



BARRINGER RESEARCH

ANNUAL REPORT 1968

Officers:

DR. ANTHONY R. BARRINGER, PRESIDENT
DR. D. RICHARD CLEWS, EXECUTIVE VICE PRESIDENT
DAVID A. WHITEMAN, VICE PRESIDENT
ROBERT J. ARMSTRONG, SECRETARY-TREASURER
HERBERT RADDA, CONTROLLER

Directors:

ROBERT J. ARMSTRONG
DR. ANTHONY R. BARRINGER
DANIEL R. BERESKIN
DR. D. RICHARD CLEWS
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PATRICK C. MacCULLOCH
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Transfer Agents:

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Auditors:

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Corporate Counsels:

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Corporate Offices:

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A. R. Barringer, president

Dear Shareholder:

THIS IS the first annual report issued by Barringer Research Inc., and I wish to welcome our new stockholders. The report describes the activities, plans, accomplishments and state of the Company during its first year of public ownership. It documents a period of heavy financial investment, the reduction to practice of new and unique concepts, the testing of a new and exciting market and the resolution of alternative growth paths for the Company. We believe it describes a year of significant value for the future of the Company.

Barringer Research Inc. is dedicated to producing advanced techniques and instrumentation for the earth sciences. The activities of 1968 clearly show the breadth of this statement. A new third-generation nuclear magnetometer was built to serve the expanding market for these instruments in oceanography. The Correlation Spectrometer family of instruments were used throughout the year in atmospheric investigations—in measuring pollution from within a smokestack to making airborne surveys on a regional scale. Our airborne electromagnetic systems were used in several countries for geophysical surveys. A rich ore body was located by an INPUT® System operated by a geophysical contractor; increased penetrations of the ground to 1000 feet and greater were accomplished with other instruments. Geochemical analyses and geophysical ground field crews served the mining industry in four continents.

Thus the Company dealt with the land, the sea, and the air with increased competence.

The year was an extremely active one. A review of the highlights confirms this. Our concentration has been on development programs to give substance to the years ahead. We expanded our effort to reduce ideas to practice. It now becomes the task of coming years to bring these practical ideas to the market place.

We plan to expand and develop our remote sensing chemical monitoring capability in a market where this unique approach requires a change of established methods. We seek to find the most





D. R. Clews, executive vice president

innovative methods which will demonstrate the power of this new technology. We know, and are encouraged by client enthusiasm in 1968, that Correlation Spectroscopy will offer solutions to measurement problems previously unobtainable. It will considerably simplify the measurement of gaseous substances.

Where we can find suitable partners we seek to grow with these partners in the expansion of our ideas. We have done so in 1968. A joint venture was established with TRW Inc.; another was agreed upon with Combustion Equipment Associates, Inc. Teaming agreements to submit proposals for space projects were established with IBM and the General Electric Company. These working relationships have encouraged us to seek similar partnerships where the technology and market acceptance can be advanced more rapidly by so doing.

In the mining industry we seek participation, for it is the power of our exploration tools coupled with the investment of the mining community which finds new ore. Work was conducted on three exploration projects in which the Company has direct interest in the areas being explored, and the Company was paid fees for all survey work on these projects in 1968. No significant announcements were made during the year to change the status of these projects, and work is continuing.

Internally we continue to work toward the development of enthusiastic and capable technologists and scientists to support our endeavor. The unique character of our work is dependent upon the cross-fertilization of the diverse talents of our staff. Success relies on their willingness and desire to prove the merit of their work under the most extreme environments and in all parts of the world.

We view 1968 as a significant year's work toward this goal. We maintained approximately a constant or slightly increased level of growth. Sales were reduced, but internally supported programs brought the total effort to a value above 1967. Three major programs were supported by the Company; these were the Electro-optical Program, the Natural Fields Development Program and the Integrated Exploration Program. In recognition of the accomplishments of these programs during the year, the cost of \$588,352 was capitalized.



D. A. Whiteman, vice president

In previous years, research and development work was carried out almost exclusively for others on a contract basis. In-house funded work was relatively small and, being performed with the view to obtain further outside work, has been capitalized at marginal direct cost only and was written off over a relatively short period. While contract research and development continued in 1968 at a level comparable to previous years, we were able to apply and concentrate a considerably increased in-house funded effort on development of new instruments and techniques for sale, as outlined in our prospectus. These new instruments and techniques are expected to be marketed and should substantially increase sales and profitability in future years. We propose to continue such a policy of Company-sponsored activity. In consequence, Company-sponsored research and development expenditures are now being capitalized at their total cost and will be amortized over the minimum number of years during which returns from such new instruments and techniques can reasonably be expected at the present time.

The net profit for 1968 was \$75,091. This is 10 cents per share, based on the average number of shares outstanding during the year, down slightly from earnings of 14 cents per share in 1967. The lesser amount is directly related to our decision to concentrate on internal programs this year. This choice has limited our ability to undertake externally supported research and development because of the assignment of the unique talents of our technical staff. Our geochemical and geophysical activities, commercial products and air pollution contracts continued at an increased rate, however. Year-end backlog rose to \$860,000; this amount was \$790,000 in 1967.

It continues to be the goal of our management to coordinate these complex technologies with sufficient flexibility to produce the profits essential for increased growth. We anticipate that, even in 1969, we will begin to enjoy the benefits from this most recent work.

A handwritten signature in cursive script that reads "A. R. Barringer". The signature is written in dark ink on a light background.

A. R. BARRINGER
President

1968 Highlights

A REVIEW of specific events and accomplishments chronicles the year. The most significant event of the year was the original public offering of 200,000 shares of the Company's stock on March 20, 1968, through the investment banking firm of Scheinman, Hochstin & Trotta, Inc. Barringer Research Inc. was formed to accomplish this and assumed all the outstanding shares of its predecessor, Barringer Research Limited. All activities of the Company remained in Rexdale, Ontario, near the Toronto International Airport, however; and all historical data referred to in this report recognize the continuum between the two firms.

The major continuing development evolved around the *correlation spectrometer* technology. This patented and unique ability to monitor specific chemical compounds continuously was produced in four configurations for the measurement of sulphur dioxide, nitrogen dioxide and iodine.

The most dramatic and widely used version was mounted in a twin-engine aircraft. This custom installation was flown over Toronto, Los Angeles, San Francisco, Chattanooga and off the coasts of Florida and Maine under contracts from the National Aeronautic and Space Administration and The Department of Health, Education and Welfare. The resulting measurements proved its unique ability to measure contaminants over long paths. Plume chasing, long range synoptic surveys and perimeter investigations were conducted to produce maps of the distribution patterns of pollution.

The ground remote sensor continued in use as an instrument capable of monitoring stack emissions from a distance. In particular, care was taken during 1968 to compare measurements made with this new technology to measurements produced using wet chemical analyses. Discrepancies early in the year forced a detailed study to investigate the irregularities. Our knowledge of correction factors depending on the extreme heat of stack emissions and the attenuating character of haze in the air has greatly added to our confidence in the method.

The "stack monitor" shared in the knowledge gained from the ground instrument. Late in the year we obtained acceptable results measuring under these extreme environments, where part of the instrument may be placed in the flue at 1000° while the exposed end can be in subfreezing weather. The many unique characteristics of this particular configuration and the market it serves caused us to seek a partner in its reduction to a production unit and introduction to the market. By year's end an agreement had been reached with



Air Monitoring Aircraft



Remote Sensing
Correlation Spectrometer

Highlights 1968

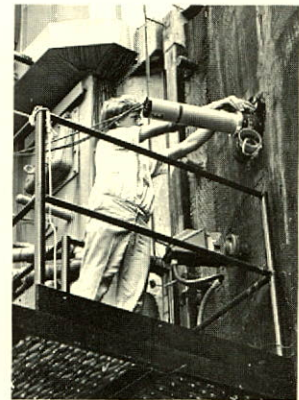
Combustion Equipment Associates Inc., of New York City in which the on-stream use of the correlation spectrometer for monitoring sulfur dioxide and oxygen was licensed to CEA in return for their financial support in the design of a production unit, their guarantee of minimum royalty payments and an exchange of stock to encourage a mutual effort in the further advancement of this technology. The Company will issue a total of \$500,000 of ten-year subordinate convertible notes to CEA.

A fourth configuration, the ambient "point" monitor, was introduced at the Ninth Annual Air Pollution Association Conference in Minneapolis in June 1968. Subsequent to the meeting, the prototype instrument was returned for additional engineering to increase its sensitivity ten-fold. This specification was reached, and the equipment was prepared for field evaluation and as a new type of laboratory analytical instrument.

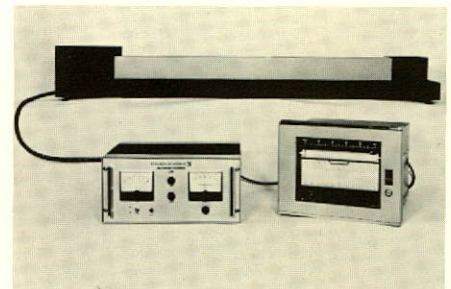
Not all of the Company's chemical interests were related to the remote sensing correlation spectrometer. In the Summer of 1968, our first field geochemical laboratory was established at Ross River, Yukon Territory. This field unit brought high quality production analyses, using an atomic absorption spectrophotometer and other sophisticated analytical methods, close to the mining customer and backed our consulting geochemical services in the general area. Meanwhile, the preparation of samples and our production analyses by more than a dozen processes continued in Toronto. During the active Summer field season, the year-round staff was supplemented and the working hours were extended.

Geochemical consulting played a significant role in our investment in the Integrated Exploration Program during the year. This program, the detail of which is not subject to release at this time, involved the application of several of our unique instruments, together with geochemical techniques and methods advanced in our laboratories and in the field, and combined with geologic concepts and procedures. This highly complex "systems approach" to the problem of exploration required a significant investment of our time and the development of a computer capability which is expanding within the Company.

Two related events are an outgrowth of this investment of the Company's time and effort, but are not related themselves. The first is a contract agreement with TRW Inc. for the establishment of a joint venture to develop and demonstrate the use of new mineral techniques. The joint venture will be able to draw upon the data



Correlation Spectrometer
Stack Monitor Probe



Correlation Spectrometer Point Monitor



Geochemistry Laboratory, Toronto

1968 Highlights



Use of IBM Data Computer



INPUT® Survey Aircraft



Radiophase Survey Aircraft

handling and computer technology of TRW's Systems Group, and this program will require extensive field work over several years. In addition, the Company is concluding negotiations for significant mineral leases in the Fiji Islands for exploration rights. These islands, in an interesting geologic setting, are subject to the concepts developed.

The Company is known for the development of unique geophysical survey systems. The instrumentation which largely built the initial reputation of Barringer Research is the INPUT® Airborne Electromagnetic Prospecting System. It was particularly heartening in 1968 when a survey conducted by one of the contract INPUT® Systems, operated by Questor Surveys, produced an anomaly which was subsequently drilled to reveal a new rich copper-zinc-silver ore body. This discovery, at Uchi Lake in Northwestern Ontario, was made by Selco Exploration Company Ltd. Selco, the Canadian exploration subsidiary of Selection Trust Ltd., supported the early research and the development of a prototype INPUT® Instrument. While Barringer Research has no financial interest or participation in the Uchi Lake deposit, the Company has received annual royalties from the use of INPUT® Electromagnetic Systems by contract licensees in the order of \$250,000. 1968 was no exception.

It is worth noting that the Company does have interest in other exploration programs and that it is the intent of Barringer Research to increase such participative interests in exploration projects in return for providing its new and unique integrated geophysical, geochemical and geological techniques.

The Natural Fields Development Program showed tangible results early in the summer and an additional portion of the Company's funds were invested. Radiophase, which monitors the effect of the earth on the propagation of radio waves produced by any of several U.S. Navy VLF radio stations placed around the world, is fundamentally a technique for geologic mapping. This instrument can be mounted on a small single engine aircraft and reflects the characteristics of the terrain more deeply than previous techniques, achieving, under ideal conditions, penetration depths to 1000 feet. An operational survey supported by the Department of Natural Resources in Quebec was flown in 1968 to confirm the usefulness of the technique. In addition to supporting the entire development of Radiophase, a modest investment was made in computerizing the interpretation of this unusual method.

The development of the "Teltran" method was continued and

Highlights 1968

is in an advanced stage. This new system may produce maps of conductive structures to a depth of over 1,000 feet and is based on a license which allows use of basic patent using natural signals created by electric storms (AFMAG).

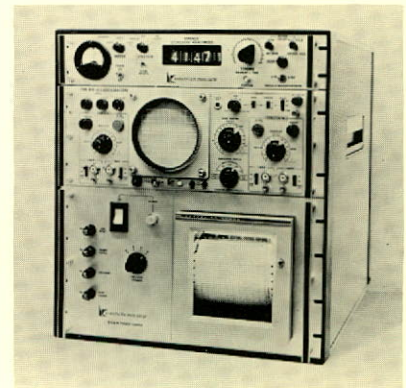
Radiophase, Teltran and the INPUT® Technique all can be used in conjunction with the Company's airborne nuclear magnetometers, produced since 1963.

Magnetometer development continued and evolved three configurations of a third-generation instrument in 1968. Oceanographic magnetometers were produced and delivered to the United States Navy. Portable versions were produced and delivered to the Canadian Geological Survey. A "suitcase" version of the same instrument was produced for those groups which require heavy-duty instrumentation which still must be portable. In the meantime advances in basic proton resonance theory allowed the demonstration of greatly increased sensitivity with this technique.

Helicopter-borne electromagnetic systems were constructed in 1968. Advances were made in this technology as well. A unique and patented mechanical alignment technique was used to obtain resolutions greater than known to be obtained with other operational systems. In addition multi-coil receivers were used to obtain component information from a helicopter-mounted electromagnetic detector.

During the year, staff members of the Company continued active participation in professional groups throughout the world. Technical papers were delivered to several societies and Dr. Barringer was invited to deliver a Highlight Address for the Twenty-third Annual Conference of the Instrument Society of America in New York. He was appointed to the position of Visiting Professor at the Imperial College of Science and Technology in London. In this capacity he will direct an earth science research program. It is anticipated that the limited time required will allow this work to be conducted concurrent with normal Company business in Europe. To improve communications with the Company's customers, stockholders, and other friends, a quarterly publication was initiated in the Fall. Projects, instrument developments, and other activities are featured as described by the staff members involved.

The year was not only an eventful one in view of the major technological advances obtained, but it was a year of major investment as well. The full impact of these efforts will be felt in 1969, and subsequent years.

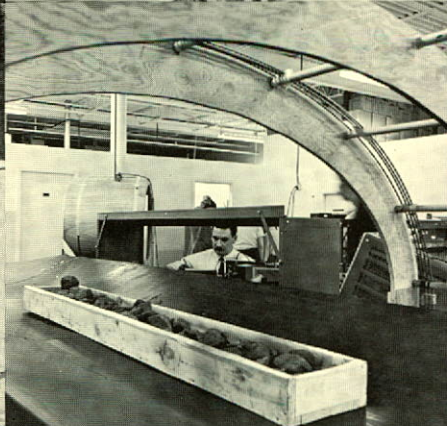
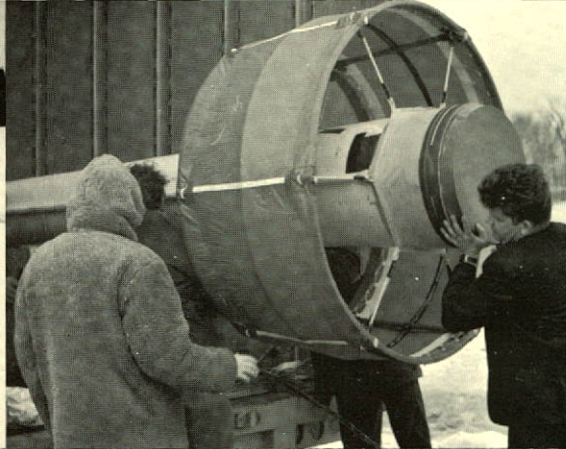
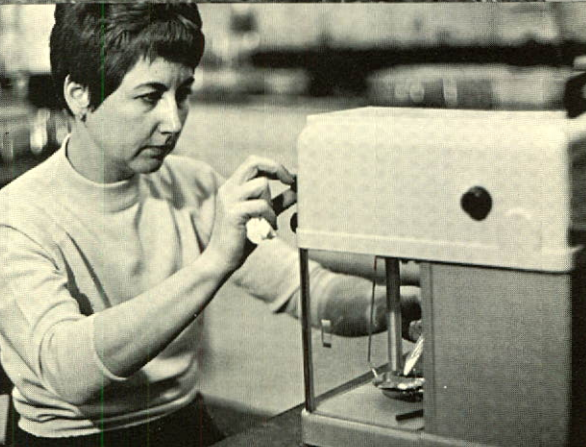


U.S. Navy Oceanographic Magnetometer

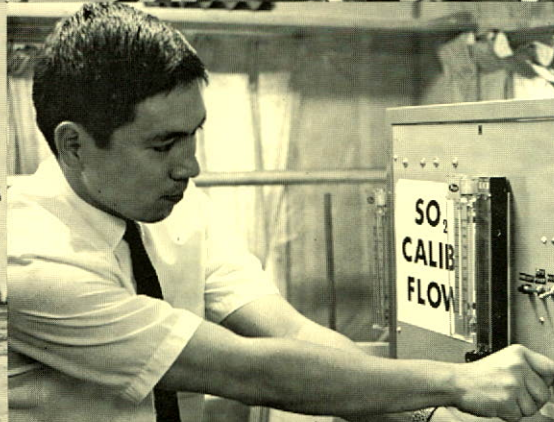
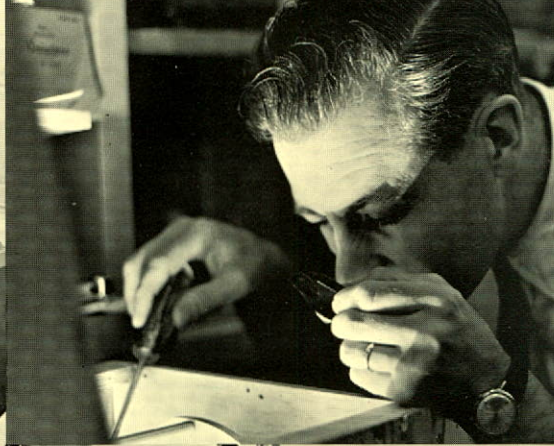
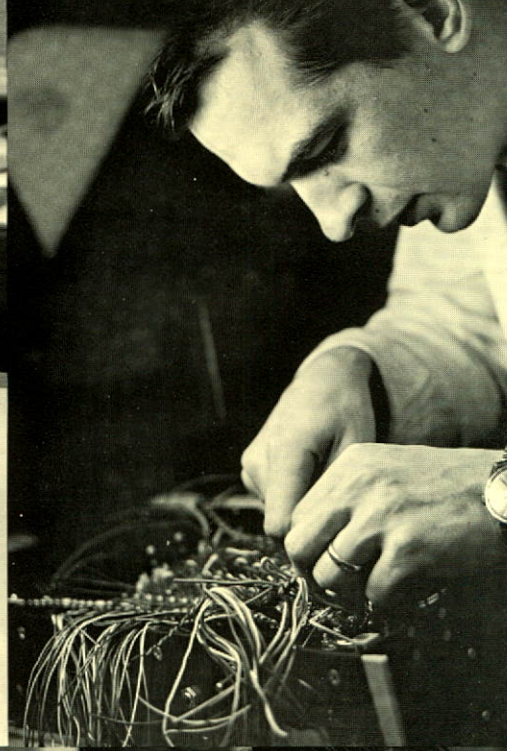
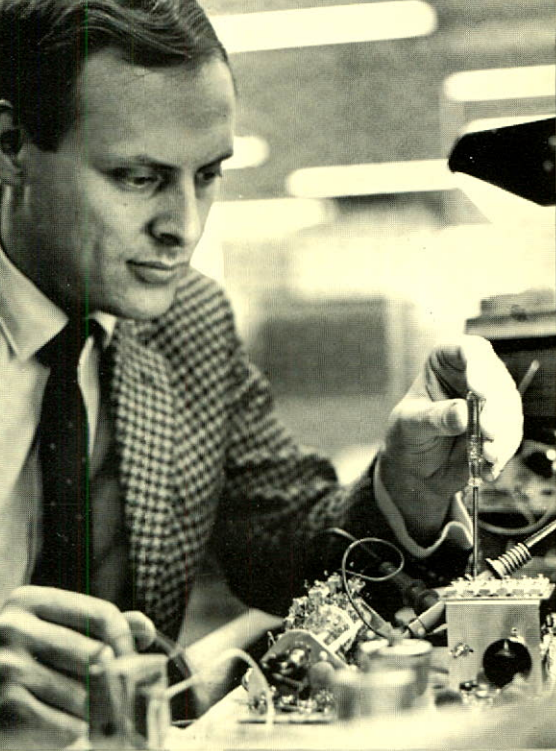


Electromagnetic Survey Helicopter

BARRINGER RESEARCH does things for customers—provides geochemical analyses; conducts in-the-field geological, geochemical and geophysical surveys; flies geophysical and air pollution surveys; reduces field data to presentation form; interprets gathered data; produces comprehensive reports; consults on pollution problems and in exploration planning; advises on the suitability of technical approaches in the earth sciences.



BARRINGER RESEARCH makes things for customers—produces rugged field instruments for making geophysical and geochemical measurements; designs unique devices for specialized applications in mining and process control; develops advanced systems for exploration and remote sensing; conducts research into new technical approaches using electromagnetic, magnetic and electro-optical techniques of remote sensing and improves present instruments after in-use testing.



BARRINGER RESEARCH INC. AND CONSOLIDATED SUBSIDIARIES

CONSOLIDATED BALANCE SHEET AS AT DECEMBER 31, 1968 (with 1967 figures for comparison)

ASSETS

	1968	1967 (Note 1)
CURRENT ASSETS:		
Cash	\$ 131,321	\$ 10,980
Accounts receivable:		
Trade (less allowance for doubtful accounts, 1968—\$8,347; 1967—\$20,106) (Note 5)	411,699	357,352
Government grants	130,200	—
Proceeds of issue of promissory notes	255,000	—
Inventories (Note 2)	90,897	151,517
Deposits, advances and prepaid expenses	37,840	38,386
Total current assets	<u>1,056,957</u>	<u>558,235</u>
INVESTMENTS AND ADVANCES (Note 1):		
Subsidiaries—not consolidated	14,241	37,246
Associated companies	11,725	18,469
Common stock of non-associated companies—at cost (market value, 1968—\$856,270; 1967—Nil)	850,117	67
Total investments and advances	<u>876,083</u>	<u>55,782</u>
FIXED ASSETS—at cost (Note 3)		
Less accumulated depreciation and amortization	524,992	428,804
Net fixed assets	<u>253,420</u>	<u>186,227</u>
Net fixed assets	<u>271,572</u>	<u>242,577</u>
OTHER ASSETS—at cost less amortization (Note 4):		
Patents and trademarks	62,648	50,088
Research and development expenditures	598,848	35,945
Total other assets	<u>661,496</u>	<u>86,033</u>
TOTAL	<u><u>\$2,866,108</u></u>	<u><u>\$942,627</u></u>

The accompanying notes are an integral part of the financial statements.

LIABILITIES AND STOCKHOLDERS' EQUITY

	1968	1967 (Note 1)
CURRENT LIABILITIES:		
Bank loan (Note 5)	\$ 232,500	\$102,300
Debenture instalments due within one year	139,500	93,000
Accounts payable and accrued charges	355,126	299,203
Excess of non-consolidated subsidiary's losses over cost of investment (Note 1)	23,797	23,576
Total current liabilities	750,923	518,079
 LONG-TERM DEBT (Note 6):		
Debenture less amounts included in current liabilities	93,000	186,000
Convertible subordinated promissory notes	255,000	—
Subordinated loan	—	139,500
Total long-term debt	348,000	325,500
 COMMITMENTS AND CONTINGENT LIABILITIES (Note 11)		
 STOCKHOLDERS' EQUITY:		
Capital stock (Notes 7 and 8):		
Authorized:		
2,000,000 shares of common stock at 1¢ par value each		
Outstanding and fully paid:		
855,000 shares	8,550	
Paid-in surplus (Note 9)	1,832,112	
Deficit	(73,477)	
Total stockholders' equity	1,767,185	99,048
TOTAL	\$2,866,108	\$942,627

The accompanying notes are an integral part of the financial statements.

CONSOLIDATED STATEMENT OF INCOME AND DEFICIT
FOR THE YEAR ENDED DECEMBER 31, 1968
(with 1967 figures for comparison)

	<u>1968</u>	<u>1967</u> (Note 1)
NET SALES	\$1,198,089	\$1,351,335
REVENUES FROM RESEARCH CONTRACTS	332,276	473,975
Total revenue	<u>1,530,365</u>	<u>1,825,310</u>
COST OF SALES	792,757	864,362
COST OF RESEARCH CONTRACTS	288,657	326,772
SELLING, GENERAL AND ADMINISTRATIVE EXPENSES	329,304	454,054
AMORTIZATION OF RESEARCH AND DEVELOPMENT EXPENDITURES (Note 4)	25,449	42,878
Total cost and expenses	<u>1,436,167</u>	<u>1,688,066</u>
OPERATING INCOME	<u>94,198</u>	<u>137,244</u>
OTHER INCOME CHARGES (CREDITS):		
Gain on disposals of fixed assets	(15,906)	—
Interest expense—net	24,029	24,605
Provision for losses of non-consolidated subsidiaries and associated companies (Note 1)	10,984	26,402
Net other income charges	<u>19,107</u>	<u>51,007</u>
INCOME BEFORE INCOME TAXES AND EXTRAORDINARY CREDIT	75,091	86,237
INCOME TAXES	<u>29,500</u>	<u>37,200</u>
INCOME BEFORE EXTRAORDINARY CREDIT	45,591	49,037
BENEFIT OF TAX LOSS-CARRYFORWARD (Note 10)	<u>29,500</u>	<u>37,200</u>
NET INCOME FOR THE YEAR	75,091	86,237
DEFICIT AT BEGINNING OF THE YEAR	148,568	234,805
DEFICIT AT END OF THE YEAR	<u>\$ 73,477</u>	<u>\$ 148,568</u>
EARNINGS PER SHARE:*		
Income before extraordinary credit	\$ 0.06	\$ 0.08
Extraordinary credit	0.04	0.06
Net income for the year	<u>\$ 0.10</u>	<u>\$ 0.14</u>

* Earnings per share are based on the average number of shares outstanding during the years after giving retroactive effect to the issuance on March 14, 1968 of 605,000 shares for all of the common shares of Barringer Research Limited.

The accompanying notes are an integral part of the financial statements.

CONSOLIDATED STATEMENT OF SOURCE AND APPLICATION OF FUNDS
FOR THE YEAR ENDED DECEMBER 31, 1968
(with 1967 figures for comparison)

	<u>1968</u>	<u>1967</u> <u>(Note 1)</u>
FUNDS PROVIDED:		
From operations:		
Net income for the year	\$ 75,091	\$ 86,237
Charges to income not involving an outlay of funds:		
Depreciation and amortization:		
Fixed assets	81,269	74,131
Research and development expenditures	25,449	42,878
Patents and trademarks	1,604	934
Provision for losses of non-consolidated subsidiaries and associated companies	<u>10,984</u>	<u>26,402</u>
Funds provided from operations	194,397	230,582
Net cash proceeds from issue of common stock and warrants	877,670	10
Promissory notes issued	255,000	—
Disposals of fixed assets	8,235	19,848
Collection of advances from non-consolidated subsidiaries and associated companies ..	<u>18,765</u>	<u>20,233</u>
Total funds provided	<u>1,354,067</u>	<u>270,673</u>
 FUNDS APPLIED:		
Redemption of preferred shares	244,125	
Research and development expenditures	588,352	31,491
Additions to fixed assets	118,499	168,260
Additions to patents and trademarks	14,163	20,590
Debenture instalments	93,000	93,000
Common stock of non-associated companies	<u>30,050</u>	<u>—</u>
Total funds applied	<u>1,088,189</u>	<u>313,341</u>
 INCREASE (DECREASE) IN WORKING CAPITAL FOR THE YEAR	265,878	(42,668)
 WORKING CAPITAL AT BEGINNING OF THE YEAR	<u>40,156</u>	<u>82,824</u>
 WORKING CAPITAL AT END OF THE YEAR	<u>\$ 306,034</u>	<u>\$ 40,156</u>

The accompanying notes are an integral part of the financial statements.

BARRINGER RESEARCH INC. AND CONSOLIDATED SUBSIDIARIES
NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS
DECEMBER 31, 1968

1. Basis of Financial Statements

Barringer Research Inc. (the Company), incorporated on September 7, 1967 under the laws of the State of Delaware, was inactive until March 14, 1968, on which date it acquired all of the outstanding common shares of Barringer Research Limited (Limited), a company incorporated under the laws of Ontario, Canada, on January 23, 1961. The accompanying consolidated financial statements comprise the accounts of the Company, Limited and Barringer Instruments Inc., a subsidiary incorporated on April 2, 1968 under the laws of the State of Delaware.

Inactive subsidiaries of Limited, none of which is significant, have not been consolidated. Investments in and advances to these subsidiaries and to associated companies are accounted for on the equity method. The equity of Limited in the losses of one such subsidiary exceeds the aggregate of the investments in and advances to such subsidiary. This excess, described as "Excess of non-consolidated subsidiary's losses over cost of investment," is included in current liabilities in the accompanying balance sheet. This excess has been provided since, for good-will purposes, Limited may make further advances to permit the subsidiary to pay its other creditors in full.

The 1967 statements shown for comparison are those of Limited only. Net sales and revenue from research contracts for that year include billings to non-consolidated subsidiaries and associated companies of \$23,066 and \$9,642, respectively. The profit on these billings, after application of direct costs and production overhead, amounted to \$21,572. There were no such billings in 1968.

Amounts applicable to Limited have been translated into United States dollars from Canadian dollars at the prevailing free rate of exchange. Changes in the exchange rate during the year did not have a significant effect on consolidated net income.

2. Inventories

The major categories of inventories are as follows:

	December 31,	
	1968	1967
Finished goods	\$ 57,461	\$ 47,278
Work in progress, materials and supplies	21,211	74,300
Contracts in progress	12,225	29,939
Total	\$ 90,897	\$151,517

Inventories, other than contracts in progress, are stated at the lower of average cost or market. The percentage-of-completion method is used to accrue income earned on contracts in progress. Anticipated losses are provided for in full.

3. Fixed Assets

Principal categories of fixed assets are as follows:

	December 31,	
	1968	1967
Rental equipment	\$200,112	\$146,332
Survey equipment	79,404	68,954
Laboratory equipment	149,327	77,231
Other	96,149	65,972
Equipment under construction	—	70,315
Total	\$524,992	\$428,804

Depreciation is provided on the straight-line basis over the estimated useful lives of the assets, principally four to ten years. Depreciation so provided and charged in the accompanying consolidated statement of income and deficit amounted to \$81,269 (1967—\$74,131).

4. Other Assets

Patents and trademarks are amortized over their related lives which range from five to seventeen years. Amortization charged in the accompanying consolidated statement of income and deficit amounted to \$1,604 (\$934 in 1967).

Effective January 1, 1968, research and development costs incurred during the year (other than in connection with research contracts) in excess of government grants and other outside support therefor are amortized over the following five years. These costs include all applicable overhead expenses. Prior to 1968, direct costs only were included and amortized over three years commencing with the year incurred. As a result of these changes in practice, total cost and expenses for the year shown in the accompanying consolidated statement of income and deficit have been reduced by approximately \$429,000. Research

and development costs incurred during the year (other than in connection with research contracts) amounted to \$588,352 (1967—\$31,491) after deduction of government grants and other outside support therefor in the amount of \$188,098 (1967—\$151,318).

5. Bank Loan

The trade accounts receivable of \$411,699 and term life insurance policies of Limited have been pledged as collateral security to the bank loan.

6. Long-term Debt

The debenture is payable at \$46,500 on February 28, 1969 and thereafter in semi-annual instalments of \$46,500 commencing March 31, 1969, and is secured by a pledge of all of the assets of Limited, excluding life insurance policies and accounts receivable. The book value as at December 31, 1968 of the assets pledged was \$1,241,665. Interest has been paid at varying rates, the rate as at December 31, 1968 being 7½% per annum. Interest for the year amounted to \$18,975 (1967—\$17,650).

The convertible subordinated promissory notes were issued on December 31, 1968 and are payable in semi-annual instalments of \$15,000 commencing December 31, 1970. Interest is payable at fluctuating rates, the rate as at December 31, 1968 being 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. Under the agreement covering the issuance of these notes, an additional series aggregating \$245,000 is to be issued for cash on June 30, 1969.

The subordinated loan of Limited was cancelled during the year.

7. Capital Stock

The following shares of common stock were issued during the year:

605,000 shares issued in exchange for all of the common shares of Limited.	
200,000 shares issued for cash.	
50,000 shares issued on December 31, 1968 in exchange for 22,000 shares of common stock of Combustion Equipment Associates, Inc.	

Warrants to purchase 25,000 shares of common stock were issued for cash on March 27, 1968. The warrants are exercisable at any time up to March 31, 1975 at prices ranging from \$5.50 per share to \$7.50 per share depending upon the time of exercise.

Shares of common stock reserved for issuance at December 31, 1968 are as follows:

For stock options:	
Options outstanding	31,350
Available for granting future options	8,650
For warrants	25,000
For conversion of promissory notes	25,000
	90,000

Details of the stockholders' equity of Limited as at December 31, 1967 are as follows:

Capital stock:	
Authorized:	
325,000 3% non-voting, non-cumulative, participating, preference shares, par value \$1 (Canadian) each, redeemable at par	
37,500 common shares of no par value	
Issued and fully paid:	
262,500 redeemable preference shares ..	\$244,125
37,500 common shares	3,491
	247,616
Deficit	148,568
Net stockholders' equity	\$ 99,048

The 262,500 preference shares were redeemed during 1968 at par. The 37,500 common shares, all of which were acquired by the Company in 1968, have been eliminated on consolidation.

8. Stock Options

On March 14, 1968, the company adopted a 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. Under the Plan, options to purchase an aggregate of 21,350 shares of the common stock, at an option price of \$5.50 per share, were granted to employees on March 14, 1968.

Under two employment agreements dated October 1, 1967, the Company has also granted, as options not under the Plan, rights to purchase an aggregate of 10,000 shares of the common stock at a price of \$5.00 per share during the period from October 1, 1969 to September 30, 1972. The agreements contain other provisions relating to options similar to those contained in the Qualified Stock Option Plan.

9. Paid-in Surplus

Details of paid-in surplus are as follows:

Cash proceeds from issue of 200,000 shares of common stock in excess of par value thereof (after deducting organization and other expenses of \$122,580)	\$ 875,420
Cancellation of subordinated loan of Limited	139,500
Market value of 22,000 shares of common stock of Combustion Equipment Associates, Inc. (less market value of 1,500 of such shares paid to financial advisors) in excess of par value of 50,000 shares of common stock issued therefor	819,500
Cash proceeds from issue of warrants	250
	1,834,670
Excess of par value of 605,000 shares of common stock issued in exchange for common shares of Limited over stated value of common shares of Limited acquired	2,558
Paid-in surplus, December 31, 1968	\$1,832,112

10. Income Taxes

Canadian income taxes have been eliminated by the application of prior years' loss carryforwards. As at December 31, 1968, loss carryforwards of approximately \$757,000 were available for application against taxable income of future years for Canadian income tax purposes, of which approximately \$638,000 resulted from research and development expenditures and patent costs claimed for tax purposes but deferred in the accompanying consolidated financial statements. These loss carryforwards expire \$8,500 in 1970, \$210,000 in 1971 and \$538,500 in 1973.

In addition, the undepreciated cost for Canadian income tax purposes of depreciable assets exceeds their net book value as at December 31, 1968 by approximately \$100,000. This excess, which may be carried forward indefinitely, is also available for application against taxable income of future years on a diminishing-balance basis at specified annual rates. The maximum amount of this excess which could be applied in 1969 is approximately \$20,000.

No liability for United States income taxes has been incurred to date.

11. Commitments and Contingent Liabilities

Limited has 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 is borne by the Canadian government, subject to repayment, as explained below, to the extent that the instruments prove 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 regular practice with respect to research and development projects (See Note 4). 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 \$465 has been repaid to date. Such repayments are an element of cost of sales and are deductible in computing taxable income.

An annual rental of \$15,300 is payable under a long-term lease which expires January 14, 1986.

OPINION OF INDEPENDENT CHARTERED ACCOUNTANTS

DELOITTE, PLENDER, HASKINS & SELLS
Chartered Accountants

55 Yonge Street
Toronto 1, Canada

To the Directors and Stockholders of
Barringer Research Inc.

We have examined the consolidated balance sheet of Barringer Research Inc. and Consolidated Subsidiaries as at December 31, 1968 and the related consolidated statements of income and deficit and source and application of funds for the year 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 opinion, these consolidated financial statements present fairly the financial position of the Companies as at December 31, 1968 and the results of their operations and the source and application of their funds for the year then ended, in accordance with generally accepted accounting principles. In our opinion, these principles were applied on a basis consistent with that of the preceding year except for the change in the method of accounting for research and development expenditures as explained in Note 4.

Deloitte, Plender, Haskins & Sells

March 14, 1969

