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Providing  
total customer service  
and technological support  
to its international  
customer base

**└ circo craft**

Circo Craft is the leading independent Canadian manufacturer of printed circuit structures. The Company markets its products and services to major original electronic equipment manufacturers (OEMs) from the telecommunications, computer, automotive and instrumentation industries. Our mission is to be a recognized world-class industry and technology leader by providing our international customer base with quality and manufacturing excellence, and technological innovation.

### **Shareholders' Meeting**

Circo Craft's Annual General Meeting of Shareholders will be held on Wednesday, April 24, 1991 at 11:30 a.m. (EST) at the Four Seasons Hotel, 1050 Sherbrooke Street West, Montréal, Québec, Canada.

## Financial Highlights

| (millions of dollars)                                       | 1990    | % change | 1989   | 1988   |
|---|---------|----------|--------|--------|
| <b>Operations</b>   |         |          |        |        |
| Sales   | \$ 81.3 | (10.4)   | \$90.7 | \$91.4 |
| Operating margin  | 11.9    | (46.9)   | 22.4   | 22.3   |
| Depreciation  | 7.0     | 9.4      | 6.4    | 6.4    |
| Earnings (Loss) before income taxes<br>& extraordinary item | (3.3)   | —        | 8.4    | 6.7    |
| Net earnings (Loss)   | (1.4)   | —        | 1.7    | 4.3    |

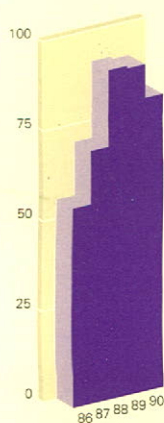
| (millions of dollars)     |         |        |        |        |
|---------------------------|---------|--------|--------|--------|
| <b>Financial Position</b> |         |        |        |        |
| Working capital           | \$ 10.0 | (21.3) | \$12.7 | \$13.8 |
| Shareholders' equity      | 45.7    | (3.0)  | 47.1   | 45.4   |
| Total assets              | 69.9    | 9.0    | 64.1   | 71.9   |

| (in dollars)                              |          |       |        |        |
|---|----------|-------|--------|--------|
| <b>Per Share</b>                          |          |       |        |        |
| Earnings (Loss) before extraordinary item | \$(0.19) | —     | \$0.43 | \$0.36 |
| Net earnings (Loss)                       | (0.11)   | —     | 0.14   | 0.36   |
| Book value                                | 3.79     | (2.8) | 3.90   | 3.76   |

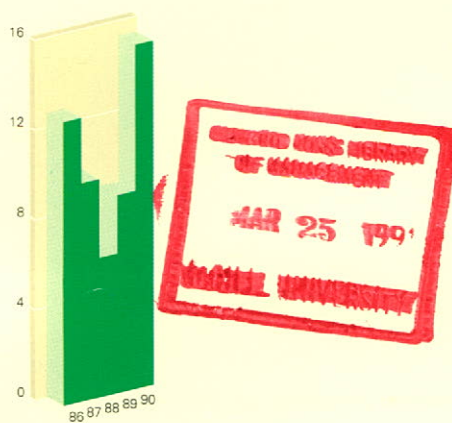
|                    |      |        |      |      |
|--------------------|------|--------|------|------|
| <b>Key Ratios</b>  |      |        |      |      |
| Sales/fixed assets | 1.64 | (25.8) | 2.21 | 2.11 |
| Sales/total assets | 1.16 | (17.7) | 1.41 | 1.27 |
| Current ratio      | 1.95 | (12.9) | 2.24 | 1.93 |

| (millions of dollars)     |         |        |        |        |
|---------------------------|---------|--------|--------|--------|
| <b>Other Statistics</b>   |         |        |        |        |
| Capital expenditures      | \$ 15.3 | 73.9   | \$ 8.8 | \$ 6.2 |
| Cash flow from operations | 3.7     | (66.1) | 10.9   | 11.4   |

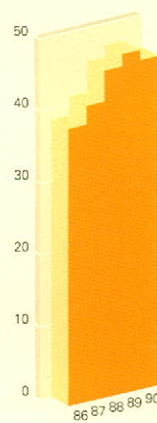
**Sales**  
(millions of dollars)



**Capital Expenditures**  
(millions of dollars)



**Shareholders' Equity**  
(millions of dollars)



Challenging market conditions, combined with certain internal factors, contributed to making 1990 a difficult year for Circo Craft. Sales from continuing operations were \$81.3 million, down 5.6 percent from sales of \$86.1 million for continuing operations in 1989. Total sales of \$90.7 million in 1989, included \$4.6 million from the discontinued microelectronic operations.

Generally weak customer demand engendered additional unused capacity and intensified pressures on printed circuit manufacturers, manifested primarily by aggressive pricing. Major users of printed circuits, faced with their own operating imperatives, reduced delivery lead times, raised quality requirements and generally sought greater levels of service and responsiveness. The situation was compounded by the poor economic environment which disrupted customer ordering cycles, leading end-users to delay or defer purchases.

Circo Craft did achieve manufacturing progress by adjusting operations to manufacture more multilayer products with a higher value-added content. However, severe price pressures caused by keen domestic and international competition also impacted revenues. Coupled with the market constraints were lower manufacturing yields resulting from the start-up of new advanced process technologies used to produce the high density multilayer circuits.

The Company incurred a net loss of \$1,374,000 or 11 cents per common share, after extraordinary item, compared to net earnings of \$1,709,000 or 14 cents per common share in 1989. Before extraordinary item, the loss amounted to \$2,374,000 or 19 cents per share, compared to earnings of \$5,219,000 or 43 cents per share in the previous year. Margins were affected primarily by expenses related to the establishment of the Advanced Technology Centre which incorporates the quick turnaround activities.

Still, without losing sight of our long-term objectives, Circo Craft registered several important achievements crucial to our future: we realigned operations towards greater production of more complex circuitry, notably 6-8-10 multilayer circuits, together with the necessary production and marketing strategies; we undertook the creation of our Advanced Technology Centre. Last, but not least, we launched our longer term strategic plan, "Operation Enterprise".

In addition to receiving renewals of all our various existing supplier certifications for excellence, Circo Craft earned a most coveted new certification, Motorola's "Supplier Award for Excellence". The first tangible result was the three-year \$25 million agreement to supply Motorola with printed circuits for its Automotive and Industrial Electronics Group.

"Operation Enterprise" is the convergence of Circo Craft strategies which brought the company to its present position as one of North America's most highly regarded printed circuit manufacturers. This comprehensive three-year program is at the core of Circo Craft's 1990 decision to increasingly specialize in the manufacture of complex, multilayer products in order to achieve more stable pricing and better margins. "Operation Enterprise" is based on four building blocks: uncompromising commitment to total quality management in all company services supported by applied statistical process controls; increasing specialization in complex multilayer and fine line products; technology and process development to extend applications and production efficiency; and increasing the scope for initiative and autonomy of each manufacturing facility and of each and every employee.

Our continued investments in advanced process technology, devoted primarily to improving quality and manufacturing efficiency at our existing facilities totalled \$15.3 million. Funds were provided from operations and an increase in long-term debt of \$8 million. Circo Craft's investments approximate 19% of sales, one of the highest rates in this capital intensive industry, and considerably above the average of 8%-10%.

Pursuing our long-term strategy and sales thrust for U.S. based customers, we expanded our customer support and technical sales organization to cover strategic regions and market sectors of the industry. We now have seven such field offices which function as the primary link with Circo Craft's international customers. This will enable us to work even more closely with customers, many of which, notably in the telecommunications and computer fields, are focusing on the advantages of expanding opportunities in Europe. To keep abreast of these developments, Circo Craft has also appointed a

marketing and sales representative in Munich, Germany.

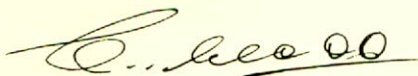
Recognizing that Circo Craft has grown beyond the capacity of the entrepreneurial organization of its early years, we initiated a major search for talent and technological expertise to bring the Company to a new level of operations. Bruce Sorensen, a highly-regarded technologist with many years of management experience in the U.S. printed circuit industry, joined the Company in November 1990, in the newly created position of Executive Vice President and Chief Operating Officer. We broadened our executive team with a director of operations, new general managers for two of our facilities, and augmented our technical capability with the addition of key personnel in engineering, manufacturing and sales. Never before has Circo Craft's management team been better prepared to successfully face the technological challenges of the '90s.

Strategically, we are both well equipped and well positioned to serve our domestic and international customers. Our facilities rank among the most advanced in North America. We have a stable and select customer base and we hold a preeminent supplier position. With our experienced employees, we are fully committed to the teamwork needed to attain our objectives.

Ever growing applications for printed circuitry with increased sophistication and greater capacity are creating new opportunities for six, eight and ten layer circuits. We continue to focus our business towards those customers requiring high volumes of printed circuits with fine lines and tighter geometries, and to developing the modern management practices to meet the challenges.

The realignment of our manufacturing operations is being implemented with the acceleration of our corporate restructuring, in order to mitigate short-term losses and ensure the Company's long-term prosperity. We remain guarded about any early market recovery in view of the current economic recession and international situation. Furthermore, severe global competition for certain products has undercut any real benefit derived thus far from the Canada-U.S. Free Trade Agreement that eliminated tariffs on printed circuit exports since April 1990. Nevertheless, as we continue to improve quality and reduce cycle times, we expect to achieve even higher levels of customer satisfaction and operational effectiveness.

I wish to acknowledge the adaptability and resolve of the dedicated men and women of the Circo Craft team and thank them for their vital contributions during 1990. With "Operation Enterprise" under way, we are counting on their commitment to successfully meet the many future challenges and, in concert with the valued support of our customers and suppliers, strengthen Circo Craft's leadership in high technology printed circuit manufacturing.



**Hans-Karl Muhlegg**  
President and Chief Executive Officer  
February 22, 1991

## Towards Increased Product Complexity

Constant advances in the design and use of printed circuits and the ongoing rationalization of the industry present many new manufacturing challenges. Electronic systems increasingly require higher speed, capacity and reliability thereby generating a rapidly growing demand for multilayer circuits of increased complexity. At the same time, the demand for more complex two and four layer circuits has created a greater need for dedicated high-volume production units with greater manufacturing efficiency.

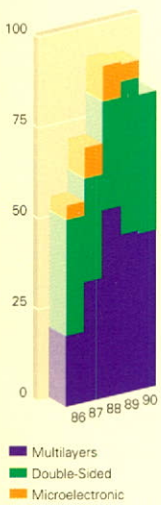
Common to both these directions has been the need to constantly upgrade manufacturing processes with advanced equipment and personnel training. To pursue its goal of industry leadership, to meet these challenges and the "Total Quality" concepts of product development, Circo Craft continued to invest in leading multilayer manufacturing technology and capabilities to support a steady increase in fine line and high density printed circuit fabrication. Also included in capital spending for 1990 was approximately \$2 million for water treatment and control systems as we took another major step in eliminating manufacturing effluent. These expenditures are part of our constant effort to maintain above-standard conditions as normal operating practices at all manufacturing locations.

Just as increasing customer demand for more complex circuit structures spurred the advance of our multilayer and fine line processing capabilities, the faster time-to-market requirements for new product introduction signalled the need for a higher level of customer support. Our impressively equipped Advanced Technology Centre (ATC), designed to meet growing customer demands for early supplier involvement in achieving optimal "manufacturability", will take us a major step in this direction in 1991.

About 70% of the ATC's capacity will be devoted to quick turnaround of prototypes, pre-production series and small volume requirements. The remaining capacity will be used for internal research and development to pursue process and product enhancement for Circo Craft and its customers. Not only will the ATC give us the means to harness and exploit the rapid changes in production and process technology, but it will also be an invaluable business development asset by tangibly demonstrating that Circo Craft is in the forefront of process technology and provides uniquely superior services.

With our Advanced Technology Centre leadership, Circo Craft's goal is to raise the proportion of multilayer circuits to at least 80% of production by 1993, close to half of that being eight layers or more with .005" conductors on the inner and outer layers. Investments in leading-edge processes and a significant increase in production efficiency of higher-layer count printed circuits should result in growth in sales volumes to existing and new customers.

Sales by Product  
(millions of dollars)



Advanced Computer Aided Design systems are essential tools for the development of engineering documentation, providing customers invaluable feedback on designs and product manufacturing.

## An Evolving Industry

Circo Craft is seeking to create new opportunities in a market which is in a constant state of business and technological flux. During the last four years, the technological, market, financial and competitive environment caused the North American printed circuit industry to shrink considerably. Signs are that it will contract further over the next three years as capital requirements, technological and service demands continue to increase.

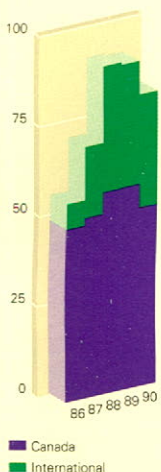
Furthermore, the industry's evolution is such that only a small number of printed circuit manufacturers have the capacity, ability and capital resources to improve supplier position and raise their respective level of performance with clients. In terms of sales volume, only about a dozen North American independents can be compared to Circo Craft and fewer still are direct competitors.

Another major shift has independents now accounting for 68% of production, up from 40% three years ago, due largely to the abandonment of captive OEM manufacturing. Integrated OEMs continue to reduce or disengage from their captive printed circuit manufacturing in response to the challenging market environment. A third trend has seen the industry segmented according to product niches or technology levels that reflect a manufacturer's technological or financial resources, or the choice of an operating orientation.

Anticipating these trends and to respond to customer needs, Circo Craft several years ago began to produce small volumes of more sophisticated multilayer circuits and high density surface mount products. Today, as these markets are projected to grow at above-average rates over the next several years, a vigorous expansion into higher technologies and a broadening of the customer base is now the main focus of our controlled growth strategy.

Consistent with its philosophy, Circo Craft's strategic planning and development in recent years emphasized a steady, high level of investment in leading edge equipment and processes, management and production systems such as MRP II and JIT manufacturing, employee training and development, as well as the decision to opt for a superior product and market niche. Today, Circo Craft is in a position not only to seize opportunities, but also to create them.

**Sales by Geographic Market**  
(millions of dollars)



With proven technologies such as the high speed Hitachi micro-drilling system, Circo Craft has achieved economies of scale and improved product reliability for its customers.

## A Superior Customer Base

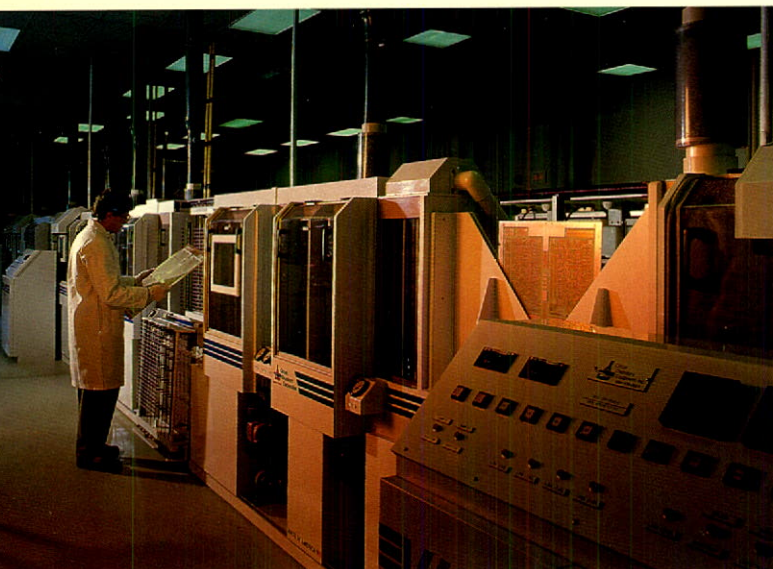
Circo Craft's philosophy is to direct its marketing and sales to a select customer base. Through direct consultation and collaboration with our customers, we have the opportunity to develop a mutual understanding of each other's business and solidify relationships that are of inestimable value for long range planning, capital investment and marketing strategies. The diverse but select customer base also helps to attenuate Circo Craft's exposure to market cyclicity.

Circo Craft transacts with approximately 40 customers, most of them leading names in the fields of computers and peripherals, telecommunications, automotive electronics and industrial instrumentation. Prominent customers include:

|                   |                             |
|-------------------|-----------------------------|
| Digital Equipment | Motorola                    |
| Hewlett-Packard   | Northern Telecom            |
| IBM               | Philips Information Systems |
| Micron Technology | Unisys                      |

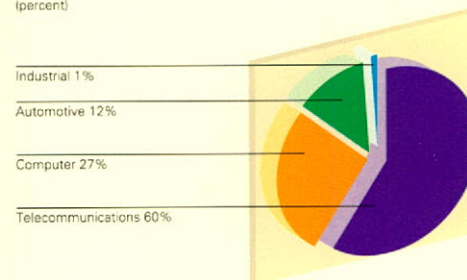
With multinational corporations such as Northern Telecom and Motorola, contracts are accorded by several different divisions which are effectively separate clients, autonomous with respect to requirements, certifications and orders. Several major customers have granted Circo Craft ship-to-stock status, a significant indication of the quality rating of our products as they go directly into a customer's assembly line without incoming inspection. Critical to establishing such relationships is a high level of customer service and satisfaction in adapting to their needs for near-perfect quality, timely delivery and responsiveness.

Dramatic and rapid change both in production and in management techniques will characterize the industry for the balance of the decade. Direct involvement of all our manufacturing personnel is geared to emphasize responsiveness and collaboration with all levels of a customer's organization. Closer consultation with customers will be the hallmark of our success as major OEMs come to rely increasingly on a narrower base of technologically and managerially sophisticated printed circuit manufacturers such as Circo Craft.



Our Advanced Technology Centre's vertical integrated processing line ensures a continuous supply of high-quality fine line etched boards to meet our customers' time-to-market requirements for high technology printed circuits.

**Sales by Market Sector**  
(percent)





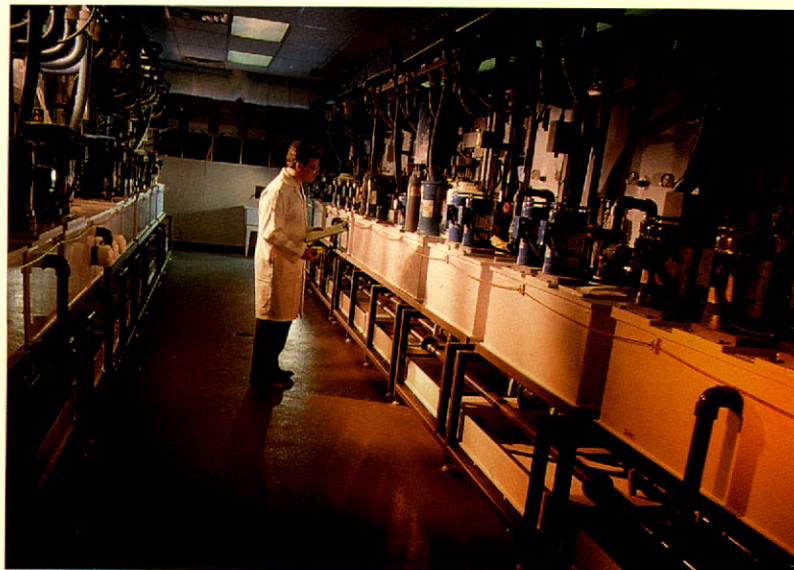
Two vital factors in Circo Craft's quest for ever better quality and competitiveness are the full commitment and extensive skills of all members of our team and their concerted efforts to achieving these goals. Without these, the advanced equipment and complex processes – the tools and techniques that put high levels of performance within human reach – would never achieve full effectiveness.

Extensive training and education remain a high priority at Circo Craft and the core of our human resources development program. In 1990, over 34,000 hours were devoted to training in SPC, JIT manufacturing methods, MRP II and improving middle management's proficiency. This commitment will nearly double in 1991 as we intensify employee certification throughout our operations.

Beyond the development of skills, we are fostering a team spirit and whole-hearted commitment central to achieving a total quality performance. Philosophies and specific methods, such as Total Productive Maintenance, Six Sigma Performance and Cycle Time Reduction, have been introduced to empower employees to influence more actively the quality of the product and increase operational effectiveness throughout the Company.

Yet the demands of technology and the market for even greater progress mean that a great deal remains to be achieved. Implementing Total Quality process methods and its many diverse elements is an ongoing process that, necessarily, must be deliberate and assimilated by every employee, as well as be integrated into each facet of our organization.

Circo Craft's commitment to Total Quality will be endlessly pursued. Total Quality protects and enhances our long-term relationships as "privileged" or "certified supplier" to major electronics' manufacturers. Therein lies the human key to our success.



The automated deep tank gold plating system fulfills our customers' need for precision and durability, key ingredients in our joint quest for Six Sigma performance.

## Board of Directors

**Hans-Karl Muhlegg**  
President and Chief Executive Officer

**Renato Cervini**  
President,  
Cernato Holdings Inc.

**Norman Thorne Currie, f.c.a.\***  
President and Chief Executive Officer,  
Maple Leaf Mills

**Peter David Kyle, c.a.\***  
Chairman and Chief Executive Officer,  
JM Asbestos Inc.

**Hubert T. Lacroix**  
Partner,  
McCarthy Tétrault  
(barristers and solicitors)

**Jean-Guy Fontaine, c.g.a.\***  
Vice President, Finance  
and Administration,  
Cerico Investments Inc.  
and Secretary of Circo Craft

\* Member of the Audit Committee

## Officers

**Hans-Karl Muhlegg**  
President and Chief Executive Officer

**Bruce W. Sorensen**  
Executive Vice President and  
Chief Operating Officer

**Gerhard Kastner**  
Vice President, Operations

**Jean-Guy Fontaine, c.g.a.**  
Corporate Secretary



(From left to right) Henri Mikhael, Director of Operations, Gerhard Kastner, Vice President, Operations and Bruce Sorensen, Executive Vice President and Chief Operating Officer, in the Advanced Technology Centre.

**Annual Information Form  
Financial Statements  
and Management's Discussion  
and Analysis**

For the fiscal year ended December 31, 1990  
Dated February 22, 1991

**Table of Contents**

|         |  |    |
|---------|--|----|
| Item 1. | <b>Incorporation</b>   | 2  |
| Item 2. | <b>General Development<br/>of the Business</b>   | 3  |
| Item 3. | <b>The Business</b>  | 4  |
| Item 4. | <b>Financial Statements</b>  | 9  |
| Item 5. | <b>Market for Securities</b>   | 17 |
| Item 6. | <b>Board of Directors and Officers</b>   | 18 |
| Item 7. | <b>Additional Information</b>  | 20 |
| Item 8. | <b>Management's Discussion<br/>and Analysis of Financial Condition<br/>and Results of Operations</b> | 21 |
| Item 9. | <b>Selected Financial Data (10 years)</b>  | 26 |

## Item 1. **Incorporation**

Circo Craft Co. Inc. ("Circo Craft" or the "Company") was incorporated under Part I of the Companies Act (Québec) by letters patent dated August 29, 1973 and was continued under Part IA of the Companies Act (Québec) by a Certificate of Continuance dated November 18, 1981. By a Certificate of Amendment dated August 24, 1984, certain amendments were made to the Company's charter provisions and share capital. On October 3, 1984, the Company made its initial public offering, the net proceeds of which were used for the expansion of its manufacturing capacity. Circo Craft has 12,072,700 common shares outstanding and its stock is traded on the Montréal and Toronto Stock Exchanges under the stock symbol CCC.

## Item 2. General Development of the Business

Since its founding in 1973, Circo Craft's overall business strategy has been to manufacture and sell increasingly sophisticated printed circuits of consistent high quality in large volumes to selected multinational electronics manufacturers (OEM). The Company believes that one of the major reasons for its success in obtaining large volume orders from its customers is the quality of its products. The Company employs stringent quality and statistical process controls. In-process quality controls ensure that variances or defects are corrected as soon as possible in the manufacturing process. This strategy has allowed the Company to achieve economies of scale, increased manufacturing efficiencies and reduced marketing expenses. Moreover, for a given volume of production, higher prices and profit margins are generally obtained for more sophisticated printed circuits.

Both the Kirkland and Granby facilities have historically focused on the manufacturing of high density double-sided and four layer printed circuits.

Increasing production of multilayer circuits commenced at the Pointe-Claire plant in 1985 and in November of that year, the Company entered the microelectronics' field, specializing part of the Pointe-Claire facility in thick-film hybrid circuits. These products are an alternate form of electronics interconnection, considered a bridge between conventional printed circuits and more complex integrated circuits. In 1986, the Company introduced surface mount assembly, the assembly of electronic components on printed circuit boards. Following the decision in 1989 to focus on its core business, that of printed circuit fabrication, the Company's hybrid microelectronics and surface mount assembly division was closed, resulting in an extraordinary loss for discontinued operations of \$3,510,000.

Circo Craft's long-term strategic plan, "Operation Enterprise", was initiated in mid-1990 to bring the Company into the high technology segment of the international printed circuit market. The Company has made a meaningful stride this year towards its strategic goal to focus on the selling and manufacturing of an increasing proportion of multilayer printed circuits. It has concentrated its energies on the pursuit of total quality, on improved manufacturing methods and on the enhancement of its fine line and higher layer count production capabilities, in order to preserve and increase its market share.

The establishment of Circo Craft's Advanced Technology Centre, primarily dedicated to serving its existing customers with quick turnaround of prototype and small volume production, will also enable the Company to further test and refine its processes to assure greater efficiencies in high volume manufacturing of complex multilayer circuits.

Management recognizes that keen competition and intense pressures on prices will necessitate effective process enhancements, as well as aggressive manufacturing efficiency and ongoing cost-reduction efforts. It maintains that continued demand for higher technologies and greater densities, and Circo Craft's ability to respond to these requirements, will become the key focus of the Company's strategy to become the leader in a segment of the market that provides higher margins and contains fewer competitors.

**Overview**

Circo Craft is Canada's largest independent manufacturer of high density double-sided and multilayer printed circuits, which are widely used in telecommunications, computer, automotive electronics and other electronic equipment. The Company is headquartered in Kirkland (Québec) where it operates a manufacturing facility, with additional facilities in Pointe-Claire and Granby (Québec). Circo Craft's overall strategy has been to manufacture and sell increasingly sophisticated printed circuits of consistently high quality. The Company's customers include major OEMs in the electronics industry and independent sub-contract manufacturers.

**Principal Products and Services**

Circo Craft's business is the manufacture of electronic interconnect structures, specifically printed circuits containing customer-specified conductive patterns used to facilitate interconnections among electronic components within an electronic system. These conductive paths or traces are used to carry electrical signals from component to component within a board and from board to board connected within a system.

Conductive paths may be present on one or both sides of a board and several layers may be laminated together to form a multilayer circuit consisting of three or more layers of interconnections. The conductive patterns on double-sided and multilayer printed circuits are connected by holes drilled in the board that are plated through to connect one surface or innerlayer to another. Printed circuits are generally made of rigid fibreglass, rigid paper or thin flexible plastic. The Company manufactures printed circuits of rigid fibreglass construction.

In recent years, the trend in the electronics industry has generally been toward increasing density of components and the use of more components per unit area of printed circuit surface. The trend toward surface mount technology (SMT) has become significant to the computer and industrial markets in terms of speed and efficiency of components. The result has been growing use of multilayer printed circuits and increasing surface and innerlayer densities. During recent years, the Company has invested in the equipment, processes and technologies that permit Circo Craft to manufacture high density printed circuits, including those designed to accept surface mounted components as well as traditional through-hole devices.

Standard printed circuits, composed of two to four layers of circuitry, considered the "workhorse" of the industry, have taken on the characteristics of lower-level commodity type products subject to price pressures, lower margins and cyclical demand. The more sophisticated double-sided and four layer circuits will nevertheless remain part of the Company's activities even though they will decrease as a proportion of its overall business. The utilization of these high density circuits continues to grow, both through sales of products which already use them and through new applications. As well, technological advances demand that these circuits become smaller or more efficient or fulfil multiple functions. Circo Craft's acknowledged manufacturing expertise and quality in producing these circuits will retain a significant presence for the Company in this segment, even while facing strong competition.

**Percentage of Sales By Type of Printed Circuit**

| Fiscal Period | Multilayer | Double-sided |
|---------------|------------|--------------|
| 1989          | 50.7       | 49.3         |
| 1990          | 52.5       | 47.5         |

**Markets**

Based on industry sources, management estimates that the North American market for all printed circuits in 1990 was approximately \$5.9 billion (U.S.). It is estimated that in 1990 approximately 68% of the North American market was served by independent manufacturers such as Circo Craft with the remaining 32% being "captive" manufacturing facilities operated by certain original electronic equipment manufacturers.

**Percentage of Sales by Market Sector**

| Markets            | Year Ended<br>December 31, 1989 | Year Ended<br>December 31, 1990 |
|--------------------|---------------------------------|---------------------------------|
| Telecommunications | 60                              | 60                              |
| Computer           | 27                              | 27                              |
| Automotive         | 12                              | 12                              |
| Instrumentation    | 1                               | 1                               |

The Company has strategically concentrated on manufacturing high quality printed circuits for the commercial and industrial markets. During recent years, the Company has adopted a strategy to broaden and diversify the markets and customers it serves. As a result, the Company supplies high technology printed circuits to a diverse customer base in the computer, telecommunications, instrumentation and automotive industries.

The Company's high percentage of sales to the telecommunications and computer industries reflects the substantial use of high density double-sided and multilayer printed circuits in the end products of both industries and their predominant position in high technology manufacturing in North America.

To better support its customers, Circo Craft has developed a number of capabilities that span the period from product design to commercial delivery to the customer. The Company works in close cooperation with the customer in order to assure that their printed circuit design specifications will be compatible with the Company's manufacturing processes. The Company also gains a better understanding of future OEM requirements. This cooperative process shortens the time in transition from the development of the prototype design to volume manufacturing and facilitates the delivery of high quality products on time to the customers' premises. These results are important benefits to the Company's customers since many of their products have increasingly shorter economic lives.

The Company's new Advanced Technology Centre, located in the Pointe-Claire facilities, will assist customers by manufacturing dense double-sided and complex multilayer circuits in prototype and pre-production quantities for use during the product development stage. Historically, prototypes and pre-production orders were manufactured in its large volume facilities, therefore, such dedicated facilities should increase manufacturing efficiency of the Company's high volume lines.

In addition, by working closely with customers at the design and prototype stage, management believes that the Company has a greater likelihood of securing a preferred vendor status when customers begin commercial manufacturing of new products. While many competitors can supply prototypes, relatively few can provide complex products in the volume that our larger manufacturing facilities can provide.

The Company is the leading independent manufacturer of printed circuits in Canada. It currently exports 39 percent of its products to the United States.

#### **Percentage of Sales By Geographic Market**

| Fiscal Period | Canada | United States |
|---------------|--------|---------------|
| 1989          | 61.9   | 38.1          |
| 1990          | 60.9   | 39.1          |

Circo Craft markets its products through its own sales and marketing organization and a network of seven independent field offices, compensated on a basic-fee and commission basis, and situated in strategic locations in the United States and in Munich, Germany.

#### **Competition**

The North American market for printed circuits is highly competitive and fragmented. Circo Craft believes that OEMs manufactured approximately 32% of their own needs internally with the remaining 68% provided by approximately 1,000 independent manufacturers of various sizes. Domestic and off-shore competition is increasing in the area of single-sided and low density double-sided printed circuits. With respect to high density and multilayer products, the Company believes its major competitors are the larger independent producers and captive producers. Many of the captives are part of large national or multinational electronic equipment manufacturers. The major captive printed circuit producers include IBM, AT&T, DEC. These captive facilities lead the industry in technical capability and, over the recent past, have concentrated increasingly on designing more complex circuit technologies. A growing trend has seen many major printed circuit users with captive printed circuit manufacturing facilities relying more heavily on independent printed circuit suppliers to meet their needs.

The number of companies engaged in the volume production of high density, multilayer printed circuits is considerably smaller than the number of companies manufacturing other types of printed circuits. High density multilayer circuits involve a high level of material and process technology and therefore are more complex to manufacture than simple printed circuits. The Company will continue to emphasize the sale and manufacture of high density multilayer circuits, particularly in the 6-8 and 10-layer range with surface mount applications.

Circo Craft competes on the basis of product quality, timeliness of delivery, price, customer technical support and the capability to produce high density, complex circuit structures in prototype, pre-production and high volume quantities.

#### **Sources and Availability of Raw Materials**

Materials that are essential to the Company's business are freely available in the open market, and within the past five years, no segment of the Company's business experienced any significant shortages in such materials.

#### **Patents and Trademarks**

The Company does not have any patent protection of significance and does not believe that patents are material to its present operations. The Company believes that its accumulated experience with respect to materials and process technology is important to its operation.



**Research and Process Development**

Circo Craft's research and development activities are mainly related to enhancing its manufacturing processes, including the study of new materials and new manufacturing systems. In fiscal 1990, the Company spent \$1,387,000 on internal research and development.

**Environmental Matters**

The Company believes that its facilities and water treatment systems are currently in compliance with all federal, provincial and municipal environmental protection laws. In fiscal 1990, the Company's capital expenditures for environmental control facilities and equipment totalled approximately \$2,000,000. The Company estimates that it will make capital expenditures with respect to additional waste treatment facilities and equipment of approximately \$2,000,000 in fiscal 1991, in anticipation of any future heightened environmental controls and regulations.

**Customers**

The Company supplied more than 40 customers during fiscal 1990 which was approximately the same number as in fiscal 1989. The Company's strategy is to market its products and services to customers who are well established and who currently have, or have the potential to obtain, significant market shares in their respective industries. The following list sets forth the Company's largest customers in order of sales volume during fiscal 1990:

|                             |     |
|-----------------------------|-----|
| Northern Telecom            | 45% |
| Motorola                    | 24% |
| Philips Information Systems | 17% |

With respect to its two largest customers, the Company's sales were made to several different divisions, each with their own requirements, certifications and orders. In addition, several of the Company's customer divisions deal in various market sectors thus helping to reduce Circo Craft's dependence on any particular market segment. Circo Craft continues its efforts to increase and diversify its customer base, particularly with customers who require complex state-of-the-art printed circuits or whose needs closely match the technological capabilities of the Company.

**Employees**

Circo Craft employed 964 persons as at December 31, 1990. Subsequent to the year-end, a rationalization of the Company's workforce brought this number to 748 full-time employees. The Company believes that its employee relations are excellent. The employees are not represented by a union, and the Company has never experienced any labour problems resulting in a work stoppage.

The Company believes that the expertise of its employees is a significant factor in its ability to produce high quality printed circuits. Each of the Company's employees in the manufacturing sector is given extensive training in several functions; this contributes to the overall development of employees and at the same time ensures maximum flexibility and quality control in the Company's manufacturing processes.

**The Free Trade Agreement**

The Free Trade Agreement (the "FTA") between the governments of Canada and the U.S.A. came into effect on January 1, 1989 eliminating all tariffs on printed circuit exports in April 1990. The impact of the FTA on the Company's business has been favourable, although severe price cutting in the industry has somewhat reduced the Company's competitiveness.

**Properties**

Circo Craft owns three facilities located in Kirkland, Pointe-Claire and Granby (Québec) comprising a total of 380,000 square feet, as follows:

| Location      | Function  | Surface (sq. ft.) |
|---------------|---|-------------------|
| Kirkland      | • High volume high density double-sided and multilayer production   | 117,000           |
| Pointe-Claire | • High volume multilayer production<br>• Advanced Technology Centre and quick turnaround prototype facility | 160,000           |
| Granby        | • High volume double-sided and multilayer production  | 103,000           |

Item 4. **Financial Statements**

For the years ended December 31, 1990 and 1989

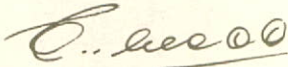
## Management's Report on Financial Statements

The accompanying financial statements of Circo Craft Co. Inc. and all information in this annual report, are the responsibility of management and have been approved by the Board of directors.

The financial statements have been prepared by management in conformity with Canadian generally accepted accounting principles. These statements necessarily include some amounts that are based on the best estimates and judgments of management and in their opinion present fairly the Company's financial position and results of its operations. The financial statements have been examined by Samson Bélair/Deloitte & Touche, Chartered Accountants, and their report is included therein. Financial information used elsewhere in the annual report is consistent with that in the financial statements.

The reliability of the financial information is determined from the Company's accounting records and related systems of internal controls. Management believes the internal accounting controls provide reasonable assurance that financial records are reliable and form a proper basis for preparation of financial statements and that assets are properly accounted for and safeguarded. The Company has an Internal Audit Department whose function includes the review of accounting records and related systems of internal controls to ensure that they are adequate and functioning as intended.

The Board of directors carries out its responsibility for the financial statements in this annual report principally through the Audit Committee, the majority of whose members are outside directors. The Audit Committee reviews the Company's annual financial statements and the auditors' report, and recommends their approval by the Board of directors.



**Hans-Karl Muhlegg**

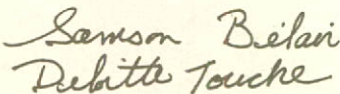
President and Chief Executive Officer

## Auditors' Report to the Shareholders

We have audited the balance sheets of Circo Craft Co. Inc. as at December 31, 1990 and 1989 and the statements of earnings, retained earnings and changes in financial position for the years then ended. 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.

We conducted our audits in accordance with 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 financial statements present fairly, in all material respects, the financial position of the company as at December 31, 1990 and 1989, and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles.



**Samson Bélair/Deloitte & Touche**

Chartered Accountants

Montréal, Québec

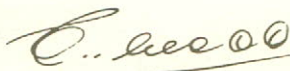
February 7, 1991

## Balance Sheets

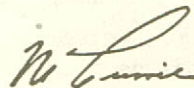
As at December 31, 1990 and 1989

| (thousands of dollars)                   | 1990            | 1989            |
|--|-----------------|-----------------|
| <b>Assets</b>                            |                 |                 |
| Current assets                           |                 |                 |
| Bank and short-term investments          | \$ 982          | \$ 4,375        |
| Accounts receivable                      | 10,139          | 7,752           |
| Income taxes                             | 778             | -               |
| Inventories (note 2)                     | 8,252           | 10,664          |
| Prepaid expenses                         | 335             | 234             |
|  | <u>20,486</u>   | <u>23,025</u>   |
| Fixed assets (Note 3)                    | 49,429          | 41,062          |
|  | <u>\$69,915</u> | <u>\$64,087</u> |
| <b>Liabilities</b>                       |                 |                 |
| Current liabilities                      |                 |                 |
| Bank indebtedness                        | \$ -            | \$ 192          |
| Accounts payable and accrued liabilities | 10,323          | 8,105           |
| Income taxes                             | -               | 1,693           |
| Current portion of long-term debt        | 200             | 300             |
|  | <u>10,523</u>   | <u>10,290</u>   |
| Long-term debt (note 4)                  | 8,010           | 241             |
| Deferred income taxes                    | 5,679           | 6,479           |
|  | <u>24,212</u>   | <u>17,010</u>   |
| <b>Shareholders' Equity</b>              |                 |                 |
| Capital stock (note 5)                   | 17,100          | 17,100          |
| Retained earnings                        | 28,603          | 29,977          |
|  | <u>45,703</u>   | <u>47,077</u>   |
|  | <u>\$69,915</u> | <u>\$64,087</u> |

On behalf of the board



Hans-Karl Muhlegg  
Director



Norman Thorne Currie  
Director

## Statements of Retained Earnings

For the years ended December 31, 1990 and 1989

| (thousands of dollars)           | 1990     | 1989     |
|----------------------------------|----------|----------|
| Balance – beginning of year      | \$29,977 | \$28,268 |
| Net Earnings (Loss) for the year | (1,374)  | 1,709    |
| Balance – end of year            | \$28,603 | \$29,977 |

## Statements of Changes in Financial Position

For the years ended December 31, 1990 and 1989

| (thousands of dollars)                                     | 1990       | 1989     |
|--|------------|----------|
| <b>Operating Activities</b>                                |            |          |
| Earnings (Loss) before extraordinary items                 | \$ (2,374) | \$ 5,219 |
| Non-cash items –   |            |          |
| Depreciation   | 6,980      | 6,401    |
| Deferred income taxes                                      | (800)      | (634)    |
| Gain on disposal of fixed assets                           | (119)      | (67)     |
|  | 3,687      | 10,919   |
| Cash provided by working capital                           | 442        | 5,916    |
|  | 4,129      | 16,835   |
| <b>Financing Activities</b>                                |            |          |
| Increase (decrease) in long-term debt                      | 7,669      | (4,734)  |
| <b>Investing Activities</b>                                |            |          |
| Acquisition of fixed assets                                | (15,317)   | (8,818)  |
| Proceeds from sale of fixed assets                         | 240        | 225      |
| Government grants for the funding of fixed assets acquired | 78         | –        |
|  | (14,999)   | (8,593)  |
| <b>Increase (Decrease) in Funds</b>                        | (3,201)    | 3,508    |
| <b>Funds – Beginning of Year</b>                           | 4,183      | 675      |
| <b>Funds – End of Year</b>                                 | 982        | 4,183    |
| Funds are represented by:                                  |            |          |
| Bank and short-term investments                            | 982        | 4,375    |
| Bank indebtedness  | –          | (192)    |
|  | \$ 982     | \$ 4,183 |

## Statements of Earnings

For the years ended December 31, 1990 and 1989

| (thousands of dollars except per share amounts)                | 1990       | 1989     |
|--|------------|----------|
| Sales  | \$81,256   | \$90,673 |
| Cost of sales  | 69,383     | 68,249   |
| Operating margin   | 11,873     | 22,424   |
| Selling, general and administrative expenses                   | 7,978      | 7,695    |
| Other expenses   |            |          |
| Depreciation   | 6,980      | 6,401    |
| Interest on long-term debt                                     | 259        | 210      |
| Results of investment operations                               | (45)       | (299)    |
|  | 7,194      | 6,312    |
| Earnings (Loss) before income taxes and<br>extraordinary items | (3,299)    | 8,417    |
| Provision for income taxes (Recovery) (note 6)                 | (925)      | 3,198    |
| Earnings (Loss) before extraordinary items                     | (2,374)    | 5,219    |
| Extraordinary items (note 7)                                   | 1,000      | (3,510)  |
| Net earnings (Loss) for the year                               | \$ (1,374) | \$ 1,709 |
| Earnings (Loss) per share before<br>extraordinary items        | \$ (0.19)  | \$ 0.43  |
| Earnings (Loss) per share                                      | \$ (0.11)  | \$ 0.14  |

## Notes to Financial Statements

For the years ended December 31, 1990 and 1989

### 1. Accounting Policies

#### Short-term investments

Short-term investments are valued at the lower of cost and market.

#### Inventories

Inventories are valued at the lower of cost and market. Cost is determined on the first-in, first-out basis for raw materials and maintenance supplies. The cost of work in process inventories includes the cost of raw materials, direct labour and applicable manufacturing overhead, excluding depreciation. Market is defined as replacement cost for raw materials, and as net realizable value less cost to complete for work in process.

#### Fixed assets and depreciation

Fixed assets are recorded at cost less applicable investment tax credits, government grants and accumulated depreciation. Assets acquired prior to 1982 are depreciated using the diminishing balance method at rates varying between 2 1/2% and 15%. Assets acquired after 1981 are depreciated using the straight-line method at rates varying between 2 1/2% and 20%.

#### Foreign exchange

Monetary assets and liabilities are translated into Canadian dollars at exchange rates in effect on December 31 and non-monetary assets and liabilities at the exchange rates prevailing when the assets were acquired and liabilities incurred. Sales and expenses, with the exception of depreciation, are translated at average monthly rates. Depreciation is translated at the rates used in the translation of the relevant asset accounts. Translation gains and losses are included in determining net earnings in the year in which the exchange rate changes.

#### Income taxes

The company follows the tax allocation method of providing for income taxes. Deferred income taxes result primarily from the difference between capital cost allowance claimed for income tax purposes and depreciation recorded for accounting purposes.

### 2. Inventories

| (thousands of dollars) | 1990            | 1989             |
|------------------------|-----------------|------------------|
| Raw materials          | \$ 2,772        | \$ 4,028         |
| Work in process        | 3,693           | 4,762            |
| Maintenance supplies   | 1,787           | 1,874            |
|                        | <u>\$ 8,252</u> | <u>\$ 10,664</u> |

### 3. Fixed Assets

| (thousands of dollars)                  | 1990            |                          | 1989            |                 |
|---|-----------------|--------------------------|-----------------|-----------------|
|   | Cost            | Accumulated depreciation | Net             | Net             |
| Land                                    | \$ 1,127        | \$ -                     | \$ 1,127        | \$ 1,127        |
| Buildings                               | 24,824          | 3,758                    | 21,066          | 19,872          |
| Machinery and equipment                 | 61,392          | 31,111                   | 30,281          | 24,976          |
| Vehicles                                | 179             | 119                      | 60              | 96              |
|   | <u>\$87,522</u> | <u>\$34,988</u>          | <u>52,534</u>   | <u>46,071</u>   |
| Less:                                   |                 |                          |                 |                 |
| Government grants – unamortized balance |                 |                          | 1,429           | 2,327           |
| Provision for discontinued operations   |                 |                          | 1,676           | 2,682           |
|   |                 |                          | <u>\$49,429</u> | <u>\$41,062</u> |



#### 4. Long-Term Debt

a) Long-term debt is comprised of the following:

| (thousands of dollars)   | 1990           | 1989  |
|--|----------------|-------|
| Revolving bank loan (note 4 b))  | \$8,000        | \$ -  |
| Term loan from the Minister of Regional<br>Industrial Expansion, non-interest<br>bearing, repayable in February 1991 | 200            | 401   |
| Other  | 10             | 140   |
|  | <b>8,210</b>   | 541   |
| Less: Current portion  | 200            | 300   |
|  | <b>\$8,010</b> | \$241 |

Principal repayments over the next five years are as follows:

|  | 1991  | 1992    | 1993    | 1994    | 1995    |
|--|-------|---------|---------|---------|---------|
|  | \$200 | \$2,010 | \$2,000 | \$2,000 | \$2,000 |

b) According to an agreement with a chartered bank, the company has available credit facilities up to \$17,500,000. Under the agreement, a portion of this amount, when converted into a term loan, can be repaid in annual instalments of \$2,000,000 until June 30, 1996, at which time the balance becomes payable. The interest rate on these loans varies from prime to prime plus 1/4%. As at December 31, 1990, the company had borrowed \$8,000,000 in the form of bankers' acceptances. These bank loans are guaranteed by a demand debenture in the amount of \$6,800,000 for which a specified asset has been pledged as security by a first ranking specific charge.

#### 5. Capital Stock

a) As at December 31, 1990 and 1989 the authorized capital stock consists of the following:

- An unlimited number of First Preferred shares, without nominal or par value, issuable in series
- An unlimited number of Second Preferred shares, without nominal or par value, issuable in series
- An unlimited number of Common shares, without nominal or par value

The directors are responsible for defining the rights, privileges, restrictions and the conditions attached to each series of the First and Second Preferred shares upon their issuance.

b) The issued and paid capital stock as at December 31, 1990 and 1989 consists of the following:

| (thousands of dollars)                                  | 1990            | 1989     |
|---|-----------------|----------|
| 12,072,700 Common shares                                | \$17,100        | \$17,100 |
| 1,200,000 Second preferred shares, Series A (note 5 c)) | -               | -        |
| 156,000 Second preferred shares, Series B (note 5 c))   | -               | -        |
|   | <b>\$17,100</b> | \$17,100 |

c) The company issued Second Preferred shares, Series A and B in connection with the financial assistance amounting to \$1,200,000 in 1986, \$78,000 in 1988 and \$78,000 in 1990, received from the Government of Québec for costs incurred in the installation of facilities. Such shares are non-voting and are entitled to receive, as and when declared, an aggregate non-cumulative preferential dividend of \$1 and, upon liquidation, to receive an aggregate amount of \$1. The company issued such shares for the purposes of such financial assistance and will repurchase such shares at their issue price upon request of the holder thereof if the majority of the Common shares or more than half of the assets of the company are transferred, within five years following the granting of such financial assistance, to an enterprise whose head office is not located in the Province of Québec or to an individual who does not reside therein. The proceeds from these issues were deducted from the cost of certain fixed assets.

## 6. Income Taxes

The company's recovery and provision for income taxes include the following:

| (thousands of dollars) | 1990            | 1989           |
|------------------------|-----------------|----------------|
| Current                | \$ (125)        | \$3,832        |
| Deferred               | (800)           | (634)          |
|                        | <u>\$ (925)</u> | <u>\$3,198</u> |

The company's effective income tax rate is calculated as follows:

|  | 1990         | 1989         |
|--|--------------|--------------|
|  | %            | %            |
| Combined basic federal and provincial income tax rate  | 41.00        | 41.00        |
| Increase (decrease) in income tax rate resulting from: |              |              |
| Active business income deduction                       | (7.50)       | (7.50)       |
| Manufacturing and processing deduction                 | (3.50)       | (2.50)       |
| Surtax   | 1.40         | 1.40         |
| Other  | (3.40)       | 5.60         |
|  | <u>28.00</u> | <u>38.00</u> |

## 7. Extraordinary Items

| (thousands of dollars)   | 1990           | 1989             |
|--|----------------|------------------|
| Proceeds from life insurance   | \$1,000        | \$ -             |
| Costs pertaining to the closing of the microelectronic division (net of income taxes of \$1,974,000) | -              | (3,510)          |
|  | <u>\$1,000</u> | <u>\$(3,510)</u> |

## 8. Major Clients

Approximately 69% (1989 - 62%) of the company's sales were to two unrelated multinational corporations which have several divisions responsible for their own purchasing decisions.

## 9. Commitments

Capital expenditures committed at December 31, 1990 amount to approximately \$3,784,000.

## 10. Geographic and Activity Segments

Sales to foreign countries amounted to approximately 39% (1989 - 38%) of the company's total sales.

The company's operations are concentrated in the designing and manufacturing of printed circuits.

## Item 5. **Market for Securities**

The Company's common shares are traded on the Montréal and Toronto Stock Exchanges under the stock symbol, CCC. Market information can be found in the stock tables of Canadian newspapers under the acronym CIRCO CRFT.

Circo Craft has a long-standing policy not to pay dividends on its common shares in order to reinvest earnings for the development of the Company's business. The Company anticipates that it will continue to retain its earnings for use in the business for the foreseeable future.

## Item 6. Board of Directors and Officers

The following list indicates the directors elected at the Annual General Meeting of Shareholders of Circo Craft held on April 26, 1990, the principal occupation of each director, the year when each nominee first became a director and the number of common shares of the Company beneficially owned, directly or indirectly, or over which control or direction was exercised, by each director.

### Board of Directors

| Name and municipality of residence              | Principal occupation  | First year as a director | Common shares beneficially owned or over which control or direction was exercised |
|---|---|--------------------------|---|
| Hans-Karl Muhlegg<br>Beaconsfield, Québec       | President and Chief Executive Officer of the Company  | 1973                     | 50,635 <sup>(1)</sup>   |
| Renato Cervini<br>Rosemère, Québec              | President,<br>Cernato Holdings Inc.   | 1973                     | 562,465   |
| Norman T. Currie, f.c.a.<br>Islington, Ontario  | President and Chief Executive Officer of Maple Leaf Mills (food company)                              | 1984                     | 3,000   |
| Peter D. Kyle, c.a.<br>Montréal, Québec         | Chairman and Chief Executive Officer of JM Asbestos Inc. (mining company)                             | 1984                     | 3,500   |
| Hubert T. Lacroix<br>Montréal, Québec           | Partner,<br>McCarthy Tétrault<br>(barristers and solicitors)  | 1987                     | 1,000   |
| Jean-Guy Fontaine, c.g.a.<br>Île Bizard, Québec | Vice President, Finance and Administration<br>Cerico Investments Inc. and<br>Secretary of the Company | 1984                     | 2,635   |

Each of the directors whose name appears above has held the principal occupation shown opposite his name, or other executive office with the same or related firm, for the last five years. The mandates of all directors expire at the next annual meeting to be held on April 24, 1991.

<sup>(1)</sup>To the knowledge of the senior executives of the Company, Cerico Investments Inc. ("Cerico") was the only person exercising control or direction over more than 10% of the outstanding common shares of the Company; the common shares are the only securities in the share capital of the Company which carry voting rights. As of the date hereof, Cerico was the beneficial owner of 8,359,920 common shares, being 69.25% of the outstanding common shares of the Company. All outstanding voting shares of Cerico are indirectly held by Hans-Karl Muhlegg, nominee for election as a director of the Company.

As of the date hereof, the occupation and municipality of residence of the officers of Circo Craft are the following:

**Officers**

| Name and municipality of residence              | Current position                                     |
|---|--|
| Hans-Karl Muhlegg<br>Beaconsfield, Québec       | President and Chief Executive Officer                |
| Bruce W. Sorensen<br>Hudson, Québec             | Executive Vice President and Chief Operating Officer |
| Gerhard Kastner<br>Granby, Québec               | Vice President, Operations                           |
| Jean-Guy Fontaine, c.g.a.<br>Île Bizard, Québec | Corporate Secretary                                  |

All of the above officers have held the position indicated opposite their name or held a similar position with Circo Craft during the last five years, except Mr. Bruce Sorensen who was successively Vice President, Advanced Technology and Engineering of a major U.S. manufacturer of high technology printed circuits and President and Chief Executive Officer of a firm specializing in advanced chemical research until October 1990.

## Item 7. **Additional Information**

Circo Craft's Management's Report on Financial Statements, Auditors' Report to the Shareholders, and Financial Statements for the fiscal years 1990 and 1989 are presented in Item 4 of this report. The Management's Discussion and Analysis of Financial Condition and Results of Operations is presented in the following pages.

Other information, including information related to the principal holders of securities of the Company, election of directors, and remuneration of executives is presented in the Information Circular for Solicitation of Proxies, with respect to the Annual General Meeting of Shareholders of the Company to be held April 24, 1991. This document is available from the Company upon request.

Item 8. **Management's Discussion and Analysis of  
Financial Condition and Results of Operations**

## Management's Discussion and Analysis of Financial Condition

### Results of Operations

Sales for continuing operations declined by 5.6 percent in 1990 to \$81,256,000, from the prior year level of \$86,113,000, due to generally poor market demand that carried over from 1989 and weak prices caused by strong competition in the market for double-sided printed circuits. Sales were further restrained by continued deferrals and delays requested by customers due to the economic situation. Compared to total sales in 1989 of \$90,673,000, the overall decrease is 10.4 percent in view of last year's sales contribution of \$4,560,000 from the discontinued microelectronic operations.

The Company incurred a net loss of \$1,374,000 or 11 cents per common share, after extraordinary item. The loss of \$2,374,000 or 19 cents per common share, before extraordinary item, was reduced by proceeds of \$1,000,000 coming from a life insurance policy. These results compare to 1989 earnings, before extraordinary item, of \$5,219,000 or 43 cents per common share, and net earnings of \$1,709,000 or 14 cents per share, after an extraordinary charge of \$3,510,000 related to the closure of the microelectronic operations.

Higher material consumption caused by reduced manufacturing efficiency, contributed to the decline in operating margins. Net after-tax expenses of \$1,346,000 related to the establishment of the Advanced Technology Centre, and costs associated with fine-tuning of new processes used for multilayer fabrication, were also factors.

The 3.7 percent increase in selling, general and administrative expenses was attributable to higher selling expenses in the second semester of 1990 related to U.S. and European market penetration and expenses associated with the implementation of a computerized operations and information system.

Depreciation expense increased by \$579,000, due to higher levels of manufacturing assets acquired under the Company's continuing emphasis on investing in the most technologically advanced processes. This expense is expected to rise again in 1991, due to the high level of investment in 1990 for manufacturing systems coming on stream late in the year and early in 1991.

Interest charges on long-term debt rose slightly pursuant to an increase in long-term borrowing in the latter part of the year which will also create higher interest costs for all of 1991.

Subsequent to the year-end, as a result of a decision to accelerate a planned restructuring and rationalization program, the Company reduced its workforce from 964 to 748 full-time employees, in line with current market demand for its products. Manufacturing costs are expected to remain high in the early part of the year as recent equipment and processes are integrated into production and because of one-time charges of \$550,000 related to the reduction in the workforce. The Company expects to be able to reduce these costs and other manufacturing costs through gains from using current and new technologies.

The impact of currency fluctuations on exports to the U.S.A. is substantially offset by the Company's purchases of raw materials and supplies which are imported mostly from the United States. Unit purchasing costs for raw materials are not expected to change meaningfully during 1991.

### Capital Spending

Capital expenditures amounted to \$15.3 million in 1990. The Advanced Technology Centre, including funds for the quick turnaround facility, absorbed \$7.1 million; water treatment processes and equipment accounted for \$2 million; the balance was used to enhance existing processes and technology at the Pointe-Claire, Kirkland and Granby facilities. As of December 31, 1990, capital expenditures committed for fiscal 1991 amounted to approximately \$3,784,000.



**Capitalization**

Circo Craft's financial position remains strong; shareholders' equity was 76.6 percent of total capitalization as at December 31, 1990.

**Liquidity and Capital Resources**

Working capital declined mainly because of the loss incurred during 1990, and the net cash position as at December 31, 1990 decreased to \$982,000 from \$4,183,000 due to lower profitability and increased capital spending. The present working capital ratio is considered strong by industry standards and is deemed adequate for operations and to support the Company's commitments. The Company believes its working capital, borrowing capacity and funds generated from operations will be sufficient to meet anticipated cash requirements for 1991.

Long-term debt was augmented by a revolving bank loan of \$8,000,000 in the form of bankers' acceptances contracted in 1990. Under the agreement, a portion of this amount, when converted into a term loan, can be repaid in annual instalments of \$2,000,000 until June 30, 1996, at which time the balance becomes payable. The loan was obtained under credit facilities amounting to \$17.5 million, available to the Company from a chartered bank, and is guaranteed by a demand debenture in the amount of \$6,800,000 for which the Pointe-Claire property has been pledged as security by a first ranking specific charge. Funds were used for the Company's capital expenditure program.

## Capitalization

at December 31

|                             | 1990     |       | 1989     |       | 1988     |       |
|-----------------------------|----------|-------|----------|-------|----------|-------|
|                             | millions | %     | millions | %     | millions | %     |
| Long-term debt, including   |          |       |          |       |          |       |
| current portion             | \$ 8.2   | 13.8  | \$ 0.5   | 0.9   | \$ 5.3   | 9.0   |
| Deferred income taxes       | 5.7      | 9.6   | 6.5      | 12.0  | 8.2      | 14.0  |
| Common shareholders' equity | 45.7     | 76.6  | 47.1     | 87.1  | 45.3     | 77.0  |
|                             | \$59.6   | 100.0 | \$54.1   | 100.0 | \$58.8   | 100.0 |

## Quarterly Financial Data

(unaudited)

| (in thousands of dollars except per share amounts) | 1st Quarter | 2nd Quarter | 3rd Quarter | 4th Quarter | Total    |
|--|-------------|-------------|-------------|-------------|----------|
| <b>1990</b>  |             |             |             |             |          |
| Sales  | \$19,238    | \$19,880    | \$21,337    | \$20,801    | \$81,256 |
| Operating margin                                   | 2,682       | 3,517       | 3,807       | 1,867       | 11,873   |
| Earnings (Loss) before extraordinary item          | (404)       | (143)       | 75          | (1,902)     | (2,374)  |
| Extraordinary item                                 | -           | -           | 1,000       | -           | 1,000    |
| Net earnings (Loss)                                | (404)       | (143)       | 1,075       | (1,902)     | (1,374)  |
| Loss per share before extraordinary item           | (0.03)      | (0.01)      | -           | (0.15)      | (0.19)   |
| Net earnings (Loss) per share                      | (0.03)      | (0.01)      | 0.08        | (0.15)      | (0.11)   |
| <b>1989</b>  |             |             |             |             |          |
| Sales  | \$24,861    | \$28,439    | \$20,194    | \$17,179    | \$90,673 |
| Operating margin                                   | 6,491       | 8,470       | 4,383       | 3,080       | 22,424   |
| Earnings before extraordinary item                 | 1,621       | 2,904       | 593         | 101         | 5,219    |
| Extraordinary item                                 | -           | (3,840)     | -           | 330         | (3,510)  |
| Net earnings (Loss)                                | 1,621       | (936)       | 593         | 431         | 1,709    |
| Earnings per share before extraordinary item       | 0.13        | 0.24        | 0.05        | 0.01        | 0.43     |
| Net earnings (Loss) per share                      | 0.13        | (0.08)      | 0.05        | 0.04        | 0.14     |
| <b>1988</b>  |             |             |             |             |          |
| Sales  | \$23,050    | \$21,759    | \$22,601    | \$23,964    | \$91,374 |
| Operating margin                                   | 6,863       | 5,100       | 5,333       | 5,042       | 22,338   |
| Net earnings                                       | 1,650       | 741         | 911         | 987         | 4,289    |
| Net earnings per share                             | 0.14        | 0.06        | 0.08        | 0.08        | 0.36     |

Item 9. **Selected Financial Data (10 years)**

(unaudited)

| For the year  | 1990    | 1989    | 1988    |
|---|---------|---------|---------|
| <b>Operations</b> (thousands of dollars)                              |         |         |         |
| Sales   | 81,256  | 90,673  | 91,374  |
| Cost of sales   | 69,383  | 68,249  | 69,036  |
| Operating margin  | 11,873  | 22,424  | 22,338  |
| Depreciation  | 6,980   | 6,401   | 6,376   |
| Interest (Income) expense-net   | 214     | (89)    | 1,082   |
| Earnings (Loss) before income<br>taxes and extraordinary item         | (3,299) | 8,417   | 6,701   |
| Income taxes (recovery)   | (925)   | 3,198   | 2,412   |
| Earnings (Loss) before extraordinary item                             | (2,374) | 5,219   | 4,289   |
| Net earnings (Loss)   | (1,374) | 1,709   | 4,289   |
| <b>Balance Sheet</b> (thousands of dollars)                           |         |         |         |
| Total assets  | 69,915  | 64,087  | 71,882  |
| Current assets  | 20,486  | 23,025  | 28,569  |
| Current liabilities   | 10,523  | 10,290  | 14,805  |
| Working capital   | 9,963   | 12,735  | 13,764  |
| Long-term debt  | 8,010   | 241     | 3,553   |
| Shareholders' equity  | 45,703  | 47,077  | 45,368  |
| <b>Cash Flow</b> (thousands of dollars)                               |         |         |         |
| Cash flow from operations   | 3,687   | 10,919  | 11,404  |
| Capital expenditures  | 15,317  | 8,818   | 6,190   |
| <b>Key Financial Ratios</b>   |         |         |         |
| Current ratio   | 1.9     | 2.2     | 1.9     |
| Earnings (Loss) before extraordinary<br>item as a percentage of sales | (2.9)   | 5.8     | 4.7     |
| Return on average<br>shareholders' equity                             | (3.0)   | 3.7     | 9.9     |
| Sales/fixed assets  | 1.64    | 2.21    | 2.11    |
| Sales/total assets  | 1.16    | 1.41    | 1.27    |
| <b>Per Share Data*</b> (in dollars)                                   |         |         |         |
| Earnings (Loss) before extraordinary item                             | (0.19)  | 0.43    | 0.36    |
| Net earnings (Loss)   | (0.11)  | 0.14    | 0.36    |
| Shareholders' equity  | 3.79    | 3.90    | 3.76    |
| <b>Other Information</b>  |         |         |         |
| Number of employees at year-end                                       |         |         |         |
| Printed circuit group   | 964     | 845     | 877     |
| Microelectronic group   | -       | -       | 166     |
| Total   | 964     | 845     | 1,043   |
| Total square footage of<br>plant facility                             |         |         |         |
| Printed circuit group   | 355,000 | 315,000 | 230,000 |
| Microelectronic group   | -       | -       | 85,000  |
| Available future expansion  | 25,000  | 25,000  | 25,000  |
| Total   | 380,000 | 340,000 | 340,000 |

\*By a certificate of amendment dated August 24, 1984, the outstanding common shares of the company were subdivided into 10,000,000 common shares. Per share data for the years 1973 to 1983 have therefore been calculated based on the assumption that 10,000,000 shares were issued and outstanding.

| 1987    | 1986    | 1985    | 1984    | 1983    | 1982    | 1981    |
|---------|---------|---------|---------|---------|---------|---------|
| 70,127  | 55,335  | 45,317  | 37,335  | 19,593  | 11,893  | 12,195  |
| 52,492  | 39,435  | 28,530  | 22,003  | 12,415  | 8,334   | 7,282   |
| 17,635  | 15,900  | 16,787  | 15,332  | 7,178   | 3,559   | 4,913   |
| 5,104   | 3,533   | 2,407   | 1,529   | 1,151   | 610     | 176     |
| 1,006   | (122)   | (563)   | 532     | 776     | 586     | 40      |
| 4,123   | 5,937   | 8,511   | 9,335   | 3,113   | 897     | 3,689   |
| 1,541   | 2,186   | 3,179   | 2,700   | 543     | 389     | 1,206   |
| 2,582   | 3,751   | 5,332   | 6,635   | 2,570   | 508     | 2,483   |
| 2,582   | 3,751   | 5,332   | 6,635   | 2,570   | 508     | 2,483   |
| 72,941  | 65,515  | 50,420  | 40,832  | 19,888  | 16,079  | 17,540  |
| 28,876  | 25,549  | 16,614  | 19,964  | 9,272   | 7,441   | 9,618   |
| 14,055  | 13,427  | 6,464   | 7,763   | 4,409   | 3,561   | 5,222   |
| 14,821  | 12,122  | 10,150  | 12,201  | 4,863   | 3,880   | 4,396   |
| 10,190  | 7,424   | 5,212   | 1,229   | 6,607   | 6,265   | 6,395   |
| 41,079  | 38,497  | 34,746  | 29,414  | 7,046   | 4,476   | 4,594   |
| 9,142   | 9,398   | 9,399   | 8,797   | 3,857   | 1,580   | 3,559   |
| 9,656   | 12,648  | 16,095  | 12,691  | 3,832   | 2,579   | 6,387   |
| 2.1     | 1.9     | 2.6     | 2.6     | 2.1     | 2.1     | 1.8     |
| 3.7     | 6.8     | 11.8    | 17.8    | 13.1    | 4.3     | 20.4    |
| 6.5     | 10.2    | 16.6    | 36.4    | 44.6    | 11.2    | 71.4    |
| 1.59    | 1.39    | 1.34    | 1.82    | 1.85    | 1.38    | 1.54    |
| 0.96    | 0.84    | 0.90    | 0.92    | 0.98    | 0.74    | 0.70    |
| 0.21    | 0.31    | 0.44    | 0.64    | 0.26    | 0.05    | 0.25    |
| 0.21    | 0.31    | 0.44    | 0.64    | 0.26    | 0.05    | 0.25    |
| 3.40    | 3.19    | 2.88    | 2.44    | 0.70    | 0.45    | 0.46    |
| 722     | 550     | 460     | 465     | 317     | 156     | 167     |
| 181     | 190     | 70      | 15      | -       | -       | -       |
| 903     | 740     | 530     | 480     | 317     | 156     | 167     |
| 225,000 | 185,000 | 175,000 | 110,000 | 100,000 | 100,000 | 35,000  |
| 75,000  | 40,000  | 40,000  | -       | -       | -       | -       |
| 30,000  | 105,000 | 115,000 | 142,000 | -       | -       | 65,000  |
| 330,000 | 330,000 | 330,000 | 252,000 | 100,000 | 100,000 | 100,000 |

**Shareholders' Information**

Requests should be directed to:

The office of the Secretary

Circo Craft Co. Inc.

17600 Trans Canada Highway

Kirkland (Québec)

H9J 3A3

Si vous désirez vous procurer  
la version française du présent rapport,  
veuillez vous adresser comme suit:

Compagnie Circo Craft Inc.

Le bureau du Secrétaire

17600, route Transcanadienne

Kirkland (Québec)

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Please recycle

**General Administration  
and Head Office**

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**Bank**

The Royal Bank of Canada

**Legal Advisors**

McCarthy Tétrault,  
barristers and solicitors

**Auditors**

Samson Bélair/Deloitte &  
Touche, chartered accountants

**Transfer Agent and Registrar**

Montreal Trust Company, at its  
principal offices in Montréal,  
Toronto, Winnipeg, Regina,  
Calgary and Vancouver

**Stock Listing**

The shares of Circo Craft are  
traded on the Montréal and  
Toronto Stock Exchanges under  
the stock symbol, CCC. Market  
information can be found in the  
stock tables of Canadian  
newspapers under the acronym  
CIRCO CRFT



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