BARRINGER RESEARCH
Annual Report/1976

Barringer Research Inc.

and Subsidiaries

ANNUAL REPORT 1976

Contents

Cover photo: AIRTRACE equipped helicopter on survey in Africa.

BARRINGER RESEARCH

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Dr. Anthony R. Barringer, President

Dr. D. Richard Clews, Executive Vice President

Dr. Michael D. Silvester, Vice President

John H. Davies, Vice President

Dr. John L. Walker, Vice President

Kenneth H. Dalton, Controller

Robert J. Armstrong, Secretary

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Roger C. Wilson

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TRADEMARKS

INPUT, COSPEC, GASPEC, E-PHASE,
RADIOPHASE, AIRTRACE, COTRAN
are trademarks of Barringer Research

Dr. Anthony R. Barringer, President

Chairman's Letter

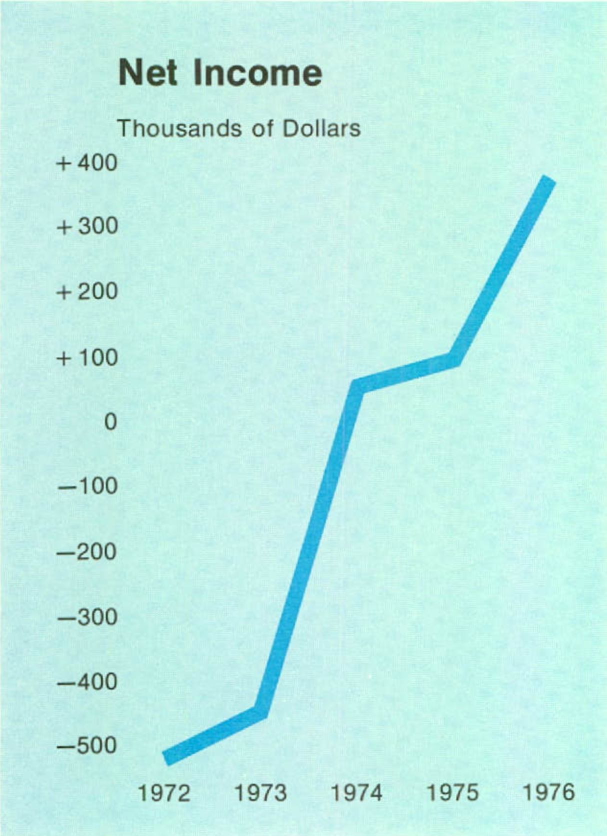
Dear Shareholder,

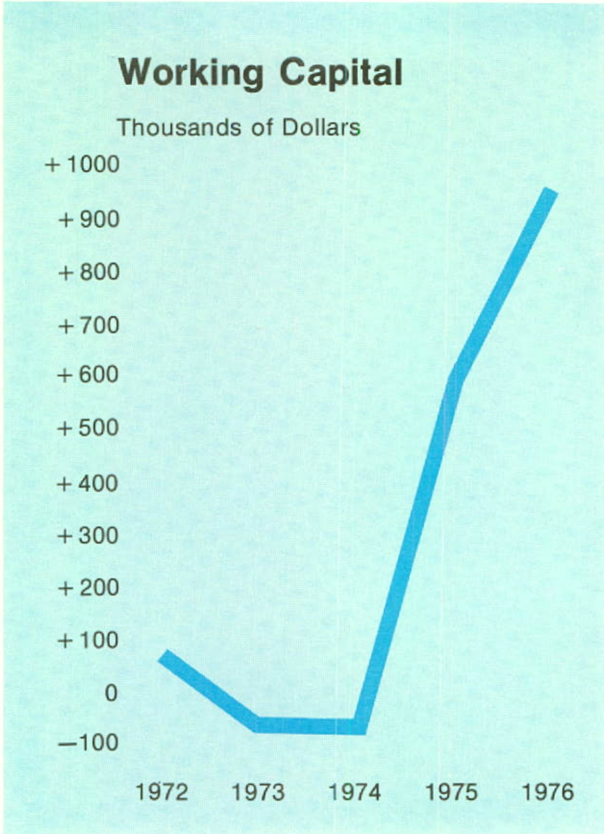
During 1976 Barringer Research continued to maintain the pattern of improved financial performance established in 1974. Comparative results for 1974, 1975 and 1976 are summarized in the following table:

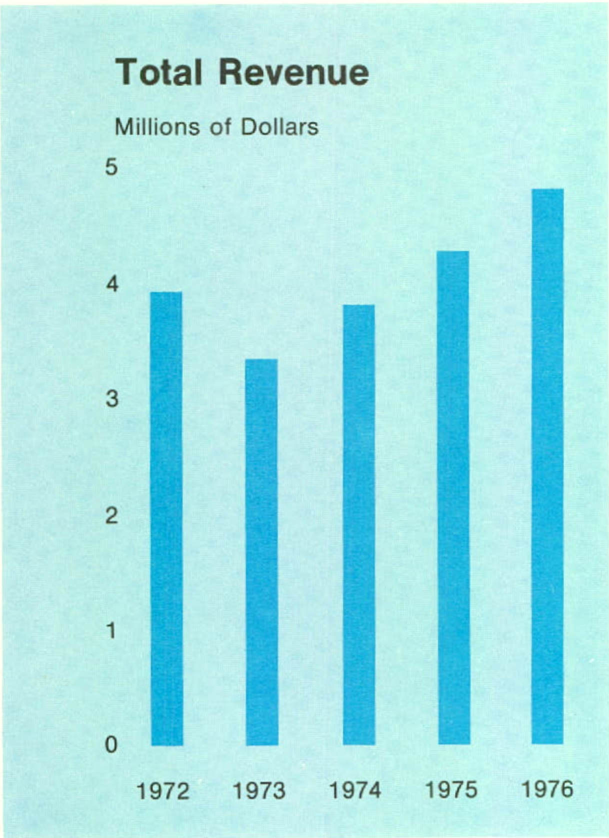
	1974 (in $000's)	1975 (in $000's)	1976 (in $000's)
Total revenue	3,807	4,253	4,798 (4,188)*
Income from operations	290	374	1,077 (467)*
Net profit after taxes	51	90	379 (368)**
Ratio of Current Assets to Current Liabilities	.95	1.59	2.50
Working capital	–71	+588	+950
Cash deficit	592	416	88
Long term debt	185	125	65
General and Administrative Costs	918	888	799

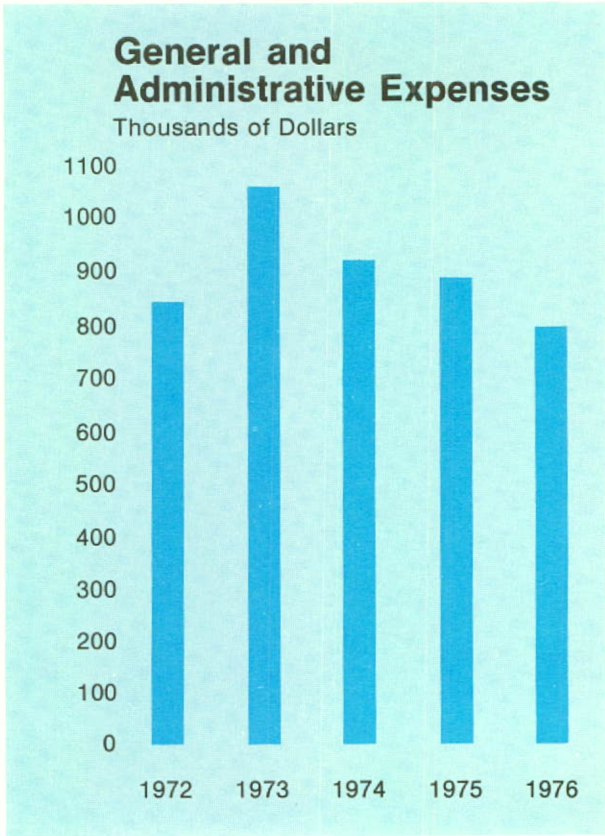
**$610 thousand that had been classified as deferred income arising from previous transactions was brought into sales and current income in 1976.*

***An additional $113 thousand was taken into other income as a result of the same transaction, and 702 thousand was provided for as a loss on advances. Thus, a comparison to previous years performance is shown in brackets.*

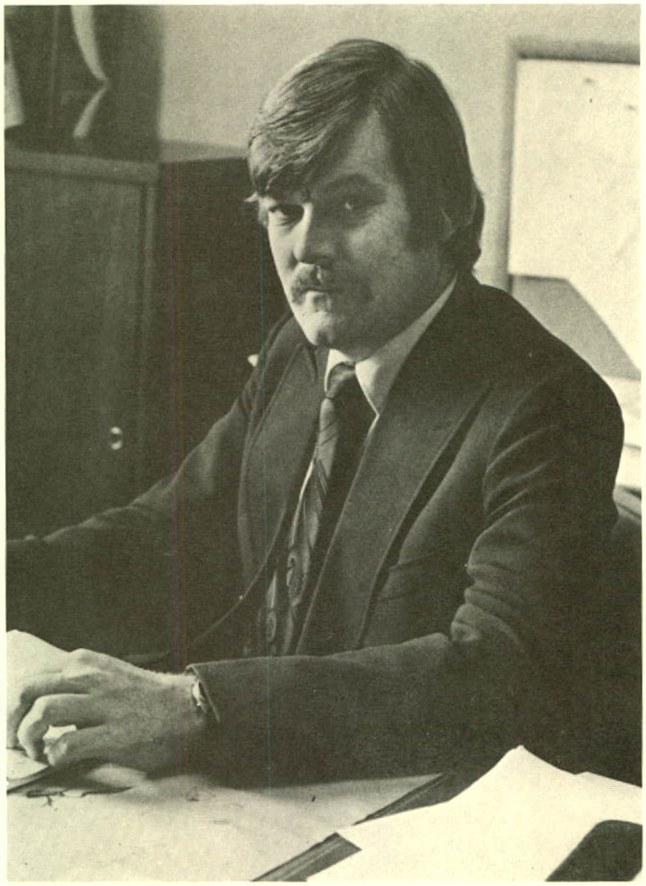

Net Income
Thousands of Dollars
+400
+300
+200
+100
0
−100
−200
−300
−400
−500
1972
1973
1974
1975
1976


Working Capital
Thousands of Dollars
+1000
+900
+800
+700
+600
+500
+400
+300
+200
+100
0
−100
1972
1973
1974
1975
1976


Total Revenue
Millions of Dollars
5
4
3
2
1
0
1972
1973
1974
1975
1976


General and Administrative Expenses
Thousands of Dollars
1100
1000
900
800
700
600
500
400
300
200
100
0
1972
1973
1974
1975
1976

Dr. D. Richard Clews, Executive Vice President



Dr. Michael D. Silvester, Vice President

The steady progress that is being made in your company's financial performance is attributable to the careful deployment of our technical resources and expertise in order to obtain a full and proper return on our patents, technology and skills. At the same time, a constant surveillance of costs has been maintained and the General and Administrative figures have been significantly reduced. This has been achieved by internal re-organizations as required in order to apply our staff with the greatest possible efficiency to the projects, contracts and service work at hand. Your senior management continues to maintain a careful watch on performance with a view to achieving continued growth in revenue and profits.

Highlights of some of your company's principal activities are outlined under appropriate headings below.

Denver Operations

An important decision to establish a Barringer Research office and laboratory in the Denver, Colorado area was made during 1976 for the following reasons:—

(a) Denver is a major centre for mining and hydrocarbon exploration operations and offices are maintained in Denver by a large number of mining and oil companies.

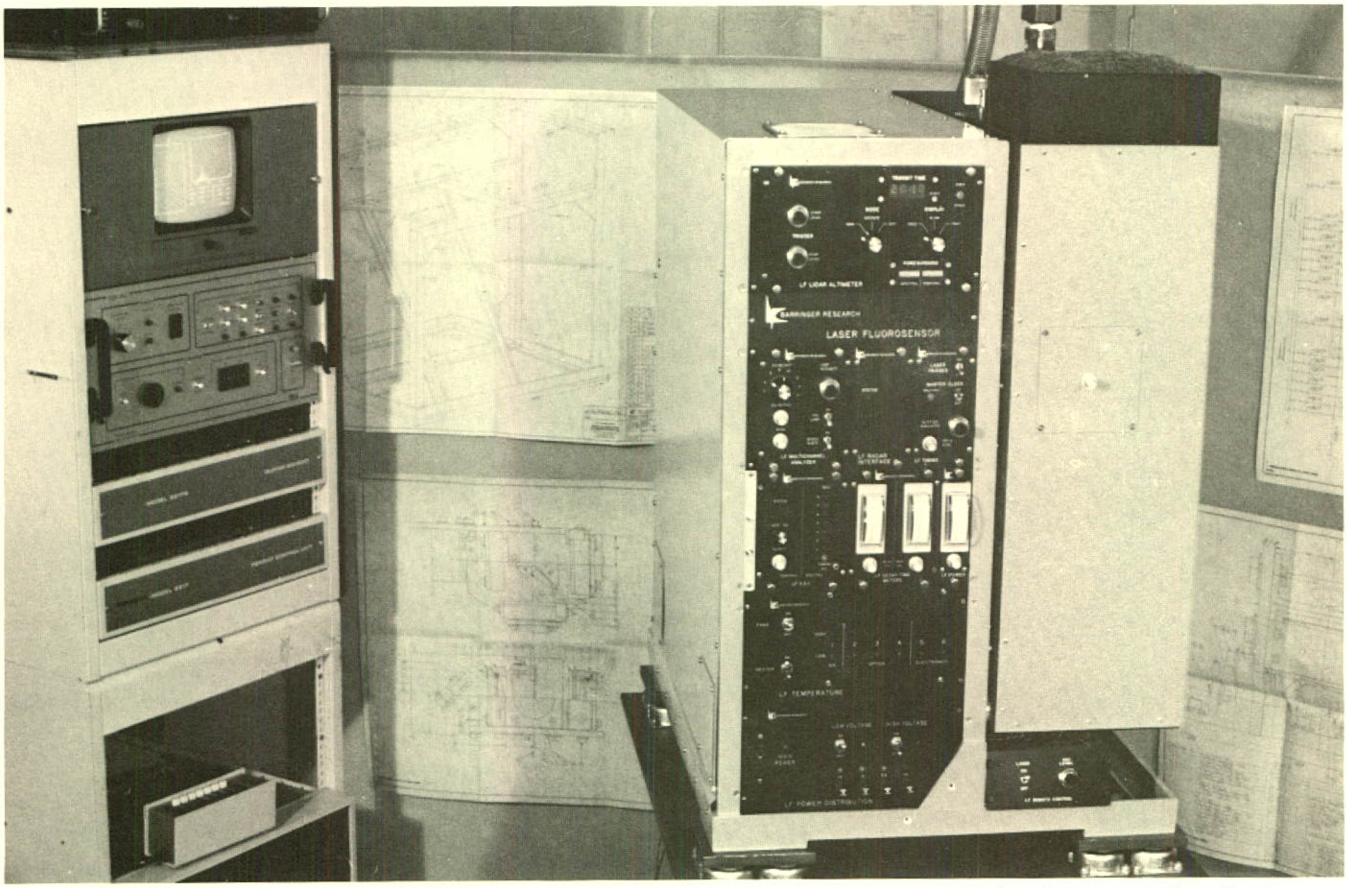
(b) Activity in the energy exploration and development field for uranium, oil, gas, coal and geothermal energy is currently at a very high level and a significant proportion of the United States national effort in these areas is managed from Denver bases.

(c) Denver is one of the largest centres for United States Federal Research funding outside of Washington.

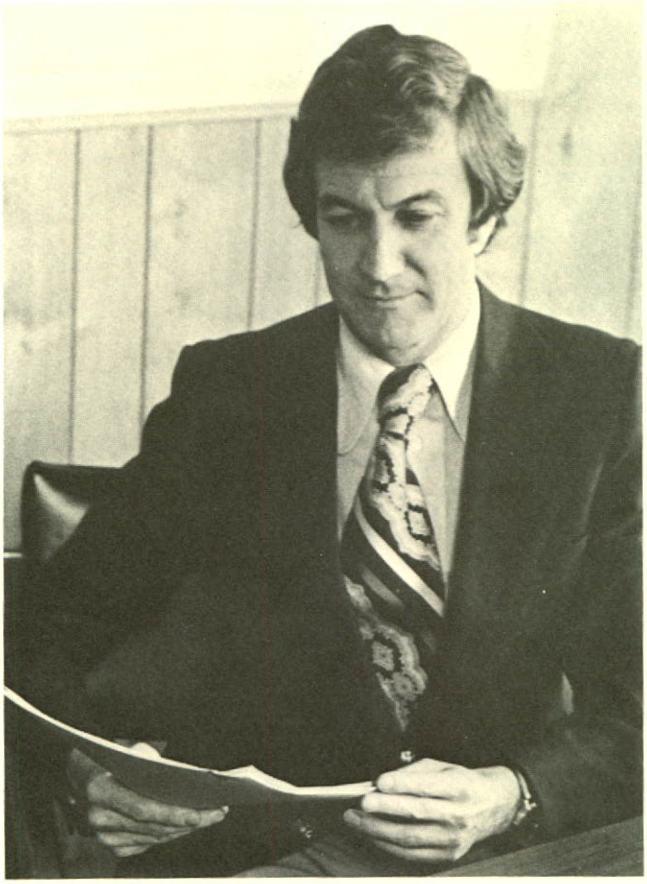
(d) The Denver-Boulder area is an important centre for government research laboratories such as those of the United States Geological Survey and the National Center for Atmospheric Research. The area also contains numerous research and development facilities supported by the private sector.

(e) Barringer Research has the potential for greatly increasing its penetration of the United States markets through a United States facility. The lack of such a facility has been a significant inhibiting factor with our U.S. customers in the past.

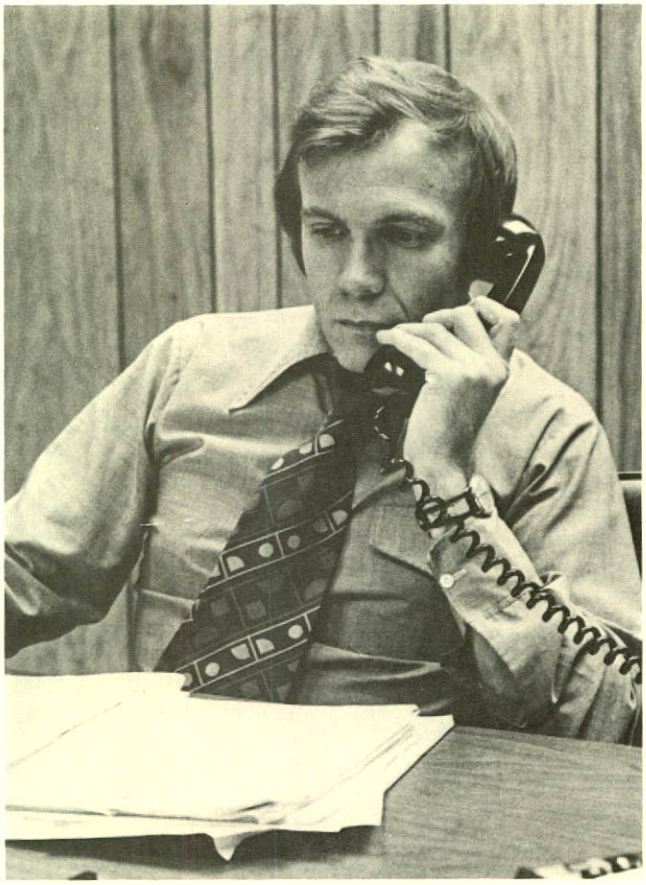
Ludo Daubner, Chief Engineer, testing the optical counter of the AIRTRACE fission track uranium analyser.



Laser Fluorosensor, built for Canadian Centre for Remote Sensing for airborne detection and classification of oil spills.



Dr. John L. Walker, Vice President



John H. Davies, Vice President

(f) The established expertise of your company in the earth sciences, exploration technology and contract research and instrumentation for remote sensing of the environment, are ideally matched with the opportunities available in the Denver region.

Our initial move has been to establish a small, geochemical laboratory and photogeological facility. Contract work has already commenced on these premises.

Particular emphasis is being placed upon energy areas in the Denver laboratory and expansion into contract research is also scheduled after the geochemical laboratory is fully established. As far as possible, it is planned to integrate the Denver and Toronto capabilities in a complementary fashion.

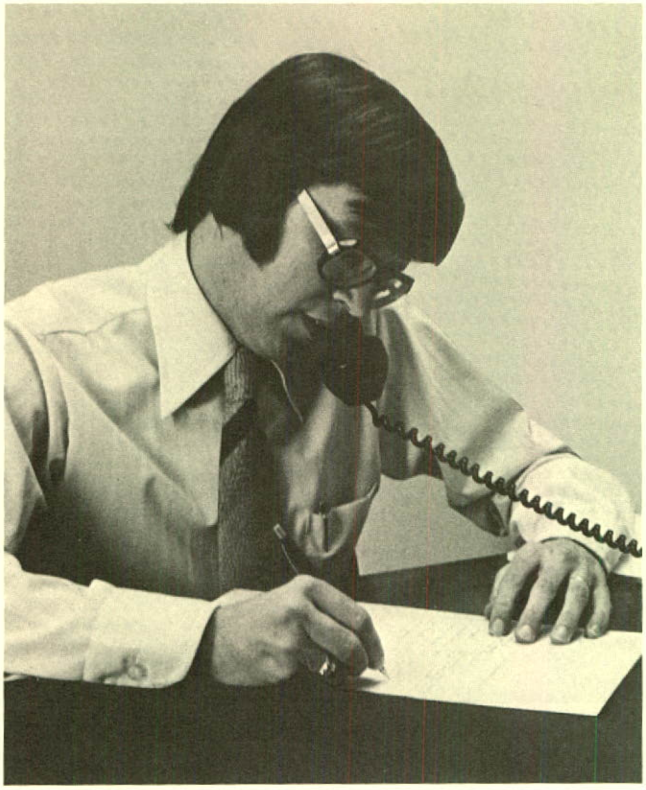
During the initial phases of growth of the Denver operation, some corporate investment will be required, but this will be reviewed continuously with a view to achieving a self-sustaining operation as soon as possible.

For the reasons given above, I consider the growth possibilities of the Denver facility to be very substantial and with a view to ensuring that your company's investment is applied with full vigour, I intend to make Denver my personal base during the period of establishment.

Analytical Chemistry and Biology Services

During the past year the Analytical Chemistry and Biological Division has been expanding rapidly and diversifying. Our entry into the specialized field of spectro-chemical analysis with the radio frequency induction coupled plasma has been of particular importance and has played a key role in enhancing the reputation of our organization in the field of analytical chemistry. As a result of our pioneering work in the practical commercial application of this technique, we have essentially retained a sole-source position for contract research and development and analytical service work with this method. This situation has enabled the division to expand the volume of sales in the high sensitivity multi-element analysis field to well over $200,000 during the year.

The rapid expansion for uranium exploration has also resulted in increased sales of geochemical custom analyses, both in our Toronto and Whitehorse laboratories. Considerable research is being undertaken on new geochemical techniques for use in uranium explo-



Kenneth H. Dalton, Controller

Corporate offices in Rexdale

ration with the aim of capitalizing on your company's position both in Canada and in our new geochemical laboratories in Denver.

During 1976 the division started to represent several American analytical instrument companies in Canada. These representation agreements have already resulted in increased revenues and profits for the company. The decision to expand into this area of sales and marketing has proved to be very fruitful and sales personnel calling on clients are now able to sell analytical services and/or analytical instruments.

The division continued to perform custom analyses on a production basis for a list of clients that includes most of the major Canadian and international mining and exploration companies, as well as certain government agencies. Significant penetration of the United States market for analytical work was also accomplished, both in the private and public sectors.

Research and Development Services

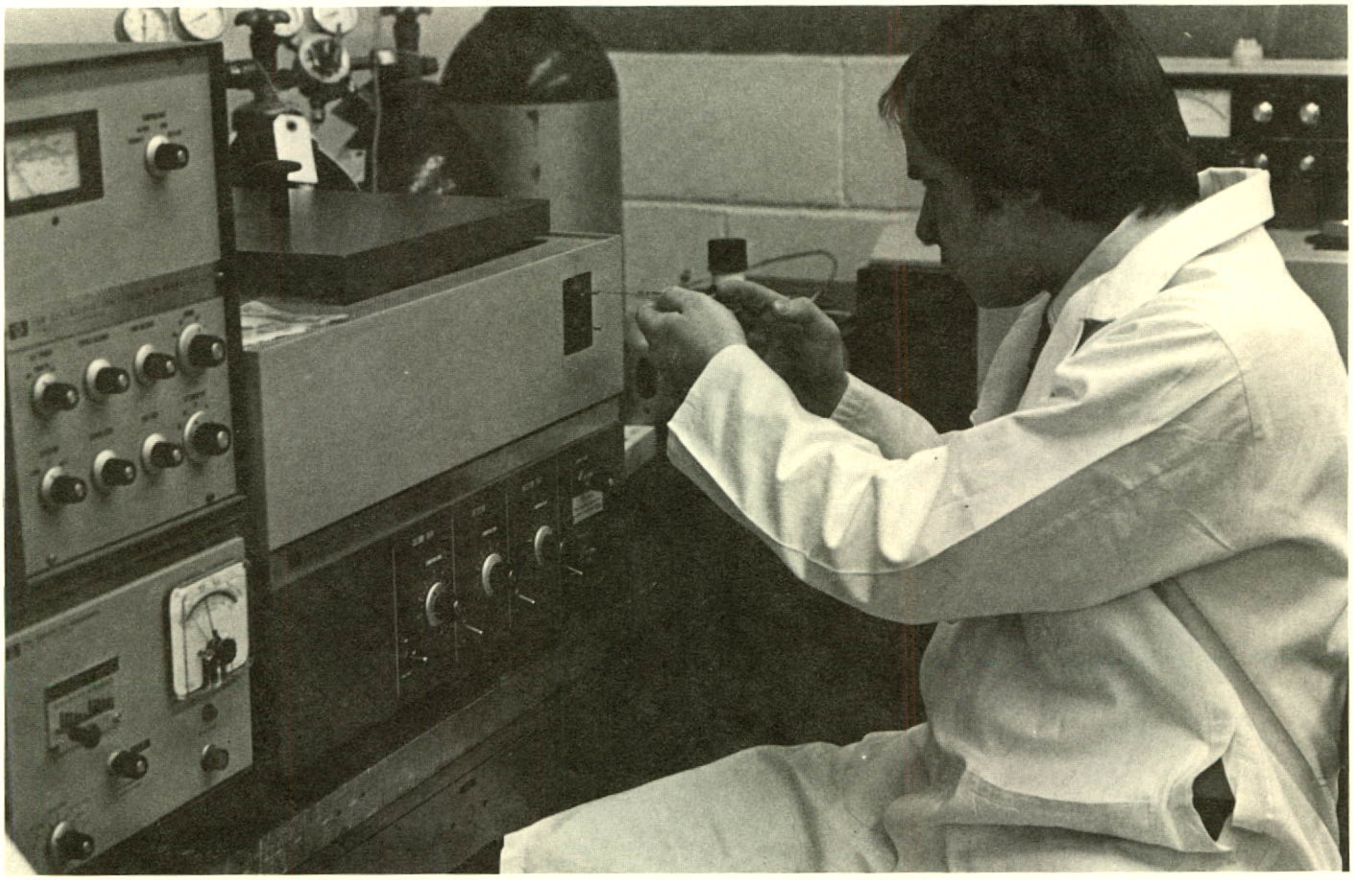
Activities in Research and Development during 1976 included continued work on the advanced development of the company's AIRTRACE system, development of the COTRAN airborne electromagnetic prospecting system, further improvement of the company's INPUT airborne electromagnetic prospecting system, continued development of an airborne laser fluorosensor for off-shore oil pollution surveillance and other remote sensing applications, construction of a prototype version of the company's GASPEC pollution remote sensing monitor for National Aeronautics and Space Administration under a sub-contract from TRW Inc., and a variety of other lesser projects. The AIRTRACE and COTRAN programs will be discussed in greater detail under a separate heading.

Our Commercial Products manufacturing is being handled as a section of our Research and Development Services Division and is continuing to be a profitable activity with the principal output being magnetometers for airborne, oceanographic and ground applications, COSPEC'S (*Co*rrelation *Spec*trometers), and heavy water monitoring equipment for process control in reactors.

Exploration Services

Activities in Exploration and related services included important expansion of effort in the hydrocarbon field, as well as continuation in Barringer Research's normal services in the mineral exploration field. A combination of the energy crisis plus dwindling North American oil and gas reserves has created an excellent climate for development and marketing of

Collecting geochemical ground data for airborne comparison.



Andy Murray, Microbiologist, using gas chromatograph for hydrocarbon exploration research.

AIRTRACE equipped helicopter on geothermal survey in Roosevelt Springs, Utah.

innovative techniques in hydrocarbon exploration. These techniques are in many cases a natural development from parallel studies conducted for mineral exploration. We have discovered that in sedimentary basins there is a commonality in techniques applicable to both hydrocarbons and metals which has not been appreciated by most geologists. By working in both areas simultaneously Barringer Research is developing unique methods in both fields.

Exploration services were also particularly active in the area of uranium exploration in 1976. Combined field and laboratory tests were conducted for clients in several parts of Canada and the United States.

In 1976, Barringer Research has continued to be active in mineral exploration services overseas, particularly in Brazil and South Africa. In South Africa, Barringer Research now has an association with Loxton Hunting's geochemical laboratory whereby a royalty is received by Barringer Research for all geochemical analyses undertaken. In Brazil a major contract with the Brazilian Federal Government was completed late in 1976. This program was very successful and Barringer Research is investigating the feasibility of opening a geochemical laboratory in Brazil.

Airtrace and Cotran System

The AIRTRACE system is a proprietary airborne geochemical system that has been under continuous development during 1976. The system has also been used on both test and operational surveys with promising results. Several technical difficulties were identified during the year and these appear to have been substantially overcome. A mixture of tests and operational surveys will continue during 1977 and it is hoped that an expansion of the application of the system will commence to the point where your company will start to earn significant royalty income from this source.

The system is operated for mineral surveys by Minsearch Surveys Limited, a joint company between the Anglo American Mining Group and Barringer Research. In recognition of the additional funds supplied by our partners to continue research and development programs on the system, Barringer Research exchanged its holdings of common stock for non-voting convertible class B stock. However, this has not affected our royalty agreements which have the potential for providing an excellent source of income if the system achieves commercial success.

The AIRTRACE program has been paralleled by

Licencees' INPUT equipped aircraft

the development of air sampling and rapid high sensitivity multielement analysis techniques that are subject of patent applications. These have been instrumental in generating new business outside of the area of airborne surveys and marketing activity is continuing in order to broaden the application of these new techniques in the fields of pollution monitoring and high volume production analyses.

The COTRAN system is an airborne electromagnetic prospecting system that employs fully digital signal processing of a type that greatly enhances sensitivity and improves the rejection of interference from conductive overburden. The system is covered by a series of patents and was partially tested during 1976. The results were highly promising, however an aircraft mishap that was caused by severe weather conditions temporarily interrupted development. The system is thought to have the potential for achieving deeper penetration below the earth surface than all existing systems, and therefore to have broad application, even in areas that have been previously surveyed with other equipment. Prospects exist at the present time for negotiating additional contractual support for continued development of the system.

Summarizing the year's performance, steady progress was made in improving the company's financial condition and expanding its position in the profitable analytical chemical field. Royalties from the company's INPUT system continued to flow in a very satisfactory manner but exploitation of our AIRTRACE system has been somewhat delayed by technical difficulties. Future prospects for our proprietary systems, including both AIRTRACE AND COTRAN, although not yet assured, nevertheless show distinct promise. I also feel confident that our newly established Denver operation will make a major contribution in the development of the company in due course.

A.R. Barringer

A.R. Barringer

Barringer Research Inc. and Subsidiaries

CONSOLIDATED BALANCE SHEET

As at December 31, 1976 and 1975

ASSETS

	1976	1975
Current assets		
Cash	$ 231,420	$ 20,612
Accounts receivable –		
Trade, less allowance for doubtful accounts, 1976 – $31,686; 1975 – $31,975	423,649	751,388
Corporate joint ventures	468,170	225,854
Inventories (note 2)	384,314	545,005
Deposits, advances and prepaid expenses	36,973	22,553
Income taxes recoverable	41,263	26,655
	1,585,789	1,592,067
Investments and advances		
Advances to associated company (note 15)	–	387,625
Investments and advances (notes 4 and 15)	15,663	337,844
	15,663	725,469
Fixed assets (note 5)	382,939	432,653
Other assets – at cost, less amortization (note 1(d))		
Patents and trademarks	157,472	159,392
	$2,141,863	$2,909,581

LIABILITIES

	1976	1975
Current liabilities		
Bank indebtedness (note 6)	$ 319,493	$ 436,343
Current portion of long-term debt	60,000	60,000
Accounts payable	213,642	307,452
Accrued liabilities	34,182	61,206
Excess of billings over selling price of contracts in progress	8,525	138,834
	635,842	1,003,835
Deferred income (note 15)	–	722,691
Long-term debt (note 7)		
Convertible subordinated promissory notes,		
less amount included in current liabilities	65,000	125,000
Other liabilities	22,404	22,404
	723,246	1,873,930

SHAREHOLDERS' EQUITY

Common stock (notes 8 and 9)		
Authorized –		
2,000,000 shares of common stock of 1¢ par value each		
Issued and fully paid –		
978,400 shares (1975 – 977,400 shares)	9,784	9,774
Paid-in surplus (note 8)	2,023,534	1,985,044
Deficit	(474,157)	(852,765)
	1,559,161	1,142,053
Less: Common stock in treasury – at cost, 98,600 shares		
(1975 – 88,400 shares)	20,421	6,402
Due from shareholder (note 3)	76,670	100,000
Deferred compensation (note 3)	43,453	–
	140,544	106,402
	1,418,617	1,035,651
	$2,141,863	$2,909,581

Barringer Research Inc. and Subsidiaries

CONSOLIDATED STATEMENT OF EARNINGS

For the years ended December 31, 1976 and 1975

	1976	1975
Revenue (notes 15 and 16)	$4,797,843	$4,252,621
Cost and expenses		
Cost of goods sold (including royalties of $60,274 (1975 – $78,994))	2,840,106	2,866,170
General and administrative expenses	799,425	887,537
Research and development expenditures (note 1(e))	81,458	124,895
	3,720,989	3,878,602
Operating income	1,076,854	374,019
Other expenses (income)		
Write-down of investments	22,125	77,672
Write-down of advances (notes 4(b) and 15)	702,159	125,000
Gain on sale of subsidiary company previously deferred (note 15)	(112,897)	–
Interest –		
Long-term debt	11,598	20,251
Other – net	44,830	67,801
Other	30,403	10,268
	698,218	300,992
	378,636	73,027
Income tax provision	212,220	88,645
Earnings (loss) before extraordinary item and minority interest	166,416	(15,618)
Minority interest in loss	–	221
	166,416	(15,397)
Extraordinary item		
Benefit of timing differences brought forward	212,192	105,300
Net earnings for the year	$ 378,608	$ 89,903
Average number of shares outstanding (note 14)	899,163	847,107
Earnings (loss) per share (note 14)		
Net earnings (loss) before extraordinary item	$0.19	($0.02)
Extraordinary item	$0.23	$0.13
Net earnings for the year	$0.42	$0.11

Barringer Research Inc. and Subsidiaries

CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION

For the years ended December 31, 1976 and 1975

	1976	1975
Funds provided		
From operations –		
Earnings (loss) before extraordinary item	$ 166,416	$ (15,397)
Items not involving funds –		
Benefit of timing differences brought forward	212,192	105,300
Deferred income (note 15)	(722,691)	(37,500)
Depreciation and amortization	161,509	154,840
Amortization of deferred compensation (note 3)	17,377	–
Write-down of investments	22,058	77,672
Write-down of advances	702,159	125,000
Minority interest in loss – net	–	(221)
Other	203	(687)
	559,223	409,007
Deferred income	–	290,441
Write-down of investment against short-term loan	–	167,361
Issue of shares of common stock	1,000	110,000
Additions to long-term debt	–	22,404
Net proceeds on disposals of fixed assets and patents	15,398	9,536
	575,621	1,008,749
Funds applied		
Due from shareholder	–	100,000
Investments and advances	14,614	11,059
Reduction in long-term debt	60,000	60,000
Additions to patents and trademarks	14,431	10,980
Purchases of fixed assets	110,842	167,725
Purchase of treasury shares	14,019	–
	213,906	349,764
Increase in funds	$ 361,715	$ 658,985
Changes in Components of Working Capital		
Working capital (deficiency) – beginning of year	$ 588,232	$ (70,753)
Increase (decrease) in cash	210,808	(7,672)
(Decrease) in inventories	(160,691)	(29,725)
Increase (decrease) in receivables	(85,423)	137,075
Increase in other current assets	29,028	10,696
Decrease in bank indebtedness	116,850	183,657
Decrease in other current liabilities	251,143	364,954
Increase in working capital	361,715	658,985
Working capital – end of year	$ 949,947	$ 588,232
Funds represented by:		
Current assets	$1,585,789	$1,592,067
Current liabilities	635,842	1,003,835
	$ 949,947	$ 588,232

Barringer Research Inc. and Subsidiaries

CONSOLIDATED STATEMENT OF DEFICIT

For the years ended December 31, 1976 and 1975

	1976	1975
Deficit — beginning of year	$ (852,765)	$ (942,668)
Net earnings for the year	378,608	89,903
Deficit — end of year	$ (474,157)	$ (852,765)

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

For the year ended December 31, 1976

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

(a) Principles of consolidation

The accompanying consolidated financial statements comprise the accounts of the company and its active subsidiary companies. All intercompany transactions have been eliminated.

Investments in various wholly-owned inactive subsidiaries are recorded at nominal value and have not been consolidated.

(b) Principles of translation

The accounts of the foreign subsidiaries have been translated into United States dollars on the following basis:

(i) Income and expenses (other than depreciation and amortization) — at the average rate for the year.

(ii) Depreciation and amortization — at historic rates applicable to the related asset account.

(iii) Current assets and current liabilities at year-end rates.

(iv) Other balance sheet accounts — at historic rates.

A loss on translation of $12,416 (1975 — $6,840) has been charged against earnings.

(c) Inventory policies and depreciation

See notes 2 and 5 respectively.

(d) Amortization of intangibles

Patents and trademarks are amortized over their useful lives which range from five to seventeen years. Amortization amounted to $8,168 in 1976 (1975 — $7,516).

(e) Recognition of income and expense

The company's research and development expenditures are primarily of a continuing nature and are written off as incurred.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

(f) Maintenance and repairs

Maintenance and repairs are charged to expense as incurred; renewals and betterments are capitalized, with adjustment made for the cost of property retired or replaced, less accumulated depreciation and salvage recovered.

(g) Holdbacks receivable

Holdbacks receivable relating to contracts in progress which are billed and unpaid are included in accounts receivable and are expected to be collected within one year.

2. INVENTORIES

(a) The major categories of inventories are as follows:

	1976	1975
Finished goods	$ 31,017	$ 85,495
Work in progress	149,758	157,542
Materials and supplies	58,059	35,302
Selling price of contracts in progress, less billings	145,480	266,666
	$384,314	$545,005

Finished goods and work in progress inventories are stated at the lower of average cost and net realizable value. Materials and supplies are stated at their actual cost.

(b) Contracts in progress

The percentage-of-completion method of accruing profit on fixed price contracts in progress is used, with anticipated losses being provided for in full.

3. DUE FROM SHAREHOLDER

An employment agreement between Dr. A. R. Barringer and the company was resolved by the Board of Directors on June 23, 1975. The agreement provides for an extended term of employment, an increase in remuneration, purchase of common stock and a loan.

The company sold to Dr. A. R. Barringer 100,000 unregistered shares of common stock ($.01 par value) at a price of $1.00 per share. The consideration for the shares was in the form of a 4% promissory note maturing on June 30, 1985. Payment of the principal and interest of the note is secured by a pledge of the shares which the company holds as collateral.

The quoted market value of the shares issued amounted to $137,500.

The Board of Directors determined that the fair market value of the shares was $100,000 and that the interest rate on the note of 4% is fair and just since Dr. A. R. Barringer is restricted by the terms of his employment contract. The shares are also restricted as to resale since they are unregistered and Dr. A. R. Barringer is both an insider and forms part of control. However, generally accepted accounting principles provide for the inclusion in deferred compensation of $37,500 being the difference between the quoted market price and issue price of the shares and an amount attributable to an imputed interest rate of 8½% rather than the 4% indicated rate.

The amount of deferred compensation of $60,830 so determined is being amortized over the term of Dr. Barringer's employment agreement. The amortization for 1976 of $17,377 includes an amount of $5,790 representing 1975 amortization not reflected in that year's financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

4. INVESTMENTS AND ADVANCES

Investments and advances are summarized as follows:

(a) Shares or interest recorded at cost or cost, less amounts written off –

Barringer Fiji Limited – 40 shares (a 10% interest) – no quoted value	$ 50
Royex Sturgex Mining Limited – 136,395 registered shares and 91,700 unregistered shares (a 15% interest)	1
Barringer Surveys Limited – 490 shares (a 22% interest) – no quoted value	700
HSA Reactors Limited – 194,950 shares (a 15% interest)	14,614
Fiji Namosi Project – Unincorporated (less than a 2½% interest) (note 11(a)(ii))	1
Minsearch Surveys Limited – 15,000 class B shares – no quoted value	297
	$ 15,663

(b) Advances

Minsearch Surveys Limited	$314,534
Barringer Geosurveys Pty. Limited (a subsidiary of Minsearch Surveys Limited)	387,625
	702,159
Less: Provision (note 15)	702,159
	$ Nil

(c) Acquisitions during year

(i) The company acquired 51,395 shares of Royex Sturgex Mining Limited ("Royex Sturgex") on conversion of a promissory note for $5,059, increasing its ownership to 15%. The company's investment in Royex Sturgex has been written down to a nominal value of $1.

(ii) The company acquired a 15% interest in HSA Reactors Limited ("HSA") for $14,614. HSA is in the process of developing an electrochemical cell.

(iii) During the year the company's interest in Barringer Surveys Limited ("BSL") was diluted to 22% by the issuance of shares to the other participating shareholder. The company accounts for its investment in BSL on the cost basis as it does not feel it exercises a significant influence over the operating and financial policies of BSL.

5. FIXED ASSETS

The major categories of fixed assets are as follows:

	1976	1975
Office furniture and equipment	$ 122,610	$ 119,852
Plant and machinery	569,652	490,617
Exploration equipment	337,925	337,954
Equipment for lease	323,477	319,920
Leasehold improvements	111,022	98,904
	1,464,686	1,367,247
Accumulated depreciation	1,081,747	934,594
Net book value	$ 382,939	$ 432,653

Depreciation is provided on the straight-line basis over the estimated useful lives of the assets, principally four to ten years. Leasehold improvements are being amortized over the terms of the company's leases principally five to twenty years. Depreciation and amortization for the year amounted to $153,341 (1975 – $147,324).

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

6. BANK INDEBTEDNESS

The bank indebtedness is collateralized by a general assignment of accounts receivable and a floating charge debenture on all the assets of the company, and the company's shares of Royex Sturgex Mining Limited.

The weighted average interest rate during the year was 11.71% (1975 – 11.98%) calculated by dividing the interest paid by the average borrowings. At year-end, the average interest rate was 9.75% (1975 – 10.75%). The maximum and average short-term borrowings outstanding during the year were $425,000 (1975 – $592,008) and $331,403 (1975 – $477,450) respectively.

7. LONG-TERM DEBT

The convertible subordinated promissory notes mature serially in semi-annual instalments of $30,000 to December 31, 1978 with the final payment on that date being $35,000. Interest is payable at fluctuating rates, the rate as at December 31, 1976 being 6% (1975 – 8%) per annum. These notes are convertible on the basis (subject to adjustment under certain conditions) of $20 principal amount of notes for one share of common stock.

8. COMMON STOCK AND PAID-IN SURPLUS

	Common stock		Paid-in surplus	
	1976	1975	1976	1975
Balance – beginning of year	$9,774	$8,674	$1,985,044	$1,876,144
(i) 10,000 shares issued to a former officer of a subsidiary company for a consideration of $10,000	–	100	–	9,900
(ii) 100,000 shares issued to an officer and director of the company (note 3) for a consideration of $100,000	–	1,000	–	99,000
(iii) Deferred compensation arising on the excess of market value over cost of shares acquired in 8(ii)	–	–	37,500	–
(iv) 1,000 shares issued to an employee of the company on exercise of an option for a consideration of $1,000	10	–	990	–
Balance – end of year	$9,784	$9,774	$2,023,534	$1,985,044

Shares of common stock reserved for issuance were as follows:

	1976	1975
For stock options –		
Options outstanding and exercisable	82,550	96,550
Available for granting future options	69,050	56,050
For conversion of promissory notes	6,250	10,278
	157,850	162,878

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

9. STOCK OPTIONS

(a) 1968 Qualified Stock Option Plan

In 1968 the company adopted the 1968 Qualified Stock Option Plan covering 30,000 shares of common stock of the company.

Options may be granted to key employees of the company or its subsidiaries at a price not less than the market value of the common stock at the time of the grant of the option. Each option is exercisable two years from the date of the grant, providing the employee remains in the continuous employ of the company or a subsidiary, and expires five years from the date of the grant. Information with respect to this Stock Option Plan is summarized as follows:

	Shares	Amount
Options granted subsequent to 1968 and outstanding at December 31, 1974 ($2.00 to $5.50 per share)	13,200	$ 51,950
Changes during 1975 –		
Options cancelled and expired	(8,850)	(28,025)
Options granted at market value ($1.25 per share)	1,000	1,250
Options outstanding at December 31, 1975 ($1.25 to $5.50 per share)	5,350	25,175
Changes during 1976 –		
Options granted at market value ($1.25 per share)	2,000	2,500
Options outstanding and exercisable at December 31, 1976 ($1.25 to $5.50 per share)	7,350	$ 27,675

(b) 1970 Qualified Stock Option Plan

On May 13, 1970 the company adopted the 1970 Qualified Stock Option Plan covering 30,000 shares of common stock of the company. Options may be granted to directors, officers and other key employees of the company or its subsidiaries at a price not less than the market value of the common stock at the time of the grant of the option. Each option is exercisable two years from the date of the grant, provided the optionee continues as a director or remains in the employ of the company or a subsidiary, and expires five years from the date of the grant. No optionee may exercise an option while there is outstanding any other stock option previously granted to the optionee. Information with respect to this Stock Option is summarized as follows:

	Shares	Amount
Options granted subsequent to 1970 and outstanding at December 31, 1974 ($2.00 to $3.00 per share)	12,700	$ 31,400
Changes during 1975 – Options cancelled and expired	(12,700)	(31,400)
Options outstanding at December 31, 1975 and 1976	Nil	Nil

(c) 1972 Unqualified Stock Option Plan

In 1972 the company adopted an Unqualified Stock Option Plan covering 95,000 shares of common stock of the company. Options may be granted to directors, officers and other key employees of the company or its subsidiaries at a price not less than the market value of the common stock at the time of grant of the option. These options are exercisable at varying times from date of grant, provided the optionee continues as a director or remains in the employ of the company or subsidiary, and expires five years from the date of the grant. The company has first right of refusal to reacquire shares purchased under this option plan at a formula price equivalent to 75% of quoted value of the shares. Information with respect to this Stock Option Plan is summarized as follows:

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

	Shares	Amount
Options granted subsequent to 1972 and outstanding at December 31, 1974 ($5.00 to $5.50 per share)	78,000	$408,500
Changes during 1975 –		
Options granted at market value ($1.00 per share)	56,500	56,500
Options exercised ($1.00 per share; market value $1.37)	(10,000)	(10,000)
Options cancelled and expired	(64,000)	(334,500)
Options outstanding and exercisable at December 31, 1975 ($1.00 to $5.00 per share)	60,500	120,500
Changes during 1976 –		
Options granted at market value ($1.50 per share)	1,000	1,500
Options exercised ($1.00 per share; market value $1.63)	(1,000)	(1,000)
Options cancelled and expired	(6,000)	(6,000)
Options outstanding and exercisable at December 31, 1976 ($1.00 to $5.00 per share)	54,500	$115,000

(d) Options under employment agreements

Under two employment agreements dated October 1, 1972, the company granted options, not under the option plans, to purchase an aggregate of 10,000 shares of common stock of the company at a price of $5.00 per share during the period from October 1, 1972 to September 30, 1977. As at December 31, 1976, these options have not been exercised, and are outstanding.

(e) Other stock options

The company also grants stock options to consultants as authorized by the Board of Directors from shares available under existing plans. These options are exercisable two years from the date of grant and expire three to five years from the date of grant. As at December 31, 1976, 10,700 options are outstanding at a price of $1.50 to $5.50 per share.

10. INCOME TAXES

(a) Canadian income taxes

As at December 31, 1976, the company has recorded in the accounts depreciation and amortization of $461,950 in excess of that claimed for tax purposes.

The company is appealing an assessment from Revenue Canada, Taxation, for the 1970 taxation year. If the appeal were allowed, the income for tax purposes declared by the company would decrease by $209,000 for the 1970 taxation year, and, the availability to the company of depreciation for tax purposes to reduce future years' income taxes would be increased by $189,000.

(b) Canadian income taxes – Barringer Hydrocarbons Limited and Magenta Explorations Limited

Both Barringer Hydrocarbons Limited and Magenta Explorations Limited have certain research and development expenses that can be used to reduce taxable income in future years. The amount of these expenses are approximately $71,000 and $4,506,000 respectively.

Utilization of these expenses is dependent on these companies attaining profitable operations in the future.

(c) Tax rate on earnings

The 1976 provision calculates to an expected rate of 56% on earnings before income taxes. Items accounting for the 1976 rate are:

	1976	1975
Normal U.S. Federal tax rate	48%	48%
Losses in international operations for which there is no current income tax benefit	–	54%
Expenses incurred which are non-deductible for tax purposes	13%	15%
Other	(5%)	4%
	56%	121%

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

11. COMMITMENTS AND CONTINGENT LIABILITIES

(a) Contingent liabilities

(i) A subsidiary participated in a program under which a portion of the cost of research and development projects involving the development of two instruments for the sensing of air pollution was borne by the Canadian Government, subject to repayment, as explained below, to the extent that the instruments proved to be commercially successful. Contributions of approximately $113,460 were received from the Government in prior years, and have been accounted for in accordance with the company's regular practice with respect to research and development projects. Repayments are being made at a fixed rate per instrument sold or rented; the aggregate amount of such repayments is not to exceed the contributions received with interest thereon. A total of $12,265 has been repaid to date. Such repayments are an element of cost of sales.

(ii) Fiji Namosi Project
The company held a 5% participating interest subject to dilution which was pledged to another participant to secure a loan of $167,362. After dilution to date, the company computes that its interest amounts to fractionally less than 2.5%. The company did not repay the loan and the pledge of the company's interest may be realized upon by the lender, in which case the company will be entitled to an accounting and there may be a contingent liability for any deficiency upon realization. The lender claims that the company's interest was forfeited for non-payment which the company disputes. The company has no liability if the interest is forfeited; if the company's position is upheld and the security is realized upon, there may be a contingent liability for any deficiency upon realization.

(b) Rental expense and lease commitments

(i) Rental and lease expenses for the year amounted to $88,600 (1975 – $80,990).

(ii) Lease commitments on rented premises are as follows:

Year	Rental cost
1977-1981 – annual rental cost	$49,600
1982-1985 – aggregate rental cost	$66,000

(iii) Equipment and automobile lease commitments total $39,000 in each of the next three years.

12. PENSION PLAN

In 1972, a subsidiary converted its insured pension plan for senior employees to a plan that provides retirement benefits for any employee, equal to 2% of annual salary for each year of employment under the plan. The aggregate cost of the plan was $38,831 in 1976 (1975 – $29,383). Pension costs are funded, and there was no unfunded liability as at December 31, 1976.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

13. MINORITY INTEREST

Minority interest in the loss was $57 (1975 – $22,174). Losses attributable to minority interest in excess of their portion of paid-up capital in the amount of $22,010 have been absorbed as an expense. This amount will be recovered in future years if there are profitable operations of Barringer Hydrocarbons Limited.

14. EARNINGS (LOSS) PER SHARE

Earnings (loss) per share are based on the weighted average number of shares outstanding, with shares issuable upon exercise of options, where applicable, during a year being included using the treasury stock method. Shares issuable upon conversion of the convertible promissory notes are not included since such conversion would have an anti-dilutive effect.

15. JOINT VENTURE AGREEMENT

During the year the company exchanged its holdings of common stock in Minsearch Surveys Limited for non-voting convertible class B shares. Thus, the company ceased to exercise any significant influence over the operations of Minsearch. Accordingly, in 1976, $722,691 (including a gain of $112,897 on the sale of a subsidiary) that had previously been classified as deferred income arising from previous transactions with Minsearch, was brought into current income.

In 1976 management determined that advances made to Minsearch in prior years were no longer certain of collection since such collection is dependent on Minsearch achieving profitable operations and repaying other long-term debt. Therefore management has deemed it prudent to provide in full for the potential loss of $702,159 on such advances.

16. RELATED PARTY TRANSACTIONS

In 1976 the company included in earnings, income of $1,613,425 (of which $722,691 represents previously deferred income) to Minsearch Surveys Limited, a company in which the company used to own common stock but now owns 15,000 class B shares. Sales to Barringer Surveys Limited, in which the company holds 22% of the common shares, amounted to $609,260 in 1976.

17. COMPARATIVE FIGURES

The prior year's figures have been reclassified to conform to the 1976 presentation.

18. FINANCIAL POSITION AND OPERATIONS OF THE PARENT COMPANY

Barringer Research Inc.

BALANCE SHEET

As at December 31, 1976 and 1975

	1976	1975
Assets		
Current Assets		
Cash	$ 111,556	$ 17,775
Income taxes recoverable	7,423	26,655
Accounts receivable (net)	9,858	–
Due from associated company	–	11,988
Deposits and prepaids	6,871	–
	135,708	56,418
Investments and advances –		
Investment in subsidiary company – at equity	738,583	242,139
Advances to subsidiary company	711,292	932,215
	1,449,875	1,174,354
Fixed Assets – at cost	34,601	–
Less: Accumulated depreciation	(3,303)	–
	31,298	–
	$1,616,881	$1,230,772
Liabilities		
Current Liabilities		
Accounts payable and accrued charges	$ 15,683	$ 10,121
Current portion of long-term debt	60,000	60,000
Bank loan payable	25,000	–
Unearned income	6,000	–
	106,683	70,121
Long-term debt		
Convertible subordinated promissory notes, less amount included in current liabilities	65,000	125,000
Loan from a subsidiary	26,581	–
	91,581	125,000
	198,264	195,121
Shareholders' equity		
Common Stock		
Authorized –		
2,000,000 shares of common stock of 1¢ par value each		
Issued and fully paid – 978,400 shares (1975 – 977,400)	9,784	9,774
Paid-in surplus	2,023,534	1,985,044
Deficit	(474,157)	(852,765)
	1,559,161	1,142,053
Less: Common stock in treasury – at cost, – 98,600 shares (1975 – 88,400 shares)	20,421	6,402
Due from a shareholder	76,670	100,000
Deferred compensation	43,453	–
	140,544	106,402
	1,418,617	1,035,651
	$1,616,881	$1,230,772

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS (Continued)

18. FINANCIAL POSITION AND OPERATIONS OF THE PARENT COMPANY (continued)

Barringer Research Inc.

STATEMENT OF EARNINGS AND DEFICIT

For the years ended December 31, 1976 and 1975

	1976	1975
Revenue	$ 64,538	$ –
Interest earned	44,292	42,000
	108,830	42,000
Cost of goods sold	108,102	–
General and administrative expense	88,294	50,071
	196,396	50,071
Operating loss	87,566	8,071
Other expenses –		
Write-down of advances	11,988	–
Interest on long-term debt	11,598	20,251
Withholding taxes	6,375	6,300
Other interest	309	–
	30,270	26,551
Loss before income taxes and share of earnings of subsidiaries	117,836	34,622
Income taxes recoverable	–	16,655
Share of earnings of subsidiary	496,444	107,870
Earnings for the year	378,608	89,903
Deficit – beginning of year	(852,765)	(942,668)
Deficit – end of year	$ (474,157)	$ (852,765)

OPINION OF THE INDEPENDENT PUBLIC ACCOUNTANTS

COOPERS & LYBRAND

CHARTERED ACCOUNTANTS

OFFICES THROUGHOUT CANADA
AND IN PRINCIPAL AREAS
OF THE WORLD

TELEPHONE (416) 869-1130
CABLES COLYBRAND
TELEX 06-23590
145 KING STREET WEST
TORONTO, ONTARIO, CANADA M5H 1V8

To the Shareholders
Barringer Research Inc.

We have examined the consolidated balance sheet of Barringer Research Inc. as at December 31, 1976 and 1975 and the related consolidated statements of earnings, deficit, changes in financial position and schedules, which are being filed as part of the Annual Report (Form 10-K) to the Securities and Exchange Commission, for the years then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our report dated February 20, 1976, our opinion on the 1975 financial statements was qualified as being subject to the realization of the advances of $387,625 to Barringer Geosurveys Pty. Limited and $314,534 to Minsearch Surveys Limited which are to be repaid from the cash flow of Minsearch Surveys Limited. As explained in note 15, the carrying amount of these advances has been charged to operations in the current year as required by generally accepted accounting principles. Accordingly our present opinion on the 1975 financial statements, as presented herein, is different from that expressed in our previous report.

In our opinion:
(a) These consolidated financial statements present fairly the financial position of the company as at December 31, 1976 and 1975 and the results of its operations and the changes in its financial position for the years then ended in accordance with generally accepted accounting principles applied on a consistent basis.

(b) The accompanying schedules as at December 31, 1976 and 1975 present fairly the information required to be set forth therein, in conformity with generally accepted accounting principles applied on a consistent basis.

Coopers & Lybrand

CHARTERED ACCOUNTANTS

Toronto, Ontario, Canada,
February 25, 1977

This year Barringer Research is including in the annual report a copy of the S.E.C. Form 10-K. This form, filed each year by all publicly owned companies, contains more detailed information than is given in the typical annual report. Our intention in presenting it here is to give all present and prospective shareholders a comprehensive picture of Barringer Research's business and financial condition. However, to avoid repetition, the formal financial statements, notes, and auditors' opinion, consisting of pages 15 to 28 and page 36 of the 10K Report, which are reproduced in their traditional position in the annual report, as pages 12 to 26 following the Chairman's Letter, have not been repeated in this section.

This Form 10-K has not been approved or disapproved by the Securities and Exchange Commission nor has the Commission passed on the accuracy or adequacy of the data included herein.

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

Form 10-K

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

For the fiscal year ended December 31, 1976 **Commission File No. 0–3207**

Barringer Research Inc.

(Exact name of registrant as specified in its charter)

Delaware — *(State or other jurisdiction of incorporation or organization)*

84–072–0473 — *(IRS Employer Identification Number)*

Barringer Research Limited

(Exact name of registrant as specified in its charter)

Ontario, Canada — *(State or other jurisdiction of incorporation or organization)*

– — *(IRS Employer Identification Number)*

304 Carlingview Drive,
Metropolitan Toronto,
Rexdale, Ontario, Canada
(Address of principal executive offices)

M9W 5G2
(Postal Code)

Registrant's telephone number, include area code: (416) 675-3870

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

NONE

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

Common Stock, $ .01 par value, Barringer Research Inc.
(Title of Class)

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

Yes ✓ **No** ______

Number of shares outstanding as of December 31, 1976 – 978,400.

BARRINGER RESEARCH INC.

FORM 10-K

PART I

ITEM 1. BUSINESS

Item 1. (a) PRINCIPAL PRODUCTS AND SERVICES

Barringer Research Inc., a Delaware Corporation (the "Registrant"), through a branch operation in Denver and its wholly-owned subsidiary Barringer Research Limited, an Ontario Corporation ("BRL") engages in five principal activities: (1) Research and Development Services; (2) Natural Resource Exploration Ventures and Services; (3) Commercial Products: Instrument Manufacture; (4) Analytical Chemistry and Biology Services; (5) Licensing of Patented Proprietary Products.

(1) RESEARCH AND DEVELOPMENT SERVICES

BRL's Research and Development Division comprises a staff of professional scientists and engineers plus technologists and technicians (11 university graduates) that undertakes R & D work for industrial and Government agency clients in the following disciplines: (i) electro-optics; (ii) electro-magnetics; (iii) magnetics; and (iv) atmospheric physics.

BRL's R & D policy is to undertake projects and programs whose results can be transformed into patented or proprietary commercial products and systems. Generally such projects include design engineering and construction of prototype instruments and systems.

Due to BRL's patent position for significant instruments and instrument systems, and the know-how obtained from previous R & D work associated with these patents, a large portion of the Company's 1976 R & D work was carried out pursuant to agreements funded by major mining and mining-finance companies with which BRL is also partner in joint ventures. These systems are licensed for commercial operations to the joint companies (See Sections (1) (a) and (5).)

Major clients for R & D projects underway in 1976 included private and government organizations, among them:

- University of Utah (Energy Research and Development Administration) (USA)
- General Electric Space Science Laboratories (USA)
- TRW Systems (USA)
- Communications Research Center (Canada)
- Atomic Energy of Canada Limited (Canada)
- Department of Energy, Mines and Resources (Canada)
- National Research Council (Canada)
- Department of the Environment (Canada)
- Department of Supply & Services (Canada)
- Department of National Defence (Canada)
- Department of Communications (Canada)
- Minsearch Surveys Ltd. (Canada)
- Barringer Surveys Ltd. (South Africa)
- Environmental Protection Agency (USA)

R & D revenues amounted to $1,486,000 in 1976 ($1,610,000 in 1975).

R & D Products and Techniques

From its R & D projects BRL has developed instruments, instrument systems and techniques in the fields of: (a) airborne exploration, (b) ground exploration and (c) environmental monitoring and process control.

(a) Airborne Exploration Systems

(i) *INPUT:* BRL began as a company with the scientific and commercial success of an R & D effort, the airborne electromagnetic INduced PUlse Transient technique (INPUT). This commercially licensed system now provides BRL with a substantial annual royalty and rental income from its survey applications that are flown under license to Geoterrex Limited (Ottawa) and Questor Surveys Limited (Toronto). During 1976 further refinements were made to improve the operational status of the INPUT System (See Section 5).

(ii) *AIRTRACE:* In 1972 BRL began active field testing of a new patented and proprietary geochemical exploration system – AIRTRACE. In 1973 this program continued, and license agreements for commercial use of the system were concluded with Gold Fields of South Africa in certain limited geographic areas. In 1974 BRL formed a joint company, Minsearch Surveys Limited (Minsearch), licensed by BRL to exploit AIRTRACE commercially on a worldwide basis, subject to the prior-existing agreements. Orientation Surveys continued through 1976 in Canada, the U.S., and South Africa (See Section 5).

(iii) *Airborne EM Systems:* Throughout 1976 BRL continued its development work on airborne electromagnetic systems. This work involved continued development of COTRAN, a new patented multi-frequency EM system. The COTRAN system received the 1976 IR 100 as one of the year's one hundred most significant new Industrial Inventions.

(b) Environmental Monitoring/Process Control

BRL's R & D in these fields has produced four techniques and products that are manufactured and sold by BRL.

(i) *Electro-optical techniques for air pollution monitoring,* including the SO_2/NO_2 correlation spectrometers designated COSPEC II and III and a higher sensitivity unit, the single gas COSPEC IV. (See Section 2C).

(ii) *The Barringer gas filter cell correlation spectrometer,* the GASPEC, which is capable of remote detection of trace gases in the atmosphere. BRL has specialized in the infrared spectral region for the GASPEC, and development work continued during 1976.

(iii) *The Barringer-patented correlation interferometer* for the remote sensing of trace gases, continued during 1976 under subcontract to General Electric Space Science Laboratories (Philadelphia) for NASA Langley Research Center. This work involves the development of a space unit with multi-gas detection capabilities.

(iv) *During the year* BRL continued a program to develop an airborne laser fluorosensor unit for oil spill detection and classification. This program is under contract to the Canadian Centre for Remote Sensing. The sensor will be test flown in the spring of 1977.

(2) COMMERCIAL PRODUCTS: INSTRUMENT MANUFACTURE

BRL manufactures and markets specialized instrument systems that have been generated by the company's R & D activities.

The principal market for BRL products is Canada, the United States and Europe. Revenues from instrument sales and rentals in 1976 amounted to approximately $576,000 ($553,000 in 1975), and operations were profitable.

(a) *Geophysical Instruments:* The M-123 magnetometer was first marketed in 1975 for airborne, oceanographic and ground applications and during 1976 sales were made, particularly to the shallow water marine salvage industry. The new eight channel light weight recorder for airborne geophysical applications, the CR900, remained in production and sales continued. Sales of the GM122 ground portable magnetometer were made from inventory.

(b) *Nuclear Process Control:* Since 1971 BRL has produced and sold three different kinds of heavy water (D_2O) process control instruments. These have been designed for Canadian CANDU-type reactors in nuclear power plants and the heavy water industry to monitor ratios of heavy and light water and detect trace concentrations of heavy water. Development work continued during 1976 in co-operation with Atomic Energy of Canada, Ltd., with BRL providing a resident site engineer to the Chalk River Nuclear laboratories.

(c) *Air Pollution/Environmental Monitoring:* BRL originally developed correlation spectrometric techniques for application in the remote sensing of gases and earth resource exploration. In 1967 the company recognized the air pollution monitoring applications of this technique and BRL began producing an instrument line – the COSPEC series – designated to measure SO_2 and/or NO_2 continuously in the atmosphere. BRL sells these instruments directly from its Toronto location. BRL has an agreement with Japan Spectroscopic Company Limited, Tokyo, (Jasco) under which Jasco is licensed to sell the COSPEC series in Japan and other Southeast Asian countries. The COSPEC is now receiving growing acceptance throughout the world with approximately 65 units in use in 20 countries.

(3) NATURAL RESOURCE EXPLORATION VENTURES AND SERVICES

BRL's current exploration policy continues to be one of undertaking contract programs for minerals and hydrocarbons. These programs incorporate generally available exploration techniques but also utilize the company's most advanced airborne and ground system, techniques and expertise as appropriate. BRL uses its combined professional experience in geology, geochemistry, geophysics, photogeology and data processing, backed with laboratory competence in analytical chemistry to undertake large and small mineral exploration programs. During 1976, BRL's staff of professional geologists, geochemists, geophysicists and photogeologists provided exploration consulting, field and airborne services, training of personnel for the mineral industry and undertaking services under contract. The exploration staff has also supported specialized R & D in new instrument and remote sensing technology and research for hydrocarbon, uranium and base metal exploration.

BRL has further consolidated its activities in consulting and analytical services in North America with the opening of an office and laboratory facility in Denver. Through 1976 BRL professionals were actively providing consulting services for mineral exploration programs in Canada, the United States, South Africa and Brazil. In Brazil the initial phase of the Goias geochemical survey project, a major exploration program financed by the Inter-American Development Bank and the Brazilian Government was successfully completed under management by Barringer Research. The three BRL geochemists responsible for this work returned to Canada in late 1976 having successfully trained a group of Brazilian geologists, technicians and laboratory staff to continue the exploration program. The work by BRL geochemists proved the effectiveness of geochemistry in locating mineralization in Brazil. This work created much outside interest and has caused many exploration groups active in Brazil to include geochemistry in their exploration technology for the first time.

On behalf of Minsearch Surveys Limited BRL operated and managed AIRTRACE AIRBORNE SURVEYS in 1976. Surveys were conducted in the Dominican Republic, several locations in Northern Ontario, Texas, New Mexico and the Republic of South Africa. BRI, as prime contractor conducted an AIRTRACE survey over the Roosevelt Springs known geothermal resource area for the U.S. Energy Research and Development Agency.

During 1976 the test flying of the TRISLANDER multi-sensor installation commenced and INPUT/ COTRAN (EM) results were obtained over known massive sulphide mineralization.

During 1976 the Barringer Research group of specialists in exploration technology provided consulting and technical services to a large number of organizations including:—

D.N.P.M. (Brazil)
Energy Research and Development Agency (U.S.A.)
Texas Gulf Sulphur Inc. (Colorado)
Noranda Explorations (Toronto)
Shell Minerals (Canada)
B.P. Eastern (Canada)
Camflo Mines (Canada)
Uranerz Mining (Canada)
Anglo American Corp. (South Africa, Brazil)
Rio Tinto Group (Brazil, U.S.A., South Africa)
Phelps Dodge Group (U.S.A.)
Rocky Mountain Energy (Colorado)
Minsearch Surveys (Canada)

Fiji Program: BRL is currently involved in mineral exploration programs in the Fiji Islands through two vehicles: (1) Barringer Fiji Limited and (2) a joint venture with Australian Anglo American Company Limited (AAA) and American Metal Climax, Inc. (AMAX) (the "Namosi Project").

1. *Barringer Fiji Limited (BFL):* BRL incorporated BFL in connection with an agreement with the Government of Fiji for exclusive prospecting rights on the two main Fiji islands, covering all ground except that subject to leave of claims as at July 31st, 1969. BFL was incorporated to assume the rights and responsibilities under such agreement and to carry out the exploration program. American Metal Climax, Inc. managed the program in 1976 and 1975. BRL initially acted as technical manager of the program, which was funded by Contifiance S.A. (an affiliate of Roan Selection Trust) in return for an 80 percent interest in BFL.

Under terms of an agreement with Australian Anglo American *et al.* concluded in 1974, BRL relinquished 10 percent interest in BFL to AAA in return for 0.5 percent increase in equity in the Fiji Namosi Project, bringing its total interest from 4.5 to 5.0 percent (See 2 below). AAA can earn 55% interest in BFL by expending Fiji$1,800,000 on exploration in the BFL areas. BRL received a fee for its services in assisting conclusion of the agreement. Exploration on BFL ground began in late 1974 and continued in 1975 and 1976. Results of the exploration to date are not considered encouraging but work is continuing. BRL has no financial obligations for the BFL program.

2. *Australian Anglo American Limited (Namosi Project):* In March 1973 BRL acquired a 4.5 percent interest in a separate Fijian porphyry copper property in the Namosi area of Fiji from AAA. Under terms of the 1974 BFL agreement (See above), BRL received an additional 0.5 percent equity interest in the Namosi project. The project is being managed by AMAX. In light of the recent low copper prices and inability to project significant price increases in the near or medium term future the results of the drilling cannot be considered encouraging. Active exploration by drilling has been temporarily discontinued. BRL did not contribute to its pro rated share of exploration expenses and as a result retains less than 2.5 percent interest. This interest will continue to dilute if BRL does not contribute to future exploration costs. In view of the uncertain future of this project BRL deemed it prudent to write-down $75,000 in 1975 which was approximately the book value assigned to the Namosi project.

Canadian Program: In August 1968, BRL entered into an agreement with TRW, Inc. (TRW) that established a joint venture exploration program between BRL and TRW in a large area within the Canadian Provinces of Manitoba, Saskatchewan, Alberta and portions of the Northwest Territories. TRW ceased funding the program in 1972, after reconnaissance and subsequent exploration phases up to but not including diamond drilling.

After termination of funding by TRW, BRL continued acting in 1973 and 1974 on behalf of a Canadian company, Magenta Explorations Limited (Magenta) to secure funding partners for further development work on several drill targets in the Magenta claim areas. Magenta was formed in December 1971 by BRL and OMAR Explorations, Inc., a Delaware Corporation (OMAR) to which TRW had assigned all its exploration rights. After formation of Magenta, BLR's and OMAR's rights and interests were assigned to Magenta in return for shares in stock. BRL received a total of 1 million of the 4.5 million shares issued in this exchange.

During 1975 TRW offered BRL the opportunity to purchase all of the shares of OMAR. OMAR's major asset was 205,486 shares of Royex Mining Limited (See below) and BRL's management offered $15,000 for the purchase of OMAR. The offer was accepted and after acquiring ownership of the Royex shares BRL wound up the affairs of OMAR and surrendered its charter. As a result of the purchase of OMAR, BRL now also owns 100 percent equity in Magenta. A third party completed a small exploration program on one Magenta property in 1975 and 1976 with negative results. In view of this and taking into consideration the economic and political conditions prevalent in the Canadian mineral exploration industry and industry's response to these conditions, BRL's management decided to write-off its assigned book value ($125,000) in Magenta in 1975.

BRL, through its joint venture with OMAR, obtained shares in an Ontario Company, Royex Mining Limited (Royex). Royex holds interests in a number of claims including a gold property in the Northwest Territories. BRL previously held 147,914 shares in Royex and this was increased to 353,400 as a result of acquiring OMAR. In 1974 the management of Royex and another company, Sturgex Mines Limited (Sturgex) amalgamated the two companies with a new name Royex Sturgex Mining Limited (Royex Sturgex). Royex shares were exchanged for Royex Sturgex shares on the basis of 2 Royex shares for 1 Royex Sturgex share. Thus BRL received 176,700 Royex Sturgex shares, which represented approximately 12 percent of the outstanding shares.

Royex Sturgex holds an 18 percent interest of which 10 percent is free carried, in a gold property in the Northwest Territories. Some $1.6 million was spent by a third party on underground development on this property in 1975. This underground work confirmed previous drill results that a moderate tonnage of gold ore is present on the property. At the present time the claims are being held on a care and maintenance basis and in view of the current depressed market for gold the Company deemed it prudent to write down its investment to $1.00.

Total revenues obtained from resource exploration consulting, field operations and R & D contract activities amounted to $748,000 ($814,000 in 1975).

(4) ANALYTICAL CHEMISTRY AND BIOLOGY SERVICES

During the past year BRL's Analytical Chemistry and Biology Division continued to operate as a separate organizational unit within the company. A rapid expansion and further diversification of the division's interests occurred during 1976. Two areas particularly dominated the division's work during the year:

(i) The radio frequency induction coupled plasma, an instrumental area in which BRL essentially retained a sole source position for contract R & D and analytical service work. This unique position allowed the division to expand sales in this area to well over $200,000 during the year, split approximately equally into R & D and custom analytical sales.

(ii) The rapid expansion for uranium exploration, which resulted in increased sales of geochemical custom analyses both in the Toronto and Whitehorse laboratories. Further, the commercial demand for uranium exploration geochemical analyses in the United States was sufficiently high to justify the opening of a laboratory in Denver. Although this operation resulted in a loss situation due to start up expenses in 1976, BRI expects a reversal of this trend in 1977.

The division continued to perform analyses on samples submitted by customers on a custom-oriented production basis. In 1976 clients for this service work included most major Canadian and international mining and exploration companies, together with several Canadian Provincial and Federal resource agencies. Considerable penetration of the U.S. market for analytical work was also accomplished both in the private and public sectors. The division continued to provide substantial analytical research support for the AIRTRACE programs on behalf of the company's joint venture partners.

The division continued research into a novel electrochemical reactor funded by a contract by HSA Reactors Ltd., in which BRL has a 15 percent interest, and by the Canadian Federal Government.

Revenues from the division's operations in 1976 amounted to $904,000 ($599,000 in 1975).

(5) LICENSING OF PATENTED PROPRIETARY PRODUCTS

BRL grants licenses for the right to use, manufacture and/or sell certain proprietary techniques and instrumentation developed by BRL, and on which the company holds patents or other rights.

Revenue to BRL in 1976 from its licenses was approximately $1,084,000 ($675,000 in 1975). The major components of these license fees were derived from agreements regarding the BRL INPUT and AIRTRACE systems.

INPUT System Agreement

BRL has a worldwide exclusive license granted by the purchaser of BRL's INPUT patents to manufacture this airborne geophysical system and to jointly grant sublicenses to others for their use. In 1976, five systems were licensed to two companies engaged in providing contract airborne exploration surveys. The two licensees paid BRL rental for the equipment as well as license fees for every mile flown on survey, amounting to approximately $398,000 in 1976 ($348,000 in 1975).

According to data compiled by the Society for Exploration Geophysicists, INPUT surveys represent approximately 50 percent of the total worldwide survey mileage flown in 1975 using electro-magnetic techniques.

AIRTRACE Exploration Survey Company Joint Ventures

During 1973 and 1974 BRL entered into agreements establishing three airborne exploration survey companies licensed to operate the BRL-developed and patented AIRTRACE system. These companies and their locations are: Barringer Surveys Limited (BSL), Johannesburg; Minsearch Surveys Limited (Minsearch), Toronto; and Barringer Hydrocarbons Limited (BHL); Toronto, Canada.

BSL was incorporated in April 1973 in partnership with Gold Fields of South Africa. BRL holds a 22 percent interest in BSL, which was granted an exclusive license to use BRL's AIRTRACE airborne geochemical prospecting system in Southern Africa for mineral and hydrocarbon exploration. BSL had no operations in 1976. The company expected to commence operations in 1976 with the aircraft fully outfitted with an AIRTRACE and other airborne systems. However, in December 1976 the aircraft made a forced landing on an Ontario lake during final acceptance trials. Damage was sustained by the aircraft and the equipment. The cost of repairing the damage is being assessed and final decisions on repair, re installations, etc., will be made during the early part of 1977. When BSL is operating commercially, BRL is to receive royalty income from each line mile of survey flown. From 1974 to 1976 BSL approved programs of airborne EM development specifically tailored to its aircraft. BRL performed this development work.

Minsearch Surveys Limited was incorporated in February 1974 in partnership with Anglo American Corporation of Canada Limited (Amcan), Hudson Bay Mining and Smelting Co., Limited (HBMS), and Minerals and Resources Corporation Limited (Minorco). Minsearch was granted a worldwide exclusive license for the commercial exploitation of AIRTRACE, except for those areas covered by prior geographically limited exclusive agreement. In consideration for the grant of license and know-how rights to Minsearch, BRL received cash in the amount of $550,000 in 1974, $500,000 in 1975 and $50,000 in 1976. In addition, BRL is to receive royalties from commercial operations of Minsearch based on the number of line miles flown. Minsearch performed substantial test flying in 1975 and 1976. In 1975 and 1976 Minsearch conducted commercial surveys and these are expected to increase in 1977.

In addition, BRL in 1974 transferred to Minsearch the shares of its wholly-owned Australian subsidiary company Barringer Geosurveys Pty. Ltd. (BGS) and will be compensated for this transfer from future net cash flows of Minsearch. The non-exclusive agreement that BGS has with Allstate Exploration Pty., Ltd. in Australia for mineral exploration remains in force. Any equity interest received by BGS in deposits discovered using BRL's airborne systems will be held in trust for Minsearch.

BRL also formed a joint company – Barringer Hydrocarbons Limited – with Amcan, HBMS, and Minorco. BHL was granted a license to use the AIRTRACE system for hydrocarbon and geothermal resource exploration. BRL has a 70 percent interest in BHL. BHL was inactive in 1976, but R & D funding was directed toward aspects of the AIRTRACE hydrocarbon R & D program.

Under the terms of its agreement with Minsearch, BSL and BHL, BRL will receive a royalty based on the number of survey line miles flown with the AIRTRACE system when the companies begin commercial operation. The policy of each joint company is expected to be either to negotiate (a) a combination of service fee and participation in any discoveries made; or (b) a participation in any discoveries; or (c) a higher rate of fee in lieu of participation. Minsearch's and BSL's ability to obtain the most favourable fee and participation terms will be a function of conditions prevailing in the mineral exploration industry and the technical strength of the AIRTRACE and its related systems.

Item 1. (b) (2) REVENUES

With the exception of Minsearch Surveys Limited and Barringer Surveys Limited, which accounted for 33 percent and 13 percent respectively, no single customer accounted for more than 10 percent of total revenue in 1976.

Item 1. (b) (3) BACKLOG

The following table sets forth the backlog of work on hand as at December 31, 1975 and December 31, 1976.

	As at Dec. 31/76	As at Dec. 31/75
(1) Research and Development Services	$ 115,000	$ 777,000
(2) Natural Resource Exploration Ventures and Services	53,000	213,000
(3) Commercial Products: Instrument Manufacture	64,000	78,000
(4) Analytical Chemistry and Biology Services	29,000	131,000
(5) Licensing	185,000	197,000
TOTAL	$ 446,000	$1,396,000

It is estimated that all of the backlog work on hand as at December 31, 1976 will be filled during the current fiscal year. The decrease in 1976 backlogs is attributable to the completion of several large contracts.

Item 1. (b) (4) SOURCES AND AVAILABILITY OF RAW MATERIALS

BRL's manufactured products are basically comprised of assembled components. The items purchased by BRL are of a standardized nature and are available from numerous sources. BRL has no long-term agreement or requirement contract for any of the items purchased by it and apart from delays in the delivery of some components caused by often extremely tight supply conditions prevailing in the market does not anticipate any problem in obtaining the necessary materials or parts for manufacture of the equipment it produces.

Item 1. (b) (5) PATENTS AND LICENSING

BRL has 24 United States patents relating to its equipment and systems. An aggregate of 153 patents and patent applications have been issued or are pending in countries other than the United States. No United States patent owned by BRL will expire prior to 1978. Although BRL regards its patents and patent applications to be of value, it does not deem its business as a whole to be materially dependent on any one or more patents or patent applications.

Item 1. (b) (6) RESEARCH AND DEVELOPMENT

Reference is made to Item 1. (a) PRINCIPAL PRODUCTS AND SERVICES and (1) RESEARCH AND DEVELOPMENT SERVICES.

Item 1. (b) (7) DISCHARGE OF MATERIALS INTO THE ENVIRONMENT

Not applicable.

Item 1. (b) (8) EMPLOYEES

As of December 31, 1976 there were 91 persons, including officers, in the regular employ of the Registrant and its wholly owned subsidiary.

Item 1. (b) (9) SEASONAL BUSINESS

None of a nature material to the Company's operations.

Item 1. (c) INFORMATION AS TO LINES OF BUSINESS AND CLASSES OF SIMILAR PRODUCTS AND SERVICES

Total sales and revenues for the years 1972 through 1976 for the major lines of business and classes of products and services, expressed in percent of total revenue as shown in the consolidated statement of operations herein, were as follows:

	1972	1973	1974	1975	1976
Research and Development Services	12	15	27	38	31
Natural Resource Exploration Ventures and Services	60	43	22	19	16
Commercial Products: Instrument Manufacture	17	17	17	13	12
*Analytical Chemistry and Biology	—	—	14	14	19
Licensing	11	25	20	16	22
	100%	100%	100%	100%	100%

The major lines of business contributed to the results of operations as follows:

	1972	1973	1974	1975	1976
Research and Development Services	10	2	17	26	17
Natural Resource Exploration Ventures and Services	45	23	9	17	9
Commercial Products: Instrument Manufacture	17	6	15	7	12
*Analytical Chemistry and Biology	—	—	14	11	15
Licensing	28	69	45	39	47
	100%	100%	100%	100%	100%

The changes from 1973, reflect the increase in joint venture related R & D activities.

Contributions to the results of operations by line of business, as presented above, are based on income before application of the common or corporate costs of general and administrative activities and before income taxes and extraordinary items as shown in the consolidated statement of operations.

**Prior to 1974 figures for analytical services were combined with exploration ventures and services.*

Barringer Research Inc. and Subsidiaries

CONSOLIDATED STATEMENT OF EARNINGS (LOSS)

For the Five Years Ended December 31, 1976

ITEM 2. SUMMARY OF OPERATIONS

	1972	1973	1974	1975	1976
Revenue	$3,911,927	$3,361,067	$3,807,331	$4,252,621	$4,797,843
Costs and expenses					
Cost of goods sold	2,951,854	2,220,613	2,514,019	2,866,170	2,840,106
General and administrative expenses	844,424	1,059,163	918,166	887,537	799,425
Research and development expenditures	875,966	489,643	85,295	124,895	81,458
	4,672,244	3,769,419	3,517,480	3,878,602	3,720,989
Operating income (loss)	(760,317)	(408,352)	289,851	374,019	1,076,854
Other expenses (income)					
Write-down of investments	–	–	–	77,672	22,125
Write-down of advances	–	–	211,487	125,000	702,159
Loss on sale of shares in non-associated companies	32,417	19,246	3,003	–	–
Gain on sale of subsidiary company	–	–	(112,897)	–	(112,897)
Interest –					
Long-term debt	26,905	30,552	33,131	20,251	11,598
Other – net	–	48,900	95,187	67,801	44,830
Other	7,006	(10,254)	18,858	10,268	30,403
	66,328	88,444	248,769	300,992	698,218
Earnings (loss) before income taxes and extraordinary items	(826,645)	(496,796)	41,082	73,027	378,636
Income tax provision (recovered)	–	(11,000)	10,000	88,645	212,220
Earnings (loss) before extraordinary items and minority interest	(826,645)	(485,796)	31,082	(15,618)	166,416
Minority interest in loss	–	–	–	221	–
	(826,645)	(485,796)	31,082	(15,397)	166,416
Extraordinary items					
Benefit of timing differences brought forward	90,000	–	20,000	105,300	212,192
Gain on sale of investment in non-associated company, less income taxes	212,934	26,000	–	–	–
	302,934	26,000	20,000	105,300	212,192
Net earnings (loss) for the year	$ (523,711)	$ (459,796)	$ 51,082	$ 89,903	$ 378,608

	1972	1973	1974	1975	1976
Average number of shares outstanding	764,600	772,624	781,087	847,107	899,163
Earnings (loss) per share					
Income (loss) before extraordinary items	($1.08)	($0.62)	$0.04	($0.02)	$0.19
Extraordinary items	$0.40	$0.03	$0.02	$0.13	$0.23
Net earnings (loss) for the year	($0.68)	($0.59)	$0.06	$0.11	$0.42

MANAGEMENT'S DISCUSSION AND ANALYSIS OF THE CONSOLIDATED STATEMENT OF EARNINGS

The following information is provided to further explain certain financial information as shown in the Consolidated Statement of Earnings. (See Note 1 of the Notes to Consolidated Financial Statements for a summary of the accounting policies that are significant in evaluating the results of Barringer's operations).

REVENUES

The decline in revenues from 1972 to 1973 resulted from cessation of a large mineral exploration program that was managed by Barringer and funded by a third party. Termination of funding for this program at the end of 1972 caused a temporary decline in Barringer's manpower utilizing levels during the first half of 1973 and therefore a corresponding drop in revenues.

The subsequent growth in revenues is due in major part to license fees and R & D programs undertaken for the joint venture companies (Minsearch Surveys Limited, Barringer Surveys Limited) that are funded by third parties. Further, Barringer experienced higher levels of personnel utilization during these periods than in 1973 in its major service business of analytical chemistry and contract research and development. In 1976, $609,794 that had been classified as deferred income arising from previous transactions was brought into current income.

COSTS AND EXPENSES

The cost of goods sold has been relatively constant at a percentage of total revenue during the last 5 years (i.e., approximately 66 percent). In 1972 the cost of goods sold was higher than this average (i.e., 75 percent) because of the level of exploration field service activities associated with the mineral exploration program noted above. This program was performed at full recovery of cost but without a fee. Therefore the cost of goods sold was substantially higher in proportion to gross revenue for this year than in prior and subsequent years. In 1976 the cost of goods sold dropped to 58 percent due to the inclusion in revenues of the income previously deferred.

Selling, general and administrative expenses increased substantially from 1972 to 1973 because of the management and administration costs of Barringer's Australian subsidiary, Barringer Geosurveys Pty., Ltd., (BGS) and higher professional service fees associated with negotiations of certain agreements with international mining companies in Australia, Republic of South Africa and the United Kingdom.

These costs declined from 1973 to 1975 both absolutely and as a percentage of gross revenue chiefly because of cessation of the bulk of BGS' activities. The continued decrease in 1976 resulted from a reorganization of senior management as well as increasing management attention to this cost area.

Research and development expenditures declined substantially in the periods 1972 to 1973 and 1973 thru 1976, both in relative and absolute dollar terms. These declines reflect the completion of substantial in-house funding of important proprietary and patent-oriented R & D work that has enabled the Company to secure certain license and royalty fees for certain of its exploration systems. The decline between 1972 and 1973 is due primarily to the fact that in 1973 the Company secured some extensive but non-recurring external funding for test flying a patented device that reduced the costs of the internally funded R & D. The sharp drop from 1973 is principally due to the fact that the bulk of Barringer's R & D activity was funded by third parties in joint venture companies.

Research and development costs incurred during 1974 to 1976 relate primarily to the unrecovered costs associated with personnel who are in part funded by government grants and to basic R & D activities that Barringer management believes important to its future patenting position. This work is not yet funded by third parties, though it is Barringer's intent to secure outside funding whenever it can be negotiated. In addition, in 1975 R & D funding by Barringer Hydrocarbons Limited was directed towards aspects of the AIRTRACE hydrocarbon program.

OTHER INCOME AND EXPENSES

The write-down of advances in 1974 and 1975 represents a disposition of the advances to a mineral exploration venture (Magenta Explorations Limited) that Barringer had entered into in the years 1969 to 1972. One small exploration program was terminated in 1976 without success. Barringer management believes it desirable to write-down the balance of the advances because exploration programs are no longer being undertaken and there is no firm indication of interest by exploration companies of future program activation.

The write-down in 1976 represents advances made to Minsearch in prior periods. As payment is depended on Minsearch achieving profitable operations and repaying other long-term debt, management has deemed it prudent to provide in full for such advances.

The write-down of investments in 1975 related primarily to disposition of the net book value of the Namosi Project. Active exploration by drilling was discontinued in 1975 and in view of the uncertain future, BRL deemed it prudent to write-down this investment.

In 1976, BRL wrote down its investment in Royex Sturgex Mining as the claims are being held on a care and maintenance basis due to the current depressed market for gold.

(Gain) on sale of subsidiary company pertained to the profit arising on the sale of Barringer Geosurveys Pty. Ltd. to Minsearch Surveys Limited. Half of the gain was brought into income at the time of sale; the other half was deferred until this year.

Interest expenses decreased from 1974 due to the decrease in Barringer's bank line of credit.

EXTRAORDINARY ITEMS

Timing differences brought forward from previous periods have been utilized to offset income taxes otherwise payable.

The gain on sale of investment in a non-associated company in 1972 of $212,934 represents the gain on sale of shares in a company engaged in the pollution and environmental monitoring business that were acquired by Barringer in exchange for long-term debt and warrants to acquire common shares of Barringer.

MARKET AND DIVIDEND INFORMATION

The principal market for the corporation's securities is the over the counter market. Prices for these securities are quoted in NASDAQ (National Association of Securities Dealers Inc.).

SUMMARY OF MARKET PRICES

	1976		1975	
	High	**Low**	**High**	**Low**
First Quarter	$3.25	$1.33	$2.38	$0.50
Second Quarter	2.75	1.50	2.13	1.00
Third Quarter	2.00	1.00	2.50	1.13
Fourth Quarter	2.00	1.00	1.50	0.50

There were no dividends paid during 1975 or 1976.

ITEM 3. PROPERTIES

BRL's offices, laboratories and manufacturing facilities are located at 304 Carlingview Drive, Metropolitan Toronto, Rexdale, Ontario, Canada, M9W 5G2, in a building containing 15,000 square feet of floor area constructed in 1965. BRL occupies the building under lease expiring in January 1986 at a rental of $16,500 per year.

BRL also leases approximately 13,000 square feet of floor space at 44 Fasken Drive, about one block away from the 304 Carlingview Drive headquarters. BRL occupies the building under lease expiring May, 1979 at a rental of $19,800 per year.

BRI leases approximately 1,500 square feet of floor space containing a laboratory and photogeological services at 6869 South Emporia St., Englewood, Colorado. BRI occupies the building under lease expiring July, 1981 at a rental of $8,250 per year.

ITEM 4. PARENT AND SUBSIDIARIES

Name	State, Province or Country of Incorporation	Percentage Voting Securities Owned or Controlled
Dr. Anthony R. Barringer	Including Trust	45%
Dr. D. Richard Clews	Including Trust	14%
Barringer Research Inc.	Delaware	
Subsidiary of Barringer Research Inc.		
Barringer Research Limited (BRL)	Ontario, Canada	100%
Subsidiary of "BRL"		
Barringer Hydrocarbons Limited	Canada	70%

ITEM 5. PENDING LEGAL PROCEDURES

The company is appealing an assessment from Revenue Canada, Taxation, for the 1970 taxation year. If the appeal were allowed, the income for tax purposes declared by the company would decrease by $209,000 for the 1970 taxation year, and the availability to the company of depreciation for tax purposes to reduce future years' income taxes would be increased by $189,000.

ITEM 6. INCREASES AND DECREASES IN OUTSTANDING EQUITY SECURITIES

(a) (1) (i) Number of shares of Common Stock outstanding at December 31, 1975 was 977,400.

(ii) Number of shares of Common Stock outstanding at December 31, 1976, was 978,400.

(See notes 3 and 8 to the Consolidated Statement.)

ITEM 7. APPROXIMATE NUMBER OF EQUITY SECURITY HOLDERS

BARRINGER RESEARCH INC.

(A) Title or Class	(B) Approximate Number of Record Holders December 31, 1976
Convertible Promissory Notes due serially until 1978	1
Common Stock (par value $ .01 per share)	710

ITEM 8. EXECUTIVE OFFICERS OF THE REGISTRANT

The names, ages and positions of all of the executive officers of the Company as of March 25, 1977 are listed below along with their business experience during the past five years. Officers are appointed annually by the Board of Directors at the annual meeting of directors immediately following the annual meeting of shareholders. There are no family relationships among these officers, nor any arrangement or understanding between any officer and any other person pursuant to which the officer was selected.

Name, Age and Position	Business Experience During Past Five Years
Dr. Anthony R. Barringer, 51 *President*	President of the Registrant and Barringer Research Limited.
Dr. D. Richard Clews, 55 *Executive Vice President*	Executive Vice President of the Registrant and Barringer Research Limited.
John H. Davies, 40 *Vice President*	Manager, Research and Development Division, Barringer Research Limited to September 1975; Vice President of Registrant and Barringer Research Limited since September 1975.
Dr. Michael D. Silvester, 33 *Vice President*	Barringer Research Fellow at Imperial College to October 1972; Chief Chemist at Barringer Research Limited to April 1974; Manager, Analytical Chemistry and Biology Division, Barringer Research to November 1974; Vice President of the Registrant and Barringer Research Limited since November, 1974.
Dr. John L. Walker, 46 *Vice President*	Manager, Exploration Division, Barringer Research Limited to December 1975; Vice President of Registrant and Barringer Research Limited since December 1975.
Kenneth H. Dalton, 33 *Controller*	Controller of Design Lithographers Limited to July 1974; Controller of the Registrant and Barringer Research Limited since July 1974.
Robert J. Armstrong, 46 *Secretary*	Barrister and Solicitor, Partner of Messrs. Blackwell, Law, Treadgold and Armstrong, Secretary of the Registrant and Barringer Research Limited.
Robert H. Schnell, 66 *Assistant Secretary*	Barrister and Solicitor, Partner of Messrs. Satterlee and Stephens, Assistant Secretary of the Registrant since 1976.

ITEM 9. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 145 of the General Corporation Law of Delaware provides for indemnification of directors, officers, employees and agents against expenses, judgements, fines and settlements where such persons act in a manner not opposed to the best interest of the Corporation and without reason to believe his conduct was unlawful. In actions by or in the right of the Corporation, such indemnification is limited to expenses. Determination that the applicable standard of conduct has been met is made by disinterested directors, independent legal counsel, or the stockholders. The Corporation is empowered to insure such persons against such liability, but no such insurance has been obtained.

The Certificate of Incorporation of the Registrant provides that directors and officers shall be indemnified to the full extent permitted under the General Corporation Law of the State of Delaware.

ITEM 10. FINANCIAL STATEMENTS AND EXHIBITS

(a) FINANCIAL STATEMENTS:
Consolidated:
Balance Sheets as at December 31, 1976 and 1975
Statement of Earnings for the two years ended December 31, 1976
Statement of Deficit for the two years ended December 31, 1976
Statement of Changes in Financial Position for the two years ended December 31, 1976

NOTES TO FINANCIAL STATEMENTS:

SCHEDULES:*

III Investments
V Fixed Assets
VI Accumulated Depreciation and Amortization of Fixed Assets
VII Intangible Assets
VIII Accumulated Amortization of Intangible Assets
XII Reserves

(b) EXHIBITS

Statement of Calculation of Earnings per Share

**All other schedules are omitted because of the absence of the conditions under which they are required, or because the information called for is included in the financial statements or notes thereto.*

PART II

Omitted Pursuant to Instruction H, Form 10-K.

SIGNATURES

Pursuant to the requirements of Section 13 or 15 (d) of the Securities Exchange Act of 1934, the Registrants have duly caused this report to be signed on their behalf by the undersigned, thereunto duly authorized.

BARRINGER RESEARCH INC.
(Registrant)

by D. Richard Clews
Executive Vice President

BARRINGER RESEARCH LIMITED
(Registrant)

by D. Richard Clews
Executive Vice President

DATED: March 25, 1977

SCHEDULE III

Barringer Research Inc. and Subsidiaries

INVESTMENTS

For the year ended December 31, 1975

Name of issuer and descriptions of investment	Balance as at December 31, 1974 Number of shares	Dollars	Additions during year Number of shares	Dollars	Deductions during year Number of shares	Dollars	Balance at December 31, 1975 Number of shares	Dollars
Barringer Fiji Limited – common stock	40	$123,667	–	–	–	$123,617	40	$ 50
Magenta Explorations Limited – common stock	1,000,000	116,466	3,500,000	–	–	116,466	4,500,000	–
Royex Sturgex Mining Limited – common stock	147,914	4,000	205,486	$ 15,000	–	2,000	353,400	17,000
Royex Sturgex Mining Limited – advances	–	–	–	5,059	–	–	–	5,059
Barringer Surveys Limited – common stock	490	700	–	–	–	–	490	700
Namosi Project – Fiji – 2½% interest	–	242,171	–	–	–	242,170	–	1
Magenta Explorations Limited – advance	–	134,000	–	–	–	134,000	–	–
Minsearch Surveys Limited – common stock	25,000	500	–	–	–	–	25,000	500
Minsearch Surveys Limited – advances	–	314,534	–	–	–	–	–	314,534
Totals		$936,038		$ 20,059		$618,253		$337,844

INVESTMENTS

For the Year Ended December 31, 1976

Name of issuer and descriptions of investment	Balance as at December 31, 1975		Additions during year		Deductions during year		Balance at December 31, 1976	
	Number of shares	Dollars	Number of shares	Dollars	Number of shares	Dollars	Number of shares	Dollars
Barringer Fiji Limited – common stock	40	$ 50	–	–	–	–	40	$ 50
Magenta Explorations Limited – common stock	4,500,000	–	–	–	–	–	4,500,000	–
Royex Sturgex Mining Limited – common stock	353,400	$ 17,000	51,395	$ 5,059	176,700 (1)	$ 22,058 (2)	228,095	$ 1
Royex Sturgex Mining Limited – advances	–	$ 5,059	–	–	–	$ 5,059	–	–
Barringer Surveys Limited – common stock	490	$ 700	–	–	–	–	490	$ 700
Namosi Project – Fiji – 2½% interest	–	$ 1	–	–	–	–	–	$ 1
HSA Realtors Limited – common stock	–	–	194,950	$ 14,614	–	–	194,950	$ 14,614
Minsearch Surveys Limited								
– common shares	25,000	$ 500	–	–	25,000	$ 500	–	–
– class B shares	–	–	15,000	$ 297	–	–	15,000	$ 297
Minsearch Surveys Limited – advances	–	$314,534	–	–	–	$314,534 (3)	–	–
Totals		$337,844		$ 19,970		$342,151		$ 15,663

(1) Reflects a two for one stock exchange
(2) Reflects a write-down of the value of the shares
(3) Provided for in full (see note to the financial statements)

SCHEDULE V

Barringer Research Inc. and Subsidiaries

FIXED ASSETS

For the two years ended December 31, 1976

Classification	Balance at beginning of year	Additions at cost	Retirements or sales	Balance at close of year
Year ended December 31, 1975:				
Office furniture and equipment	$ 115,854	$ 4,601	$ 603	$ 119,852
Plant and machinery	361,853	133,764	5,000	490,617
Exploration equipment	354,708	–	16,754	337,954
Equipment for lease	318,120	1,800	–	319,920
Leasehold improvements	71,505	27,560	161	98,904
Total	$1,222,040	$ 167,725	$ 22,518	$1,367,247
Year ended December 31, 1976:				
Office furniture and equipment	$ 119,852	$ 9,278	$ 6,520	$ 122,610
Plant and machinery	490,617	85,616	6,581	569,652
Exploration equipment	337,954	273	302	337,925
Equipment for lease	319,920	3,557	–	323,477
Leasehold improvements	98,904	12,118	–	111,022
Total	$1,367,247	$ 110,842	$ 13,403	$1,464,686

SCHEDULE VI

Barringer Research Inc. and Subsidiaries

ACCUMULATED DEPRECIATION AND AMORTIZATION OF FIXED ASSETS

For the two years ended December 31, 1976

Classification	Balance at beginning of year	Charged to costs and expenses	Retirements, renewals, and replacements	Balance at close of year
Year ended December 31, 1975:				
Office furniture and equipment	$ 70,863	$ 10,474	$ 120	$ 81,217
Plant and machinery	255,033	65,994	–	321,027
Exploration equipment	268,932	30,371	15,701	283,602
Equipment for lease	185,909	32,658	–	218,567
Leasehold improvements	22,368	7,827	14	30,181
Total	$ 803,105	$ 147,324	$ 15,835	$ 934,594
Year ended December 31, 1976:				
Office furniture and equipment	$ 81,217	$ 9,036	$ –	$ 90,253
Plant and machinery	321,027	70,789	5,886	385,930
Exploration equipment	283,602	30,608	302	313,908
Equipment for lease	218,567	33,809	–	252,376
Leasehold improvements	30,181	9,099	–	39,280
Total	$ 934,594	$ 153,341	$ 6,188	$1,081,747

SCHEDULE VII

Barringer Research Inc. and Subsidiaries

INTANGIBLE ASSETS

For the two years ended December 31, 1976

Description	Balance at beginning of year	Additions at cost	Disposals	Balance at close of year
Year ended December 31, 1975:				
Patents and trademarks	$ 184,147	$ 10,980	$ 2,807	$ 192,320
Year ended December 31, 1976:				
Patents and trademarks	$ 192,320	$ 14,431	$ 8,183	$ 198,568

SCHEDULE VIII

Barringer Research Inc. and Subsidiaries

ACCUMULATED AMORTIZATION OF INTANGIBLE ASSETS

For the two years ended December 31, 1976:

Description	Balance at beginning of year	Charged to costs and expenses	Deductions	Balance at close of year
Year ended December 31, 1975:				
Patents and trademarks	$ 25,412	$ 7,516	$ –	$ 32,928
Year ended December 31, 1976:				
Patents and trademarks	$ 32,928	$ 8,168	$ –	$ 41,096

SCHEDULE XII

Barringer Research Inc. and Subsidiaries

RESERVES

For the two years ended December 31, 1976

Description	Balance at beginning of year	Additions	Deductions from reserves Amount	Balance at close of year
Reserves deducted from assets to which they apply:				
Allowance for doubtful accounts:				
Year ended December 31, 1975:	$ 28,377	$ 17,580 (1)	$ 13,982 (2)	$ 31,975
Year ended December 31, 1976:	31,975	–	289	31,686
Deferred income:				
Year ended December 31, 1975:	$ 709,833	$ 290,441	$ 277,583 (3)	$ 722,691
Year ended December 31, 1976:	722,691	–	722,691 (4)	–

(1) Charged to costs and expenses

(2) Uncollectible accounts written off

(3) Write-down of balance of investments in Magenta and Barringer Fiji Limited. And transfer to income of the balance of deferred income regarding Consolidated Goldfields – U.K.

(4) Transfer to income of the balance of deferred income regarding Minsearch Surveys Limited.

Barringer Research Inc.

WORKING PAPER IN SUPPORT OF EARNINGS PER SHARE AS SHOWN BY THE CONSOLIDATED STATEMENT OF EARNINGS (LOSS)

For the two years ended December 31, 1976

	1976		1975	
Average market value per share of common stock	$ 1.80		$ 1.40	
Weighted average number of shares outstanding, excluding common stock equivalents	977,900		922,400	
Common stock equivalents:				
Options:				
Employment Agreements	–	(1)	–	(1)
1968 Stock Option Plan	917		107	
1970 Stock Option Plan	–	(2)	–	(2)
1972 Stock Option Plan	17,279		13,000	
Other Stock Option Plans	1,667		–	
Treasury stock acquired	(98,600)		(88,400)	
Weighted average number of shares outstanding – Per Consolidated Statement of Income (Loss)	899,163		847,107	
(A) **Income (loss) before extraordinary item –** Per Consolidated Statement of Income (Loss)	$ 166,416		$ (15,397)	
(B) **Extraordinary items**				
Earnings per share –	$ 212,192		$ 105,300	
as Per Consolidated Statement of Income (Loss)				
Income (Loss) before extraordinary items – line (A)	$ 0.19		$ (0.02)	
Extraordinary items – line (B)	$ 0.23		$0.13	

(1) The exercise price is higher than the average market per share of common stock.

(2) No options outstanding as at December 31, 1975, or 1976.

(3) The effect of converting the promissory notes to common stock is anti-dilutive and hence is omitted from calculations.

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