



Micromem Technologies Inc.
Consolidated Financial Statements
For the years ended October 31, 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 Stockholders 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, 2022 and 2021, and the related consolidated statements of operations and comprehensive loss, changes in equity, and cash flows for each of the years in the three-year period ended October 31, 2022, 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, 2022 and 2021, and its financial performance and its consolidated cash flows for each of the years in the three-year period ended October 31, 2022, in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board.

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 losses from operations and has a net capital deficiency 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 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, including the impact of the global COVID-19 pandemic 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. The Company's ability to execute the planned refinancing actions are especially judgmental given that the global financial markets and economic conditions have been, and continue to be, volatile as a result of the COVID-19 pandemic. 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, not exceeding 12 months from the date of the Statements 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 and COVID-19 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, 2022, 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 the valuation techniques that require management to make several assumptions related to the inputs into those models. Auditing management's fair value determinations 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 prices 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.

MNP LLP

Toronto, Ontario
February 15, 2023

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, 2022 and October 31, 2021
(Expressed in United States dollars)

	<u>Notes</u>	<u>As at October 31, 2022</u>	<u>As at October 31, 2021</u>
Assets			
Current			
Cash	20	\$ 33,227	\$ 171,397
Prepaid expenses and other receivables		<u>18,200</u>	<u>24,007</u>
Total current assets		51,427	195,404
Property and equipment	6	48,092	26,012
Patents	7	-	3,877
Total assets		<u>\$ 99,519</u>	<u>\$ 225,293</u>
Liabilities			
Current			
Trade payables and other liabilities	18(b), 20(c)	\$ 287,575	\$ 343,850
Current lease liability	8	15,366	24,788
Debenture payable	11	38,001	40,207
Convertible debentures	10,20	3,792,064	2,452,402
Derivative liabilities	10,20	<u>641,299</u>	<u>787,081</u>
Total current liabilities		4,774,305	3,648,328
Non-current lease liability	8	29,418	-
Long-term loan	9	<u>43,796</u>	<u>48,243</u>
Total liabilities		<u>4,847,519</u>	<u>3,696,571</u>
Shareholders' Deficiency			
Share capital	12	87,784,725	86,815,836
Contributed surplus		27,459,730	28,197,382
Equity component of convertible debentures	10	793,140	14,004
Accumulated deficit		<u>(120,785,595)</u>	<u>(118,498,500)</u>
Total shareholders' deficiency		<u>(4,748,000)</u>	<u>(3,471,278)</u>
Total liabilities and shareholders' deficiency		<u>\$ 99,519</u>	<u>\$ 225,293</u>
Going concern	2		
Contingencies	19		
Subsequent events	23		

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, 2022, 2021, and 2020
(Expressed in United States dollars)

		Years ended October 31,		
	Notes	2022	2021	2020
Operating expenses				
General and administrative	16(a)	\$ 185,366	\$ 155,504	\$ 154,007
Professional, other fees and salaries	16(b)	647,710	424,485	462,124
Recovery of reserve for litigation costs		-	-	(205,788)
Statute barred payables	17(b)	-	(422,982)	-
Stock-based compensation	13	41,484	360,044	-
Travel and entertainment		59,504	24,903	23,903
Amortization of property and equipment	6	25,878	28,033	27,735
Amortization of patents	7	3,877	8,000	8,123
Foreign exchange loss (gain)	20(a)	(176,477)	222,553	1,447
Total operating expenses		787,342	800,540	471,551
Other expenses				
Accretion expense	10	1,179,603	1,169,921	1,099,818
Interest expense on convertible debt	10	469,425	495,809	441,369
Other finance expenses	8,10	13,233	84,478	35,500
Loss (gain) on revaluation of derivative liabilities	10	(409,607)	(2,547,192)	(771,920)
Loss (gain) on conversion of convertible debentures	10	94,326	(9,506)	96,484
Loss (gain) on repayment of convertible debentures	10	(47,877)	-	-
Loss (gain) on extinguishment of convertible debentures	10	200,650	1,018,928	(127,409)
Total other expenses		1,499,753	212,438	773,842
Loss before income tax provision		(2,287,095)	(1,012,978)	(1,245,393)
Income tax provision	15	-	-	-
Net loss and comprehensive loss		\$ (2,287,095)	\$ (1,012,978)	\$ (1,245,393)
Weighted average number of outstanding shares, basic and diluted	14	451,177,796	422,613,046	377,380,476
Loss per share, basic and diluted	14	\$ (0.01)	\$ -	\$ -

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

Micromem Technologies Inc.
Consolidated Statements of Changes in Equity
For the years ended October 31, 2022, 2021, and 2020
(Expressed in United States dollars)

	<u>Notes</u>	<u>Number of shares</u>	<u>Share capital</u>	<u>Contributed surplus</u>	<u>Equity component of convertible debentures</u>	<u>Accumulated deficit</u>	<u>Total</u>
Balance at November 1, 2019		346,952,721	\$ 84,153,696	\$ 27,757,639	\$ 50,147	\$ (116,240,129)	\$ (4,278,647)
Private placements of shares for cash	12	10,996,994	425,789	-	-	-	425,789
Convertible debentures converted into common shares	10	44,237,644	859,331	-	-	-	859,331
Expiry of convertible debenture conversion option	10	-	-	52,947	(52,947)	-	-
Renewal of convertible debentures	10	-	-	-	26,752	-	26,752
Shares issued on settlement of accounts payable	12	365,094	24,826	-	-	-	24,826
Net loss		-	-	-	-	(1,245,393)	(1,245,393)
Balance at October 31, 2020		<u>402,552,453</u>	<u>\$ 85,463,642</u>	<u>\$ 27,810,586</u>	<u>\$ 23,952</u>	<u>\$ (117,485,522)</u>	<u>\$ (4,187,342)</u>
Private placements of shares for cash	12	17,573,429	840,564	-	-	-	840,564
Convertible debentures converted into common shares	10	15,611,852	511,630	-	-	-	511,630
Expiry of convertible debenture conversion option	10	-	-	26,752	(26,752)	-	-
Renewal of convertible debentures	10	-	-	-	16,804	-	16,804
Stock-based compensation	13	-	-	360,044	-	-	360,044
Net loss		-	-	-	-	(1,012,978)	(1,012,978)
Balance at October 31, 2021		<u>435,737,734</u>	<u>\$ 86,815,836</u>	<u>\$ 28,197,382</u>	<u>\$ 14,004</u>	<u>\$ (118,498,500)</u>	<u>\$ (3,471,278)</u>
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	10	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	10	-	-	1,258,388	(1,258,388)	-	-
Renewal of convertible debentures	10	-	-	(2,037,524)	2,037,524	-	-
Stock-based compensation	13	-	-	41,484	-	-	41,484
Net loss		-	-	-	-	(2,287,095)	(2,287,095)
Balance at October 31, 2022		<u>467,607,678</u>	<u>87,784,725</u>	<u>27,459,730</u>	<u>793,140</u>	<u>(120,785,595)</u>	<u>(4,748,000)</u>

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, 2022, 2021, and 2020
(Expressed in United States dollars)

	Notes	Years ended October 31,		
		2022	2021	2020
Operating activities				
Net loss		\$ (2,287,095)	\$ (1,012,978)	\$ (1,245,393)
Items not affecting cash:				
Statute barred payables		-	(422,982)	-
Amortization of property and equipment	6	25,878	28,033	27,735
Amortization of patents	7	3,877	8,000	8,123
Accretion expense	10,17	1,179,603	1,169,921	1,099,818
Accrued interest on convertible debentures	17	368,280	605,507	306,839
Stock-based compensation	13	41,484	360,044	-
Loss (gain) on conversion of convertible debentures	10,17	94,326	(9,506)	96,484
Loss (gain) on repayment of convertible debentures	10,17	(47,877)	-	-
Loss (gain) on revaluation of derivative liabilities	10,17	(409,607)	(2,547,192)	(771,920)
Loss (gain) on extinguishment of convertible debentures	10,17	200,650	1,018,928	(127,409)
Shares issued for financing costs		-	-	7,500
Foreign exchange loss (gain)	20	(136,336)	421,937	78,004
		(966,817)	(380,288)	(520,219)
Net changes in non-cash working capital:				
Decrease in prepaid expenses and other receivables		5,807	1,414	(10,670)
Decrease in trade payables and other liabilities		(36,021)	(383,892)	(229,683)
Cash flows used in operating activities		(997,031)	(762,766)	(760,572)
Investing activity				
Purchase of property and equipment	5	-	(5,271)	-
Cash flows used in investing activity		-	(5,271)	-
Financing activities				
Principal payments on lease liability	8	(25,317)	(27,282)	(11,422)
Proceeds from long-term loan		-	17,974	30,269
Private placements of shares for cash	12	207,588	840,564	425,789
Share issuance costs		(25,591)	-	-
Proceeds from issuance of convertible debentures	17	765,671	510,000	612,279
Repayments of convertible debentures	17	(63,490)	(593,301)	(150,920)
Cash flows provided by financing activities		858,861	747,955	905,995
Net change in cash		(138,170)	(20,082)	145,423
Cash - beginning of period		171,397	191,479	46,056
Cash - end of period		\$ 33,227	\$ 171,397	\$ 191,479
Supplemental cash flow information				
Interest paid (classified in operating activities)	10	\$ 88,465	\$ 87,266	\$ 155,690
Interest converted (classified in operating activities)	10	\$ 12,680	\$ 196,964	\$ -
Interest paid on non-convertible debt (classified in operating activities)		\$ 9,604	\$ 11,785	\$ 8,081
Interest paid on lease liability (classified in operating activities)	8	\$ 3,629	\$ 9,160	\$ 14,081
Carrying amount of convertible debentures converted into common shares	17	\$ 764,432	\$ 521,136	\$ 762,847
Shares issued on settlement of accounts payable	12	\$ 22,460	\$ -	\$ 24,826
ROU asset and lease liability recognized	8	\$ 48,408	\$ -	\$ -

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

Micromem Technologies Inc.
Notes to Consolidated Financial Statements
For the years ended October 31, 2022, 2021, and 2020
(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 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 "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 October 31, 2022 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, 2022, the Company reported a net loss and comprehensive loss of \$2,287,095 (2021 - \$1,012,978, 2020 - \$1,245,393) and negative cash flow from operations of \$997,031 (2021 - \$762,766, 2020 - \$760,572). The Company's working capital deficiency as at October 31, 2022 was \$4,722,878 (October 31, 2021 - \$3,452,924).

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 2023; 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. If the 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.

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. The Company has encountered delays in the commercial plans for its technology with its primary target customers. It secured a government backed loan of \$60,000 CDN (\$43,796 USD) as at October 31, 2022 (October 31, 2021 - \$60,000 CDN, \$48,243 USD) which matures in December 2025 (Note 9). During the year ended October 31, 2022, the Company received government wage subsidies of \$nil CDN (\$nil USD) (October 31, 2021 - \$167,388 CDN, \$133,699 USD) (Note 15(b)(i)) and rent subsidies of \$nil CDN (\$nil USD) (October 31, 2021 - \$38,440 CDN, \$30,613 USD).

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 IFRS 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 February 14, 2023.

Micromem Technologies Inc.
Notes to Consolidated Financial Statements
For the years ended October 31, 2022, 2021, and 2020
(Expressed in United States dollars, unless otherwise noted)

3. Basis of presentation (continued)

(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:

(i)	<u>Inactive subsidiaries</u>	<u>Domiciled in</u>
	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

(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. 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 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.

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. Nonmonetary 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 annual average exchange rates. 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

The Company aggregates similar financial instruments into classes based on their nature and characteristics. All financial assets except those classified as fair value through profit or loss are reviewed at each reporting date to determine whether there is any indication of impairment. Financial assets are considered to be impaired when there is objective evidence that the estimated future cash flows of the investment have been affected as a result of one or more events that occurred after the initial recognition.

The Company's accounting policy for each class of financial instruments is as follows:

(i) Fair value through profit or loss

Financial instruments classified as fair value through profit or loss are reported at fair value at each reporting date, and any change in fair value is recognized in net income in the period during which the change occurs. In these consolidated financial statements, cash and derivative liabilities have been classified as fair value through profit or loss.

(ii) Other financial assets and financial liabilities

Other financial instruments are carried at amortized cost using the effective interest method. Transaction costs are included in the amount initially recognized. In these consolidated financial statements, trade payables and other liabilities, debenture payable, convertible debentures, and long-term loan have been subsequently measured at amortized cost.

(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.

(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.

Micromem Technologies Inc.
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For the years ended October 31, 2022, 2021, and 2020
(Expressed in United States dollars, unless otherwise noted)

4. Summary of significant accounting policies (continued)

(d) Property and equipment

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

	<u>Method</u>	<u>Rate</u>
Computers	Declining balance	30%
Right-of-use asset	Straight-line	lesser of useful life and lease term (three years)

(e) Impairment of long-lived assets

The Company follows the guidelines prescribed in IAS 36 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 loss and comprehensive loss.

(f) 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 2022, 2021, or 2020.

(g) Patents

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

(h) Leases

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.

(i) 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.

4. Summary of significant accounting policies (continued)

(j) 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.

(k) 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.

(l) 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) 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.

(n) 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 inconsistencies 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, 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.

(b) Amendment to IAS 37, Provisions, Contingent Liabilities and Contingent Assets, Issued but not yet effective

IAS 37 was amended in May 2020 to clarify the costs a company should include as the cost of fulfilling a contract when assessing whether a contract is onerous. The amendment is effective for annual reporting periods beginning on or after January 1, 2022. Earlier adoption is permitted. The Company will adopt the amendment as of the effective date, and does not anticipate any material impacts on adoption.

(c) Amendment to IAS 16, Property, Plant and Equipment, Issued but not yet effective

IAS 16 was amended in May 2020 to prohibit deducting from the cost of an item of property, plant and equipment any proceeds from selling items produced while bringing that asset to the location and condition necessary for it to be capable of operating in the manner intended by management. Instead, an entity recognizes the proceeds from selling such items, and the cost of producing those items, in profit or loss. The amendment is effective for annual reporting periods beginning on or after January 1, 2022. Earlier adoption is permitted. The Company will adopt the amendment as of the effective date, and does not anticipate any material impacts on adoption.

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5. New accounting standards and pronouncements (continued)

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

In February 2021, the International Accounting Standards Board (“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 9, Financial Instruments, Issued but not yet effective

The amendment clarifies the fees an entity includes in assessing the terms of a new or modified financial liability to determine whether to recognize a financial liability. The amendment clarifies that the reference to fees in the 10% test includes only fees paid or received between the borrower and the lender, including fees paid or received by either the borrower or the lender on the other's behalf (ie. finders fees, brokerage commission and legal fees are excluded). The amendment is effective for annual periods beginning on or after January 1, 2022. The Company will adopt the amendment as of the effective date, and does not anticipate any material impacts on adoption.

6. Property and equipment

	As at November 1, 2021	Additions	Disposals	As at October 31, 2022
Cost				
Computers	\$ 18,570	\$ -	\$ (11,104)	\$ 7,466
Right-of-use assets	74,307	48,408	(74,307)	48,408
	<u>92,877</u>	<u>48,408</u>	<u>(85,411)</u>	<u>55,874</u>
Accumulated amortization				
Computers	12,824	1,723	\$ (10,799)	3,748
Right-of-use assets	54,041	24,155	(74,162)	4,034
	<u>66,865</u>	<u>25,878</u>	<u>(84,961)</u>	<u>7,782</u>
Net book value	<u>\$ 26,012</u>			<u>\$ 48,092</u>
	As at November 1, 2020	Additions	Disposals	As at October 31, 2021
Cost				
Computers	\$ 32,040	\$ 5,271	\$ (18,741)	\$ 18,570
Right-of-use assets	74,307	-	-	74,307
	<u>106,347</u>	<u>5,271</u>	<u>(18,741)</u>	<u>92,877</u>
Accumulated amortization				
Computers	30,077	1,013	(18,266)	12,824
Right-of-use assets	27,021	27,020	-	54,041
	<u>57,098</u>	<u>28,033</u>	<u>(18,266)</u>	<u>66,865</u>
Net book value	<u>\$ 49,249</u>			<u>\$ 26,012</u>

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.

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7. Patents

	As at November 1, 2021	Additions	Disposals	As at October 31, 2022
Cost	\$ 681,288	\$ -	\$ -	\$ 681,288
Accumulated amortization	677,411	3,877	-	681,288
Net book value	\$ 3,877	\$ (3,877)	\$ -	\$ -

	As at November 1, 2020	Additions	Disposals	As at October 31, 2021
Cost	\$ 681,288	\$ -	\$ -	\$ 681,288
Accumulated amortization	669,411	8,000	-	677,411
Net book value	\$ 11,877	\$ (8,000)	\$ -	\$ 3,877

The Company holds several patents in the United States for its Multimodal Fluid Condition Sensor Platform. In prior years, the Company had negotiated with a major automotive company and a Tier 1 manufacturer for the development and commercial exploitation of this patented technology. The Company maintains that there remains significant potential value in its existing patents in terms of potential licensing agreements and royalty fees once it begins to exploit this asset class in the future.

8. Leases

(a) Continuity schedule of lease obligation

The lease obligation relates to the use of office space in Toronto, Ontario. The lease agreement in effect for the years ended October 31, 2021 and 2020 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%.

Balance, November 1, 2019	\$ -
Adoption of IFRS 16	74,307
Interest expense	14,081
Lease payments	(25,504)
Foreign exchange	(10,814)
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

(b) Maturity analysis of lease obligations

The following represents a maturity analysis of the Company's undiscounted contractual lease obligations as at October 31, 2022:

	CDN
Less than one year	\$ 25,532
Between one and five years	\$ 43,804

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9. Long-term loan

As at October 31, 2022 the Company has obtained a \$60,000 CDN (\$43,796 USD) (October 31, 2021 – \$60,000 CDN, \$48,243 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, 2023 will result in a loan forgiveness of \$20,000 CDN (\$14,599 USD). Effective January 1, 2024, any outstanding balance on the term loan shall bear interest at a rate of 5% per annum. As the Company does not yet know whether they will be able to meet the terms of forgiveness, no amount has been recognized to income.

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 year ended October 31, 2022, the Company incurred \$21,000 financing costs (2021 - \$84,478, 2020 - \$35,500) which primarily consisted of early repayment and administrative fees, of which \$nil (2021 - \$nil, 2020 - \$7,500) was converted into common shares. All loan principal amounts and conversion prices are expressed in original currency and all remaining dollar amounts are expressed in USD.

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

Convertible debentures outstanding as at October 31, 2022:

	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	Total
Loan principal outstanding	\$ 1,205,144	\$ 2,321,755	\$ 347,700	
Terms of loan				
Annual stated interest rate	12% - 24%	12% - 24%	2% - 4%	
Effective annual interest rate	24%	22 - 131%	24% - 5803%	
Conversion price to common shares	\$0.03 - \$0.07	\$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

For the year ended October 31, 2022:

	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	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) loss on revaluation of derivative liabilities	\$ -	\$ (379,736)	\$ (29,871)	\$ (409,607)
(Gain) loss on conversion of convertible debentures	\$ -	\$ -	\$ 94,326	\$ 94,326
(Gain) loss 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
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

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10. Convertible debentures (continued)

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

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

(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, 2021:

	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	Total
Loan principal outstanding	\$ 1,037,782	\$ 1,989,187	\$ 468,600	
Terms of loan				
Annual stated interest rate	12% - 24%	12% - 24%	2% - 10%	
Effective annual interest rate	24.00%	13% - 28735624%	0% - 5525%	
Conversion price to common shares	\$0.03 - \$0.07	\$0.05 - \$0.08	(i) - (ii)	
Remaining life (in months)	0 - 6	0 - 6	0 - 10	
Consolidated Statement of Financial Position				
Carrying value of loan principal	\$ 1,036,124	\$ 609,924	\$ 172,166	\$ 1,818,214
Interest payable	332,605	269,455	32,128	634,188
Convertible debentures	\$ 1,368,729	\$ 879,379	\$ 204,294	\$ 2,452,402
Derivative liabilities	\$ -	\$ 557,322	\$ 229,759	\$ 787,081
Equity component of convertible debentures	\$ 14,004	\$ -	\$ -	\$ 14,004

(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, 2021:

	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	Total
Consolidated Statement of Operations and Comprehensive Loss				
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

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10. Convertible debentures (continued)

(b) Comparative information presented in the consolidated financial statements

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

For the year ended October 31, 2020:

	USD (equity component)	CDN (embedded derivative)	USD (embedded derivative)	Total
Consolidated Statement of Operations and Comprehensive Loss				
Accretion expense	\$ 37,934	\$ 723,641	\$ 338,244	\$ 1,099,819
Interest expense	\$ 194,091	\$ 215,923	\$ 31,355	\$ 441,369
(Gain) loss on revaluation of derivative liabilities	\$ -	\$ (590,625)	\$ (179,295)	\$ (769,920)
(Gain) loss on conversion of convertible debentures	\$ -	\$ -	\$ 96,484	\$ 96,484
(Gain) loss on extinguishment of convertible debentures	\$ -	\$ (10,919)	\$ (116,490)	\$ (127,409)
Consolidated Statement of Changes in Equity				
Amount of principal converted to common shares	\$ 20,000	\$ 35,000	\$ 553,000	\$ 608,000
Amount of interest converted to common shares	\$ 447	\$ 1,168	\$ 27,046	\$ 28,661
Number of common shares issued on conversion of convertible	511,175	731,440	42,995,029	44,237,644
Consolidated Statement of Cash Flows				
Amount of principal repaid in cash	\$ -	\$ 93,721	\$ 80,000	\$ 173,721
Amount of interest repaid in cash	\$ 60,918	\$ 93,005	\$ 1,767	\$ 155,690

(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, 2022	As at October 31, 2021
Share price	\$0.03	\$0.05
Exercise price	\$0.02 - \$0.07	\$0.03 - \$0.07
Volatility factor (based on historical volatility)	140% - 232%	32% - 133%
Risk free interest rate	3.09% - 4.28%	0.17% - 0.55%
Expected life of conversion features (in months)	0 - 11	0 - 10
Expected dividend yield	0%	0%
CDN to USD exchange rate (as applicable)	0.7299	0.8041
Call value	\$0.00 - \$0.02	\$0.01 - \$0.04

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

11. Debenture payable

This debenture was issued on March 17, 2020 with an original maturity date of June 17, 2020 with a principal amount of \$51,500 CAD. On June 17, 2020, December 17, 2020, June 17, 2021, December 17, 2021, June 17, 2022, and December 17, 2022, the debenture was extended for six month intervals. The most recent extension on December 17, 2022, extended the debenture to June 17, 2023. The debenture bears interest at a rate of 24% and is unsecured. Interest expense on this debenture of \$9,604 USD has been recognized during the year ended October 31, 2022 (2021 - \$7,261 USD, 2020 - \$4,840 USD).

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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 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.
 - (ii) 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.
 - (iii) In 2020, the Company completed three 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 \$425,789 and issued a total of 10,996,994 common shares.

(c) Accounts payable settled in common shares

During the year ended October 31, 2022, \$22,460 (2021 - \$nil, 2020 - \$24,826) of accounts payable was settled in exchange for 413,674 (2021 - nil, 2020 - 365,094) common shares. There was no gain or loss recognized upon settlement.

13. Stock options

(a) Stock option plan

Until September 8, 2020, under the Company's fixed stock option plan (the "Plan"), the Company could grant 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.

The Company held its most recent Annual General Meeting of Shareholders on September 8, 2020. The authorized limit for stock options in the Company's plan was increased from 18.84 million options to 27.5 million options at the meeting.

(b) Summary of changes

	<u>Number of options</u>	<u>Weighted average exercise price</u>
Outstanding at October 31, 2019	5,730,000	\$ 0.25
Cancelled	(2,040,000)	0.25
Expired	(1,490,000)	0.46
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

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13. Stock options (continued)

(c) Stock options outstanding at October 31, 2022

There were nil options issued to directors and officers during the year ended October 31, 2022 (2021 - 9,500,000 options issued, 2020 - nil). Of the options granted, 525,000 options have vested, 500,000 options will vest by January 11, 2023, 500,000 options will vest by April 11, 2023, and the remaining 500,000 options will vest by July 11, 2023.

<u>Date of issue</u>	<u>Expiry date</u>	<u>Number of options</u>	<u>Weighted average</u>	
			<u>Exercise price</u>	<u>Remaining contractual life</u>
June 29, 2018	June 29, 2023	2,200,000	0.10	0.7
November 13, 2020	November 13, 2025	6,500,000	0.05	3.0
October 8, 2021	October 8, 2026	1,000,000	0.07	3.9
December 15, 2021	December 15, 2023	25,000	0.07	1.1
October 11, 2022	October 11, 2023	2,000,000	0.07	0.9
Outstanding at October 31, 2022		11,725,000	\$ 0.06	2.3

Of the total options outstanding, 10,225,000 are exercisable as at October 31, 2022 (2021 - 11,700,000).

(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:

	<u>2022</u>	<u>2021</u>
Share price at grant date	\$0.03 - \$0.05	\$0.05
Exercise price	\$0.07	\$0.05 - \$0.07
Volatility factor	212% - 272%	148% - 180%
Risk free interest rate	0.97% - 4.33%	0.75%
Expected life of options in years	1 - 2	5
Expected dividend yield	0%	0%
Forfeiture rate	0%	0%
Weighted average Black Scholes value at grant date	\$0.02 - \$0.03	\$0.05 - \$0.06

During the year ended October 31, 2022, the Company recorded an expense of \$41,484 respectively to the issuance of these stock options (2021 - \$360,044).

14. Loss per share

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

<u>Numerator</u>	<u>2022</u>	<u>2021</u>	<u>2020</u>
Net loss attributable to common shareholders and used in computation of basic and diluted loss per share	\$ (2,287,095)	\$ (1,012,978)	(1,245,393)
Denominator			
Weighted average number of common shares for computation of basic and diluted loss per share	451,177,796	422,613,046	377,380,476

For the years ended October 31, 2022, 2021 and 2020, all stock options and conversion features were anti-dilutive and, therefore, are excluded from the calculation of diluted loss per share.

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15. Income taxes

- (a) The Company has non-capital losses of approximately \$32 million available to reduce future taxable income, the benefit of which has not been recognized in these consolidated financial statements. As at October 31, 2022, the tax losses expire as follows:

	<u>Canada</u>	<u>United States</u>	<u>Total</u>
2026	\$ 1,743,280	\$ -	\$ 1,743,280
2027	1,465,962	-	1,465,962
2028	-	-	-
2029	1,502,416	143,721	1,646,137
2030	2,027,152	1,880,897	3,908,049
2031	1,221,296	18,526	1,239,822
2032	1,353,513	325,793	1,679,306
2033	1,640,591	157,463	1,798,054
2034	2,373,379	679,089	3,052,468
2035	2,682,124	570,901	3,253,025
2036	3,147,625	441,019	3,588,644
2037	2,519,765	232,714	2,752,479
2038	1,703,454	317	1,703,771
2039	1,523,813	-	1,523,813
2040	513,301	-	513,301
2041	889,381	-	889,381
2042	1,262,336	-	1,262,336
	<u>\$ 27,569,388</u>	<u>\$ 4,450,440</u>	<u>\$ 32,019,828</u>

- (b) 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.
- (c) 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:

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Non-capital losses and other	\$ 8,485,255	\$ 8,924,982	\$ 8,232,346
Capital losses	162,275	178,808	166,316
Property, equipment, patents and deferred costs	1,639,306	1,794,285	1,666,788
	<u>\$ 10,286,836</u>	<u>\$ 10,898,075</u>	<u>\$ 10,065,450</u>
Deferred tax asset not recognized	(10,286,836)	(10,898,075)	(10,065,450)
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

As at October 31, 2022 and 2021, 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.

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

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Loss before income taxes	\$ (2,287,095)	\$ (1,012,987)	\$ (1,245,393)
Statutory tax rate	26.5%	26.5%	26.5%
Expected income tax recovery	\$ (606,080)	\$ (268,439)	\$ (330,029)
Accretion expense and loss (gain) on convertible debentures and derivative liabilities	269,531	(97,480)	-
Stock-based compensation	10,992	95,412	-
Non-deductible (non-taxable) expenses and other items	(3,780)	82,530	143,550
Effect of exchange rate on deferred tax assets carried forward and other	940,577	(644,649)	38,037
Change in deferred tax assets not recognized	(611,240)	832,626	148,442
	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>

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16. Operating expenses

(a) General and administration

The components of general and administration expenses are as follows:

	<u>2022</u>	<u>2021</u>	<u>2020</u>
General and administration	\$ 59,938	\$ 86,186	\$ 49,702
Rent and occupancy	50,907	15,536	37,153
Office insurance	1,696	753	2,024
Investor relations, listing and filing fees	64,769	53,029	49,537
Telephone	8,056	-	15,591
	<u>\$ 185,366</u>	<u>\$ 155,504</u>	<u>\$ 154,007</u>

(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, 2022, the Company recognized \$nil (2021 - \$38,440 CDN (\$30,613 USD)) (2020 - \$nil) 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:

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Professional fees	\$ 110,933	\$ 107,554	\$ 148,926
Consulting fees	69,563	132,793	138,123
Salaries and benefits	467,214	184,138	175,075
	<u>\$ 647,710</u>	<u>\$ 424,485</u>	<u>\$ 462,124</u>

(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, 2022, the Company recognized \$nil (2021 - \$167,388 CDN (\$133,699 USD)) (2020 - \$85,455 CDN (\$63,792 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,		
	<u>2022</u>	<u>2021</u>	<u>2020</u>
Balance - beginning of period	\$ 3,239,483	\$ 3,615,080	\$ 3,364,499
Cash flows from financing activities:			
Proceeds from issuance of convertible debentures	765,671	510,000	612,279
Repayments of convertible debentures	(63,490)	(593,301)	(150,920)
Non-cash changes:			
Accretion expense	1,179,603	1,169,921	1,099,818
Accrued interest on convertible debentures	368,280	408,543	285,679
Loss (gain) on repayment of convertible debentures	(47,877)	-	-
Loss (gain) on conversion of convertible debentures	94,326	-	-
Loss (gain) on revaluation of derivative liabilities	(409,607)	(2,547,192)	(771,920)
Loss (gain) on extinguishment of debt	200,650	1,018,928	(127,409)
Convertible debentures converted into common shares	(764,432)	(521,136)	(762,847)
Renewal of convertible debentures	-	(16,804)	(26,752)
Foreign exchange loss	(129,244)	195,444	92,653
Balance - end of period	<u>\$ 4,433,363</u>	<u>\$ 3,239,483</u>	<u>\$ 3,615,080</u>

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) are summarized as follows:

	<u>2022</u>	<u>2021</u>	<u>2020</u>
Professional, other fees, and salaries	\$ 133,517	\$ 107,201	\$ 17,517
Stock-based compensation	-	227,500	-
	<u>\$ 133,517</u>	<u>\$ 334,701</u>	<u>\$ 17,517</u>

During the year ended October 31, 2022, key management were not awarded any options. During the year ended October 31, 2021, the Company awarded 5 million stock options to key management as part of the total 9.5 million stock options issued (2020 - nil).

(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 is \$5,650 CDN (USD - \$4,139) payable to a corporation controlled by an officer of the Company as at October 31, 2022 (2021 - \$nil).

(c) Convertible debentures

In January 2018, the CEO of the Company subscribed for a convertible debenture of \$150,000 CDN (\$114,086 USD). As at October 31, 2022, \$nil CDN (\$nil USD) (October 31, 2021 - \$9,483 CDN, \$7,657 USD) in loan principal remains outstanding.

19. 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 is now pursuing collection of the judgement award. It will report the recovery of this contingent asset as funds are received. In the year ended October 31, 2022 the Company has recorded a recovery of \$9,040 received in the period as a reduction of legal expenses (year ended October 31, 2021 - \$40,000).

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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 (CDN). 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, 2022, and October 31, 2021, balances that are denominated in CDN are as follows:

	As at October 31, 2022 CDN	As at October 31, 2021 CDN
Cash	\$ 15,715	\$ 55,950
Other receivables	\$ 13,832	\$ 7,422
Trade payables and other liabilities	\$ 393,978	\$ 425,549
Convertible debentures	\$ 2,810,362	\$ 1,093,684
Debenture payable	\$ 51,500	\$ 51,500
Derivative liabilities	\$ 601,696	\$ 693,143
Long-term loan	\$ 60,000	\$ 60,000

A 10% strengthening of the US dollar against the CDN would decrease net loss and comprehensive loss by \$257,995 as at October 31, 2022 (October 31, 2021 - decrease net loss and comprehensive loss by \$166,047). 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) 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, 2022.

(i) Trade payables

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

	As at October 31, 2022	As at October 31, 2021
Less than 30 days past billing date	\$ 287,575	\$ 384,057
31 to 90 days past billing date	-	-
Over 90 days past billing date	-	-
	\$ 287,575	\$ 384,057

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20. Financial risk management (continued)

(c) Liquidity risk (continued)

(ii) Convertible debentures and derivative liabilities

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

	As at October 31, 2022			As at October 31, 2021		
	Convertible debentures	Derivative liabilities	Debenture payable	Convertible debentures	Derivative liabilities	Debenture payable
Less than three months	\$ 2,440,840	\$ 162,380	\$ -	\$ 1,609,762	\$ 238,802	\$ -
Three to six months	1,204,783	257,933	-	842,451	414,602	-
Six to twelve months	146,441	220,986	38,001	189	133,677	40,207
	<u>\$ 3,792,064</u>	<u>\$ 641,299</u>	<u>\$ 38,001</u>	<u>\$ 2,452,402</u>	<u>\$ 787,081</u>	<u>\$ 40,207</u>

(d) Credit risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations, and arises principally from the Company's cash. The maximum exposure to credit risk is the carrying value of these financial assets, which amounted to \$33,227 as at October 31, 2022 (October 31, 2021 - \$171,397). The Company reduces its credit risk by assessing the credit quality of counterparties, taking into account their financial position, past experience and other factors.

(i) Cash

The Company held cash of \$33,227 at October 31, 2022 (October 31, 2021 - \$171,397). 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.

21. Fair value hierarchy

Assets and liabilities recorded at fair value in the 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 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.

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, 2022 and 2021, there were no transfers between levels.

22. 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, 2022.

23. Subsequent events

Subsequent to October 31, 2022:

- (a) The Company secured two (2) private placements with investors consisting of common shares with no warrants pursuant to prospectuses and registrations set forth in applicable securities law. It realized net proceeds of \$50,000 CDN (\$36,635 USD) and issued a total of 1,000,000 common shares.
- (b) The Company secured \$143,000 USD in convertible debentures with a 12 month term and conversion features which become effective six months after initiation date.
- (c) The Company converted \$172,584 USD of convertible debentures and accrued interest through the issuance of 7,307,524 common shares.
- (d) The Company repaid \$5,000 USD of interest accrued on a convertible debenture.
- (e) The Company extended convertible debentures that were within 3 months of maturity date from October 31, 2022 for an additional (6) months.