 2023	\$ 29,054

The following represents a maturity analysis of the Company's undiscounted contractual lease obligations as at October 31, 2023:

	 USD
Less than one year	\$ 18,822
Between one and five years	\$ 12,756

(b) As a lessor

The Company sub-leases a portion of its office space under a lease agreement for a term of three years, expiring July 31, 2025. The sub-lease is classified as an operating lease because it does not transfer substantially all of the risks and rewards incidental to ownership of the asset.

For the year ended October 31, 2023, the Company recognized a total of \$17,682 (2022 - \$19,076) as rental income which has been recorded as a reduction to general and administrative expenses on the consolidated statement of operations and comprehensive loss.

The following represents a maturity analysis of the Company's lease payments to be received after October 31, 2023:

	USD
Less than one year	\$ 17,626
Between one and five years	\$ 14,593

9. Long-term loan

The Company was granted a \$60,000 CAD (\$43,254 USD) interest-free loan from the Government of Canada under the Canada Emergency Business Account ("CEBA") program to cover its operating costs (the "CEBA Loan"). If the Company repays \$40,000 CAD (\$28,836 USD) of the aggregate amount advanced on or before January 18, 2024, the repayment of the remaining \$20,000 CAD will be forgiven. The balance was not paid by January 18, 2024, and as a result, the total principal amount was subsequently converted to a 3-year term loan at 5% annual interest paid monthly, commencing January 19, 2024. The total amount owing on the CEBA loan as at October 31, 2023 is \$43,254 (\$60,000 CAD) (October 31, 2022 - \$43,796 (\$60,000 CAD)).

10. Debenture payable

The Company issued a debenture on March 17, 2020, with a principal amount of \$51,500 CAD (\$37,126 USD) and an original maturity date of June 17, 2020. The debenture's maturity date was extended by six month intervals on June 17, 2020, December 17, 2021, June 17, 2022, December 17, 2022 and June 17, 2023. The most recent extension on June 17, 2023 extended the debenture to December 17, 2023. The extension of the debenture's maturity date resulted in a substantial modification of the existing terms of the debenture and accordingly was accounted for as an extinguishment. The debenture bears interest at a rate of 24% and is unsecured. At October 31, 2023, the debenture had an outstanding balance of \$37,509 (\$52,031 CAD) (October 31, 2022 - \$38,001 (\$52,062 CAD)). During the year ended October 31, 2023, total interest expense of \$9,170 (2022 - \$9,604, 2021 - \$7,261) was recognized in the consolidated statement of operations and comprehensive loss.

11. Convertible debentures

The Company issues three types of convertible debentures: USD denominated convertible debentures with an equity component, Canadian dollar ("CAD") 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 year ended October 31, 2023, the Company incurred \$86,352 of financing costs (2022 - \$21,000, 2021 - \$84,478) which primarily consisted of early repayment and administrative fees, of which \$nil (2022 - \$nil, 2021 - \$nil) was converted into common shares.

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

Convertible debentures outstanding as at October 31, 2023:

		USD (equity omponent)	`	CAD embedded erivative)	`	USD mbedded erivative)		Total
Loan principal outstanding	\$	1,261,265	\$	2,146,715	\$	405,001		
Terms of loan Annual stated interest rate Effective annual interest rate Conversion price to common shares Remaining life (in months)	\$0	24% 24% 0.03 - \$0.04 0 - 4		2% - 24% 22 - 131% 0.05 - \$0.10 0 - 11	-	2% - 4% % - 5158% ^{(i) - (ii)} 0 - 11		
Consolidated Statement of Financial Position Carrying value of loan principal Interest payable Convertible debentures	\$ \$	1,261,265 344,993 1,606,258	\$ \$	1,499,667 334,511 1,834,178	\$	77,238 30,385 107,623	\$ \$	2,838,170 709,889 3,548,059
Derivative liabilities Equity component of convertible debentures	\$ \$	3,220,473	\$ \$	783,650 -	\$ \$	295,743	\$ \$	1,079,393 3,220,473

For the year ended October 31, 2023:

	USD (equity mponent)	CAD (embedded derivative)		USD (embedded derivative)		(embedded		Total
Consolidated Statement of Operations and Comprehensive Loss								
Accretion expense	\$ 18,258	\$ 243,162	\$	18,414	\$	279,834		
Interest expense	\$ 273,458	\$ 254,523	\$	12,948	\$	540,929		
Gain on revaluation of derivative liabilities	\$ -	\$ (507,186)	\$	(151,317)	\$	(658,503)		
Loss on conversion of convertible debentures	\$ -	\$ -	\$	21,120	\$	21,120		
Loss on repayment of convertible debentures	\$ -	\$ -	\$	27,243	\$	27,243		
(Gain) loss on extinguishment of convertible debentures	\$ 33,488	\$ 1,169,800	\$	197,535	\$	1,400,823		
Consolidated Statement of Changes in Equity								
Amount of principal converted to common shares	\$ 250,000	\$ 455,000	\$	232,700				
Amount of interest converted to common shares	\$ 30,016	\$ 204,189	\$	4,654				
Number of common shares issued on conversion of convertible debentures	6,406,250	14,391,709		9,548,701		30,346,660		

Micromem Technologies Inc. Notes to Consolidated Financial Statements For the years ended October 31, 2023, 2022, and 2021 (Expressed in United States dollars, unless otherwise noted)

11. Convertible debentures (continued)

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

	USD (equity nponent)	(er	CAD nbedded rivative)	`	USD mbedded erivative)	Total
Consolidated Statement of Cash Flows						
Amount of principal repaid in cash	\$ -	\$	-	\$	270,000	\$ 270,000
Amount of interest repaid in cash	\$ 12,973	\$	47,353	\$	4,353	\$ 64,679

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

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

(b) Comparative information presented in the consolidated financial statements

Convertible debentures outstanding as at October 31, 2022:

	<u> </u>	USD (equity omponent)	`	CAD embedded lerivative)	`	USD mbedded erivative)	 Total
Loan principal outstanding	\$	1,205,144	\$	2,321,755	\$	347,700	
Terms of loan Annual stated interest rate	1	2% - 24%	1	2% - 24%	~	2% - 4%	
Effective annual interest rate	1	24%		22 - 131%		2% - 4% % - 5803%	
Conversion price to common shares	\$0	0.03 - \$0.07	\$0	0.05 - \$0.08		(i) - (ii)	
Remaining life (in months)		0 - 6		0 - 10		0 - 11	
Consolidated Statement of Financial Position							
Carrying value of loan principal	\$	1,203,478	\$	1,661,742	\$	130,424	\$ 2,995,644
Interest payable		380,360		389,617		26,443	796,420
Convertible debentures	\$	1,583,838	\$	2,051,359	\$	156,867	\$ 3,792,064
Derivative liabilities	\$	-	\$	439,194	\$	202,105	\$ 641,299
Equity component of convertible debentures	\$	793,140	\$	-	\$	-	\$ 793,140

⁽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.

For the year ended October 31, 2022:

	USD CAD (equity (embedded component) derivative)		embedded	(-	USD mbedded erivative)	Total		
Consolidated Statement of Operations and Comprehensive Loss								
Accretion expense	\$	28,000	\$	1,086,385	\$	65,218	\$	1,179,603
Interest expense	\$	230,058	\$	232,211	\$	7,156	\$	469,425
Gain on revaluation of derivative liabilities	\$	-	\$	(379,736)	\$	(29,871)	\$	(409,607)
Loss on conversion of convertible debentures	\$	-	\$	-	\$	94,326	\$	94,326
Gain on repayment of convertible debentures	\$	-	\$	(661)	\$	(47,216)	\$	(47,877)
(Gain) loss on extinguishment of convertible debentures	\$	(28,007)	\$	99,078	\$	129,579	\$	200,650

Micromem Technologies Inc. Notes to Consolidated Financial Statements For the years ended October 31, 2023, 2022, and 2021

(Expressed in United States dollars, unless otherwise noted)

11. **Convertible debentures (continued)**

(b) Comparative information presented in the consolidated financial statements

	USD equity nponent)	(en	CAD nbedded rivative)	(-	USD embedded erivative)	Total
Consolidated Statement of Changes in Equity						
Amount of principal converted to common shares	\$ -	\$	-	\$	712,100	
Amount of interest converted to common shares	\$ -	\$	-	\$	12,680	
Number of common shares issued on conversion of convertible debentures	-		-		26,443,820	26,443,820
Consolidated Statement of Cash Flows						
Amount of principal repaid in cash	\$ -	\$	7,490	\$	56,000	\$ 63,490
Amount of interest repaid in cash	\$ 14,941	\$	73,524	\$	-	\$ 88,465

For the year ended October 31, 2021:

	co	USD (equity omponent)	CAD embedded lerivative)	(USD embedded erivative)	Total
Consolidated Statement of Operations and Comprehensive Loss		<u> </u>	 			
Accretion expense	\$	28,001	\$ 1,003,613	\$	138,307	\$ 1,169,921
Interest expense	\$	236,519	\$ 226,520	\$	32,770	\$ 495,809
(Gain) loss on revaluation of derivative liabilities	\$	-	\$ (2,718,409)	\$	171,217	\$ (2,547,192)
(Gain) loss on conversion of convertible debentures	\$	-	\$ (47,356)	\$	37,850	\$ (9,506)
(Gain) loss on extinguishment of convertible debentures	\$	-	\$ 1,360,536	\$	(341,608)	\$ 1,018,928
Consolidated Statement of Changes in Equity						
Amount of principal converted to common shares	\$	-	\$ 100,000	\$	284,000	
Amount of interest converted to common shares	\$	30,200	\$ 160,064	\$	6,700	
Number of common shares issued on conversion of convertible						
debentures		1,118,519	7,744,774		6,748,559	15,611,852
Consolidated Statement of Cash Flows						
Amount of principal repaid in cash	\$	205,100	\$ 31,492	\$	364,370	\$ 600,962
Amount of interest repaid in cash	\$	25,101	\$ 36,052	\$	26,113	\$ 87,266

(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 October 31, 2023	As at October 31, 2022
Share price	\$0.05	\$0.03
Exercise price	\$0.03 - \$0.07	\$0.02 - \$0.07
Volatility factor (based on historical volatility)	114% - 189%	140% - 232%
Risk free interest rate	5.11% - 5.48%	3.09% - 4.28%
Expected life of conversion features (in months)	0 - 11	0 - 11
Expected dividend yield	0%	0%
CDN to USD exchange rate (as applicable)	0.7209	0.7299
Call value	\$0.01 - \$0.08	\$0.00 - \$0.02

The key unobservable input in these models relates to volatility. Volatility was estimated using the historical volatility of the Company's stock prices for common shares. Changes in these assumptions may affect the fair value estimates of the derivative liabilities.

12. 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
 - (i) In 2023, the Company completed 26 private placements with investors consisting of common shares with no warrants, pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$509,939 and issued a total of 9,864,500 common shares.
 - (ii) In 2022, the Company completed 9 private placements with investors consisting of common shares with no warrants, pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$181,997 and issued a total of 5,012,450 common shares.
 - (iii) In 2021, the Company completed 37 private placements with investors consisting of common shares with no warrants, pursuant to prospectus and registration exemptions set forth in applicable securities law. The Company received net proceeds of \$840,564 and issued a total of 17,573,429 common shares.
- (c) Accounts payable settled in common shares

During the year ended October 31, 2023, \$nil (2022 - \$22,460, 2021 - \$nil) of accounts payable was settled in exchange for nil (2022 - 413,674, 2021 - nil) common shares. There was no gain or loss recognized upon settlement.

13. Stock options

(a) Stock option plan

Under the Company's fixed stock option plan (the "Plan"), the Company could grant up to 27,500,000 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 October 31, 2020	2,200,000	\$	0.10		
Granted	9,500,000		0.06		
Outstanding at October 31, 2021	11,700,000	\$	0.06		
Granted	2,025,000		0.07		
Expired	(2,000,000)		0.07		
Outstanding at October 31, 2022	11,725,000	\$	0.06		
Granted	3,000,000		0.09		
Expired	(2,400,000)		0.08		
Exercised (i)	(2,550,000)		0.09		
Outstanding at October 31, 2023	9,775,000	\$	0.06		

(i) During the year ended October 31, 2023, the Company issued a total of 2,550,000 common shares related to the exercise of stock options for gross proceeds of \$214,140.

13. Stock options (continued)

(c) Stock options outstanding at October 31, 2023

There were 3,000,000 options issued to directors, officers, employees and consultants during the year ended October 31, 2023 (2022 - nil, 2021 - 9,500,000 options issued). Of the 3,000,000 options granted, 2,750,000 options have vested, the remaining 250,000 options vested on January 6, 2024.

			Weighted average				
		Number of			Remaining		
Date of issue	Expiry date	options	Exercise price		contractual life		
November 13, 2020	November 13, 2025	5,750,000	\$	0.05	2.0		
October 8, 2021	October 8, 2026	1,000,000		0.07	2.9		
December 15, 2021	December 15, 2023	25,000		0.07	0.1		
March 20, 2023	March 20, 2028	2,000,000		0.07	4.4		
April 6, 2023	April 6, 2024	1,000,000		0.12	0.4		
Outstanding at October 31, 2023		9,775,000	\$	0.06	2.4		

Of the total options outstanding, 9,525,000 are exercisable as at October 31, 2023 (2022 - 10,225,000).

(d) Fair value of options issued during the year

The fair value of the stock options issued has been determined in accordance with the Black Scholes option-pricing model. Volatility was estimated using the historical volatility of the Company's stock prices for its common shares. The underlying assumptions are as follows:

	2023	2022	2021
Share price at grant date	\$0.07 - \$0.12	\$0.03 - \$0.05	\$0.05
Exercise price	\$0.07 - \$0.12	\$0.07	\$0.05 - 0.07
Volatility factor	175% - 184%	212% - 272%	148% - 180%
Risk free interest rate	2.79% - 3.58%	0.97% - 4.33%	0.75%
Expected life of options in years	1 - 5	1 - 2	5
Expected divided yield	0%	0%	0%
Forfeiture rate	0%	0%	0%
Weighted average Black Scholes value at grant date	\$0.06 - \$0.08	\$0.02 - \$0.03	\$0.05 - \$0.06

During the year ended October 31, 2023, the Company recorded an expense of \$217,965 related to the vesting of stock options (2022 - \$41,484, 2021 - \$360,044).

14. Loss per share

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

	2023	2022	2021
Numerator Net loss attributable to common shareholders and used in computation of basic and diluted loss per share	\$ (2,691,670)	\$ (2,287,095)	\$ (1,012,978)
Denominator Weighted average number of common shares for computation of basic and diluted loss per share	490,310,376	451,177,796	422,613,046

For the years ended October 31, 2023, 2022 and 2021, all stock options and conversion features were anti-dilutive and, therefore, are excluded from the calculation of diluted loss per share.

15. Income taxes

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

	2023	 2022	 2021
Loss before income taxes	\$ (2,691,670)	\$ (2,287,095)	\$ (1,012,978)
Statutory tax rate	26.5%	 26.5%	 26.5%
Expected income tax recovery	\$ (713,293)	\$ (606,080)	\$ (268,439)
Accretion expense and loss (gain) on convertible debentures and derivative liabilities	283,688	269,531	(97,480)
Stock-based compensation	57,761	10,992	95,412
Non-deductible (non-taxable) expenses and other items	(13,660)	(3,780)	82,530
Effect of changes in exchange rates	74,714	940,577	(644,649)
Change in deferred tax assets not recognized	310,790	(611,240)	832,626
	\$ -	\$ -	\$ -

(b) 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. Significant components of the Company's deferred tax assets and liabilities are as follows:

	2023	2022	2021
Non-capital losses	\$ 8,833,940	\$ 8,485,255	\$ 8,924,982
Capital losses	159,671	162,275	178,808
Property, equipment, patents and deferred costs	1,605,743	1,639,306	1,794,285
	\$ 10,599,354	\$ 10,286,836	\$ 10,898,075
Deferred tax asset not recognized	(10,599,354)	(10,286,836)	(10,898,075)
	\$ -	\$ -	\$ -

As at October 31, 2023 and 2022, 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 carried in the consolidated statements of financial position for such assets.

(c) The Company has non-capital losses of approximately \$33 million available to reduce future taxable income, the benefit of which has not been recognized in these consolidated financial statements. As at October 31, 2023, the tax losses expire as follows:

	Canada	United States	Total
2026	\$ 1,731,988	\$ -	\$ 1,731,988
2027	1,456,466	-	1,456,466
2028	-	-	-
2029	1,492,685	143,721	1,636,406
2030	2,014,021	1,880,897	3,894,918
2031	1,213,385	18,526	1,231,911
2032	1,344,746	325,793	1,670,539
2033	1,629,964	157,463	1,787,427
2034	2,358,006	679,089	3,037,095
2035	2,664,751	570,901	3,235,652
2036	3,127,236	441,019	3,568,255
2037	2,503,443	232,714	2,736,157
2038	1,692,420	317	1,692,737
2039	1,513,943	-	1,513,943
2040	509,976	-	509,976
2041	883,620	-	883,620
2042	1,254,159	-	1,254,159
2043	1,494,374	-	1,494,374
	\$ 28,885,183	\$ 4,450,440	\$ 33,335,623

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

16. Operating expenses

(a) General and administration

The components of general and administration expenses are as follows:

	Notes	2023		 2022	2021
General and administration		\$	70,584	\$ 59,938	\$ 86,186
Rent and occupancy	8 (b)		17,663	50,907	15,536
Office insurance			1,930	1,696	753
Investor relations, listing and filing fees			52,756	64,769	53,029
Telephone			5,683	 8,056	 -
		\$	148,616	\$ 185,366	\$ 155,504

(i) Rent subsidy

The Government of Canada announced the Canada Emergency Rent Subsidy (CERS) to support eligible businesses by covering part of their commercial rent or property expenses. For the year ended October 31, 2023, the Company recognized \$nil (2022 - \$nil, 2021 - \$38,440 CDN (\$30,613 USD)) of rent subsidy under this program, which has been recorded as a reduction of rent and occupancy expenses in the consolidated statements of operations and comprehensive loss. This program ran from September 27, 2020 to October 23, 2021.

(b) Professional, other fees and salaries

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

	 2023	 2022	 2021
Professional fees	\$ 144,244	\$ 110,933	\$ 107,554
Consulting fees	67,664	69,563	132,793
Salaries and benefits	 398,144	 467,214	 184,138
	\$ 610,052	\$ 647,710	\$ 424,485

(i) Wage subsidy

The Canada Emergency Wage Subsidy (CEWS) was announced by the Government of Canada on March 27, 2020 to enable companies negatively impacted by COVID-19 to re-hire workers. Under this program, qualifying business can receive a subsidy for a portion of their employees' wages. For the year ended October 31, 2023, the Company recognized \$nil (2022 - \$nil, 2021 - \$167,388 CDN (\$133,699 USD)) of wage subsidy under this program, which has been recorded as a reduction of salaries expenses in the consolidated statements of operations and comprehensive loss. This program concluded on October 23, 2021.

17. Supplemental cash flow information

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

	Years ended October 31,					
		2023		2022		2021
Balance - beginning of year	\$	4,433,363	\$	3,239,483	\$	3,615,080
Cash flows from financing activities:						
Proceeds from issuance of convertible debentures		645,151		765,671		510,000
Repayments of convertible debentures		(270,000)		(63,490)		(593,301)
Non-cash changes:						
Accretion expense		279,834		1,179,603		1,169,921
Accrued interest on convertible debentures		471,596		368,280		408,543
Loss (gain) on repayment of convertible debentures		27,243		(47,877)		-
Loss on conversion of convertible debentures		21,120		94,326		-
Gain on revaluation of derivative liabilities		(658,503)		(409,607)		(2,547,192)
Loss on extinguishment of debt		1,400,823		200,650		1,018,928
Convertible debentures converted into common shares		(1,656,422)		(764,432)		(521,136)
Renewal of convertible debentures		-		-		(16,804)
Foreign exchange (gain) loss		(66,753)		(129,244)		195,444
Balance - end of year	\$	4,627,452	\$	4,433,363	\$	3,239,483
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18. 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) is summarized as follows:

	 2023	 2022	 2021
Professional, other fees, and salaries Stock-based compensation	\$ 214,914 82,946	\$ 133,517	\$ 107,201 227,500
Stock based compensation	\$ 297,860	\$ 133,517	\$ 334,701

During the year ended October 31, 2023, key management were awarded 1,340,000 options as part of the total 3,000,000 issued (October 31, 2022 - nil). During the year ended October 31, 2021, the Company awarded 5,000,000 stock options to key management as part of the total 9,500,000 stock options issued.

(b) Trade payables and other liabilities

In 2021, the Company reversed certain amounts totalling \$422,982 due to the payables being statute barred. These balances carried forward from prior years and the Company derecognized these balances during the year ended October 31, 2021.

Included in accounts payable at October 31, 2023 is \$nil payable to a corporation controlled by an officer of the Company (2022 - \$5,650 CAD (USD - \$4,139)). In addition, at October 31, 2023, accounts payable includes \$2,173 payable to a director (2022 - \$nil).

19. Commitments and 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) The Company has previously reported on the lawsuit filed by Mr. Steven Van Fleet against Micromem, the Company's response to the lawsuit and its counterclaims against Mr. Van Fleet.

On April 29, 2021 the matter was resolved in Micromem's favor when the Court dismissed Mr. Van Fleet's claims and ruled that he was liable to the Company and to MAST on their counterclaims. On June 16, 2021, the Court ruled that Micromem and MAST had established damages totaling \$765,579 representing the full amount that had been requested; furthermore, the Court awarded costs and statutory prejudgment interest from May 9, 2017. On June 29, 2021 the Court entered a judgement in favor of Micromem and MAST for a total amount of \$1,051,739.

With respect to the Company's efforts to collect on that Judgement, a settlement ("Settlement") was reached during October 2021. Pursuant to the Settlement, the Company received an initial one-time payment and is entitled to additional monthly payments over a period of up to six years. The Company will record those payments as and when they are received. The total amount to be received by the Company if Mr. Van Fleet makes all the required payments under the terms of the Settlement will be less than the amount of the Judgement obtained by the Company, but if Mr. Van Fleet does not comply with the terms of the Settlement, it also provides the Company a means of enforcing a larger judgement against Mr. Van Fleet that is substantially in line with the Judgement. Mr. Van Fleet has made the prescribed monthly payments each month since October 2021.

The Company reports the recovery of this contingent asset as funds are received. In the year ended October 31, 2023 the Company has recorded a recovery of \$23,555 as a reduction of legal expenses (October 31, 2022 - \$9,040, October 31, 2021 - \$40,000). At October 31, 2023, \$11,705 of the recovery is recorded as other receivable on the consolidated statement of financial position (2022 - \$nil).

(c) On November 1, 2023, a former employee filed a statement of claim against the Company relating to employment termination without reasonable notice. The Company filed a statement of defence and counterclaim on November 29, 2023 denying all liability to the former employee. The Company considers the claim of the former employee to be largely and likely without merit and therefore, no provision has been recorded in these consolidated financial statements.

19. Commitments and Contingencies (continued)

(d) On March 23, 2023, the Company signed a letter of intent (the "LOI") with companies incorporated in Romania (the "Parties") whereby the Parties intend to collaborate for the development of certain hardware equipment (the "Project"). Under the LOI, the Parties will provide full payment for the hardware equipments and the Company will provide all engineering support and expertise as required. At October 31, 2023 a formal agreement relating to the Project has not been executed.

During the year ended October 31, 2023, the Company received total advances of \$63,000 from the Parties and has paid \$63,000 to a third party for the construction of the hardware equipment. The Company has recorded the total advances as a deposit liability and the third party payments as a prepaid expense on the consolidated statement of financial position.

At October 31, 2023 the Company is committed to a further \$63,000 payment related to the construction of the hardware equipment.

20. 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 (CAD). The Company manages currency risk by monitoring the Canadian dollar position of these monetary financial instruments on a periodic basis throughout the course of the reporting period.

As at October 31, 2023, and October 31, 2022, balances that are denominated in CAD are as follows:

	0	As at october 31, 2023 CAD	0	As at october 31, 2022 CAD
Cash	\$	38,444	\$	15,715
Other receivables	\$	29,080	\$	13,832
Trade payables and other liabilities	\$	290,311	\$	393,978
Convertible debentures	\$	2,544,289	\$	2,810,362
Debenture payable	\$	52,031	\$	51,500
Derivative liabilities	\$	1,087,044	\$	601,696
Long-term loan	\$	60,000	\$	60,000

A 10% strengthening of the US dollar against the CDN dollar would decrease net loss and comprehensive loss by \$260,000 as at October 31, 2023 (October 31, 2022 - decrease net loss and comprehensive loss by \$257,995). A 10% weakening of the USD against the CDN would have 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) 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. The Company has exposure to credit risk from its cash and receivables. The maximum exposure to credit risk is the carrying value of these financial assets, which amounted to \$43,289 as at October 31, 2023 (October 31, 2022 - \$33,227).

The risk for cash is mitigated by holding these balances with with central banks and financial institution counterparties that are highly rated. The Company therefore does not expect any credit losses on its cash.

The risk of credit loss on receivable is substantially mitigated by assessing the credit quality of counterparties, taking into account their financial position, past experience and other factors. Management actively monitors the Company's exposure to credit risk under its financial instruments, including with respect to other receivables.

20. Financial risk management (continued)

(d) 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. With the exception of the long-term loan, all financial liabilities are due within 1 year as at October 31, 2023.

(i) Trade payables

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

	00	As at ctober 31, 2023	0	As at ctober 31, 2022
Less than 30 days past billing date	\$	209,285	\$	287,575
	\$	209,285	\$	287,575

(ii) Convertible debentures and derivative liabilities

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

		As at Octo 202				ctober 3 022	1,
		Convertible lebentures	_	bebenture bayable	Convertible debentures	Deben	ture payable
Less than three months Three to six months	\$ \$	2,451,614 1,038,355	\$ \$	37,509	\$ 2,445,107 1,235,836	\$	-
Six to twelve months	\$	433,815	\$	-	 446,635	_	38,001
	\$	3,923,784	\$	37,509	\$ 4,127,578	\$	38,001

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, i.e. 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 year ended October 31, 2023.

22. Subsequent events

Subsequent to October 31, 2023:

- (a) The Company secured four private placements with investors for net proceeds of \$113,260 and issued a total of 2,400,000 common shares with no warrants, pursuant to prospectus and registrations set forth in applicable securities law.
- (b) The Company secured \$137,188 in convertible debentures with issuance dates between November 22, 2023 and January 12, 2024. The convertible debentures have a 12 month term, interest rate of 4% per annum and expiring dates ranging from November 22, 2024 to January 12, 2025. The conversion features become effective six months after initiation date.
- (c) On January 1, 2024, the Company secured \$79,227 (\$109,900 CAD) in a convertible debenture with a 12 month term, interest rate of 12% per annum and expiring on January 11, 2025.
- (d) The Company converted \$127,704 of convertible debentures and accrued interest through the issuance of 3,780,426 common shares.
- (e) The Company repaid \$154,391 on two of its convertible debentures, as well as a partial payment of \$5,000 on another convertible debenture.
- (f) A total of 25,000 stock options expired unexercised on December 15, 2023
- (g) The Company extended its convertible debentures, with an original maturity date ranging between November 2, 2023 to January 27, 2024, for an additional 6 months, expiring between May 2, 2024 and July 27, 2024. There were no significant changes to the terms of the convertible debentures as a result of the extension.