

MICROMEM TECHNOLOGIES INC

FORM 20-F

(Annual and Transition Report (foreign private issuer))

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**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

FORM 20-F

☐ REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934
or

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For The Fiscal Year Ended **October 31, 2024**

Or

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
or

☐ SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

Commission File No. **0-26005**

MICROMEM TECHNOLOGIES INC.

(Exact name of Registrant as specified in its charter)

Ontario, Canada

(Jurisdiction of incorporation or organization)

121 Richmond Street West, Suite 602

Toronto, Ontario M5H 2K1, Canada

Tel: (416) 364-6513

Fax: (416) 360-4034

(Address of principal executive offices)

Joseph Fuda; 416-364-6513, jfuda@micromeminc.com, 121 Richmond Street West, Suite 602 Toronto, ON M5H 2K1

(Name, Telephone, E-Mail and/or Facsimile number and Address of Company Contact Person)

Securities registered or to be registered pursuant to Section 12(b) of the Act:

None

Securities registered or to be registered pursuant to Section 12(g) of the Act:

Common Shares without par value

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock as of the close of the period covered by the annual report:
572,985,698 Common Shares

Indicate by check mark if the registrant is a well-known seasoned issuer as defined in Rule 405 of the Securities Act:

Yes ☐ No ☒

If this report is an annual or transition report, indicate by check mark if the registration is not required to file a report pursuant to section 13 or 15 of the Securities Exchange Act of 1934:

Yes ☐ No ☒

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days:

Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files).

Yes ☒ No ☐

Indicate by check mark whether the registrant is a large, accelerated filer, an accelerated filer, a non-accelerated filer, or an emerging growth company. See definition of "large, accelerated filer," "accelerator filer," and "emerging growth company" in Rule 12b-2 of the Exchange Act:

Large Accelerated Filer ☐ Accelerated Filer ☐ Non-Accelerated Filer ☒ Emerging growth company ☐

If an emerging growth company that prepares its financial statements in accordance with U.S. GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act (15 U.S.C. 7262(b) by the registered public accounting firm that prepared or issued its audit report. ☐

If securities are registered pursuant to Section 12(b) of the Act, indicated by check mark whether financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing:

U.S. GAAP ☐

International Financial Reporting Standards as issued
by the International Accounting Standards Board ☒

Other ☐

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the Registrant has elected to follow:

Item 17 ☐ Item 18 ☐

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act):
Yes ☐ No ☒

(APPLICABLE ONLY TO ISSUERS INVOLVED IN BANKRUPTCY PROCEEDINGS DURING THE PAST FIVE YEARS)

Indicate by check mark whether the registrant has filed all documents and reports required to be filed by Section 12, 13 or 15(d) of the Securities Exchange of 1934 subsequent to the distribution of securities under a plan confirmed by the court ☐

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PART I

INTRODUCTION

Abbreviations

Throughout this document, Micromem Technologies Inc. and/or its affiliates are referred to as "Micromem", the "Company", "we", "us" or "our".

Throughout this document, unless otherwise noted or the context otherwise indicates, references to "2024" or "Fiscal 2024" refer to the fiscal year ended October 31, 2024; references to "2023" or "Fiscal 2023" refer to the fiscal year ended October 31, 2023; references to "2022" or "Fiscal 2022" refer to the fiscal year ended October 31, 2022; references to "2021" or "Fiscal 2021" refer to the fiscal year ended October 31, 2021; references to "2020" or "Fiscal 2020" refer to the fiscal year ended October 31, 2020; references to "2019" or "Fiscal 2019" refer to the fiscal year ended October 31, 2019; references to "2018" or "Fiscal 2018" refer to the fiscal year ended October 31, 2018; and references to "2017" or "Fiscal 2017" refer to the fiscal year ended October 31, 2017.

Forward Looking and Cautionary Statements

This Form 20-F contains certain forward-looking statements. These forward-looking statements are based on current expectations, estimates and projections about the business of our Company and the industry in which we operate, our management's beliefs, and assumptions made by our management. Words such as "expects," "anticipates," "intends," "plans," "believes," "seeks" and "estimates," variations on such words and similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions which are difficult to predict. Our actual results could differ materially from those expressed or forecasted in these forward-looking statements as a result of certain factors, including those set forth under Item 3 - Key Information - Risk Factors and elsewhere in this Form 20-F.

Unless otherwise noted or the context otherwise indicates, the forward-looking statements contained herein are provided as of the date hereof, and we do not undertake to update or amend such forward-looking statements whether as a result of new information, future events or otherwise, except as may be required by applicable law.

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISORS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

A. [Reserved]

Selected Financial Data for Fiscal 2024, 2023, 2022, 2021 and 2020

The following table sets forth our selected consolidated financial data in United States dollars as of and for each of the fiscal years ended October 31, 2024, October 31, 2023, October 31, 2022, October 31, 2021 and October 31, 2020. The selected consolidated financial data has been derived from our audited consolidated financial statements. All information contained in the following table should be read in conjunction with our audited consolidated financial statements and the notes thereto in "Item 18-Financial Statements" and "Item 5 - Operating and Financial Review and Prospects" included elsewhere in this Annual Report on Form 20-F.

Our consolidated financial statements for the years ended October 31, 2024, 2023, 2022, 2021 and 2020 have been prepared in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board ("IFRS").

Selected balance sheet information
(all amounts in U.S. dollars)

	2024	2023	2022	2021	2020
Working Capital (deficiency)	(6,693,448)	(4,818,699)	(4,722,878)	(3,452,924)	(4,202,571)
Property & Equipment	15,272	32,767	48,092	26,012	49,249
Total Assets	282,713	168,350	99,519	225,293	278,026
Share Capital	91,678,279	90,471,712	87,784,725	86,815,836	85,463,642
Shareholders' Deficiency	(6,722,982)	(4,841,204)	(4,748,000)	(3,471,278)	(4,187,342)

Selected statement of operations and deficit information
(all amounts in U.S. dollars)

	2024	2023	2022	2021	2020
Interest and other income	\$-	\$-	\$-	\$-	\$-
Research and development expenses (recovery)	-	-	-	-	-
General and administrative and other expenses (6)	1,199,652	1,403,188	1,228,516	1,020,783	948,420
Loss on revaluation of warrant liabilities	826,393	-	-	-	-
Loss on debt settlement	118,784	-	-	-	-
(Gain) on revaluation of derivative liabilities (1)	78,915	(658,503)	(409,607)	(2,547,192)	(771,920)
(Gain) Loss on conversion/repayment of debt (2)	107,788	48,363	46,449	(9,506)	96,484
Loss (Gain) on extinguishment of debt (5)	452,248	1,400,823	200,650	1,018,928	(127,409)
Accretion expense (3)	272,501	279,834	1,179,603	1,169,921	1,099,818
Stock based compensation (4)	6,517	217,965	41,484	360,044	-
Loss before income tax provision	(3,062,798)	(2,691,670)	(2,287,095)	(1,012,978)	(1,245,393)
Net Loss and Comprehensive loss	(3,062,798)	(2,691,670)	(2,287,095)	(1,012,978)	(1,245,393)

- 1) Gain on revaluation of derivative liabilities for 2024, 2023, 2022, 2021 and 2020 above relates to the measurement of the derivative liabilities relating to the outstanding convertible bridge loans. The gain as reported is a non-cash charge which is calculated in accordance with IFRS.
- 2) Loss on conversion of debt relates to the inducement of additional common shares of the Company (the "common shares") issued to the bridge loan lenders who converted their bridge loans to common shares and any loss recorded on the repayment of convertible debentures.
- 3) Accretion expense is a non-cash expense calculated in accordance with IFRS and relates to increasing the carrying value of the debt to the contracted amount over the term of the loan.
- 4) Stock based compensation is a non-cash expense calculated in accordance with IFRS using the Black Scholes option pricing model.
- 5) Loss (Gain) on extinguishment of debt relates to the replacement of an existing debt instrument at maturity date with a new debt instrument reflecting revised renewal terms at maturity date.
- 6) Includes general and administrative expenses, professional fees, other fees, salaries, travel and entertainment expenses, amortization expense, foreign exchange loss, interest expense and financing costs. In 2020 we also report the recovery of a reserve of \$205,788 for litigation costs which was recorded in 2018-19. In 2021 we report a recovery of stale dated accounts payable of \$422,982.

Currency and Exchange Rates

Our financial statements are all expressed in United States dollars. All other financial data appearing in this Form 20-F are expressed in United States dollars with the exception of certain limited cases when reference is made to instruments denominated in Canadian dollars ("CDN \$").

Transactions that were conducted in Canadian dollars or other foreign currencies have been converted into United States dollars using the 3 month average rate of exchange per quarter which rate approximates the rate of exchange prevailing at the date of such transactions. Monetary assets and liabilities denominated in Canadian dollars or other foreign currencies but expressed in this Form 20-F in United States dollars have been converted into United States dollars at the rate of exchange prevailing on the date of the applicable financial statement. Non-monetary assets and liabilities denominated in Canadian dollars but expressed in this Form 20-F in United States dollars have been converted into U.S. dollars at the historical exchange rate at the date of the transaction.

The following table sets forth, for the periods indicated, the high, low, end of period and average for period based on the Noon Buying Rates as published by the Bank of Canada, as expressed in the amount of U.S. Dollars equal to one Canadian dollar.

	2024	2023	2022	2021	2020
High for period	0.7573	0.7617	0.8031	0.8111	0.7863
Low for period	0.7186	0.7209	0.7217	0.7903	0.6898
End of period	0.7186	0.7209	0.7383	0.8075	0.7854
Average for period	0.7347	0.7415	0.7692	0.0841	0.7461

The following table sets forth, for each period indicated, the high and low exchange rates for United States dollars expressed in Canadian dollars on the last day of each month during such period, based on the Noon Buying Rate.

	February 2024	March 2024	April 2024	May 2024	June 2024	July 2024
High	0.7460	0.7423	0.7405	0.7345	0.7334	0.7346
Low	0.7367	0.7357	0.7235	0.7268	0.7264	0.7219
	August 2024	September 2024	October 2024	November 2024	December 2024	January 2025
High	0.7429	0.7428	0.7412	0.7218	0.7138	0.6978
Low	0.7216	0.7353	0.7186	0.7101	0.6937	0.6904

On February 26, 2025 - the noon buying rate for one Canadian dollar, as quoted by the Bank of Canada, was CDN \$1. = U.S. \$0.6974.

B. Capitalization and Indebtedness

Not applicable.

C. Reasons for the Offer and Use of Proceeds

Not applicable.

D. Risk Factors

We and our investors face a number of risks, which are described below.

Risk Factors Related to Our Business

The financial statements of our Company have been prepared on a going concern basis.

We have prepared our financial statements on a "going concern" basis which presumes that we will be able to realize our assets and discharge our liabilities in the normal course of business for the foreseeable future.

Our ability to continue as a going concern is dependent upon the successful commercialization of our sensor technology platforms that we currently have under development with our industry partners. Ultimately, we must achieve a profitable level of operation through licensing fees, royalties and the commercial sale of our products. We will require additional financing in the interim to fund our activity.

At October 31, 2024 we had \$125,705 of cash on hand. Our working capital deficiency is \$6,693,448 at October 31, 2024. Subsequent to October 31, 2024, through to the date of the filing of this Annual Report on Form 20-F, we have raised an additional \$57,500 through the issuance of convertible debentures, \$285,125 through private placements of equity and \$58,344 upon an exercise of warrants.

Our consolidated financial statements, which have been prepared on a going concern basis, do not include any adjustments to the amounts and classifications of the assets and liabilities that might be necessary should we be unable to continue in business. If the going concern assumption was not appropriate for our financial statements then adjustments would be necessary in the carrying value of assets and liabilities, the reported expenses and the balance sheet classifications used. Such adjustments could be material.

We currently have no operating revenue.

We have not yet reported commercial revenues from licensing fees, royalties or product sales. If we fail to enter into license agreements or if we do not obtain purchase orders from potential customers, we will have no revenues. If we enter into such agreements the amount of the revenues we receive will depend on the terms we are able to secure from each licensee and the ability of licensees to compete in their particular market.

There are market risks relating to the sale of our sensor technology platforms.

We continued to develop applications of our sensor technology in 2024 working with our technical advisors and our strategic development partners. We are pursuing joint development agreements with potential strategic partners with the expectation that we will jointly develop sensor applications for use by these potential strategic partners. We believe that these current initiatives will result in revenues and cash flow to the Company in the future but there can be no assurance when and if such revenues will be achieved.

We may face competition from larger corporations which also sell sensor technology and who have greater financial resources than the Company.

Our success will in part be determined by the following factors which have not yet been fully and completely tested nor measured: the ability of manufacturers to incorporate the technology into existing manufacturing capabilities without significant retooling and material costs, price competitiveness and the differential performance advantages of our technology.

Additionally, our ability to compete successfully will depend on elements outside of our control, including the rate at which customers incorporate our technology into their products, the success of such customers in selling those products, our protection of our intellectual property, the number, nature and success of our competitors and their product introductions and general market and economic conditions. Our success will depend on our ability to protect our intellectual property, to develop, introduce, and license or sell in a timely manner our technology or products incorporating our technology and to compete effectively on the basis of factors such as speed, density, die size and power consumption.

Failure to secure continued financing will cause our business to suffer.

Since there is no assurance that commercial revenues will be realized in future, we will need additional financing to continue our development and to successfully market our technology to potential licensees and strategic partners.

There can be no assurance that we will be able to continue to raise sufficient financing in the future and the failure to do so would affect our ability to further develop our technology platforms and to market our products to existing and new potential customers.

Because our success and value depends in part on our ownership and use of intellectual property, our failure to protect our property could adversely affect our future growth and success.

Our success will depend, in part, on our ability to protect our intellectual property. We rely primarily on patent, copyright, trademark and trade secret laws, as well as nondisclosure agreements and other methods to protect our proprietary technology and processes. Despite our efforts to do so, unauthorized parties may attempt to copy or otherwise obtain and use our products or technology, develop similar technology independently or design around our patents. Policing unauthorized use of our products is expensive and difficult, and we cannot be certain that all required steps we have taken will prevent misappropriation or infringement of our intellectual property.

Intellectual property claims against us, no matter how groundless, could cause our business to suffer.

Our future success and competitive position depend in part on our ability to retain rights to our technology, including any improvements that may be made on that technology from time to time by us or on our behalf. Certain of our technology is patented or is subject to pending patent applications in the United States and abroad and we know of no challenge that has been made either against our technology or our rights to it. We have no reason to believe that any such challenge might be made or that the grounds for any such challenge exist. If any intellectual property litigation were to be commenced against us, no matter how groundless, the result could be a significant expense to us, adversely affecting further development, licensing and sales, diverting the efforts of our technical and management personnel and, in the event of an adverse outcome, damages and possible restrictions on the further development, licensing and use of our technology. There can be no assurance that any of our outstanding pending patent applications will be issued as patents or that any issued patent will not be determined to be invalid at a later date.

We have a history of losses, and we may continue to generate losses in future.

To date, we have operated as a product development company and have not been profitable. Unless and until we are able to successfully commercialize our technology applications, we may not be able to generate sufficient revenues in future periods and we may not be able to attain profitability.

The further development of our sensor technology may require significant additional capital which we may have to fund directly if we are unable to secure financing from development partners. Therefore, we may incur expenses without receiving equal and offsetting revenues at least until we are able to license our technology to third parties. This may result in net operating losses until we can generate an acceptable level of revenues. Further, even if we achieve operating revenues, there can be no assurance that such revenues will be sufficient to fund continuing operations.

The likelihood of the success of our business plan must be considered in light of the problems, expenses, difficulties, complications and delays frequently encountered in connection with developing and expanding early stage businesses and the competitive environment in which we operate.

We will be dependent upon the success of a limited range of products.

The range of products we intend to commercialize is currently limited to applications of our sensor technology. If we are not successful in commercializing our technology platforms, or if there is not adequate demand for such technology or the market for such technology develops less rapidly than we anticipate, we may not have the capability to shift our resources to the development of alternative products on a timely basis. This could limit future revenues and profitability.

We may not realize income from the licensing of our technologies if our licensees fail to commercialize the products that incorporate these technologies.

In order to generate revenues from our sensor technology platforms, we will need to enter into licensing arrangements with third parties who can integrate our technology into products that will gain acceptance in the market. We have not yet entered into any licensing agreements, and there is no assurance that we will be able to do so on acceptable terms in future. To the extent we are successful in licensing our technology; in general we will seek upfront payments plus ongoing royalties based on anticipated commercial sales of the products into which our technology is incorporated. Our ability to realize royalties will thus depend upon the successful manufacture and commercialization of such products, which will be primarily within the control of the licensee. There is no assurance that such licensees will be successful in marketing and selling such products. In addition, licensees could decide to delay or discontinue the commercialization of products for financial or other business reasons. Even if our licensees succeed in developing products that incorporate our technology, in all likelihood a significant amount of development and testing will be required before such products can be introduced to market. Therefore we may not receive royalty income for a substantial period following the commencement of any licensing arrangements. If our licensees are unable to commercialize products on a timely basis, they may lose market share to competing or alternative technologies. Any failure by the companies to which we license our technologies to successfully develop marketable products would have an adverse effect on our future royalty payments and financial condition.

In order to commercialize our future products, we will need to establish a sales and marketing capability.

At present, we have limited sales and marketing capability and our financial resources have been limited. We will need to add marketing and sales expertise and must also develop the necessary supporting distribution channels. Although we believe we can build the required infrastructure either in-house or through strategic relationships, we may not be successful in doing so. Failure to establish a sales force and distribution network would have an adverse effect on our ability to grow our business.

We depend on key personnel.

Our senior managers and employees are Joseph Fuda, who serves as our Chief Executive Officer, and Dan Amadori, who serves as our Chief Financial Officer. We have engaged the services of several engineering/technical consulting firms to assist in converting our development efforts to commercialization. Our success depends on our ability to retain certain of our senior management and key technical personnel, our ability to attract and retain additional highly skilled personnel in the future and to maintain our working relationships with our engineering and technical consulting firms to whom we have historically subcontracted our development work.

A depressed oil and gas sector could place our development projects at risk.

Certain of our development partners are engaged primarily in the oil and gas sector. If market conditions are depressed for this sector, there is a risk that such companies could defer or cancel previously established capital expenditure programs or product development initiatives. If these situations arose with our development partners in this sector, our related development projects could be at risk of delays or cancellation.

We may be materially affected by global economic, political and other conditions beyond our control.

Our ability to generate revenue may be adversely affected by uncertainty in the global economy and could also be affected by unstable global political conditions. Health epidemics, terrorist attacks or acts of war could significantly disrupt our operations and the operations of our future customers, suppliers, distributors, or resellers. We cannot predict the potential impact on our financial condition or our results of operations should such events occur.

We are pursuing a significant business opportunity in Romania, working with Romgaz, the state-controlled gas company. To date, the war in the Ukraine with Russia, has not impacted our go forward plans in Romania. If the Ukraine war expands into other eastern European countries in future, there could be repercussions to our ongoing business which could be significant.

We may be affected by IT related risks including cybersecurity and artificial intelligence related risks.

The Company utilizes the services of an independent consultant to address IT related issues including security and control over internal data. Our audit committee supervises this process and reports to our Board of Directors as appropriate. We believe our control procedures address such potential risks.

We may be materially affected by rapid technological change and evolving industry standards.

Short product life cycles are inherent in high-technology companies due to rapid technological change and evolving industry standards. Our future financial condition and results of operations depend on our ability to respond effectively to these changes. There can be no assurance that we will be able to successfully do so or adapt our current products to new technologies or new industry standards. In addition, our customers may be reluctant to adopt new technologies and standards or they may prefer competing technologies and standards. Because the technology market changes so rapidly, it is difficult for us to predict the rate of adoption of our technology.

We may be materially affected by risks associated with new product development.

Our new product development is complex and requires us to investigate and evaluate multiple alternatives, as well as plan the design and manufacture of those alternatives selected for further development. Our development efforts could be adversely affected by hardware and software design flaws, product development delays, changes in operating systems and changes in industry standards. The manufacturing of new products involves integrating complex designs and processes, coordinating with suppliers for parts and components and managing manufacturing capacities to accommodate forecasted demand. If we are not successful in meeting these requirements, this could adversely affect our ability to introduce new products on a timely basis.

Our operations may be materially affected by the risks associated with the continued developments and protection of our intellectual property.

There can be no assurance that we will be able to continue to develop new intellectual property or that we will continue to have it developed for us. We rely on a combination of U.S. patent, copyright, trademark, and trade secret laws to protect our intellectual property rights. We previously filed patent and trademark registration applications with certain foreign governments; in 2019 we abandoned certain of these foreign applications. We may not have appropriate coverage in all jurisdictions where we may sell or license our product in future.

We enter into confidentiality and non-disclosure agreements relating to our intellectual property with our employees and consultants. Despite our efforts to protect our intellectual property rights, unauthorized parties may attempt to copy or otherwise obtain or use our intellectual property. Monitoring the unauthorized use of our intellectual property is difficult and we cannot be certain that we will be able to adequately protect our intellectual property in the future.

There are foreign exchange risks associated with our Company.

Because we have historically raised funds in both U.S. and Canadian markets and a portion of our costs are denominated in Canadian dollars, our funding is subject to foreign exchange risks. A decrease in the value of the U.S. dollar relative to the Canadian dollar could affect our costs and potential future profitability. We do not currently hold forward exchange contracts or other hedging instruments to exchange foreign currencies for U.S. dollars so as to offset potential currency rate fluctuations.

Risk Factors Related to Our Common Shares

Our common shares are subject to the penny stock regulations, which may discourage brokers from effecting transactions in our common shares and adversely affect the market price of our common shares and liquidity.

Our common shares constitute "penny stock" under applicable regulations of the United States Securities and Exchange Commission (the "SEC"). The penny stock regulations impose significant restrictions on brokers who sell penny stock to persons other than established customers and institutional accredited investors. Broker-dealers participating in sales of our stock will be subject to the so called "penny stock" regulations covered by Rule 15c-2 under the Exchange Act of 1934, as amended (the "Exchange Act"). Under the rule, broker-dealers must furnish to all investors in penny stocks a risk disclosure document required by the rule, make a special suitability determination of the purchaser and have received the purchaser's written agreement to the transaction prior to the sale. The penny stock regulations may discourage brokers from effecting transactions in the common shares. This would decrease market liquidity, adversely affect market price and make it difficult for you to use the common shares as collateral.

The rights of our shareholders may differ from the rights typically afforded to shareholders of a U.S. corporation.

We are incorporated under the Business Corporations Act (Ontario), also referred to herein as the "OBCA". The rights of holders of our common shares are governed by the laws of the Province of Ontario, including the OBCA, by the applicable laws of Canada, and by our Articles of Incorporation and all amendments thereto, also referred to herein as the "Articles", and our By-laws. These rights differ in certain respects from the rights of shareholders in typical U.S. corporations. The principal differences include without limitation the following:

Under the OBCA, we have a lien on any common share registered in the name of a shareholder or the shareholder's legal representative for any debt owed by the shareholder to us. Under some U.S. state laws, corporations generally are not entitled to any such statutory liens in respect of debts owed by shareholders.

With regard to certain matters, we must obtain approval of our shareholders by way of at least 66 2/3% of the votes cast at a meeting of shareholders duly called for such purpose being cast in favor of the proposed matter. Such matters include without limitation: (a) the sale, lease or exchange of all or substantially all of our assets out of the ordinary course of our business; and (b) any amendments to our Articles including, but not limited to, amendments affecting our capital structure such as the creation of new classes of shares, changing any rights, privileges, restrictions or conditions in respect of our shares, or changing the number of issued or authorized shares, as well as amendments changing the minimum or maximum number of directors set forth in the Articles. Under some U.S. state laws, the sale, lease, exchange or other disposition of all or substantially all of the assets of a corporation generally requires approval by a majority of the outstanding shares, although in some cases approval by a higher percentage of the outstanding shares may be required. In addition, under some U.S. state laws, the vote of a majority of the shares is generally sufficient to amend a company's certificate of incorporation, including amendments affecting capital structure or the number of directors. Under certain circumstances the board of directors may also have the ability to change the number of directors under some U.S. state laws.

Pursuant to our By-laws, two persons present in person or represented by proxy and each entitled to vote thereat shall constitute a quorum for the transaction of business at any meeting of shareholders. Under some U.S. state laws, a quorum generally requires the presence in person or by proxy of a specified percentage of the shares entitled to vote at a meeting, and such percentage is generally not less than one-third of the number of shares entitled to vote.

Under rules of the Ontario Securities Commission, a meeting of shareholders must be called for consideration and approval of certain transactions between a corporation and any "related party" (as defined in such rules). A "related party" is defined to include, among other parties, directors and senior officers of a corporation, holders of more than 10% of the voting securities of a corporation, persons owning a block of securities that is otherwise sufficient to affect materially the control of the corporation, and other persons that manage or direct, to a substantial degree, the affairs or operations of the corporation. At such shareholders' meeting, votes cast by any related party who holds our common shares and who has an interest in the transaction may not be counted for the purposes of determining whether the minimum number of required votes have been cast in favor of the transaction. Under some U.S. state laws, a transaction between a corporation and one or more of its officers or directors can generally be approved either by the shareholders or a by majority of the directors who do not have an interest in the transaction. Corporations that are listed on a U.S. securities exchange or are quoted on Nasdaq may also be required to have transactions with officers and directors and other related party transactions reviewed by an audit committee comprised of independent directors.

There is no limitation imposed by our Articles or other charter documents on the right of a non-resident to hold or vote our common shares. However, the Investment Canada Act, also referred to herein as the Investment Act, as amended by the World Trade Organization Agreement Implementation Act, also referred to herein as the WTOA Act, generally prohibits implementation of a reviewable investment by an individual, government or agency thereof, corporation, partnership, trust or joint venture that is not a "Canadian," as defined in the Investment Act, unless, after review, the minister responsible for the Investment Act is satisfied that the investment is likely to be a net benefit to Canada. An investment in our common shares by a non-Canadian would be reviewable under the Investment Act if it were an investment to acquire direct control of Micromem, and the value of our assets were CDN \$5.0 million or more. However, an investment in our shares by a national of a country (other than Canada) that is a member of the World Trade Organization or has a right of permanent residence in such a country (or by a corporation or other entity that is a "WTO Investor-controlled entity" pursuant to detailed rules set out in the Investment Act) would be reviewable at a higher threshold of CDN \$344 million in assets, except for certain economic sectors with respect to which the lower threshold would apply. A non-Canadian, whether a national of a WTO member or otherwise, would acquire control of Micromem for purposes of the Investment Act if he or she acquired a majority of our common shares. The acquisition of less than a majority, but at least one-third of our common shares, would also be presumed to be an acquisition of control of Micromem, unless it could be established that Micromem was not controlled in fact by the acquirer through the ownership of voting shares. The United States is a WTO Member for purposes of the Investment Act. Certain transactions involving our common shares would be exempt from the Investment Act, including:

- an acquisition of our common shares if the acquisition were made in connection with the person's business as a trader or dealer in securities.
- an acquisition of control of Micromem in connection with the realization of a security interest granted for a loan or other financial assistance and not for any purpose related to the provisions of the Investment Act; and
- an acquisition of control of Micromem by reason of an amalgamation, merger, consolidation or corporate reorganization, following which the ultimate direct or indirect control of Micromem, through the ownership of voting interests, remains unchanged. Under U.S. law, except in limited circumstances, restrictions generally are not imposed on the ability of non-residents to hold a controlling interest in a U.S. corporation.

U.S. shareholders may not be able to enforce civil liabilities against us.

Micromem is incorporated under the laws of the Province of Ontario. Additionally, a number of our directors and executive officers are non-residents of the U.S., and all or a substantial portion of the assets of such persons are located outside the U.S. As a result, should any investor commence an action in the U.S. against Micromem or its directors or executive officers, Micromem or its directors or officers, as the case may be, may be able to insist that any action against them take place in the jurisdiction of the Province of Ontario. Accordingly, it may be difficult for investors to effect service of process on Micromem or these non-United States resident persons within the United States or to rely in the United States upon judgments obtained in the United States based on the civil liability provisions of the U.S. federal securities laws against Micromem or its executive officers and non-United States resident directors. In addition, if an investor were to obtain a U.S. judgment against Micromem or its directors or executive officers, there is doubt as to the enforceability of such U.S. judgment in Canada.

As a foreign private issuer, we are permitted to file less information with the SEC than a company that is not a foreign private issuer or that files as a domestic issuer.

As a "foreign private issuer" (as defined by 405 of the Securities Act of 1933, as amended (the "Securities Act")), we are exempt from certain rules under the Exchange Act that impose disclosure requirements as well as procedural requirements for proxy solicitations under Section 14 of the Exchange Act. In addition, our officers, directors and principal shareholders are exempt from the reporting and "short-swing" profit recovery provisions of Section 16 of the Exchange Act. Moreover, we are not required to file periodic reports and financial statements with the SEC as frequently or as promptly as a company that files as a domestic issuer whose securities are registered under the Exchange Act, nor are we generally required to comply with the SEC's Regulation FD, which restricts the selective disclosure of material non-public information. For as long as we are a foreign private issuer we intend to file our annual financial statements on Form 20-F or Form 40-F, as applicable, and furnish our quarterly financial statements on Form 6-K to the SEC for so long as we are subject to the reporting requirements of Section 13(g) or 15(d) of the Exchange Act. However, the information we file or furnish is not the same as the information that is required in annual and quarterly reports on Form 10-K or Form 10-Q for U.S. domestic issuers. Accordingly, there may be less information publicly available concerning us than there is for a company that files as a U.S. domestic issuer.

We may lose our foreign private issuer status, which would then require us to comply with the Exchange Act's domestic reporting regime and cause us to incur additional legal, accounting and other expenses.

We are required to determine our status as a foreign private issuer on an annual basis at the end of our second fiscal quarter. In order to maintain our current status as a foreign private issuer, either (1) a majority of our shares must be either directly or indirectly owned of record by non-residents of the United States or (2) (a) a majority of our executive officers or directors must not be U.S. citizens or residents, (b) more than 50 percent of our assets cannot be located in the United States and (c) our business must be administered principally outside the United States. If we lost this status as a foreign private issuer, we would be required to comply with the Exchange Act reporting and other requirements applicable to U.S. domestic issuers, which are more detailed and extensive than the requirements for foreign private issuers. We would also be subject to additional restrictions on offers and sales of securities outside the United States and would have to comply with the generally more restrictive Regulation S requirements under the Securities Act that apply to U.S. domestic issuers, which could limit our ability to access capital markets in the future. The regulatory and compliance costs to us under U.S. securities laws if we are required to comply with the reporting requirements applicable to a U.S. domestic issuer may be higher than the cost we would incur as a foreign private issuer. As a result, we expect that a loss of foreign private issuer status would increase our legal and financial compliance costs.

We do not anticipate paying dividends.

We have never paid a dividend on our securities and we do not anticipate paying dividends in the foreseeable future.

We are likely a "passive foreign investment company" ("PFIC"), which may have adverse U.S. federal income tax consequences for U.S. investors.

We believe that we were classified as a PFIC for our most recently completed tax year, and based on current business plans and financial expectations, we expect that we may be a PFIC for our current tax year and subsequent tax years. If we are a PFIC for any year during a U.S. taxpayer's holding period of our common shares, then such U.S. taxpayer generally will be required to treat any gain realized upon a disposition of our common shares or any so-called "excess distribution" received on our common shares as ordinary income, and to pay an interest charge on a portion of such gain or distribution. In certain circumstances, the sum of the tax and the interest charge may exceed the total amount of proceeds realized on the disposition, or the amount of excess distribution received, by the U.S. taxpayer. Subject to certain limitations, these tax consequences may be mitigated if a U.S. taxpayer makes a timely and effective QEF Election (as defined below) or a Mark-to-Market Election (as defined below). Subject to certain limitations, such elections may be made with respect to the common shares. A U.S. taxpayer who makes a timely and effective QEF Election generally must report on a current basis its share of our net capital gain and ordinary earnings for any year in which we are a PFIC, whether or not we distribute any amounts to our shareholders. However, U.S. taxpayers should be aware that there can be no assurance that we will satisfy the record keeping requirements that apply to a qualified electing fund, or that we will supply U.S. taxpayers with information that such U.S. taxpayers require to report under the QEF Election rules, in the event that we are a PFIC and a U.S. taxpayer wishes to make a QEF Election. Thus, U.S. taxpayers may not be able to make a QEF Election with respect to our common shares. A U.S. taxpayer who makes the Mark-to-Market Election generally must include as ordinary income each year the excess of the fair market value of our common shares over the taxpayer's basis therein. This paragraph is qualified in its entirety by the discussion below under the heading "*Certain United States Federal Income Tax Consequences - Passive Foreign Investment Company Rules*." Each potential investor who is a U.S. taxpayer should consult its own tax advisor regarding the tax consequences of the PFIC rules and the acquisition, ownership, and disposition of our common shares.

We may need to issue additional securities which may cause our shareholders to experience dilution.

Our Board of Directors has the authority to issue additional common shares, without par value, or other of our securities without the prior consent or vote of our shareholders. The issuance of additional common shares would dilute the proportionate equity interest and voting power of our shareholders.

The price of our common shares and volume of our common shares may be volatile.

Our shareholders may be unable to sell a significant number of our common shares on the OTCQB[®] Venture Market (the "OTCQB") without a significant reduction in the market price of the shares.

Furthermore, there can be no assurance that we will be able to meet the listing requirements of, or achieve listing on, any other stock exchange. The market price of the common shares may be affected significantly by factors such as fluctuations in our operating results, announcements of technological innovations or new products by us or our competitors, action by governmental agencies against us or the industry in general, developments with respect to patents or proprietary rights, public concern as to the safety of products developed by us or others, the interest of investors, traders and others in public companies such as ours and general market conditions. In recent years, the securities markets in the United States and Canada have experienced a high level of price and volume volatility, and the market price of securities of many companies, particularly small capitalization companies, have experienced fluctuations which have not necessarily been related to the operating performance, underlying asset values or business prospects of such companies.

ITEM 4. INFORMATION ON THE COMPANY

A. History and Development of Our Company

Micromem is a corporation formed under the laws of the Province of Ontario, Canada, with principal executive offices at 121 Richmond Street West, Suite 602, Toronto, Ontario M5H 2K1 (416.364.6513). Micromem was incorporated on October 21, 1985 as Mine Lake Minerals Inc. We subsequently changed our name to Avanti Capital Corp. on June 23, 1988, to Avanti Corp International Inc. on April 30, 1992 and to Micromem Technologies Inc. on January 11, 1999 in connection with our acquisition of Pageant Technologies Incorporated, also referred to herein as Pageant International. Our website address is www.micromeminc.com. The information on our website is not part of this Annual Report on Form 20-F. We have included our website address in this document as an inactive textual reference only.

The Evolution of Micromem from Memory to Sensor Based Client Solutions

Micromem Applied Sensors Technologies, Inc., our wholly-owned subsidiary ("MAST") was incorporated in 2008 in the State of Delaware. MAST was formed in connection with a contract with BAE Systems in Nashua, New Hampshire. BAE Systems is a Department of Defense trusted facility, which can only do business with U.S. entities (ITAR regulations). BAE Systems' interest was in the potential to utilize our MRAM technology in a radiation-hardened environment for military applications. During this work it was determined that the Hall sensor, which was integral to the MRAM design, had several performance characteristics that by itself, as a product, would potentially create value for MAST.

Frost & Sullivan was contracted by MAST in 2009 to assess the market opportunities for a late entry into the Hall sensor market. The Hall sensor market in 2009 was robust at an estimated \$1.9 billion USD. The market barriers were mature market, declining margins and heavy competition. A decision was taken to not enter the Hall sensor component market for the above reasons. A decision was taken to explore the market opportunities associated with creating unique sensor based solutions that revolved around our Hall sensor technology.

A decision was taken to internally develop, at our own cost, proof of concepts for products that we had gleaned, through our marketing efforts, to have potential market value. These included a magnetic gold sensor for drilling plug analysis, an oil condition sensor for automotive use and an oil/gas aerial exploration platform.

In 2010, MAST was engaged to develop a sensor platform for detecting four nanometer magnetic particles in a flowing oil stream at a concentration less than 1 ppb. Another revenue generating opportunity came in 2011 from a supplier for high speed air bearing motors. MAST replaced the incumbent Hall sensor supplier and delivered a unique circuit board form factor that incorporated the smallest Hall sensor in the world.

In 2011 MAST became aware of the NineSigma Open Innovation model. Nine Sigma's core services connect innovation-seeking companies to the best solutions, capabilities, and partners around the world. MAST's relationship with NineSigma provided us access to the Global Fortune 1000 companies and resulted in a future sales proposal pipeline.

In 2011, a decision was taken to stop research and development effort in the MRAM market space. This decision was taken, in part, due to the high capital demand for staying current in the rapidly changing technology and, equally important, the MRAM market had not grown at the anticipated growth rates. Micromem had amassed multiple memory patents and in 2013 began efforts to value the patent portfolio and attempt to arrange for a sale of these assets.

Until 2014, Micromem funded virtually all of its research and development initiatives. Our main priority was to provide customers with sensor based platform solutions that address their difficult business problems. By 2015 we had advanced a number of our product development initiatives under joint product development agreements with our clients Chevron, Castrol, Flextronics, and Eversource Energy. Our pipeline of development projects expanded.

In 2016 and 2017, we attempted to advance our projects towards field trials. The Flextronics and Eversource projects were ultimately discontinued. We continued with the Chevron and Castrol development projects and began discussions with Repsol SA.

In 2018 the Castrol project was discontinued. We continued to advance our Chevron and Repsol S.A. projects.

In October 2018, Steve Van Fleet filed a lawsuit against the Company and MAST seeking payment of alleged remuneration and expense reimbursements due to him totaling \$214,574. The Company denied the allegations and, in turn, interposed counterclaims against Mr. Van Fleet seeking, among other things, damages of not less than \$3.0 million. In 2021 the litigation with Mr. Van Fleet was resolved in our favor. See Item 5 - Operating and Financial Review and Prospects - Contingencies.

Recent Developments Prior to Fiscal 2024:

Romgaz:

Our discussions with Romgaz and other companies incorporated in Romania occurred on a continuous basis throughout fiscal 2024 and have continued to progress since our fiscal year end. The key go-forward points in these discussions, at the current date are as follows:

- (i) We received an initial purchase order - for several interwell tracer devices, similar to the technology that Chevron deployed in the California field trials referenced above.
- (ii) Micromem will be commissioned to conduct/lead a development program to enhance and expand the analytics capabilities of the existing technology with the end goal of delivering a comprehensive analytics solution to Romgaz for its specific performance requirements in its gas wells.
- (iii) Micromem has pursued discussions whereby the technology application developed in (ii) above will be manufactured on a commercial scale in Romania. It is expected that the technology that will be manufactured in Romania will be suitable for both oil and gas well applications.
- (iv) A joint venture agreement between Micromem and Romgaz is contemplated. The working relationship between Micromem and Romgaz is expected to expand to include the development of other technology applications where Micromem has been active over the past five years. We expect to finalize these working arrangements and move forward with these initiatives in 2025. It is expected that Romgaz will provide the initial capital to launch this expanded working relationship.

In anticipation of these developments with Romgaz in 2025, Micromem is planning for its business activity to include the following components:

- (i) Continuance of its working relationship with the developer of the interwell tracer device (ARTRA 171) technology which Chevron has successfully tested in on site testing of operating oil wells for which we received a Romgaz purchase order in 2023.
- (ii) We plan to maintain our dialogue with Chevron and may pursue certain licensing opportunities with Chevron relating to their proprietary technology in our continued work with Romgaz.
- (iii) We have established a Toronto - based engineering/product presence in cooperation with an established manufacturing and engineering group with whom we expect to have a role as a strategic partner to Micromem.
- (iv) Between June 2021-August 2022, Micromem hired two engineering staff persons through the University of Toronto ("U of T") coop program, each for a 16-month term. The engineering staff were responsible for supporting all of Micromem's current initiatives with Chevron, Romgaz and other potential customers. With that work completed, we did not engage with the coop program in 2023. As our Romgaz project continues, we may continue this program of coop hires, as appropriate, in future.
- (v) We will plan to add additional senior management to the Micromem team in the project management, engineering, and financial reporting areas of discipline. We will also look to recruit additional corporate directors to our Board.

Chevron:

As previously reported, successful field testing of the interwall tracer device was conducted on-site at a California-based Chevron well site in 2019. Sample testing was conducted for a 12-month period thereafter through March 2020.

We met with Chevron in their offices in December 2023 and in September 2024.

In our September 2024 meeting, Chevron requested that Micromem prepare a "White Paper" report on the current state of tracer technology for measurement of multiple attributes in operating oil and gas wells.

To that end, Micromem is currently engaged in discussions with a Houston-based oil recovery company and with the research team at the U of T. We anticipate that our White paper report will be delivered to Chevron in Q2 2025.

Micromem engaged the research team at the U of T in December 2024 to prepare this technical report. The U of T submitted their draft report to Micromem in January 2025; in turn Micromem has submitted this report to Chevron. Our ongoing discussions with Chevron continue.

Senior management at Chevron has, in the past, been very supportive of Micromem's engagement with Romgaz.

Capital Expenditures

Micromem reports \$nil capital expenditures in 2024. In 2023 capital expenditures totaled \$2,044 representing computer equipment.

Available Information

The SEC maintains an Internet site at <http://www.sec.gov/edgar> that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC through the SEC's Electronic Data Gathering, Analysis and Retrieval ("EDGAR") system. Information is also available under the Company's profile on SEDAR+ (<http://www.sedarplus.ca>) or on www.micromeminc.com.

B. Business Overview

Update of Product Development Activity at October 31, 2024

We continue to work with our engineering subcontractor on the ARTRA unit. Our ongoing relationship with our Toronto based engineering group has been maintained.

Deferred development costs / development expenses

Until October 31, 2016, we capitalized as deferred development costs the expenditures that we incurred on these projects, net of the recoveries of such costs from our development partners. Since November 2016, we have expensed net costs as such costs did not meet the criteria for capitalization based on our impairment analysis.

We have previously reported on the chronology, by customer, of our investment in development costs relating to our various projects which we undertook with our strategic partners. A summary of these costs and recoveries between 2012 and 2019 is provided as below:

Net Costs absorbed by the Company:

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	Total
Cost incurred	4,499,466	225,000	2,035,676	939,458	2,470,329	1,129,168	522,720	11,821,817
Recoveries from development partners	(3,442,050)	(100,000)	(838,500)	(300,000)	(200,000)	-	(46,000)	(4,926,550)
Net costs absorbed by the Company	1,057,416	125,000	1,197,176	639,458	2,270,329	1,129,168	476,720	6,895,2

1. Chevron (2013-2019)
2. Repsol (2018-2019)
3. Castrol (2014-2018)
4. Saudi Aramco (2012-2013)
5. Northeast Utilities (2013-2015)
6. GM/Flextronics (2012-2015)
7. Other (various) (2011-2014)

The Chevron development project was self-funding after 2016. The Castrol project was suspended in 2018 given that Castrol was not prepared to commit additional funding to the project. The Saudi Aramco contract was completed in 2014. The Northeast Utilities contract was terminated in 2015 given that Northeast Utilities was not prepared to commit additional funding to the project other than in kind consideration. The GM/Flextronics work commenced in 2012; the Company was absorbing all of the costs associated with the development of the prototype product being developed in conjunction with GM/Flextronics. The prototype work was suspended due to the turnover of the GM project team by 2016-2017 and the Company's decision to stop committing additional funding to the project after 2016. The Company has been awarded several patents relating to the work completed on the GM/Flextronics project.

In 2019 the Company incurred \$36,051 of expenses with respect to the ongoing costs associated with the Chevron project and recovered \$77,597 from Chevron including payments received for certain milestones achieved in 2018.

The Company remains a pre-revenue entity at October 31, 2024. It did not incur any further development expenses on any project between 2020-2024.

Given the progress and momentum achieved to date with Chevron and with Romgaz, the Company believes it will have commercial orders, although there can be no assurances such purchase orders will be made or that revenues will be achieved in future. In October 2023 we received our first purchase order from Romgaz. We have now completed the initial ARTRA unit and are shipping that unit to Romgaz in 2025.

We are now engaged with the U of T who have been assisting us with our white paper report. The initial draft of this report was submitted to Chevron in January 2025.

Intellectual Property

Our intellectual property consists of two components:

- a) A series of patents and provisional patents relating to the smart oil pan plug technology (the formal reference is the "multimodal conditional sensor platform and system thereof") originally developed from the work completed on the GM/Flextronics project.
- b) A series of older patents relating to the Hall sensor application for magnetic random access memory (MRAM). These patents and the market for MRAM applications have not been pursued by the Company since 2009 and all of the costs associated with these patents were written off by 2013 after unsuccessful attempts to sell or license this intellectual property to other parties.

Beginning in 2018, we began to abandon provisional patent filings in a number of international jurisdictions as a cost cutting initiative. We have not funded any additional patent related activity nor patent filings since 2018.

We believe that the U.S. patents that have been granted for MRAM have sustaining value to be realized in the future. If the Company's financial position improves, it may pursue the exploitation of its patents in this field of endeavors.

Our patent costs are summarized below for the fiscal years ending October 31, 2019-2024:

	2021-2024	2020	2019
	\$	\$	\$
Patent expenditures:	-	-	-
Patent costs capitalized:	-	-	-
Amortization expense:	-	8,123	152,962
Impairment Reserve:	-	-	223,143

Share Capital

At October 31, 2024, the Company had 572,985,698 common shares outstanding (2023: 510,368,838 common shares outstanding). Additionally, the Company has 8,750,000 stock options outstanding with a weighted average exercise price of \$0.06 per share (2023: 9,775,000 options outstanding with a weighted average exercise price of \$0.06 per share).

Changes to Our Board of Directors and Management:

The Company held its most recent Annual General and Special Meeting of the shareholders for the fiscal years ending 2020, 2021, 2022 and 2023 on April 22, 2024 (the "Annual Meeting"). At the Annual Meeting, Joseph Fuda, Alex Dey and Oliver Nepomuceno were re-elected as directors. Joseph Fuda and Dan Amadori continue in their respective roles of CEO and CFO respectively.

We plan to schedule the next annual general meeting of shareholders to cover the 2024 fiscal years to be held prior to April 30, 2025. We will evaluate the opportunities to expand our Board of Directors at this upcoming annual general meeting of shareholders.

Equity Financing Transactions:

In the fiscal year ended October 31, 2024, the Company completed the following transactions:

- (a) Pursuant to prospectus and registration exemptions set forth in applicable securities law, the Company completed private placements consisting of common shares, received net proceeds of \$439,155 and issued a total of 24,478,227 common shares.
- (b) The Company continued its bridge loan financing activities in 2024, specifically:
 - (i) It issued 36,805,300 common shares for the conversion of bridge loans totaling \$716,674.
 - (ii) It realized net proceeds of \$417,950 from the issuance of convertible debentures.
 - (iii) It repaid \$287,460 of bridge loans previously secured.
 - (iv) Certain of the bridge loans that matured in 2024 were extended at maturity date, ultimately through October 31, 2024, and thereafter.

In the fiscal year ended October 31, 2023, the Company completed the following transactions:

- (c) Pursuant to prospectus and registration exemptions set forth in applicable securities law, the Company completed private placements consisting of common shares, received net proceeds of \$535,525 and issued a total of 9,864,500 common shares.
- (d) The Company continued its bridge loan financing activities in 2023, specifically:
 - (v) It issued 30,346,660 common shares for the conversion of bridge loans totaling \$1,742,226.
 - (vi) It realized net proceeds of \$645,151 from the issuance of convertible debentures.
 - (vii) It repaid \$270,000 of bridge loans previously secured.
 - (viii) Certain of the bridge loans that matured in 2023 were extended at maturity date, ultimately through October 31, 2023, and thereafter.

Environmental Matters:

We are subject to various environmental protection regulations imposed by the government in the jurisdiction where we conduct our development work. We are not aware of any current or pending environmental protection laws or regulations that would have a material impact on our capital expenditure requirements or competitive position.

C. Organizational Structure

In November 2007, the Company incorporated MAST as a Delaware-based wholly-owned subsidiary. MAST had an office in New York City and was being managed by Steven Van Fleet, its then President and a Director of Micromem. We have utilized the services of other consultants to continue the work of MAST since the departure of Mr. Van Fleet in August 2018.

In October 2008, the Company incorporated 7070179 Canada Inc. as a wholly-owned subsidiary. On October 31, 2008, the Company assigned its rights, title, and interest in certain of its intellectual property which it previously held directly to 707179 Canada Inc. in exchange for common shares of this wholly-owned subsidiary.

We have a wholly-owned subsidiary, Pageant International, which was incorporated under the laws of the Turks & Caicos Islands and continued to Barbados on May 25, 2001. Pageant International has a wholly-owned subsidiary, Pageant Technologies (USA) Inc., a corporation incorporated in the State of Utah. Pageant Technologies USA has been inactive since 2002.

We have a wholly-owned subsidiary, Memtech International Inc., incorporated under the laws of the Bahamas, which in turn has a wholly-owned subsidiary, Memtech International (USA) Inc., a corporation incorporated in the State of Delaware. We also have a wholly-owned subsidiary Micromem Holdings (Barbados) Inc. These subsidiaries have been inactive since inception.

D. Property, Plant and Equipment

We maintain our corporate headquarters in Toronto, Ontario, Canada. We occupied 2,500 square feet of commercial office space pursuant to a lease that was extended in February 2017 for five years through July 2022. In August 2022 we moved to a smaller unit in the same commercial building occupying 1,154 square feet pursuant to a lease from August 1, 2022, to July 31, 2025. The Company sublets a portion of its rental space on a month to month basis and realized sublet income of \$17,205 in 2024 (2023: \$17,682; 2022: \$19,076)

In 2022, the Company capitalized \$48,408 of right of use assets under IFRS 16 pertaining to its lease for office premises and recorded an equivalent liability in its accounts. The Company recorded amortization of \$16,492 in 2024 (\$16,492 in 2023; \$25,878 in 2022).

ITEM 4A. UNRESOLVED STAFF COMMENTS

None.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

This section of the Form 20-F has been prepared to provide a more substantive discussion of our business and to assist the reader in analyzing the audited consolidated financial statements for the years ended October 31, 2024, October 31, 2023, and October 31, 2022. This discussion and analysis of financial condition and results of operations should be read in conjunction with the consolidated financial statements and related notes in this Annual Report, which are prepared in accordance with IFRS and are stated in United States dollars.

Operating Results:

The following table sets forth certain selected financial information of our Company.

Selected statement of operation and deficit information

	2024	2023	2022	2021
	\$	\$	\$	\$
Administration	146,636	148,616	185,366	155,504
Professional and other fees and salaries	391,406	610,052	647,710	424,485
Travel and entertainment	37,631	63,360	59,504	24,903
Recovery of reserve for litigation costs/stale dated payables	-	-	-	(422,982)
Stock compensation expense	6,517	217,965	41,484	360,044
Interest expense	604,664	540,929	469,425	495,809
Amortization expense	16,492	16,492	29,755	36,033
Accretion expense	272,501	279,834	1,179,603	1,169,921
Loss on revaluation of warrant liabilities	826,393	-	-	-
Loss on debt settlement	118,784	-	-	-
(Gain) Loss on conversion of bridge loans	45,535	21,120	94,326	(9,506)
(Gain) on revaluation of derivatives	78,915	(658,503)	(409,607)	(2,547,192)
Loss (Gain) on extinguishment/repayment of convertible debentures	514,501	1,428,066	200,650	1,018,928
Financing costs	24,227	86,352	13,233	84,478
Foreign exchange loss (gain)	(21,404)	(62,613)	(176,477)	222,553
(Loss) for the year	(3,062,798)	(2,691,670)	(2,287,095)	(1,012,978)
(Loss) per share - basic and diluted	(0.01)	(0.01)	(0.01)	0.00

Selected balance sheet information

	2024	2023	2022	2021
	\$	\$	\$	\$
Working capital (deficiency)	(6,693,448)	(4,818,699)	(4,722,878)	(3,452,924)
Other Assets	15,272	32,767	48,092	29,889
Total Assets	282,713	168,350	99,519	225,293
Long term liabilities	44,806	55,272	(73,214)	(48,243)
Shareholders' equity (deficiency)	(6,722,982)	(4,841,204)	(4,748,000)	(3,471,278)

Fiscal 2024 Compared to Fiscal 2023

- a) Administration costs were \$146,636 in 2024 versus \$148,616 in 2023. These costs include rent and occupancy costs of \$18,514(2023: \$17,663), the Company reported sublet income for a portion of its office space in 2024; office insurance costs of \$1,986 (2023: \$1,930; the Company did not renew its directors' and officers' insurance coverage after 2020), investor relations, listings and filing fees of \$77,535 (2023: \$52,756), other general and administrative expenses of \$48,601 (2023: \$70,584).
- b) Professional and other fees and salaries costs were \$391,406 in 2024 versus \$610,052 in 2023. The components of these total costs include legal and audit related expenses of \$98,412 in 2024 (2023: \$144,244), third party consulting fees were \$40,977 in 2024 (2023: \$ 67,664), staff salaries and benefits were \$252,017 in 2024 (2023: \$398,144).

The CFO has received \$40,904 of management fees in 2024 (2023: \$86,250). The CEO of the Company has received \$36,919 of compensation in 2024 (2023: \$190,317).

- c) Travel and entertainment expenses were \$37,631 in 2024 (2023: \$63,360).
- d) In 2024, the Company did not award any stock options to directors, officers, employees and consultants. (2023: 3,000,000 stock options issued to consultants). In 2024 an expense of \$6,517 was reported (2023: \$217,965) and was calculated using the Black Scholes option-pricing model.
- e) Interest expense was \$604,664 in 2024 versus \$540,929 in 2023. This represents the actual interest expense obligations incurred by the Company based on the stated interest rates on the convertible debenture notes.
- f) Amortization expense was \$16,492 in 2024 relating to Capital Assets (2023: \$16,492).
- g) Financing costs were \$24,227 in 2024 versus \$86,352 in 2023. These expenses relate to costs associated with the convertible debenture financings which the Company completed in 2024 and 2023.
- h) The gain on foreign exchange reported in 2024 was \$21,404 versus a gain of \$62,613 in 2023. This included the exchange relating to the translation of \$CDN denominated transactions during the year and to Canadian denominated assets and liabilities at fiscal quarter and year ends. It also included the foreign exchange relating to the initiation, renewal, conversion, and repayment of convertible debentures transactions during the fiscal years. The Canadian dollar, relative to the U.S. dollar was \$0.7596 at October 31, 2020, \$0.7956 at October 31, 2021, \$0.7327 at October 31, 2022, \$0.7207 at October 31, 2023 and \$0.7186 at October 31, 2024.
- i) The other expenses reported relate to the convertible debentures. These expenses are all non-cash expenses and compare as follows:

	2024	2023	Change
Accretion expense	\$ 272,501	\$ 279,834	\$ (7,333)
Loss on conversion of convertible debentures	45,535	21,120	24,415
Loss (gain) on revaluation of derivative liabilities	78,915	(658,503)	737,418
Loss (gain) on extinguishment/repayment of convertible debe	514,501	1,428,066	(913,565)
Net expense	\$ 911,452	\$ 1,070,517	\$ (159,065)

Fiscal 2023 Compared to Fiscal 2022

- a) Administration costs were \$148,616 in 2023 versus \$185,366 in 2022. These costs include rent and occupancy costs of \$17,663 (2022: \$50,907, the Company reported sublet income for a portion of its office space in 2022; office insurance costs of \$1,930 (2022: \$1,696; the Company did not renew its directors and officers' insurance coverage after 2020), investor relations, listings and filing fees of \$52,756 (2022: \$64,769), other general and administrative expenses of \$70,584 (2022: \$59,938).
- b) Professional and other fees and salaries costs were \$610,052 in 2023 versus \$647,710 in 2022. The components of these total costs include legal and audit related expenses of \$144,244 in 2023 (2022: \$110,933), third party consulting fees were \$67,664 in 2023 (2022: \$69,563), staff salaries and benefits were \$398,144 in 2023 (2022: \$467,214).

The CFO has received \$86,250 of management fees in 2023 (2022: \$40,615). The CEO of the Company has received \$190,317 of compensation in 2023 (2022: \$92,902).

- c) Travel and entertainment expenses were \$63,360 in 2023 (2022: \$59,504).
- d) In 2023, the Company awarded 3,000,000 stock options to directors, officers, employees and consultants. (2022: 2,025,000 stock options issued to consultants); the related expense of \$217,965 was calculated using the Black Scholes option-pricing model (2022: \$41,484).
- e) Interest expense was \$540,929 in 2023 versus \$469,425 in 2022. This represents the actual interest expense obligations incurred by the Company based on the stated interest rates on the convertible debenture notes.
- f) Amortization expense was \$16,492 in 2023 relating to Capital Assets (2022: \$29,755 consisting of \$3,877 relating to patents and \$25,878 relating to Capital Assets).
- g) Financing costs were \$86,352 in 2023 versus \$13,233 in 2022. These expenses relate to costs associated with the convertible debenture financings which the Company completed in 2023 and 2022; there were fewer such financings in 2022.
- h) The gain on foreign exchange reported in 2023 was \$62,613 versus a gain of \$176,477 in 2022. This included the exchange relating to the translation of \$CDN denominated transactions during the year and to Canadian denominated assets and liabilities at fiscal quarter and year ends. It also included the foreign exchange relating to the initiation, renewal, conversion, and repayment of convertible debentures transactions during the fiscal years. The Canadian dollar, relative to the U.S. dollar was \$0.7509 at October 31, 2019, \$0.7596 at October 31, 2020, \$0.7956 at October 31, 2021, \$0.7327 at October 31, 2022 and \$0.7207 at October 31, 2023.
- i) The other expenses reported relate to the convertible debentures. These expenses are all non-cash expenses and compare as follows:

	2023	2022	Change
	\$	\$	\$
Accretion expense	279,834	1,179,603	(899,769)
Loss (Gain) on conversion/repayment of debentures	48,363	46,449	1,914
Loss (Gain) on revaluation of derivative liabilities	(658,503)	(409,607)	(248,896)
Loss (Gain) on extinguishment of convertible debentures	1,400,823	200,650	1,200,173
Net Expense	1,070,517	1,017,095	53,422

Unaudited Quarterly Financial Information

Three months ended (unaudited)	Revenues \$	Expenses \$	Income (loss) in period \$	Loss per share \$
October 31, 2024	-	2,517,964	(2,517,964)	-
July 31, 2024	-	570,496	(570,496)	-
April 30, 2024	-	(1,446,174)	1,446,174	0.01
January 31, 2024	-	1,420,512	(1,420,512)	-
October 31, 2023	-	(1,271,082)	1,271,082	-
July 31, 2023	-	(149,612)	149,612	-
April 30, 2023	-	3,896,034	(3,896,034)	0.01
January 31, 2023	-	216,330	(216,330)	-

Three months ended (unaudited)	Working capital (deficiency)	Capital assets at NBV	Other Assets	Total Assets	Shareholders' equity (deficit)
October 31, 2024	(6,693,448)	15,272	-	282,713	(6,722,982)
July 31, 2024	(4,532,200)	19,720	-	186,845	(4,540,961)
April 30, 2024	(4,426,287)	24,359	-	133,392	(4,432,080)
January 31, 2024	(6,100,773)	28,393	-	144,827	(6,001,984)
October 31, 2023	(4,818,699)	32,767	-	168,350	(4,841,204)
July 31, 2023	(6,148,332)	36,331	-	240,608	(6,174,904)
April 30, 2023	(6,847,503)	39,466	-	309,695	(6,873,535)
January 31, 2023	(4,786,678)	43,779	-	105,556	(4,813,784)

B. Liquidity and Capital Resources:
Liquidity

We have not yet realized commercial revenues from the exploitation of our technology platforms. We currently do not have positive cash flow from operations and will not realize positive cash flow until we license or directly produce and sell products utilizing our technology platforms.

We currently have no lines of credit available. We have relied on obtaining equity financing from investors through private placements, through the exercise of common stock options by officers and directors, and through bridge loans that the Company has secured in order to meet our cash flow needs until we can generate sustainable revenues. At October 31, 2024, we had a working capital deficiency of \$6,693,448 (2023: \$4,818,699) including cash on hand of \$125,705 (2023: \$31,584). Since October 31, 2024, we have raised an additional \$57,500 of bridge loan financing and \$285,125 of financing from private placements. We have granted to our directors, officers, other employees and consultants a number of options to purchase shares at prices that are at or above market price on the date of grant. None of the optionees have any obligation to exercise their options and there can be no guarantee that we will realize any funds from the exercise of these options.

In 2025, we plan to continue to raise financing as required and we anticipate that we may report initial revenues from our development partners. In our opinion, despite the current working capital deficiency, in consideration of the future financing endeavours, business plan and existing cash resources, we expect the Company to have sufficient financial resources to fund the Company's planned operations through fiscal 2025.

We incurred \$nil capital expenditures in 2024 (2023: \$2,044).

C. Research and Development:

Under IFRS, research costs are expensed in the period incurred. Development expenses are expensed as incurred unless they meet the criteria for deferral and amortization under IFRS, which criteria is the translation of research findings or other knowledge into a plan for the technology prior to commercial production or use.

D. Trend Information:

The market applications for "smart" sensors are expanding; there are potential applications that could be utilized in virtually every industry vertical.

Our prospects for commercial revenues are dependent upon the successful completion of milestones in the development contracts that we have initiated to date and upon the customers deciding to proceed with commercial orders once these development contracts are successfully completed.

Off-Balance Sheet Arrangements:

We are not party to any off-balance sheet arrangements. In addition, we have no unconsolidated special purpose financing or partnership entities.

Tabular Disclosure of Contractual Obligations:

A summary of our financial commitments as of October 31, 2024, is as below:

	Payments due by period (\$USD)				
	Total	Less than 1 year	1-5 years	More than 5 years	
Operating lease obligations	\$ 12,873	\$ 12,873	\$ -	-	-
	Payments due by period (\$USD)				
	Total	Less than 30 days	31-90 days past billing date	Over 90 days past billing date	
Trade payables	\$ 336,575	\$ -	\$ -	\$ -	
	Payments due by period (\$USD)				
	Total	Less than 3 months	Three to six months	Six to twelve months	One to five years
Convertible debentures	\$ 4,040,479	\$ 2,492,556	\$ 1,376,673	\$ 171,250	\$ -
Debenture payable	\$ 37,389	\$ 37,389	\$ -	\$ -	\$ -
Warrant liabilities	\$ 1,087,997	\$ -	\$ -	\$ -	\$ 1,087,997
Long-term debt	\$ 49,477	\$ -	\$ -	\$ -	\$ 49,477

Critical Accounting Policies:

Our significant accounting policies are set forth in our consolidated financial statements, which should be read in conjunction with management's discussion of our critical accounting policies and estimates set forth below.

Our consolidated financial statements have been prepared in accordance with IFRS.

We have not yet realized commercial revenues from the exploitation of our technology. Under IFRS, research costs are expensed in the period incurred. Development expenses are expensed as incurred unless they meet the criteria for deferral and amortization under IFRS which is the translation of research findings or other knowledge into a plan for the technology prior to commercial production or use. As at October 31, 2024, the Company capitalized \$nil of development costs and capitalized \$nil as intangible assets under IFRS.

Management is required to make estimates and assumptions which can affect the reported balances. In determining estimates of net recoverable amounts and net realizable values, or whether there has been a permanent impairment in value, we rely on assumptions regarding applicable industry performance and prospects, as well as general business and economic conditions that prevail and are expected to prevail. Assumptions underlying asset valuations are limited by the availability of reliable comparable data and the uncertainty of predictions concerning future events.

Contingencies:

- (1) We have agreed to indemnify our directors and officers and certain of our employees in accordance with our Bylaws.
- (2) The Company may be subject to litigation, claims and governmental and regulatory proceedings arising in the ordinary course of business. In such cases, the Company would accrue a loss contingency for these matters when it is probable that a loss has been incurred and the amount of the loss can be reasonably estimated.
- (3) **Legal matter: Litigation with Steven Van Fleet**

We have previously reported on the litigation matter, which commenced in 2018, relating to Mr. Van Fleet, the former President of MAST.

In 2021, the Supreme Court of the State of New York, County of Dutchess ultimately dismissed all of Mr. Van Fleet's claims, found that he was liable to Micromem and MAST on their counterclaims and ordered an inquest to determine damages. The inquest was held between June 3 - 7, 2021.

On June 16th, 2021, the court ordered that Micromem, and MAST had established damages of \$765,579.35, the full amount that had been requested. Additionally, the court awarded costs and statutory prejudgement interest from May 9, 2017. On June 29th, 2021, the court entered a judgement ("Judgement") in favor of Micromem and MAST and against Mr. Van Fleet in the amount of \$1,051,739.83.

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. To date Mr. Van Fleet has complied with the payment terms of the Judgement.

(4) **Legal matter: Litigation with ex-controller**

On November 1, 2023, a former employee filed a statement of claim with the Ontario Superior Court in the amount of \$410,000 CDN alleging multiple claims relating to employment termination without reasonable notice against the Company. The Company filed a statement of defence and counterclaim on November 29, 2023 denying all liability to the former employee. Discoveries with legal counsel were completed in August 2024. Mediation proceedings were completed in October 2024. At that time the claim was reduced to \$48,000. However, the mediation process did not result in a resolution of this matter. We anticipate that a resolution of this matter may develop in 2025; otherwise, the matter may proceed to a trial hearing at some point in future.

No provision has been recorded in these consolidated financial statements as the Company continues to consider the claims of the former employee to be without merit.

Translation of Foreign Currencies:

Our functional and reporting currency is the United States dollar. Accounts recorded in foreign currency have been converted to United States dollars as follows: Monetary assets and liabilities are translated at exchange rates at the consolidated balance sheet dates; non-monetary assets are translated using the historical rate of exchange in effect at the translation dates; revenues and expenses are translated using the average rate of exchange for the year, which rate approximates the rate of exchange prevailing at the transaction dates; and gains and losses resulting from the translation are included in the determination of net loss for the period.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Executive Officers

The Directors and Executive Officers of Micromem as at January 31, 2024, are set forth below:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Joseph Fuda	64	President, Chief Executive Officer and Director
Dan Amadori	73	Chief Financial Officer
Oliver Nepomuceno	57	Director
Alex Dey	81	Director

Joseph Fuda has been President, Chief Executive Officer, and Director since February 13, 2002. Previously he served as Manager of Strategic Alliances for Micromem since February 2001. Prior thereto, he served as a consultant to Micromem since November 2000. Prior thereto he served as a Vice-President and a Director of IPO Capital Corp since April 1999. He was a director of Leader Capital Corp. until June 2007 and also served as a director of Echo Energy Canada Inc, and of Echo Power Generational Inc until June 2004.

Dan Amadori has served as Chief Financial Officer of Micromem since June 2004. From January 2018 to December 9, 2020, he served as a member of the Board of Directors and as Chair of the Audit Committee of Nerium Biotechnology Inc. He served as a Director and Chair of the Governance Committee of Invesque Inc. from 2015 through May 2019. He served as Chair of the Board of Kingsway Arms Retirement Residences Inc. from August 2011 through May 2015. Prior to 2010 he served as an officer - director of other public companies including HyDrive Technologies Inc., Luxell Technologies Inc., XGen Ventures Inc., Ontex Resources Ltd and Leader Capital Corp. He is President of Lamerac Financial Corp., a financial advisory firm, and has held that position since October 1988. Mr. Amadori is a Chartered Professional Accountant and holds an MBA from the Ivey School of Business. He received his ICD.D designation from the Rotman School of Business in 2010.

Oliver Nepomuceno has served as a director of Micromem since June 26, 2006. He is a resident of Switzerland and continues to serve as a financial advisor and is located in Switzerland. He actively assists corporations in the development of new business opportunities in new markets.

Alex Dey is a retired businessman and was elected as a director on September 24, 2010. He was the sole proprietor of Alex Dey, Chartered Accountants until July 31, 2004.

There are no arrangements or understandings between any director and any other person pursuant to which the director was selected as a director or executive officer. Each director holds office until the next annual meeting of shareholders or until his or her successor is elected or appointed, unless his or her office is earlier vacated according to the provisions of our By-laws or the *Business Corporations Act* (Ontario).

B. Compensation

	Annual Compensation			Long-Term Compensation Awards	
	Fiscal Year	Salary (US\$)	Bonus (US\$)	Other Annual Compensation (US\$)	Securities Under Options Granted (#)
Joseph Fuda Chief Executive Officer	2022	92,902	-	-	-
	2023	141,120	-	22,712	340,000
	2024	36,919	-	-	-
Dan Amadori Chief Financial Officer	2022	40,615	-	-	-
	2023	63,769	-	22,712	340,000
	2024	40,904	-	-	-
Oliver Nepomuceno Director	2022	-	-	-	-
	2023	-	-	22,044	330,000
	2024	-	-	-	-
Alex Dey Director	2022	-	-	-	-
	2023	9,896	-	22,044	330,000
	2024	-	-	-	-

Options are offered to directors, executive officers, and employees to purchase our common shares at an exercise price equal to or above the market price for the common shares at the date that the options are granted. These options are approved by the Compensation Committee. None of the directors have agreements that provide for benefits. No options were granted in 2024. In 2023 1,340,000 options were granted to directors and officers. The weighted average exercise price was \$0.06 per share. No stock options were granted to directors or officers in 2022.

C. Board Practices:

All matters pertaining to our financing, contractual arrangements and Management and Director compensation are approved by the Board of Directors. The members of the Board of Directors are appointed to a one-year term at our Annual Meeting or until such time as the next annual general meeting of shareholders is held.

Our Board of Directors meets on an as required basis during the fiscal year. Our Board of Directors did not meet in person in 2024. The Board was convened informally as of each quarter end.

Our Audit Committee met regularly during fiscal 2024 for the purpose of approving and recommending to the Board the quarterly financial statements and our yearend financial statements. In addition, our Audit Committee receives regular periodic reports from management.

Our Compensation Committee met as part of our audit committee meetings in 2024; it receives regular reports from management. Our Compensation Committee approves management and director compensation and all stock option grants for recommendation to the Board of Directors.

The Company held its Annual Meeting on Monday, April 22, 2024 for the fiscal years ending 2020, 2021, 2022 and 2023. At the meeting, the incumbent of directors - Joseph Fuda, Alex Dey and Oliver Nepomuceno were reelected to our Board of Directors.

Audit Committee

The Board of Directors has appointed an Audit Committee consisting of two independent directors. The members of the Audit Committee are Alex Dey (Chairman) and Oliver Nepomuceno, each of whom serves in such capacity until the Board of Directors' next annual meeting. The Audit Committee is responsible for the integrity of our internal accounting and control systems. The committee receives and reviews our financial statements and makes recommendations thereon to the Board of Directors prior to its approval by the full Board of Directors. The Audit Committee communicates directly with our external auditors in order to discuss audit and related matters whenever appropriate. The Audit Committee met formally in January, February, June and September 2024.

Compensation Committee

The Board of Directors has appointed a Compensation Committee which meets on executive compensation matters as and when required. Our Compensation Committee includes Oliver Nepomuceno and Alex Dey as outside directors. The Compensation Committee did not meet separately in 2024 as both members also serve on the Audit Committee.

Disclosure Committee

The Board of Directors has appointed a Disclosure Committee whose primary responsibility is to ensure timely and accurate disclosure of all relevant information in accordance with the various securities regulations. Our Disclosure Committee includes Joseph Fuda, the Company's CEO, and Alex Dey, an outside director.

D. Employees

We have three employees, one of which serves in a management capacity and two of which serve in an administrative capacity. This includes Mr. Fuda, the Chief Executive Officer and President, and two support staff, all of whom work from our executive offices in Toronto, Canada. Mr. Amadori, our CFO, provides services through his management company. All research and development is outsourced to third parties. We consider our relations with our employees to be satisfactory. Our Controller resigned in February 2023 and has been replaced through a third-party service provider.

E. Share Ownership

NAME	COMMON SHARES OWNED ¹	OPTIONS HELD	OPTION EXERCISE PRICE	OPTION EXPIRATION DATE	% OF TOTAL ²
Joseph Fuda Chief Executive Officer and Director	2,074,335	1,500,000 400,000 340,000	\$0.05 \$0.07 \$0.07	11/13/2025 10/08/2026 03/20/2028	0.75% (4,314,335)
Dan Amadori Chief Financial Officer	1,123,857 ³	1,500,000 400,000 340,000	\$0.05 \$0.07 \$0.07	11/13/2025 10/08/2026 03/20/2028	0.59% (3,363,857)
Oliver Nepomuceno Director	1,078,572	500,000 100,000 330,000	\$0.05 \$0.07 \$0.07	11/13/2025 10/08/2026 03/20/2028	0.35% (2,008,572)
Alex Dey Director	899,795	500,000 100,000 330,000	\$0.05 \$0.07 \$0.07	11/13/2025 10/08/2026 03/20/2028	0.32% (1,829,795)

1. Common shares beneficially owned as of the date of this Annual Report.
2. Calculated based on common shares owned plus options held as a percentage total of common shares outstanding as of the date of this Annual Report, plus options held.
3. 215,716 common shares are held by a corporation controlled by Mr. Amadori.
4. 254,863 common shares are held by a corporation wholly owned by Mr. Dey.

We do not have any arrangements involving the employees in the capital of the Company, except for the grant of stock options pursuant to our 2020 Stock Option Plan, as amended and approved by our shareholders on September 8, 2020, at the discretion of the Board.

F. Disclosure of a Registrant's Actions to Recover Erroneously Awarded Compensation.

Not Applicable.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders:

To our knowledge, no shareholder holds greater than 5% of the common shares outstanding of the Company. As of the date of this Annual Report, approximately 45% of the issued and outstanding common shares are held by Canadian investors; approximately 48 of the issued and outstanding shares are held by U.S. investors; and approximately 7% are held by investors outside of Canada and the U.S.

We are not aware of any arrangement, the operation of which may result in a change of control of the Company.

B. Related Party Transactions:

The Company reports the following related party transactions:

(a) Management and consulting fees:

Included in professional fees, other fees and salaries as reported are management fees and consulting fees paid or payable to individuals (or Companies controlled by such individuals) who served as officers, directors, and employees of the Company. The total compensation paid to such parties is summarized as follows:

	2024	2023	2022
Cash Compensation	\$ 77,823	\$ 214,914	\$ 133,517
Stock based compensation	-	82,946	-
	\$ 77,823	\$ 297,860	\$ 133,517

The cash compensation paid in 2024 included \$40,904 to our CFO, Dan Amadori (2023: \$69,990) and \$36,919 to our CEO, Joseph Fuda (2023: \$147,242).

C. Interests of Experts and Counsel.

Not applicable.

ITEM 8. FINANCIAL INFORMATION**A. Consolidated Statements and Other Financial Information**

Our consolidated financial statements for the years ended October 31, 2024, 2023 and 2022 have been prepared in accordance with IFRS.

We have never paid a dividend on our securities. We do not anticipate paying dividends in the foreseeable future.

B. Significant Changes

Significant Changes since October 31, 2024, are as presented in Note 22 to the Company's Consolidated Financial Statements. See "Item 18 - Financial Statements".

ITEM 9. THE OFFER AND LISTING

Our common shares are quoted in the United States on the OTCQB under the symbol "MMTIF". Our common shares are traded in Canada on the Canadian Securities Exchange under the symbol "MRM".

On February 26, 2025, the last reported sale price for our common shares on the OTCQB was \$0.053

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital

Our authorized capital consists of an unlimited number of common shares, of which 572,985,698 shares were issued and outstanding as of October 31, 2024, and 2,000,000 special, redeemable, voting preference shares, referred to herein as special shares, none of which were outstanding, as of October 31, 2024.

Additionally, the Company has 8,750,000 stock options outstanding with a weighted average exercise price of \$0.06 per share (2023: 9,775,000 options outstanding with a weighted average exercise price of \$0.06 per share).

B. Memorandum and Articles of Incorporation

Articles of Incorporation

Details and Objects of Micromem Technologies Inc.

Micromem Technologies Inc. was incorporated under the laws of the Province of Ontario, Canada, on October 21, 1985, as Mine Lake Minerals Inc. We subsequently changed our name to Avanti Capital Corp. by filing Articles of Incorporation of Amendment on June 23, 1988, and to AvantiCorp International Inc. on April 30, 1992 before becoming Micromem Technologies Inc. on January 14, 1999. The Articles of Incorporation place no restrictions on the nature of the business to be carried on by Micromem.

Summary of Directors Powers and Authorities

The rights, duties, powers, and authorities of our Board of Directors are set out in the Articles of Incorporation and By-laws and the statutory provisions of the *Business Corporations Act* (Ontario). The following is a selected summary of the Articles of Incorporation, By-laws and applicable provisions of the *Business Corporations Act* (Ontario) as they relate to selected rights, duties, powers and authorities of our Board of Directors.

The Articles of Incorporation provide for a minimum of three and a maximum of 12 directors. The *Business Corporations Act* (Ontario) prescribes that an offering corporation must have a minimum of three directors, at least twenty five percent (25%), or if they are less than 4, at least one of whom are Canadian residents and at least one third of whom are not officers or employees of us or our affiliates. The Board of Directors may, between annual shareholders meetings, appoint one or more additional directors to serve until the next annual shareholders meeting provided that the number of directors so added may not exceed by one-third (1/3) the number of directors required to have been elected at the last annual meeting of shareholders.

The Chairman of the Board of Directors or any one director may call a meeting upon the provision of forty-eight hours notice to each director in the manner prescribed in our By-laws. Any such notice shall include the items of business to be considered at the meeting. A majority of the directors constitute a quorum provided that half of those directors present are Canadian residents. Business cannot be transacted without a quorum. A quorum of directors may vote on any matter of business properly brought before the meeting provided that where a director is a party to a material contract or proposed material contract or has a material interest in the matter to be considered, such director must disclose his or her interest at the earliest possible date, request the conflict be noted in the minutes of the meeting, and with a few limited exceptions enumerated in the By-laws, refrain from voting on the matter in which the director has a material interest. There is no limitation on the Board of Directors to vote on matters of their remuneration provided such remuneration is disclosed in the financial statements and annual shareholder proxy materials.

The Board of Directors has broad borrowing powers and may, without authorization from the shareholders:

- borrow money on the credit of Micromem;
- issue, re-issue, sell or pledge debt obligations of Micromem;
- subject to restrictions respecting financial assistance prescribed in the *Business Corporations Act* (Ontario), give a guarantee on behalf of Micromem to secure the performance of an obligation of any person; and

- mortgage, hypothecate, pledge or otherwise create a security interest in all or any property of Micromem, owned or subsequently acquired, to secure any obligation of Micromem.

A person is qualified to be or stand for election as a director provided such person is at least 18 years of age, is not a bankrupt and is not found to be of unsound mind by a court in Canada or elsewhere. There is no requirement for a director to hold common shares.

Securities of Micromem

Holders of our common shares will be entitled to receive notice of, attend and vote at all meetings of the shareholders of Micromem. Each common share carries one vote at such meetings. In the event of the voluntary or involuntary liquidation, dissolution or winding-up of Micromem, after payment of all outstanding debts, the remaining assets of Micromem available for distribution will be distributed to the holders of our common shares. Dividends may be declared and paid on our common shares in such amounts and at such times as the directors shall determine in their discretion in accordance with the Business Corporations Act (Ontario). There are no pre-emptive rights, conversion rights, redemption provisions or sinking fund provisions attaching to the common shares. Common shares are not liable to further calls or to assessment by Micromem; provided, however, that pursuant to the provisions of the Business Corporations Act (Ontario), Micromem has a lien on any common share registered in the name of a shareholder or the shareholder's legal representative for a debt owed by the shareholder to Micromem.

Holders of special shares are entitled to receive notice of, attend and vote at all meetings of the shareholders of Micromem. Each special share carries one vote at such meetings. In the event of the voluntary or involuntary liquidation, dissolution or winding-up of Micromem, after payment of all outstanding debts, the holders of the special shares shall be entitled to receive, before any distribution of any part of the assets of Micromem among the holders of any other shares, the amount paid up on the special shares. The special shares are redeemable at the option of Micromem for the amount paid up on the shares. Dividends may not be declared or paid on the special shares and transfer of the Special Shares is restricted without the approval of the Directors of Micromem and the prior written consent of the Ontario Securities Commission. The number of special shares that may be issued and outstanding at any time is limited to 500,000. There are no pre-emptive rights, conversion rights or sinking fund provisions attaching to the special shares. Special shares are not liable to further calls or to assessment by Micromem; provided, however, that pursuant to the provisions of the Business Corporations Act (Ontario), Micromem has a lien on any special shares registered in the name of a shareholder or the shareholder's legal representative for a debt owed by the shareholder.

Rights and Privileges of Shareholders

Only the registered holders of our common shares and special preference shares on the record date are entitled to receive notice of and vote at annual and special meetings of shareholders. Where the items of business affect the rights of shareholders other than the holders of common shares, a special majority of two-thirds of the votes cast by the affected shareholders at the meeting called for such purpose is required to approve the item of business. Beneficial holders of common shares and special shares are also entitled to receive proxy materials in respect of meetings of shareholders in accordance with Canadian Securities Administrators National Instrument 54-101, provided that such proxies are limited in scope to instructing the registered shareholder (usually a brokerage house) on how to vote on behalf of the beneficial shareholder. There are no restrictions on the number of shares that may be held by non-residents other than restrictions set out in the *Investment Canada Act* (Canada). See "Additional Information - D. Exchange Controls".

There are no provisions in the By-laws regarding public disclosure of individual shareholdings. Notwithstanding this, applicable Canadian securities legislation requires certain public disclosure of persons owning or acquiring common shares in excess of 10% of a corporation's issued and outstanding share capital.

C. Material Contracts

None. The agreements referred to in *Item 4.B - Business Overview - Equity Financing Transaction* are in the ordinary course of business.

D. Exchange Controls

As of the date hereof, we are not aware of any governmental laws, decrees or regulations in Canada that restrict the export or import of capital, including, but not limited to, foreign exchange controls, or that affect the remittance of dividends or other payments to nonresident holders of our common shares.

We are not aware of any limitations under the laws of Canada or the Province of Ontario, or in the Articles of Incorporation or any other of our constituent documents on the right of nonresidents of Canada or persons who are not Canadian citizens to hold and/or vote common shares.

E. Taxation

Certain Canadian Income Tax Consequences

This discussion under this heading summarizes the principal Canadian federal income tax consequences of acquiring, holding and disposing of common shares for a shareholder who is not a resident of Canada but is a resident of the United States and who will acquire and hold a common share as capital property for the purposes of the Income Tax Canada, also referred to as the Canadian Tax Act. This summary does not apply to a shareholder who carries on business in Canada through a permanent establishment situated in Canada or performs independent personal services in Canada through a fixed base in Canada if the shareholder is effectively connected with such permanent establishment or fixed base. This summary is based on the provisions of the Canadian Tax Act and the regulations there under and on an understanding of the administrative practices of Canada Customs & Revenue Agency, and takes into account all specific proposals to amend the Canadian Tax Act or regulations made by the Minister of Finance of Canada as of the date hereof. It has been assumed that there will be no other relevant amendments of any governing law although no assurance can be given in this respect. This discussion is general only and is not a substitute for independent advice from a shareholder's own Canadian and US tax advisors.

The provisions of the Canadian Tax Act are subject to income tax treaties to which Canada is a party, including the Canada-United States Income Tax Convention (1980), as amended.

Dividends on common shares and Other Income

Under the Canadian Tax Act, a non-resident of Canada is generally subject to Canadian withholding tax at the rate of 25 percent on dividends paid or deemed to have been paid to him or her by a corporation resident in Canada. We are responsible for the withholding of tax at the source. The Canada-United States Income Tax Convention (1980) limits the rate to 15 percent if the shareholder is a resident of the United States and the dividends are beneficially owned by and paid to such shareholder, and to 5 percent if the shareholder is also a corporation that beneficially owns at least 10 percent of the voting stock of the payor corporation.

The amount of a stock dividend (for tax purposes) would generally be equal to the amount of our paid up or stated capital and increased by reason of the payment of such dividend. We will furnish additional tax information to shareholders in the event of such a dividend. Interest paid or deemed to be paid on our debt securities held by non-Canadian residents may also be subject to Canadian withholding tax, depending upon the terms and provisions of such securities and any applicable tax treaty.

The Canada-United States Income Tax Convention (1980) generally exempts from Canadian income tax dividends paid to a religious, scientific, literary, educational, or charitable organization or to an organization constituted and operated exclusively to administer a pension, retirement or employee benefit fund or plan, if the organization is a resident of the United States and is exempt from income tax under the laws of the United States.

Dispositions of Common Shares

Under the Canadian Tax Act, a non-resident of Canada is subject to Canadian tax on taxable capital gains, and may deduct allowable capital losses, realized on a disposition of "taxable Canadian property". common shares will constitute taxable Canadian property of a shareholder at a particular time if the shareholder used the shares in carrying on business in Canada, or if at any time in the five years immediately preceding the disposition 25 percent or more of the issued shares of any class or series in the capital stock of Micromem belonged to one or more persons in a group comprising the shareholder and persons with whom the shareholder did not deal at "arm's length" and in certain other circumstances.

The Canada-United States Income Tax Convention (1980) relieves United States residents from liability for Canadian tax on capital gains derived on a disposition of shares unless:

the value of the shares is derived principally from "real property" in Canada, including the right to explore for or exploit natural resources and rights to amounts computed by reference to production, the shareholder was resident in Canada for 120 months during any period of 20 consecutive years preceding, and at any time during the 10 years immediately preceding, the disposition and the shares were owned by them when they ceased to be resident in Canada, or the shares formed part of the business property of a "permanent establishment" that the holder has or had in Canada within the 12 months preceding the disposition.

Certain United States Federal Income Tax Consequences

The following is a general summary of certain U.S. federal income tax considerations applicable to a U.S. Holder (as defined below) arising from and relating to the acquisition, ownership and disposition of our common shares.

This summary is for general information purposes only and does not purport to be a complete analysis or listing of all potential U.S. federal income tax considerations that may apply to a U.S. Holder as a result of the acquisition, ownership and disposition of our common shares. In addition, this summary does not take into account the individual facts and circumstances of any particular U.S. Holder that may affect the U.S. federal income tax consequences to such U.S. Holder, including specific tax consequences to a U.S. Holder under an applicable tax treaty. Accordingly, this summary is not intended to be, and should not be construed as, legal or U.S. federal income tax advice with respect to any particular U.S. Holder. This summary does not address the U.S. federal net investment income, U.S. federal alternative minimum, U.S. federal estate and gift, U.S. state and local, and non-U.S. tax consequences to U.S. Holders of the acquisition, ownership, and disposition of our common shares. In addition, except as specifically set forth below, this summary does not discuss applicable tax reporting requirements. Each U.S. Holder should consult its own tax advisor regarding the U.S. federal, U.S. federal net investment income, U.S. federal alternative minimum, U.S. federal estate and gift, U.S. state and local, and non-U.S. tax consequences relating to the acquisition, ownership and disposition of our common shares.

No opinion from legal counsel or ruling from the Internal Revenue Service (the "IRS") has been requested, or will be obtained, regarding the U.S. federal income tax considerations applicable to U.S. Holders as discussed in this summary. This summary is not binding on the IRS, and the IRS is not precluded from taking a position that is different from, and contrary to, the positions taken in this summary. In addition, because the authorities on which this summary is based are subject to various interpretations, the IRS and the U.S. courts could disagree with one or more of the positions taken in this summary.

Scope of this Summary

Authorities

This summary is based on the Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations (whether final, temporary, or proposed) promulgated under the Code, published rulings of the IRS, published administrative positions of the IRS, the Canada-United States Income Tax Convention (1980), and U.S. court decisions, that are in effect and available, as of the date of this document. Any of the authorities on which this summary is based could be changed in a material and adverse manner at any time, and any such change could be applied retroactively. This summary does not discuss the potential effects, whether adverse or beneficial, of any proposed legislation that, if enacted, could be applied on a retroactive or prospective basis.

U.S. Holders

For purposes of this summary, the term "U.S. Holder" means a beneficial owner of our common shares that is, for U.S. federal income tax purposes:

- a citizen or individual resident of the United States;
- a corporation (or other entity treated as a corporation for U.S. federal income tax purposes) organized under the laws of the United States, any state thereof or the District of Columbia;
- an estate whose income is subject to U.S. federal income taxation regardless of its source; or
- a trust that (1) is subject to the primary supervision of a court within the United States and the control of one or more U.S. persons for all substantial decisions or (2) has a valid election in effect under applicable Treasury Regulations to be treated as a U.S. person.

U.S. Holders Subject to Special U.S. Federal Income Tax Rules Not Addressed

This summary does not address the U.S. federal income tax considerations applicable to U.S. Holders that are subject to special provisions under the Code, including U.S. Holders that: (a) are tax-exempt organizations, qualified retirement plans, individual retirement accounts, or other tax-deferred accounts; (b) are financial institutions, underwriters, insurance companies, real estate investment trusts, or regulated investment companies; (c) are brokers or dealers in securities or currencies or are traders in securities that elect to apply a mark-to-market accounting method; (d) have a "functional currency" other than the U.S. dollar; (e) own our common shares as part of a straddle, hedging transaction, conversion transaction, constructive sale, or other integrated transaction; (f) acquired our common shares in connection with the exercise of employee stock options or otherwise as compensation for services; (g) hold our common shares other than as a capital asset within the meaning of Section 1221 of the Code (generally, property held for investment purposes); (h) are partnerships and other pass-through entities (and investors in such partnerships and entities); (i) are S corporations (and shareholders therein); (j) are subject to special tax accounting rules; (k) own, have owned or will own (directly, indirectly, or by attribution) 10% or more of the total combined voting power or value of our outstanding shares; (l) are U.S. expatriates or former long-term residents of the U.S.; or (m) hold our common shares in connection with a trade or business, permanent establishment, or fixed base outside the United States. U.S. Holders that are subject to special provisions under the Code, including U.S. Holders described immediately above, should consult their own tax advisors regarding the U.S. federal, state, local, and non-U.S. tax consequences relating to the acquisition, ownership and disposition of our common shares.

If an entity or arrangement that is classified as a partnership (or other pass-through entity) for U.S. federal income tax purposes holds our common shares, the U.S. federal income tax consequences to such entity or arrangement and the owners of such entity or arrangement generally will depend on the activities of such entity or arrangement and the status of such partners (or other owners). This summary does not address the tax consequences to any such entity or arrangement or partner (or other owner). Partners (or other owners) of entities or arrangements that are classified as partnerships for U.S. federal income tax purposes should consult their own tax advisor regarding the U.S. federal, state, local, and non-U.S. tax consequences arising from and relating to the acquisition, ownership, and disposition of our common shares.

Passive Foreign Investment Company Rules

If we are considered a "passive foreign investment company" within the meaning of Section 1297 of the Code (a "PFIC") at any time during a U.S. Holder's holding period, the following sections will generally describe the potentially adverse U.S. federal income tax consequences to U.S. Holders of the acquisition, ownership, and disposition of our common shares.

We believe that we were classified as a PFIC for our most recently completed tax year, and based on current business plans and financial expectations, we expect that we may be a PFIC for our current tax year and subsequent tax years. No opinion of legal counsel or ruling from the IRS concerning our status as a PFIC has been obtained or is currently planned to be requested. The determination of whether any corporation was, or will be, a PFIC for a tax year depends, in part, on the application of complex U.S. federal income tax rules, which are subject to differing interpretations. In addition, whether any corporation will be a PFIC for any tax year depends on the assets and income of such corporation over the course of each such tax year and, as a result, our PFIC status for the current year and future years cannot be predicted with certainty as of the date of this document. Accordingly, there can be no assurance that the IRS will not challenge any PFIC determination made by us. Each U.S. Holder should consult its own tax advisor regarding our status as a PFIC and the PFIC status of each of our non-U.S. subsidiaries.

In any year in which we are classified as a PFIC, a U.S. Holder will be required to file an annual report with the IRS containing such information as Treasury Regulations and/or other IRS guidance may require. In addition to penalties, a failure to satisfy such reporting requirements may result in an extension of the time period during which the IRS can assess a tax. U.S. Holders should consult their own tax advisors regarding the requirements of filing such information returns under these rules, including the requirement to file an IRS Form 8621 annually.

We generally will be a PFIC for any tax year in which (a) 75% or more of our gross income for such tax year is passive income (the "PFIC income test") or (b) 50% or more of the value of our assets either produce passive income or are held for the production of passive income, based on the quarterly average of the fair market value of such assets (the "PFIC asset test"). "Gross income" generally includes sales revenues less the cost of goods sold, plus income from investments and from incidental or outside operations or sources, and "passive income" generally includes, for example, dividends, interest, certain rents and royalties, certain gains from the sale of stock and securities, and certain gains from commodities transactions.

For purposes of the PFIC income test and PFIC asset test described above, if we own, directly or indirectly, 25% or more of the total value of the outstanding shares of another corporation, we will be treated as if it (a) held a proportionate share of the assets of such other corporation and (b) received directly a proportionate share of the income of such other corporation. In addition, for purposes of the PFIC income test and PFIC asset test described above, "passive income" does not include any interest, dividends, rents, or royalties that are received or accrued by us from a "related person" (as defined in Section 954(d)(3) of the Code), to the extent such items are properly allocable to the income of such related person that is not passive income.

Under certain attribution rules, if we are a PFIC, U.S. Holders will be deemed to own their proportionate share of any of our subsidiaries which are also PFICs (each, a "Subsidiary PFIC"), and will generally be subject to U.S. federal income tax as discussed below under the heading "*Default PFIC Rules Under Section 1291 of the Code*" on their proportionate share of any (i) distribution on the shares of a Subsidiary PFIC and (ii) disposition or deemed disposition of shares of a Subsidiary PFIC, both as if such U.S. Holders directly held the shares of such Subsidiary PFIC. Accordingly, U.S. Holders should be aware that they could be subject to tax under the PFIC rules even if no distributions are received and no redemptions or other dispositions of our common shares are made. In addition, U.S. Holders may be subject to U.S. federal income tax on any indirect gain realized on the stock of a Subsidiary PFIC on the sale or disposition of our common shares.

Default PFIC Rules Under Section 1291 of the Code

If we are a PFIC, the U.S. federal income tax consequences to a U.S. Holder of the purchase of common shares and the acquisition, ownership, and disposition of our common shares will depend on whether such U.S. Holder makes an election to treat us as a "qualified electing fund" or "QEF" under Section 1295 of the Code (a "QEF Election") or makes a mark-to-market election under Section 1296 of the Code (a "Mark-to-Market Election") with respect to our common shares. A U.S. Holder that does not make either a QEF Election or a Mark-to-Market Election (a "Non-Electing U.S. Holder") will be subject to tax as described below.

A Non-Electing U.S. Holder will be subject to the rules of Section 1291 of the Code with respect to (a) any gain recognized on the sale or other taxable disposition of our common shares and (b) any excess distribution received on our common shares. A distribution generally will be an "excess distribution" to the extent that such distribution (together with all other distributions received in the current tax year) exceeds 125% of the average distributions received during the three preceding tax years (or during a U.S. Holder's holding period for our common shares, if shorter).

Under Section 1291 of the Code, any gain recognized on the sale or other taxable disposition of our common shares of a PFIC (including an indirect disposition of shares of a Subsidiary PFIC), and any excess distribution received on such common shares (or a distribution by a Subsidiary PFIC to its shareholder that is deemed to be received by a U.S. Holder) must be ratably allocated to each day in a Non-Electing U.S. Holder's holding period for our common shares. The amount of any such gain or excess distribution allocated to the tax year of disposition or distribution of the excess distribution and to years before the entity became a PFIC, if any, would be taxed as ordinary income (and not eligible for certain preferential tax rates, as discussed below). The amounts allocated to any other tax year would be subject to U.S. federal income tax at the highest tax rate applicable to ordinary income in each such year, and an interest charge would be imposed on the tax liability for each such year, calculated as if such tax liability had been due in each such year. A Non-Electing U.S. Holder that is not a corporation must treat any such interest paid as "personal interest," which is not deductible.

If we are a PFIC for any tax year during which a Non-Electing U.S. Holder holds our common shares, we will continue to be treated as a PFIC with respect to such Non-Electing U.S. Holder, regardless of whether we cease to be a PFIC in one or more subsequent tax years. If we cease to be a PFIC, a Non-Electing U.S. Holder may terminate this deemed PFIC status with respect to our common shares by electing to recognize gain (which will be taxed under the rules of Section 1291 of the Code as discussed above) as if such common shares were sold on the last day of the last tax year for which we were a PFIC.

QEF Election

A U.S. Holder that makes a QEF Election for the first tax year in which its holding period of our common shares begins generally will not be subject to the rules of Section 1291 of the Code discussed above with respect to our common shares. However, a U.S. Holder that makes a QEF Election will be subject to U.S. federal income tax on such U.S. Holder's pro rata share of (a) our net capital gain, which will be taxed as long-term capital gain to such U.S. Holder, and (b) our ordinary earnings, which will be taxed as ordinary income to such U.S. Holder. Generally, "net capital gain" is the excess of (a) net long-term capital gain over (b) net short-term capital loss, and "ordinary earnings" are the excess of (a) "earnings and profits" over (b) net capital gain. A U.S. Holder that makes a QEF Election will be subject to U.S. federal income tax on such amounts for each tax year in which we are a PFIC, regardless of whether such amounts are actually distributed to such U.S. Holder by us. However, for any tax year in which we are a PFIC and have no net income or gain, U.S. Holders that have made a QEF Election would not have any income inclusions as a result of the QEF Election. If a U.S. Holder that made a QEF Election has an income inclusion, such a U.S. Holder may, subject to certain limitations, elect to defer payment of current U.S. federal income tax on such amounts, subject to an interest charge. If such U.S. Holder is not a corporation, any such interest paid will be treated as "personal interest," which is not deductible.

A U.S. Holder that makes a timely and effective QEF Election generally (a) may receive a tax-free distribution from us to the extent that such distribution represents "earnings and profits" that were previously included in income by the U.S. Holder because of such QEF Election and (b) will adjust such U.S. Holder's tax basis in our common shares to reflect the amount included in income or allowed as a tax-free distribution because of such QEF Election. In addition, a U.S. Holder that makes a QEF Election generally will recognize capital gain or loss on the sale or other taxable disposition of our common shares.

The procedure for making a QEF Election, and the U.S. federal income tax consequences of making a QEF Election, will depend on whether such QEF Election is timely. A QEF Election will be treated as "timely" for purposes of avoiding the default PFIC rules discussed above if such QEF Election is made for the first year in the U.S. Holder's holding period for our common shares in which we were a PFIC. A U.S. Holder may make a timely QEF Election by filing the appropriate QEF Election documents at the time such U.S. Holder files a U.S. federal income tax return for such year. If a U.S. Holder owns PFIC stock indirectly through another PFIC, separate QEF Elections must be made for the PFIC in which the U.S. Holder is a direct shareholder and the Subsidiary PFIC for the QEF rules to apply to both PFICs.

A QEF Election will apply to the tax year for which such QEF Election is made and to all subsequent tax years, unless such QEF Election is invalidated or terminated or the IRS consents to revocation of such QEF Election. If a U.S. Holder makes a QEF Election and, in a subsequent tax year, we cease to be a PFIC, the QEF Election will remain in effect (although it will not be applicable) during those tax years in which we were not a PFIC. Accordingly, if we become a PFIC in another subsequent tax year, the QEF Election will be effective, and the U.S. Holder will be subject to the QEF rules described above during any subsequent tax year in which we qualify as a PFIC.

U.S. Holders should be aware that there can be no assurances that we will satisfy the record keeping requirements that apply to a QEF, or that we will supply U.S. Holders with a PFIC Annual Information Statement or other information that such U.S. Holders are required to report under the QEF rules, in the event that we are a PFIC. Thus, U.S. Holders may not be able to make a QEF Election with respect to our common shares. Each U.S. Holder should consult its own tax advisors regarding the availability of, and procedure for making, a QEF Election.

A U.S. Holder makes a QEF Election by attaching a completed IRS Form 8621, including a PFIC Annual Information Statement, to a timely filed U.S. federal income tax return. However, if we do not provide the required information with regard to us or any Subsidiary PFICs, U.S. Holders will not be able to make a QEF Election for such entity and will continue to be subject to the rules of Section 1291 of the Code discussed above that apply to Non-Electing U.S. Holders with respect to the taxation of gains and excess distributions.

Mark-to-Market Election

A U.S. Holder may make a Mark-to-Market Election with respect to our common shares only if our common shares are marketable stock. Our common shares generally will be "marketable stock" if our common shares are regularly traded on (a) a national securities exchange that is registered with the SEC, (b) the national market system established pursuant to Section 11A of the U.S. Exchange Act or (c) a foreign securities exchange that is regulated or supervised by a governmental authority of the country in which the market is located, provided that (i) such foreign exchange has trading volume, listing, financial disclosure, and other requirements and the laws of the country in which such foreign exchange is located, together with the rules of such foreign exchange, ensure that such requirements are actually enforced and (ii) the rules of such foreign exchange ensure active trading of listed stocks. If such stock is traded on such a qualified exchange or other market, such stock generally will be considered "regularly traded" for any calendar year during which such stock is traded, other than in *de minimis* quantities, on at least 15 days during each calendar quarter. U.S. Holders should consult their own tax advisors regarding the marketable stock rules.

A U.S. Holder that makes a Mark-to-Market Election with respect to our common shares generally will not be subject to the rules of Section 1291 of the Code discussed above with respect to such common shares. However, if a U.S. Holder does not make a Mark-to-Market Election beginning in the first tax year of such U.S. Holder's holding period for our common shares and such U.S. Holder has not made a timely QEF Election, the rules of Section 1291 of the Code discussed above will apply to certain dispositions of, and distributions on, our common shares.

A U.S. Holder that makes a timely and effective Mark-to-Market Election will include in ordinary income, for each tax year in which we are a PFIC, an amount equal to the excess, if any, of (a) the fair market value of our common shares held by such U.S. Holder, as of the close of such tax year over (b) such U.S. Holder's tax basis in our common shares. A U.S. Holder that makes a Mark-to-Market Election will be allowed a deduction in an amount equal to the excess, if any, of (i) such U.S. Holder's adjusted tax basis in our common shares, over (ii) the fair market value of such common shares (but only to the extent of the net amount of previously included income as a result of the Mark-to-Market Election for prior tax years).

A U.S. Holder that makes a timely and effective Mark-to-Market Election generally also will adjust such U.S. Holder's tax basis in our common shares to reflect the amount included in gross income or allowed as a deduction because of such Mark-to-Market Election. In addition, upon a sale or other taxable disposition of our common shares, a U.S. Holder that makes a Mark-to-Market Election will recognize ordinary income or ordinary loss (not to exceed the excess, if any, of (a) the amount included in ordinary income because of such Mark-to-Market Election for prior tax years over (b) the amount allowed as a deduction because of such Mark-to-Market Election for prior tax years).

A U.S. Holder makes a Mark-to-Market Election by attaching a completed IRS Form 8621 to a timely filed U.S. federal income tax return. A timely Mark-to-Market Election applies to the tax year in which such Mark-to-Market Election is made and to each subsequent tax year, unless our common shares cease to be "marketable stock" or the IRS consents to revocation of such election. Each U.S. Holder should consult its own tax advisor regarding the availability of, and procedure for making, a Mark-to-Market Election.

Although a U.S. Holder may be eligible to make a Mark-to-Market Election with respect to our common shares, no such election may be made with respect to the stock of any Subsidiary PFIC that a U.S. Holder is treated as owning because such stock is not marketable. Hence, the Mark-to-Market Election will not be effective to eliminate the interest charge and other income inclusion rules described above with respect to deemed dispositions of Subsidiary PFIC stock or distributions from a Subsidiary PFIC to its shareholder.

Other PFIC Rules

Under Section 1291(f) of the Code, the IRS has issued proposed Treasury Regulations that, subject to certain exceptions, would cause a U.S. Holder that had not made a timely QEF Election to recognize gain (but not loss) upon certain transfers of our common shares that would otherwise be tax-deferred (e.g., gifts and exchanges pursuant to corporate reorganizations). However, the specific U.S. federal income tax consequences to a U.S. Holder may vary based on the manner in which our common shares are transferred.

If finalized in their current form, the proposed Treasury Regulations applicable to PFICs would be effective for transactions occurring on or after April 1, 1992. Because the proposed Treasury Regulations have not yet been adopted in final form, they are not currently effective, and there is no assurance that they will be adopted in the form and with the effective date proposed. Nevertheless, the IRS has announced that, in the absence of final Treasury Regulations, taxpayers may apply reasonable interpretations of the Code provisions applicable to PFICs and that it considers the rules set forth in the proposed Treasury Regulations to be reasonable interpretations of those Code provisions. The PFIC rules are complex, and the implementation of certain aspects of the PFIC rules requires the issuance of Treasury Regulations which in many instances have not been promulgated and which, when promulgated, may have retroactive effect. U.S. Holders should consult their own tax advisors about the potential applicability of the proposed Treasury Regulations.

Certain additional adverse rules will apply with respect to a U.S. Holder if we are a PFIC, regardless of whether such U.S. Holder makes a QEF Election. For example, under Section 1298(b)(6) of the Code, a U.S. Holder that uses our common shares as security for a loan will, except as may be provided in Treasury Regulations, be treated as having made a taxable disposition of such common shares.

In addition, a U.S. Holder who acquires our common shares from a decedent will not receive a "step up" in tax basis of such common shares to fair market value.

Special rules also apply to the amount of foreign tax credit that a U.S. Holder may claim on a distribution from a PFIC. Subject to such special rules, foreign taxes paid with respect to any distribution in respect of stock in a PFIC are generally eligible for the foreign tax credit. The rules relating to distributions by a PFIC and their eligibility for the foreign tax credit are complicated, and a U.S. Holder should consult with their own tax advisor regarding the availability of the foreign tax credit with respect to distributions by a PFIC.

The PFIC rules are complex, and each U.S. Holder should consult its own tax advisor regarding the PFIC rules (including the applicability and advisability of a QEF Election and Mark-to-Market Election) and how the PFIC rules may affect the U.S. federal income tax consequences of the acquisition, ownership, and disposition of common shares.

General Rules Applicable to the Acquisition, Ownership, and Disposition of Common Shares

The following discussion describes the general rules applicable to the ownership and disposition of our common shares but is subject in its entirety to the special rules described above under the heading "*Passive Foreign Investment Company Rules*."

Distributions on Common Shares

We do not anticipate paying dividends with respect to our common shares in the foreseeable future. A U.S. Holder that receives a distribution, including a constructive distribution, with respect to a common share will be required to include the amount of such distribution in gross income as a dividend (without reduction for any Canadian income tax withheld from such distribution) to the extent of our current and accumulated "earnings and profits", as computed under U.S. federal income tax principles. A dividend generally will be taxed to a U.S. Holder at ordinary income tax rates we are a PFIC for the tax year of such distribution or the preceding tax year. To the extent that a distribution exceeds our current and accumulated "earnings and profits", such distribution will be treated first as a tax-free return of capital to the extent of a U.S. Holder's tax basis in our common shares and thereafter as gain from the sale or exchange of such common shares (see "*Sale or Other Taxable Disposition of Common Shares*" below). However, we may not maintain the calculations of earnings and profits in accordance with U.S. federal income tax principles, and each U.S. Holder may be required to assume that any distribution by us with respect to our common shares will constitute ordinary dividend income. Dividends received on our common shares generally will not be eligible for the "dividends received deduction" generally applicable to corporations. Subject to applicable limitations and provided we are eligible for the benefits of the Canada-United States Income Tax Convention (1980), or our common shares are readily tradable on a United States securities market, dividends paid by us to non-corporate U.S. Holders, including individuals, generally will be eligible for the preferential tax rates applicable to long-term capital gains for dividends, provided certain holding period and other conditions are satisfied, including that we not be classified as a PFIC in the tax year of distribution or in the preceding tax year. The dividend rules are complex, and each U.S. Holder should consult its own tax advisor regarding the application of such rules.

Sale or Other Taxable Disposition of Common Shares

Upon the sale or other taxable disposition of our common shares, a U.S. Holder generally will recognize capital gain or loss in an amount equal to the difference between (a) the amount of cash plus the fair market value of any property received and (b) such U.S. Holder's tax basis in such common shares sold or otherwise disposed of. Gain or loss recognized on such sale or other taxable disposition generally will be long-term capital gain or loss if, at the time of the sale or other taxable disposition, our common shares have been held for more than one year. Preferential tax rates may apply to long-term capital gain of a U.S. Holder that is an individual, estate, or trust. There are no preferential tax rates for long-term capital gain of a U.S. Holder that is a corporation. Deductions for capital losses are subject to significant limitations under the Code.

Additional Tax Considerations

Receipt of Foreign Currency

The amount of any distribution paid to a U.S. Holder in foreign currency or on the sale, exchange or other taxable disposition of our common shares generally will be equal to the U.S. dollar value of such foreign currency based on the exchange rate applicable on the date of receipt or, if applicable, the date of settlement if the common shares are traded on an established securities market (regardless of whether such foreign currency is converted into U.S. dollars at that time). If the foreign currency received is not converted into U.S. dollars on the date of receipt, a U.S. Holder will have a tax basis in the foreign currency equal to its U.S. dollar value on the date of receipt. Any U.S. Holder who receives payment in foreign currency and engages in a subsequent conversion or other disposition of the foreign currency may have a foreign currency exchange gain or loss that would be treated as ordinary income or loss, and generally will be U.S. source income or loss for foreign tax credit purposes. Different rules apply to U.S. Holders who use the accrual method of tax accounting. Each U.S. Holder should consult its own U.S. tax advisor regarding the U.S. federal income tax consequences of receiving, owning, and disposing of foreign currency.

Foreign Tax Credit

Dividends paid on our common shares will be treated as foreign-source income, and generally will be treated as "passive category income" or "general category income" for U.S. foreign tax credit purposes. Any gain or loss recognized on a sale or other disposition of Common Shares generally will be United States source gain or loss. Certain U.S. Holders that are eligible for the benefits of the Treaty may elect to treat such gain or loss as Canadian source gain or loss for U.S. foreign tax credit purposes. The Code applies various complex limitations on the amount of foreign taxes that may be claimed as a credit by U.S. taxpayers. In addition, Treasury Regulations that apply to taxes paid or accrued (the "**Foreign Tax Credit Regulations**") impose additional requirements for Canadian withholding taxes to be eligible for a foreign tax credit, and there can be no assurance that those requirements will be satisfied. The Treasury Department has released guidance temporarily pausing the application of certain of the Foreign Tax Credit Regulations.

Subject to the PFIC rules and the Foreign Tax Credit Regulations, each as discussed above, a U.S. Holder that pays (whether directly or through withholding) Canadian income tax with respect to dividends paid on our common shares generally will be entitled, at the election of such U.S. Holder, to receive either a deduction or a credit for such Canadian income tax paid. Generally, a credit will reduce a U.S. Holder's U.S. federal income tax liability on a dollar-for-dollar basis, whereas a deduction will reduce a U.S. Holder's income subject to U.S. federal income tax. This election is made on a year-by-year basis and applies to all foreign taxes paid or accrued (whether directly or through withholding) by a U.S. Holder during a year. The foreign tax credit rules are complex and involve the application of rules that depend on a U.S. Holder's particular circumstances. Accordingly, each U.S. Holder should consult its own tax advisor regarding the foreign tax credit rules.

Information Reporting; Backup Withholding Tax

Under U.S. federal income tax laws certain categories of U.S. Holders must file information returns with respect to their investment in, or involvement in, a foreign corporation. For example, U.S. return disclosure obligations (and related penalties) are imposed on U.S. Holders that hold certain specified foreign financial assets in excess of certain threshold amounts. The definition of specified foreign financial assets includes not only financial accounts maintained in foreign financial institutions, but also, unless held in accounts maintained by a financial institution, any stock or security issued by a non-U.S. person. U. S. Holders may be subject to these reporting requirements unless our common shares held by such U.S. Holder are held in an account at certain financial institutions. Penalties for failure to file certain of these information returns are substantial. U.S. Holders should consult their own tax advisors regarding the requirements of filing information returns, including the requirement to file IRS Form 8938.

Payments made within the U.S., or by a U.S. payor or U.S. middleman, of dividends on, and proceeds arising from the sale or other taxable disposition of our common shares generally may be subject to information reporting and backup withholding tax, currently at the rate of 24%, if a U.S. Holder (a) fails to furnish its correct U.S. taxpayer identification number (generally on Form W-9), (b) furnishes an incorrect U.S. taxpayer identification number, (c) is notified by the IRS that such U.S. Holder has previously failed to properly report items subject to backup withholding tax, or (d) fails to certify, under penalty of perjury, that it has furnished its correct U.S. taxpayer identification number and that the IRS has not notified such U.S. Holder that it is subject to backup withholding tax. However, certain exempt persons, such as U.S. Holders that are corporations, generally are excluded from these information reporting and backup withholding tax rules. Any amounts withheld under the U.S. backup withholding tax rules will be allowed as a credit against a U.S. Holder's U.S. federal income tax liability, if any, or will be refunded, if such U.S. Holder furnishes required information to the IRS in a timely manner.

The discussion of reporting requirements set forth above is not intended to constitute a complete description of all reporting requirements that may apply to a U.S. Holder. A failure to satisfy certain reporting requirements may result in an extension of the time period during which the IRS can assess a tax and, under certain circumstances, such an extension may apply to assessments of amounts unrelated to any unsatisfied reporting requirement. Each U.S. Holder should consult its own tax advisors regarding the information reporting and backup withholding rules.

THE ABOVE SUMMARY IS NOT INTENDED TO CONSTITUTE A COMPLETE ANALYSIS OF ALL TAX CONSIDERATIONS APPLICABLE TO U.S. HOLDERS WITH RESPECT TO THE ACQUISITION, OWNERSHIP, AND DISPOSITION OF OUR COMMON SHARES. U.S. HOLDERS SHOULD CONSULT THEIR OWN TAX ADVISORS AS TO THE TAX CONSIDERATIONS APPLICABLE TO THEM IN THEIR OWN PARTICULAR CIRCUMSTANCES.

F. Dividends and Paying Agents

Not applicable.

G. Statement by Experts

Not applicable.

H. Documents on Display

We have filed the documents referred to herein and other information with the SEC, the Ontario Securities Commission and the Alberta Securities Commission. You may inspect and copy such material at the public reference facilities maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may also obtain copies of such material from the SEC at prescribed rates by writing to the Public Reference Section of the SEC, 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference rooms.

The SEC maintains an Internet website at <http://www.sec.gov/edgar> that contains reports, proxy statements, information statements and other material that are filed through EDGAR. Documents filed with the Ontario Securities Commission and the Alberta Securities Commission can be accessed through an Internet website at <http://www.sedarplus.ca> that contains reports, proxy statements, information statements and other material that are filed through the SEDAR+.

Additional information is also available on our website at www.micromeminc.com. Such information on our website is not part of this Form 20-F.

I. Subsidiary Information

Not Applicable.

J. Annual Report to Security Holders

Not Applicable.

ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

We are exposed to market risks in the ordinary course of our business. Market risk represents the risk of loss that may impact our financial position due to adverse changes in financial market prices and rates. Our market risk exposure is primarily a result of fluctuations in interest rates and foreign currency exchange rates. We do not hold or issue financial instruments for trading purposes. See Note 20 to our consolidated financial statements for our quantitative and qualitative disclosures about market risk.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

Not Applicable.

PART II

ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

None.

ITEM 14. MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS

A. to D.

None.

E.

Not Applicable

ITEM 15. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

Our management, with the participation of our Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of our disclosure controls and procedures (as defined in Rules 13a-15(e) and 15d-15(e) under the Exchange Act as of October 31, 2024. Based on management's evaluation, our Chief Executive Officer and Chief Financial Officer concluded that, as of October 31, 2024, our disclosure controls and procedures were effective in that they were designed to ensure that information required to be disclosed by us in our reports that we file or submit under the Exchange Act is recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures are designed to ensure that information required to be disclosed by the Company in our reports that we file or submit under the Exchange Act are recorded, processed, summarized and reported within the time periods specified in the SEC rules and forms. Exchange Act Rule 13a-15(e) also states that disclosure controls and procedures are designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Act is accumulated and communicated to the issuer's management, including its principal executive and principal financial officers, or person performing similar functions, as appropriate to allow timely decisions regarding required disclosure.

Management's Annual Report on Internal Control over Financial Reporting

Micromem's Board of Directors and executive management are responsible for establishing and maintaining adequate internal control over financial reporting. Our internal control system was designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation and fair presentation of its published consolidated financial statements.

All internal control systems, no matter how well designed have inherent limitations. Therefore, even those systems determined to be effective may not prevent or detect misstatements and can provide only reasonable assurance with respect to financial statement preparation and presentation. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our Chief Executive Officer and Chief Financial Officer assessed the effectiveness of Micromem's internal control over financial reporting as of October 31, 2024. In making this assessment, they used the criteria established in Internal Control - Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Based on this assessment the Chief Executive Officer and Chief Financial Officer have concluded that, as of October 31, 2024, our internal control over financial reporting were effective.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal controls over financial reporting identified in connection with the evaluation required by paragraph (d) of 17 CFR 240.13a-15 or 240.15d-15 that occurred during the period covered by this Annual Report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 16. [Reserved]

ITEM 16A. Audit Committee Financial Expert

Our Board of Directors has determined that a member of the Board of Directors, Alex Dey, is an audit committee financial expert and that he is independent, as defined in the Marketplace Rules of the Nasdaq Stock Market.

The SEC has indicated that the designation or identification of a person as an audit committee financial expert does not make such person an "expert" for any purpose, impose any duties, obligations or liability on such person that are greater than those imposed on members of the audit committee and the Board of Directors who do not carry this designation or identification, or affect the duties, obligations or liability of any other member of the audit committee or the Board of Directors.

ITEM 16B. Code of Ethics

We have adopted a Code of Ethics to impose certain policies relating to ethical conduct on all of our Directors and employees, including our Chief Executive Officer, Chief Financial Officer, principal accounting officer and persons performing similar functions. We undertake to provide a copy of our Code of Ethics to any holder of our securities upon request, without charge.

ITEM 16C. Principal Accountant Fees and Services

The following table presents fees for professional audit services rendered by our auditors for the audit of our consolidated financial statements for the years ended October 31, 2023 and 2022, and fees billed for other services rendered by our auditors including our offerings of securities and tax services.

	<u>2024</u>	<u>2023</u>
Audit Fees	\$98,000	\$87,500
Audit Related Fees	-	-
Tax Fees	-	-
All Other Fees	-	-

Audit Fees

In 2024 we incurred \$98,000 and in 2023 we incurred \$87,500, in audit fees to MNP LLP.

Audit Related Fees

In 2024 and 2023 we paid \$nil in audit-related fees.

Tax Fees

We paid \$5,000 in 2024 and \$5,000 in 2023, of tax-related fees for services to Chiampou Travis LLP.

All Other Fees

None.

Pre-approval policies

The Audit Committee assesses and pre-approves all audit and non-audit services.

ITEM 16D. Exemptions from the Listing Standards for Audit Committees

Not applicable.

ITEM 16E. Purchases of Equity by the Issuer and Affiliated Purchasers.

None.

ITEM 16F. Change in Registrants Certifying Accountant.

Not Applicable.

ITEM 16G. Corporate Governance

Not applicable.

ITEM 16H. Mine Safety Disclosure

Not applicable.

ITEM 16I. Disclosure Regarding Foreign Jurisdictions that Prevent Inspections

Not applicable.

ITEM 16J. Insider Trading Policies

The Company has adopted insider trading policies and procedures (the "Insider Trading Policy") that govern the purchase, sale, and other dispositions of the Company's securities by directors, officers, employees and consultants that are designed to promote compliance with applicable insider trading laws, rules and regulations, and any other securities legislation applicable to the Company. The Insider Trading Policy is filed hereto as Exhibit 11.1 to this Annual Report.

ITEM 16K. Cybersecurity

Cybersecurity Risk Management and Strategy

We engage an independent consultant who monitors all of our information technology (the "IT Consultant") related issues and who helps identify, assess, and manage cybersecurity risks relevant to the Company's business. To date we are not aware of any material cybersecurity incidents that have occurred.

Our internal process for overseeing cybersecurity threats is supervised by the Chair of the Audit Committee, working in tandem with our Chief Financial Officer, who interact on a regular basis, including periodically reporting cybersecurity risks and any material cybersecurity incidents as needed. Our Audit Committee and Board of Directors review our cybersecurity procedures as part of our regulatory reporting at each quarter end. The IT consultant also monitors the prevention, detection, mitigation and remediation of cybersecurity risks and incidents through various means, which may include threat intelligence and other information obtained from governmental, public or private sources, including external consultants engaged, and alerts and reports produced by security tools deployed in the IT environment.

Cybersecurity Governance

The Audit Committee members and our Chief Financial Officer have sufficient expertise (finance and operational) to assess the risk related to a cybersecurity matter, along with experts from the IT Consultant that will provide analysis on any security matters.

In Fiscal 2024, the Company did not experience any "cybersecurity threat" (as defined in Item 106(a) of Regulation S-K) or "cybersecurity incident" (as defined in Item 106(a) of Regulation S-K) that materially affected or was reasonably likely to materially affect the Company's business strategy, results of operations or financial condition.

PART III

ITEM 17. Financial Statements

See Item 18.

ITEM 18. Financial Statements

The Consolidated Financial Statements and schedules appear on pages F-1 through F-28 of this Annual Report and are incorporated herein by reference. Our audited financial statements as prepared by our management and approved by the Board of Directors include:

Report of Independent Registered Public Accounting Firm (PCAOB ID: 1930)

Consolidated Financial Statements:

- Consolidated Statements of Financial Position
- Consolidated Statements of Operations and Comprehensive Income (Loss)
- Consolidated Statements of Changes in Equity
- Consolidated Statements of Cash Flows
- Notes to the Consolidated Financial Statements

All the above statements are available on the Company's website at www.micromeminc.com or under the Company's profile on SEDAR+ at <http://www.sedarplus.ca>.



Micromem Technologies Inc.

Consolidated Financial Statements

For the years ended October 31, 2024, 2023 and 2022

(Expressed in United States Dollars)

Micromem Technologies Inc.
Consolidated Financial Statements
For the years ended October 31, 2024, 2023 and 2022
(Expressed in United States Dollars)

Contents

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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, 2024 and 2023, 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, 2024, 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, 2024 and 2023, 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, 2024, in conformity with IFRS[®] Accounting 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 and comprehensive losses, negative cash flows from operations and has a net working capital deficiency which raises 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.

MNP LLP

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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 judgment 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 judgments 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, 2024, 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 calculations related to the financial instruments, including the assessment of the conversion features 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

Chartered Professional Accountants
Licensed Public Accountants

February 25, 2025
Toronto, Canada

We have served as the Company's auditor since 2017

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MNP

Micromem Technologies Inc.
Consolidated Statements of Financial Position
As at October 31, 2024 and October 31, 2023
(Expressed in United States dollars)

	Notes	As at October 31, 2024	As at October 31, 2023
Assets			
Current			
Cash	23	\$ 125,705	\$ 31,584
Prepaid expenses and other receivables	21 (d)	141,736	103,999
Total current assets		267,441	135,583
Property and equipment	7	15,272	32,767
Total assets		\$ 282,713	\$ 168,350
Liabilities			
Current			
Trade payables and other liabilities	20(b), 23(d)	\$ 336,575	\$ 209,285
Deposit liability	21(d)	63,000	63,000
Current lease liability	10	11,980	17,036
Debenture payable	8	37,389	37,509
Convertible debentures	11,23	3,853,273	3,548,059
Derivative liabilities	11,23	1,570,675	1,079,393
Warrant liabilities	12	1,087,997	-
Total current liabilities		6,960,889	4,954,282
Non-current lease liability	10	-	12,018
Long-term loan	9	44,806	43,254
Total liabilities		7,005,695	5,009,554
Shareholders' Deficiency			
Share capital	13	91,678,279	90,471,712
Contributed surplus		27,288,183	24,868,843
Equity component of convertible debentures	11	696,671	3,220,473
Accumulated deficit		(126,386,115)	(123,402,232)
Total shareholders' deficiency		(6,722,982)	(4,841,204)
Total liabilities and shareholders' deficiency		\$ 282,713	\$ 168,350
Going concern			
	2		
Commitments and Contingencies			
	21		
Subsequent events			
	24		

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, 2024, 2023, and 2022
(Expressed in United States dollars)

		Years ended October 31,		
	Notes	2024	2023	2022
Operating expenses				
General and administrative	16(a)	146,636	148,616	185,366
Professional, other fees and salaries	16(b)	391,406	610,052	647,710
Stock-based compensation	15	6,517	217,965	41,484
Travel and entertainment		37,631	63,360	59,504
Depreciation of property and equipment	7	16,492	16,492	25,878
Amortization of patents		-	-	3,877
Foreign exchange (gain)		(21,404)	(62,613)	(176,477)
Total operating expenses		577,278	993,872	787,342
Other expenses (income)				
Accretion expense	11	272,501	279,834	1,179,603
Interest expense	9,11	604,664	540,929	469,425
Other finance expenses	8,10,13	24,227	86,352	13,233
Loss on revaluation of warrant liabilities	12	826,393	-	-
Loss on debt settlement	13	118,784	-	-
Loss (gain) on revaluation of derivative liabilities	11	78,915	(658,503)	(409,607)
Loss on conversion of convertible debentures	11	45,535	21,120	94,326
Loss (gain) on repayment of convertible debentures	11	62,253	27,243	(47,877)
Loss on extinguishment of convertible debentures	11	452,248	1,400,823	200,650
Total other expenses		2,485,520	1,697,798	1,499,753
Loss before income tax provision		(3,062,798)	(2,691,670)	(2,287,095)
Income tax provision	19	-	-	-
Net loss and comprehensive loss		\$ (3,062,798)	\$ (2,691,670)	\$ (2,287,095)
Weighted average number of outstanding shares, basic and diluted	17	529,474,454	490,310,376	451,177,796
Loss per share, basic and diluted	17	\$ (0.01)	\$ (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, 2024, 2023, and 2022
(Expressed in United States dollars)

	Notes	Number of shares	Share capital	Contributed surplus	Equity component of convertible debentures	Accumulated deficit	Total
Balance at November 1, 2021		435,737,734	\$ 86,815,836	\$ 28,197,382	\$ 14,004	\$ (118,498,500)	\$ (3,471,278)
Private placements of shares for cash	13	5,012,450	207,588	-	-	-	207,588
Share issuance costs	13	-	(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	13	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	15	-	-	41,484	-	-	41,484
Net loss and comprehensive 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>
Private placements of shares for cash	13	9,864,500	535,525	-	-	-	535,525
Share issuance costs	13	-	(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	15	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	15	-	-	217,965	-	-	217,965
Net loss and comprehensive loss		-	-	-	-	(2,691,670)	(2,691,670)
Balance at October 31, 2023		<u>510,368,838</u>	<u>\$ 90,471,712</u>	<u>\$ 24,868,843</u>	<u>\$ 3,220,473</u>	<u>\$ (123,402,232)</u>	<u>\$ (4,841,204)</u>
Private placements of shares for cash	13	24,478,227	439,155	-	-	-	439,155
Cash share issuance costs	13	-	(24,520)	-	-	-	(24,520)
Broker warrants issued	14	-	(3,909)	3,909	-	-	-
Shares issued on settlement of accounts payable	13	1,333,333	79,167	-	-	-	79,167
Convertible debentures converted into common shares	11,18	36,805,300	716,674	-	(35,973)	-	680,701
Expiry of stock options		-	-	(78,915)	-	78,915	-
Expiry of convertible debenture conversion option	11	-	-	3,220,473	(3,220,473)	-	-
Renewal of convertible debentures	11	-	-	(732,644)	732,644	-	-
Stock-based compensation	15	-	-	6,517	-	-	6,517
Net loss and comprehensive loss		-	-	-	-	(3,062,798)	(3,062,798)
Balance at October 31, 2024		<u>572,985,698</u>	<u>\$ 91,678,279</u>	<u>\$ 27,288,183</u>	<u>\$ 696,671</u>	<u>\$ (126,386,115)</u>	<u>\$ (6,722,982)</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, 2024, 2023, and 2022
(Expressed in United States dollars)

		Years ended October 31,		
	Notes	2024	2023	2022
Operating activities				
Net loss		\$ (3,062,798)	\$ (2,691,670)	\$ (2,287,095)
Items not affecting cash:				
Depreciation of property and equipment	7	16,492	16,492	25,878
Amortization of patents		-	-	3,877
Accretion expense	11	272,501	279,834	1,179,603
Accrued interest	9,11	531,797	471,596	368,280
Stock-based compensation	15	6,517	217,965	41,484
Loss on revaluation of warrant liabilities	12	826,393	-	-
Loss on debt settlement	13	118,784	-	-
Loss on conversion of convertible debentures	11,18	45,535	21,120	94,326
Loss (gain) on repayment of convertible debentures	11,18	62,253	27,243	(47,877)
Loss (gain) on revaluation of derivative liabilities	11,18	78,915	(658,503)	(409,607)
Loss on extinguishment of convertible debentures	11,18	388,985	1,400,823	200,650
Foreign exchange (gain) loss		(30,539)	(67,031)	(136,336)
		(745,165)	(982,131)	(966,817)
Net changes in non-cash working capital:				
Prepaid expenses and other receivables		(37,737)	(85,799)	5,807
Deposit liability		-	63,000	-
Trade payables and other liabilities		156,978	(78,290)	(36,021)
Cash flows used in operating activities		(625,924)	(1,083,220)	(997,031)
Investing activity				
Purchase of property and equipment	7	-	(2,044)	-
Cash flows used in investing activity		-	(2,044)	-
Financing activities				
Principal payments on lease liability	10	(17,381)	(15,609)	(25,317)
Proceeds from private placements of shares and warrants	13	631,456	535,525	207,588
Share issuance costs	13	(24,520)	(25,586)	(25,591)
Proceeds from the exercise of options	15	-	214,140	-
Proceeds from issuance of convertible debentures	11,18	417,950	645,151	765,671
Repayments of convertible debentures	11,18	(287,460)	(270,000)	(63,490)
Cash flows provided by financing activities		720,045	1,083,621	858,861
Net change in cash		94,121	(1,643)	(138,170)
Cash - beginning of period		31,584	33,227	171,397
Cash - end of period		\$ 125,705	\$ 31,584	\$ 33,227
Supplemental cash flow information				
Interest paid on convertible-debt (classified in operating activities)	11	\$ 72,867	\$ 64,679	\$ 88,465
Interest converted on convertible-debt (classified in operating activities)	11	\$ 52,772	\$ 238,859	\$ 12,680
Repayment penalties paid on convertible-debt (classified in operating activities)	11	\$ 63,263	\$ -	\$ -
Interest paid on non-convertible debt (classified in operating activities)	8	\$ 9,081	\$ 9,170	\$ 9,604
Interest on lease liability (classified in operating activities)	10	\$ 1,820	\$ 3,323	\$ 3,629
Cash share issuance costs (classified in operating activities)	13	\$ 13,326	\$ -	\$ -
Carrying amount of convertible debentures converted into common shares	18	\$ 716,674	\$ 1,742,226	\$ 764,432
Shares issued on settlement of accounts payable	13	\$ 29,687	\$ -	\$ 22,460
ROU asset and lease liability recognized	10	\$ -	\$ -	\$ 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, 2024, 2023, and 2022
(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, 2024 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, 2024, the Company reported a net loss and comprehensive loss of \$3,062,798 (2023 - \$2,691,670, 2022 - \$2,287,095) and negative cash flow from operations of \$625,924 (2023 - \$1,083,220, 2022 - \$997,031). The Company's working capital deficiency as at October 31, 2024 was \$6,693,448 (October 31, 2023 - \$4,818,699).

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 2025; 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.

3. Basis of presentation

These consolidated financial statements have been prepared in accordance with IFRS® Accounting Standards as issued by the International Accounting Standards Board ("IFRS") 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 February 25, 2025.

(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)	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, warrants and conversion features

The Company makes estimates and utilizes assumptions in determining the fair value for stock options, warrants, and conversion features based on the application of option pricing valuation models, as detailed in Note 11, 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.

(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 material accounting policies

The material 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 and warrant 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 material 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 an option pricing model, as detailed in Note 11. 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 and warrant 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 and warranty liabilities are measured at fair value on a recurring basis and categorized as level 2 in the fair value hierarchy. The fair value of the derivative liabilities and warrant liabilities at October 31, 2024 are \$1,570,675 and \$1,087,997 (2023 - \$1,079,393 and \$nil). See note 11 (c) and note 12.

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, 2024 and 2023, there were no transfers between levels.

Micromem Technologies Inc.
Notes to Consolidated Financial Statements
For the years ended October 31, 2024, 2023, and 2022
(Expressed in United States dollars, unless otherwise noted)

4. Summary of material 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

(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 2024, 2023, or 2022.

(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.

Micromem Technologies Inc.**Notes to Consolidated Financial Statements****For the years ended October 31, 2024, 2023, and 2022***(Expressed in United States dollars, unless otherwise noted)*

4. Summary of material 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.

(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) 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.

Micromem Technologies Inc.
Notes to Consolidated Financial Statements
For the years ended October 31, 2024, 2023, and 2022
(Expressed in United States dollars, unless otherwise noted)

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, 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.

(b) Amendment to IFRS 9, Financial Instruments and IFRS 7, Financial Instruments - Disclosures, Issued but not yet effective

In May 2024, the IASB issued amendments to IFRS 9 Financial Instruments and IFRS 7 Financial Instruments - Disclosures. The amendments clarify the derecognition of financial liabilities and introduces an accounting policy option to derecognize financial liabilities that are settled through an electronic payment system. The amendments also clarify how to assess the contractual cash flow characteristics of financial assets that include environmental, social and governance (ESG)- linked features and other similar contingent features and the treatment of non-recourse assets and contractually linked instruments (CLIs). Further, the amendments mandate additional disclosures in IFRS 7 for financial instruments with contingent features and equity instruments classified at FVOCI. The amendments are effective for annual periods starting on or after January 1, 2026. Retrospective application is required and early adoption is permitted.

(c) IFRS 18 Presentation and Disclosure in Financial Statements, Issued but not yet effective

In April 2024, the IASB issued IFRS 18 Presentation and Disclosure in Financial Statements to improve reporting of financial performance. The new standards replaces IAS 1 Presentation of Financial Statements. IFRS 18 introduces new categories and required subtotals in the statement of profit and loss and also requires disclosure of management-defined performance measures. It also includes new requirements for the location, aggregation and disaggregation of financial information. The standard is effective for annual reporting periods beginning on or after January 1, 2027, including interim financial statements. Retrospective application is required and early adoption is permitted.

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

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. Patents

	As at November 1, 2023	Additions	Disposals	As at October 31, 2024
Cost	\$ 681,288	\$ -	\$ -	\$ 681,288
Accumulated amortization	681,288	-	-	681,288
Net book value	\$ -	\$ -	\$ -	\$ -

	As at November 1, 2022	Additions	Disposals	As at October 31, 2023
Cost	\$ 681,288	\$ -	\$ -	\$ 681,288
Accumulated amortization	681,288	-	-	681,288
Net book value	\$ -	\$ -	\$ -	\$ -

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, 2024 and 2023.

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7. Property and equipment

	As at November 1, 2023	Additions	Foreign exchange	As at October 31, 2024
Cost				
Computers	\$ 9,510	\$ -	\$ -	\$ 9,510
Right-of-use assets	48,408	-	-	48,408
	57,918	-	-	57,918
Accumulated depreciation				
Computers	4,981	1,289	\$ 70	\$ 6,340
Right-of-use assets	20,170	15,203	933	36,306
	25,151	16,492	1,003	42,646
Net book value	\$ 32,767			\$ 15,272
	As at November 1, 2022	Additions	Foreign exchange	As at October 31, 2023
Cost				
Computers	\$ 7,466	\$ 2,044	\$ -	\$ 9,510
Right-of-use assets	48,408	-	-	48,408
	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

8. 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, 2020, June 17, 2021, December 17, 2021, June 17, 2022, December 17, 2022, June 17, 2023, December 17, 2023 and June 17, 2024. The most recent extension on June 17, 2024 extended the debenture to December 17, 2024. 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, 2024, the debenture had an outstanding balance of \$37,389 (\$52,031 CAD) (October 31, 2023 - \$37,509 (\$52,031 CAD)). During the year ended October 31, 2024, total interest expense of \$9,081 (2023 - \$9,170, 2022 - \$9,604) was recognized in the consolidated statement of operations and comprehensive loss. As at the date of these consolidated financial statements were approved for issuance, the loan was not repaid.

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9. Long-term loan

The Company was granted a \$60,000 CAD (\$44,806 USD) unsecured, 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 were to have repaid \$40,000 CAD (\$29,871 USD) of the aggregate amount advanced on or before January 18, 2024, the repayment of the remaining \$20,000 CAD would have been forgiven. The balance was not paid by January 18, 2024, and as a result, on January 19, 2024 the CEBA loan was converted to a 3-year term loan, bearing interest at 5% per annum, paid monthly. The total principal balance plus any accrued and unpaid interest is payable in full on December 31, 2026. The amount of interest expense incurred during the year ended October 31, 2024 is \$1,764 (2023 - \$nil).

The continuity of the long-term loan is summarized as follows:

Balance, October 31, 2022	\$	43,796
Foreign exchange		(542)
Balance, October 31, 2023	\$	43,254
Accrued interest		1,764
Foreign exchange		(212)
Balance, October 31, 2024	\$	44,806

The following represents a maturity analysis of the Company's undiscounted contractual loan obligations as at October 31, 2024:

		USD
Less than one year	\$	2,156
Between one and five years	\$	45,632

10. Leases

(a) As a lessee

The lease obligation relates to the use of office space in Toronto, Ontario. The lease agreement has a term of August 1, 2022 to July 31, 2025. The present value of the lease obligation was calculated using a discount rate of 9%.

The lease liability is summarized as follows:

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
Interest expense		1,820
Lease payments		(19,201)
Foreign exchange		307
Balance, October 31, 2024	\$	11,980

The following represents a maturity analysis of the Company's undiscounted contractual lease obligations as at October 31, 2024:

		USD
Less than one year	\$	12,873

(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, 2024, the Company recognized a total of \$17,205 (2023 - \$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, 2024:

		USD
Less than one year	\$	12,780

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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, 2024, the Company incurred \$63,263 of financing costs (2023 - \$86,352, 2022 - \$21,000) which primarily consisted of early repayment and administrative fees, which are classified in loss of extinguishment of convertible debentures, of which \$nil (2023 - \$nil, 2022 - \$nil) was converted into common shares.

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

Convertible debentures outstanding as at October 31, 2024:

*Denominated in CAD

	USD (equity component)	CAD (embedded derivative)	USD (embedded derivative)	Total
Loan principal outstanding	\$ 1,413,245	\$ 1,523,657*	\$ 231,250	
Terms of loan				
Annual stated interest rate	12-24%	12% - 24%	2% - 4%	
Effective annual interest rate	24%	14 - 270%	24% - 176%	
Conversion price to common shares	\$0.03 - \$0.04	\$0.05 - \$0.10 *	(i) - (ii)	
Remaining life (in months)	0 - 4	0 - 6	0 - 12	

Consolidated Statement of Financial Position

Carrying value of loan principal	\$ 1,413,245	\$ 1,461,356	\$ 106,347	\$ 2,980,948
Interest payable	333,000	506,685	32,640	\$ 872,325
Convertible debentures	\$ 1,746,245	\$ 1,968,041	\$ 138,987	\$ 3,853,273
Derivative liabilities	\$ -	\$ 1,444,932	\$ 125,743	\$ 1,570,675
Equity component of convertible debentures	\$ 696,671	\$ -	\$ -	\$ 696,671

For the year ended October 31, 2024:

	USD (equity component)	CAD (embedded derivative)	USD (embedded derivative)	Total
Consolidated Statement of Operations and Comprehensive Loss				
Accretion expense	\$ 5,636	\$ 174,437	\$ 92,428	\$ 272,501
Interest expense	\$ 329,432	\$ 262,743	\$ 10,725	\$ 602,900
Loss (gain) on revaluation of derivative liabilities	\$ -	\$ 179,315	\$ (100,400)	\$ 78,915
Loss on conversion of convertible debentures	\$ -	\$ -	\$ 45,535	\$ 45,535
Loss (gain) on repayment of convertible debentures	\$ -	\$ (8,269)	\$ 70,522	\$ 62,253
Loss on extinguishment of convertible debentures	\$ (5,636)	\$ 376,297	\$ 81,587	\$ 452,248

Consolidated Statement of Changes in Equity

Amount of principal converted to common shares	\$ 159,106	\$ 60,197*	\$ 431,907	
Amount of interest converted to common shares	\$ 44,106	\$ 197*	\$ 8,469	
Number of common shares issued on conversion of convertible debentures	5,566,285	1,203,945	30,035,070	36,805,300

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11. Convertible debentures (continued)

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

	USD (equity component)	CAD (embedded derivative)	USD (embedded derivative)	Total
Consolidated Statement of Cash Flows				
Amount of principal repaid in cash	\$ 16,000	\$ 88,326	\$ 183,134	\$ 287,460
Amount of interest repaid in cash	\$ 14,339	\$ 58,528	\$ -	\$ 72,867

- (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, 2023:

*Denominated in CAD

	USD (equity component)	CAD (embedded derivative)	USD (embedded derivative)	Total
Loan principal outstanding	\$ 1,261,265	\$ 2,146,715*	\$ 405,001	
Terms of loan				
Annual stated interest rate	24.00%	12% - 24%	2% - 4%	
Effective annual interest rate	24%	22 - 131%	24% - 5158%	
Conversion price to common shares	\$ 0.03 - \$0.04	\$ 0.05 - \$0.10*	(i) - (ii)	
Remaining life (in months)	0 - 4	0 - 11	0 - 11	

Consolidated Statement of Financial Position

Carrying value of loan principal	\$ 1,261,265	\$ 1,499,667	\$ 77,238	\$ 2,838,170
Interest payable	344,993	334,511	30,385	709,889
Convertible debentures	\$ 1,606,258	\$ 1,834,178	\$ 107,623	\$ 3,548,059
Derivative liabilities	\$ -	\$ 783,650	\$ 295,743	\$ 1,079,393
Equity component of convertible debentures	\$ 3,220,473	\$ -	\$ -	\$ 3,220,473

- (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, 2023:

	USD (equity component)	CAD (embedded derivative)	USD (embedded derivative)	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
Loss on extinguishment of convertible debentures	\$ 33,488	\$ 1,169,800	\$ 197,535	\$ 1,400,823

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11. Convertible debentures (continued)

(b) Comparative information presented in the consolidated financial statements

	USD (equity component)	CAD (embedded derivative)	USD (embedded derivative)	Total
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
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

For the year ended October 31, 2022:

*Denominated in CAD

	USD (equity component)	CAD (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 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)
Loss (gain) 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
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

(c) Fair value of derivative liabilities outstanding

The fair value of the derivative liabilities is determined with option pricing models. The underlying assumptions are as follows:

	As at October 31, 2024	As at October 31, 2023
Volatility factor (based on historical volatility)	140% - 203%	114% - 189%
Risk free interest rate	3.18% - 3.50%	5.11% - 5.48%
Expected life of conversion features (in months)	0 - 12	0 - 11
Expected dividend yield	0%	0%
CDN to USD exchange rate (as applicable)	0.7186	0.7209
Call value	\$0.02 - \$0.04	\$0.01 - \$0.08

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.

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12. Warrant liability

During the year ended October 31, 2024, the Company issued warrants as specified in note 13. These warrants were issued in connection with private placements and in debt settlement arrangements. The details of the warrants issued, including the exercise price and expiry date, are disclosed in note 13.

The Company determined that these warrants were exchangeable into a variable number of shares, and as such, the warrants were classified as financial liabilities measured at fair value through profit or loss ("FVTPL"). The Company uses the Black-Scholes pricing model to estimate fair value. Expected volatility has been based on an evaluation of the historical volatility of the Company's share price. The risk-free interest rate for the life of the warrants was based on the yield available on government benchmark bonds with a term approximating the remaining term of the warrants. The life of the warrant is based on the contractual term. The values as at the grant date are as follows:

At Grant Date	July 18, 2024	July 24, 2024	September 24, 2024	September 26, 2024
Share price	\$0.01 (\$0.02 CAD)	\$0.01 (\$0.02 CAD)	\$0.01 (\$0.02 CAD)	\$0.06 (\$0.08 CAD)
Exercise price	\$0.04 (\$0.05 CAD)	\$0.04 (\$0.05 CAD)	\$0.04 (\$0.05 CAD)	\$0.04 (\$0.05 CAD)
Volatility factor (based on historical volatility)	153%	155%	160%	160%
Risk free interest rate	3.83%	3.77%	2.95%	3.01%
Expected life (in years) of warrant	3	3	3	3
Expected dividend yield	0%	0%	0%	0%

As at October 31, 2024, the Company re-valued the warrant liability with the following inputs, assumptions and results, respectively:

At October 31, 2024	July 18, 2024	July 24, 2024	September 24, 2024	September 26, 2024
Share price	\$0.06 (\$0.08 CAD)	\$0.06 (\$0.08 CAD)	\$0.06 (\$0.08 CAD)	\$0.06 (\$0.08 CAD)
Exercise price	\$0.04 (\$0.05 CAD)	\$0.04 (\$0.05 CAD)	\$0.04 (\$0.05 CAD)	\$0.04 (\$0.05 CAD)
Volatility factor (based on historical volatility)	156%	156%	154%	155%
Risk free interest rate	3.09%	3.09%	3.09%	3.09%
Expected life (in years) of warrant	3	3	3	3
Expected dividend yield	0%	0%	0%	0%

The following summarizes the warrants and broker warrants activity for the year ended October 31, 2024:

	Number of warrants	Grant date Fair value	Fair value as at year end	Weighted average exercise price
Outstanding at October 31, 2022 and 2023	-	\$ -	\$ -	\$ -
Issued in a private placement (note 13 (b) (iv - vii))	20,762,220	192,300	1,021,991	0.04
Issued for debt settlement (note 13 (b) (vii))	1,333,333	69,304	66,006	0.04
Outstanding at October 31, 2024	22,095,553	\$ 261,604	\$ 1,087,997	\$ 0.04

During the year ended October 31, 2024, the Company allocated cash share issuance costs totalling \$13,326 to the warrants issued, which were included in other finance expenses in the statement of operations and comprehensive loss. See note 13.

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13. Share capital

(a) Authorized

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) Outstanding

	Number	Amount
Outstanding at October 31, 2021	435,737,734	\$ 86,815,836
Issuance of common shares and units for cash (ix)	5,012,450	207,588
Cash share issuance costs	-	(25,591)
Shares issued on settlement of accounts payable (vii)	413,674	22,460
Convertible debentures converted into common shares (note 11)	26,443,820	764,432
Outstanding at October 31, 2022	467,607,678	\$ 87,784,725
Issuance of common shares and units for cash (viii)	9,864,500	535,525
Cash share issuance costs	-	(25,586)
Exercise of stock options (note 13 (b))	2,550,000	434,822
Convertible debentures converted into common shares (note 11)	30,346,660	1,742,226
Outstanding at October 31, 2023	510,368,838	\$ 90,471,712
Issuance of common shares and units for cash (i-vi)	24,478,227	439,155
Cash share issuance costs (i, v, vi)	-	(24,520)
Broker warrants issued (i, iv)	-	(3,909)
Shares issued on settlement of accounts payable (vii)	1,333,333	79,167
Convertible debentures converted into common shares (note 11)	36,805,300	716,674
Outstanding at October 31, 2024	572,985,698	\$ 91,678,279

(i) On December 22, 2023, the Company completed a brokered private placement and issued 1,900,000 common shares at price of \$0.045 per share for gross proceeds of \$84,937. The Company incurred share issuance costs totaling \$3,544 and finder's fees of \$2,796 paid in cash and issued 63,000 broker warrants in connection with its private placement, with a fair value of \$3,208. See note 14. The broker warrants can be exercised at any time, on a one for one basis, at a price of \$0.07 (\$0.095 CAD) per share, until December 22, 2025.

(ii) On January 24, 2024, the Company completed a non-brokered private placement and issued 500,000 common shares at price of \$0.055 per share for gross proceeds of \$27,735. There were no finder's fees or other share issuance costs paid in connection with the financing.

(iii) On March 18, 2024, the Company completed a non-brokered private placement and issued 1,316,007 common shares at price of \$0.0481 per share for gross proceeds of \$63,185. There were no finder's fees or other share issuance costs paid in connection with the financing.

(iv) On July 18, 2024, the Company closed a brokered private placement of 3,979,800 units at \$0.02 per unit for gross proceeds of \$87,181. Each unit consists of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder to purchase one common share of the Company at a price of \$0.04 (CAD \$0.05) for a period of 3 years following the issue date of the units. The Company has estimated the fair value of these warrants at \$36,345 using the Black-Scholes option pricing model. See note 12. All securities issued are subject to a 4 month hold period expiring November 19, 2024. The Company issued 184,000 broker warrants in connection with its private placement with a fair value of \$1,680. The Company allocated \$979 to the common shares and \$701 to the warrants issued. See note 14.

(v) On July 24, 2024, the Company closed a non-brokered private placement of 4,950,000 units at \$0.02 (CAD \$0.03) per unit for gross proceeds of \$108,435. Each unit consists of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder to purchase one common share of the Company at a price of \$0.04 (CAD \$0.05) for a period of 3 years following the issue date of the units. The Company has estimated the fair value of these warrants at \$45,521 using the Black-Scholes option pricing model. See note 12. All securities issued are subject to a 4 month hold period expiring November 25, 2024. There were no finder's fee paid in connection with the financing.

On July 24, 2024 (together with the private placement on July 18, 2024), the Company incurred cash share issuance costs totaling \$9,157. The Company allocated \$5,325 to the common shares and \$3,833 to the warrants issued.

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13. Share capital (continued)

(vi) On September 24, 2024, the Company closed a non-brokered private placement of 11,832,420 units at \$0.02 (CAD \$0.03) per unit for gross proceeds of \$259,982. Each unit consists of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder to purchase one common share of the Company at a price of \$0.04 (CAD \$0.05) for a period of 3 years following the issue date of the units. The Company has estimated the fair value of these warrants at \$110,434 using the Black-Scholes option pricing model. See note 12. All securities issued are subject to a 4 month hold period expiring January 25, 2025. There were no finder's fee paid in connection with the financing. The Company incurred cash share issuance costs totaling \$22,348 and allocated \$12,855 to the common shares and \$9,493 to the warrants issued.

(vii) During the year ended October 31, 2024, \$29,687 (2023 - \$nil) of accounts payable was settled in exchange for the issuance of 1,333,333 (2023 - nil) units. Each unit consists of one common share of the Company and one common share purchase warrant. Each warrant entitles the holder to purchase one common share of the Company at a price of \$0.04 (CAD \$0.05) for a period of 3 years following the issue date of the units. The Company has estimated the fair value of the common shares at \$79,167 and the fair value of the warrants at \$69,304 using the Black-Scholes option pricing model. See note 12. A loss on debt settlement in the amount of \$118,784 was recognized in the statement of operations and comprehensive loss.

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

(viii) 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.

(ix) 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.

14. Warrants

The following summarizes the broker warrants activity for the year ended October 31, 2024:

	Number of warrants	Grant date Fair value	Weighted average exercise price
Outstanding at October 31, 2022 and 2023	-	\$ -	\$ -
Broker warrants issued (note 13 (b), (i, iv))	247,000	3,909	0.04
Outstanding at October 31, 2024	247,000	\$ 3,909	\$ 0.04

The Company uses the Black-Scholes pricing model to estimate fair value. Expected volatility has been based on an evaluation of the historical volatility of the Company's share price. The risk-free interest rate for the life of the warrants was based on the yield available on government benchmark bonds with an approximate equivalent remaining term at the time of issue. The life of the warrant is based on the contractual term.

At Grant Date	July 18, 2024	December 22, 2023
Share price	\$0.01 (\$0.02 CAD)	\$0.07 (\$0.095 CAD)
Exercise price	\$0.04 (\$0.05 CAD)	\$0.07 (\$0.095 CAD)
Volatility factor (based on historical volatility)	153%	146%
Risk free interest rate	3.83%	4.02%
Expected life (in years) of warrant	3	2
Expected dividend yield	0%	0%

The following table summarizes the warrants outstanding and exercisable as at October 31, 2024:

Expiry date	Number if warrants	Exercise price	Remaining contractual life
December 22, 2025	63,000	\$0.07 (\$0.095 CAD)	1.14
July 18, 2027	184,000	\$0.04 (\$0.05 CAD)	2.71
	247,000		

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For the years ended October 31, 2024, 2023, and 2022
(Expressed in United States dollars, unless otherwise noted)

15. 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, 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
Expired	(1,025,000)	0.12
Outstanding at October 31, 2024	8,750,000	\$ 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.

(c) Stock options outstanding at October 31, 2024

There were nil options issued to directors, officers, employees and consultants during the year ended October 31, 2024 (2023 - 3,000,000, 2022 - nil options issued).

Date of issue	Expiry date	Number of options	Weighted average	
			Exercise price	Remaining contractual life
November 13, 2020	November 13, 2025	5,750,000	\$ 0.05	1.0
October 8, 2021	October 8, 2026	1,000,000	0.07	1.9
March 20, 2023	March 20, 2028	2,000,000	0.07	3.4
Outstanding at October 31, 2024		8,750,000	\$ 0.06	1.7

Of the total options outstanding, 8,750,000 are exercisable as at October 31, 2024 (2023 - 9,525,000).

(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:

	2024	2023	2022
Share price at grant date	-	\$0.07 - \$0.12	\$0.03 - \$0.05
Exercise price	-	\$0.07 - \$0.12	\$0.07
Volatility factor	-	175% - 184%	212% - 272%
Risk free interest rate	-	2.79% - 3.58%	0.97% - 4.33%
Expected life of options in years	-	1 - 5	1 - 2
Expected dividend yield	-	0%	0%
Forfeiture rate	-	0%	0%
Weighted average Black Scholes value at grant date	-	\$0.06 - \$0.08	\$0.02 - \$0.03

During the year ended October 31, 2024, the Company recorded an expense of \$6,517 related to the vesting of stock options (2023 - \$217,965, 2022 - \$41,484).

Micromem Technologies Inc.
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16. Operating expenses

(a) General and administration

The components of general and administration expenses are as follows:

	Notes	2024	2023	2022
General and administration		\$ 42,113	\$ 70,584	\$ 59,938
Rent and occupancy	10 (b)	18,514	17,663	50,907
Office insurance		1,986	1,930	1,696
Investor relations, listing and filing fees		77,535	52,756	64,769
Telephone		6,488	5,683	8,056
		\$ 146,636	\$ 148,616	\$ 185,366

(b) Professional, other fees and salaries

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

	2024	2023	2022
Professional fees	\$ 98,412	\$ 144,244	\$ 110,933
Consulting fees	40,977	67,664	69,563
Salaries and benefits	252,017	398,144	467,214
	\$ 391,406	\$ 610,052	\$ 647,710

17. Loss per share

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

	2024	2023	2022
Numerator			
Net loss attributable to common shareholders and used in computation of basic and diluted loss per share	\$ (3,062,798)	\$ (2,691,670)	\$ (2,287,095)
Denominator			
Weighted average number of common shares for computation of basic and diluted loss per share	529,474,454	490,310,376	451,177,796

For the years ended October 31, 2024, 2023 and 2022, all stock options, warrants and conversion features were anti-dilutive and, therefore, are excluded from the calculation of diluted loss per share.

18. Supplemental cash flow information

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

	Years ended October 31,		
	2024	2023	2022
Balance - beginning of year	\$ 4,627,452	\$ 4,433,363	\$ 3,239,483
Cash flows from financing activities:			
Proceeds from issuance of convertible debentures	417,950	645,151	765,671
Repayments of convertible debentures	(287,460)	(270,000)	(63,490)
Non-cash changes:			
Accretion expense	272,501	279,834	1,179,603
Accrued interest on convertible debentures	530,033	471,596	368,280
Loss (gain) on repayment of convertible debentures	62,253	27,243	(47,877)
Loss on conversion of convertible debentures	45,535	21,120	94,326
Loss (gain) on revaluation of derivative liabilities	78,915	(658,503)	(409,607)
Loss on extinguishment of debt	388,985	1,400,823	200,650
Convertible debentures converted into common shares	(680,701)	(1,656,422)	(764,432)
Foreign exchange (gain) loss	(31,515)	(66,753)	(129,244)
Balance - end of year	\$ 5,423,948	\$ 4,627,452	\$ 4,433,363

Micromem Technologies Inc.
Notes to Consolidated Financial Statements
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19. 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:

	2024	2023	2022
Loss before income taxes	\$ (3,062,798)	\$ (2,691,670)	\$ (2,287,095)
Statutory tax rate	26.5%	26.5%	26.5%
Expected income tax recovery	\$ (811,641)	\$ (713,293)	\$ (606,080)
Accretion expense and loss (gain) on convertible debentures and derivative liabilities	224,771	283,688	269,531
Stock-based compensation	1,727	57,761	10,992
Non-deductible (non-taxable) expenses and financing costs	239,387	(13,660)	(3,780)
Effect of changes in exchange rates	30,403	74,714	940,577
Change in deferred tax assets not recognized	315,353	310,790	(611,240)
	\$ -	\$ -	\$ -

- (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:

	2024	2023	2022
Non-capital losses	\$ 9,163,035	\$ 8,833,940	\$ 8,485,255
Capital losses	159,162	159,671	162,275
Property, equipment, patents and deferred costs	1,591,255	1,605,743	1,639,306
	\$ 10,913,452	\$ 10,599,354	\$ 10,286,836
Deferred tax asset not recognized	(10,913,452)	(10,599,354)	(10,286,836)
	\$ -	\$ -	\$ -

As at October 31, 2024 and 2023, 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 \$34 million available to reduce future taxable income, the benefit of which has not been recognized in these consolidated financial statements. As at October 31, 2024, the tax losses expire as follows:

	Canada	United States	Total
2026	\$ 1,726,462	\$ -	\$ 1,726,462
2027	1,451,819	-	1,451,819
2028	-	-	-
2029	1,487,922	143,721	1,631,643
2030	2,007,595	1,880,897	3,888,492
2031	1,209,514	18,526	1,228,040
2032	1,340,456	325,793	1,666,249
2033	1,624,764	157,463	1,782,227
2034	2,350,482	679,089	3,029,571
2035	2,656,250	570,901	3,227,151
2036	3,117,259	441,019	3,558,278
2037	2,495,456	232,714	2,728,170
2038	1,687,021	317	1,687,338
2039	1,509,112	-	1,509,112
2040	508,349	-	508,349
2041	880,801	-	880,801
2042	1,250,158	-	1,250,158
2043	1,484,853	-	1,484,853
2044	1,338,776	-	1,338,776
	\$ 30,127,050	\$ 4,450,440	\$ 34,577,490

- (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.

Micromem Technologies Inc.
Notes to Consolidated Financial Statements
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20. 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:

	2024	2023	2022
Professional, other fees, and salaries	\$ 77,823	\$ 214,914	\$ 133,517
Stock-based compensation	-	82,946	-
	\$ 77,823	\$ 297,860	\$ 133,517

During the year ended October 31, 2024, there were no options awarded to key management. During the year ended October 31, 2023, key management were awarded 1,340,000 options as part of the total 3,000,000 issued. See note 15.

(b) Trade payables and other liabilities

Included in accounts payable at October 31, 2024 is \$28,161 payable to a corporation controlled by an officer of the Company (2023 - \$nil). In addition, at October 31, 2024, accounts payable includes \$2,436 payable to a director (2023 - \$2,173).

21. 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, 2024 the Company has recorded a recovery of \$26,648 as a reduction of legal expenses (2023 - \$23,555, 2022 - \$9,040). At October 31, 2024 \$nil of the recovery is recorded as other receivable on the consolidated statement of financial position (2023 - \$11,705).

(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. In August 2024, management attended legal discoveries and presented the Company's position. The matter proceeded to non-binding arbitration in October 2024 which ended without reaching to an agreement. 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.

(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, 2024 a formal agreement relating to the Project has not been executed.

As at October 31, 2024, the Company received total advances of \$63,000 from the Parties and has paid \$126,000 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.

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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, 2024.

23. 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, 2024, and October 31, 2023, balances that are denominated in CAD are as follows:

	As at October 31, 2024 CAD	As at October 31, 2023 CAD
Cash	\$ 34,362	\$ 38,444
Other receivables	\$ 10,182	\$ 29,080
Trade payables and other liabilities	\$ 439,667	\$ 290,311
Convertible debentures	\$ 2,738,716	\$ 2,544,289
Debenture payable	\$ 52,031	\$ 52,031
Derivative liabilities	\$ 2,010,760	\$ 1,087,044
Warrant liabilities	\$ 1,514,051	\$ -
Long-term loan	\$ 62,351	\$ 60,000

A 10% strengthening of the US dollar against the CAD dollar would decrease net loss and comprehensive loss by \$487,000 as at October 31, 2024 (October 31, 2023 - decrease net loss and comprehensive loss by \$260,000). A 10% weakening of the USD against the CAD 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, long-term loan and debenture payable. The exposure to interest rates on convertible debentures and the debenture payable is limited due to the short-term nature of these instruments. The Company's long-term loan is at a fixed interest rate. The exposure to interest rates for the Company is considered minimal.

(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 \$125,705 as at October 31, 2024 (October 31, 2023 - \$43,289).

The risk for cash is mitigated by holding these balances 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.

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23. 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, 2024.

(i) Trade payables

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

	As at October 31, 2024	As at October 31, 2023
Over 30 days past billing date	\$ 336,575	\$ 209,285
	\$ 336,575	\$ 209,285

(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, 2024		As at October 31, 2023	
	Convertible debentures	Debenture payable	Convertible debentures	Debenture payable
Less than three months	\$ 2,492,556	\$ 37,389	\$ 2,451,614	\$ 37,509
Three to six months	1,376,673		1,038,355	-
Six to twelve months	171,250		433,815	-
	\$ 4,040,479	\$ 37,389	\$ 3,923,784	\$ 37,509

(iii) Warrant liabilities

The following represents an analysis of the maturity of warrant liabilities:

	As at October 31, 2024	As at October 31, 2023
Less than one year	\$ -	\$ -
Between one to five years	1,087,997	-
Greater than five years	-	-
	\$ 1,087,997	\$ -

(iv) Long-term debt

The following represents an analysis of the maturity of warrant liabilities:

	As at October 31, 2024	As at October 31, 2023
Less than one year	\$ -	\$ -
Between one to five years	49,477	43,254
Greater than five years	-	-
	\$ 49,477	\$ 43,254

24. Subsequent events

Subsequent to October 31, 2024:

- (a) The Company secured six (6) private placements with investors consisting of common shares and warrants pursuant to prospectus and registrations set forth in applicable securities law. It realized net proceeds of \$405,000 CDN (\$285,125 USD) and issued a total of 8,100,000 common shares.
- (b) The Company secured \$57,500 USD in convertible debentures with a 12 month term and conversion features which become effective six months after initiation date.

- (c) The Company converted \$44,106 USD of convertible debentures and accrued interest through the issuance of 1,600,588 common shares.
- (d) The Company issued 1,679,800 common shares upon an exercise of warrants realizing net proceeds of \$83,990 CDN (\$58,344 USD).
- (e) The Company made partial payments of \$16,000 USD and of \$5,000 USD towards convertible debentures.
- (f) The Company extended convertible debentures that were within 3 months of maturity date from October 31, 2024 for an additional three (3) to six (6) months.

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ITEM 19. Exhibits

The following exhibits are filed as part of this Annual Report:

<u>Exhibit No. 1.1</u>	<u>Articles of Incorporation of Micromem Technologies Inc. and amendments thereto in effect as of January 11, 2000, (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on January 11, 2000).</u>
<u>Exhibit No. 1.2</u>	<u>Articles of Incorporation of Amendment of Micromem Technologies Inc. dated as of October 17, 2001 amending the Articles of Incorporation of Micromem Technologies Inc. to increase the number of directors to a minimum of three and a maximum of ten (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on March 26, 2003).</u>
<u>Exhibit No. 1.3</u>	<u>Articles of Incorporation of Amendment of Micromem Technologies Inc. dated as of June 24, 2002 amending the Articles of Incorporation of Micromem Technologies Inc. to increase the number of directors to a minimum of 3 and a maximum of 12 (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on March 26, 2003).</u>
<u>Exhibit No. 1.5</u>	<u>By-Laws of Micromem Technologies Inc. in effect as of January 11, 2002, (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on January 11, 2000).</u>
<u>Exhibit No. 1.6</u>	<u>Amendment to the By-Laws of Micromem Technologies Inc. approved by shareholders on June 29, 2000, deleting the requirement from the By-Laws that the President shall be appointed from amongst the directors (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on March 26, 2003).</u>
<u>Exhibit No. 1.7</u>	<u>Amendment to the By-Laws of Micromem Technologies Inc. approved by shareholders on September 8, 2020 (Incorporated herein by reference to the Company's Form 20-F filed with the Commission on February 22, 2021).</u>
<u>Exhibit No. 8.1</u>	<u>List of Subsidiaries (Incorporated by reference to the Company's Annual Report on Form 20-F filed with the Commission on March 1, 2010).</u>

Exhibit No. 11.1	Insider Trading Policy
Exhibit No. 12.1	Officer's Certification pursuant to Section 302 of the Sarbanes Oxley Act, 2002 (filed herewith).
Exhibit No. 12.2	Officer's Certification pursuant to Section 302 of the Sarbanes Oxley Act, 2002 (filed herewith).
Exhibit No. 13.1	Officer's Certification pursuant to Section 906 of the Sarbanes Oxley Act, 2002 (filed herewith).
Exhibit No. 13.2	Officer's Certification pursuant to Section 906 of the Sarbanes Oxley Act, 2002 (filed herewith).
Exhibit No. 15.1	Consent of MNP LLP (filed herewith)
Exhibit No. 101.INS	Inline XBRL Instant Document
Exhibit No. 101.SCH	Inline XBRL Taxonomy Extension Schema Document
Exhibit No. 101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
Exhibit No. 101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase
Exhibit No. 101.LAB	Inline XBRL Taxonomy Extension Label Linkbase
Exhibit No. 101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase
Exhibit No. 104	Cover Page Interactive Data File - (formatted as Inline XBRL and contained in Exhibit 101)

SIGNATURES

The Registrant hereby certifies that it meets all of the requirements for filing on Form 20-F and that it has duly caused and authorized the undersigned to sign this annual report on Form 20-F on its behalf.

MICROMEM TECHNOLOGIES INC.

By: /s/ Joseph Fuda
Name: Joseph Fuda
Title: Chief Executive Officer

By: /s/ Dan Amadori
Name: Dan Amadori
Title: Chief Financial Officer

Dated: February 28, 2025.

Insider Trading Policy

Micromem Technologies Inc. (Company or Corporation)

Concept:

A principle of securities legislation is that everyone investing and potentially investing in securities should have equal access to information that may affect their decision as to whether to buy, sell or hold securities.

Directors, officers and employees the Company and consultants to the Company sometimes acquire knowledge of "Material Information" concerning the business and affairs of the Company, which has not yet been disclosed to the public. If that is the case, they have an unfair advantage in buying or selling securities because the seller or buyer on the other side of the transaction may have made a different investment decision had they been aware of that information.

"Material Information" is any information relating to the business and affairs of a corporation and its subsidiaries that results in, or would reasonably be expected to result in, a significant change in the market price or value of any of the Company's securities or would reasonably be expected to affect the investment decisions of a reasonable investor. Examples include the release of quarterly financial results, business partnerships, pending acquisitions or dispositions, mergers, developments in operations, changes in capital structure, dividend announcements and significant changes in earnings or cash flow prospects.

Similarly, if such a person informs another person of undisclosed Material Information, and such person buys or sells securities on the basis of that information, the seller or buyer on the other side of the transaction is, once again, at a disadvantage.

Certain securities laws in Canada have been enacted so as to prevent and deter such inequitable trading in securities by providing that:

- persons receiving undisclosed material information are prohibited from buying or selling securities of the Company while in possession of such material information and prior to dissemination of such information to the public;
- directors, officers and employees are prohibited from disclosing Material Information relating to the corporation to third parties, other than when it is necessary to do so in the course of business of the corporation; and
- significant shareholders, directors and officers must report their trades in securities of the Company.

The Company has formulated this Policy to assist directors, officers, employees and consultants of the Corporation in complying with these laws. The purpose of this Policy is to confirm in writing the existing policies and procedures and guidelines relating to trading by directors, officers, employees and consultants in securities of the Company. This Policy, does not reduce the obligations imposed by law on directors, officers and employees. Compliance with insider trading and disclosure requirements remains the personal responsibility of such persons.

1. Application of the Policy

This Policy applies to all directors, officers, employees and consultants of the Company, as well as to securities over which such director, officer, employee or consultant exercises control or direction and securities which are indirectly owned. Directors, officers, employees and consultants are responsible for ensuring compliance by their families and other members of their households with the terms of this Policy.

This Policy applies to any transactions in all the Company's securities, including options, trust units, warrants, debentures, as well as other derivative securities that are not issued by the Company's but are based on the value of the Company's securities.

In addition, this Policy applies to Material Information relating to another company that directors, officers, employees or consultants of the Company may learn in the course of a proposed or pending transaction.

2. Trading Restrictions and Blackout Periods

Directors, officers, employees and consultants may trade in the Corporation's securities, either directly or indirectly, or may exercise direction or control over the trading of its securities, except as follows:

Trading by directors, officers, employees and consultants is prohibited when they are in possession of Material Information which is being kept confidential and which has not been made public. Directors, officers, employees and consultants of the Company, with knowledge of confidential or material information about the Company are prohibited from tipping or trading until the information has been fully disclosed. Employees who are not sure whether they should be trading in securities at any particular time may contact the CEO, COO, CFO or CIO, collectively (the "Designated Officers").

Under this Policy, trading by directors, officers, employees and consultants should not take place until after the first full business day following a broadly disseminated news release of any Material Information.

No trading should take place by directors, officers, employees or consultants of the Company who have access to undisclosed financial information during periods when financial statements are being prepared but results have not yet been publicly disclosed. The blackout period commences ten business days prior to the proposed public announcement of the results for a fiscal quarter or year-end and ends after the first full business day following the issuance of a news release disclosing the quarterly financial results. Directors, officers, employees and consultants should confirm the timing for issuance of financial results prior to engaging in a transaction involving securities of the Company.

Blackout periods may be prescribed from time to time as a result of special circumstances relating to the Company pursuant to which all directors, officers, employees and consultants of the Company may be precluded from trading in securities of the Company.

Ontario Securities Commission Rule 48-501 Trading during Distributions, Formal Bids and Share Exchange Transactions ("OSC Rule 48-501") imposes restrictions on the ability of certain insiders of the Company to purchase or sell securities of the Fund during certain restricted periods including those during which the Fund is involved in an offering of its securities by way of a prospectus or a private placement. The Rule provides for a number of exemptions from the trading restrictions. The Company will institute a blackout for such periods during which the Company is in the course of distributing its securities. To the extent that you wish to rely on an exemption available to you pursuant to OSC Rule 48- 501 you must first seek the prior approval of one of the Designated Officers on your intended reliance on such exemption.

To protect the reputation of the Company and avoid the appearance of impropriety, directors, officers and other insiders can inquire prior to making proposed trades in the Company's securities one of the Designated Officers to determine if there is undisclosed Material Information about the Company that is to be announced.

If you are uncertain as to your status as an "insider" of the Company, you should enquire one of the Designated Officers as to the existence of any trading restrictions before entering into a transaction.

3. Prohibition on Short Selling

A director, officer, employee or consultant must not, at any time, enter into a sale of the Company's securities where such person does not own or has not fully paid for the securities being sold.

4. Insider Reporting Requirements

The following is a general overview of obligations regarding insider-trading reporting.

Who is an Insider?

You are deemed to be an "Insider" of the Corporation, for reporting purposes, if you are a director or senior officer of the Company or if you are a shareholder of any Fund that controls 10% or more of the securities of the Fund. The definition of the term "insider" in securities legislation is very technical and you are encouraged to contact a Designated Officer if you are unsure whether you qualify as an insider of the Company.

"Senior Officer" includes the Chair of the Board of Directors, the CEO & President, Chief Operating Officer (COO) Vice-President, Company Secretary, Accounting Manager and CFO. It also includes any other individuals who perform functions similar to those normally performed by an individual occupying such office. In addition, each of the five highest paid employees of an issuer, including any individual referenced above, is deemed to be an insider for insider trading purposes. Thus if you do not hold a senior office title, but are one of the top five highest paid employees of the Company, you are considered to be an insider.

Filing of an Initial Insider Report

Securities regulations stipulate that, within 10 days of becoming an insider, insiders of the Fund must file an initial insider report with the securities commissions in certain of the Fund's reporting jurisdictions. Irrespective of the fact that not all jurisdictions require the filing of an initial insider report, it is prudent to file an initial insider report with all jurisdictions to which the Fund is subject upon becoming an insider of the Fund, even though the insider may not hold securities of the Fund at that time. The initial insider report will show the insider's holdings in the Fund's securities including options, warrants, trust units, debentures and other debt instruments.

Filing of a Subsequent Insider Report

Reports should be filed for all purchase and sale transactions of the company's securities, option grants and exercises of options, changes in the nature of ownership within 10 days of the trade, award or transaction. The onus is on the individual to ensure filing is on time. The Company is not responsible for this action.

Preparation and Filing of Insider Reports

Insider trading reports are required to be filed electronically on the "System for Electronic Disclosure by Insiders" or "SEDI". SEDI is an Internet-based system for reporting insider trading information and can be located at www.sedi.ca. Insider reports (excluding certain personal information) that are filed on SEDI are now accessible to the public via the Internet.

The Company may be able to assist an insider with their filing but the Company is a resource only.

5. Insider Liability

Both the British Columbia and Ontario Securities Commissions levy fees for late filing of insider reports. In British Columbia, the late payment fee is currently \$50 per late report and in Ontario, the late payment fee is \$50 per business day, subject to a maximum of \$1,000 per issuer per financial year. It is the insider's obligation to pay any late payment fees.

Each insider who fails to comply with insider trading laws is exposed to potential civil liability to third parties, fines of up to \$1 million, and/or imprisonment up to five years less one day. Further, the reputation of the Corporation may be damaged, and it may be exposed to liability. A breach of this Policy is considered a breach of the employment contract with the Corporation and as such, violators may be immediately dismissed for cause.

6. Further Information

Any questions concerning insider-trading matters should be directed to any one of the Disclosure Policy Officers.

**SECTION 302 CERTIFICATION
CERTIFICATION OF CHIEF EXECUTIVE OFFICER**

I, Joseph Fuda, certify that:

1. I have reviewed this annual report on Form 20-F of Micromem Technologies Inc. for the Fiscal Year Ended October 31, 2024;
 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
-

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
- a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2025

/s/ Joseph Fuda

Joseph Fuda

Chief Executive Officer

(Principal executive officer)

**SECTION 302 CERTIFICATION
CERTIFICATION OF CHIEF FINANCIAL OFFICER**

I, Dan Amadori, certify that:

1. I have reviewed this annual report on Form 20-F of Micromem Technologies Inc. for the Fiscal Year Ended October 31, 2024;
 2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
 3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
 4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the period covered by the annual report that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
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5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
- a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 28, 2025

/s/ Dan Amadori

Dan Amadori
Chief Financial Officer
(Principal financial officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Micromem Technologies Inc. (the "Company") on Form 20-F for the Fiscal Year Ended October 31, 2024 (the "Report"), I, Joseph Fuda, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, based on my knowledge, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: February 28, 2025

/s/ Joseph Fuda

Joseph Fuda

Chief Executive Officer

(Principal executive officer)

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of Micromem Technologies Inc. (the "Company") on Form 20-F for the Fiscal Year Ended October 31, 2024 (the "Report"), I, Dan Amadori, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as adopted pursuant to §906 of the Sarbanes-Oxley Act of 2002, based on my knowledge, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

Date: February 28, 2025

/s/ Dan Amadori

Dan Amadori
Chief Financial Officer
(Principal financial officer)



CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the inclusion in the Annual Report on Form 20-F of our auditor's report dated February 25, 2025 relating to the consolidated financial statements of Micromem Technologies Inc. (the "Company") consisting of the consolidated statements of financial position as at October 31, 2024 and 2023 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, 2024, 2023, and 2022, as filed with the United States Securities and Exchange Commission.

We also consent to the incorporation by reference of such report in the Company's Registration Statement on Form S-8 (File No. 333-203466)

MNP LLP

/s/ MNP LLP

Chartered Professional Accountants
Licensed Public Accountants
February 28, 2025
Toronto, Canada

MNP LLP
1 Adelaide Street East, Suite 1900, Toronto ON, M5C 2V9

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