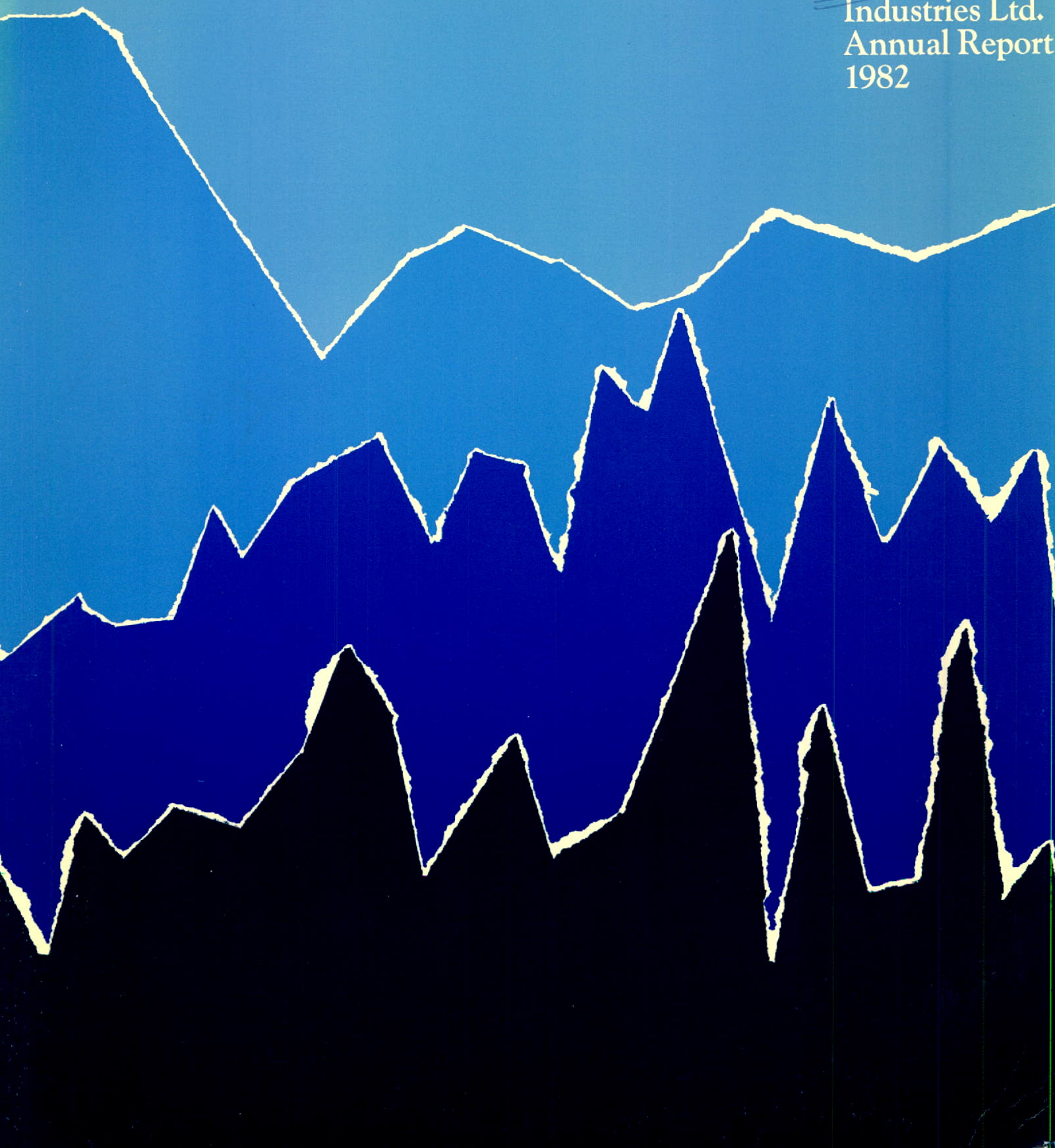
Federal Industries Ltd. Annual Report 1982



Federal Industries is a Canadian-controlled, diversified company, with Head Office located in Winnipeg, Canada. Through wholly owned subsidiaries, it provides truck, ocean and rail services to Western Canada, services other Canadian transportation systems through a bulk transshipment terminal, and remanufactures and distributes aerospace products around the world.

The Company has annual sales of nearly $180 million and assets of $200 million. More than 90 per cent of the 4.69 million common shares are owned by residents of Canada and are traded on the Toronto and Winnipeg Stock Exchanges.

About the Cover

With 1982 representing a major downturn in the world economy, where we are on "the business cycle" is a major topic for discussion. This year's cover shows three of the economic cycles discussed in some detail in the Report.

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Annual Meeting

The Annual Meeting of the Shareholders will be held at the Westin Hotel, Two Lombard Place, Winnipeg, Manitoba, on May 5, 1983 at 11:00 a.m.

1982 was a disappointing year for your Company. Like most corporations, Federal Industries was hit hard by negative economic forces, with revenue and profitability declining as a result of significant cutbacks in business for two of our Divisions.

In the face of this adversity, our low debt load, fundamental financial soundness and tight cost controls did enable us both to minimize the earnings downturn and to strengthen our balance sheet.

Just as importantly, we were able to stay on target with an ongoing program of diversification designed to increase our resistance to future economic fluctuations.

For now, it's our opinion that the cycle may well have bottomed out (see special section beginning on page 41). While 1983 will be a relatively difficult year, 1984 should see a return to higher sales, profits and growth.

The following pages provide a comprehensive report on your Company's operations and prospects. However, if you have any questions or comments, please feel free to fill out and return the card provided for your convenience inside the back cover.

Report to Shareholders

John F. Fraser
President and Chief
Executive Officer

Stewart A. Searle
Chairman

The past year was both frustrating and rewarding for Federal Industries.

It was frustrating because virtually all key financial indicators for the Company reflected the devastated economic environment in which we operated.

It was rewarding in that the Company was able to maintain a respectable level of earnings and to achieve a strengthened balance sheet in spite of the business cycle downturn.

Looking back, the year began well with a record-breaking first quarter performance for all Divisions. Unfortunately, this was not to last. The abrupt end came in spring as the encroaching recession struck one industry after another. Natural resource activities in mining, forestry and petroleum products came to a virtual halt, requiring massive adjustments in our operating Divisions.

The Aerospace Division's commercial overhaul business was impacted seriously by unprecedented drops in numbers of flying hours, particularly in Canada where many aircraft are deployed in resource exploration. To offset the demand reduction in the company's traditional Canadian marketplace, Standard Aero embarked on a rigorous campaign targeted on the United States, and with attention to overseas opportunities. Initial results are encouraging.

The distribution of aviation parts and accessories was also affected by the recession, with volumes declining 15 per cent. To counter this development, and as part of a well-defined long range strategy, your Company purchased two U.S.-based aviation distribution companies, providing additional management and branch sales outlets. Although these companies did not have a material impact on 1982 earnings, they are expected to make a substantial contribution in the years ahead.

The impact of the worldwide economic recession on the Transport Division was equally dramatic. Here, metal prices at levels not witnessed since the 1930 s resulted in the shutdown of many mines, including the Cyprus Anvil lead-zinc mine, The White Pass and Yukon Corporation's largest customer. In May, a short term closure was announced, and White Pass, attempting to be ready for the anticipated reopening of the mine in the fall, kept most of its people and equipment ready for action. However, in October, closure until at least spring 1983 was confirmed, forcing management to suspend both marine and rail activities shortly thereafter.

The combined effects of sharply reduced volume and expenses associated with this cutback produced a small loss in earnings per common share for The White Pass and Yukon Corporation in 1982 — a disappointing performance in the face of what we had expected would be record earnings.

The bright spot in Federal Industries' operations in 1982 clearly was the Terminals Division. Use of western Canadian coal by Ontario Hydro increased 19 per cent from 1981, but the biggest factor once again was the shipment of potash, with volumes growing 54 per cent to over 1,000,000 tons. The record sales and earnings reflect the excellent operational and marketing efforts of the Terminal's staff.

Specific Results

As the chart shows, net earnings for 1982 were down 45 per cent to $6,029,000 from $10,914,000 (before extraordinary items) a year ago.

Earnings per share decreased 49 per cent to $1.25 from $2.43, reflecting an increase in average outstanding shares to 4,699,512 from 4,485,361 in 1981. More particularly, 1982 results show the full annual effect of 808,844 shares issued in mid-1981, together with stock dividends declared during 1982.

The prior year's results contain $24,000 in extraordinary income, raising earnings to $10,938,000 or $2.44 per share. In 1982, there were no extraordinary items.

Earnings per common share in 1982 were decreased by three cents as a result of dividends totalling $158,600 on newly-issued Class II Preferred Shares. These shares were issued as part of the May purchase of IMI Corporation (see "Acquisitions" below).

Other key results:

- Capital expenditures declined sharply to $3,183,000 from $14,515,000 reflecting a cutback in existing and projected activity. Major internal capital items included new semi-trailers for White Pass' southern expansion of its general freight operation and new engine overhaul equipment facilities at Standard Aero. The Company also acquired over $600,000 in capital assets through its U.S. acquisitions.
- The net cost and level of borrowings remained virtually constant in 1982 compared with the previous year. Repayment of principal amounts was offset by new borrowings to finance a petroleum tank farm in Skagway, Alaska and by the assumption of long-term debt in one of the aviation distribution companies purchased.
- Consolidated sales fell seven per cent to $179,193,000 from $192,690,000, reflecting reduced sales volumes at The White Pass and Yukon Corporation and Standard Aero.
- Working capital increased 26 per cent to $50,542,000 from $40,048,000. The im-

provement is a result of the issue of Class II Preferred Shares, the assumption of long-term debt on acquisition and a sharply curtailed capital expenditure program.

- Although cash flow from operations declined to $13,878,000 from $18,709,000 in 1981, it was the second strongest performance for the Company in the past five years.
- Return on equity was cut approximately in half. Based on the "opening equity" method, ROE dropped to 8.1 per cent from 20.0 per cent in 1981.

Acquisitions

During the year, Federal Industries acquired two U.S.-based aviation products distribution companies serving North American and international markets under the trade names SPAD, P.F. Industries and IMI Corporation. These companies, now collectively operating as Standard Aero International, represent $30 million (U.S.) in annual sales through nine branch locations across the western United States and through agents in Japan and the Far East.

Underpinning the purchase was the issue of Class II Preferred Shares of Federal Industries valued at $2.3 million (U.S.) and the assumption of $5.4 million (U.S.) in liabilities. The preferred share issue was the first since the creation of this new class of stock in 1981. Details are discussed in the Financial Report.

Shortly after the acquisition, Mr. W. L. (Bill) Carolla, was appointed President and CEO of Standard Aero International Inc., based in Dallas, Texas. Bill's 43-year career in aviation distribution uniquely qualifies him to head Federal's newest Division, consisting of the two U.S. companies and the substantial distribution operation in Canada and Europe, formerly managed by Standard Aero Limited.

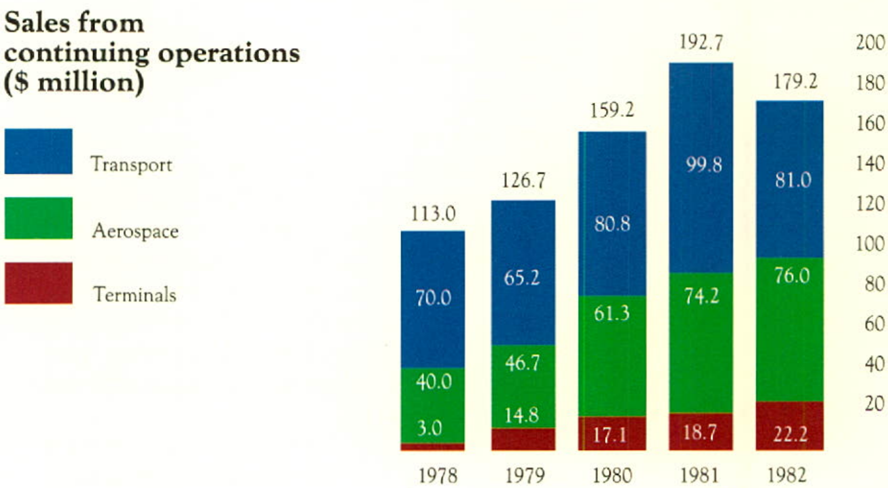
The newly-appointed President of Standard Aero Limited is Gordon B. Sampson. An aeronautical engineer, Gordon brings to the company 25 years experience in the industry, latterly as senior operating officer of a significant Canadian aviation business. Mr. Sampson will administer the Company's worldwide aircraft engine overhaul operations from Winnipeg.

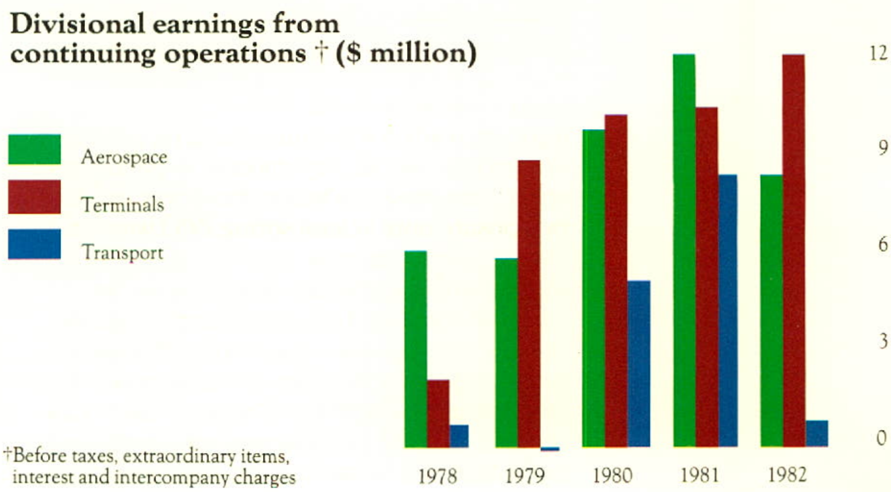
This major restructuring of Federal's Aerospace operations into Overhaul and Distribution components is in recognition of the outstanding growth and profit potential of both divisions. With worldwide headquarters being established in Minneapolis, the Distribution group will maintain close liaison with Overhaul's Winnipeg facilities. The combined forces are well positioned and financed to become a major presence in international aviation.

Dividends

During the year, dividends on preferred shares amounted to $158,600 while dividends on common shares were $2,345,000 or 45 cents per share, compared to 30 cents per share in 1981. Annual dividends currently are at the rate of 50 cents per common share.

	December 1982 12 Months ($ Million)	December 1981 12 Months ($ Million)
Sales	**179.2**	192.7
Earnings before interest, taxes and extraordinary items	**19.3**	29.3
Interest Charges	**7.9**	7.6
Net Income before Extraordinary Items	**6.0**	10.9
Net Income after Extraordinary Items	**6.0**	10.9
Working Capital	**50.5**	40.0
Earnings per Share before Extraordinary Items	**$ 1.25**	$ 2.43
Earnings per Share after Extraordinary Items	**$ 1.25**	$ 2.44
Equity per Class A and Class B share	**$16.46**	$15.65

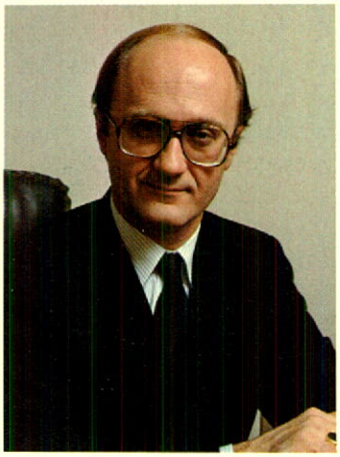




†Before taxes, extraordinary items, interest and intercompany charges

Corporate Appointment

Late in the year, William E. Watchorn was appointed Vice-President of Federal Industries Ltd. with responsibility for maintaining operational liaison with subsidiaries and conducting Federal's day-to-day financial affairs. A chartered accountant, Bill has held senior financial positions in a number of large Canadian corporations.



Outlook for 1983

North American fiscal and monetary policies, the outlook for world base metal prices and resumption of natural resource activities in Canada are key factors in your Company's prospects for 1983.

Government's response to enormous deficits and high unemployment will determine whether lower interest rates will persist through 1983, and while Federal is relatively immune to interest level fluctuations, many of its major customers are not. We are concerned that government may respond to the current high unemployment problem by increasing the size of the deficit, with the result that inflation may return to haunt us in 1984 and beyond.

Whether or not this happens, the outlook is sufficiently clouded that we can foresee no immediate substantial improvement in any of the Company's markets which are affected by the level of economic activity, interest rates and money supply, such as general aviation, freight tonnages and levels of petroleum and mining exploration. Base metal prices are primarily demand-set, and although no further weakening seems likely, we are forecasting a long, shallow recovery in which the 1983 outlook for mining, while improving, is not bright. Specifically, we do not anticipate a return to shipping of concentrates at Cyprus Anvil during the year. Stripping of overburden may occur, but demand for bulk freight services will be substantially lower than in 1982. As a result, White Pass is planning to redeploy its assets elsewhere and accelerate the strategy to reduce its reliance on volumes supplied by the Cyprus Anvil mine. This major restructuring and reorganization of White Pass, begun in 1982, is designed to assure a return to profitability in 1984 at volumes only half of recent years.

Activity in off-shore markets for aviation products is somewhat brighter. Less affected by the recession, the Far East, Europe and Africa and particularly government customers, should increase purchases of our products and services. Significant allocations have been made for new expenditures in aviation overhaul and for the installation of a state-of-the-art computer system serving Standard Aero International operations.

Overall, 1983 is expected to be another difficult year with results in the first half lagging considerably behind the same period in 1982, when the Cyprus Anvil mine was in full production for five months. Nevertheless, we anticipate an improving situation as the year progresses with the final financial results meeting or exceeding those of 1982.

Looking beyond 1983, we expect economic conditions to improve, and this, combined with the positive impact of White Pass' reorganization and the full effect of our new expansion into the U.S. aviation market, will assure a return to higher levels of sales, profits and cash flow by 1984. Nevertheless, the present unsettled economic environment requires a continuation of our conservative fiscal policies with minimal capital outlays. Expansion through acquisition will remain a fundamental objective, but not at the expense of our emphasis on balance sheet strength.

On behalf of the Board of Directors.

J. Fraser

John F. Fraser

Stewart A. Searle

Stewart A. Searle
March 16, 1983

Financial Report

John S. Pelton
Vice-President, Finance

Earnings

In 1982, earnings declined to $6,029,000 or $1.25 per share from $10,914,000 or $2.43 per share the previous year. A net extraordinary gain of $24,000 or one cent per share increased 1981 earnings to $10,938,000 or $2.44 per share. The gain represented a combination of tax loss carry-forwards and an allowance against a claim still under litigation.

The past year's decline in earnings resulted primarily from substantially lower ore traffic at The White Pass and Yukon Corporation Limited, where operating profit decreased by more than 87 per cent, and from reduced overhaul and parts business at Standard Aero Limited, where operational earnings fell by approximately 35 per cent.

Operations of all Divisions are described more fully in the review beginning on page 11.

Acquisitions

During the year, the Company, through subsidiaries, acquired two U.S.-based aviation products distribution companies for consideration consisting of assumption of debt, obligations taken back by the vendors and the issuance of Class II Preferred Shares. Goodwill arising on the purchases is being amortized over a 40-year period, and other intangible assets over 10 years.

Interest Costs

Total interest expense relating to operations increased slightly to $7,917,000 from $7,584,000 in 1981. After excluding the cost of debt related to Thunder Bay Terminals Ltd. (covered by an all-events contract with Ontario Hydro and discussed under "Balance Sheet" below), interest expense increased to $1,916,000 from $1,416,000 in the previous year.

In 1983, the Company expects to be able to fund its capital requirements for existing subsidiaries and dividend payments from internally generated funds, leaving Federal relatively immune to the effect of interest rate fluctuations.

During the year, $492,000 in interest was earned on short-term deposits placed with Canadian banks. This was a decrease of $86,000 over 1981. Both amounts are reported under "interest earned" in the statement of earnings.

Foreign Exchange Losses

Foreign exchange fluctuations have been an historic source of losses at The White Pass and Yukon Corporation. This is because most of the costs of running the company's railway between Skagway, Alaska and Whitehorse, Yukon have been incurred in U.S. dollars, while revenues derived from this service have been paid in Canadian dollars. The resulting imbalance depressed profits by $475,000 in 1982 and by $550,000 in 1981.

Foreign Currency Translation

During the year, Standard Aero Limited acquired new operating subsidiaries in the United States. For foreign currency translation purposes, these United States operations are considered self-sustaining operations. Accordingly, income and expenses have been translated on the basis of average exchange rates during the year and the year end assets and liabilities have been translated at year end exchange rates. Exchange gains and losses for self-sustaining operations are customarily included as a segregated section of shareholders' equity. In 1982, the adjustment was not material and has been included in accounts payable.

Balance sheet

During the year, working capital improved by nearly $10,500,000 to $50,542,000, the sixth successive annual increase in this important indicator.

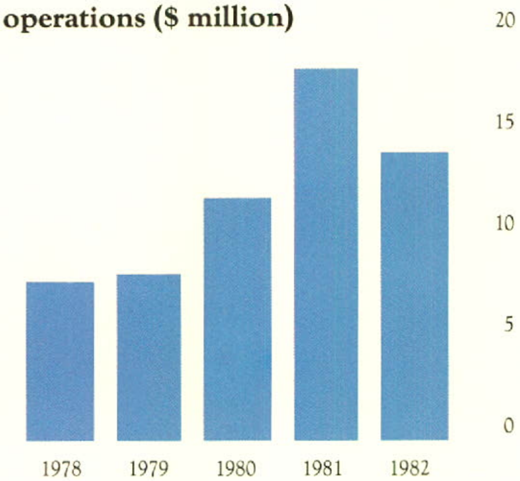
A summary of the working capital components, in millions of dollars, is set out below.

	1982	1981
Cash inflow from profits and non-cash expenses	13.9	18.7
Cash inflow from other sources		
Issuance of shares	2.9	10.3
Issuance of assumption of debt	9.3	5.5
Other	1.9	4.2
	28.0	38.7
Cash outflow from operations		
Purchase of fixed assets	3.2	14.5
Investment in newly-acquired business	4.0	–
Retirement of debt	5.7	6.1
Dividends paid	2.8	1.6
Other	1.8	0.7
	17.5	22.9
Net cash provided for addition to working capital	10.5	15.8

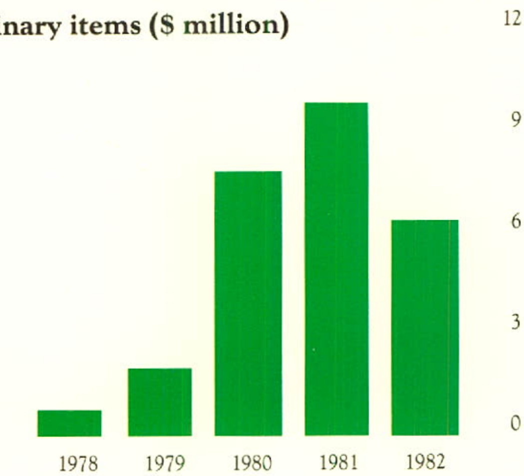
Of the $71,895,000 in long-term debt, $56,604,000 represents funded obligations of Thunder Bay Terminals. As more fully explained in Note 4 to the financial statements, a long-term contract between the Terminal and Ontario Hydro provides for the payment of debt service under all events and, under the terms of the mortgage bonds, security is limited to the assets of the Terminal. Accordingly, it is reasonable to exclude this "project financing" debt in calculating the Company's long-term debt-to-equity ratio. On this basis, the year-end ratio was 0.16 to one, compared with 0.09 to one at December 31, 1981. Total debt-to-equity was 0.28 to one at the end of 1982, compared with 0.20 to one in 1981.

As part of loan arrangements concluded last year with the Bank of Montreal, Federal Industries has established an operating line of credit of $50,000,000 – secured primarily by charges against current assets. However, the medium-term operating and capital requirements of the existing Divisions will continue to be met from internally-generated cash flow, supplemented from time to time by this line of credit. As a substantial base to fund future acquisitions, an additional credit line of $15,000,000 has also been negotiated.

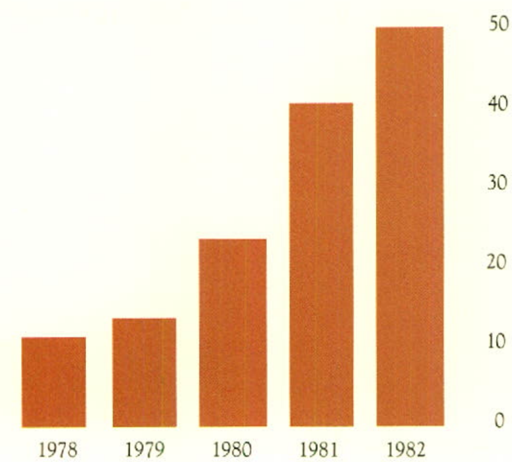
Cash flow from continuing operations ($ million)



Net profit before extraordinary items ($ million)



Working capital ($ million)



Income Taxes

Because Federal Industries is comprised of subsidiaries in several tax jurisdictions, the consolidated rate of tax may vary from period to period. This is particularly true when one or more companies incur losses while others remain profitable, or when tax incentive programs affect the amount of tax paid. In 1982, the consolidated income tax rate decreased to 43.9 per cent from 48.1 per cent last year. In 1981, certain White Pass railway subsidiaries remained unprofitable, and the accounting practice of not recognizing in the current year potential recovery of taxes from losses carried forward resulted in higher-than-normal taxes for both White Pass and Federal Consolidated. In 1982, however, White Pass experienced a more balanced tax rate, and reduced profit levels at Standard Aero enhanced the effect of inventory tax credits on the already lower manufacturing tax rate.

Federal Industries has organized its affairs in the United States to allow for filing of joint tax returns, a practice which is not yet permitted in Canada. Until this is allowed, and with a continued use of available tax incentives, there will be some volatility in the consolidated rate of tax.

Capital Expenditures and Depreciation

In 1982, capital expenditures totalled $3,183,000 compared with $14,515,000 the previous year. The major proportion of these expenditures in both years was made by The White Pass and Yukon Corporation. In 1981, White Pass spent $5,500,000 from the proceeds of non-interest bearing government loans on railway rolling stock, replaced a substantial part of its trucking fleet and incurred the majority of costs in relocating its petroleum tank farm in Skagway, Alaska. In 1982, most of the capital amount was used to replace highway equipment at White Pass.

Share Capital

At a Special Meeting held in 1981, shareholders approved an increase in the authorized capital of the Company by creating Class I and Class II Preferred Share categories, each consisting of an unlimited number of shares without nominal or par value. Class I Preferred Shares are entitled to a preference over Class II Preferred Shares in payment of dividends and distribution of assets in the event of a dissolution of the Company. The Class II Shares are intended to have special features, such as participatory or convertibility rights, while Class I Preferred Shares are directed towards the more conservative, yield-oriented buyer.

In May of 1982, 28,760 Class II Convertible

Preferred Shares valued at $2,876,000 were issued on the acquisition of all the common shares of IMI Corporation Inc. of Seattle, Washington. Bearing a coupon rate of nine per cent, these shares are convertible at the option of its holder within 10 years at $15.78 per Federal common share. Some voting and sale restrictions are attached to the shares.

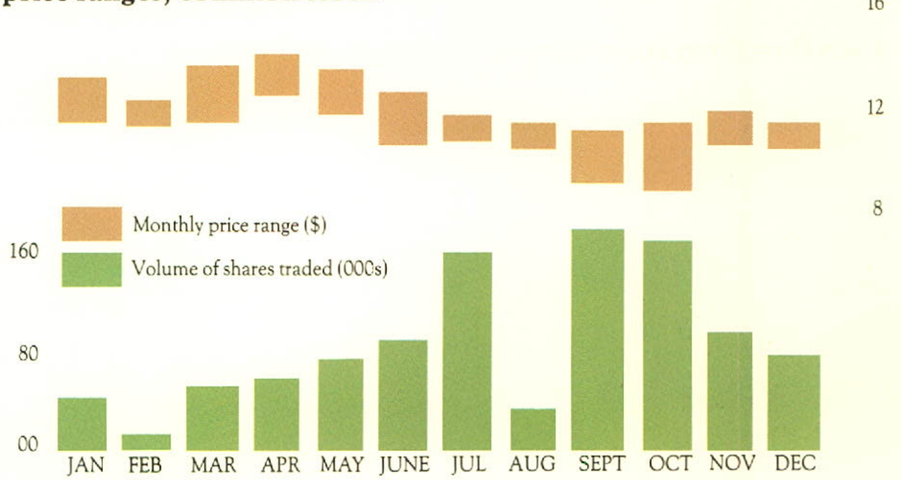
During the year, 104,800 Class A Common Shares were purchased for cancellation at prices reflecting market value at the date of purchase. All of the purchased shares were issued under a Stock Purchase Plan use of which was discontinued at the end of 1981. A new Share Option Plan was approved by shareholders at the Annual Meeting in May 1982.

With the issue of 9,639 Class B Common Shares as stock dividends and conversion of 169,726 Class B Shares into Class A Shares during the year, a total of 4,694,613 common shares were outstanding at December 31, 1982, comprised of 4,530,419 Class A Shares and 164,194 Class B Shares.

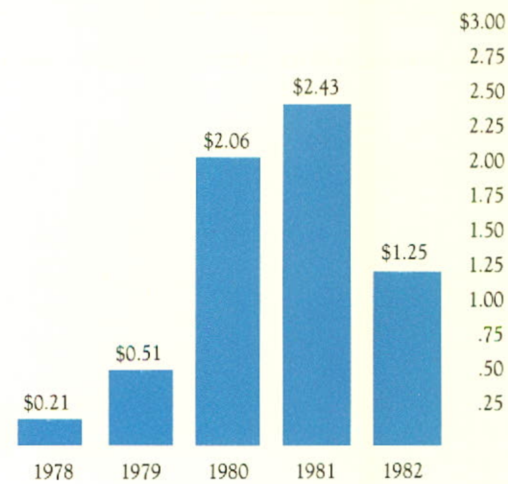
The weighted average number of Class A and B Shares outstanding for 1982 was 4,699,512, compared to 4,485,361 shares in 1981. This accounts for the differential between the dollar earnings and earnings per share.

Market performance of Federal Industries shares was relatively encouraging in the light of stock market developments in 1982. Prices varied from a low of $8.25 to a high of $14.00.

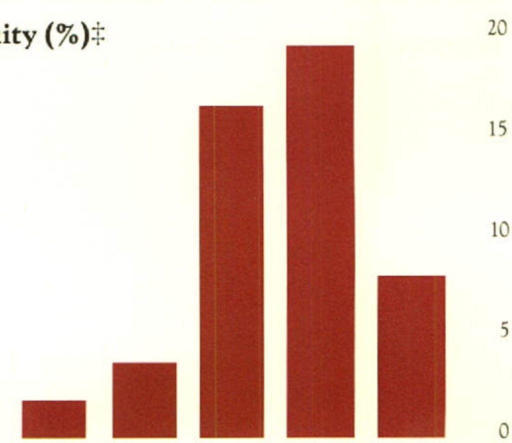
1982 Trading volumes and price ranges, common stock



Earnings per share before extraordinary items



Return on shareholders' equity (%)‡



‡Based on opening common equity

Divestitures

In the course of its operations in previous years, Federal Industries has disposed of a number of businesses. The historical effects of all divestitures have been segregated in the financial statements and shown retroactively in the consolidated historical summary.

Summary

The Company's policy of fiscal prudence has once again shown its value, with liquidity improving during the worst economic environment in fifty years. Careful planning and conservatism will continue to be key elements of our financial strategies in the still unsettled and volatile economic circumstances. We foresee improvement in Federal's balance sheet strength through 1983, which will aid our existing businesses in taking advantage of any recovery, and which will enable us to consider advantageous acquisitions.

Planning Report

R. J. Vahsholtz
Vice-President, Planning

Planning is an important activity for virtually every corporation. But nowhere is it more important than at Federal Industries.

This is partially a function of the diversified nature of the Company, and of the economic times. But the major factor is one of management approach.

That's the reason a major time commitment for planning is made throughout the year and why, two years ago, the Company created a vice-presidential planning position.

This section is designed to provide an understanding of the process, principles, and participants in planning activities which will do much to shape the future for Federal.

The objective is to create an operating plan that blends the detached corporate office perspective with the subsidiary's detailed operating know-how into a plan that makes sense to all participants.

These are exciting times with the world in turmoil as we make our transition from the industrial age to an uncertain technological future. In Canada the challenge is even greater as our nation struggles to find its destiny. Planning in such an environment is particularly challenging, and we approach the task as we approach business in general: by looking at the fundamentals.

Federal Industries is a diversified management company. That means that we, Federal, own several other companies in various fields, and our function is managing the management of those companies. Currently we have four subsidiaries, all of which are service oriented and transportation related, yet geographically and operationally diverse. Each subsidiary is operated by a president and a complete management team with skills and experience appropriate to their industry. Federal's role is to insure the continuity of highly motivated, aggressive management for each company and provide them with a well structured and financed corporate environment. In essence, we act as a sort of working "Board of Directors" for each subsidiary.

We do this by staying in close touch with each subsidiary's management team, studying and projecting the trends of each industry in which our companies operate, contributing to strategic overview and monitoring the fundamentals of each operation. This helps insure that each company is alert to the hazards it faces and able to take advantage of opportunities that arise. In addition, we are able to scan the business horizon, seeking the acquisition of additional companies which will enhance Federal's profits and growth.

The fundamentals of planning at Federal and all of its subsidiaries include a well established and smooth working planning process. Each year in the first quarter, we prepare a Corporate Long Range Plan. In this plan, we boil down our overview of Federal and each of its subsidiaries in the context of our current and long range strategies as well as our judgment of the economic and strategic outlook. Because we are removed from the pressures of day-to-day operations, we can take the time and do the study necessary to maintain a clear perspective on each company. Because we have close working relationships with each subsidiary's management, we are able to frequently check our overview against the realities of their operating environment. Because we're not tied to any specific industry by tradition, knowledge or emotional strings, we can look objectively at acquisition opportunities. And because we concentrate on the fundamentals, we avoid building a large corporate office staff and getting caught up in details.

This Corporate Long Range Plan goes to all subsidiaries at the end of the first quarter of each year. In the second quarter, the subsidiaries each prepare their own detailed long range plan. Building on their own experience and Federal's overview, they write their company's objectives and strategies for the upcoming five years. The plan includes financial projections, but the emphasis is on their approach to business — where they're going, the obstacles and challenges they face, and how they intend to reach their objectives.

The long range plan is followed in the third quarter by a capital budgeting exercise which concentrates on ensuring that resources will be available to implement the plan. In the fourth quarter, the following year's detailed annual operating budget is prepared. This is an operating plan that spells out the specific strategies, targets and tactics for the following year — year one of the five-year plan. Each year, the entire process is repeated for each company and results are compared with previous projections.

All of these plans, budgets and major expenditures are reviewed in detail, discussed between corporate office and subsidiary (and revised if need be) until a consensus is reached. The objective is to create an operating plan that blends the detached corporate office perspective with the subsidiary's detailed operating know-how into a plan that makes sense to all participants. That's an educational experience in itself.

But these plans are much more than an academic exercise. They form the basis for our system of consensus management. We learned long ago that even the best laid plans are subject to becoming obsolete before the ink is dry. This "unpredictability factor" has led some companies to despair of using long range planning. We use it to enhance our ability to manage.

To begin with, we have maintained the short lines of communications we developed during the 1978 Federal turnaround. Each president reports directly to Jack Fraser, and each has a close working relationship that facilitates good communications. Despite careful planning, we assume there will be unforeseen events arising that necessitate adjustments to the plan. And since the plan represents our consensus, the presidents know what to do as long as the plan progresses as anticipated. When a new factor that might impact on the plan is perceived, the presidents know it's time to call Federal, and they do so. These phone calls and meetings facilitate a continuing consensus that minimizes surprises and keeps the operating plan intact, even in the face of major unanticipated changes such as occurred in 1982.

Good strategy involves creating a strategic plan that will work despite a changing environment, that will facilitate good management and that will capture the commitment of all the people necessary for implementation.

We're talking about the fundamentals of planning here, and while the above is a fairly typical planning process, there's a more important fundamental that captures much of our attention: strategy.

Much of what passes for strategic planning these days is linear extrapolation of past trends. The advent of computers and sophisticated planning techniques masterminded by academics and consultants has created a mystique that surrounds much of the corporate planning process. Some of it is good — and we use it, but we believe that business is fundamentally simple. Much of our planning effort is directed at "keeping it simple" — getting to the essence of business problems. It's not as easy as it sounds, but we work at it diligently because we find that doing so is the essence of good strategy, and good strategy is the essence of good business.

Good strategy is far more than clever ideas; far more than anticipating the future; far more than even understanding the essence of our business. Good strategy involves creating a strategic plan that will work despite a changing environment, that will facilitate good management and will capture the commitment of all the people necessary for implementation. Good strategy has to sound good and look good. Most importantly, it has to *work*.

During the past five years as we've been writing our Corporate Long Range Plan each year, we've been working toward developing a comprehensive long range strategic plan for Federal Industries; a plan that we and our subsidiaries can lock in on and use as a unifying force for our diversified companies in the years ahead, a plan that will continue to be revised each year but remain intact in essence for the foreseeable future. Two years ago, we set an objective to have such a plan written and agreed upon during the 1983 planning cycle. As this is written, that objective is being met on schedule. It's not being prepared in isolation. There have been many meetings between Federal and its subsidiaries to put the plan together, and there will be more; but the consensus is largely built.

Creating this plan for a diversified company operating in turbulent times has proven to be quite a challenge. We'll continue to refine and develop it for years to come, but we have the essence of it in sight.

There's one overriding goal: to build Federal Industries into a Great Canadian Company. And there are two pre-eminent strategies: to foster *management excellence* and to develop our competence at *managing diversity*. Here's a brief explanation of what we mean by those statements.

What's a suitable objective? What is the purpose of business? We believe that Buckminster Fuller has figured that out pretty well. He has said if all the leaders of all the world's governments were to suddenly disappear into thin air, after a few months of confusion, everything would be back to normal. If the leaders of the world's great *businesses* were to suddenly disappear into thin air, such chaos would ensue that the world would be lucky to survive. We believe that great companies are the cornerstone of good economies, and that the wheels of commerce provide the fuel for the high standard of living enjoyed in this age when Thomas Malthus predicted the world would run out of everything. We define a "Great Canadian Company" as one that would meet certain "Canadian" criteria and be defined as "great" by senior Canadian businesspeople.

Our plan defines the objective in detail, as well as the steps toward achievement and the schedule.

"Management excellence" is like motherhood and apple pie; a strategy that's hard to fault. We believe the essence of a business is its management, and that the quality of a business varies directly with the quality of its management. Federal's strategic plans in recent years have contained dozens of specific strategies aimed at building management, and while we are experiencing some of the initial rewards of those management development strategies, we realize the major payoff is in the future.

We also feel we have a leg-up on companies just now busying themselves with restructuring for the more competitive environment of today's economic times. We believe that our strategies for management development are better than most because again, we focus on the fundamentals: hire the best people (it only takes a few) . . . reward them for outstanding performance . . . back them to the limits of good judgment . . . and put the best ones in charge.

Perfecting our ability to manage diversity is a much more controversial strategy. There are hosts of management consultants and (particularly) stock market analysts who say the feat should not be attempted. Diversified companies have been poorly perceived in the financial marketplace in recent years and for good reason: in general, they have not lived up to the potential they promised in earlier decades when they were the darlings of the stock market.

We've spent many hours in the past five years looking into the reasons for the generally poor record of the conglomerates. We've found that their average record is less than acceptable by our criteria; but there are many outstanding performers. The average is brought down by companies in the classification that saw diversification as a way out of problems in their core business. In some cases where the core business problem related to a fundamental decline in an industry, the diversification strategy worked fine. In many other cases, where the core business problem related to management weakness, diversification only made the problem worse. Diversification is not, in our opinion, a way out of problems or a short cut to success. It is a form of business that allows us to participate in a variety of industries, pursue unique opportunities, establish countercyclical and geographically diverse operations, and maintain our objectivity and overview, thus avoiding some of the traps of turbulent times.

After careful consideration, we believe the advantages of diversification outweigh the disadvantages in the coming decades, at least for Federal Industries. Federal's core business, after all, is managing management. We ensure that each company is properly structured and managed by professionals who know their industry. We believe in professional management techniques, and we believe they can be taught, although training can never actually replace hands-on experience.

After careful consideration, we believe the advantages of diversification outweigh the disadvantages . . . Federal's core business, after all, is managing management.

By hiring and promoting strong managers, by ensuring they operate well structured and well financed companies in viable industries, and by keeping them abreast of suitable management strategies and techniques, we believe each of our companies can perform as well as or better than their competition. By cultivating carefully planned growth and diversification within our demonstrated ability to manage and finance, we believe we can build Federal at a rate exceeding the average of other Canadian companies. By maintaining a stable of companies that are affected differently by geographic, economic and technological trends, yet which respond to the same fundamentals of management and control, we think we can help Federal to make its way — intact — through the economic minefields.

This is not a new or revolutionary plan we're putting together. Federal is already diversified, and its companies are all well managed by presidents with proven competence in their fields, who have the management freedom to succeed. The Executive Committee of Federal is a team of executives with proven competence in managing diversity, who are avidly interested in every subsidiary and can step in and help operate any Federal company in an emergency. And the plan represents no change in direction. It is, however, a formalizing and refinement of what we've learned about managing diversity — an affirmation that after careful consideration and looking at a lot of options, we choose to continue doing what we do well.

We expect the years ahead to be exciting, challenging and full of opportunity. Management excellence and willingness to rise to the opportunities and challenges of a difficult economic environment will continue to be the keys to Federal's future.

We're planning on it.

The White Pass and Yukon Corporation

The White Pass and Yukon Corporation Limited is Yukon's largest petroleum and automotive parts distributor and provides a wide range of freight hauling services by truck, rail, ocean and pipeline. Both bulk commodities and general freight are handled in Alberta, British Columbia, Yukon and Northwest Territories.

Review of 1982

The dominant issue in 1982 was the closing of the Cyprus Anvil mine at Faro, Yukon in June, and the continuing uncertainty as to the timing and nature of a re-opening. In response to poor metal prices and as a consequence of extreme cash flow pressures, a decision was taken by the mine owners to extend indefinitely what was first a three to five-week summer shutdown. The ripple effect of this and other smaller mine closures has been dramatic throughout Yukon — with estimates of a 40 per cent reduction in overall economic production. The future implication of mine closures on the company's principal businesses is described in more detail below.

Five Year Review

12 months	Sales (Millions)			Earnings from Operations* (Millions)
	Freight	Petroleum	Total	
1982	38.3	42.7	81.0	1.0
1981	44.8	55.0	99.8	8.1
1980	41.6	39.9	81.5	5.0
1979	37.2	28.0	65.2	(0.6)
1978	40.6	29.4	70.0	0.4

*Before taxes, extraordinary items, interest and inter-company charges

Petroleum Sales and Services

Petroleum sales declined 16 per cent from 1981. Most of the reduction occurred in the second half of the year, almost totally because of the closure of Cyprus Anvil and other Yukon mines. The cessation of mining also sharply reduced the amount of power required, much of which is generated by petroleum products sold by White Pass. Further, the railway and trucking operations in the North are major users of diesel products, and their curtailment in the third and fourth quarters affected sales.

Profitability of the petroleum division declined over 50 per cent, reflecting reduced volume and increasing pressure on margins as competitors continued to penetrate the Yukon marketplace. This competitive situation arises primarily because of a glut of petroleum products on the west coast, itself a result of the activity declines in the forestry and mining industries.

Freight Transportation Services

Freight dollar volume fell 16 per cent from 1981, once again largely a result of mine closures in Yukon and their attendant economic effect. Operating profits worsened from a break-even position in 1981 to a loss in excess of $2.7 million.

Marine volume declined by more than 50 per cent, a consequence of the fact that a major proportion of bulk cargo handled by this operation is destined for the Cyprus Anvil mine. Further, general falloff in demand for consumer commodities, including petroleum products carried within the ship, produced a less frequent travelling schedule.

The marine route, however, did demonstrate its relative economics by regaining the important Kelly Douglas contract for hauling foodstuffs into Yukon, a traffic formerly handled by an all road haul, and marine profitability actually ran ahead of 1981 until the final quarter, when the full effects of mine closures became apparent.

The White Pass and Yukon railway suspended operations on October 8th, 1982, an action brought on by the disclosure that the Cyprus Anvil mine would not open until at least the spring of 1983, and with no assurance that that date was firm. Ironically, during the first and second quarter, volume handled by the railway was extraordinarily high, reflecting the decision by Cyprus Anvil to ship as much product as their mill could produce. After the mine closed on June 4th, 1982, the railway continued to operate for four months, carrying other freight and passengers. The tourist business declined somewhat from 1981 but by historic standards was reasonably high.

Profitability of the railway was adversely affected by the severely cold winter and by unusually heavy volumes of lead-zinc shipped during the first five months, requiring the railway to operate on a seven-day basis and to incur substantial overtime and other penalty costs. In addition, the decision to operate a passenger operation with greatly reduced general freight loads increased the losses. However, management efforts at cost-cutting and the recording of shortfall tonnage penalties payable by Cyprus Anvil left the railway in approximately the same loss position as in 1981 — approximately $3 million.

The northern highway operation, which hauls primarily Anvil ore from the mine to the railhead, experienced an excellent first half due to the high production levels at the mine. Unlike the railway, which has relatively high fixed costs, the highway division is able to be profitable over a larger range of freight volumes. Low equipment maintenance due to newly purchased power units and the absence of road bans in Yukon also contributed to first half profitability. However, third quarter losses mounted when the railway shut down and the division operated an alternative — and very expensive — service through the port of Haines, Alaska, itself curtailed by a strike in the fourth quarter. In addition, the closure of United Keno Hills Mine made worse the steadily deteriorating profit performance in this division, with the result that earnings were almost $1 million lower than 1981.

The general freight division, operating an extensive network of routes in British Columbia, Alberta, Yukon and Northwest Territories, was not as severely affected by the Cyprus Anvil closure. However, volumes were decreased by the deepening recession in Western Canada, with total sales down nearly 40 per cent in the second half. Some pick-up was evident in the fourth quarter, but overall volumes were very disappointing.

Profitability in this division was also reduced by the costs of acquiring and integrating new routes — in particular the Vancouver to Whitehorse run which represents an important strategic direction for the entire White Pass and Yukon Corporation. The existence of operating authorities between Vancouver, Edmonton and Whitehorse allows the company to provide an alternative service to the traditional White Pass Route, which uses the marine and rail links.

During the year, agreement was reached for the sale of land in Skagway and Whitehorse. Proceeds of approximately $1,200,000 have been received, and have been credited to freight division operations.

From virtually every standpoint, 1982 was a particularly disappointing year for The White Pass and Yukon Corporation. Poised to produce record earnings, the company experienced the best first quarter in its history. But the closure of all mines in Yukon — an event unprecedented in this century — together with the unexpected severity of the economic recession in Western Canada, combined to reduce performance to a break-even position.

Revenue and profits from petroleum sales and service declined sharply in 1982, because of mine closings in Yukon.

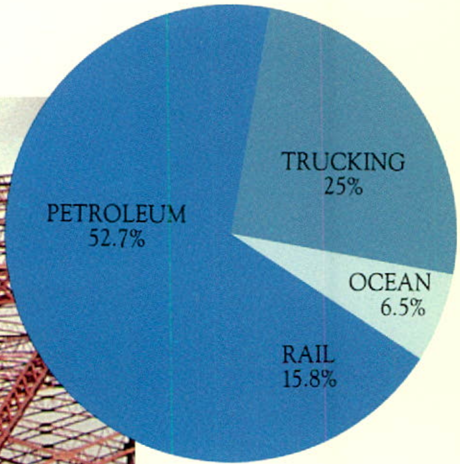
Cash flow for the year, after providing for needed capital replacements, was approximately even, allowing the corporation to maintain financial strength.

Outlook for 1983

The restructuring of White Pass for the coming year is based on the presumption that the activity of Cyprus Anvil in 1983 will be directed to stripping overburden and not to the shipping of ore. As a result, marine operations were halted after the January sailing and the suspension of railway activities was continued into 1983. The company is targeting its Yukon efforts to petroleum sales and distribution operations, with the emphasis in Western Canada on the hauling of general freight.

Regrettably, the personnel complement, which was at 750 people in May 1982, will be reduced to fewer than 250 people by March of 1983. Only essential management personnel will be retained in the marine and rail divisions, and the company will be actively seeking business elsewhere than Yukon to employ trucking assets formerly used to haul ore from Anvil to the railhead. All of the company's union agreements will expire during 1983, and it is expected that White Pass will be able to negotiate renewal agreements that will be competitive in the new and unsettled environment.

In summary, Yukon will remain a severely depressed area and sales of petroleum products and other White Pass services will be curtailed throughout the year. However, the company expects to expand materially its general freight operation south of the 60th parallel and to obtain a number of trucking contracts for activities such as exploration drilling in the Beaufort Sea. Although the costs of restructuring will be significant, it is expected that any loss experienced in 1983 will not be material, and there is a reasonable possibility of profitable operations before 1984.



Sales distribution for the twelve months to December 31, 1982.

White Pass expects to continue expanding its general freight trucking operation south of the 60th parallel, and to redeploy other equipment formerly used to haul ore from the Anvil mine.

Standard Aero Limited

Standard Aero Limited is an independent remanufacturer of aircraft and helicopter engines and accessories, and a manufacturer of ground support equipment for large military and commercial aircraft, with sales exceeding $50 million annually.

Review of 1982

The optimism reflected in our 1981 Annual Report and confirmed by an exceptionally strong first quarter was dampened by mid-June, when most markets served by Standard Aero experienced a sudden and unprecedented drop-off in demand, developing into a downward trend that is just now levelling off.

Particularly hard hit was the Canadian helicopter industry, which is dependent for much of its hours flown on mining and petroleum exploration, and on the forestry industry. Tumbling world prices for commodities forced closures and degrees of cutbacks not seen in Canada for forty years, and the Division's traditional overhaul business shrank by almost 50 per cent.

Five Year Review

12 months	Sales (Millions)	Earnings from Operations* (Millions)
1982	76.0	8.1
1981	74.2	12.4
1980	61.3	9.6
1979	46.7	5.7
1978	40.0	6.1

*Before taxes, extraordinary items, interest and inter-company charges

To counter this development, the company extended overhaul marketing into the United States, both directly and through agents. Programs were developed to stimulate and attract business, particularly in turbine power plants, and a number of bids were made to supply overhauled engines and accessories on a contract basis. These initiatives appear to have been successful in halting the slide in volume, and some strength is returning to the reciprocating engine market.

Sales of overhauled products and parts to the Canadian military was a bright spot for 1982, showing an increase of 11.6 per cent over 1981. Sales to the military account for about 38 per cent of total overhaul sales, forming an important base for many engine lines and accessories.

During the last half of 1982, the Aerospace Group was restructured to form two separately operating entities: the overhaul division at Winnipeg-based Standard Aero Limited, and the distribution division, doing business as Standard Aero International from principal offices at Minneapolis. A review of the new distribution division and its prospects for 1983 is presented separately.

Sales and operating profits up to and including 1982, shown in the Operational Earnings Summary, combine the results of distribution business formerly carried on by Standard Aero Limited.

Outlook for 1983

The overhaul division is anticipating volume increases for 1983, primarily from commercial engine and accessories overhaul. This improvement will come from enhanced penetration of the United States market and from incremental market share in certain engine lines remanufactured by the Division. Standard Aero Limited has increased its marketing and sales emphasis and is beginning to exploit further its extensive accessory overhaul capabilities. Military spending is forecast to improve somewhat over 1982, reflecting very slight volume growth and price inflation.

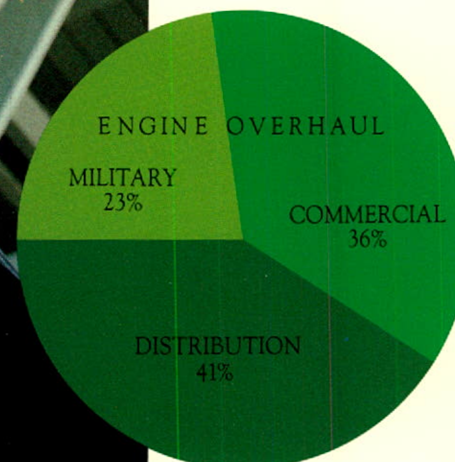
It is clear, however, that the future of Standard Aero depends upon its ability to recognize trends in engine growth and maturity and to anticipate accurately those power units which will have long and profitable lives. Since some products overhauled are presently reaching maturity, strenuous efforts will be made to establish new engine programs for the company.

Additional initiatives will be made in Canada and elsewhere to create service centres where Standard Aero provides design, know-how and parts to competent third parties to perform some or all repair and overhaul functions at sites remote from the Winnipeg plant.

On January 1, 1983, the overhaul division assumed control and management of P.F. Industries Inc., located in Seattle, Washington. P.F. is a manufacturer of ground support equipment for large commercial and military aircraft, operating under license from such major manufacturers as Boeing, Lockheed and Douglas, and producing a wide variety of proprietary items for aircraft servicing. Acquired in 1982, P.F. currently enjoys sales of approximately $3.5 million and has excellent prospects for expansion.

It is one of Federal Industries' more important longer term strategies to build a strong position in the manufacturing and remanufacturing aspects of the aviation industry. Toward this goal, we anticipate the possibility of one or more acquisitions in 1983, complementing the skills and workforce of our Winnipeg location.

Standard Aero Limited expects growth in commercial engine and accessories overhaul — from growth in existing sales and an increased share of the U.S. market.



Sales distribution for the twelve months to December 31, 1982.

Standard Aero International

Standard Aero International was created in the second half of 1982 to spearhead Federal Industries' worldwide aviation parts and accessories distribution business. Headquartered in Dallas, Texas with principal offices in Minneapolis, Minnesota, this Division generates over $50 million in annual sales through 20 locations in the United States, Canada and overseas.

Review of 1982

In mid-1982, Federal acquired two U.S.-based aviation products distribution operations serving North American and International markets under the names SPAD, P.F. Industries and IMI Corporation. With total sales of some $30 million (U.S.), SPAD and P.F. Industries distributed aviation accessories, parts and ground support equipment primarily in the United States and IMI Corporation distributed a wide range of aircraft components in the Far East and Japan.

Effective January 1, 1983, P.F. Industries, which manufactures proprietary ground support equipment for major airline aircraft, has been grouped with the remanufacturing activities at Standard Aero Limited. SPAD and IMI, together with the Canadian-based distribution operations formerly under Standard Aero Limited, were integrated under one name, Standard Aero International, in the last quarter of 1982, and William L. Carolla was appointed President and Chief Executive Officer. With 43 years of experience in the industry, Mr. Carolla is challenged for the fourth time to build a significant worldwide aviation parts and accessories distributorship.

During the year, the industry's parts distribution volumes fell off significantly. In Canada, reduced exploration and development activity in the natural resource field, together with cuts in general aviation activity, resulted in a year-to-year decline of approximately 15 per cent. In Japan, volume declines approached 40 per cent, primarily as a result of deferrals of existing programs which pushed deliveries of product into 1983. U.S. domestic sales also fell, particularly in the area of fixed wing aircraft. The worsening recession, and lingering effects of the Air Controllers strike, resulted in the lower usage of light aircraft serviced by the company. However, a bright spot for 1982 and the future is the helicopter marketplace, a growth area not adequately serviced by the industry. Another specialty, aircraft hose assembly and distribution, maintained volume levels, primarily by accessing new market areas.

Overall, with a generally shrinking marketplace throughout 1982, margins fell somewhat as competition increased. But while results were disappointing and well below expectations of a year ago, they were satisfactory within the context of an adverse economic environment and the significant reorganization of structure and management that took place.

Outlook for 1983

The key task for 1983 is to complete restructuring of the company's activities and to put into place management and system requirements for success in the coming years. The division is establishing a central warehouse at Minneapolis,

Aviation parts sales operations will be linked to the Minneapolis central warehouse through a sophisticated computer system.

which, in co-operation with significant stores of allied aviation products held by the overhaul operation some 400 miles away in Winnipeg, will allow quick delivery of the company's many product lines.

Although some expansion is likely in Japanese and Far East markets — and in servicing of helicopter operations throughout the world — 1983 will be a year of consolidation. The most significant development will be the delivery and installation of the most effective and up-to-date computer system in the industry . . . providing Standard Aero International with a real competitive edge.

Federal's Divisional Leaders: Making a critical contribution.

Given the emphasis that the Company places on management strength and divisional autonomy, it is not surprising that Federal's four divisional executives are each leaders in their field.

Thomas H. King, President and Chief Executive Officer, The White Pass and Yukon Corporation

Born and educated in Golden, British Columbia, Tom King has had a lengthy and successful career in transportation.

The first nineteen years were with a major Canadian trucking organization in which he rose to the position of Director of Terminal Operations. In December 1978, he left that company and the relative warmth of Calgary to join The White Pass as Executive Vice President and General Manager at its newly established Whitehorse, Yukon corporate offices.

In August of 1980, Tom was appointed President and Chief Executive Officer and a Director of The White Pass Corporation and all its subsidiary companies.

A Director of the Canadian Chamber of Commerce and an active Rotarian, Tom is an avid outdoorsman who enjoys hunting, fishing and boating.

Gordon B. Sampson, President, Standard Aero Limited

Gordon Sampson is a graduate aeronautical engineer from the University of Toronto with a year's post-graduate study at the Institute of Aerophysics.

While Gordon joined Standard Aero Limited relatively recently, his experience in the field goes back more than 25 years. Initially employed by Avro Aircraft in the design of fighter aircraft, supersonic transports and wire guided missiles, he moved to Avian Aircraft in 1959 to assist in the design, development and certification of the Avian gyroplane.

In 1970, he joined Fleet Industries as Deputy General Manager, rising to Vice President and General Manager and a Director of the parent company, Ronyx Corporation Limited before moving to Standard Aero in October of last year.

William L. Corolla, President and Chief Executive Officer, Standard Aero International

Like so many other World War II pilots, Bill Corolla sought his career in aviation. But unlike many others, Bill stayed with it. Most notably with Van Dusen Air which he served for more than fourteen years, latterly as President and Director.

Bill's success story with Van Dusen was later repeated with Cooper Airmotive (now AVIALL) where he developed a strong aviation parts distribution network.

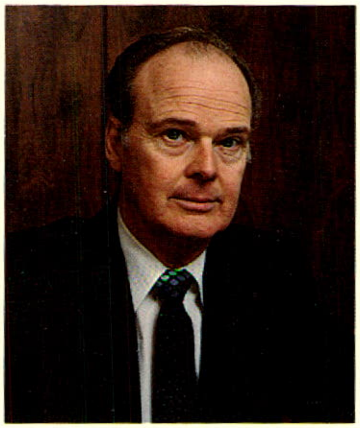
After heading up the two largest aircraft parts distribution companies in the United States, Bill Corolla has taken on a third major challenge; to meld and expand Federal Industries' worldwide aviation parts distribution activities — under the new name Standard Aero International.

Augustus S. Leach, Jr., President, Thunder Bay Terminals Ltd.

A graduate of universities on both sides of the border, Gus Leach joined Federal Industries in 1962. Since that time, he has held a variety of accounting, operating and corporate positions leading to his position as President of Thunder Bay Terminals.

A director of several Canadian companies, Gus is also very active in community affairs. He is currently on the advisory committee to the National Gallery of Canada, The Board of Governors of the Winnipeg Art Gallery, The Board of Directors of Junior Achievement of Manitoba, and The Board of Directors of the Winnipeg Football Club.

Thomas H. King



Gordon B. Sampson

William L. Corolla

Augustus S. Leach, Jr.

Thunder Bay Terminals

Thunder Bay Terminals Ltd. is a major transshipment point between trains and Great Lakes vessels moving Western Canadian products to eastern markets. Initially built to handle thermal coal, the terminal is currently diversifying into other bulk commodities.

Review of 1982

Sales increased by 23 per cent and operating profitability by approximately 28 per cent during 1982, with potash the highlight of the year. Total volume of this mineral through the Port of Thunder Bay increased by 17.3 per cent over 1981 to 1,653,000 metric tons, and our tonnage increased by 54 per cent to 1,020,000 metric tons – representing a port market share of more than 61 per cent.

Coal handled for Ontario Hydro also increased to 3,029,000 metric tons from 2,539,000 metric tons. Most of the additional tonnage arose from increased shipments of lignite coal to the expanded generating station on adjacent Mission Island.

Marketing efforts were focussed during the year at securing additional potash volumes, a task complicated by the fact that industry sales of potash into our potential markets decreased by almost 30 per cent from 1981 levels. Success of the efforts to sell the rail/water route through Thunder Bay was enhanced by decisions made by three potash mining companies to lease covered warehouse space in several ports located on the Great Lakes. This investment will tend to continue the routing of potash through the Port. For the future, the Division believes that its share of total potash movements through Thunder Bay can be increased and that tonnage handled will improve even further when an economic recovery permits farmers once again to buy fertilizer in normal quantities.

A small volume of urea was handled during the last quarter. This nitrogen-based fertilizer is produced at manufacturing plants in Western Canada. Its future outlook as a transshipment cargo for the terminal is promising.

Due to low commodity prices, the terminal did not move any grain-related products such as the 17,000 metric tons of Manitoba corn handled in 1981. However, because of the success of the initial shipments, Thunder Bay Terminals looks forward to the prospect of developing markets for corn and other agricultural commodities.

Five Year Review

12 months	Sales (Millions)	Earnings from Operations* (Millions)
1982	22.2	12.9
1981	18.7	10.8
1980	17.1	10.3
1979	14.8	8.9
1978	3.0	1.9

*Before taxes, extraordinary items, interest and inter-company charges

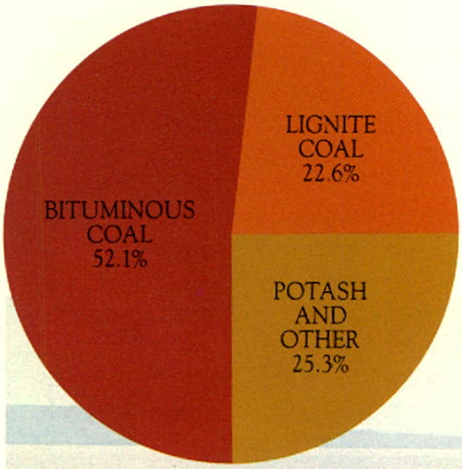
Outlook for 1983

Emphasis on potash marketing efforts will continue during 1983 in order to maximize the terminal's tonnage handled. However, total fertilizer volume to be moved into the key U.S. markets is uncertain because of the unknown impact of new U.S. federal government programs to remove acreage from 1983 crop production. Designed to combat over-production, these policies may have the short term effect of reducing potash consumption.

Coal tonnage is likely to decrease during 1983 since continuing weak demand for electricity is creating excess supplies of fuel for Ontario Hydro. Reflecting market conditions, the terminal is exercising economies to lower the cost of servicing this commodity for its major customer.

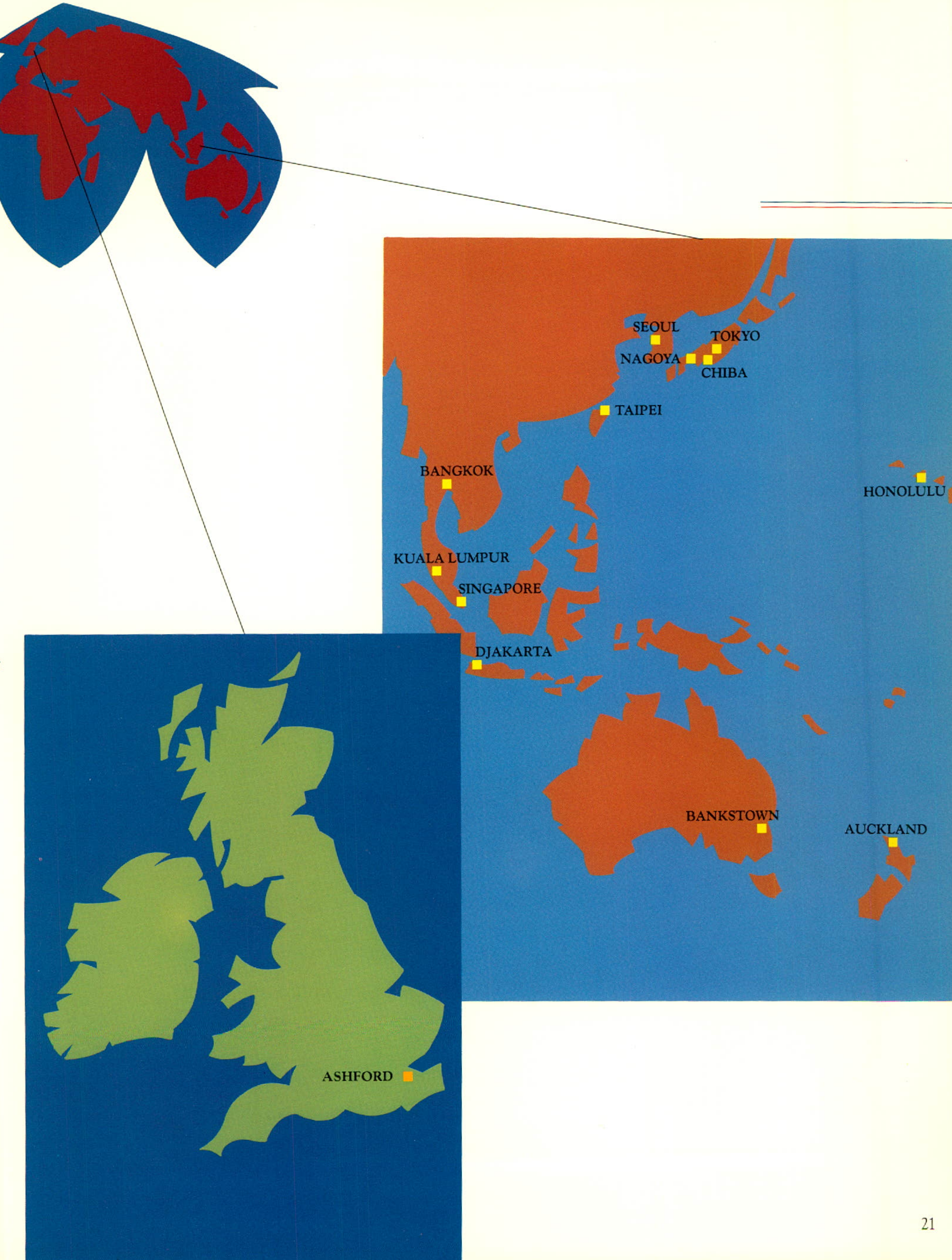
Overall, Thunder Bay Terminals anticipates that both sales and earnings will show a slight improvement in 1983.

More than one million tons of potash moved through Thunder Bay Terminals in 1982 – strong evidence of the Terminal's continuing product diversification.



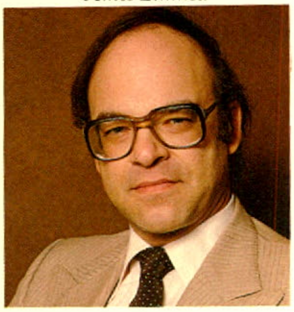
Tonnage distribution for the twelve months to December 31, 1982.

Map of Operations


SEOUL
TOKYO
NAGOYA
CHIBA
TAIPEI
BANGKOK
HONOLULU
KUALA LUMPUR
SINGAPORE
DJAKARTA
BANKSTOWN
AUCKLAND
ASHFORD

Analysts' Questions and Answers

Roland Jones
Dominion Securities
Ames Limited



Ira Katzin
Pitfield Mackay Ross Limited

Frederick K. Larkin
Wood Gundy Limited

Leo Soenen
Richardson Greenshields
of Canada Limited

In order to provide our shareholders with an insight into the type of information regularly requested by professional investors, in late February of 1983 we asked four prominent Canadian analysts who "follow" us to supply questions on the operations of Federal Industries, to be answered by the Company's Executive Committee.

For the sake of brevity, those questions clearly answered by the text of the Annual Report were omitted. And, in a few cases, similar questions on the same topic were combined. However, no "embarrassing" questions or points were omitted or changed.

Q. With the acquisitions made in the United States during 1982, Standard Aero International is now North America's third largest aerospace parts distribution company. Where do you see that industry going over the next five years, and do you anticipate any further acquisitions during that time?

A. The North American aviation parts distribution industry has had a long history of growth, and although it has been impacted adversely by the recent economic slowdown, we foresee a recovery in the five-year future and plan to make this marketplace our base. However, since we see the dominance of North America declining in the long term, our expansion will also target overseas opportunities. Growth is expected to be largely by acquisition.

Q. Federal is a diversified management company in three industries: distribution, transportation and bulk commodity handling. Do you foresee any further acquisitions for Federal down the road and if so, what industries do you find particularly appealing?

A. As discussed in the Planning Report, Federal Industries believes that managed diversity is a key strategy in attaining the goals of the Company. Accordingly, it is the intention of management to seek out additional industry groups and at the appropriate time and under appropriate circumstances to add such industries to the corporate portfolio. Our preference is to diversify outside of natural resource dependency, into businesses which are less asset intensive than our present group. There is an active and ongoing identification and evaluation function at corporate office, although nothing is sufficiently advanced at this stage to be publicly discussed.

Q. Federal's balance sheet is in very good shape, unlike many other companies. Does this accurately reflect an intentional debt avoidance policy?

A. A fundamental policy at Federal Industries is fiscal prudence — the disciplined, reasoned management of the financial assets of the Company, exercising caution in their development. But while the key words, "disciplined", "reasoned", and "caution" describe a conservative approach, they also permit innovative actions utilizing skill and judgement. What is absent in our debt policy is planned volatility, and, in general, the higher the debt-to-equity ratio, the more volatile performance will be. As a result, particularly during periods of uncertainty and economic turbulence, the Company will not borrow to a level at which any foreseeable event or combination of events could place the Company in default on its obligations.

Q. Do you foresee the need for future equity financing in conjunction with possible capital expenditure programs?

A. Equity financing will continue to be a basic strategy of Federal Industries. In our most recent acquisitions, two U.S. aviation products distribution companies, approximately $5,000,000 of debt was assumed and $2,900,000 of Federal equity issued. Although this ratio may not be applicable to future acquisitions, it does offer one example of the Company's attitude towards leverage levels.

Q. Do you foresee the Alaska Highway natural gas pipeline project going ahead at some point in the future and if so, in what way will The White Pass and Yukon division participate?

A. At present, world price and supply levels for natural gas would indicate the indefinite postponement of the Alaska Highway natural gas pipeline. However, in the long term, demand for energy should make the project feasible, and White Pass is ideally placed to benefit. On the basis of planning done two years ago when the project seemed imminent, we believe that no substantial capital expenditures will be required. We also anticipate that normal profit levels of our northern operations could more than double during any construction period.

Q. Who are your leading competitors in the aerospace parts distribution business, and what are Standard Aero International's strengths and weaknesses vis-à-vis these companies?

A. Standard Aero International has two major competitors in the distribution of aviation parts: Van Dusen Air Incorporated, headquartered at Minneapolis, Minnesota, and Aviall Inc., headquartered at Dallas, Texas. Standard Aero is more conservatively financed than either of its competitors and has an automated, computer-based point-of-sale capacity equal to or better than anything else in the industry. In choosing to build our own U.S. network, we accept the weakness of having to take market share but add the strengths of being able to avoid pitfalls our competitors have fallen into — and to respond to current economic trends.

Q. Do you have a program in place whereby employees of the Company share in profits and/or can purchase shares of the Company at a discount?

A. Senior management of Federal are eligible to participate in a Stock Option Plan, and the Presidents of our subsidiaries share in the profits of their operations.

Q. Have Standard Aero's overhaul and distribution activities been affected adversely by the economic slowdown in North America, and what are its medium to longer term prospects?

A. The Aerospace Group has been hurt by worldwide cutbacks in the aviation industry. The current recession in the natural resource sector — with oil, gas, forest and mining activities all sharply curtailed — has significantly reduced helicopter flying hours, which, in turn, has cut the volumes and profits of Standard Aero Limited. In addition, the reduction in general aviation activity in North America has resulted in a reduced demand for aviation parts and accessories. However, we are confident that the long term prospects for this industry and our position in it are secure and growing.

Q. At Thunder Bay Terminals, will the volume of coal shipments be increased over the next few years, or will non-coal commodities make up the bulk of the growth in the Division?

A. Coal volumes for use in Ontario Hydro generation stations are likely to decline in the short term, due to a current reduction in the demand for energy. However, an economic recovery in Ontario would likely result in a significant resurgence in the use of coal terminalled by the Division. For the future, the emphasis of terminal management will be to add non-coal commodities, and these will make up the bulk of the growth. In the last two years, we have handled substantial tonnages of potash, along with smaller volumes of urea and corn.

Q. What is the amount of capital expenditures projected for 1983, and where will the funds be spent?

A. Purchases of fixed assets in 1983 are expected to decline somewhat from the $3.2 million level in 1982, primarily due to severely-curtailed activities at the White Pass and Yukon Corporation. Most of the funds will be spent to provide additional equipment for improved aviation engine overhaul, and to add state-of-

Federal Industries' Executive Committee (left to right): Bill Watchorn, Vice-President; Jack Fraser, President and Chief Executive Officer; R. J. Vahsholtz, Vice-President, Planning; John Pelton, Vice-President, Finance.

the-art computer equipment for Standard Aero International.

Q. Will there be any divestitures of unprofitable operations in 1983?

A. None are anticipated.

Q. Given the success of Thunder Bay Terminals, what opportunities exist or could be developed for similar projects in other ports, both in Canada and internationally?

A. Federal Industries has developed an expertise in the design, erection, operation and financing of terminals — with Thunder Bay Terminals an example of our capabilities. Similar opportunities will be examined favourably although none is in view presently.

Q. What are the prospects for the White Pass and Yukon railway should Cyprus Anvil: 1. remain closed; 2. be taken over by the Federal Government; 3. be reopened in the foreseeable future?

A. The White Pass and Yukon railway has suspended its operations primarily because of the current low mineral volumes available to it, a situation caused by the closure of the Cyprus Anvil and other Yukon mines. It is unlikely that this suspension will be lifted should the Anvil Mine remain closed and no other activity take its place.

On a number of occasions, we have discussed the takeover of the railbed and equipment by the Federal or Yukon Territorial Government, or even by the State of Alaska. This political option has not received much support but could be acceptable to White Pass.

The most likely event, however, would be the concurrent reopening of the railway and the Cyprus Anvil mine, sometime in 1984, at which time it is anticipated that White Pass will have been able to reduce operating costs and improve the terms of its handling agreement with the mine.

Q. In order for the White Pass and Yukon railway to achieve a meaningful measure of success in the future, what kind of capital investments will have to be made?

A. For the foreseeable future, the White Pass and Yukon railway will not require significant capital investments beyond normal repair and maintenance activities. In 1981, agreement was reached with the Federal and Yukon Governments for the provision of a $6,000,000, interest free loan, the proceeds of which were used in re-equipping the railway. It is envisaged that future capital required can be produced from internally-generated funds or through contractual arrangements.

Q. What investment opportunities are open to Federal Industries in the helicopter servicing industry, both in Canada and the U.S.? Would that industry open the way for other international involvement, for example in Europe?

A. Federal views the helicopter industry as a major growth prospect for its Aerospace Group. At present, Standard Aero Limited overhauls most of the helicopter engines in Canada and is expanding this business into the remainder of North America and overseas. One of the recent U.S. acquisitions specializes in distribution of helicopter parts and in the manufacture of proprietary items for helicopter applications, such as medical evacuation and drill rig servicing. Standard Aero is also examining the feasibility of overhauling other parts of the airframe and rotors, together with potential manufacture and assembly of the entire unit. Most of the helicopters in the world are based in North America, so expansion would be primarily within that area, although Western Europe is growing in production and use of rotary wing aircraft.

Q. What are Federal Industries' objectives/targets for the remainder of the 1980s in regard to size, capital structure, scope of operations and return on investment? What kind of business or economic environment would these objectives be dependent upon?

A. Federal Industries intends to expand its present businesses from within and by acquisitions, and to acquire major positions in other industries. The capital structure envisaged would be fiscally sound and characterized by a relatively low debt/equity ratio as noted earlier. Anticipated return on investment would exceed the median of Canadian public companies in our field, and the present minimum threshold rate is 15% after tax. We are looking for a compound annual sales growth rate in excess of 25%.

Q. Given the assets currently in place, what would be the realistic rate of return given a normal economic environment?

A. We view 15% after tax as a realistic average rate of return on shareholders' equity, and in 1981 our return was nearly 17%. Since we consider the current results as anomalous, we believe that a target rate of return should approach 20% after tax.

Q. What are Federal Industries' future objectives in regard to labour relations and labour intensity in its various subsidiaries?

A. The aviation remanufacturing business of Standard Aero and transportation services provided by the White Pass and Yukon Corporation are relatively labour intensive, and are likely to remain so into the future. Thunder Bay Terminals, on the other hand, runs with fewer than 60 people, notwithstanding an asset investment in excess of $68,000,000. The distribution of aviation products and accessories is less labour intensive than its sister overhaul operation and, where appropriate, utilizes agents in place of permanent staff. Almost half of Federal employees are not unionized, and labour relations in general continue to be excellent.

Q. Do you view the United States as providing the future expansion opportunities for Federal Industries, particularly in the aerospace industry?

A. Because of the relative size of the U.S. aviation industry, which at present dwarfs that of any other country — and because most of the world's aircraft operate on engines produced by American manufacturers — the United States will provide the most lucrative opportunities for expansion in the medium term. However, the Company recognizes that changes are emerging in production and use of aircraft, and accessing other world markets is a close second in priority.

Q. The economic situation in Yukon has become much worse than most people had ever anticipated, and this has been reflected in Federal's results for 1982. What strategy do you have in place for The White Pass and Yukon Corporation in light of the probable slow turnaround of Yukon's economy?

A. As more fully discussed in the Report to Shareholders and in the divisional section of this Report, White Pass is reconfiguring itself to operate profitably without the volume traditionally provided by the Yukon mining sector. This strategy primarily involves consolidating around the Company's petroleum distribution and general freight division, which has been recently expanded in the British Columbia and Alberta markets. Both rail and marine operations have been suspended, and employment reduced by over two-thirds from summer 1982 levels. However, the company has retained all of its key managers, and, because of a strong financial position, will be able to retain all of the assets necessary to reopen full services when the Cyprus Anvil Mine, in particular, reopens.

Q. What is your policy with respect to the payment of dividends?

A. Dividends have been increased significantly over the past three years, from an annual rate of 20 cents per share to the current 50 cents. This improvement has reflected the increased profitability and liquidity of the Company, and has brought the payout rate into line with similar businesses. No formal policy has been adopted by the Board of Directors.

Q. What alternatives are open to the White Pass and Yukon Corporation to lessen its sensitivity to Cyprus Anvil?

A. Limiting the effect that this one customer has had on the White Pass and Yukon Corporation has been a key strategy of the Company since 1979, and events of the past year have acted to accelerate our plans. First, a lowering of the railway's operation costs, together with an anticipated new operating agreement with the Cyprus Anvil Mine, will lessen the volatility during periods of the mine's operation. Second, as mentioned in our response to an earlier question, we are currently implementing a well defined strategy that calls for a complete reorganization and restructuring of the Company that will assure a return to profitability without the freight and petroleum volumes historically provided for by the Cyprus Anvil mine. A key to this strategy is the aggressive expansion of the Company's general freight business south through British Columbia and Alberta, reducing the White Pass's reliance on both the economy of Yukon generally, and the Cyprus Anvil mine particularly.

Consolidated Statement of Earnings

For the year ended December 31, 1982

	$000	
	1982	1981
Sales and services (Note 11)	**$179,193**	$192,690
Cost of sales and operating expenses (Note 12)	**152,638**	156,710
Depreciation	**7,159**	6,649
Amortization of goodwill and intangible assets	**74**	–
Interest on long term debt	**6,760**	6,503
Other interest expense	**1,649**	1,659
Interest earned	**(492)**	(578)
	167,788	170,943
Earnings before income taxes and extraordinary items	**11,405**	21,747
Provision for income taxes		
Current	**1,782**	7,207
Deferred	**3,222**	3,255
	5,004	10,462
Earnings before extraordinary items	**6,401**	11,285
Extraordinary items (Note 13)	**–**	24
Net earnings	**6,401**	11,309
Earnings allocated to minority shareholders	**372**	371
Net earnings for the year	**$ 6,029**	$ 10,938
Earnings per common share (Note 10)		
Before extraordinary items	**$1.25**	$2.43
Extraordinary items	**–**	.01
Including extraordinary items	**$1.25**	$2.44

See accompanying notes to financial statements.

Consolidated Statement of Retained Earnings

For the year ended December 31, 1982

	$000	
	1982	1981
Balance, beginning of year	**$44,849**	$35,281
Net earnings for the year	**6,029**	10,938
Loss on redemption of shares	**(671)**	–
	50,207	46,219
Dividends		
Class II preferred shares, Series A	**159**	–
Class A common shares	**2,238**	1,267
Class B common shares	**107**	103
	2,504	1,370
Balance, end of year	**$47,703**	$44,849

See accompanying notes to financial statements.

Auditors' Report

Touche Ross & Co.
Suite 2000, 360 Main Street
Winnipeg, Manitoba R3C 3Z3
(204) 942-0051

To the Shareholders,
Federal Industries Ltd.

We have examined the consolidated balance sheet of Federal Industries Ltd. and its subsidiary companies at December 31, 1982 and the consolidated statements of retained earnings, earnings and changes in financial position for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as we considered necessary in the circumstances.

In our opinion, these consolidated financial statements present fairly the financial position of the companies at December 31, 1982 and the results of their operations and the changes in their financial position for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

Touche Ross & Co.

Winnipeg, Manitoba,
March 16, 1983.

Chartered Accountants

Federal Industries Ltd. and its Subsidiary Companies

Consolidated Balance Sheet

For the year ended December 31, 1982

Assets

	1982 ($000)	1981 ($000)
Current		
Cash and short term deposits	**$ 4,342**	$ 7,521
Accounts receivable	**25,340**	31,167
Income taxes recoverable	**1,149**	–
Inventories (Note 2)	**49,586**	47,081
Prepaid expenses	**667**	1,220
Claims recoverable	**304**	245
Current portion of long term receivable (Note 4)	**3,850**	3,850
Total current assets	**85,238**	91,084
Fixed (Note 3)		
Property, plant and equipment, at cost	**161,164**	159,344
Accumulated depreciation	**54,780**	49,370
	106,384	109,974
Other		
Long term receivable (Note 4)	**1,925**	1,827
Other investments, at cost (Note 5)	**2,366**	3,354
Deferred charges	**145**	65
Goodwill, less amounts amortized	**2,072**	–
Other intangible assets, less amounts amortized	**1,439**	–
	7,947	5,246
	$199,569	$206,304

On behalf of the Board

Stewart A. Searle

Director

J. Fraser

Director

See accompanying notes to financial statements.

Liabilities

	$000 1982	1981
Current		
Bank indebtedness, secured (Note 6)	**$ 9,683**	$ 16,637
Accounts payable and accrued liabilities	**18,562**	24,324
Dividends	**652**	359
Income taxes payable	**—**	5,114
Current portion of long term debt	**5,799**	4,602
Total current liabilities	**34,696**	51,036
Long term (Note 7)	**71,895**	68,313
Deferred income taxes	**7,342**	6,500
Minority interest (Note 8)	**5,500**	5,500
Total liabilities	**119,433**	131,349
Shareholders' Equity		
Share capital (Note 9)	**32,433**	30,106
Retained earnings	**47,703**	44,849
Total shareholders' equity	**80,136**	74,955
	$199,569	$206,304

Consolidated Statement of Changes in Financial Position

For the year ended December 31, 1982

	$000 1982	1981
Source of funds		
Operations		
Net earnings for the year	**$ 6,029**	$10,938
Add Depreciation	**7,159**	6,649
Amortization of goodwill and intangible assets	**74**	—
Amortization of deferred charges	**87**	74
Deferred income taxes	**3,222**	3,255
Accrued revenue in respect of deferred income taxes (Note 4)	**(2,380)**	(2,310)
Gain on sale of fixed assets	**(685)**	(244)
Earnings allocated to minority shareholders	**372**	371
Extraordinary items	**—**	(24)
Funds provided by operations	**13,878**	18,709
Proceeds on sale of fixed assets	**901**	386
Additional long term debt financing	**9,130**	5,526
Issue of shares (Note 9)	**2,876**	10,282
Long term debt assumed on acquisition of subsidiary companies	**186**	—
Other investments	**1,097**	248
Reclassification from current to deferred income taxes	**—**	476
Reduction in income taxes (Note 13)	**—**	324
Unexpended construction funds	**—**	2,737
	$28,068	$38,688
Application of funds		
Acquisition of subsidiary companies		
Fixed assets acquired	**$ 602**	$ —
Other non-current assets acquired	**109**	—
Excess of the cost of subsidiary companies over the book value of net assets acquired	**3,293**	—
Purchase of fixed assets	**3,183**	14,515
Increase in long term receivable net of deferred income tax component of $2,380 (Note 4)	**98**	340
Decrease in long term debt	**5,734**	6,066
Dividends	**2,397**	1,267
Dividends paid by subsidiary company to minority shareholders	**372**	371
Redemption of shares	**1,330**	—
Organizational costs	**292**	—
Deferred charges	**167**	—
Allowance for claims recoverable	**—**	300
Other	**(3)**	8
	17,574	22,867
Increase in working capital, including $3,490 increase due to acquisition of subsidiary companies	**10,494**	15,821
	$28,068	$38,688
Working capital, end of year	**$50,542**	$40,048

See accompanying notes to financial statements.

Notes to Consolidated Financial Statements

For the year ended December 31, 1982

1. Summary of significant accounting policies

(a) Principles of consolidation

The consolidated financial statements include the accounts of the Company and all subsidiaries. The names of the subsidiaries, which are all wholly owned, are as follows:

Standard Aero Limited
Standard Aero International Inc.
The White Pass and Yukon Corporation Limited
Thunder Bay Terminals Ltd.

During the year, Standard Aero Limited acquired subsidiary companies which carry on business in the United States. Operations of these companies are included in the accounts from the dates of acquisition.

All material inter-company balances, transactions and profits have been eliminated.

(b) Foreign currency translation

The accounts of certain subsidiaries of The White Pass and Yukon Corporation Limited are maintained in United States dollars. These accounts represent integrated foreign operations and have been translated into Canadian dollars as follows: current assets, current liabilities and long term debt at exchange rates prevailing at the end of the year; fixed assets and depreciation substantially on the basis of rates prevailing at date of acquisition; income and expenses (other than depreciation) on the basis of average exchange rates during the year. Exchange gains or losses from such translation practices have been included in consolidated earnings.

The accounts of certain subsidiaries of Standard Aero Limited are maintained in United States dollars. These accounts represent a self-sustaining foreign operation and have been translated into Canadian dollars as follows: assets and liabilities at exchange rates prevailing at the end of the year; income and expenses on the basis of average exchange rates during the year. The adjustment arising from the translation of these accounts has been deferred and, as not material, included in accounts payable and accrued liabilities.

(c) Valuation of inventories

Inventories have been valued at the lower of cost and net realizable value.

(d) Capitalization of leases

All material leases of a capital nature have been recorded as fixed assets and long term debt obligations.

(e) Revenue recognition — bulk handling terminal contract

A portion of the revenues accruing under the bulk handling terminal contract between Thunder Bay Terminals Ltd. and Ontario Hydro is being recognized on a basis that reflects an approximate constant return over each of the fifteen years of the initial term of the contract. (See Note 4).

(f) Depreciation

Depreciation on property, plant and equipment is provided at rates which are estimated to amortize the original cost of such assets over their useful lives.

(g) Goodwill and intangible assets

Goodwill on the balance sheet represents the excess cost of subsidiary companies over the book amount of net assets acquired, less amounts amortized. Intangible assets represent organizational costs of subsidiary companies, amounts paid for distribution agreements and research materials. The Company's policy is to amortize goodwill over a forty year period and other intangible assets over a ten year period.

(h) Income taxes

The Company follows the tax allocation method of accounting for income taxes whereby earnings are charged with income taxes relating to reported earnings.

Differences between such taxes and taxes currently payable are reflected in deferred income taxes and arise because of differences between the time certain items of revenue and expense are reported in the accounts and the time they are reported for income tax purposes.

Potential tax reductions that may result from the application of losses against future taxable income are not recognized until recovery out of future taxable income is virtually certain.

(i) Basic earnings per share

Earnings per common share are calculated using the weighted daily average number of common shares outstanding. The calculation of fully diluted earnings per share is described in Note 10.

(j) International accounting standards

The accompanying financial statements are prepared in accordance with accounting principles generally accepted in Canada and conform in all material respects with international accounting standards.

2. Inventories

	$000	
	1982	1981
Aerospace Division		
Aircraft engines	$ 5,470	$ 3,384
Work in process	3,149	4,625
Parts	27,699	23,243
	36,318	31,252
Terminal Division		
Spare parts and supplies	1,389	1,336

	$000	
	1982	1981
Transport Division		
Petroleum division products held for resale	8,825	10,957
Spare parts and supplies	3,054	3,536
	11,879	14,493
	$49,586	$47,081

3. Fixed assets

	$000 1982			1981
	Cost	Accumulated Depreciation	Net	Net
Aerospace Division				
Land and buildings	$ 4,044	$ 1,686	$ 2,358	$ 1,965
Machinery and equipment	6,203	3,890	2,313	1,618
	10,247	5,576	4,671	3,583
Terminal Division				
Terminal handling facilities	69,851	11,008	58,843	61,573
Transport Division				
Petroleum				
Trucks	349	258	91	89
Land and buildings	1,679	770	909	1,197
Machinery and equipment	916	519	397	494
Transportation				
Rail and pipeline	36,686	10,331	26,355	22,377
Ships and containers	6,490	5,851	639	596
Trucks and containers	13,114	9,553	3,561	3,941
Skagway terminal	6,690	4,451	2,239	2,658
Land and buildings	3,392	1,261	2,131	1,998
Machinery and equipment	1,131	649	482	410
Storage facilities	3,844	207	3,637	3,963
Equipment under construction	—	—	—	4,694
Equipment held for resale	6,341	4,134	2,207	2,207
	80,632	37,984	42,648	44,624
Other corporate assets	434	212	222	194
	$161,164	$ 54,780	$106,384	$109,974

Included in the amounts reported above are assets under capital leases of $3,194,000 (1981 – $3,065,000) and related accumulated depreciation thereon of $1,912,000 (1981 – $1,450,000).

4. Terminal handling facility – Thunder Bay, Ontario

(a) Thunder Bay Terminals Ltd. has entered into a long term contract with Ontario Hydro for the construction and operation of a bulk terminal handling facility at Thunder Bay, Ontario. The total cost of the terminal is $69,851,000 of which $53,953,000 relates to facilities which became operational on March 1, 1979 and $15,898,000 relates to terminal facilities which became operational in 1981.

(b) The cost of the terminal has been financed by the issue of $71,496,000 aggregate principal amount, 9⅝% First Mortgage Sinking Fund Bonds, Series A. As at December 31, 1982, the Series A bonds issued and outstanding aggregated $60,454,000. The terms and conditions of the Series A bond issue are provided for in a Deed of Trust and Mortgage dated as of October 12, 1977 between the company and the trustee for the bondholders.

(c) Under the terms of the agreements with Ontario Hydro, Thunder Bay Terminals Ltd. will receive, over the initial fifteen year term of the contract, contractual amounts of revenue including specific revenue components to cover all payments required for the redemption of all of the Series A bonds and for income taxes. These revenue components become recoverable as and when the bond and income tax payments become due and payable. The use of the cash received in respect of these specific revenue components is restricted to the redemption of the Series A bonds and the payment of income taxes.

(d) The amounts receivable over the fifteen years of the initial term of the contract to cover the redemption of the Series A bonds represent the revenues required to pay for the capital cost of the terminal facility. The net contribution to earnings from these revenues (total amounts receivable less depreciation on the terminal) is recorded in the accounts so as to reflect an approximate constant annual return over each of the fifteen years.

(e) At December 31, 1982, the accrued revenues receivable from Ontario Hydro for the redemption of Series A bonds amount to $5,775,000 of which $1,925,000 is long term and $3,850,000 is current. The long term accrued revenues receivable for the payment of income taxes amount to $8,458,000 (1981 – $6,078,000), all of which relate to deferred income taxes. Because the $8,458,000 to be received is restricted to the payment of income taxes, the liability for the deferred income taxes has been netted against the long term receivable.

5. Other investments

	$000	
	1982	1981
Mortgages and agreements for sale	**$ 341**	$ 401
Loans to officers and directors		
Stock purchase plan	**–**	873
Housing	**168**	176
Securities	**1,650**	1,650
Other	**207**	254
	$2,366	$3,354

6. Bank indebtedness

Bank indebtedness is secured by a pledge of shares in subsidiaries, assignment of book debts and inventories and specific pledges of certain inventories.

7. Long term debt

	$000	
	1982	1981
Terminal Division		
First mortgage bonds, 9⅝% (Note 4)	**$56,604**	$60,454
Aerospace Division		
Bank loan, secured, ½% above United States prime rate	**1,842**	–
Bank loan, secured, 2¼% above United States prime rate, due 1987	**160**	–
Note payable, 15% due 1984	**1,071**	–
Other	**9**	–
	3,082	–
Transport Division		
First ship mortgage note, 8½% due 1984	**325**	650
Capitalized equipment leases, 9%-16%	**1,039**	1,508
Government of Canada non-interest bearing loan, secured by certain rail assets	**5,000**	5,000
Government of Yukon Territory non-interest bearing loan, secured by certain rail assets	**1,000**	500
Alaska Industrial Development Authority Port Facility 13¾% bond, due 1998	**4,672**	–
Other	**18**	24
	12,054	7,682

Corporate debt		
Capitalized lease obligations, 14¼-16½%	**155**	177
	$71,895	$68,313

The aggregate amount of maturities over the next five years is approximately as follows: 1983 – $5,799,000; 1984 – $6,087,000; 1985 – $4,906,000; 1986 – $4,637,000; 1987 – $4,615,000.

9. Share capital

8. Minority interest

Minority interest is $5,500,000 of 6¾% preferred shares of The White Pass and Yukon Corporation Limited (1981 – $5,500,000).

(a) At December 31, 1982 the authorized share capital of the Company consists of:

i. an unlimited number of Class A convertible common shares without nominal or par value;

ii. an unlimited number of Class B convertible common shares without nominal or par value;

iii. an unlimited number of Class I preferred shares without nominal or par value, issuable in series; and

iv. an unlimited number of Class II preferred shares without nominal or par value, issuable in series; to date the directors have authorized:

28,760 Class II cumulative, convertible, preferred shares, designated Series A, with dividends payable in quarterly instalments of $2.25 per share.

Both the Class A shares and the Class B shares are inter-convertible at any time at the option of the holder on a share for share basis. The basic difference between the two classes of shares is that dividends on Class A shares are payable in the form of cash dividends, while dividends on Class B shares are presently payable in the form of stock dividends, payable in Class B shares.

The directors have the authority to issue the Class I and Class II preferred shares in series and fix the designation, rights, privileges and conditions to be attached to each series, except the Class I shares shall be entitled to preference over the Class II shares with respect to the payment of dividends and the distribution of assets in the event of liquidation, dissolution or winding-up of the Company.

During the year the directors authorized the creation of 28,760 Class II preferred shares, Series A.

(b) During 1982 the following shares were issued:

i. 28,760 Class II preferred shares, Series A, for an aggregate consideration of $2,876,000.

ii. 9,639 Class B shares as stock dividends of $110,000. An additional 1,997 Class B shares were issued as stock dividends of $22,000 on January 1, 1983.

(c) The number of shares issued and outstanding at December 31 were as follows:

	1982	1981
Class II preferred, Series A	**28,760**	–
Class A common	**4,530,419**	4,463,656
Class B common	**164,194**	326,118
	4,694,613	4,789,774

(d) The dollar values of the shares issued and outstanding at December 31 were as follows:

	$000	
	1982	1981
Class II preferred, Series A	**$ 2,876**	$ –
Common shares	**29,557**	30,106
	$32,433	$30,106

(e) In 1978 the shareholders confirmed a by-law authorizing a stock purchase plan, the purpose of which is to provide loans to employees of the Company for the purchase of Class A shares of the Company. During the year the Company repurchased 104,800 shares, originally issued under the provisions of the stock purchase plan, from officers of the Company and an officer of a subsidiary company at their market value of $12.6875 per share for an aggregate consideration of $1,330,000; all employee loans made under the stock purchase plan with respect to those shares were repaid.

(f) In December 1981 the directors approved a share option plan, the purpose of which is to provide employees of the Company the opportunity to participate in the growth and development of the Company. At December 31, 1982, 300,000 authorized and unissued Class A convertible shares of the Company have been reserved and set aside for purposes of the plan. Options have been granted to officers of the Company and an officer of a subsidiary company for an aggregate of 210,000 shares at a price of $12.6875 per share. These options, which expire in 1991, are exercisable on a cumulative basis to the extent of 42,000 shares per year in each of the years 1981 to 1985, except that under certain specified conditions they become exercisable immediately.

Subsequent to December 31, 1982, additional options were issued as follows: 20,000 shares at a price of $11.5118 and 10,000 shares at a price of $12.50. These options, which expire in 1993, are exercisable on a cumulative basis to the extent of 6,000 shares per year in each of the years 1983 to 1987.

10. Earnings per common share

(a) Basic earnings per common share are calculated using the weighted daily average number of common shares outstanding.

(b) Fully diluted earnings per common share are as follows:

	1982	1981
Before extraordinary items	**$1.25**	$2.38
Extraordinary items	**—**	.01
Including extraordinary items	**$1.25**	$2.39

Fully diluted earnings per share are calculated under the assumption that all convertible, preferred shares issued during the year had been converted at the date of issue and that stock options outstanding during the year had been exercised at the beginning of the year. Imputed earnings on the proceeds from the exercise of the options are calculated using a 10% after tax rate of return.

11. Segmented information

		$000			
		1982		1981	
		Sales & Services	**Segment Margin***	Sales & Services	Segment Margin*
Divisions	Aerospace	**$ 75,995**	**$ 5,346**	$ 74,232	$ 9,726
	Terminal	**22,180**	**6,900**	18,676	4,620
	Transport				
	Petroleum	**46,069**	**4,001**	58,712	8,572
	Transportation	**44,126**	**(3,855)**	49,831	(1,179)
		188,370	**12,392**	201,451	21,739
Inter-segment eliminations		**9,177**	**339**	8,761	373
		$179,193	**$ 12,053**	$192,690	21,366
Corporate interest expense			**(41)**		(231)
Inter-segment interest			**1,622**		2,029
Interest earned			**492**		578
Other corporate expenses			**(2,721)**		(1,995)
Earnings from operations			**11,405**		21,747
Provision for income taxes			**(5,004)**		(10,462)
Extraordinary items			**—**		24
Allocated to minority shareholders			**(372)**		(371)
Net earnings			**$ 6,029**		$ 10,938

*After deduction of interest: Aerospace $2,779,000 (1981 – $2,672,000); Terminal $6,001,000 (1981 – $6,168,000); Petroleum $99,000 (1981 – $129,000); Transportation $1,111,000 (1981 – $991,000).

Other segmented information

		$000					
		1982			1981		
		Capital Expenditures	**Deprec. and Amort.**	**Identifiable Assets**	Capital Expenditures	Deprec. and Amort.	Identifiable Assets
Divisions	Aerospace	**$ 1,613**	**$ 524**	**$ 64,108**	$ 1,443	$ 545	$ 54,544
	Terminal	**542**	**3,272**	**68,601**	1,313	2,963	71,462
	Transport						
	Petroleum	**86**	**196**	**12,457**	258	195	20,104
	Transportation	**1,469**	**3,122**	**49,698**	11,478	2,908	51,791
Other corporate assets		**75**	**45**	**4,705**	23	38	8,403
Total		**$ 3,785**	**$ 7,159**	**$199,569**	$ 14,515	$ 6,649	$206,304

a. The Company has segmented its operations on the basis of the major industries in which it operates as described below:
   i. The Aerospace Division's operations consist of the remanufacturing and rebuilding of aircraft engines and sales of related parts and accessories.
   ii. The Terminal Division operates a major coal handling terminal facility.
   iii. The Transport Division's operations consist of the marketing of petroleum and related consumer products, and the provision of ocean, rail and truck transportation services.

   Inter-segment sales are accounted for at prices comparable to open market prices for similar products and services.

b. The Aerospace Division had domestic sales to foreign customers, principally in Europe, of $8,606,000 (1981 – $13,759,000).

12. Directors' remuneration

The aggregate remuneration of directors and senior officers of the company is as follows:

	1982				1981			
	As Directors		**As Officers**		As Directors		As Officers	
	No.	**Amount**	**No.**	**Amount**	No.	Amount	No.	Amount
Federal Industries Ltd.	**9**	**$31,500**	**6**	**$575,513**	10	$33,300	7	$504,503
The White Pass and Yukon Corporation Limited	**6**	**6,400**	**–**	**–**	7	6,800	1	25,000

4 Officers are also Directors of the Company (1981 – 5 Officers).

13. Extraordinary items

	$000	
	1982	1981
Allowance in respect of claims recoverable, net of income taxes of $ – (1981 – $261,000)	**$ –**	$ (300)
Reduction of income taxes arising from the utilization of loss carry forwards by a subsidiary company	**–**	324
	$ –	$ 24

14. Other

(a) The White Pass and Yukon Corporation Limited's largest customer indefinitely shutdown its mining operations on June 4, 1982 and accordingly that subsidiary has suspended a major portion of its transportation operation pending a recommencement of mining operations sufficient to generate an appropriate level of shipping tonnage.

(b) The Company and its subsidiary companies have operating lease commitments with varying terms requiring annual rental payments of approximately $480,000.

Federal Industries Ltd. and its Subsidiary Companies

Summarized quarterly financial information (unaudited)

(in thousands of dollars)

For the year ended December 31, 1982

	Three months ended				Year ended
1982	**March 31**	**June 30**	**Sept. 30**	**Dec. 31**	**Dec. 31**
Sales	**$ 47,822**	**$ 47,462**	**$ 45,293**	**$ 38,616**	**$ 179,193**
Gross earnings from operations	**6,659**	**8,390**	**5,808**	**5,698**	**26,555**
Gross margin percentage	**13.9%**	**17.7%**	**12.8%**	**14.8%**	**14.8%**
Net earnings	**1,434**	**2,658**	**817**	**1,120**	**6,029**
Earnings per common share	**$ .30**	**$ .57**	**$ .15**	**$ .23**	**$ 1.25**
Market price of common shares					
High	**13.75**	**14.00**	**11.50**	**11.75**	**14.00**
Low	**11.00**	**10.25**	**8.50**	**8.25**	**8.25**
Number of shares traded	**106,800**	**207,000**	**361,000**	**326,700**	**1,001,500**

	Three months ended				Year ended
1981	March 31	June 30	Sept. 30	Dec. 31	Dec. 31
Sales	$ 38,755	$ 48,724	$ 53,710	$ 51,501	$192,690
Gross earnings from operations	5,895	8,733	12,397	8,955	35,980
Gross margin percentage	15.2%	17.9%	23.1%	17.4%	18.7%
Net earnings	420	2,527	4,798	3,193	10,938
Earnings per common share	$ .11	$ .60	$ 1.06	$ .67	$ 2.44
Market price of common shares					
High	15.375	15.875	15.25	14.00	15.875
Low	13.00	13.50	10.75	10.00	10.00
Number of shares traded	228,100	186,200	139,500	103,200	657,000

Segmented information
(in thousands of dollars)

	Transport Division			
	Petroleum Sales and Services		Freight Hauling Services	
	1982	1981	**1982**	1981
Sales	**$46,069**	$58,712	**$44,126**	$49,831
Inter-segment sales	**3,331**	3,728	**5,846**	5,033
	42,738	54,984	**38,280**	44,798
Segment operating profit before interest	**3,761**	8,328	**(2,744)**	(188)
Interest earned				
Interest expense				
Inter-segment interest				
General corporate expenses				
Earnings from operations before income taxes				
Income taxes				
Net earnings before minority interests and extraordinary items				
Identifiable assets	**12,457**	20,104	**49,698**	51,791
Corporate assets				
Capital expenditures	**86**	258	**1,469**	11,478
Depreciation and amortization	**$ 196**	$ 195	**$ 3,122**	$ 2,908

Aerospace Division		Terminals Division		Consolidated	
1982	1981	**1982**	1981	**1982**	1981
$75,995	$74,232	**$22,180**	$18,676	**$188,370**	$201,451
				9,177	8,761
75,995	74,232	**22,180**	18,676	**179,193**	192,690
8,125	12,398	**12,901**	10,788	**22,043**	31,326
				492	578
				(10,031)	(10,191)
				1,622	2,029
				(2,721)	(1,995)
				11,405	21,747
				5,004	(10,462)
				$ 6,401	$ 11,285
64,108	54,544	**68,601**	71,462	**194,864**	197,901
				4,705	8,403
				199,569	206,304
1,613	1,443	**542**	1,313		
524	545	**3,272**	2,963		

Consolidated Historical Summary

	12 Mos. 31 Dec. 82	12 Mos. 31 Dec. 81	12 Mos. 31 Dec. 80	12 Mos. 31 Dec. 79	12 Mos.* 31 Dec. 78
Income Information ($000)					
Sales & Services	**179,193**	192,690	159,226	126,716	112,987
Gross Earnings from Operations	**26,555**	35,980	29,291	18,192	11,293
Net Earnings Before Extraordinary Items	**6,029**	10,914	7,407	1,789	714
Extraordinary Items	**—**	24	(290)	—	(1,527)
Net Earnings After Extraordinary Items	**6,029**	10,938	7,117	1,789	(813)
Depreciation	**7,159**	6,649	5,615	5,227	3,974
Interest on Long Term Debt	**6,760**	6,503	8,319	7,969	3,120
Income Taxes	**5,004**	10,462	7,158	1,756	1,475
Earnings (Loss) per Common Share ($)	**1.25**	2.44	1.98	.51	(.23)
Earnings (Loss) per Share Excluding Extraordinary Items ($)	**1.25**	2.43	2.06	.51	.21
Balance Sheet Information ($000)					
Current Assets	**85,238**	91,084	69,032	56,490	50,044
Current Liabilities	**34,696**	51,036	44,805	41,880	39,386
Working Capital	**50,542**	40,048	24,227	14,610	10,658
Fixed Assets—Net	**106,384**	109,974	102,250	119,092	112,574
Other Assets	**7,947**	5,246	7,965	16,135	13,347
Total Assets	**199,569**	206,304	179,247	191,717	175,965
Long Term Debt	**71,895**	68,313	68,853	95,043	82,542
Deferred Income Taxes	**7,342**	6,500	5,079	5,525	6,091
Minority Interest	**5,500**	5,500	5,500	5,500	5,500
Shareholders' Equity	**80,136**	74,955	55,010	43,769	42,446
Other Information					
Gross Margin Ratio %	**14.8**	18.7	18.4	14.4	10.0
Net Earnings as % of Sales	**3.4**	5.7	4.5	1.4	(.7)
No. Shares Outstanding (A & B)	**4,694,613**	4,789,774	3,944,006	3,528,900	3,488,900
Dividend per Share					
Class A ($) Note 1	**.45**	.275	.20	.20	.20
Class B ($) Note 2	**.45**	.275	.20		
Price Range of Stock ($)					
High	**14.00**	15.87	15.25	8.00	7.12
Low	**8.25**	10.00	6.37	5.50	4.90
Shareholders' Equity per Share ($)	**16.46**	15.65	13.95	12.40	12.17

*Unaudited

NOTES:

(1) Payable in cash dividends.

(2) Payable by way of stock dividend in Class B shares. These Class B shares were created in May, 1980.

Cycles . . .

. . . they're everywhere. In nature and in business. Misunderstood and ignored for many years, they're coming to the fore once again as economists attempt to understand, predict and, hopefully, better control economic fluctuations. Whether or not we're in the grip of a precipitous 10-year downturn on the tail end of a massive 50-year cycle as a few experts suggest, a better understanding of business cycles is important to both management and investors.

In last year's Annual Report, we looked at ways of assessing performance based on *internal* factors . . . using financial statements as a measure of management effectiveness.

But we also made it clear that performance had to be assessed in light of external developments . . . within the industries in which companies operate . . . and in Canadian, North American or world economies.

The economic events of 1982 underscored the need for this approach. As we are all now aware, the strong recessionary trend had a severe impact on many Canadian and international corporations.

This was far from the first recession to hit economies of the western world. In fact, since the Industrial Revolution, good and bad times have traded places frequently . . . with regular fluctuations in our relative economic well-being, generally known as business or economic "cycles".

In spite of their importance, relatively little is known about economic cycles — although there has been a resurgence of interest on the part of many economists in recent years.

In the hope that a better understanding of the economy's ups and downs will make you a better informed — and more successful — investor, this special section has been prepared.

Historians have always maintained that a knowledge of the past is essential to an understanding of the future.

The same holds true in economics.

After the past year, for example, thousands of economists and business forecasters, along with average investors, are attempting to peer into the future to see "where we are going".

It is a difficult task, but one that appears all the more important in the face of governments' seeming inability to correct fundamental economic fluctuations through fiscal or monetary policies.

In their attempt to look ahead, more and more economists are looking to past developments — and resorting to theories which had fallen into some disfavour — to explain past cyclical patterns of economic development and are attempting to apply these patterns to coming decades.

Does it work? Can we confidently forecast that yesterday's experience will be repeated tomorrow?

No. Not that easily. History seldom repeats itself exactly. And there are too many unquantifiable factors involved. But there's growing support for the thesis that "cycles" of varying lengths do have a pervasive influence on all of us . . . and that our knowledge of this area can help to "predict" the future and, at the very least, make better investment and management decisions.

Cycle Theory: Still More Questions Than Answers

Experts have catalogued 1,280 business cycles, with 37 of these in stock market prices alone.

Consistent economic fluctuations, or cycles, have occurred throughout history. On that point there is almost unanimous agreement. As Fischer Black, a professor at the Massachusetts Institute of Technology puts it, "neither good times nor bad times last forever. On average, economic conditions are neither good nor bad; they're middlin'. Good times are more likely to get worse than to get better; and bad times are more likely to get better than to get worse . . . Of course, in the background, we have normal economic growth: both peaks and troughs tend to get higher over time."

That may sound simplistic, but looking at virtually all measures of economic activity — production, income, employment, retail sales, new orders by manufacturers, even housing starts — business conditions rarely stand still for long. We always *want* economic growth along with full employment *and* price level stability . . . but we almost never get them at the same time. Long term economic growth has been interrupted by economic instability. Boom periods have frequently been marred by inflation . . . expansionary times have given way to recession and depression.

So economic cycles are a fact of life. But that's where the economic consensus breaks down. What do cycles mean? Are these curves mere "coincidence"? Are they a "cause" or an "effect"? What triggers them? Will long term patterns appear again? Or are we entering a new era where economic orthodoxy must be discarded? How do we determine upward or downward turning points for cycles? These are all questions that remain unanswered. Or, more properly, questions for which there are many conflicting answers.

To see cycles at work, at a very fundamental level, we need only look at nature. Cyclical patterns are literally everywhere, and they have been well accepted as natural occurrences for thousands of years.

The water cycle . . . the respiratory cycle . . . tides . . . the apparent movement of the sun . . . the orbit of the moon . . . insect infestations . . . variations in animal populations . . . even the human heartbeat are all fundamentally cyclical and can be charted to show characteristic curves.

Economic cycles are very similar to those in nature, with a few major exceptions: business fluctuations are generally more complicated, more difficult to study, and frequently more difficult to project into the future. But what gets many cycle theorists excited is when the wavelengths of natural science cycles are the same as wave lengths of "social" cycles — suggesting that there may be a common cause.

These zealots go on to suggest that many business cycles repeat so regularly, so dominantly and so many times that they cannot possibly be accidental or ascribed to "chance". And, if they are not a matter of chance, then some internal or external force must "trigger" them. Unravelling the cause, they claim, will enable us to control cycles or at least to accurately project them into the future.

Says Edward Dewey, in his book, *Cycles: The Mysterious Forces That Trigger Events,* "if the cycle is accidental, we know it will not continue. If for three successions, every fourth car you pass on the highway is a Volkswagen, it does not follow that three cars later you will pass another Volkswagen, except by accident."

"At the other end of the scale: even if you don't know the cause, you can count on the twelve and a half hour cycle of the tides, the 24-hour cycle of the day, the 25-day cycle of the moon, the seven-day cycle of the week (man-made, to be sure, but a forced cycle, nevertheless), and the 12-month cycle of the year," he adds. "Between these two extremes is the great body of rhythmic cycles."

With economic cycles, we are dealing with, at the most, several hundred years of recorded cyclical data. Beyond that, forecasts must take into account social, political and technological developments. Because of these factors, there is far more "faith" . . . or, at least, subjective judgement in any attempt to forecast future economic developments based on the past.

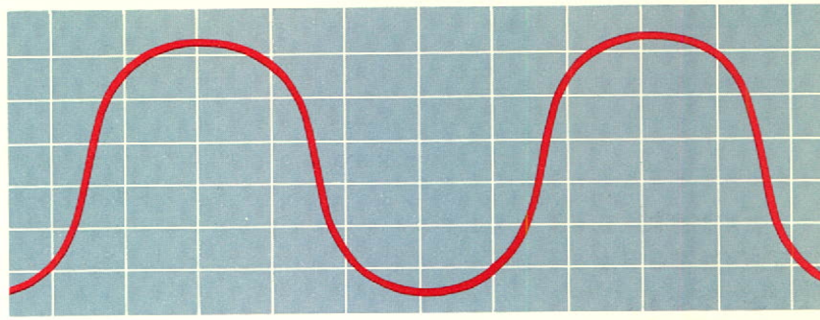
Through all this, though, more and more economists *do* seem to accept that there are fundamental waves ebbing and flowing through our economic system which show a great resistance to manipulation by monetary and fiscal policies.

The Business Cycle: A Collection of Many

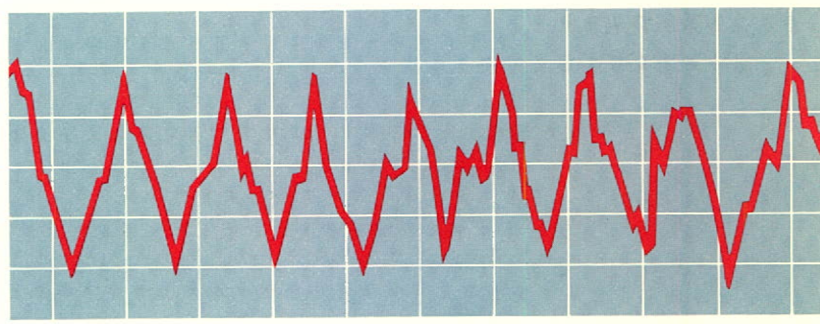
When commentators speak of cyclical economic development, they often refer to "the business cycle". In reality, however, there is not one predominant cycle but many affecting various industries, commodities, major economic indices, the stock market and more. In fact, in studying the field, the Founda-

Economic Cycles: The Curves That Have Economists Concerned

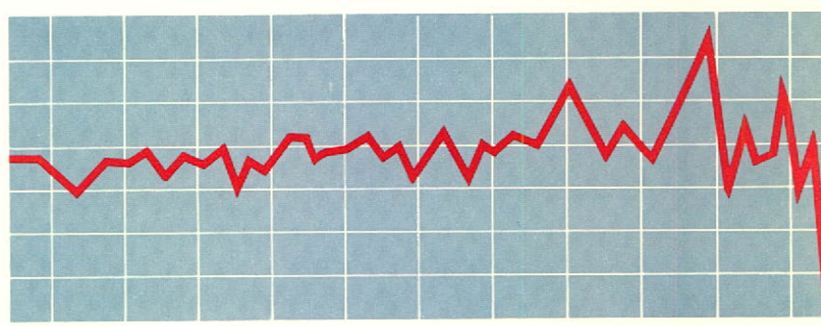
Although they're frequently drawn as smooth, wave-like curves, business cycles are rarely as rhythmically predictable as many of those that appear in nature. But models do show the characteristic ebb and flow of expansion and recession that typifies all business cycles.



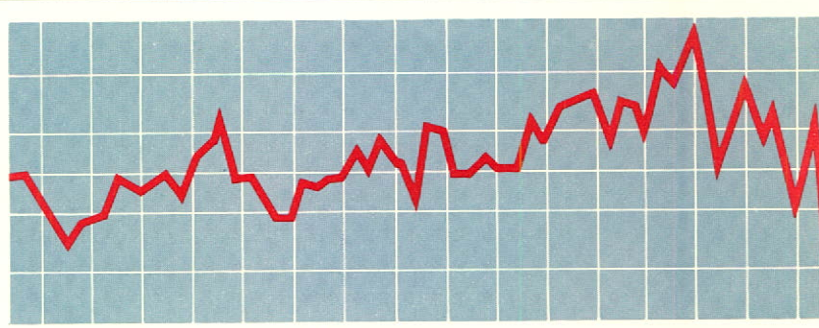
The 18-year cycle in real estate activity, shown here from 1795 to 1958, has traditionally been one of the most regular and "predictable" cycles.



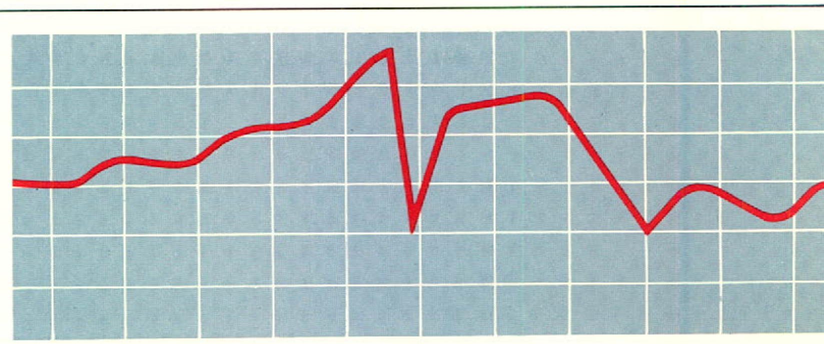
On the other hand, four-year fluctuations in business inventory are far less symmetrical when plotted on a graph. Inventory changes are one of the more involatile elements of total business investment — varying directly with the level of production and sales and inversely with the rate of interest (shown here 1925 to 1982).



Although it's difficult to see from this plotting, broad indicators such as Gross National Product have tended to follow a cycle approximately eight years in length. Many of the fluctuations in GNP are closely correlated to changes in investment, etc. during and after World War II, when government expenditures were the prime influence. (Curve depicts period 1927-1982).



"A statistician's absurdity", as economist Paul Samuelson states, or the work of a genius? That's the open question surrounding the much longer 50-55 year Kondratieff cycle. The U.S. Wholesale Price Index, for example, closely tracked the idealized Kondratieff wave for three complete cycles from 1789 to nearly 1950. Since then, some divergence has occurred . . . but that only adds fuel to the fiery question of what, if any, significance Kondratieff has for the balance of this decade.



There has been a strong revival in the 50-year Kondratieff "megacycle".

tion for the Study of Cycles in the U.S. has catalogued 1,280 cycles within business, with 37 of these in stock market prices alone.

No two of these business cycles are exactly the same. But they have a great deal in common. Says one text, "The exact formula, such as might apply to the motions of the moon or of a simple pendulum, cannot be used to predict the timing of future (or past) business cycles. Rather, in their rough appearance and irregularities, business cycles more closely resemble the fluctuations of disease epidemics, the vagaries of the weather, or the variations in a child's temperature."

Once again, Dewey adds a suitable analogy. Predicting the tides with one moon is relatively simple, he claims, "but suppose we had a dozen or more moons, all different masses and all revolving around the earth at different rates. Can you visualize how complicated our tides would be?"

Taking things one step further, he postulates that if the sky was perpetually overcast, like that of Venus, and we did not know the moons were there, "it would be a long time . . . before it would occur to anyone that the seemingly haphazard movement of the water was due to anything but the winds. Patient work over many years might be necessary before the mystery could be unscrambled, the various moons postulated with certainty, and predictions made with accuracy."

The parallel is a clear one with the great range of business cycles for which there is no real known "cause". The obvious challenge is to find a common thread.

During the 1982 Christmas season, for example, computer stores were selling almost every item they could bring into inventory before December 25. Audio stores were doing a brisk business. Some other retailers were barely attracting any customers at all. In the natural resource field, sales of base metals were down, but gold revenues were up. The possible curves — changing daily, monthly and yearly — that could be drawn and examined for that period are limited only by the number of available computers.

Even in this simplified case, we would need to make allowance for the seasonal upswing in sales which is normal at Christmas — and to assess year-over-year results carefully in the light of longer term trends.

At the best of times, it's a tough task just to assess what is going on at the *present* . . . let alone project trends far into the future. So it's small wonder most economists put their faith in broad business cycles based on major indicators, such as Gross National Product, which take in virtually all aspects of the economy — and in curves with a generally short time frame or "period".

As far back as the early 1940s, it had been known that there was a major business cycle with an average duration of just over eight years . . . a shorter cycle, approximately three and a half years in length . . . a longer-term 15 to 25-year "Kuznets" business cycle (named for the Nobel prize winner who discovered it in 1930) . . . as well as a cyclical construction boom approximately 18 years long.

Since that time much has been written about each; however, it is to the short term "inventory" cycle popularized by Arthur Burns (later to become the Chairman of the U.S. Federal Reserve System) that most economists refer when they point to a juncture in the "business cycle".

As a result of Burns' work charting business patterns from 1854 to 1961, there is general agreement that this cycle averages about 49 months in length, taking in an average advance of 30 months, and an average decline of 19 months. But there is much less accord on the precise factors that bring about the advances or declines for all cycles, or on the most effective method of establishing where in the cycle we happen to be at a given time.

For instance, at the beginning of 1983, the forecasters were generally agreed only that a recovery was probable. Some few said that it would be sharp, most that it would be weak and slow. To anyone who reads these conflicting opinions in newspapers, it can be a frustrating business.

But even though we have great difficulty forecasting "next year" let alone the next 10 years, there has been a strong revival of interest in the "megacycle" of up to 50 years first proposed by a Russian economist who was attempting to foresee the ultimate downfall of the capitalist system. In fact, the "Kondratieff Cycle", for which three complete curves can be traced from the 1780s to 1940, has some economists concerned. As Ronald W. Kaiser wrote in mid-1979 in the *Financial Analysts Journal*, "If history repeated itself exactly, the dyed in the wool follower of Kondratieff would already be looking for actual declines in the level of wholesale and consumer prices. The real estate boom would cool off within the next two years, and prices would actually decline. Then, sometime between 1979 and 1983, something would trigger a rapid collapse of our currently vulnerable economy, and we would suffer through one or more prolonged recessions, passing various sorts of legislation in an attempt to solve the resulting problems, until a war sometime in the 1990s would signal the beginning of another 25-to-30 year period of sustained economic growth."

Doomsday hypotheses of this type bring blood to near the boiling point for many "conventional" economists, particularly when the Kondratieff cycle is used to predict everything from wars to successive peaks and the virulence of women's liberation activities. Just the same, many economists take Kondratieff's work seriously — if only because patterns of the first three "waves" were so regular and the consequences of each decline so dramatic.

As Kaiser says, "investors who consider only the economic experience of the post-World War II era may find that they have been reading a dangerously short history book."

Cycles: Many Suggested Causes

Short or long term, the major arguments among cycle theorists are over the factors that influence the business cycle. And there are many suggested solutions. Among them: monetary theories that attribute cyclical fluctuations to expansion and contraction of bank credit . . . innovation theories that predicate cycles on technological development . . . psychological theories that base developments on the expectations of the individual consumer . . . external theories based on such non-economic influences as sunspots or weather.

There are even those who suggest that cycles are caused "politically" — by wars, by government attempting to manipulate fiscal policy to stay in power or by heavy-handed bureaucrats overreacting with economic brakes or accelerators in the face of alternately good and bad economic news. Still others portray business cycles as basic economic rhythms that "just happen" — transcending rational understanding.

Of all these "external" and "internal" theories, the most broadly accepted explanation looks at the relationship between business investment and consumer demand. Under this theory, growth is caused initially when consumers begin to purchase a variety of goods, leading manufacturers to invest in inventory and in the capital goods needed to produce that inventory. Demand continues to grow and reaches a peak in which wage rates increase and labour is in short supply — further encouraging capital intensive production . . . with, at each stage, the "multiplier effect" sending productive ripples through the economy.

Ultimately, manufacturing expands to a capacity greater than is needed to meet demand. Unemployment follows, leading to lower wage rates and a shift towards use of more workers, which in turn cuts the need for new capital equipment. As demand — and production — falls even further, a "buyer's market" with heavy discounting materializes. Finally, over the next 10 to 25 years, capital stock wears out, creating the conditions for the next growth phase.

While this theory appears viable, it is far from being the sole explanation. For example, it has been suggested that the business cycle is, at least to some extent, a reflection of the economic times in which key decision makers were born.

Investors who consider only the post-World War II era may be reading a dangerously short history book.

Says Ronald Kaiser, "the people who entered the labour force during the Great Depression remained very conservative, preferring to pay off home mortgages early and buying everything with cash, not credit. This made for slow but steady economic growth during the 1940s and 1950s. These people are now, by and large, retired or in the waning years of their influence on the national economic mood. Those who have had the greatest part in creating the current economic condition are their children, who grew up in the prosperous 40s and 50s."

The result has been an entirely new attitude, with consumers who show no fear of going heavily into debt. Claims Kaiser, "these people became the aggressive bankers who never made a bad loan, or the people who felt the government could outspend every problem or the businessmen who felt that the company could grow faster simply by borrowing more money, or the union member who looked upon big business as an endless source of raises, or the consumer who embraced the plastic credit card, or the home buyer who didn't mind reaching for the third mortgage because 'house prices always go up'. There is no doubt that our confidence in the government's ability to control the economy, founded on the Keynesian ideas of the 1930s, has made us far more vulnerable to economic shock than ever before."

Another economist suggests that demographic trends also influence business cycles because depressions reduce the birth rate while peak economic times result in baby booms. The result is that the influence of individuals who have grown up during a depression is relatively less than that of consumers whose formative years were in times of economic prosperity.

But while most suggested causes of the business cycle focus on "demand", there is a new "supply side" theory which appears to have some merit. Essentially, this says that with availability and price of a variety of key commodities such as oil controlled by international cartels, there will be times when manufacturing must cut back — with negative effects for the economy as a whole — regardless of the level and demand for manufactured products that may exist.

Research into these theories and more continues. But knowledge of what triggers cycles will only be of real value if it leads to a greater degree of control. What's most important is being able to "smooth" the cycles by knowing what will happen . . . to be able to establish when the economy is about to get better — or, more particularly, worse, so that we can prepare ourselves.

Of course, depending on your economic viewpoint, "preparing ourselves" could mean radical fiscal action on the part of the government, or passively battening down the hatches to ride out the storm.

Knowledge of cycles will only be of real value if it leads to a greater degree of control.

Cycles in Canada: A Recent Analysis

In a recent study, Philip Cross of the Current Economic Analysis staff of Statistics Canada disputes the conventional use of as many as 600 individual series of data as a basis for evaluating economic fluctuation. Cross argues that a single measure such as Gross Domestic Product speaks for hundreds of related indicators of virtually all aspects of current production (GDP adjusts the more widely known Gross National Product to include international transactions).

Analyzing patterns in GDP, it appears that the Canadian economy has had seven distinct business cycles involving actual economic contractions and expansions since 1950. According to Cross, Canadian business swings have not been as wide as those in the United States because of the greater influence of government's "automatic stabilizers" and economic controls. But the duration of our cycles has been remarkably similar. The Canadian economy typically reaches a peak one and a half months before the U.S. economy, while cycle recoveries begin at approximately the same time.

In fact, there is general agreement among economists that all western economies are affected by the same basic cycles. The unanswered questions are how and where upturns and downturns "start".

Cross's study was completed before the depths of the current recession became fully appreciated. As a result, he lists the 13-month contraction in 1953-54 as the most severe in duration and depth since 1950. During that period, real output (GDP adjusted for inflation) fell by 2.6 per cent.

By the end of 1982, however, Canada's real Gross National Product was down 4.8 per cent from December of 1981, and there was little doubt that we had fallen into the most damaging recession since the Great Depression of the 1930s. How long this situation will last is a matter for cyclical theorists, economists, investors and "the man on the street" to consider . . . and one any of us ignores only at great risk.

Governments: Facing the Cyclical Facts

To some observers, the apparent suddenness and unpleasantness of what we have endured over the past year or more is as significant as it is traumatic. They feel the economic writing has been on the wall for some time while economists have kept business cycle theory on the back burner.

Whether or not this is true, beginning with the renowned John Maynard Keynes, economists in public and private sectors alike have generally assumed that governments could ultimately control and improve the business cycle. And, in the long run of prosperity from 1950 onward, North American administrations did appear to achieve some success by being prepared to spend money when the economy was down . . . and to pull in the reins when it began running ahead of itself.

In simple terms, governments would spend more than they received during the bad times, incurring a deficit which they would finance by additional borrowing. The good times would see the public sector trying to generate a surplus.

Over the past decade, however, it became more and more apparent that things were not working as they should. Governments found all kinds of "needs" to "stimulate the economy", even when things were relatively buoyant. And while times were good, the expected surpluses failed to materialize. As a result, we have been forced to wake up to the reality that, at this point in time, governments do not have the real remedy for economic ailments . . . and are themselves being drawn increasingly into debt with severe consequences for the economy.

The Longer Look: Disquieting for Some

Just because things appear relatively "out of control" does not necessarily mean we are in the grip of a major long term cycle. But past experience is compelling enough that more and more economists are delving into the trickier and less-charted territory of longer term cycles to gather as much historical perspective as possible.

While many accept that the longer term cycles are plausible, the problem, as they see it, is insufficient data (because the industrialized world is still relatively young). Nonetheless, there is a growing body of opinion that something is happening in the business world that bears a resemblance to the stresses of the 1930s and to the theories and explanations of Kondratieff and Schumpeter, the Nobel laureate who has championed longer term business cycles which he saw as a result of technological and demographic factors.

What is the evidence? Recent high commodity prices, interest rates and inflation followed by a sharp drop . . . continuing record unemployment . . . low corporate revenues and spending . . . more talk of tariff walls to protect our economies.

A Kondratieff disciple might argue that this is the beginning of the declining phase of this wave, particularly since unemployment in the current decline of the short-term business cycle has reached levels in Europe and North America not seen since the Great Depression.

In his recent book, *World Out of Work*, Giles Merritt of the London *Financial Times* suggests that employment in the 1970s would have reached crisis proportions long ago had it not been for a slowdown in the growth in productivity among industrialized nations.

By the early 1980s, when competition from newly industrialized countries such as South Korea and Brazil had toughened, unemployment was climbing faster than the forecasters could call it. And since Merritt wrote, the Organization for Economic Cooperation and Development has officially forecast 35 million unemployed in the 24 most developed nations by 1985. This is expected about the time the effect of the baby boom peaks; but Merritt and other observers are far from certain that growth unemployment will have run its course by then.

They suggest that over the coming years, a number of factors will contribute to continuing unemployment: the computerization of production lines . . . the shift of labour-intensive industries to newly industrialized countries . . . the development of a variety of lower weight, lower cost substitutes for traditional materials such as metals . . . and the growing pressure of regionalism and protectionism which will save jobs in the short-term at the expense of every nation's longer term growth.

Each factor puts workers out of jobs (or threatens to), and creates some new jobs. But the losses have been exceeding the gains because the new technology is almost always more labour efficient than the old and the political responses frequently have been short in term and effectiveness.

With this rapid process of technological change in the business environment, can we still apply to the future what we have learned from past business cycles? It's very much an open question. But the answer, according to some economists, is "yes". Because, they say, the triggering mechanisms for broad economic cycles reflecting many sub-cycles in various industries is essentially *social*, or at least so endemic to the system as to be beyond influence from such seemingly fundamental matters such as technological change.

Cycles show great resistance to manipulation by monetary and fiscal policies.

Others, following Schumpeter's lead, see technology as the prime factor. They suggest, for example, that we are currently in a transitional phase between technological "eras".

It may even be, as Gerhard Mensch, of Case Western Reserve University in the U.S. suggests, that our recent economy is typical of the maturing of one technology (the auto) and the take-off of the new (the explosion of computers and electronic communications).

In a recent speech, Alfred Powis, Chairman and Chief Executive Officer of Noranda Mines Limited, provided one compelling explanation of causes for long-term cycles. According to Powis, prolonged prosperity contains the seed of its own destruction as "good things" are pushed too far. When the economy is bubbling, wealth is frequently redistributed rather than used to create more wealth. Values such as discipline, hard work and thrift give way to an era of stagnant institutions, declining productivity, inflation and speculation.

On the other hand, recovery is driven primarily by forces beyond government control — innovation, debt liquidation, changes in societal and political attitudes, the work ethic and entrepreneurial effort.

If what Powis says is true, the ultimate solutions to control of cyclical fluctuations may well rest as much with social as economic policies.

The Federal Industries Viewpoint

At Federal, we've been studying cycle theory for some time. And while we find the subject fascinating, we have no more conclusions about the significance of specific cycles than do others who have studied the matter. We do, however, believe that much of the

Prepared for the worst, we're hoping for a gradual recovery as this cycle turns upward.

turmoil in the world economy will ultimately be seen to be largely attributable to cyclical swings that will be clear with the benefit of hindsight. We also see danger signals that suggest turbulent times could continue for several more years.

As a company, we support the current consensus that anticipates a modest recovery starting in 1983 and continuing over the next several years and we've joined them in hedging our bets. In fact, the "hedge level" of economic forecasts has reached a new plateau, reflecting the uncertainty of the times in which we live. We're in one of those periods when a single decision can have momentous effects on the economies of nations. Economic forecasters recognize this by predicating their projections on certain assumptions. When their forecasts fail to materialize, they can usually fall back on their stated assumptions, some of which also unavoidably prove incorrect.

As business managers, we must also make assumptions. These also often prove faulty due to unpredictable events. In our case, though, more than our credibility is on the line. Our actions affect the financial performance of Federal Industries. We hedged *our* bets by structuring the Company's balance sheet conservatively, prior to this recession, while maintaining the flexibility to pursue expansion opportunities aggressively.

As a result, we're ready for what comes. If the Kondratieff contingent is right, our financial hatches are better battened than most, and Federal can survive the cyclone. If the great body of economic wisdom is right and a mild long recovery is in the offing, Federal will share in that recovery. In the final analysis, we think our relative position will improve because of our ability to sieze opportunities that we are able to find.

As to specifics, we are hopeful but perhaps a bit less optimistic than most economists. We are concerned about Canada's relative strength as an industrial nation and about the high volatility of the world's economy and we don't see Canada's position improving in the next few years despite its enormous potential. Also we see a good chance of inflation continuing to moderate, not because of government actions but because the people now seem to be aware of the magnitude of the problem. Despite moderating interest costs we don't expect a return to massive borrowing to finance business expansion. Rather, the emphasis will be on restructuring balance sheets and bringing operating costs into line with competition. Skill in management will be the key to holding profitability, and there will be lots of opportunities to gain market share as weaker companies fall by the wayside.

At Federal, management began to prepare for a severe cyclical downturn two years ago. As a result, we believe we are in shape to cope with the worst, if that is yet to come. We were trimming our projected expenses as 1982 ended, and we won't hesitate to cut deeper if the gloom persists in 1983.

But while we are prepared for the worst, we're hoping for a gradual recovery as the cycle turns upward. Such a recovery would have varying effects on the company's businesses.

Thunder Bay Terminals, for instance, derives a good measure of insulation against downward cyclical fluctuations from its contracts. A fundamental requirement for a terminal operation is to protect the viability of its assets in down cycles, and our agreement with Ontario Hydro provides this strategic protection, which in itself is a competitive edge. As the cycle eases, demand for commodities improves, and the Division can enjoy rapid expansion from its solid base.

White Pass derives the major portion of its revenues from contract hauling of commodities, so its volume reductions will continue as long as the natural resource industries of the Yukon and other areas of Canada served by it remain the victims of weak commodity prices. These prices have always been cyclical and response to changing levels can be dramatic. The Company has significant elasticity in responding to these cycles, and any recovery of commodities demand will have a rapid and profitable impact. Steps have been taken to restore the Division's ability to operate profitably even if the current down market continues.

Major customers of Standard Aero Limited in Canada are the companies who explore for and develop the nation's oil, forests and minerals. This Division has already felt the effects of severe slowdown in these activities, and recovery to historic levels will be dependent upon a cyclical upturn in requirements for raw materials from Canada.

However, the United States and other world markets have not been as badly affected, and Federal has committed substantial resources to expansion in these areas through Standard Aero International. Most purchases have been working capital assets, and the Division has positioned itself to take full advantage of a cyclical upswing, or ride out a continuing recession.

Overall, while there is a good possibility of modest recovery in 1983, we are well-prepared for the economic turn-around to be slow in coming. Our ongoing program of internal change, acquisition and expansion, while it has as a prime strategic objective the protection of assets in the current down cycle, is also intended to position us on the leading edge of any recovery.

Cycles: A Concise 100-Year History...

Many industries have accepted the existence and relevance of sectoral cycles (for example, the nine-year copper and 18-year construction cycles). However, acceptance of long-term cycles in the economy as a whole has been far from unanimous.

The father of cyclical theory was Clement Juglar, a 19th Century French physician who discerned the nine to 10-year business cycle, refined by subsequent researchers to an eight-year cycle.

At the turn of the century, Charles Henry Dow (founder of Dow Jones and Company and first head of the *Wall Street Journal*) discussed recurring patterns in the world-famous stock index of 30 leading American companies which was first compiled by his company in 1948. William Hamilton, one of Dow's successors, and Robert Ray, an investment advisor, further developed cyclical theories that are still widely used in technical stock market analysis today.

In 1922, Tchijefsky, a Soviet professor, attempted to show a strong correlation between human unrest and excitability (wars, riots, revolutions, mass migrations, etc.) in 11-year cycles that coincided with major sun-spot activity.

At Harvard in the 1930s, Joseph Schumpeter actively supported a 40-month cycle, the eight-year Juglar cycle, and a longer cycle of 30 to 50 years. Subsequently, Nobel prize-winner Simon Kuznets established an 18 to 25-year cycle caused, he suggested, by changes in population and immigration.

The work of Arthur Burns and Paul Volker (both Chairmen of the U.S. Federal Reserve Board) in the 50s and 60s revived interest in cycle theory and provided a more precise definition of the short-term "inventory" cycle.

But the most dramatic and controversial figure of them all was Nicolai Dimitriyevich Kondratieff, devisor of the 50-year cycle popularized by Schumpeter. Kondratieff uncovered his long waves in a study of commodity prices of France, Britain and of the rising industrial economy in the U.S. The cycle showed a 24 to 25-year upswing in prices, giving way to a short, sharp downturn, followed by a plateau for a final 10-year or more slide.

In 1926, the Soviet economist published his now-famous paper in which he discerned three long waves since 1789 — the third of them pointing clearly to the Great Depression of the 1930s.

Once these grim times had arrived and made themselves felt, unforeseen by many western commentators, the significance of what Kondratieff had been saying began to be appreciated on this side of the world. Researchers began dusting off the covers of his rare published works.

Since then, there has been a second upsurge of interest in Kondratieff's work, particularly as we move into the 1980s, which represent a possible final phase of the decline in the current long "cycle".

If an upswing happens, companies such as Federal Industries, with strong balance sheets and strategic management, should be able to take advantage of the cycle.

Companies with strong balance sheets and good management should be able to take greatest advantage of any upturn.

...And Their Importance to You

An understanding of cycles provides:

- A broader perspective on key external developments that influence any company's sales and profitability.
- A valuable orientation toward the past as well as the future. Yesterday's cyclical patterns may or may not repeat themselves in the future, but they will give you an indication of what you may expect.
- An understanding that a long-term view is required. As one British economist recently said, "We cannot understand what is happening (in the economy) without at least a 10-year perspective."
- The knowledge that some companies are more susceptible than others to cyclical fluctuations. Manufacturers of capital goods and "consumer durables" (plant equipment, fridges, stoves, cars, etc.) generally face sharper drops and rises in demand because these major purchases are easiest to postpone. Grocery distributors, on the other hand, are likely to face relatively stable demand.
- A realization that diversified companies have a greater resilience and resistance to cyclical influence because of a broader base in a number of industries, involvement in new growth areas and insightful management able to spot future trends.
- A real "bottom line": The cyclical ebb and flow need not concern you if you understand and plan strategies around the curves ... as long as the overall direction is "up".

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