

MICROMEM TECHNOLOGIES INC  
Form 20-F/A  
May 28, 2004

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

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FORM 20-F/A2

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

Commission File No. 0-26005

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MICROMEM TECHNOLOGIES INC

•  
(Exact name of Registrant as specified in its charter)

**Ontario, Canada**

(Jurisdiction of incorporation or organization)

777 Bay Street, Suite 1910,  
Toronto, Ontario M5G 2E4, Canada  
Tel: (416) 364-6513  
Fax: (416) 360-4034

(Address of principal executive offices)

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

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

None

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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

46,700,937 Common Shares

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 which financial statement item the Registrant has elected to follow:

Item 17  Item 18

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PART I

INTRODUCTION

Abbreviations

Reference throughout this document to Micromem Technologies Inc. and/or its affiliates may be made through abbreviated forms of their respective names. See "Item 4. Information on the Company - C. Organizational Structure" for a summary of these abbreviated names.

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 the Company and the industry in which the Company operates, management's beliefs, and assumptions made by 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. The Company's 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 "Description of Business" and elsewhere in this Form 20-F.

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. Selected Financial Data

The following table sets forth selected consolidated financial data of the Company in Unites States dollars as of and for each of the five fiscal years ended October 31, 2002. The selected consolidated financial data has been derived from the audited consolidated financial statements of the Company. All information contained in the following table should be read in conjunction with the audited consolidated financial statements of the Company and the notes thereto and "Management's Discussion and Analysis of Financial Condition and Results of Operations, included elsewhere in this Form.

Selected balance sheet information

Years ended October 31,

2002

2001

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2000

1999

1998

Working capital (deficiency)

\$

985,551

\$

3,455,108

\$

1,076,127

\$

(317,3096)

\$ (516,425)

Capital Assets

98,654

336,839

381,125

55,097

15,334

Total Assets

1,583,422

14,454,470

2,219,987

585,327

164,020

Shareholder's equity (deficiency)

1,391,903  
 14,124,918  
 1,684,775  
 (3,095,695)  
 (500,991)

Selected statement of operations and deficit information

Years ended October 31,

2002  
 2001  
 2000  
 1999  
 1998

Interest & other income

\$ (165,892)  
 \$ (196,520)  
 \$ (140,231)  
 \$ (1,303)  
 \$ (2,571)

Research and development

1,601,624  
 2,212,679  
 1,205,777  
 455,288  
 50,000

General and administrative expenses

1,332,820  
 2,513,252

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	6,168,810
	4,753,802
	452,313
Write-down of royalty rights	
	10,000,000
	-
	-
	-
	-
Loss before income taxes	
	12,768,552
	4,529,411
	7,234,356
	5,207,787
	499,742
Provision for income taxes (recovery)	
	(35,537)
	30,214
	25,000
	-
	-
Net loss	
	12,733,015
	4,559,625
	7,259,356
	5,207,787
	499,742
Loss per share-basic & diluted	
	0.27
	0.10



0.19

0.14

0.02

Weighted average number of basic and diluted shares

46,396,799

44,163,669

38,763,920

36,213,319

32,120,676

Reconciliation between Canadian GAAP and U.S. GAAP:

The Company's consolidated financial statements have been prepared in accordance with Canadian GAAP which, in the case of the Company, conform in all material respects with U.S. GAAP, except for those items disclosed in note 17 to the notes to the Consolidated Financial Statements.

Currency and Exchange Rates

The financial statements of the Company are all expressed in United States dollars. All other financial data appearing in this Form 20-F are expressed in United States dollars ("US \$"), 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 at the rate of exchange prevailing at the date of such transactions, and 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.

The following table sets forth, for the periods indicated, the high, low, end of period and average for period noon buying rates as published by the Bank of Canada (the "Noon Buying Rate"), as expressed in the amount of U.S. Dollars equal to one Canadian dollar.

2002

2001

2000

1999

1998

**High for period**

.6179

.6293

.6527

.6421

.6311

**Low for period**

.6654

.6711

.6984

.6916

.7122

**End of period**

.6339

.6294

.6568

.6797

.6481

**Average for period**

.6368

.6493

.6779

.6678

.6833

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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 2003
	January 2003
	December 2002
	November 2002
	October 2002
	September 2002
<b>High</b>	1.4950
	1.5340
	1.5801
	1.5713
	1.5696
	1.5879
<b>Low</b>	1.4832
	1.5203
	1.5768
	1.5632
	1.5555
	1.5753

On March 3, 2003, the noon buying rate for one Canadian dollar as quoted by the Bank of Canada was US \$0.6736 (US \$1.00 = CDN \$1.4846).

### B. Capitalization and Indebtedness

Not Applicable.

C. Reasons for the Offer and Use of Proceeds

Not Applicable.

D. Risk Factors

The Company and the Company's investors face a number of significant risks, which are described below.

*Going Concern*

There is substantial doubt about the Company's ability to continue as a going concern because of the substantial losses incurred in the development state. In addition the Company is still in the development state and it will be necessary to raise additional funds for the continuing development, testing and commercial exploitation of its technologies. The sources of these funds have not yet been identified and there can be no certainty that sources will be available in the future. As such, the realization of the Company's assets and discharge of its liabilities is subject to significant uncertainty.

The Company's ability to continue as a going concern is dependent upon completing the development of its technology for a particular application, achieving profitable operations, obtaining additional financing and successfully bringing its technologies to the market. The outcome of these matters cannot be predicted at this time. The consolidated financial statements have been prepared on a going concern basis and do not include any adjustments to the amounts and classifications of the assets and liabilities that might be necessary should the Company be unable to continue in business.

*The Company Currently Has No Operating Revenue*

The Company has no revenues and it does not expect to generate revenues in the near future. If the Company fails to enter into any license agreements it will have no revenues and even if it enters into such agreements the amount of the revenues it receives will depend on the terms it is able to get from each licensee and the ability of each licensee to compete in its particular market.

*The Company's Technology is under Development*

The Company's technology is currently under development and is therefore not yet proven to be commercially viable. In order that the Company may be able to procure revenue generating licensing arrangements, significant development work remains to be completed.

*Products Using the Technology Have Not Yet Been Manufactured*

The Company's success depends on whether its technology can be manufactured in large quantities at competitive prices. Failure to be able to manufacture large quantities at competitive prices will seriously hurt the Company's ability to generate revenues.

*Competitors are seeking to develop Other Magnetic based Memory Technologies*

Most of the major producers of memory components and devices are reported to be conducting research directed towards the development of other non-volatile random access memory technologies. While information concerning such research is difficult to obtain, reports indicate that very large sums of money are being spent and that major companies such as IBM, Motorola and Honeywell, that have enormous resources at their disposal, are involved.

*Failure To Receive Continued Financing Will Cause the Business to Suffer*

Since the Company expects no revenues in the near future, the Company will need additional financing to continue the research and development and to successfully market the technology to potential licensees. While the Company has had sufficient funds thus far to meet its requirements, there is no assurance it will be able to continue to do so, and failure to raise sufficient funds in the future will affect its ability to develop and market the technology.

*Because Much of the Company's Success and Value Depends On Its Ownership and Use of Intellectual Property the Company's Failure to Protect That Property Could Adversely Affect Its Future Growth and Success*

The Company's success will depend on its ability to protect its intellectual property. The Company relies primarily on patent, copyright, trademark and trade secret laws, as well as nondisclosure agreements and other methods to protect its proprietary technologies and processes. Despite its efforts to protect its proprietary technologies and processes, unauthorized parties may attempt to copy or otherwise obtain and use its products or technology without authorization, develop similar technology independently or design around its patents. Policing unauthorized use of the Company's products is expensive and difficult, and the Company cannot be certain that the steps it has taken will prevent misappropriation or infringement of its intellectual property.

*Intellectual Property Claims Against the Company, No Matter How Groundless, Could Cause Its Business To Suffer*

The Company's future success and competitive position depend in part on its ability to retain exclusive rights to its technology, including any improvements that may be made on that technology from time to time by the Company or on its behalf. While the technology is patented or subject to pending patent applications in the U.S.A. and the Company knows of no challenge that has been made either against the technology or against the Company's rights to it, and has 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 the Company, no matter how groundless, the result would be significant expense, adversely affecting further development, licensing and sales, and diverting the efforts of its technical and management personnel and, in the event of an adverse outcome, substantial damages and possible restrictions on the further development licensing and use of the technology.

There is no assurance that any of the pending applications will be issued as patents or that any issued patent will not be determined to be invalid at a later date.

*No Foreseeable Dividends*

Micromem has never paid a dividend on its securities. Micromem does not anticipate paying dividends in the foreseeable future.

*Issuance of Additional Securities and Dilution*

The board of directors of Micromem has the authority to issue additional Common Shares or other securities of Micromem without the prior consent or vote of Micromem's shareholders. The issuance of additional Common Shares may have the effect of diluting the proportionate equity interest and voting power of holders of Shares.

*Dependence on Key Personnel*

The Company's success will depend on its ability to retain certain of its senior management and key technical personnel. It will also depend, to a large extent, on its ability to attract and retain additional highly skilled personnel in the future.

*The Company may be materially affected by global economic and political conditions*

The Company's ability to generate revenue may be adversely affected by the slowdown in the global economy as companies delayed their purchase decisions, reduced their technology spending budgets, increased their purchase authorization approval requirements, and reduced their capital expenditures by maximizing the current capacities of their data storage equipment. The Company does not currently anticipate any significant improvement in technology spending during 2003. During 2002, the Company implemented various cost-saving measures to help mitigate the adverse effects of the slowdown in the global economy. The Company cannot provide any assurance that a prolonged economic downturn will not have additional adverse effects on the Company's financial condition, results of operations, or our ability to generate revenue growth. Furthermore, the Company cannot provide any assurance that our cost-saving measures will be successful or sufficient to allow the Company to continue to generate improved operating results in future periods.

The Company's financial condition and results of operations could also be materially affected by unstable global political conditions. Terrorist attacks or acts of war could significantly disrupt the Company's operations and the operations of the Company's future customers, suppliers, distributors, or resellers. The Company cannot predict the potential impact on its financial condition or results of operations should such events occur.

*The Company may be materially affected by aggressive competition*

The memory and data storage industry is highly competitive, and customers make their decisions based on a number of competitive factors, including the following:

- Functionality
- Technology
- Performance
- Reliability
- System scalability
- Price
- Quality

- Product availability
- Customer service
- Brand recognition

The Company must address each of these factors effectively in order to successfully compete. If the Company is unable to adapt its products and services to changes in these competitive factors, it may never gain market share.

*The Company may be materially affected by rapid technological change and evolving industry standards*

Short product life cycles are inherent in high-technology industries due to rapid technological change and evolving industry standards. The Company's future financial condition and results of operations depend on its ability to respond effectively to these changes. The Company cannot provide any assurance that it will be able to successfully develop, manufacture, and market innovative new products or adapt its current products to new technologies or new industry standards. In addition, 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 to predict the rate adoption of its ferromagnetic memory technology.

*The Company may be materially affected by risks associated with new product development*

New product research and development is complex and requires the investigation and evaluation of multiple alternatives, as well as planning the design and manufacture of those alternatives selected for further development. Research and development efforts could be adversely affected by any of the following:

- Hardware and software design flaws
- Product development delays
- Changes in data storage technology
- Changes in operating systems
- Changes in industry standards

Manufacturing new products involves integrating complex designs and processes, coordinating with suppliers for parts and components, and managing manufacturing capacities to accommodate forecasted demand. Failure to obtain sufficient quantities of parts and components, as well as other manufacturing delays or constraints, could adversely affect the timing of new product introductions. The Company has experienced product development delays in the past that adversely affected its financial position.

*The Company may be materially affected by the risks associated with developing and protecting intellectual property*

The Company depends on its ability to develop new intellectual property that does not infringe on the rights of others. The Company cannot provide any assurance that it will be able to continue to develop such new intellectual property.

The Company relies on a combination of U.S. patent, copyright, trademark, and trade secret laws to protect its intellectual property rights. The Company enters into confidentiality agreements relating to its intellectual property with its employees and consultants.

Due to financial constraints, the Company has determined not to file patent and trademark registration applications with foreign governments; this may expose us and our technologies to infringement in foreign

jurisdictions.

Despite all of the Company's efforts to protect its intellectual property rights, unauthorized parties may attempt to copy or otherwise obtain or use its intellectual property. Monitoring the unauthorized use of the Company's intellectual property is difficult, particularly in foreign countries. The Company cannot provide any assurance that it will be able to adequately protect its intellectual property.

*The Company may be materially affected if it is unable to attract, retain, and motivate key employees*

The Company's future success depends in large part on its ability to attract, retain, and motivate its key employees. The Company faces significant competition for individuals who possess the skills required to design, develop, manufacture, and market the Company's technologies. An inability to successfully attract, retain, and motivate these employees in the future could have an adverse effect on the Company's future financial condition and results of operations.

#### *Volatility of Common Share Price and Volume*

Shareholders of Micromem may be unable to sell significant numbers of common shares of Micromem on the NASD OTC-BB (where the common shares are currently traded) without a significant reduction in the price of the shares, if at all.

Furthermore, there can be no assurance that the Company will be able to meet the listing requirements of, or achieve listing on, any other stock exchange. The market price of the common shares of the Company may be affected significantly by factors such as fluctuations in the Company's operating results, announcements of technological innovations or new products by the Company or its competitors, action by governmental agencies against the Company or the industry in general, developments with respect to patents or proprietary rights, public concern as to the safety of products developed by the Company or others, the interest of investors, traders and others in public companies such as the Company 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 performances, underlying asset values or prospects of such companies.

#### ITEM 4. INFORMATION ON THE COMPANY

##### A. History and Development of the Company

Micromem is a corporation formed under the laws of the Province of Ontario, Canada, with principal executive offices at 777 Bay Street, Suite 1910, Toronto, Ontario M5G 2E4. Formerly known as AvantiCorp International Inc., Micromem changed its name to Micromem Technologies Inc. on January 14, 1999. Micromem was incorporated under the laws of the Province of Ontario, Canada, on October 21, 1985 as Mine Lake Minerals Inc. It subsequently changed its name to Avanti Capital Corp. on June 23, 1988 and to AvantiCorp International Inc. on April 30, 1992 before becoming Micromem Technologies Inc. on January 14, 1999 in connection with its acquisition of Pageant International.

##### *Purchase of Pageant Technologies Incorporated*

On January 11, 1999, Micromem completed the acquisition of 100% of the capital stock of Pageant International, in exchange for 32,000,000 Common Shares and warrants for the purchase of an additional 1,000,000 Common Shares (the "Warrants"), representing 88.94% of the outstanding Common Shares of Micromem (89.24% assuming exercise of all the Warrants). The acquisition was completed pursuant to an



agreement, dated December 7, 1998, among Micromem, as the purchaser, and Ataraxia Corp., as the vendor, and Pageant International. The Warrants were exercisable at CDN \$2.00 per share through January 11, 2000 and thereafter at CDN \$2.30 per share through January 12, 2001 on which date the Warrants remaining unexercised expired. The total purchase price for the Pageant International Common Stock was \$30,000,000. The value of the Common Shares used to pay the purchase price was determined through arm's length negotiations using as a point of reference the price per Common Share of \$1.16 on September 23, 1998 less an agreed upon discount.

The primary asset of Pageant International was an undivided 50% interest in patents, issued in the United States and Europe, with a corresponding application in Japan, for nonvolatile random access memory technology which was, at the time, called MAGRAM and which is, today, called VEMRAM™<sup>1</sup> (the "VEMRAM™ Patents"). The VEMRAM™ technology also includes certain improvements to the VEMRAM™ Patents, many of which are the subject of pending patent applications. The undivided 50% interest in the VEMRAM™ Patents was originally conveyed to Ataraxia Corp. by Estancia Limited, a company incorporated under the laws of the Turks & Caicos Islands ("Estancia"), pursuant to a Joint Ownership and Licensing Agreement dated September 17, 1997 (the "Joint Ownership and Licensing Agreement") which Ataraxia Corp. assigned to Pageant International on October 22, 1997 with the written consent of Estancia. In addition to the undivided 50% interest in the VEMRAM™ Patents, under the Joint Ownership and Licensing Agreement Pageant International was granted an exclusive worldwide license to develop, manufacture and sell the VEMRAM™ technology. The Joint Ownership and Licensing Agreement requires Pageant International to pay Estancia or its nominee a royalty of 40% of the gross profits less expenses agreed by the parties for each technology license sold. Additionally, Pageant International would be required to pay Estancia Limited 40% of any per unit royalty received by Pageant less properly documented reasonable expenses directly related to the obtaining of those royalties and as agreed by the parties in writing.

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<sup>1</sup>VEMRAM™ is a trade-mark of Memtech International Inc., a Bahamas corporation wholly-owned by Micromem, and is used under license by Micromem and other corporations affiliated with Micromem.

The Joint Ownership and Licensing Agreement also provided that if Pageant International, as approved assignee of Ataraxia Corp., sold the rights to the VEMRAM™ technology to a third party not owned or controlled by it, it would have to pay Estancia 50% of the proceeds from such transaction. This provision makes it clear that in the event of the sale of all of the VEMRAM™ technology rights, 50% of the proceeds would go to Estancia, reflecting its 50% undivided interest in the technology, rather than 40% reflecting its royalty rights under the VEMRAM™ License. Estancia is controlled by John Zammit. Mr. Zammit has no direct control relationship with Micromem, and the management of Micromem is not aware that Mr. Zammit has any indirect control relationship with Micromem or any control relationship, direct or indirect, with Ataraxia Corp.

See "Item 4. Information on the Company – B. Business Overview - Recent Developments – Agreement to Purchase Estancia Interests".

The acquisition of Pageant International was treated as a reverse takeover for accounting purposes. A reverse takeover is deemed to have occurred when a company uses so much of its voting stock to purchase another company that the former stockholders of the acquired company could be said to have ended up controlling the company doing the acquiring. In the case of the purchase of Pageant International by Micromem, the two former shareholders of Pageant International ended up with a greater number of voting shares than did the pre-acquisition Micromem shareholders and therefore have been deemed to have apparent control. The consolidated financial statements of Micromem are presented as a continuation of the financial position and results of Pageant International, even though Micromem remains the legal parent and Pageant International remains the legal subsidiary. The primary consequence of the application of this treatment to the acquisition is that the patent rights are recorded at \$100, the historical value at which they were carried on the Pageant International balance sheet, rather than being increased to reflect a significantly greater valuation.

*Changes to Board of Directors and Management*

On January 11, 1999, immediately following the acquisition, Stephen Fleming, who had been serving as President and Chief Executive Officer of Pageant USA, was elected to Micromem's Board to join Salvatore Fuda and Ross McGroarty, who had served as directors since 1992 and 1988, respectively. The Board then elected Mr. Fuda as Chairman, Mr. Fleming as President and Chief Executive Officer, and Mr. McGroarty, who had been serving as President, as Executive Vice President and Secretary of Micromem. Subsequently, on March 18, 1999, Robert Patterson, who had been serving as Chairman of the Board and Vice President of Corporate Development of Pageant USA, was elected President and Chief Executive Officer of Micromem to replace Mr. Fleming. On November 15, 1999, Antonio Lopes was appointed Chief Financial Officer of Micromem. On June 15, 2000, Mr. McGroarty resigned as Executive Vice-President of Micromem.

At the annual meeting of shareholders of Micromem held on June 29, 2000, the following individuals were elected as directors of Micromem: Andrew Brandt, Stephen Fleming, Salvatore Fuda, Charles Harnick and George Kennedy. The terms of all previously elected directors ended on such date. The term of Mr. Lopes' employment as Micromem's Chief Financial Officer having ended on June 5, 2000, Raj Viswanathan was appointed as Chief Financial Officer. The term of Robert Patterson's employment as Micromem's President and Chief Executive Officer having ended, Salvatore Fuda was reappointed as Chairman and he was appointed as Chief Executive Officer on June 29, 2000. Also on June 29, 2000, Manoj Pundit was appointed as Executive Vice-President and General Counsel of Micromem. On February 21, 2001, Dr. Dale Hensley was appointed as Chief Operating Officer of Micromem and Pageant USA.

At the annual meeting of shareholders of Micromem held on March 14, 2001, Andrew Brandt, Stephen Fleming, Salvatore Fuda, Charles Harnick, George Kennedy, Manoj Pundit and David Sharpless were elected as directors of Micromem.

At a meeting of the Board of Directors held on March 14, 2001, a resolution was passed appointing Dale Hensley as a director of Micromem. At a meeting of the Board of Directors held on February 13, 2002, the Board accepted the resignation of Salvatore Fuda as President and Chief Executive Officer of Micromem due to health reasons. Salvatore Fuda continues to serve as Chairman and Director of Micromem. In his place, the Board appointed Joseph Fuda to serve as President and Chief Executive Officer. Mr. J. Fuda was also appointed as a director. Messrs. Andrew Brandt, Stephen Fleming, Salvatore Fuda, Charles Harnick, Dale Hensley, George Kennedy, Manoj Pundit, David Sharpless and Stephen Van Fleet were elected as directors of Micromem at the annual meeting held April 30, 2002.

Dr. Dale Hensley's employment as Chief Operating Officer was terminated by Micromem and by Pageant USA effective as of September 24, 2002. Raj Viswanathan resigned as Chief Financial Officer of Micromem on October 31, 2002 and as a director of Pageant USA on September 26, 2002. Dr. Hensley resigned as a director of Pageant USA on September 26, 2002 and as a director of Micromem effective October 9, 2002. Antonio Lopes was appointed as Chief Financial Officer of Micromem with effect from November 1, 2002. Messrs. Salvatore Fuda, Joseph Fuda, Manoj Pundit and Antonio Lopes continue to hold their respective offices, as described above, at the date of this Form 20F.

**B. Business Overview**

The Company is engaged in the development of memory technologies having the characteristic of non-volatility, which is the ability to retain information after power has been shut off.

The Company's Technology (as defined in the next paragraph below) is based on ferromagnetism, which consists of microscopic magnetic elements and Hall effect sensors deposited on a substrate of silicon or glass. Each

magnetic element stores one bit of data based on its ability to alternate between states of magnetic polarization, which states are determined by a Hall effect sensor normal to the magnetic field. The Company's Technology represents "1"s and "0"s by the different polarization of magnets; for example, a magnet oriented north/south is a "1" and a magnet oriented south/north is a "0". The magnetic field strength and direction do not decay when power is switched off; therefore, the memory is non-volatile.

Micromem has been pursuing the development of its two unique memory technologies (collectively, the "Company's Technology"): (i) a memory design with the magnetic bit aligned horizontally to the substrate (known as "HEMRAM™ 2"); and (ii) a memory design with the magnetic bit aligned vertically to the substrate ("VEMRAM™ "). During the 2002 fiscal year, Micromem's Chief Operating Officer oversaw an R&D team focused on the further development of the thin film horizontal element magnetic devices and applications of this technology. The inventor under the patent for the VEMRAM™ technology has been contracted to assist Pageant USA in the development of the vertical element magnetic technology. The Company has a portfolio of patents and patent applications protecting the technologies that it is developing.

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2HEMRAM™ is a trade-mark of Memtech International Inc., a Bahamas corporation wholly-owned by Micromem, used under license by Micromem and other corporations affiliated with Micromem.

### *Industry Background*

The semiconductor memory industry is principally driven by the requirements of the computing industry. The nature of the memory manufacturing industry is that it is capital intensive, cyclical, rapidly changing and depends significantly on patent protection.

The semiconductor industry is intensely competitive. Both low-density and high-density nonvolatile memory products are manufactured and marketed by major corporations possessing worldwide wafer manufacturing and integrated circuit production facilities and by specialized product companies.

### *Company's Technology*

The various characteristics of the Company's Technology can be better understood by describing the three basic types of memory used by present day computers, Random Access Memory (RAM), Read Only Memory (ROM), and secondary storage devices such as floppy and hard disks. The three types of memory are described below:

Random Access Memory (RAM) is memory that can be both read and written randomly, which means that its storage locations can be accessed in any order. Thus a computer using RAM can find and go directly to the selected location rather than performing a sequential search. Semiconductor RAM is usually the primary memory associated with the computer's *central processing unit (CPU)*, the computational unit of the computer responsible for interpreting and executing instructions. However, RAM is *volatile* which means that all stored information vanishes once the power supply is removed and must be restored from a secondary storage device each time the power is resumed.

Two typical examples of RAM are Dynamic Random Access Memory and Static Random Access Memory. *Dynamic Random Access Memory (DRAM)* uses integrated circuits containing capacitors to achieve significant storage capacity and speed. DRAM can be written and read in the speed range of less than 100 nanoseconds. DRAM has a major drawback in that its capacitors lose their charge over time and therefore information contained in DRAM must be continually refreshed. Basically, this means that on average DRAM must stop operations every 16-30 milliseconds and restore all of the data it contains or the data will disappear. During this refresh time, the processor

has no access to the information being refreshed. *Static Random Access Memory (SRAM)* differs from DRAM in that it stores information in a logic circuit referred to as a flip-flop, rather than in a capacitor. SRAM memory does not need to be refreshed while the power is on, but also loses its information once the power is turned off.

*Read Only Memory (ROM)*, like RAM, can be read randomly, but cannot be written randomly. Unlike RAM, however, it is non-volatile and therefore does not lose its information when a computer's power is cut off. ROM is typically employed to store vital program information required during the first moments after a computer is powered on. It may be used for such purposes as forcing system test routines, directing the processor to input/output devices or for controlling access to certain computer subsystems such as hard drives. *EPROMs (erasable programmable read-only memory)* and *EEPROMs (electrically erasable read-only memory)* are read only memories that can be erased and rewritten, but must be written "en masse," rather than at the individual word level. "Flash" memory is a form of EEPROM that is widely used today in such devices as cell phones, modems and personal digital assistants. The drawbacks to Flash memory are that write times are slower, the number of read/write cycles are limited and the requirement for significantly higher power than DRAM to store data.

*Secondary Storage Devices* include *Floppy Disks*, which are light and portable and are written and read by a motor driven mechanical drive. They normally have a storage capacity in the low megabyte range. *Hard Disks* far exceed floppy disks in storage capacity and have become the standard for mass storage of data to be written and read by the processor. Both Floppy Disks and Hard Disks are non-volatile and can be both written and read. However, since they are serial (as opposed to parallel) devices, they are considerably slower than RAM.

Micromem's horizontal element magnetic memory technology, HEMRAM™, involves producing hybrid memories based on in-plane magnetization mechanism of horizontally oriented micron scale ferromagnetic thin films that act as storage elements. An in-plane magnetization generates a spatially inhomogeneous field profile with a narrow fringe field normal to the substrate. This fringe field results in a measurable Hall voltage across the probe terminals when a current flows through the sensor. Changing current direction will lead to a reversed Hall voltage. This intrinsically bipolar output forms the basis of nonvolatile storage, logic gate and field sensing.

Micromem's vertical element magnetic memory technology, VEMRAM™, uses a novel hybrid Hall effect MRAM scheme which utilizes out-of-plane magnetization induced by vertically oriented high-aspect-ratio ferromagnetic posts. The VEMRAM™ cell comprises two parts: a high-aspect-ratio ferromagnetic storage post or "bit" (memory element) and a patterned high-mobility thin film Hall sensing element (InAs or InSb) underneath the bit. The bit is vertically positioned or normal to the probe surface, which is necessary to suppress so-called "N" rotation, a tendency for the magnetic field in a ferromagnet to rotate away from its set direction under the influence of an external perturbing magnetic field. The memory bits and driving circuits can be directly constructed on a wafer where Hall sensors have already been produced by direct implantation or by epitaxial growth and patterned etching. In the writing operation, each bit is coerced to change its magnetic states by the drive current flowing along the surrounding single-turn electrical loop. When the drive current is reversed, the remnant state switches from one state to the other to store a new binary number. The reading process remains essentially the same as in the in-plane magnetization arrangement.

### *Competition*

The Company is aware of others conducting research and development in the magnetic non-volatile memory area. These include IBM Research (San Jose, California), Ovonyx, Inc. (Troy, Michigan), Hewlett-Packard (Palo Alto, California), Honeywell (Plymouth, Minnesota) and Motorola (Phoenix, Arizona).

In February 2002, Cypress Semiconductor Corp. formed a subsidiary to develop magnetic RAM in association with NVE and has allocated \$22 million in research and development to bring a product to market.

The basic MRAM cell consists of one transistor and one magnetic tunneling junction. Reading the cell involves passing a current through the magnetic tunneling junction (MTJ) stack. Two main centers of MRAM research are at IBM and Infineon. IBM and Infineon have alternative MRAM technologies based on the giant magneto resistance (GMR) principle. GMR memory elements consist of two ferromagnetic layers separated by a conductive nonmagnetic interlayer. The electrical resistance is high in the absence of external magnetic field; however, an applied external field forces the initially anti-parallel magnetization in the coupled films into parallel alignment and the resistance drops. The high or low resistance determines the data storage state. MTJ cells have similar sandwiched structures but the interlayer is insulating instead of conducting. In contrast to GMR structures in which the sense current usually flows parallel to the layers, the current in MTJ flows perpendicularly to the layers of the stack.

Neither the current stages of development of these companies' non-volatile technologies nor their projected development completion dates are known.

Micromem's technology is based on a variety of realizations of low-cost hybrid Hall effect magnetic cells. Unlike GMR and MTJ, hybrid Hall effect magnetic memory cells combine a ferromagnetic storage element and an integrated Hall effect device to read information by sensing magnetization polarities. For example, a high-mobility thin film Hall sensor (also called a Hall cross due to four perpendicularly oriented leads connected to the sensor) can be used as an excellent local magnetometer for measuring the strength of field generated by ferromagnetic films or structures due to its high sensitivity and tolerance of broad range of temperatures. This concept utilizes the well-known Hall effect. When a current flows through a semiconductor in the presence of a transverse magnetic field, the mobile charges drift in a direction perpendicular to both the electric and magnetic fields because of the Lorentz force. This gives rise to a transverse voltage difference called Hall voltage. The reversed magnetic field also alters the polarity of the voltage, making the Hall probe a suitable tool for recording binary information.

The Company will face intense competition when its technologies are developed to a point at which they may be sold and/or licensed. The Company will be required to introduce its technologies into a well developed market and compete with major corporations who manufacture, sell and license existing memory products such as DRAM, SRAM, EPROM, EEPROM and Flash memory. The market for memory technologies is dominated by major corporations who have established market segments for their memory technologies and products, and have significantly greater financial and other resources which are required to design, develop, manufacture, market, sell and license their products and technologies. Many of these major corporations have worldwide wafer manufacturing and integrated circuit production facilities.

The success of the Company's Technology will be determined by the following factors for which it has not yet been tested or measured: (i) the ability to build fully functional sub-micron scale devices for specific applications; (ii) the ability of manufacturers to incorporate the technology into existing manufacturing capabilities without significant retooling and material costs; (iii) price competitiveness; and (iv) availability and costs of raw materials.

After completion of the development of the company's Technology, the ability of the Company to compete successfully will depend on elements outside of its control, including the rate at which customers incorporate the Company's Technology into their products, the success of such customers in selling those products, the Company's protection of its intellectual property, the number, nature and success of competitors and their product introductions, and general market and economic conditions. In addition, the Company's success will depend on its ability to develop, introduce, and license or sell in a timely manner its technology or products incorporating its technology and to compete effectively on the basis of factors such as speed, density, die size and packaging.

#### *Recent Developments*

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In June 2002, the Company's management determined that its research and development operations required restructuring due to financial constraints, in order to continue the development of its magnetic non-volatile memory technology. Accordingly, the Company commenced restructuring its operations in July 2002 to achieve an orderly transition of its R&D program. As part of this restructuring, Pageant USA closed its Lee's Summit, MO facility by August 31, 2002 and Micromem downsized its head office in Toronto by end of the fiscal year, October 31, 2002. Micromem and Pageant USA terminated Dr. Dale Hensley as Chief Operating Officer effective as of September 24, 2002. Pageant USA terminated all of its other employees by October 31, 2002. Dr. Hensley resigned as a director of Micromem on October 9, 2002 and as a director of Pageant USA on September 26, 2002. In September 2002, Pageant USA terminated its agreement with Townsend Capital Inc. pursuant to which Pageant USA occupied the offices, laboratory and clean room it had occupied at Summit Technology Campus, Lee's Summit, Missouri.

### Infrastructure Agreements with University of Toronto

On November 1, 2002 ("effective date"), Micromem entered into an Infrastructure Agreement with the University of Toronto, to fund the assembly of a facility for research and development and fabrication of Magnetic Memory ("MMF").

Under the terms of the agreement, Micromem has committed to contribute \$231,140 (CDN\$360,000) in cash to fund the direct costs of MMF. The sum is payable to University of Toronto as follows:

- i. \$120,000 on execution of agreement, which was paid on November 28, 2002;
- ii. \$120,000 at end of the two months following the effective date; and
- iii. \$120,000 at end of the four months following the effective date.

### University of Toronto and MMO

On October 24, 2002, Micromem entered into a 2-year research collaboration agreement ("U of T Research Collaboration Agreement") with Materials and Manufacturing Ontario ("MMO"), the University of Toronto, and Dr. Harry Ruda, Chair Professor in Nanotechnology. Through the collaboration, Micromem will continue its involvement in the research and development of magnetic memory technology, which will be carried out by a highly skilled research team headed and assembled by Dr. Ruda. Under the agreement, Micromem and MMO will each provide (CDN) \$272,000 of funding and the combined (CDN) \$544,000 will be used to cover the operating expenses of the research collaboration over a term of two years. Under the agreement, Micromem will maintain its ownership of its portfolio of patents and intellectual property to date.

Micromem will have the first right to an exclusive and perpetual worldwide sub-license for all uses of the technology developed under the collaboration (except that the University may use the technology for educational and research purposes). MMO will be entitled to receive a royalty on Micromem's manufacturing revenues from the sale of products incorporating the technology developed under the collaboration. A separate royalty will be negotiated in the future on revenues to be generated by Micromem from sub-licenses of the technology developed under the collaboration.

The research collaboration agreement contemplates a number of milestones under a comprehensive research plan. The research will be carried out from research facilities at the University of Toronto.

MMO is one of four Ontario Centres of Excellence (OCE) established by the provincial government to promote commercial research partnerships between universities and industry. The OCE program is funded by the Ministry of Enterprise, Opportunity and Innovation; and is part of the provincial government's \$2 billion investment in Ontario's knowledge economy making Ontario more competitive through innovation in science and technology

### FabTech Inc.

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On May 1, 2001, Pageant Technologies (USA) Inc., a wholly owned subsidiary of Micromem, entered into a support services agreement ("Fabtech Agreement") with Fabtech Inc. located in Lee's Summit, Missouri. Under the agreement, as amended from time to time, during the 2002 fiscal year, FabTech provided access to its equipment and facilities and assigned engineering and other technical staff to work directly with Micromem's research and development team at FabTech's facilities. The objective of the relationship was to facilitate the fabrication of samples using Micromem's HEMRAM™ memory design. Pageant USA terminated the Fabtech Agreement effective as of August 31, 2002.

### Honeywell FM&T

On December 9, 1999, Pageant USA, a subsidiary of Micromem, entered into an Agreement (the "DOE Agreement") with AlliedSignal Federal Manufacturing & Technologies ("AlliedSignal") operating under contract with the US Department of Energy ("DOE") to conduct an engineering evaluation of the Company's technology. AlliedSignal was subsequently acquired by Honeywell, Inc., which assumed responsibility for both performance of the DOE Agreement and management of the DOE Facility through Honeywell Federal Manufacturing & Technologies ("Honeywell FM&T"). The DOE Agreement was subsequently amended on July 10, 2000 to expand the scope of work to be completed by Honeywell FM&T. Pursuant to the amended DOE Agreement, Honeywell FM&T agreed that, in addition to providing an evaluation of the technology, it would provide engineering and manufacturing services to Pageant. The DOE Agreement terminated in August 2002.

### Agreement to Purchase Estancia Interests

On December 10, 2000, Micromem and Pageant International entered into an agreement (the "Purchase Agreement") with Estancia Limited and Richard M. Lienau ("Lienau") to purchase from Estancia and Lienau all interests (the "Estancia Interests") in the VEMRAM™ Patents and the VEMRAM™ technology and all other rights, interests and entitlements held by Estancia and Lienau as set forth in the Joint Ownership and Licensing Agreement. The Purchase Agreement is subject to all required approvals from securities regulatory authorities.

Under the Purchase Agreement which closed on March 9, 2001, Pageant International agreed to pay a purchase price of \$50.0 million (the "Purchase Price") to Estancia, as follows:

i.

\$10.0 million was paid on closing (after receipt of regulatory approvals), in the form of 2,007,831 common shares of Micromem (or \$8.0 million worth of Micromem's common shares ("Micromem Shares") based on the close price on the closing date, being \$3.98 per share) and \$2.0 million in cash;

ii. **\$20.0 million, will be paid if and when either: (a) certification is received from Honeywell Federal Manufacturing & Technologies that fully integrated, randomly addressable memory matrices of VEMRAM™ technology have met certain stipulated performance standards, or (b) Micromem or any of its affiliates executes a definitive agreement for the sale or licensing of the VEMRAM™ technology to an arm's length third party for any commercial purposes other than testing or evaluation of the technology; payable in the form of cash and Micromem Shares to be determined by Pageant International provided that a minimum of 50% of the \$20.0 million shall be paid in Micromem Shares valued at the close of trading on the date of such certification receipt, sale or licensing; and**

iii. **\$20.0 million, will be paid if and when Micromem or any of its affiliates executes a definitive agreement for the sale or licensing of any technology (including the VEMRAM™ Technology) owned by Micromem to an arm's length third party for any commercial purposes other than testing or evaluation of the technology; payable in the form of cash and Micromem Shares to be determined by Pageant International provided that a minimum of 50% of the \$20.0 million shall be paid in Micromem Shares valued at the close of trading on the date of execution of the license.**

Notwithstanding the provisions triggering the two \$20.0 million payments (the "Trigger Events"), Pageant International has the right to pay any portion or all of the Purchase Price at any time following the Closing Date through a combination of cash and a number of common shares of Micromem, provided that a minimum of 50% of such payment shall be through the issuance of common shares of Micromem. In the event that one or both of the Trigger Events do not occur prior to three years following the Closing Date, Pageant International shall be deemed to

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have caused a proportionate interest in the Estancia Interests to be conveyed to Estancia where the proportionate interest is calculated as the ratio of the portion of the Purchase Price remaining unpaid at such date over \$50.0 million. In the event that Pageant International or Micromem default in the payment of any portion or all of the Purchase Price when due, Pageant International shall be deemed to have caused a proportionate interest in the Estancia Interests to be conveyed to Estancia where the proportionate interest is calculated as the ratio of the portion of the Purchase Price remaining due and unpaid at such date over \$50.0 million.

At the closing of the Purchase Agreement, on March 9, 2001, Estancia was required to and it did enter into a three year technology development agreement with Pageant International for the provision of the services of Richard Lienau in respect of the continued development of VEMRAM™ technology (the "Technology Development Agreement"). The Technology Development Agreement provides for fees to Estancia of \$215,000 per annum and a budget for the continued development of VEMRAM™ of up to \$500,000 per annum. Effective April 23, 2002, the Technology Development Agreement was amended to extend the term of the agreement for an additional eight months commencing March 9, 2004 through to November 9, 2004, and to provide a reduction of the monthly fees payable to Estancia to \$107,500 during the periods from June 1 to December 2002, and during the extended period.

The acquisition of the Estancia Interests under the Purchase Agreement could result in additional payments of cash by Pageant International and additional issuances of Common Shares by Micromem. The amount of cash, if any, to be paid to Estancia and the number of Common Shares, if any, to be issued will depend upon several factors including whether or not the Trigger Events occur prior to three years following the Closing Date and the market price of Micromem's Common Shares on the date of each Trigger Event. The table below sets forth the amount of cash and the number of Common Shares of Micromem that will be required to be paid and issued if both Trigger Events occur, prior to three years following the Closing Date, based on assumed market prices of Micromem's Common Shares of \$4.00, \$6.00 and \$8.00 on both dates on which the Trigger Events occur. The data presented in the table is also based upon the assumption that 25% of the portion of the purchase price due upon each Trigger Event will be paid in cash and the balance of 75% will be paid through the issuance of Common Shares. The actual amounts of cash to be paid and the number of Common Shares to be issued may vary significantly from the amounts and numbers set forth in the table below if one or more of the Trigger Events does not occur prior to three years following the Closing Date, if the market prices of Micromem's Common Shares on the dates of the Trigger Events are different than those assumed in the table below or if the percentage of the Purchase Price payable upon a Trigger Event which is paid in the form of cash or shares varies from 25% and 75% respectively.

	Assumed Market Price
<b><u>Date of Certification or Licensing/Sale of VEMRAM™</u></b>	
<b><u>Date of Licensing/Sale Of any Technology Total</u></b>	
#Shares	
Cash \$	
# Shares	
Cash \$	
# Shares (% increase) <sup>3</sup>	



\$ \$4.00

3,750,000  
 5,000,000  
 3,750,000  
 5,000,000  
 7,500,000 (16.1)  
 10,000,000 \$6.00  
 2,500,000  
 5,000,000  
 2,500,000  
 5,000,000  
 5,000,000 (10.7)  
 10,000,000 \$8.00  
 1,875,000  
 5,000,000  
 1,875,000  
 5,000,000  
 3,750,000 (8.0)  
 10,000,000

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3Percentage of Common Shares outstanding on a fully diluted basis, based on 46,700,937 Common Shares outstanding on a fully diluted basis as of October 31, 2002.

**Patents and Trademarks**

The Company believes that protection of its intellectual property is important to its ability to generate revenues from its technologies in the future. The Company has both issued patents and pending patent applications and also enters into confidentiality and other agreements with third parties and its employees for protection of its intellectual property and trade secrets. The Company intends to continue to actively pursue the protection of its intellectual property. Management will determine from time to time the jurisdictions where protection will be sought which determination will be based on a number of factors including: state of development of the Company's Technology;

importance of a particular market for the Company's Technology; costs of pursuing patent protection in a jurisdiction; and financial position of the Company.

The Company's magnetic memory patent portfolio comprises two series of patents and patent applications: (i) those covering VEMRAM™ technology and related technologies and processes; and (ii) those covering HEMRAM™ technology and related technologies and processes.

The Company has applied for registration in respect of the trademark for HEMRAM™, VEMRAM™ and MICROMEM™.

#### Inter-corporate Agreements

During the 2002 fiscal year, Pageant International, a wholly-owned subsidiary of Micromem, was engaged in the development of the VEMRAM™ technology. Pursuant to an agreement between Pageant International and Pageant USA, with effect from January 11, 1999, Pageant International engaged Pageant USA to develop the VEMRAM™ technology using some of the facilities, equipment and personnel of Pageant USA as well as indirectly through outside laboratories and to enter into contracts with third parties for the development of VEMRAM™ technology. Under the said agreement, Pageant International was required to reimburse Pageant USA in respect of all costs directly and indirectly incurred on the project plus a six per cent mark-up.

Memtech International, another wholly owned subsidiary of Micromem, has been established to develop non-volatile memory technology other than the VEMRAM™ technology, known as HEMRAM™. Pursuant to an agreement between Micromem and Pageant USA, with effect from July 1, 2000, which agreement was assigned as of August 30, 2000 by Micromem to Memtech International, Memtech International engaged Pageant USA to develop Memtech International's technology using some of the facilities, equipment and personnel of Pageant USA and to enter into contracts with third parties for the development of Memtech International's technology. Under that agreement, Memtech International was required to reimburse Pageant USA in respect of all costs directly incurred on the project plus a six per cent mark-up.

With the closure of Pageant USA's research and development operations as described above, no further inter-corporate payments or reimbursements will be required under the aforesaid inter-corporate agreements.

#### Environmental Matters

The Company is subject to various environmental protection regulations imposed by the government in the jurisdiction where it conducts its development work. The Company is not aware of any current or pending environmental protection laws or regulations that would have a material impact on the Company's capital expenditure requirements or competitive position.

#### C. Organizational Structure

Micromem has one wholly-owned subsidiary whose total assets constitute more than 10% of the consolidated assets of Micromem for the most recent fiscal year: Pageant Technologies Incorporated ("Pageant International"), which was incorporated under the laws of the Turks & Caicos Islands and continued to Barbados on May 25, 2001, in turn has a wholly-owned subsidiary, Pageant Technologies (USA) Inc. ("Pageant USA"), a corporation incorporated in the State of Utah, USA. Micromem has a second wholly-owned subsidiary, Memtech International Inc. ("Memtech International"), incorporated under the laws of the Bahamas, which in turn has a wholly-owned subsidiary, Memtech International (USA) Inc. ("Memtech USA"), a corporation incorporated in the State of Delaware, U.S.A. Micromem has a third wholly-owned subsidiary, Micromem Technologies B.V., ("Micromem BV"), incorporated under the laws of the Netherlands on January 16, 2001, which in turn had a

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subsidiary, Micromem Technologies S.p.A., ("Micromem Italy"), a corporation incorporated under the laws of Republic of Italy on January 25, 2001. After the 2002 year end, Micromem Italy was dissolved pursuant to the laws of Italy on December 27, 2002.

Pageant International and Pageant USA will be sometimes jointly referred to in this Form 20F as "Pageant". Memtech International and Memtech USA will be sometimes jointly referred to in this Form 20F as "Memtech". Micromem BV and Micromem Italy will be sometimes jointly referred to in this Form 20F as "Micromem Europe". Micromem, Pageant International, Pageant USA, Memtech International, Memtech USA, Micromem BV and Micromem Italy will be sometimes collectively referred to in this Form 20F as the "Company." The following chart sets forth the corporate organizational structure at the date of this Form 20F.

### D. Facilities

Micromem maintains its corporate headquarters in Toronto, Ontario, Canada. The space occupied by Micromem consists of 3,987 square feet of commercial office space and is occupied by Micromem pursuant to a lease that expires December 29, 2005.

## ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

This discussion and analysis of financial condition and results of operations for the years ended October 31, 2002, 2001, 2000, 1999 and 1998 should be read in conjunction with the consolidated financial statements and related notes in this report, which are prepared in accordance with Canadian generally accepted accounting principles (Canadian GAAP). These principles differ in certain material respects from United States generally accepted accounting principles (U.S. GAAP). The differences as they affect the consolidated financial statements of the Company are described in Note 17 to the Company's 2002 consolidated financial statements.

### A. Operating Results

The following table sets forth certain selected financial information of the Company:

#### Selected statement of operations and deficit information

(all amounts in United States dollars)

Years ended October 31,

2002

2001

2000

1999

1998

Interest & other income

\$ (165,892)

\$ (196,520)

\$ (140,231)

\$ (1,303)

\$ (2,571)

Loss for the period

12,733,015

4,559,625

7,259,356

5,207,787

499,742

Loss per share-basic & diluted

0.27

0.1

0.19

0.14

0.02

Selected balance sheet information

(all amounts in United States dollars)

Years ended October 31,

2002

2001

2000

1999

1998

Working capital (deficiency)

\$ 985,551

\$ 3,455,108

\$ 1,076,127

\$ (3,173,096)

\$ (516,425)

Capital Assets

98,654

336,839

29

	381,125
	55,097
	15,334
Total Assets	
	1,583,422
	14,454,470
	2,219,987
	585,327
	164,020
Shareholder's equity (deficiency)	
	1,391,903
	14,124,918
	1,684,775
	(3,095,695)
	(500,991)

#### Fiscal 2002 Compared to Fiscal 2001

The Company had no operating revenue, its only activities being the development of its memory technologies. Its only income during 2002 was \$165,892 (2001: \$196,520) being principally the interest it earned on excess funds deployed in short-term deposits and revenue generated through an engineering services contract.

Costs and expenses have increased from \$4,725,931 in 2001 to \$12,934,444 in 2002. The increase includes a \$10,000,000 write down of royalty rights, which, when excluded from costs and expenses would result in a decrease of 37.9% of costs and expenses when compared to similar costs and expenses in 2001.

In March 2001, Micromem's wholly-owned subsidiary, Pageant International, purchased a 40% gross profits royalty ("Estancia Royalty") related to patents and patent applications for VEMRAM™ technology ("VEMRAM Patents") and the remaining 50% interest in the VEMRAM™ Patents and all rights, entitlements and interests held by Estancia Limited and Richard Lienau under the Joint Ownership and Licensing Agreement dated as of September 17, 1997 pursuant to an asset purchase agreement (the "Asset Purchase Agreement") among Micromem, Pageant International and Estancia Limited and Richard Lienau for a purchase price of \$10 million (which was paid at closing) and a further maximum of \$40 million to be paid upon certain stipulated milestones being met. During the year, the Company decided to restructure its operations by closing its research and development facility and adopted a plan to continue its research and development program through a research collaboration with the University of Toronto.

Micromem determined that there was significant uncertainty that any amounts would have become payable in respect of the Estancia Royalty. Accordingly, it was determined that a write down of the Estancia Royalty rights in the amount of \$10,000,000 was appropriate under current generally accepted accounting principles. Notwithstanding the write down, Micromem is committed to continue its research and development of magnetic memory technology through its research collaboration with the University of Toronto.

During the year, the Company expended \$1,601,624 (2001: \$2,212,679) related to its efforts on research and development of its memory technologies, representing 54.6% (2001: 46.8%) of total expenditures (excluding the royalty rights write down). During the fourth quarter of 2002, Micromem entered into a two year research collaboration agreement whereby researchers at the University of Toronto will undertake the research and development of magnetic memory technology in collaboration with Micromem. Furthermore, Micromem was successful in obtaining matching funds from Materials and Manufacturing Ontario (MMO – a non profit organization) pursuant to a research collaboration agreement among Micromem, the University of Toronto, Dr. Harry Ruda and MMO. Over the two-year period, Micromem will provide CDN\$272,000 (approximately \$175,000) with matching contributions from the MMO towards the research and development to be undertaken under the research collaboration. In the fourth quarter of 2002, Micromem paid \$87,432 (CDN\$136,000) against its commitment. Micromem will have the first right to an exclusive and perpetual worldwide sub-license for all uses of the technology developed under the collaboration. MMO will be entitled to receive a royalty on Micromem's manufacturing revenues from the sale of products incorporating the technology developed under the collaboration.

The Company has also continued its efforts to reduce administrative expenses in all areas of operation. The Company's facilities in Lee's Summit have been closed and all employees at the facility were terminated. The Company has also undertaken to control costs performed by outside service providers by performing the work in-house. Furthermore, Micromem has downsized its head office which will continue to reduce costs into the future. As a result of these efforts, general administration expenses decreased by 13.9% from \$403,178 in 2001 to \$347,256 in 2002; professional fees decreased by 44.5% from \$473,653 in 2001 to \$262,927 in 2002; travel and entertainment decreased by 64.3% from \$205,757 in 2001 to \$73,385 in 2002.

Wages and salaries decreased 59.0% from \$1,372,375 in 2001 to \$562,532 in 2002 as a result of decreasing employee levels (as discussed above) and as a result of changes to the Chairman and CEO's 2001 employment agreement, with effect from November 1, 2001. Effective February 13, 2002, Mr. Fuda resigned as President and Chief Executive Officer of Micromem but continued as Chairman and a director of Micromem and as a director of certain subsidiaries of Micromem. Mr. Fuda's compensation was reduced, with effect from November 1, 2001, to \$1.00 per year.

Amortization of patents and trademarks commenced in 2002 amounting to an expense of \$31,338. Patents and trademarks will be amortized over 10 years.

Amortization of capital assets decreased from \$65,298 in 2001 to \$40,635 in 2002 as a result of dispositions of assets due to downsizing.

Micromem had a net loss of \$12,733,015 for 2002 or \$0.27 loss per share compared to a net loss of \$4,559,625 in 2001 or \$0.10 per share. The effect on loss per share of the royalty write down in 2002 was \$0.22 per share.

#### Fiscal 2001 Compared to Fiscal 2000

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The Company had no operating revenue, its only activities being the development of its memory technologies. Its only income during 2001 was \$196,520 being principally the interest it earned on excess funds held in short-term deposits.

Costs and expenses decreased 35.9% to \$4,725,931 during 2001 from \$7,374,587 during 2000.

The Company continued to focus its efforts in progressing the research and development of its memory technologies by incurring \$2,212,679 during 2001 (2000: \$1,205,777) that is 84% higher than what was expended during 2000. Since inception, the Company had expended a total of \$3,923,744 as direct costs relating to the research and development of its memory technologies by the end of 2001. The Company had entered into a services agreement with Fabtech Inc., a semi-conductor company, to support the further development of the Company's technologies. In the last 4 months of 2001, the Company employed 5 additional research engineers with varied skills and experience, to expand the development efforts.

The share compensation costs of \$754,125 (2000: \$3,247,721), included in Wages and Salaries, relate to options exercised by the Chairman that were granted under his 2000 Employment and Option Agreement ("2000 Employment Agreement") and the value of shares that are accrued under his new employment agreement ("2001 Agreement") that commenced on January 1, 2001 and that was approved at the annual meeting of shareholders of the Company on March 14, 2001. The Chairman exercised 714,686 options that were granted to him under the 2000 Employment Agreement on January 17, 2001. The compensation cost under the 2000 Employment Agreement for 2001 includes a credit of \$677,420. An accrual of \$1,431,545 has been made for the value of shares that are accrued but not issued under the 2001 Agreement at October 31, 2001. The 2000 share compensation costs of \$3,247,721 relate to compensation agreements the Company had with the Chairman and Mast Holding (Bermuda) Ltd., a company controlled by the former President and Chief Executive Officer of the Company.

Professional fees decreased 57% to \$473,653 in 2001 from \$1,086,839 in 2000 reflecting primarily legal and accounting fees incurred in 2000 related to the preparation and filing of the Company's registration statement under US securities laws. The reduction in professional fees is also attributable to the addition of a General Counsel and a Chief Financial Officer to the management team.

Wages and salaries (excluding the share compensation costs) increased 41% to \$618,250 in 2001 from \$440,578 in 2000 principally due to the hiring of additional employees to meet the requirements of an expanding operation.

Amortization expenses increased in line with the increase in capital assets acquired to help the progress of the research and development efforts, excluding the one-time impairment loss of \$140,000 recorded in 2000.

Micromem had a net loss of \$4,559,625 for 2001 or \$0.10 per share, a decrease of 38% over the net loss of \$7,259,356 for 2000 or \$0.19 per share.

Unaudited quarterly financial information

dollars)

(all amounts in United States

Quarter ended,

October 31,



July 31,

April 31,

January 31,

October 31,

July 31,

April 31,

January 31,

2002

2001

Total Revenue

57,743

27,931

66,547

13,671

49,147

39,643

57,020

50,710

Loss for the period

10,423,341

628,603

797,439

883,632

501,722

1,343,816

1,351,559

1,362,528

Loss per share:

0.22

0.01

0.02

0.02

0.01

0.03

0.03

0.03

Basic and diluted

Notes:

1. The decrease in the loss for the quarter ended October 31, 2001 is principally due to the reversal of \$677,420 in this quarter, relating to the 2000 compensation agreement with the Chairman, due to the decline in stock price between October 31, 2000 and the vesting date of January 2, 2001.

2. The increase in the loss for the quarter ended October 31, 2002 is due to a \$10,000,000 write down of royalty rights, the effect of which is \$0.22 per share.

## B. Liquidity and Capital Resources

### Liquidity

The Company currently has no cash flow from operations and will have none until it is in a position to either license or directly produce and sell products utilizing its memory technologies.

Micromem currently has no lines of credit in place and must obtain equity financing from investors and from persons who hold outstanding options in order to meet its cash flow needs until it can generate revenues.

Micromem has granted to its directors, officers and other employees 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 has any obligation to exercise his options and there can be no assurance that Micromem will realize any funds.

### Capital Resources

Micromem had no material commitments for capital expenditures as of October 31, 2002 or 2001. In March 2001, Micromem and its wholly owned subsidiary, Pageant International, completed the Asset Purchase Agreement

described above. The total consideration payable in respect of the purchased assets under the Asset Purchase Agreement is \$50 million in the form of cash and shares. Of this amount, \$10 million was paid at closing through a cash payment of \$2.0 million and the issuance by Micromem of 2,007,831 common shares valued at \$3.98 per share. The balance of \$40 million is payable in two equal amounts of \$20 million each upon achievement of certain stipulated milestones provided that a minimum of 50% of each \$20 million payment shall be in the form of shares of Micromem. None of the stipulated milestones have been met and therefore no amounts have been paid toward the balance of the \$40 million purchase price. If no further payments toward the purchase price are made to Estancia under the Asset Purchase Agreement, Pageant is deemed to have conveyed back a percentage of the VEMRAM™ Patents and to have granted a gross profits royalty to Estancia Limited such that Pageant would remain holding a 60% interest in the VEMRAM™ Patents and it would be required to pay a 32% gross profits royalty to Estancia Limited in respect of the VEMRAM™ technology.

Subsequent to the year end, Micromem entered into an infrastructure agreement with the University of Toronto to fund the assembly of a facility for research and development and fabrication of magnetic memory, which, among other things, will be used for research and development related to collaborations between the University and Micromem. Micromem has committed to contribute \$231,140 (\$360,000 in Canadian funds) in 2003 pursuant to the agreement.

#### Change in accounting policy

Effective November 1, 2001, the Company changed its accounting policy for patents and trademarks to be recorded at cost less accumulated amortization which is provided on a straight-line basis over ten years. In prior years, the Company accounted for its patents and trademarks at cost and amortization was to commence on an appropriate basis to charge off the cost over the future benefit, not exceeding the legal life, when sales commence. There was no material impact on prior years consolidated financial statements and accordingly, the comparative consolidated financial statements have not been restated.

For the year ended October 31, 2002, the change in accounting policy resulted in an increase in amortization expense and net loss by \$31,338 and there was no material impact on net loss per share.

#### Critical accounting policies

The preparation of the Company's consolidated financial statements is based on the selection and application of critical accounting policies, some of which require management to make significant 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 revenue and expenses during the reporting periods. Actual results could differ from these estimates. The Company believes that the following are some of the critical judgment areas in the application of its accounting policies that currently affect the Company's financial condition and results of operations.

The Company had royalty rights capitalized as an intangible asset on its balance sheet. The determination of the recoverability of this amount and whether or not this asset is impaired involves significant judgments. In assessing the recoverability of this intangible assets, the Company considered whether the recoverability of the asset was probable or imminent to assess the future benefit, also considered the degree of certainty to justify carrying the intangible asset forward. Notwithstanding the fact that management has not abandoned the continued development of the technology and is working to pursue the development through recent arrangements with the University of Toronto, and management anticipated it will achieve commercialization, for accounting purposes an impairment in the asset

exists based on the significant uncertainty that royalties would be payable to Estancia in the foreseeable future. Accordingly, management has written down the balance of the royalty rights.

ITEM 6. DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES

A. Directors and Executive Officers

The Directors, Executive Officers and other key personal of Micromem as at March 1, 2003 are set forth below:

	<u>Name</u>	<u>Age</u>	<u>Position</u>
	Salvatore Fuda	67	
	Chairman of the Board of Directors Joseph Fuda	42	
	President, Chief Executive Officer and Director Manoj Pundit	38	
	Executive Vice-President, General Counsel, Secretary and Director Andrew Brandt	64	
	Director Stephen Fleming	53	
	Director Charles Harnick	52	
	Director George Kennedy	62	
	Director David Sharpless	52	
	Director Steven Van Fleet		

48

**Director Antonio Lopes**

40

**Chief Financial Officer**

Salvatore Fuda is and has served as Chairman of the Board of Micromem since January 11, 1999 and a Director of Micromem since 1992. He served as President and Chief Executive Officer from June 2000 through to February 13, 2002. From 1992 to January 11, 1999 he also served as Secretary of Micromem. He served as President and Chief Executive Officer of Ontex Resources Limited (TSE) from 1986 to December 1998 and as Chairman of the Board of Ontex Resources Limited since that date. He is and has served as Chairman and director of Pifher Resources Inc. (TSX Venture Exchange) since June, 2002. He is the father of Joseph Fuda.

Joseph Fuda is and has been President, Chief Executive Officer and Director since February 13, 2002. Prior thereto he served as Manager, 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. Mr. J. Fuda has served as a director of Micromem since February 13, 2002. He is the son of Salvatore Fuda.

Manoj Pundit is and has served as Micromem's Executive Vice President and General Counsel since July 2000 and joined the Board of Directors in March 2001. He has also been a partner, since December 1995, at Chitiz Pathak LLP, a Toronto law firm serving clients in the securities and investment industries, including issuers and dealers on a full range of securities transactions. Mr. Pundit holds a LL.M. in Taxation from Osgoode Hall Law school and a LL.B. and B.Sc. (Math) from the University of Alberta. Mr. Pundit has served as a director of Micromem since March 2001.

Andrew Brandt is and has been Chairman and Chief Executive Officer of the Liquor Control Board of Ontario ("LCBO") since February 1991. The LCBO is the largest single purchaser of alcohol beverage products in the world with annual sales exceeding two billion dollars Canadian. Prior to his appointment to the LCBO, Mr. Brandt served as Leader of the Ontario Progressive Conservative Party from 1987 to 1990. He has previously served as the Minister of Industry and Trade, Minister of Environment and Mayor of Sarnia, Ontario. Mr. Brandt has served as a director of Micromem since June 2000

Stephen B. Fleming is and has served as Managing Director of Kismet Limited since June 2001; prior thereto he served as Managing Director of Barefoot Enterprises since April 1999; prior thereto, he served as President of Pageant Technologies (USA) Inc. from July 1997 to April 1999; prior thereto, Mr. Fleming was Executive Vice-President of International Ion from August 1994 to April 1997. Previously, Mr. Fleming was responsible for planning MCI's wireless data products, intelligent network and frame relay international initiatives, and served as director of engineering for international business development for Telecom U.S.A. Mr. Fleming has worked with numerous emerging technology companies in consulting and management capacities. Mr. Fleming has served as a director of Micromem since January 1999.

Charles Harnick is and has served as Senior Advisor for the Jeffery Group Ltd., a public affairs management firm since June 2000; he is also President and Chief Executive Officer of Ontex Resources Limited (TSE) and has served in such capacities since March, 2000. Mr. Harnick has been a practicing lawyer with Sutts, Strosberg LLP since December 2001. He was the Attorney-General of Ontario from June 1995 to June 1999. Mr. Harnick has served as a director of Micromem since June 2000.

George A. Kennedy is and has served as managing partner of Source International (an international consulting firm in the Metropolitan Washington D.C. area) since March 1997. In 2001, he was Director for Planning and International Development for iGate Inc., a broadband technology company in Louisville, KY. From 1993 until 1996, Mr. Kennedy served as U.S. Consul General in Toronto, Canada, and prior thereto he held senior positions with the US Departments of State and Commerce in Washington D.C. Currently, he is an Executive Editor of the Black Business Journal of Houston, TX. Mr. Kennedy has served as a director of Micromem since June 2000.

David Sharpless is Chairman, Maverick Inc., a family investment corporation. From 2000 to September 2001, he was President, International of CIT's Vendor Technology Finance unit. In this capacity, he was responsible for CIT's international vendor finance business, covering CIT's operations in Canada, Europe, Latin America, Asia Pacific, Australasia. Prior thereto, Mr. Sharpless was Newcourt Credit Group Inc.'s Deputy Chairman and was responsible for international operations for Newcourt Financial. David is a graduate of Osgoode Hall Law School and is a member of the bar of Ontario. Mr. Sharpless has served as a director of Micromem since March 2001.

Steven Van Fleet is and has been Program Director for the Silent Commerce/Smart Packaging Initiative at International Paper Company since November 1999. From January 1999 to November 1999, he was Program Director for Process and Product Uniformity and from March 1996 to December 1998 he was the Director for Control Systems Development at International Paper in Cincinnati, Ohio. He is also presently on the Board of Overseers for the Massachusetts Institute of Technology Auto ID Center.

Antonio Lopes is currently the Chief Financial Officer of several companies. Since November 1, 2002, he has been CFO of Micromem; since 1993, he has been CFO of Federal White Cement; since 1997, he has been CFO of Ontex Resources Limited; and since 1997, he has been CFO of Pifher Resources Inc. From 1994 to 1998, he was CFO of Fortune Mineral Limited. From 1989 to 1993, he was a staff accountant at Ernst & Young LLP. Mr. Lopes is a Chartered Accountant and holds an MBA from the University of Toronto.

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 the by-laws of the Micromem or the *Business Corporations Act* (Ontario).

Other than a father/son relationship between Salvatore Fuda (father) and Joseph Fuda (son), there is no family relationship between any director or executive officer and any other director or executive officer.

B. Compensation

Annual Compensation

Long-Term Compensation

Awards

Payouts

Name and  
Principal Position

Year

Salary  
(US\$)

Bonus  
(US\$) Other Annual Compensation (US\$)

Securities  
Under Options Granted (#)

Restricted Shares or Restricted Share Units (\$)

Long Term Incentive Plan Payouts (\$)

All other  
Compensation (\$) Joseph Fuda  
Chief Executive Officer 1

2002

100,000

-

-

-

-

-

- Salvatore Fuda, Chairman  
Former Chief Executive  
Officer and President 1

2002

2001

2000 -

745,1252

2,463,9622

-

-

-

-

-

-

-  
1,714,6833

250,0004

-  
-  
-  
  
-  
-  
-  
  
-  
-

- Manoj Pundit, Executive  
Vice President and General Counsel5

2002  
2001  
2000

162,066  
174,958  
49,583

-  
-  
20,000

-  
-  
-

-  
500,0006  
500,0007

-  
-  
-  
  
-  
-  
-  
  
-  
-

- Dale Hensley, Chief Operating Officer8

2002  
2001  
2000 216,577  
308,685





-

-

-

-

-

-

- Robert Patterson, Former  
President13

2002

2001

2000

-

-

783,75914

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

-

Notes:

(1) Salvatore Fuda has served as Chairman since January 11, 1999. He served as President and Chief Executive Officer from June 2000 through to February 13, 2002. Joseph Fuda was appointed Chief Executive Officer on February 13, 2002. All of Joseph Fuda's options were cancelled after the 2002 fiscal year end. (2) Salvatore Fuda (or companies controlled by him) was a party to consulting and employment agreements with the Corporation pursuant to which Mr. Fuda received, as compensation, a number of common shares based on formulas prescribed by those agreements. The dollar value represents the value of the shares accrued due to Mr. Fuda at the end of the fiscal years ended October 31, 1999, October 31, 2000, and October 31, 2001. (3) 1.0 million at \$3.125 vesting January 31, 2002 and 714,683 options at \$0.10 vesting January 3, 2001 and expiring January 2, 2002. (4) 125,000 of these options vested on June 30, 2000 and the remaining options vested on June 30, 2001. All of these options were cancelled after the 2002 fiscal year. (5) Mr. Pundit is employed as Executive Vice-President and General Counsel of the Corporation. For the fiscal year ended October 31, 2000, Mr. Pundit was an officer of the Corporation for approximately 3 1/2 months. (6) Vesting on take-over. (7) Pursuant to his employment agreement, Mr. Pundit was granted options for the purchase of up to 500,000 common shares, 200,000 of which vested on July 17, 2000, 200,000 of which vested on January 17, 2001 and the remaining 100,000 of which vested on July 17, 2001. All of these options were cancelled after the 2002 fiscal year. (8) Dr. Hensley was employed as Chief Operating Officer from February 21, 2001 to September 24, 2002. For the fiscal years ended October 31, 2001 and 2002, Dr. Hensley was an officer of the Corporation for approximately eight months and 11 months, respectively. (9)

250,000 of these options vested on March 1, 2001 and the remaining 250,000 options vested on March 1, 2002.

(10)

Mr. Viswanathan was employed as Chief Financial Officer between June 5, 2000 and October 31, 2002. For the fiscal year ended October 31, 2000, Mr. Viswanathan was an officer of the Corporation for approximately five months.

(11)

150,000 of these options vested on June 30, 2001; 250,000 would vest on take-over or change of control of the Company.

(12) The vesting terms of these options were revised so that 20,000 vested on June 29, 2000 and remaining 80,000 vested on August 31, 2001. (13) Mr. Patterson was appointed President on March 10, 1999 and ceased to serve as President on June 29, 2000. For the fiscal years ended October 31, 1999 and October 31, 2000, Mr. Patterson was an officer of the Corporation for approximately 8 months and 4 months, respectively.

The aggregate direct compensation paid or accrued on behalf of all other directors as a group during 2002 was \$8,000. This amount includes directors' fees and expenses for non-employee directors. None of the non-employee directors have agreements with Micromem that provide for

benefits upon termination of service.

Micromem has adopted a stock option plan. Options are offered to directors, executive officers and employees to purchase 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. No options were granted during 2002. As at the Company's fiscal year ended, October 31, 2002, 5,380,000 options were outstanding, of which 2,995,000 had vested and were exercisable, with exercise prices ranging between \$2.20 and \$7.06 per share. Subsequent to the year end all outstanding options were cancelled.

## C. Board Practices

### Committees of the Board

#### Audit Committee

The board of directors has appointed an Audit Committee consisting of three independent directors. The members of the Audit Committee are Andrew Brandt, Charles Harnick and David Sharpless. The Audit Committee is responsible for the integrity of the Micromem's internal accounting and control systems. The committee receives and reviews the financial statements of Micromem and makes recommendations thereon to the Board prior to its approval by the full Board. The Audit Committee communicates directly with Micromem's external auditors in order to discuss audit and related matters whenever appropriate.

#### Compensation Committee

Micromem does not have a Compensation Committee. Micromem's executive compensation program is administered by the board of directors and meets on compensation matters as and when required.

## D. Employees

The company has seven officers and employees of which four are in a management capacity, none are in a R&D capacity and two are in an administrative capacity. This includes a Chairman, a Chief Executive Officer and President, an Executive Vice-President and General Counsel and a Chief Financial Officer, and three support staff, all of whom work from Micromem's executive offices in Toronto, Canada. All research and development is carried out by Dr. Harry Ruda and a research team employed by the University of Toronto under the U of T Research Collaboration Agreement.

At the beginning of the 2002 fiscal year, the Company had a total of 17 employees in the following categories: (i) five management personnel (including the Chairman, President and C.E.O., a Chief Operating Officer, an Executive Vice-President and General Counsel, a Chief Financial Officer and a Manager-Strategic Alliances); (ii) five administrative personnel (including a shareholder communications person and support staff); and (iii) seven research engineers.

Micromem considers its relations with its employees to be good.

## E. Share Ownership

Name

Shares Owned

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Options Held

Options Exercise Price

Expiration Date

Joseph Fuda

-

-

-

N/A

Salvatore Fuda

1,429,275

-

N/A

N/A

Manoj Pundit

2,478

-

-

N/A

Dale Hensley

-

-

N/A

N/A

Raj Viswanathan

-

-

45

N/A

N/A

Robert Patterson

-

-

N/A

N/A

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

A. Major Shareholders

Not Applicable.

B. Related Party Transactions

During fiscal year ended October 31, 2002, the Company paid \$23,846.93 to legal firms in which directors of the Company or subsidiaries are partners.

C. Interests of Experts and Counsel

Not Applicable.

ITEM 8. FINANCIAL INFORMATION

A. Consolidated Statements

See "Item 17 — Financial Statements."

Dividend Policy

Micromem has never paid a dividend on its securities. Micromem does not anticipate paying dividends in the foreseeable future.

**Significant Changes**

Except as otherwise disclosed in this report, there has been no significant change in Micromem's financial position since October 31, 2002.

B. Legal Proceedings

The Company's subsidiary, Pageant Technologies (USA) Inc. ("Pageant USA"), has been named as a defendant in legal actions relating to tenant improvements on a leased property, including an action claiming dues of approximately \$880,000 alleging breach of contract under a construction contract entered into by Clear Blue Laboratories, Inc. ("Clear Blue"). The landlord of the property is also claiming damages from Pageant USA. Pageant USA assigned its rights under the lease to Clear Blue, however, Pageant USA is allegedly obligated to pay the lease payments should the assignee default under the contract. The landlord is claiming damages of approximately \$887,000.

ITEM 9. THE OFFER AND LISTING

The table below sets forth the high and low sales prices for Common Shares in U.S. Dollars as reported since 1999. Micromem's fiscal year ends October 31. The Common Shares are not traded in Canada.

Micromem's common shares are traded in the United States and are quoted on the NASD's OTC Bulletin Board. The common shares are quoted under the symbol MMTIF.

The following table sets forth information regarding the high and low prices of the common shares for the periods specified in U.S. dollars.

Period

High

Low

Last six months:

February 2003

0.13

0.09

January 2003

0.14

0.09

December 2002

0.15

0.09

November 2002

0.36

0.13

October 2002

0.14

0.05

September 2002

0.17

0.05

Last eight quarters:



Q4 2002

0.17

0.05

Q3 2002

0.60

0.11

Q2 2002

1.21

0.43

Q1 2002

2.50

0.83

Q4 2001

3.20

1.46

Q3 2001

3.58

1.55

Q2 2001

4.50

2.03

Q1 2001

5.28

1.69

Last four years:

2002

2.50

0.05

2001

5.28

1.46

2000

25.12

2.50

1999

8.44

1.56

On February 28, 2003, the last reported sale price for the common shares on the NASD OTC Bulletin Board was \$0.093.

ITEM 10. ADDITIONAL INFORMATION

A. Share Capital

Not Applicable

B. Memorandum and Articles of Association

Articles of Incorporation

Incorporation Details and Objects of Micromem

Micromem was incorporated under the laws of the Province of Ontario, Canada, on October 21, 1985 as Mine Lake Minerals Inc. It subsequently changed its name to Avanti Capital Corp. by filing Articles 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 of Micromem provide that there are 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 the Board of Directors of Micromem are set out in the Articles of Incorporation (the "Articles") and by-laws (the "By-Laws") of Micromem and the statutory provisions of the *Business Corporations Act* (Ontario) ("OBCA"). The following is a selected summary of the Articles, By-Laws and applicable provisions of the OBCA as they relate to selected rights, duties, powers and authorities of the Board of Directors of Micromem.

The Articles of Micromem provide for a minimum of three and a maximum of 12 directors. The OBCA prescribes that an offering corporation must have a minimum of three directors, a majority of whom are Canadian residents and at least one third of whom are not officers or employees of Micromem or its 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 the 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, (a) borrow money on the credit of Micromem; (b) issue, re-issue, sell or pledge debt obligations of Micromem; (c) subject to restrictions respecting financial assistance prescribed in the OBCA, give a guarantee on behalf of Micromem to secure the performance of an obligation of any person; and (d) 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 shares of Micromem.

#### Securities of Micromem

The authorized capital of Micromem consists of an unlimited number of common shares ("Common Shares"), of which 46,700,937 shares were issued and outstanding as of October 31, 2002, and 2,000,000 special, redeemable, voting preference shares ("Special Shares"), none of which were outstanding, as of October 31, 2002.

Holders of 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 Common Shares. Dividends may be declared and paid on the Common Shares in such amounts and at such times as the directors shall determine in their discretion in accordance with the OBCA. 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 OBCA, 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 OBCA, Micromem has a lien on any Special Share registered in the name of a shareholder or the shareholder's legal representative for a debt owed by the shareholder to Micromem.

#### Rights and Privileges of Shareholders

Only the registered holders of 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 common shareholders, 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 preference 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

1.

Research Collaboration Agreement, dated October 24, 2002, among Micromem, Materials and Manufacturing Ontario ("MMO"), the University of Toronto and Dr. Harry Ruda, Chair Professor in Nanotechnology, pursuant to which: (i) Micromem has engaged the University of Toronto to conduct research and development of magnetic memory technology; and (ii) Micromem and MMO will each provide (Cdn.) \$272,000 of funding and the combined (Cdn.) \$544,000 will be used to cover the operating expenses of the research collaboration over a term of two years;

2.

Asset Purchase Agreement, dated December 10, 2000, among Micromem, Pageant International, Estancia Limited and Richard M. Lienau ("*Lienau*"), pursuant to which: (i) Pageant International purchased from Estancia Limited and Lienau all interests in the VEMRAM™ Patents and the VEMRAM™ technology and all other rights, interests and entitlements held by Estancia and Lienau as set forth in the Joint Ownership and Licensing Agreement and a termination of such agreement; and (ii) Micromem is required to pay to Estancia Limited a purchase price of \$50 million, of which \$10 million was paid in cash and shares at closing and the balance of \$40 million being payable in cash and shares upon certain stipulated milestones being achieved;

3.

Technology Development Agreement, dated March 9, 2001, as amended on April 23, 2002, among Pageant International, Estancia Limited and Richard Lienau, pursuant to which: (i) Estancia Limited and Richard Lienau are required to provide services to Pageant International in respect of the continued development of VEMRAM™ technology; and (ii) Pageant International is required to pay monthly fees to Estancia Limited at the rate of \$215,000 per annum over a term of three years and eight months, except that the fees payable during the period from June 1 to December 2002 and during the period from March 9, 2004 through to November 9, 2004 will be at a rate of \$107,000 per annum;

4.

Infrastructure Agreement between Micromem and the University of Toronto, dated November 1, 2002, pursuant to which Micromem agreed to provide funding to the University of Toronto in the amount of \$360,000 for the assembly of a magnetic memory facility to be used for research collaborations between Micromem and the University of Toronto.

D. Exchange Controls

As of the date hereof, the Company is aware of no 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 Common Shares.

The Company is aware of no limitations under the laws of Canada or the Province of Ontario, or in the charter or any other constituent documents of Micromem on the right of nonresidents of Canada or persons who are not Canadian citizens to hold and/or vote the Common Shares of Micromem.

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 stock of Micromem for a shareholder of Micromem who is not a resident of Canada but is a resident of the United States and who will acquire and hold a share of common stock of Micromem as capital property for the purposes of the Income Tax Act (Canada) (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 of Micromem 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 thereunder 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 (the "Convention").

### 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. Micromem is responsible for withholding of tax at the source. The Convention 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 by which the paid up or stated capital of Micromem and increased by reason of the payment of such dividend. Micromem will furnish additional tax information to shareholders in the event of such a dividend. Interest paid or deemed to be paid on Micromem's 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 Convention 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". Shares of common stock of Micromem 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 and persons with whom the shareholder did not deal at "arm's length and in certain other circumstances.

The Convention 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

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consecutive years preceding, and at anytime 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 discussion of certain possible United States federal income tax consequences, under current law, generally applicable to a US Holder (as defined below) of the Company's common shares. This discussion does not address all potentially relevant federal income tax matters (including but not limited to alternative minimum tax considerations) and it does not address consequences peculiar to persons subject to special provisions of federal income tax law, such as those described below as excluded from the definition of a US Holder. In addition, this discussion does not cover any state, local or foreign tax consequences. See "*Certain Canadian Income Tax Consequences*" above.

The following discussion is based upon the sections of the Internal Revenue Code of 1986, as amended (the "Code"), Treasury Regulations, published Internal Revenue Service ("IRS") rulings, published administrative positions of the IRS and court decisions that are currently applicable, any or all of which could be materially and adversely changed, possibly on a retroactive basis, at any time. This discussion does not consider the potential effects, both adverse and beneficial, of any recently proposed legislation which, if enacted, could be applied, possibly on a retroactive basis, at any time. This discussion is for general information only and it is not intended to be, nor should it be construed to be, legal or tax advice to any holder or prospective holder of the Company's common shares and no opinion or representation with respect to tax consequences to any such holder or prospective holders is made.

Accordingly, holders and prospective holders of the Company's common shares should consult their own tax advisors about the federal, state, local, and foreign tax consequences of purchasing, owning and disposing of the Company's common shares.

### US Holders

As used herein, a "US Holder" means a holder of the Company's common shares who is a citizen or individual resident (as defined under U.S. tax laws) of the United States, or, generally a corporation limited liability company, or a partnership created or organized in or under the laws of the United States or of any political subdivision thereof, or a trust whose income is taxable in the United States irrespective of source. This summary does not address the tax consequences to, and a US Holder does not include, persons subject to special provisions of federal income tax law, such as tax-exempt organizations, qualified retirement plans, individual retirement accounts and other tax-deferred accounts, financial institutions, insurance companies, real estate investment trusts, regulated investment companies, broker-dealers, non-resident alien individuals, persons or entities that have a "functional currency" other than the US dollar, shareholders who hold common stock as part of a "straddle", hedging or a conversion transaction and shareholders who acquired their stock through the exercise of employee stock options or otherwise as compensation for services. This discussion is limited to US Holders who hold the common shares as capital assets. This discussion does not address the consequences to a person or entity holding an interest in a US Holder or the consequence to a person of the ownership, exercise or disposition of any warrants, options or other rights to acquire common shares.

### Distributions on Common Shares

Subject to the discussion below at "Other Considerations", US Holders receiving dividend distributions (including but not limited to constructive dividends) with respect to the Company's common shares generally are required to include in gross income for United States federal income tax purposes the gross amount of such distributions equal to the US dollar value of each dividends on the date of receipt (based on the exchange rate on such date) to the extent that the Company has current or accumulated earnings and profits, without reduction for any Canadian income tax withheld from such distributions. Such Canadian tax withheld may be credited, subject to certain limitations, against the US Holder's United States federal income tax liability or, alternatively, may be deducted in computing the US Holder's United States federal taxable income by those who itemize deductions. (See more detailed discussion at "*Foreign Tax Credit*" below.) To the extent that distributions exceed current or accumulated earnings and profits of the Company, they will be treated first as a return of capital up to the US Holder's adjusted basis in the



common shares and thereafter as gain from the sale or exchange of the common shares. Preferential tax rates for long-term capital gains are applicable to a US Holder which is an individual, estate or trust. There are currently no preferential tax rates for long-term capital gains for a US Holder which is a corporation.

In the case of foreign currency received as a dividend that is not converted by the recipient into US dollars on the date of the receipt, a US Holder will have a tax basis in the foreign currency equal to its US dollar value on the date of receipt. Generally, any gain or loss recognized upon a subsequent sale or other disposition of the foreign currency, including an exchange for US dollars, will be ordinary income or loss.

Dividends paid on the Company's common shares will not generally be eligible for the dividends received deduction provided to corporations receiving dividends from certain United States corporations. A US Holder which is a corporation may, under certain circumstances, be entitled to a 70 per cent deduction of the United States source portion of dividends received from the Company (unless the Company qualifies as a "foreign personal holding company" or a "passive foreign investment company," as defined below) if such US Holder owns common shares representing at least 10 per cent of the voting power and value of the Company. The availability of this deduction is subject to several complex limitations which are beyond the scope of this discussion.

#### Foreign Tax Credit

A US Holder who pays (or has withheld from distributions) Canadian income tax with respect to the ownership of the Company's common shares may be entitled, at the option of the US Holder, to either a deduction or a tax credit for such foreign tax paid or withheld. Generally, it will be more advantageous to claim a credit because a credit reduces United States federal income tax on a dollar-for-dollar basis, while a deduction merely reduces the taxpayer's income subject to tax. This election is made on a year-by-year basis and generally applies to all foreign taxes paid by (or withheld from) the US Holder during that year. There are significant and complex limitations which apply to the credit, among which is the general limitation that the credit cannot exceed the proportionate share of the US Holder's United States income tax liability that the US Holder's foreign source income bears to his/her or its worldwide income. In the determination of the application of this limitation, the various items of income and deduction must be classified into foreign and domestic sources. Complex rules govern this classification process. In addition, this limitation is calculated separately with respect to specific classes of income such as "passive income," "high withholding tax interest," "financial services income," "shipping income," and certain other classifications of income. The availability of the foreign tax credit and the application of the limitations on the credit are fact specific, and holders and prospective holders of the Company's common shares should consult their own tax advisors regarding their own circumstances.

#### Disposition of Common Shares

Subject to the discussion below at "Other Considerations", a US Holder will generally recognize gain or loss upon the sale or other disposition of common shares equal to the difference, if any, between (i) the amount of cash plus the fair market value of any property received, and (ii) the shareholder's tax basis in the Company's common shares. This gain or loss will be capital gain or loss if the common shares are a capital asset in the hands of the US Holder (and if the stock is not "Section 306 Stock"), which will be a long-term capital gain or loss if the common shares of the Company are held for more than one year and which may be entitled to a preferential tax rate. Deductions for net capital losses generally may be carried over to be used in later tax years until such net capital loss is thereby exhausted. For US Holders which are corporations (other than corporations subject to Subchapter S of the Code), generally an unused net capital loss may be carried back three years from the loss year and carried forward five years from the loss year to be offset against capital gains until such net capital loss is thereby exhausted.

#### Other Considerations

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In the following circumstances, the above sections of this discussion may not describe the United States federal income tax consequences resulting from the holding and disposition of common shares:

### Foreign Personal Holding Company

If at any time during a taxable year more than 50 per cent of the total combined voting power or the total value of the Company's outstanding shares is owned, directly or indirectly (including by attribution), by five or fewer individuals who are citizens or residents of the United States and 60 per cent or more of the Company's gross income for such year (50 per cent in subsequent years) was derived from certain passive sources (e.g., dividends, interests, rents, royalties, etc.), the Company may be treated as a "foreign personal holding company." In that event, US Holders that hold common shares would be required to include in gross income for such year their allocable portions of the Company's taxable income to the extent the Company does not actually distribute such income.

### Foreign Investment Company

If 50 per cent or more of the combined voting power or total value of the Company's outstanding common shares are held, directly or indirectly (including through attribution), by citizens or residents of the United States, United States domestic partnerships or corporations, or estates or trusts other than foreign estates or trusts (as defined by Code Section 7701(a) (31)), the Company is found to be engaged primarily in the business of investing, reinvesting, or trading in securities, commodities, or any interest therein, and certain other conditions are met, the Company may be treated as a "foreign investment company" as defined in Section 1246 of the Code, causing all or part of any gain realized by a US Holder selling or exchanging common shares to be treated as ordinary income rather than capital gain.

### Passive Foreign Investment Company

As a foreign corporation with US Holders, the Company could potentially be treated as a passive foreign investment company ("PFIC"), as defined in Section 1297 of the Code, depending upon the percentage of the Company's income which is passive, or the percentage of the Company's assets which is producing passive income. Generally, on certain distributions and on disposition, US Holders owning common shares of a PFIC are subject to a special tax regime imposing the highest U.S. ordinary income tax rate plus an interest charge based on the value of deferral of tax for the period during which the common shares of the PFIC are owned. However, if the US Holder makes a timely election to treat a PFIC as a qualified electing fund ("QEF") with respect to such shareholder's interest therein, the above-described rules generally will not apply. Instead, the electing US Holder would include annually in gross income his/her or its pro rata share of the PFIC's ordinary earnings and net capital gain regardless of whether such income or gain was actually distributed. A US Holder making a QEF election can, however, under certain circumstances elect to defer the payment of United States federal income tax on such income inclusions subject to an interest charge on the amount of deferred taxes. Special rules apply to US Holders who own their interests in a PFIC through intermediate entities or persons. In addition, subject to certain limitations, US Holders owning (actually or constructively) marketable stock in a PFIC will be permitted to elect to mark that stock to market annually, rather than be subject to the tax regime described above. Amounts included in or deducted from income under this alternative (and actual gains and losses realized upon disposition, subject to certain limitations) will be treated as ordinary gains or losses.

The Company has not determined whether it is or has been a PFIC in earlier years. US Holders of the Company's common shares should consult with their own tax advisor concerning the possible application of the PFIC provisions in their circumstances.

### Controlled Foreign Corporation

If more than 50 per cent of the voting power of all classes of stock or the total value of the stock of the Company is owned, directly or indirectly (including through attribution), by citizens or residents of the United States, United States domestic partnerships and corporations or estates or trusts other than foreign estates or trusts, each of whom own 10 per cent or more of the total combined voting power of all classes of stock of the

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Company ("United States Shareholder"), the Company is a "controlled foreign corporation". This classification generally results in the inclusion of certain income of a CFC in the US Shareholders' US income as a deemed dividend. In addition, under Section 1248 of the Code, gain from the sale or exchange of stock by a holder of common shares who is or was a United States Shareholder at any time during the five year period ending with the sale or exchange may be treated as ordinary dividend income.

### F. Dividends and Paying Agents

Not Applicable

### G. Statement by Experts

Not Applicable

### H. Documents on Display

Micromem files the documents referred to herein and other information with the SEC, the Ontario Securities Commission ("OSC") and the Alberta Securities Commission ("ASC"). You may inspect and copy such material at the public reference facilities maintained by the SEC at Room 1024, 450 Fifth Street, N.W., Washington, D.C. 20549, as well as at the SEC's regional offices at 500 West Madison Street, Suite 1400, Chicago, Illinois 60661 and the Woolworth Building, 233 Broadway, New York, New York 10279. You may also obtain copies of such material from the SEC at prescribed rates by writing to the Public Reference Section of the SEC, 450 Fifth Street, N.W., 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 [www.sec.gov](http://www.sec.gov) that contains reports, proxy statements, information statements and other material that are filed through the SEC's Electronic Data Gathering, Analysis and Retrieval ("EDGAR") system. Documents filed with the OSC and the ASC can be accessed through an Internet website at [www.sedar.com](http://www.sedar.com) that contains reports, proxy statements, information statements and other material that are filed through the System for Electronic Document Analysis and Retrieval ("SEDAR").

Information about Micromem is also available on its website at [www.micromeminc.com](http://www.micromeminc.com). Such information on its website is not part of this Form 20-F.

### I. Subsidiary Information

Not Applicable

## ITEM 11. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not Applicable

## ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

Not Applicable

## PART II

### ITEM 13. DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES

Not Applicable

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

Not Applicable

### ITEM 15. CONTROLS AND PROCEDURES

(a) *Disclosure controls and procedures.* The Company's Chief Executive Officer and Chief Financial Officer have evaluated the effectiveness of its disclosure controls and procedures within the 90 days prior to the date of filing of this Annual Report on Form 20-F. Based upon such review, the Chief Executive Officer and Chief Financial Officer have concluded that the Company has in place appropriate controls and procedures designed to ensure that information required to be disclosed by the Company in the reports it files or submits under the Securities Exchange Act of 1934, as amended, and the rules thereunder, is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms. There have been no significant changes in our disclosure controls or in other factors that could significantly affect disclosure controls subsequent to the date of evaluation, including any corrective actions taken with regard to significant deficiencies and material weaknesses.

(b) *Internal controls.* Since the date of the evaluation described above, there have not been any significant changes in the Company's internal controls or in other factors that could significantly affect those controls.

## PART III

### ITEM 16.

Not applicable.

### ITEM 16A. AUDIT COMMITTEE FINANCIAL EXPERT

Our Board of Directors has determined that a member of our Board of Directors, David Sharpless, is an audit committee financial expert.

### 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.

### 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 annual financial statements for the years ended October 31, 2003 and 2002, and fees billed for other services rendered by our auditors including our offerings of securities and tax services:

2003

2002 Audit Fees \$46,359 \$53,143

ITEM 17. FINANCIAL STATEMENTS

The financial statements required by Item 17 appear commencing on the next page:

Consolidated Financial Statements  
(Expressed in United States dollars)

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

October 31, 2002

## AUDITORS' REPORT

To the Shareholders of  
Micromem Technologies Inc.

We have audited the consolidated balance sheet of Micromem Technologies Inc. (a Development Stage Company) as at October 31, 2002 and the consolidated statements of operations and deficit, cash flows and shareholders' equity for the year ended October 31, 2002 and for the cumulative period from September 3, 1997 to October 31, 2002. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with Canadian and United States generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, these consolidated financial statements present fairly, in all material respects, the financial position of the Company as at October 31, 2002 and the results of its operations and its cash flows for the year then ended and for the cumulative period from September 3, 1997 to October 31, 2002 in accordance with Canadian generally accepted accounting principles.

As discussed in note 3 to the consolidated financial statements, during 2002 the Company changed its method of accounting for patents and trademarks.

The financial statements as at October 31, 2001 and for the year then ended and for the cumulative period from September 3, 1997 to October 31, 2001 were audited by other auditors who expressed opinions without reservation on those statements in their reports dated December 20, 1999 and November 16, 2001.

Toronto, Canada,  
January 27, 2003.

/s/ Ernst & Young LLP

Chartered Accountants

## COMMENTS BY AUDITORS FOR U.S. READERS ON CANADA-U.S. REPORTING DIFFERENCE

In the United States, reporting standards for auditors require the addition of an explanatory paragraph (following the opinion paragraph) when the financial statements are affected by conditions and events that cast substantial doubt on the Company's ability to continue as a going concern, such as those described in note 2 to the consolidated financial statements. Our report to the shareholders dated January 27, 2003 is expressed in accordance with Canadian reporting standards which do not permit a reference to such events and conditions in the auditors' report when these are adequately disclosed in the consolidated financial statements.

Toronto, Canada,  
January 27, 2003.

/s/ Ernst & Young LLP

Chartered Accountants



**KPMG LLP Chartered Accountants**

Telephone (416) 777-8500 Commerce Court West Telefax (416) 777-8818 PO Box 31 Stn Commerce Court  
www.kpmg.ca Suite 3300 Toronto ON M5L 1B2

## **AUDITORS' REPORT TO THE SHAREHOLDERS**

We have audited the consolidated balance sheets of Micromem Technologies Inc. (a Development Stage Company) as at October 31, 2000 and 1999 and the consolidated statements of operations and deficit, cash flows and shareholders' equity (deficiency) for the years then ended and for the cumulative period from September 3, 1997 to October 31, 2000. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. The cumulative statements of operations and deficit, cash flows and shareholders' equity (deficiency) for the period from September 3, 1997 to October 31, 2000 include amounts for the period from September 3, 1997 to October 31, 1998 which were audited by other auditors whose report has been furnished to us, and our opinion on the cumulative statements, insofar as it relates to the amounts included for the period September 3, 1997 through October 31, 1998 is based solely on the report of the other auditors.

We conducted our audits in accordance with Canadian generally accepted auditing standards. Those standards require that we plan and perform an audit to obtain reasonable assurance whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation.

In our opinion, based on our audit and the report of other auditors, these consolidated financial statements present fairly, in all material respects, the results of the Company as at October 31, 2000 and 1999 and the results of its operations and its cash flows for the years then ended and for the cumulative period from September 3, 1997 to October 31, 2000 in accordance with Canadian generally accepted accounting principles.

Canadian generally accepted accounting principles vary in certain significant respects from accounting principles accepted in the United States. Application of accounting principles generally accepted in the United States would have affected results of operations for each of the two year period ended October 31, 2000 and shareholders' equity (deficiency) as at October 31, 2000 and 1999 to the extent summarized in note 15 to the consolidated financial statements.

The consolidated financial statements for the year ended October 31, 1998 and the cumulative period from September 3, 1997 to October 31, 1998 were audited by another firm of chartered accountants who expressed an opinion without reservation on those statements in their report dated December 20, 1999.

/s/ KPMG LLP

Chartered Accountants

Toronto, Canada

December 13, 2000, except as  
to note 16(a),(b) and (c) which is as of  
January 19, 2001

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# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

Consolidated Balance Sheet  
(Expressed in United States dollars)  
*[see note 2 –going concern]*

As at October 31

2002

2001

Assets

Current assets:

Cash and cash equivalents \$

983,939

\$

3,556,517

Deposits and other receivables (note 5)

193,131

228,143

1,177,070

3,784,660

Capital assets (note 6)

98,654

336,839

Patents and trademarks (note 7)

307,698

332,971

Royalty rights (note 4 and 11)

—

10,000,000

\$

1,583,422

\$

Liabilities and Shareholders' Equity

Current liabilities:

Accounts payable and accrued liabilities (note 8)

\$

191,519

\$

329,552

Shareholders' equity:

Share capital (note 9):

Authorized:

2,000,000 special preference shares, redeemable, voting

Unlimited common shares without par value

Issued and outstanding:

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46,700,937 common shares (2001 - 45,935,349)

31,073,787

29,642,242

Contributed surplus (note 10)

578,891

2,010,436

Deficit accumulated during the development stage

(30,260,775)

(17,527,760)

1,391,903

14,124,918

Commitments and contingencies (notes 4, 14, 15 and 18)

\$  
1,583,422

\$  
14,454,470

See accompanying notes to consolidated financial statements.

On behalf of the Board:

"Joseph Fuda" (signed)

Director

"Charles Harnick" (signed)

Director



# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Consolidated Statements of Operations and Deficit

(Expressed in United States dollars)

Years ended October 31

	Period from
	September 3,
	1997 to
	October 31,
	2002
	2001
	2000
	2002
Revenue:	
Interest and other income	
	\$
	165,892
	\$
	185,590
	\$
	73

	140,231
	\$
	495,587
Costs and expenses (income):	
Administration	
	347,256
	403,178
	610,173
	1,822,982
Professional fees	
	262,927
	473,653
	1,086,839
	2,394,373
Wages and salaries (note 9(b))	
	562,532
	1,372,375
	3,688,299
	9,225,174
Research and development	
	1,601,624
	2,212,679

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	1,205,777
	5,525,368
Travel and entertainment	
	73,385
	205,757
	255,385
	972,458
Operating leases	
	—
	—
	81,689
	109,412
Loss on sale of investment	
	—
	—
	—
	54,606
Write-down of investment	
	—
	—
	—
	61,020
Write-down of royalty rights (note 11)	
	10,000,000
	—
	—
	75

	10,000,000
Amortization of patents and trademarks	
	31,338
	—
	—
	31,338
Amortization of capital assets	
	40,635
	65,298
	180,928
	299,210
Fees to related parties (note 13(b))	
	—
	—
	186,000
	186,000
Interest expense	
	—
	—
	71,781
	75,027
Unrealized foreign exchange loss (gain)	
	14,747
	(7,009 )
	7,716
	(9,353 )

		12,934,444
		4,725,931
		7,374,587
30,747,615	Loss before other income and income taxes	
		12,768,552
		4,540,341
		7,234,356
	30,252,028 Other income	
		—
		(10,930)
		—
	(10,930) Loss before income taxes	
		12,768,552
		4,529,411
		7,234,356
30,241,098	Provision for (recovery of) income taxes	Current (note 12)
		(35,537)
		30,214
		25,000
	19,677 Net loss for the period	
		12,733,015
		4,559,625
		7,259,356
30,260,775	Deficit accumulated during the development stage, beginning of period	
		17,527,760
		12,968,135

		5,708,779
	– Deficit accumulated during the	development stage, end of period
		\$
		30,260,775
		\$
		17,527,760
		\$
		12,968,135
		\$
	30,260,775	Loss per share - basic and diluted
		\$
		0.27
		\$
		0.10
		\$
		0.19
		\$
0.65	Weighted average number of basic and	diluted shares outstanding
		46,396,799
		44,163,669
		38,763,920
		46,396,799

See accompanying notes to consolidated financial statements.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Consolidated Statement of Cash Flows (Expressed in United States dollars)

Years ended October 31

Period from

September 3,

1997 to

October 31,

2002

2001

2000



2002

Cash flows from operating activities:

Net loss for the period

\$  
(12,733,015)

)		
		\$(4,559,625)
)		
		(7,259,356)
)		
		\$(30,260,775)
)		

Adjustments to reconcile loss for the period to net cash used in operating activities:

Loss (gain) on sale of investment

		—
		(4,796)
)		
		—
		49,810

Write-down of investment

—
—
—

	61,020
Loss (gain) on sale of assets	
	13,292
	(6,134
)	—
	7,158
Write-down of royalty rights	
	10,000,000
	—
	—
	10,000,000
Amortization of patents	

and trademarks

31,338

—

—

31,338

Amortization of capital assets

170,710

200,519

230,927

484,430

Share compensation expense

—

754,125

3,247,721

7,285,696

Non-cash wages and salaries

—

34,000

—

34,000

Change in non-cash working capital items,

net of effects from reverse takeover:

Decrease (increase) in deposits

and other receivables

	35,012
	64,142
)	(276,565
)	(184,534
Increase (decrease) in accounts	

payable and accrued liabilities

	(138,033
)	(139,199
)	71,579

85,475

Net cash used in operating activities

(2,620,696

)

(3,656,968

)

(3,985,694

)

(12,406,382

)

Cash flows from investing activities:



Sale of available-for-sale investment

—

27,000

—

260,641

Capital assets, net

54,183

(150,099

)

(556,955

)

(590,242

)

Patents and trademarks

	(6,065
)	
	(127,652
)	
	(205,219
)	
	(339,036
)	

Royalty rights

	—
	(2,000,000
)	
	—
	(2,000,000
)	

Advance to related party

	—
	—

362,046

—

Net cash provided by (used in)

investing activities

48,118

(2,250,751

)

(400,128

)

(2,668,637

)

Cash flows from financing activities:

Issue of common shares

—

8,221,379

5,574,716

15,478,233

Net proceeds from shareholder loan

—

—

—

544,891

Loan proceeds from Avanticorp

—

—

—

112,031

Rights issue costs

—

	—
	(76,197
)	
	(76,197
)	
Net cash provided by financing activities	

—
8,221,379
5,498,519
16,058,958

Increase (decrease) in cash

and cash equivalents

)

(2,572,578

2,313,660

1,112,697

983,939

Cash and cash equivalents,

beginning of period

3,556,517

1,242,857

130,160

—

Cash and cash equivalents,

end of period

\$

96



983,939

\$

3,556,517

\$

1,242,857

\$

983,939

Supplemental cash flow information:

Interest paid

\$  
1,960  
\$  
—  
\$  
71,781  
\$  
76,987

Income taxes paid

11,508  
46,021  
9,193  
66,722

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## **Consolidated Statement of Cash Flows (continued)**

(Expressed in United States dollars)

Years ended October 31, 2002

Supplemental information on non-cash investing activities:

The following transactions are considered to be non-cash transactions and have been excluded from the consolidated statement of cash flows:

During fiscal 2001, the Company issued 2,007,831 common shares, being the equivalent of \$8,000,000, in respect of closing of the asset purchase agreement as described in note 4.

During fiscal 2001, common shares having a value \$1,647,703 (2000 - \$4,206,447) were issued pursuant to compensation agreements.

See accompanying notes to consolidated financial statements.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

Consolidated Statement of Shareholders' Equity  
(Expressed in United States dollars)

Deficit

Accumulated

Deferred

during

Number of

Share

Contributed

share

development

shares

Capital

surplus

compensation

stage

Micromem share capital, October 31, 1998

3,490,643

\$

—

\$

—

\$

—

\$

—

Exercise of director's stock options

490,000

—

	-
	-
	-
Pageant share capital, October 31, 1998	-
	-
	\$
	1
	\$
	-
	\$
	-
	\$
	-
Net loss for the year	-
	-
	-
	-
	-
	(500,992 )

Common shares of Pageant, December 4, 1998

	-
	4,999
	-
	-
	-
Assigned fair value of net assets (note 3(b)(iv))	32,000,000
	549,140
	-
	-
	-
Micromem share capital, September 11, 1999	35,980,643
	554,140
	-
	-
	(500,992 )
	104





cash, May 17, 1999

350,000

1,050,000

—

—

—

Shareholder loan forgiven (note 10)

—

—

544,891

—

—

Exercise of stock options for cash

100,000

106

	300,000
	—
	—
	—
Net loss for the year	—
	—
	—
	—
	—
	(5,207,787 )
Balance, October 31, 1999	36,551,319
	2,068,193
	544,891
	—

(5,708,779 )

Exercise of common share purchase warrants

for cash

182,087

274,717

—

—

Exercise of stock options for cash

100,000

300,000

108

	-
	-
Deferred share compensation (note 13(a))	-
	-
	-
	2,711,881
	(453,219
	)
	-
Private placement of common shares for	

cash, February 10, 2000

2,000,000

5,000,000

Common shares issued pursuant to

Compensation agreements, March 15, 2000

901,110

4,206,447

	-
Net loss for the year	-
	(7259,356 )
Balance, October 31, 2000	39,734,516
	11,849,357
	3,256,772
	(453,219
)	(12,968,135 )
Exercise of common share purchase warrants	

for cash	362,450
	554,655
Common shares issued under the rights offering, November 20, 2000	304,674
	1,119,058
	—
	—
	—
Exercise of stock options for cash	800,000
	112



	2,400,000
	—
	—
	—
Deferred share compensation (note 13(a))	—
	—
	(453,219)
)	
453,219	
Stock-based compensation (note 9 (b))	—
	34,000

Exercise of director's stock options

for cash, January 17, 2001

714,686

71,469

-

-

-

Common shares issued pursuant to compensatory

-

-

stock options, at January 17, 2001 (note 13 (a))

—

—

1,581,242

(1,581,242)

Adjustment-share compensation

Expenses (note 13 (a))

—

—

(677,420)

115

—  
—  
Common shares issued pursuant to compensation

agreement, January 23, 2001 (note 13 (a)) 11,192

66,461

—  
—  
—  
Private placement of common shares for

cash, March 13, 2001

2,000,000

4,000,000

—

—

—

Common shares issued under the asset purchase

agreement to Estancia Limited, March 14, 2001	2,007,831
	8,000,000
	—
	1,431,545
	—
Compensation shares due but not issued (note 13 (a))	—
	—
	—
	—
	—
	—
Net loss for the year	—

(4,559,625 )

Balance, October 31, 2001

45,935,349

29,642,242

2,010,436

(17,527,760 )

Shares issued pursuant to compensatory

agreement, March 26, 2002 (note 13 (a))

	765,588
	1,431,545
)	(1,431,545
Net loss for the year	-
	-
	-
(12,733,015 )	
Balance, October 31, 2002	46,700,937
	\$
	31,073,787
	578,891
	120





-30,260,775

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 1. Nature of Business:

Micromem Technologies Inc. ("Micromem" or the "Company") is a corporation incorporated under the laws of the Province of Ontario, Canada. By Articles of Amendment dated January 14, 1999, the Company changed its name from Avanticorp International Inc. to Micromem Technologies Inc. On January 11, 1999, the Company acquired all the outstanding shares of Pageant Technologies Inc. ("Pageant"), a company subsisting under the laws of Barbados. This acquisition, as described in note 3(b), was recorded as a reverse takeover under Canadian generally accepted accounting principles ("Canadian GAAP").

The Company currently operates in a single segment as a developer of non-volatile magnetic memory technology. To October 31, 2002, the Company has not generated significant revenue and is devoting substantially all its efforts to the development of its technologies. Accordingly, for financial reporting purposes, the Company is a development stage enterprise and, through its wholly-owned subsidiaries, is engaged in the development and testing of its non-volatile memory technologies.

### 2. Going Concern:

These consolidated financial statements have been prepared on the "going concern" basis, which presumes that the Company will be able to realize its assets and discharge its liabilities in the normal course of business for the foreseeable future.

The Company has incurred substantial losses in its development stage and is still in the development stage. It will be necessary to raise additional funds for the continuing development, testing and commercial exploitation of its technologies. The sources of these funds have not yet been identified and there can be no certainty that sources will be available in the future.

The Company's ability to continue as a going concern is dependent upon completing the development of its technology for a particular application, achieving profitable operations, obtaining additional financing, and successfully bringing its technologies to the market. The outcome of these matters cannot be predicted at this time. The consolidated financial statements have been prepared on a going concern basis and do not include any adjustments to the amounts and classifications of the assets and liabilities that might be necessary should the Company be unable to continue in business.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 3. Summary of significant accounting policies:

These consolidated financial statements have been prepared in accordance with Canadian GAAP and are stated in United States dollars. These principles are also in conformity in all material respects with United States generally accepted accounting principles ["U.S. GAAP"] except as described in note 17 to the consolidated financial statements. The most significant accounting policies are as follows:

#### (a) Principles of consolidation

These consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries, Memtech International Inc., Memtech International (USA) Inc., Micromem Technologies B.V., Micromem Technologies S.p.A., Pageant Technologies Inc. and Pageant Technologies (U.S.A.) Inc. All significant intercompany balances and transactions have been eliminated upon consolidation.

#### (b) Basis of presentation:

On January 11, 1999, the Company issued 32,000,000 common shares and 1,000,000 warrants to acquire all of the issued and outstanding shares of Pageant. On that date, the total number of the Company shares outstanding was 3,980,643 shares. As a result of this transaction, the shareholders of Pageant owned 88.9% of the outstanding common shares of the Company and, accordingly, the purchase of Pageant was accounted for as a reverse takeover transaction.

Application of reverse takeover accounting results in the following:

(i) the consolidated financial statements of the combined entity are issued under the name of the legal parent, Micromem, but are considered a continuation of the financial statements of Pageant, the legal subsidiary;

(ii) as Pageant is deemed to be the acquirer for accounting purposes, its assets and liabilities are included in the consolidated financial statements at their historical carrying values;

(iii) the comparative financial statements for the period from September 3, 1997 to October 31, 1998 are those of Pageant;

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 3. Summary of significant accounting policies (continued):

(iv) control of the assets and operations of the Company is deemed to be acquired by Pageant effective January 11, 1999. For purposes of this transaction, the deemed consideration is \$549,140 ascribed to the net assets of the Company outstanding immediately prior to the business combination; and

(v) Pageant became a wholly-owned subsidiary of the Company. For accounting purposes, at January 11, 1999, the outstanding shares of the Company, the continuing consolidated entity, consisted of the number of Micromem Shares issued to that date with an assigned value equal to the share capital of the continuing consolidated entity at that date as computed below.

The transaction was accounted for by the purchase method with the results of operations included in the financial statements from the date of acquisition. Details of the Company's net assets acquired and the assigned fair values of net assets at acquisition are as follows:

Cash

\$

168,084

Non-cash current assets

115,629

Investments

371,471

655,184

Less current liabilities

106,044

Assigned fair value of net assets

\$

549,140

(c) Use of estimates:

The preparation of consolidated financial statements in conformity with Canadian GAAP 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 revenue and expenses during the reporting period. Actual results could differ from those estimates.

(d) Cash and cash equivalents:

Cash and cash equivalents consist of all bank accounts and all highly liquid investments with original maturities of three months or less at the date of purchase.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 3. Summary of significant accounting policies (continued):

(e) Capital assets:

Capital assets are recorded at cost less accumulated amortization. Amortization is provided on capital assets on a straight-line basis for a period of up to three years. Capital assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. When circumstances dictate, an impairment loss is calculated as equal to the excess of the carrying value of the assets over their undiscounted estimated future net cash flow.

(f) Patents and trademarks:

Effective November 1, 2001, the Company changed its accounting policy for patents and trademarks to be recorded at cost less accumulated amortization which is provided on a straight-line basis over ten years. In prior years the Company accounted for its patents and trademarks at cost and amortization was to commence on an appropriate basis to charge off the cost over the future benefit, not exceeding the legal life, when sales commence. There was no material impact on prior years consolidated financial statements and accordingly, the comparative consolidated financial statements have not been restated.

For the year ended October 31, 2002, the change in accounting policy resulted in an increase in amortization expense and net loss by \$31,338 and there was no material impact on net loss per share.

Patents and trademarks are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. When circumstances dictate, an impairment loss is calculated as equal to the excess of the carrying value of the assets over their undiscounted estimated future net cash flow.

(g) Research and development expenses:

Research costs are expensed in the period incurred. Development expenses are expensed as incurred unless they meet the criteria for deferral and amortization under Canadian GAAP. The Company has determined that no development costs have met these criteria at the financial reporting date.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 3. Summary of significant accounting policies (continued):

(h) Stock-based compensation:

The Company has a stock-based compensation plan, which is described in note 9. Stock-based compensation is recognized by the intrinsic value method, whereby compensation is recorded to the extent that the exercise price is not based on the market value of the Company's common shares at the date of grant. Any compensatory benefit recorded is recognized initially as deferred compensation in the consolidated statements of shareholders' equity, and then charged against income over the contractual or vesting period.

(i) Income taxes:

The Company accounts for income taxes by the asset and liability method. Under the asset and liability method, future tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Future tax assets and liabilities are measured using substantively enacted tax rates and laws that are expected to apply when the asset is realized or the liability settled. To the extent that it is not considered to be more likely than not that a future income tax asset will be realized, a valuation allowance is provided.

(j) Foreign currency translation:

The functional currency of the Company is the United States dollar. The Company's wholly-owned subsidiaries are integrated foreign operations and therefore, the Company uses the temporal method whereby monetary assets and liabilities are translated into Canadian dollars using the rate of exchange at the consolidated balance sheet dates. Non-monetary assets and liabilities are translated at historical rates. Revenue and expenses are translated at rates of exchange prevailing at the transaction dates. Gains or losses resulting from translation are included in the determination of net loss for the period.

# **MICROMEM TECHNOLOGIES INC.**

(A DEVELOPMENT STAGE COMPANY)

## **Notes to Consolidated Financial Statements**

(Expressed in United States dollars)

October 31, 2002

### **3. Summary of significant accounting policies (continued):**

The Company's monetary assets and liabilities denominated in foreign currencies are translated into United States dollars at the exchange rate in effect at the consolidated balance sheet dates. Non-monetary assets and liabilities that are denominated in currencies other than United States dollars are translated into United States dollars using the historical rate of exchange in effect on the date the transaction occurred. Revenue and expense items are translated at the exchange rate in effect at the date of the transaction. Resulting exchange gains or losses are included in net loss for the period.



# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 4. Acquisition of royalty rights and remaining interest in technology from Estancia Limited

On December 9, 2000, the Company and its subsidiary, Pageant, entered into an Asset Purchase Agreement (the "Agreement") with Estancia Limited ("Estancia") and Richard Lienau ("Lienau") to purchase the remaining 50% interests in the patents which the Company did not own, and a 40% gross profit royalty ("Estancia Royalty"), in respect of certain ferromagnetic memory technology known as VEMRAM (previously known as MAGRAM) and covered by U.S. Patent #5,295,097 and the related patent applications (the "VEMRAM Patents") described in the agreement and all rights (the "VEMRAM Technology") held by Estancia and Lienau under the Joint Ownership and Licensing Agreement dated September 17, 1997 among Estancia, Lienau and Pageant. Under the terms of the Agreement:

(i) the Company would be required to pay a maximum purchase price of \$50,000,000 to Estancia as follows:

(a) \$10,000,000 was paid on closing (after receipt of regulatory approvals), in the form of \$8,000,000 in common shares of the Company ("Micromem Shares") (based on the close price on the closing date) and \$2,000,000 in cash;

(b) \$20,000,000 if and when either (i) certification is received from Honeywell Federal Manufacturing & Technologies ("Honeywell") and that fully integrated, randomly addressable memory matrices of the Technology have met certain stipulated performance standards, or (ii) the Company or any of its affiliates executes a definitive agreement for the sale or licensing of the Technology to an arm's length third party for any commercial purposes other than testing or evaluation of the Technology; payable in the form of cash and Micromem Shares to be determined by Pageant provided that a minimum of 50% of the \$20,000,000 shall be paid in Micromem Shares valued at the close of trading on the date of receipt of such certification, sale or licensing; and

(c) \$20,000,000 if and when the Company or any of its affiliates executes a definitive agreement for the sale or licensing with respect to any technology (including the Technology) owned by the Company to an arm's length third party for any commercial purposes other than testing or evaluation of the technology, payable in the form of cash and Micromem Shares to be determined by Pageant provided that a minimum of 50% of the \$20,000,000 shall be paid in Micromem Shares valued at the close of trading on the date of execution of such sale or licensing.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 4. Acquisition of royalty rights and remaining interest in technology from Estancia Limited

Limited (continued):

(ii) In the event that the amounts contemplated by 4(i)(b) and/or (c) above are not payable to Estancia by the third anniversary date of the closing date and provided that Estancia and Lienau are not in material breach of the terms and conditions of this agreement, Micromem shall be deemed to have conveyed and agreed, as of such date, and there shall automatically revert, without further action and notwithstanding any recordation requirements, to Estancia:

(a) an undivided interest equal to 50% of the percentage determined by dividing (i) the remaining unpaid amount due pursuant to 4(i)(b) and/or (c) above by (ii) \$50,000,000 (the "Final Payment Percentage Balance") in the VEMRAM Patents; and

(b) an undivided interest ("Royalty") equal to 40% of the Final Payment Percentage Balance in:

(1) the gross profit, less expenses agreed to by the parties, for each license of the VEMRAM Patents sold or otherwise transferred by Pageant; and

(2) the amount of all royalties received by Pageant as a result of the license or sale of the VEMRAM Patents less reasonable expenses directly related to obtaining of said royalties.

Estancia has a first charge security interest against the assets of Pageant's wholly-owned subsidiary which holds a 40% interest in the VEMRAM Patents and a 32% interest in the Royalty.

The Company paid \$2,000,000 in cash and issued 2,007,831 shares, being the equivalent of \$8,000,000, the first installment payable under the terms described above, on approval by its shareholders in the annual shareholder meeting held on March 14, 2001. The amount of \$10,000,000 paid in the form of cash and shares, has been recorded as royalty rights in these consolidated financial statements. During fiscal 2002, the amount was written-down to nil (note 11).

The consideration noted in note 4(i)(b) and (c) above will be recorded when the milestones triggering the Company's obligations to pay said consideration, as described in the agreement, have been achieved.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 5. Deposits and other receivables:

2002	2001	Sales tax recoverable			
\$ 11,048	\$ 7,613	Deposits (notes 14(a))	131,305	161,138	Other receivables \$ 50,778
			\$ 193,131	\$ 228,143	59,392

### 6. Capital assets:

2001	Additions	Disposal	2002		
Cost:					
\$					
48,968					
\$					
—					
\$					
31,536					
\$					
17,432					
			Furniture and fixtures	508,109	28,580
				329,536	207,153
					Computers and equipment
\$					
557,077					
\$					

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28,580

\$

361,072

\$

224,585

2002	2001	Net book value: \$	3,831	\$	31,945	Furniture and fixtures	94,823	94,823
		Computers and equipment	\$	98,654	\$	336,839		

Included in research and development expenses is \$130,075 (2001 - \$135,221, 2000 - \$49,999) of amortization expense. Amortization expense recognized on computers and equipment for the year ended October 31, 2002 includes an impairment loss of nil (2001 - nil, 2000 - \$140,000).

**MICROMEM TECHNOLOGIES INC.**  
(A DEVELOPMENT STAGE COMPANY)

**Notes to Consolidated Financial Statements**

(Expressed in United States dollars)

October 31, 2002

7. Patents and trademarks:

Accumulated

net book

As at October 31, 2002

cost

amortization

value

Patents

\$

292,939

\$

26,918

\$

266,021

Trademarks

46,097

4,420

41,677

\$

339,036

\$

31,338

\$

307,698

Accumulated

net book

As at October 31, 2001

cost

amortization

value

Patents

\$

286,014

\$

—

\$

286,014

Trademarks

46,957

135

-

46,957

\$

332,971

\$

-

\$

332,971

The Company, through its subsidiaries, has other pending patent applications relating to its memory technologies and the costs relating to legal and filing fees are capitalized as patents. The Company has applied to register the trademarks MAGRAM™, VEMRAM™, Micromem™ and HEMRAM™ in a number of countries.

**8. Accounts payable and accrued liabilities:**

2002	2001	Trade and other payables \$ 191,519 \$ 325,359	Payroll \$ – \$ 4,193
------	------	--	-----------------------

**MICROMEM TECHNOLOGIES INC.**

(A DEVELOPMENT STAGE COMPANY)

**Notes to Consolidated Financial Statements**

(Expressed in United States dollars)

October 31, 2002

**9. Share capital:**



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(a) Authorized:

2,000,000 special preference shares, redeemable, voting. Unlimited common shares without par value.

(b) Stock option plans:

The Company has a fixed stock option plan. Under the Company's Stock Option Plan (the "Plan"), the Company may grant options for up to 13,000,000 shares of common stock to directors, officers, employees or consultants of the Company and its subsidiaries. Under the Plan, 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. Prior to fiscal 1999, the Company did not have a stock option plan.

A summary of the status of the Company's fixed stock option plan as at October 31, 2002, 2001 and 2000 and changes during the years ending on those dates is as follows:

2002

2001

2000

Weighted

Weighted

Weighted

average

average

average

Shares in

exercise

Shares in

exercise

Shares in

exercise

thousands

price

thousands

price

thousands

price

Outstanding, beginning of year

\$

7,370

\$

4.80

3,550

\$

6.00

900

\$

3.00

Granted

—

—

6,560

4.19

	2,750
	6.87
Forfeited/expired	
	(1,990
	6.23
	(1,940
)	
	5.65
	-
	-
Exercised	
	-
	-
	-800
	3.00
	(100
)	
	3.00

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Outstanding, end of year

	\$
	5,380
\$	
	4.27
	7,370
\$	
	4.8
	3,550
\$	
	6.00

Options exercisable at year end

2,995

3,130

2,225

Weighted average fair value of

options granted during the year

-

\$

1.84

\$

3.89

## MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

### Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

#### 9. Share capital (continued):

The following table summarizes information about fixed stock options outstanding as at October 31, 2002:

Options outstanding

Options exercisable

Weighted

average

Weighted

Weighted

Actual

remaining

average

average

exercise

Number

contractual

exercise

Number

exercise

price

outstanding

life (in years)

price

exercisable

price



\$

2.20

60,000

0.42

\$

2.20

60,000

\$

2.20

3.125

1,000,000

0.25

3.125

1,000,000

3.125

3.1875

500,000

0.31

3.1875  
500,000  
3.1875  
3.19  
2,285,000  
3.04  
3.19  
—  
3.19  
7.06  
1,535,000  
2.34  
7.06  
1,435,000  
7.06  
5,380,000

Included in wages and salaries is an amount of nil (2001 - \$34,000, 2000 - nil) related to stock-based compensation on options granted to a consultant of the Company.

(c) Loss per share

Basic loss per share is calculated by dividing net loss [the numerator] by the weighted average number of common shares outstanding [the denominator] during the period. Diluted loss per share reflects the dilution that would occur if outstanding stock options and share purchase warrants were exercised or converted into common shares using the treasury stock method and are calculated by dividing net loss applicable to common shares by the sum of the weighted average number of common shares outstanding and all additional common shares that would have been outstanding if potentially dilutive common shares had been issued.

The inclusion of the Company's stock options and share purchase warrants in the computation of diluted loss per share would have an anti-dilutive effect on loss per share and are therefore excluded from the computation. Consequently, there is no difference between basic loss per share and diluted loss per share.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 10. Contributed surplus:

Ataraxia Corp., the former parent company of Pageant, forgave \$544,891 of indebtedness it was owed during fiscal year 1999. This forgiven debt was treated as contributed surplus, a separate component of shareholders' deficiency, as this balance was between related parties.

### 11. Restructuring and write-down of royalty rights:

On July 29, 2002, the Company restructured its operations by closing its research and development facility and adopted a plan to focus its current resources to outsource its research and development activities as described in note 14 (a). No major costs were associated with this restructuring. The Company is still at the research and development stage. The development of this technology is contingent upon raising additional funds. Currently there is no assurance that Micromem will be able to raise such funds.

As a result of the restructuring, the Company determined that there was significant uncertainty that any amounts that would have been payable to Estancia in the foreseeable future in respect of the Estancia Royalty (that was purchased by Pageant under the Asset Purchase Agreement). Accordingly the Estancia Royalty rights acquired in the amount of \$10,000,000 were written off in the statements of operations and deficit.

### 12. Income taxes:

The Company has non-capital losses of approximately \$4,905,000 available to reduce future taxable income, the benefit of which has not been recognized in these accounts. The tax losses expire as follows:

Other

2002

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Canada

foreign

Total

2006

\$

268,000

\$

-

\$

268,000

2007

1,632,000

108,000

2008

1,740,000

		1,363,000
		-
2009		1,363,000
		1,063,000
		-
2010		1,063,000
		-
		265,000
2011		265,000
		-
		206,000
		206,000
Total assets		\$

4,326,000

\$

579,000

\$

4,905,000

## **MICROMEM TECHNOLOGIES INC.**

(A DEVELOPMENT STAGE COMPANY)

### **Notes to Consolidated Financial Statements**

(Expressed in United States dollars)

October 31, 2002

#### **12. Income taxes (continued):**

Future income taxes reflect the net tax effect of temporary differences between the carrying amount of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of the Company's future tax assets and liabilities as at October 31 are as follows:

Unused capital losses

\$

14,563

Unused non-capital losses

1,348,467

Alternative minimum tax credit

142,091

Research and development credit

118,720

Financing charges

30,020

Tax basis of capital assets in excess of carrying value

58,084

Total future tax assets

\$



1,711,945

Valuation allowance

(1,711,945

)

Net future tax asset

\$

-

2001

Unused capital losses

\$

370,443

Unused non-capital losses

1,568,130

Alternative minimum tax credit

119,475

Research and development credit

98,867

Financing charges

48,161

Total future tax assets

\$

2,205,076

Valuation allowance

(2,205,076

)

Net future tax asset

\$

-

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 12. Income taxes (continued):

The reconciliation of income tax attributable to continuing operations computed at the statutory tax rates to income tax expense is as follows:

2002

Consolidated accounting loss before income taxes

\$

(12,768,552

)

Statutory rates

%

Expected income tax recovery

(4,979,735

)

Permanent differences, write-down of royalty rights

3,650,000

Tax benefit not recognized

1,294,198

\$

(35,537

)

**13. Management compensation and related party transactions:**

[a] The Company has previously entered into the following stock based management compensation arrangements:

(i) Effective November 1, 2001, the Company has terminated Chairman's compensation agreement described in note 13(a)(ii) below and the Chairman's compensation was reduced to \$1.00 per year. (ii) On January 1, 2001, the Company entered into a new employment agreement with the Chairman for a period of five years. Under the terms of this agreement, the Chairman has been retained to provide certain management services to the Company and its subsidiaries. The Company has agreed to issue, under the Agreement, a number of fully paid and non-assessable common shares of the Company equal to 0.5% per quarter of the number of common shares outstanding on the last day of March, June, September and December of each year throughout the term of the agreement. An amount of \$1,431,545 had been accrued for the value of shares, that had been earned but not issued as compensation expense for the year ended October 31, 2001 and treated as contributed surplus within shareholders' equity. On March 26, 2002, the Company issued 765,589 shares relating to compensation for the period ended October 31, 2001, valued at \$1,431,545.

## MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

### Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

#### 13. Management compensation and related party transactions (continued):

(iii)

On January 2, 2000, the Company entered into an Employee and Option Agreement with the Chairman of Micromem which was approved by the shareholders at a meeting held on June 29, 2000.

As remuneration for the services to be rendered by the Chairman during the period from January 2, 2000 to January 2, 2001, the Company granted the Chairman an irrevocable option to acquire from the Company a number of fully paid and non-assessable common shares of the Company equal to 1.75% of the number of common shares of the Company that will be outstanding on the close of business on January 2, 2001, at a price of \$0.10 per incentive share.

Pursuant to this agreement, deferred share compensation for the Chairman for the period from January 2, 2000 to January 2, 2001 in the amount of \$2,711,881, representing an estimate of the intrinsic value of the options to be granted on January 2, 2001, was recorded as contributed surplus within shareholders' equity. Of this amount, \$2,258,592 was recorded as compensation expense in the year ended October 31, 2000. On January 17, 2001, the Chairman exercised his options and 714,686 common shares of the Company were issued with an aggregate value of \$1,581,242, which was recorded as share capital. The difference between the actual value of the shares and the estimate recorded in 2000, of \$677,420 was recorded as a recovery of compensation expense in the year ended October 31, 2001.

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(iv) On January 29, 1999 and March 10, 1999, the Company entered into two consulting agreements with the Chairman and a company controlled by the former President, respectively. Consideration for services rendered by the Chairman and the former President were settled by issue of common shares. The Company issued 454,292 shares to the Chairman and 448,452 shares to a company controlled by the former President during fiscal 2000. The balance of 11,192 shares (\$66,461) due to a company controlled by the former President were issued in fiscal 2001.

[b] In the normal course of business, the Company enters into transactions with companies under common control. Such items are measured at agreed upon exchange amounts and included in the consolidated financial statements. During fiscal 2000, The Company paid \$186,000 to legal firms in which directors of subsidiaries are partners.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 14. Commitments:

#### (a) Research Collaboration Agreement

On October 24, 2002, Micromem entered into a two year Research Collaboration Agreement with Materials and Manufacturing Ontario ("MMO"), a not-for-profit organization funded by the provincial government, University of Toronto ("U of T") and a Researcher employed by the U of T, to fund the research on Magnetic Structure development for Hall effect memory devices.

Under the terms of the agreement, the Company has committed to contribute \$87,432 (Cdn.\$136,000) and \$18,000 (Cdn.\$28,000) in cash and in-kind contribution, respectively, per year to fund the research. As at October 31, 2002, the Company has contributed \$87,432 in cash against this commitment which has been included in deposits and other receivables as at year end.

In addition, Micromem will have sublicensing rights for the use of any new technology developed ("Technology Developed") under this research with an annual royalty payable in perpetuity to MMO based on a percentage of revenues from the sale of products incorporating the Technology Developed.

#### (b) Technology development agreement

On March 14, 2001, the Company's subsidiary, Pageant, entered into a three year Technology Development agreement with Estancia and Lienau to continue the development of the MAGRAM Technology. Under the terms of the agreement, Pageant has committed to pay Estancia \$215,000 per year, payable on a monthly basis in arrears, and committed to incur expenditures in connection with the MAGRAM development expenses of up to a maximum of \$500,000 per agreement year.

On April 23, 2002, the Technology Development agreement was amended to extend its term for an additional 8-month period and to reduce the amount payable to Estancia under this agreement to \$107,000 per year, payable monthly in arrears for the period commencing on June 1, 2002 through December 31, 2002 and for the extended period from March 9, 2004 through to November 9, 2004.



**MICROMEM TECHNOLOGIES INC.**  
(A DEVELOPMENT STAGE COMPANY)

**Notes to Consolidated Financial Statements**

(Expressed in United States dollars)

October 31, 2002

(c) Operating leases

The Company has operating lease commitments which expire in 2006, in respect of its head office. The future minimum annual lease payments are approximately as follows:

2003	\$
	93,500
2004	
	93,500
2005	
	93,500
2006	

15,500

296,000

**15. Contingencies:**

Pageant Technologies (U.S.A.) Inc. has been named as a defendant in legal actions relating to tenant improvements on a leased property, including an action claiming dues of approximately \$880,000 alleging breach of contract under a construction contract entered into by Clear Blue Laboratories, Inc. ["Clear Blue"]. The landlord of the property is also claiming damages from Pageant Technologies (U.S.A.) Inc. Pageant Technologies (U.S.A.) Inc. assigned its rights under the lease to Clear Blue, however Pageant Technologies (U.S.A.) Inc. is allegedly obligated to pay the lease payments should the assignee default under the contract. The landlord is claiming damages of approximately \$887,000.

The outcome of these actions is uncertain and Pageant Technologies (U.S.A.) Inc. is vigorously defending all actions in which it is named as a defendant. It is, therefore, not possible to provide an estimate of the financial effects, if any, of the actions. No losses related to these actions have been accrued in these consolidated financial statements. It is possible that the outcome of these claims could represent a material amount.

In the normal course of business, the Company and its subsidiaries are involved in various legal actions. In management's opinion, the ultimate disposition of these actions, individually or in aggregate, will not have a material adverse effect on the financial condition of the Company.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 16. Financial instruments:

#### (a) Fair values

The fair values for all financial assets and liabilities are considered to approximate their carrying values due to their short-term nature.

#### (b) Foreign items

The financial statements include balances/transactions that are denominated in foreign currencies as follows:

Canadian Dollar

Euro

Assets

\$

172,356

€

	111,201
Liabilities	
	59,233
	97,972
Income	
	-
	792
Expenses	
	1,109,510
	122,203

**17. Reconciliation between Canadian GAAP and U.S. GAAP:**

The Company's consolidated financial statements have been prepared in accordance with Canadian GAAP which, in the case of the Company, conform in all material respects with U.S. GAAP, except as follows:

(a) Stock based compensation:

The Company has chosen to account for employee stock-based compensation using the intrinsic value method prescribed in Accounting Principles Board Opinion ("APB") No. 25, Accounting for Stock Issued to Employees. Under this method, compensation expense is recorded if the market value exceeds the exercise price at the date of grant. The compensation expense, if any, is recognized, at the date of option grants or when the option shares are earned when future performance is required, in the consolidated statements of operations and deficit.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 17. Reconciliation between Canadian GAAP and U.S. GAAP (continued):

For the purposes of reporting under U.S. GAAP, companies are required under SFAS 123 to calculate and disclose on a pro forma basis, the compensation expense related to the fair value of the stock options granted during the year in the notes to the consolidated financial statements. Accordingly, for the purpose of reporting under U.S. GAAP, the Company's net loss applicable to common shares and loss per common share would be increased to the pro forma amounts as follows:

	Period from
	September 3,
	1997 to
	October 31,
	2002
	2001
	2000
	2002
Loss applicable to	

common shares:

Reported

\$

12,733,015

\$

4,559,625

\$

7,259,356

\$

30,260,775

Pro forma

14,565,515

9,187,377

14,640,604

46,402,284

Basic and fully diluted

loss per share:

Reported

\$

0.27

\$

0.10

\$

0.19

\$

0.65

Pro forma

0.31

0.21

0.38

1.00

There were no options granted during 2002. The fair values of all options granted during 2001 and 2000 were estimated as of the date of grant using the black-Scholes option pricing model with the following assumptions:



	2002
	2001
	2000
Dividend yield	—
	—%
	—%
Expected volatility	—
	100%
	100%
Risk-free interest rate	—
	3.97% - 5.52%
	4.87% - 6.36%
Expected option life	—
	2 - 3 years
	1 - 4 years

The effects of the pro forma disclosures are not likely to be representative of the effects on reported net income for future years, because options vest over several years and additional awards may be made in future years.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

(b) Statement of comprehensive income (loss):

Comprehensive income (loss) includes all changes in equity during the periods presented except shareholder transactions. For the periods presented, accumulated other comprehensive loss comprises the Company's change in unrealized gain on investment.

For the purpose of reporting under U.S. GAAP the components of comprehensive income and total comprehensive income are reported in the statement of changes in shareholders equity, below the net loss in the statement of operations and in a separate statement of comprehensive income as follows:

Period from

September 3,

1997 to

October 31,

2002

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2001

2000

2002

Net loss

\$

12,733,015

\$

4,559,625

\$

7,259,356

30,260,775

Change in unrealized

gain on investment

-

-

(13,796

)

(13,796

)

Comprehensive loss

\$

12,733,015

\$

4,559,625

\$

7,245,560

\$

30,246,979

As the investment was classified as available-for-sale, the unrealized gain was treated as part of the statement of comprehensive income.

# MICROMEM TECHNOLOGIES INC.

(A DEVELOPMENT STAGE COMPANY)

## Notes to Consolidated Financial Statements

(Expressed in United States dollars)

October 31, 2002

### 18. Subsequent event:

On November 1, 2002 ["effective date"], Micromem has entered into an Infrastructure Agreement with the U of T, to fund the assembly of a facility for research and development and fabrication of Magnetic Memory ("MMF"). The U of T has agreed to use the MMF in connection with, among other things, research to be conducted pursuant to collaborations between Micromem and the U of T.

Under the terms of the agreement, Micromem has committed to contribute \$231,140 (Cdn.\$360,000) in cash to fund the direct costs of MMF. The sum is payable to U of T as follows:

[i]

\$77,047 (Cdn. \$120,000) on execution of agreement, which was paid on November 28, 2002;

[ii]

\$77,047 (Cdn. \$120,000) at end of the two months following the effective date; and

[iii]

\$77,047 (Cdn. \$120,000) at end of the four months following the effective date.

**ITEM 18 FINANCIAL STATEMENTS**

Not Applicable

**ITEM 19. EXHIBITS**

The following exhibits are filed as part of this registration statement and attached hereto:

Exhibit No. 1

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/A filed with the Commission on January 11, 2000).

Exhibit No. 2

Articles of Amendment of Micromem Technologies Inc. dated as of October 17, 2001 amending the Articles of Micromem Technologies Inc. to increase the number of directors to a minimum of three and a maximum of ten and to authorize the directors to set the number of directors within the minimum and maximum

Exhibit No. 3

Articles of Amendment of Micromem Technologies Inc. dated as of June 24, 2002 amending the Articles of Micromem Technologies Inc. to increase the number of directors to a minimum of 3 and a maximum of 12 and to authorize the directors to set the number of directors within the minimum and maximum;

Exhibit No. 4

By-Laws of Micromem Technologies Inc. in effect as of January 11, 2002, (Incorporated herein by reference to the Company's Form 20-F/A filed with the Commission on January 11, 2000);

Exhibit No. 5

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;

Exhibit No. 6\*

Research Collaboration Agreement among Micromem Technologies Inc., the University of Toronto, Dr. Harry Ruda and Materials and Manufacturing Ontario dated October 24, 2002 (referred to in this Annual Report at Item 4.B – Business Overview – Recent Developments); Exhibit No. 7 Asset Purchase Agreement among Micromem Technologies Inc., Pageant Technologies Incorporated, Estancia Limited and Richard Lienau dated December 10, 2000 (referred to in this Annual Report at Item 4.B – Business Overview – Recent Developments), (Incorporated herein by reference to the Company's Form 40-F filed with the Commission on February 2, 2001); Exhibit No. 8 Technology Development Agreement among Pageant Technologies Incorporated, Estancia Limited and Richard Lienau dated March 9, 2001 (referred to in this Annual Report at Item 4.B – Business Overview – Recent Developments), (Incorporated herein by reference to the Company's Form 40-F filed with the Commission on February 2, 2001); Exhibit No. 9 Infrastructure Agreement between Micromem Technologies Inc. and the University of Toronto dated November 1, 2002 (referred to in this Annual Report at Item 4. B - Business Overview - Recent Developments);

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\* Portions of this exhibit have been omitted pursuant to a request for confidential treatment. Exhibit No. 12.1 Officers Certification pursuant to Section 302 of the Sarbanes Oxley Act, 2002. Exhibit No. 12.2 Officers Certification pursuant to Section 302 of the Sarbanes Oxley Act, 2002. Exhibit No. 13.1 Officers Certification pursuant to Section 906 of the Sarbanes Oxley Act, 2002. Exhibit No. 13.2 Officers Certification pursuant to Section 906 of the Sarbanes Oxley Act, 2002. Exhibit No. 14.1 Independent Auditors' Consent

**SIGNATURES**

Pursuant to the requirements of Section 12 of the Securities Exchange Act of 1934, the Registrant certifies that it meets all of the requirements for filing on Form 20-F and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized.

**MICROMEM  
TECHNOLOGIES  
INC.**

By: "Joseph  
Fuda" (signed)

Name: Joseph Fuda

Title: Chief Executive Officer

By: "Antonio  
Lopes" (signed)

Name: Antonio Lopes

Title: Chief Financial Officer

Dated: May 28, 2004.

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[1] VEMRAMä is a trade-mark of Memtech International Inc., a Bahamas corporation wholly-owned by Micromem, and is used under license by Micromem and other corporations affiliated with Micromem.

[2] HEMRAMä is a trade-mark of Memtech International Inc., a Bahamas corporation wholly-owned by Micromem, used under license by Micromem and other corporations affiliated with Micromem.