

AIME REPORT 1976

THE YEAR IN REVIEW

INTERNAL

The year 1976 was another outstanding year in the operation of the Institute and in the success of its varied activities.

Total AIME membership reached 59,773 for a gain of 6.4 percent. Total revenue increased to \$5,111,210, up 22.4 percent, and balance sheet assets increased to \$8,479,612, up 12.2 percent from the previous year. AIME and its constituent units conducted 30 technical meetings during the year, and attendance was up at most of them. Publications issued by the Constituent Societies continued a healthy growth. During the year 9 new local Sections were established, and at the end of the year the Institute had 150 Sections, with 19 of them overseas. Details on all of these operations are on pages 2 and 3 of this report.

An outstanding development was the continued expansion of the Governmental Energy, and Mineral Affairs Committee, established by the Institute in 1975. GEM Committees have been established in the Constituent Societies and in a large number of local Sections. The combined work of all of these committees appears to be growing in effectiveness and value to government officials and others in public policy decision making roles.

The decentralization program of business functions and administrative activities, initiated in AIME in 1973, continued to work very smoothly, and tangible results are evident in the operation of the business offices of the Constituent Societies and the AIME Headquarters. The hoped-for results of the decentralization are being realized.

EXTERNAL

With the decentralization of the Institute now working smoothly, the AIME officers and Headquarters staff have been in a better position to devote time and attention to external activities and relationships of the Institute. The outstanding activity of the year was the conduct of a conference in the White House in Washington, D.C., on May 13, 1976. The Presidents of the Institute and all of the Constituent Societies and other selected speakers presented papers to an audience of about 200 persons in the Executive Office Building of the White House. The theme of the conference was "U.S. Energy and Mineral Supplies: Meeting National Needs." Contents of the papers highlighted this theme and presented data on the development of the nation's energy and mineral resources. The conference was successful, and requests are still being received for copies of the proceedings

Another outstanding event during the year was the

formation of the Engineering Societies Commission on Energy as a joint venture between AIME and the three other leading engineering societies, ASCE, ASME and AIChE. This is a non-profit corporation in the State of New York, abbreviated ESCOE, as a subsidiary of the four engineering societies involved. The purpose of the corporation will be to contract with the Energy Research and Development Administration of the federal government to assist ERDA in the objective evaluation of the design and economics of alternative processes in the planning and management of fossil energy research, development and administration. Under a \$3.4 million contract, ESCOE will employ a management staff and ten engineers to work with ERDA in the development of research on coal liquefaction, combustion, utilization and gasification; on enhanced oil recovery, oil production technology, oil shale recovery and magnetohydrodynamics. The ten engineers, to be designated as "resident engineers," will be employed on the basis of a two-year leave from their companies. Details of the program are being published in the four AIME monthly journals in the spring of 1977, and prospects for effective operation of the program are good. Julius J. Harwood, 1976 AIME President, and Joe B. Alford, Executive Director, represent the Institute on the Board of Directors of ESCOE.

During the year AIME officers and staff conducted several meetings with other leading engineering societies, particularly ASCE, ASME, IEEE and AIChE, toward a more effective united effort in our various activities. In October several AIME members participated in an Engineers Joint Council conference on public policy decision making. Officers and staff continue to be active in representing AIME's participation in the United Engineering Trustees, the Engineering Foundation, the Engineers Joint Council and the Engineers' Council for Professional Development.

SUMMARY

AIME is uniquely organized among the leading engineering societies with the AIME Corporate Headquarters and its four Constituent Societies, all as operating units. The primary thrust of the Corporate Headquarters is external, handling AIME's interests with other engineering societies, the profession at large, and governmental relations. The Constituent Societies conduct primary administration, technical meetings and publishing operations. This organizational structure and diversity of operation allows maximum utilization of the Institute's resources, leadership and staff. All of this combines into a significant value to each AIME member.

AIME MEMBERSHIP has increased by 3,025 to 59,773 corporate and student members of the Institute, (52,642 corporate, 7,131 student). Constituent Society membership for 1976 is distributed as follows: SME-AIME: 22,472 or 37.6%, a gain of 1,529; TMS-AIME: 7,815 or 13.1%, a small loss of 252; ISS-AIME: 3,891 or 6.5%, a gain of 261; SPE-AIME: 25,595 or 42.8%, a gain of 1,487. The number of AIME local Sections has increased to 150 with the formation of the Tucson Section, the Northern Michigan Section, the North Dakota Section, the Central Arizona Section, the Cochise Section, the Maricopa Section, the Morenci Section, the Pinal Mountain Section, and the Southwest Desert Section. 1976 was another good year in the expansion of the Institute.

AIME PUBLICATIONS provide a diversified forum where information and ideas can be exchanged between members in the fields encompassed by the Institute. In 1976 the Society of Mining Engineers of AIME published five new books: Economics of the Mineral Industries, 3rd edition, World Mining and Metals Technology, Adventure Beacons, 1976 RETC Proceedings, and Flotation. Editorial highlights for MINING ENGINEERING included annual reviews of mining and exploration, mineral processing, coal, and industrial minerals. There were reports on Asarco's Tennessee mines, survey of the Idaho Coeur d'Alene district, Alaska's mining industry and a Bicentennial feature "Great Men in Mining." TRANSACTIONS OF THE SOCIETY OF MINING ENGINEERS OF AIME totaled 376 pages for 1976.

The Metallurgical Society of AIME published six new books in 1976: Computer Control in Process Metallurgy, Effect of Hydrogen on the Behavior of Materials, Extractive Metallurgy of Copper: Vol. I & II, Failure Modes in Composites III, ICCM-I Proceedings and Light Metals 1976: Vol. I & II. JOURNAL OF METALS published 636 pages in 1976 including special features such as Marine Technology, HSLA Steels, Energy Productions and Materials, Copper Technology and Superalloys. A total of 2,682 pages were published in METALLURGICAL TRANSACTIONS A & B in 1976.

The Iron and Steel Society of AIME published the third volume of BOF Steelmaking and four conference proceedings: Electric Furnace Proceedings, 1975, Vol. 33; Ironmaking Proceedings 1976, Vol. 35; Open Hearth Proceedings 1976, Vol. 59 and Mechanical Working and Steel Processing Proceedings, Vol. XIV.IRON & STEELMAKER featured articles including refractories, continuous casting, specialty steel, ironmaking, steelmaking, electric furnace, and environment.

Publication of the monthly JOURNAL OF PETRO-LEUM TECHNOLOGY, bimonthly SOCIETY OF PE-

TROLEUM ENGINEERS JOURNAL, quarterly Improved Oil-Recovery Field Reports, annual Transactions, and Membership Directory highlighted th periodicals activity of the Society of Petroleum Eng neers of AIME. Papers and/or Proceedings for 15 symposia ranging from the Annual Technical Conference and Exhibition to regional and topical meetings and staff support for TIC Facts, Monograph, Reprint Series, Improved Recovery, Editorial Review, Ferguson Medal, and Symbols and Metrication committees were other significant activities. Cementing was the new addition to the Monograph series. Additionally, work was completed on the book Advances in Well Test Analysis. Publication is expected in mid-1977. At year end final production was under way on a twovolume reprint booklet on gas technology.

AIME MEETINGS are prime forums provided by the Institute for the dissemination of information, ideas and technology by the membership. The 105th AIME Annual Meeting was held in February 1976 in Las Vegas, Nevada. Over 4200 people attended the meeting to listen to more than 600 technical presentations. The AIME Annual Meeting is a major international forum where engineers meet to discuss current technology in the minerals and materials fields.

The eighth annual Offshore Technology Conference was held in May 1976 in Houston, Texas. Over 60,000 people attended the Conference setting yet another record for attendance. Over 650 technical pers were submitted for Program Committee consideration. OTC is recognized as the world's leading

forum on offshore resources development.

The Constituent Societies were again active in holding meetings throughout the year. The Society of Mining Engineers of AIME held its Annual Fall Meeting in Denver, Colorado in conjunction with the third MMIJ/AIME Meeting. 3,323 engineers registered and attended the meeting. SME-AIME provided excellent programming for the 105th AIME Annual Meeting and had 1840 of the 4241 registrants. The Metallurgical Society of AIME sponsored or co-sponsored four technical conferences during 1976. Over 1,900 TMS-AIME members attended these conferences to hear 1,173 papers presented. The Iron and Steel Society of AIME, through its Divisions, sponsored or cosponsored five technical conferences in 1976. Total attendance at these conferences was 3,018 which is 78% of the Society's membership. Highlighting the year for meetings conducted by the Society of Petroleum Engineers of AIME was the announcement of a major new Society meeting in London, a recordbreaking registration for the Society's Annual Technical Conference and Exhibition, a leading role in the Offshore Technology Conference and conduct of 11 special topic symposia and regional meetings.

AIME REVENUE AND EXPENSE STATEMENT

FOR FISCAL YEAR ENDED NOVEMBER 30, 1976

Under the current decentralized organization of AIME, the five operating units of the Institute are the Headquarters and the four Constituent Societies. Operating budgets are established by the AIME Executive Committee and the four Society Boards, then approved by the AIME Board.

Revenues for the conduct of the 1976 activities in each unit were derived from the sources shown in the statement below. Membership dues provided 24 percent of total revenue. The Headquarters and All-Institute revenue came from an allocation of membership dues and the major part of current income from AIME endowment funds. Constituent Society revenues were also from membership dues, along with all income from their current publications, meetings and investments.

Expenses were incurred in the four major categories shown. Publications accounted for 45 percent of total expenses in 1976. Constituent Society direct expenses are divided into administration, membership services and development, and meetings. AIME Headquarters expenses include administration and All-Institute expenses such as audit, legal, and AIME support of the federations such as Engineers Joint Council.

An important aspect to note is that AIME total expense per member in 1976 was \$76.17, considerably more than individual member dues.

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	AIME Head- quarters and All- Institute	Society of Mining Engineers of AIME	The Metal- lurgical Society of AIME	Iron & Steel Society of AIME	Society of Petroleum Engineers of AIME	AIME Total
REVENUE						
Member Dues & Fees Advertising & Publication	\$222,800	\$ 432,900	\$137,100	\$ 94,800	\$ 352,800	\$1,240,400
Sales, Net		608,200	245,900	204,600	780,100	1,838,800
Endowment Funds		13,800	2,700	2,700		148,700
Meetings, Investments, Other .	53,400	452,500	130,600	168,000	1,078,600	_1,883,100
TOTAL REVENUE	405,700	1,507,400	516,300	470,100	2,211,500	5,111,000
EXPENSE						
Publications		696,500	235,600	211,100	901,500	2,044,700
Support		36,600	10,400	6,400	35,200	88,600
Constituent Society Expenses (Administrative, Meeting, Other)		636,400	235,100	243,900	927,100	2,042,500
All-Institute Expense						377,000
TOTAL EXPENSES	377,000	1,369,500	481,100	461,400	1,863,800	4,552,800
Excess of Revenue over						
EXPENSE	\$ 28,700	\$ 137,900	\$ 35,200	\$ 8,700	<u>\$ 347,700</u>	\$ 558,200
TOTAL EXPENSE PER MEMBER	\$ 6.31**	* \$ 60.94*	\$ 61.56*	\$118.58*	\$ 72.82*	\$ 76.17**
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As of January 1, 1977, corporate and student membership totals were as follows:

	Corporate	Student	Total
Society of Mining Engineers of AIME	18,864	3,608	22,472
The Metallurgical Society of AIME	5,844	1,971	7,815
Iron & Steel Society of AIME	3,885	6	3,891
Society of Petroleum Engineers of AIME	24,049	1,546	25,595
AIME Total	52,642	7,131	59,773

^{*}Based on Society Membership only

^{**}Based on total AIME membership

AIME AWARDS RECIPIENTS FOR 1976

HONORARY MEMBER John F. Bell Dennis L. McElroy Robert H. McLemore Clarence E. Sims

JAMES DOUGLAS GOLD MEDAL

John F. Elliott

CHARLES F. RAND MEMORIAL GOLD MEDAL

Theodore W. Nelson

ANTHONY F. LUCAS MEDAL

J. Clarence Karcher

ERSKINE RAMSAY MEDAL

David A. Zegeer

ROBERT H. RICHARDS AWARD

Donald A. Dahlstrom

BENJAMIN F. FAIRLESS AWARD

David S. Holbrook

HAL WILLIAMS HARDINGE

AWARD

Haydn H. Murray

ROBERT EARLL McCONNELL

AWARD

Robert H. McLemore

ENVIRONMENTAL

CONSERVATION

DISTINGUISHED SERVICE AWARD

H. Beecher Charmbury

ROSSITER W. RAYMOND AWARD

Shri Nath Singh

MINERAL INDUSTRY EDUCATION

AWARD

Murray F. Hawkins, Jr.

ROCK MECHANICS AWARD

Richard E. Goodman

DANIEL C. JACKLING AWARD AND LECTURER

Robert L. Akre

ROBERT PEELE AWARD

Gonzalo C. Barrientos

ARTHUR F. TAGGART AWARD

J. Brent Hiskey

Milton E. Wadsworth

ANTOINE M. GAUDIN AWARD

Donald W. Frommer

FELLOWS OF THE

METALLURGICAL SOCIETY

OF AIME

James C. Fulton George B. St. Pierre Charles R. Taylor

David Turnbull Milton E. Wadsworth Victor F. Zackay

CHAMPION MATHEWSON GOLD

MEDAL

Charles J. McMahon, Jr.

ROBERT LANSING HARDY

GOLD MEDAL

David K. Matlock

EXTRACTIVE METALLURGY

TECHNOLOGY AWARD

William A. Griffith Howard E. Day

Theodore S. Jordan

Van C. Nyman

EXTRACTIVE METALLURGY

SCIENCE AWARD

Murray Small

Ronald H. Radzilowski

Robert D. Pehlke

EXTRACTIVE METALLURGY

LECTURER Ernest Peters

INSTITUTE OF METALS

LECTURER

AND ROBERT FRANKLIN MEHL

AWARD

H. W. K. Honeycombe

WILLIAM HUME-ROTHERY AWARD

Charles S. Barrett

TMS-AIME/ASM DISTINGUISHED LECTURESHIP IN MATERIALS

AND SOCIETY

Michael Tenenbaum

IRON AND STEEL SOCIETY OF AIME DISTINGUISHED

MEMBERS

James B. Austin

John Chipman

John F. Elliott

Hjalmar W. Johnson

Thomas L. Joseph Francis J. McMulkin

Clarence E. Sims

Charles R. Taylor

Michael Tenenbaum

ROBERT W. HUNT SILVER

MEDAL

Donald C. Hilty John W. Farrell

J. E. JOHNSON, JR. AWARD Thomas R. Meadowcroft

HOWE MEMORIAL LECTURER

John H. Chesters

JOHN CHIPMAN AWARD

Shri Nath Singh

SOCIETY OF PETROLEUM

ENGINEERS

OF AIME DISTINGUISHED

SERVICE AWARD

L. B. Curtis

Kenneth W. Robbins

CEDRIC K. FERGUSON MEDAL

Robert H. Rossen

JOHN FRANKLIN CARLL AWARD

Wilbur F. Cloud

DeGOLYER DISTINGUISHED

SERVICE MEDAL

Robert H. McLemore

LESTER C. UREN AWARD Herald W. Winkler

AIME BOARD OF DIRECTORS FOR 1976

PRESIDENT Julius J. Harwood

H. Arthur Nedom

PRESIDENT-ELECT

PAST PRESIDENT James D. Reilly

VICE PRESIDENT-FINANCE Edward S. Miller

VICE PRESIDENTS Granville Dutton Thomas A. Henrie Robert L. Llewellyn Edward E. Runyan Alfred Weiss

William H. Wise DIRECTORS Hugh B. Barton Harry L. Bishop, Jr, Forrest F. Craig, Jr.

Thomas V. Falkie John F. Havard Charles A. Hutchinson, Jr. Robert E. Lund R. Gill Montgomery Edward J. Ostrowski Harold W. Paxton Donald O. Rausch Kenneth W. Robbins EXECUTIVE DIRECTOR

Joe B. Alford

SOCIETY OF MINING ENGINEERS OF AIME

PRESIDENT John F. Havard PRESIDENT-ELECT Donald O. Rausch PAST PRESIDENT Robert L. Llewellyn TREASURER Robert S. Shoemaker EXECUTIVE SECRETARY

Claude L. Crowley

THE METALLURGICAL SOCIETY OF AIME

PRESIDENT Harold W. Paxton PRESIDENT-ELECT Robert E. Lund PAST PRESIDENT Thomas A. Henrie TREASURER William R. Opie EXECUTIVE SECRETARY Alexander R. Scott

IRON AND STEEL SOCIETY OF AIME

PRESIDENT Harry L. Bishop, Jr. PRESIDENT-ELECT Edward J. Ostrowski PAST PRESIDENT William H. Wise TREASURER Bruce H. Ramage EXECUTIVE SECRETARY Lawrence G. Kuhn

SOCIETY OF PETROLEUM ENGINEERS OF AIME

PRESIDENT Charles A. Hutchinson, Jr. PRESIDENT-ELECT Forrest F. Craig, Jr. PAST PRESIDENT Edward E. Runyan TREASURER Charles L. Bare EXECUTIVE SECRETARY David L. Riley

The American Institute of Mining, Metallurgical, and Petroleum Engineers 345 East 47th Street, New York, New York 10017



AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS

AIME ORGANIZATION

AIME is the internationally recognized technical and professional organization for more than 50,000 individual engineers and scientists engaged in exploration for and production of minerals and minerals fuels and the manufacture of products from them. The technical coverage of the Institute has constantly broadened throughout its existence, until now over 30 different areas of technology are encompassed by AIME. In order to serve its membership effectively, AIME is organized with an AIME Headquarters Office, four Constituent Societies, two Institute Councils, and numerous AIME local Sections and Student Chapters. How these groups relate to one another is illustrated on the attached AIME Organization Chart.

AIME CORPORATE HEADQUARTERS

The AIME Corporate Headquarters handles the administration of activities that relate to AIME as a single organization and functions in ways that will benefit all AIME members and the Institute as a whole. Internally, the Headquarters executes directives of the AIME Board of Directors, manages the AIME Annual Meeting, provides staff support for AIME Councils and committees, administers AIME awards, and manages the AIME Endowment Funds. External functions of the Headquarters are on interdisciplinary activities, relations with other engineering societies and federations, communications with government agencies, and long range planning for the future.

AIME CONSTITUENT SOCIETIES

The four Constituent Societies of AIME are: Society of Mining Engineers of AIME, The Metallurgical Society of AIME, Iron and Steel Society of AIME and Society of Petroleum Engineers of AIME. Their objectives are, in broad terms, to function in ways that will benefit members of the Society by providing exchange of new developments, ideas and concepts within specified areas of technology. To achieve these objectives each Constituent Society conducts technical meetings throughout the year, each publishes a monthly technical journal as well as other publications that deal with specific topics, and each handles the accounting and data processing for its members. Additionally, the Constituent Societies administer, for the Institute, AIME local Sections and AIME Student Chapters based on specific interests of the members of those groups. Present administration is assigned as follows:

Society of Mining Engineers of AIME

- 53 AIME Local Sections
- 43 AIME Student Chapters

The Metallurgical Society of AIME

- 12 AIME Local Sections
- 39 AIME Student Chapters

Iron and Steel Society of AIME

7 AIME Local Sections

Society of Petroleum Engineers of AIME

- 68 AIME Local Sections
- 23 AIME Student Chapters

AIME LOCAL SECTIONS AND STUDENT CHAPTERS

AIME local Sections, through their monthly meetings, provide technical programs to Section members, as well as providing a place for social exchange and development of professional acquaintance. The local Section is a significant means by which AIME members can communicate with the administering Constituent Society and with the Institute.

Students are recognized as the future of AIME and engineering. The Institute has 105 Student Chapters throughout the United States and the world. These Chapters have full status within AIME and work closely with AIME local Sections in developing student engineers.

AIME COUNCILS OF ECONOMICS AND EDUCATION

The AIME Council of Economics is a group within AIME which focuses attention on economics as it relates to the fields of technology encompassed by the Institute. The Council programs comprehensive technical sessions on economics each year at the AIME Annual Meeting. The AIME Council of Education focuses its attention on matters relating to engineering education, accreditation of curricula, and other projects. It also programs each year at the AIME Annual Meeting on topics relating to engineering education.

AIME MEMBERSHIP

Membership in AIME means membership in the Institute as well as membership in one or more of the four Constituent Societies. A person selects a Society affiliation based on interest or field of work. This enables new members to interact with others in a specific field and in related fields. In AIME there is continuing interaction among the technical areas encompassed by the Institute. A person may qualify in one of four grades of membership offered - Member, Associate Member, Junior Member or Student Member. The current dues structure for these grades of membership in each Constituent Society is outlined below.

Iron and Steel Society of AIME
Member \$30
Associate Member \$30
Junior Member (over 6 yrs) \$26
Junior Member (under 6 yrs) \$18
Student Member \$ 4.50
Society of Petroleum Engineers of AIME Member
Student Member \$ 4.50

1976 AIME REVENUE AND EXPENSES PER MEMBER

56, 152 MEMBERS - JANUARY 1, 1976

TOTAL B	UDGETED REVENUE	• • • • • • • • • • • • • • • • • • • •	\$4,483,359
Rever	ue Per Member:		
Du	es and Fees	\$21.45	
Pu	blications	30.10	
Me	eetings	23.55	
En	dowment Funds	2.74	
Mi	scellaneous	2.00	
	Total Revenue Per Member	\$ 79. 84	
	UDGETED EXPENSEse Per Member:		\$4, 223, 705
Pu	blications	\$38.75	
Co	nstituent Society HQ and Services	14.32	
	eetings	12.10	
Me	embership and Special Programs	1.90	
	ction and Student Chapter Support	1.37	
	ME Corporate HQ	4.79	
	derations and Other All-Institute	1.99	
	Total Expense Per Member	\$75.22	

AIME CORPORATE HEADQUARTERS

Joe B. Alford, Executive Director 345 East 47th Street New York, New York 10017 212/644-7679

SME-AIME HEADQUARTERS

Claude L. Crowley, Executive Secretary 540 Arapeen Drive - Research Park Salt Lake City, Utah 84108 801/582-2744

TMS-AIME HEADQUARTERS

Alexander R. Scott, Executive Secretary 345 East 47th Street
New York, New York 10017
212/644-7637

ISS-AIME HEADQUARTERS

Lawrence G. Kuhn, Executive Secretary 345 East 47th Street New York, New York 10017 212/644-7639

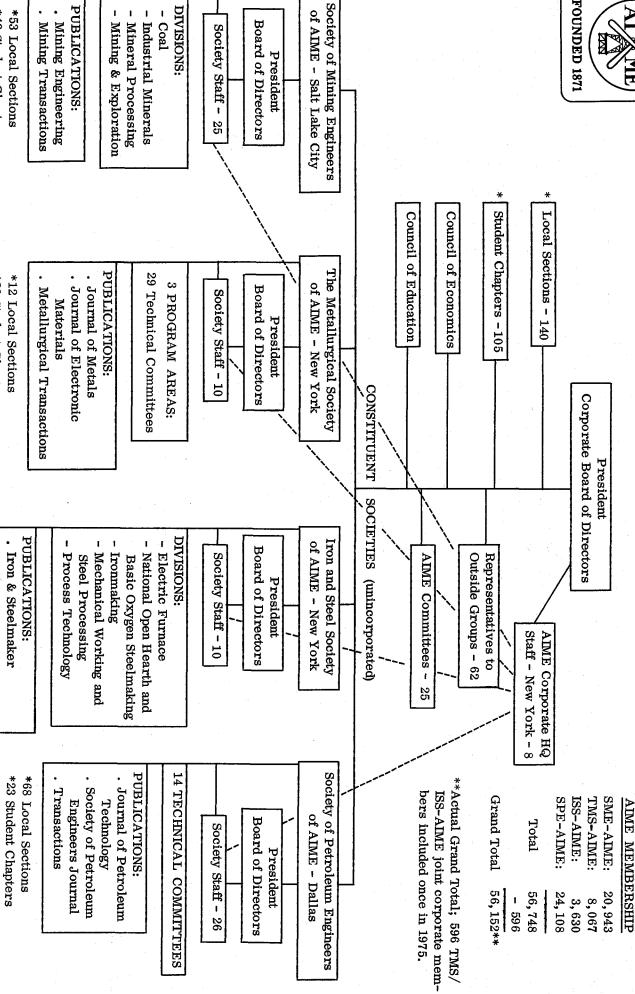
SPE-AIME HEADQUARTERS

David L. Riley, Executive Director 6200 North Central Expressway Dallas, Texas 75206 214/361-6601



THE AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEER

CORPORATE ORGANIZATION CHART



*7 Local Sections

Conference Proceedings Metallurgical Transactions

* AIME Local Sections and Student Chapters are administered

by the four Constituent Societies of AIME

*43 Student Chapters

*39 Student Chapters

1976 OFFICIAL ANNUAL REVIEW

SPECIAL COPY
AMENDED TO INCLUDE FINANCIAL
DETAILS FOR
AIME OPERATING UNITS



AIME

and its
FOUR CONSTITUENT SOCIETIES









1976

OFFICIAL AIME ANNUAL REVIEW

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American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.

REPORT OF THE EXECUTIVE DIRECTOR, AIME FOR 1976

This Annual Review of AIME and its four Constituent Societies marks 1976 as a significant year for the entire Institute. The following are highlights:

- 1. All five operating units, the AIME Headquarters and the four Societies, had a financial surplus for a combined total of \$455,512.
- 2. Overall AIME membership increased 6.4 percent for a total of 59,773 at yearend.
- 3. A wide variety of high quality member-service programs were conducted by the Societies.
- 4. Thirty technical meetings and conferences were conducted by the Institute, its Societies, Divisions and Sections, with increased attendance at most of them.
- 5. Membership use of the numerous publications issued within AIME continued at a high level.

Extensive data on all of these operations are contained in the reports of the Executive Secretaries of the Constituent Societies and other units in this Annual Review. In summary, the 106th year of the Institute's history was another milestone in its record of service in providing a forum for the development of minerals, metals and fuels for the benefit of mankind.

All AIME members are indebted to President Julius J. Harwood for his dedicated services during the year. Also, a special word of appreciation is extended to the many AIME members who served on our Boards of Directors and on our committees, and I wish to express appreciation to all of the members of the Institute staff in the Headquarters and the Societies for their outstanding work. The future of the Institute continues to be bright, because the contributions of so many people to its activities will continue to make it the great organization it has always been.

Respectfully submitted,

Aw B. Alfark

Joe B. Alford

Executive Director

American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.

RECORD OF HONORS AND AWARDS PRESENTED BY AIME IN 1976

The following Honors and Awards were presented by AIME in 1976, in addition to those presented by our Constituent Societies and described elsewhere in this Annual Review:

HONORARY MEMBERSHIP was conferred upon

Mathaniel Arbiter, "For his creative contributions to world mining as educator, engineer and scientist through his teaching and his writings, and through his success in developing new metallurgical processes in response to the industry's needs."

John C. Calhoun, Jr., "For his significant contributions to the petroleum industry as an educator and author and for his dedicated and distinguished service to the Society of Petroleum Engineers and the Institute."

Karl L. Fetters, "For notable contributions to the technology of steelmaking, particularly in the field of slag-metal reactions, and for his dedicated service and leadership in the affairs of the Institute and of the engineering profession.

The JAMES DOUGLAS GOLD MEDAL to John F. Elliott, "In recognition of his distinguished teaching and for his contributions to the broad spectrum of thermodynamics of extractive metallurgy."

The BENJAMIN F. FAIRLESS AWARD to David S. Holbrook, "For his foresight and leader-ship in the growth of the Canadian steel industry and the advancement of meaningful relationships between the North American steel producers and consumers."

The HAL WILLIAMS HARDINGE AWARD to Haydn H. Murray, "For outstanding contributions to the mineral industry as research scientist, educator, author, lecturer, and business executive; particularly in the field of clay technology."

The ANTHONY F. LUCAS GOLD MEDAL AWARD to J. Clarence Karcher, "For his pioneering efforts in developing the reflection seismograph which has led to the discovery of a major share of the world's petroleum reserves."

The ROBERT EARLL McCONNELL AWARD to Robert H. McLemore, "For his participation in the conversion of the World War II Bazooka to the perforation of down-hole casing - a peaceful use of significant engineering accomplishment that stimulated petroleum production."

The ERSKINE RAMSAY MEDAL to David A. Zegeer, "For his outstanding accomplishments as a producer, researcher and educator; and in particular, for his concern to ever improve the Coal Mining Industry."

The CHARLES F. RAND MEMORIAL GOLD MEDAL TO Theodore W. Nelson, "For his outstanding leadership, distinguished achievements in management, and dedicated service to AIME."

The ROBERT H. RICHARDS AWARD to Donald A. Dahlstrom, "In recognition of his many contributions to the technology and practice of minerals processing and environmental quality, especially in techniques of size classification and liquid-solids separation."

The ENVIRONMENTAL CONSERVATION DISTINGUISHED SERVICE AWARD to H. Beecher Charmbury, "In appreciation of his leadership in developing technology for prevention of air and water pollution and utilization of wastes associated with the coal mining industry."

The MINERAL INDUSTRY EDUCATION AWARD to Murray F. Hawkins, Jr. "For his effective teaching and research, his outstanding contributions to educational publications, and his deep interest in his colleagues' and students' advancement in petroleum engineering."

The ROCK MECHANICS AWARD to Richard E. Goodman, "For his contributions to teaching and research and his innovations in investigating and research methods in the field of rock mechanics."

The ROSSITER W. RAYMOND AWARD to Shri Nath Singh, for his paper, "Mechanism of Alumina Buildup in Tundish Nozzles During Continuous Casting of Aluminum-Killed Steels."

LEGION OF HONOR FIFTY-YEAR MEMBER INSIGNIA were conferred upon the following fortyone members: Hamilton Allport, W. S. Barquist, Charles E. Beecher, Henry A. Behre,
Walton T. Boyer, Sr., August J. Breitenstein, F. H. Buchella, John T. Crawford,
Harrison I. Dixon, Joe E. Drapeau, Jr., Wendell B. Gealy, Harry Green, Conrad C.
Haase, Walter Hochschild, Ariel F. Horle, Hiram B. Humphrey, Walter P. Jacob, Hubert
D. Keiser, Augustus B. Kinzel, Warren A. Labarthe, James A. MacDonell, James E.
McDevitt, Dennis L. McElroy, C. G. McLachlan, William B. Millar, Thomas A. Monk, Jr.,
J. T. Norton, W. J. O'Connor, O. S. Petty, Harry H. Power, Albert E. Reed, Olaf N.
Rove, James Sorenson, Cyril L. Spencer, Theodore E. Swigart, Eugene M. Thomas, Jean
A. C. Verdussen, Otto Wartenweiler, Allan S. Wigle, Clyde Williams, Fred E. Wood.

COOPERS & LYBRAND

CERTIFIED PUBLIC ACCOUNTANTS

IN PRINCIPAL AREAS

Board of Directors,

American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.:

We have examined the balance sheet of AMERICAN INSTITUTE of MINING, METALLURGICAL, and PETROLEUM ENGINEERS, INC. as of November 30, 1976 and the related statements of revenue and expenses, surplus, and changes in endowment and custodian 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. We previously examined and reported upon the financial statements of the Institute for the year ended November 30, 1975.

In our opinion, the aforementioned financial statements present fairly the financial position of American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. at November 30, 1976 and 1975, and the results of its operations and the changes in its endowment and custodian funds for the years then ended, in conformity with the accounting principles referred to in Note 1 consistently applied during the period subsequent to the change, with which we concur, made as of December 1, 1974, in accounting for inventories as described in Note 2 to the financial statements.

New York, January 14, 1977.

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AMERICAN INSTITUTE of MINING, METALLURGICAL, and PETROLEUM ENGINEERS, INC. BALANCE SHEETS, November 30, 1976 and 1975 (Note 1)

1975	\$ 147,869	52,843	490,062	105,490		1,927,642	2,723,906	14,861	4,279,352	272,821	4,552,173	265,000	\$7,555,940
1976	\$ 299,390	51,500	487,913	126,837		2,482,824	3,448,464		4,442,028	324,120	4,766,148	265,000	\$8,479,612
LIABILITIES and FUND BALANCES:	Operating fund: Accounts payable and accrued liabilities	Annual meeting surplus fund	Membership dues received in advance	Other deferred credits, principally publications and meetings		Surplus (per statement annexed)	Total operating fund	Endowment and custodian funds: Advance book sales	Fund balances (per statement annexed): Endowment funds	Custodian funds		Property fund (no change during 1976 and 1975) (Note 5)	
1975	\$1,202,011 119,413	244,826		1,041,764	45,304	70,588	2,723,906		4,169,503	133,537	263,994 4,567,034	265,000	\$7,555,940
1976	\$1,384,608 187,878	369,649		1,3	64,763	68,507	3,448,464		4,424,330	143,454	198,364	265,000	\$8,479,612
ASSETS:	Operating fund: Cash and temporary cash investments Accounts receivable	Inventories of publications, at cost or lower (Note 1b)	Investments, at cost plus accrued interest (at market quotations plus accrued interest, approxi-	mately \$1,481,000 in 1976 and \$1,030,000 in 1975) (Notes lc and 7) Fixed assets, net of accumulated	depreciation (Notes 1g and 4)	Prepaid expenses, deferred charges and other assets	Total operating fund	and custodian funds: nents, at cost plus accrue est (at market quotations	prus accrued interest, approximately #4,986,000 in 1976 and #4,256,000 in 1975) (Notes lc and 7)	ntories of books, at wer (Note 1b)	Cash and temporary cash investments	Founder Society advances to United Engineering Trustees, Inc. (Note 5)	

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

STATEMENTS of REVENUE and EXPENSES for the years ended November 30, 1976 and 1975 (Note 1)

	Headquarters and All-Institute	Society of Mining Engineers of AIME	The Metallurgical Society of AIME	Iron & Steel Society of AIME	Society of Petroleum Engineers of AIME	Elimination of Dues Allocated to Headquarters from Societies	Total 1976	Total 1975
s and entrance f	\$222,752	\$ 511,246 608 165	\$163,145	\$110,700	\$ 455,333	(\$222,752)	\$1,240,424 1 838 850	\$1,170,421 1,400,175
Advertising and publication sales Appropriations from endowment funds	129,500	13,776	2,750	2,750	O # H * C O O O		148,776	132,000
Offshore Technology Conference: Attendance and membership distribution	44,603	75,678	19,112	8,467	505,603		653,463	518,264
ent fee					134,800		134,800	91,000
Exhibit space commission Meetings, interest and miscellaneous	8,798	376,862	111,456	159,572	402,730	(200 750)	1,059,418	814,504
	(C) (C) (E)	1 + 1 6 / 6 / 6 +	01067#7	~1	000 6 + + 0 6 -		1	C 6 = 1 = 6 =
xpenses: Publications		696,519	235,610	211,131	901,522		2,044,782	1,738,485
Society direct expenses		673,014	245,521	250,467	962,327		2,131,329	1,693,314
AIME headquarters	376,917	78,297	26,053	15,885	102,517	(222,752)	376,917	359,044
Recovery of decrease in market value of investments	376,917	1,447,830	507,184	477,483	1,966,366	(222,752)	4,553,028	(54,000) 3,736,843
Excess of revenue over expenses before cumulative effect of accounting change	28,736	137,887	35,192	8,650	347,717		558,182	437,912
umulative effect on prior years (to November 30, 1974) of change in accounting for inventories (Note 2)								17,600
Excess of revenue over expenses	\$ 28,736	\$ 137,88 <u>7</u>	\$ 35,192	\$ 8,650	\$ 347,717		\$ 558,182	\$ 455,512

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

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STATEMENTS of SURPLUS

for the years ended November 30, 1976 and 1975 (Note 1)

	1976	<u> 1975</u>
Balance, beginning of year	\$1,927,642	\$1,176,991
Transfers from certain custodian fund balances relating to the formation of ISS-AIME and		
restructuring of TMS-AIME (Note 3)		301,563
Excess of revenue over expenses	550 JOA	
for the year	558,182 2,485,824	455,512 1,934,066
	2,409,024	1,934,000
Transfers to custodian funds	3,000	6,424
Balance, end of year	\$2,482,824	\$1,927,642

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

STATEMENTS of CHANGES in ENDOWMENT and CUSTODIAN FUNDS for the years ended November 30, 1976 and 1975 (Note 1)

Total \$4,060,329	(301,563)	547,099	(187,308)	4,493,173	59,000
1975 Custodian Fund Accounts \$521,699	(301,563)	14,528 6,424 15,365 25,140 2,358 64,237	9,971 15,289 8,786 (2,000)	252,327 13,494 265,821	7,000
Endowment Fund Accounts \$3,538,630	3,538,630	12,228 121,465 233,607 99,443 14,601 1,518 482,862	105,929 25,410 7,744 15,563 132,000 (206,000)	4,240,846 (13,494) 4,227,352	52,000
Total \$4,552,173	4,552,173	552,646	338,671	4,766,148	\$4,766,148
1976 Custodian Fund Accounts	272,821	15,018 3,000 1,533 15,849 44,744 3,690 1,132	14,640 10,790 8,237 33,667	324,120	\$324,120
Endowment Fund Accounts	4,279,352	9,423 7,620 243,007 154,300 50,565 2,765 467,680	101,317 25,733 7,644 21,534 148,776	4,442,028	\$4,442,028
Balance of fund accounts, beginning of year	Transfer of certain custodian fund balances to surplus, relating to the formation of ISS-AIME and restructuring of TMS-AIME on December 1, 1974 (Note 3) Balance, as adjusted	Revenue: Contributions Transfer from operating fund surplus Net gain on sale of investments Interest and dividends Sales of books, volumes, etc. Revenue from conferences and committee meetings, net Royalties from publishers and oil deeds Other	Expenses and appropriations: Publication expenses (Note 2) Awards Lecture series and student travel Sundry expenses Appropriations to operating fund Recovery of decline in market value of fund investments	Reclassification	Cumulative effect on prior years (to November 30, 1974) of change in accounting for inventories (Note 2) Balance of fund accounts, end of year

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

NOTES to FINANCIAL STATEMENTS

1. Accounting Policies

The financial statements of the American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. (the "Institute") are prepared in accordance with generally accepted accounting principles, except for the treatment of expenditures for equipment, furniture and fixtures which is explained below. The Institute's significant accounting policies are as follows:

a. General

The financial statements include the accounts of Headquarters and All-Institute (AIME Headquarters), the Society of Mining Engineers (SME-AIME), the Society of Petroleum Engineers (SPE-AIME), The Metallurgical Society (TMS-AIME), and the Iron & Steel Society (ISS-AIME); the four societies being referred to as the constituent societies. financial statements do not include assets, liabilities, revenues or expenses of Local Sections, Divisions or Special Committees except for the Institute's share of the net income of the Offshore Technology Conference (OTC). Advances to the OTC, which approximate the Institute's equity in the net assets of the OTC (at November 30, 1976 the OTC's net assets are comprised principally of cash and temporary cash investments) are included in endowment and custodian fund cash on the balance sheet.

b. Inventories

The Institute includes in inventory the cost of all salable publications and books (see Note 2).

c. Investments

Investments are carried at cost with regard to those purchased or at market value on date of gift with regard to those received as contributions, plus accrued interest where applicable. Purchases and sales of securities are reflected on a trade-date basis. An allowance for decrease in market value of investments is provided whenever market value is significantly below the aforementioned carrying value. Increases or decreases in the allowance are reflected in the statements of revenue and expenses, and of changes in endowment and custodian funds. Losses, previously provided, are charged against the allowance when the related investments are sold.

Continued

NOTES to FINANCIAL STATEMENTS, Continued

d. Gains or Losses on Sale of Investments

Gains or losses on sale of investments are determined on the basis of average cost. Such gains or losses relating to investments which are part of the endowment and custodian commingled pool of investments are allocated pro rata to the individual fund balances.

e. <u>Interest and Dividend Income</u>

Interest from investments is recorded on the accrual basis. Dividends are recorded on the cash basis; however, such basis of accounting does not differ significantly from the generally accepted method of accruing dividends on the record date.

f. Membership Dues

Membership dues are recorded as income in the accounting period to which they relate.

g. Expenditures for Equipment, Furniture and Fixtures

Expenditures for equipment, furniture and fixtures are generally charged to expense as incurred, a practice followed by many nonprofit organizations. Generally accepted accounting principles for profit-oriented business organizations require the capitalization and subsequent depreciation of such expenditures. In 1975, SME-AIME purchased a printing press to produce its own publications rather than utilize outside services. Accordingly, to appropriately match revenues from publications' sales with related costs, the Institute capitalized the cost of the press and related assets, and is depreciating these assets on the straight-line method over their estimated useful lives.

In 1976, AIME Headquarters and SME-AIME capitalized the cost of certain fixed asset additions (unrelated to the printing operations) in order to more appropriately match revenues with related costs. The Institute is depreciating such assets on the straight-line method over their estimated useful lives (see Note 4). The effect of this prospective change in accounting was to decrease AIME Headquarters' expenses by \$6,200 and to decrease SME-AIME's direct expenses by \$15,900.

Continued

h. <u>Pensions</u>

The Institute has a contributory pension plan for all full-time employees who have satisfied certain age and years of service requirements. Actuarially computed pension costs, including amortization of prior service costs over a fifteen-year period, are funded and charged to expense each year.

2. Change in Accounting Method

In 1975, the Institute adopted the policy of including in inventory the cost of all salable publications and books. Prior to 1975, the cost of most publications was charged to publications expense in the year incurred. The aforementioned change in accounting was made in order to more appropriately match revenues from sales of publications and books with the related costs.

With respect to the operating fund, the effect of the change on the 1975 excess of revenue over expenses before the cumulative effect of the change was to increase the excess by \$13,800, and the cumulative effect on years prior to 1975 amounted to \$17,600.

With respect to the endowment and custodian funds, the effect of the change was to decrease 1975 publication expenses of the endowment fund by \$75,000. The cumulative effect on publication expenses of prior years (to November 30, 1974) amounted to \$52,000 for the endowment funds and \$7,000 for the custodian funds.

3. Formation of ISS-AIME

The Board of Directors of the Institute (the "Board") authorized the formation of ISS-AIME, effective December 1, 1974, whose iron and steel activities were previously combined with TMS-AIME. In this connection and by resolution of the Board, the Institute transferred certain custodian fund balances at December 1, 1974 to the operating fund as follows: \$241,800 for the new ISS-AIME and \$59,700 for the restructured TMS-AIME.

4. Capital Expenditures

Capitalized expenditures were \$28,700 and \$47,900 in 1976 and 1975, respectively. In 1976, depreciation expense was \$9,300 of which \$2,700 is included under "SME-AIME Publications", \$5,100 is included under "SME-AIME Society Direct Expenses" and \$1,500 is included under "AIME Headquarters", in the Statements of Revenue and Expenses. In 1975, depreciation expense of \$2,600 was included under "Publications".

Continued

NOTES to FINANCIAL STATEMENTS, Continued

Amounts expended for equipment, furniture and fixtures and charged directly to expense in 1976 and 1975 approximated \$23,000 and \$30,000, respectively. Such amounts are included under "Society Direct Expenses" and "AIME Headquarters" in the Statements of Revenue and Expenses.

5. Advances to United Engineering Trustees, Inc.

By agreements dated February 28, 1958, the Founders' Agreement of August 10, 1916 between the four Founder Societies and United Engineering Trustees, Inc. was superseded by a new Founders' Agreement which provides, in part, for advances of \$265,000 to United Engineering Trustees, Inc. by the Institute in connection with the erection of the United Engineering Center Building. Such advances are not repayable by United Engineering Trustees, Inc., except upon its dissolution, but advances bear interest at 4% per annum.

6. Pensions

Pension expense amounted to \$46,700 in 1976 and \$41,700 in 1975. The provisions of the Employee Retirement Income Security Act of 1974 (ERISA) are effective December 1, 1976 for the Institute's pension plan.

The reduced participation requirements provided by ERISA may increase pension expense by as much as 60%. However, since pension expense is based on participation at the beginning of the year, such increase will not become effective until fiscal 1977.

7. Changes in Investments

	1976	1975
Operating Fund:		
Investments at cost, beginning of year Purchases of securities	\$1,041,764 867,225	\$ 843,588 1,048,131
Sales of securities	1,908,989 531,220	1,891,719 786,809
Net loss on sales of securities*	1,377,769 (4,710)	1,104,910 (63,146)
Investments at cost, end of year	\$1,373,059	\$1,041,764
Endowment and Custodian Funds: Investments at cost, beginning of year Purchases of securities	\$4,169,503 3,028,288	\$4,075,441 3,134,080
Sales of securities	7,197,791 2,782,614	7,209,52 1 3,046,704
Net gain on sales of securities*	4,415,177 9,153	4,162,817 6,686
Investments at cost, end of year	\$4,424,330	\$4,169,503

NOTES to FINANCIAL STATEMENTS, Continued

*Amounts shown represent realized gains and losses based on the original cost of the investments sold. In 1975, the gains and losses reflected in the "Statements of Revenue and Expenses" and the "Statements of Changes in Endowment and Custodian Funds" are based on original cost of the investments sold adjusted for prior provisions for decreases in market value (see Note lc).

8. Commitments

Rental commitments under leases primarily for office space approximate \$86,000 in 1977, \$88,000 in 1978, \$87,000 in 1979 and \$68,000 in 1980. Rental expense under these leases was approximately \$85,000 and \$67,000 during 1976 and 1975, respectively.

In addition, the Institute is committed to maintain certain office facilities in the United Engineering Center Building (UEC) in New York City (see Note 5). Under the terms of the agreement relating to the occupancy of the UEC, the Institute is committed to paying a pro rata portion of the operating costs of the building. The Institute's share of these costs during 1976 and 1975 was \$81,000 and \$90,000, respectively.

American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.

FINANCIAL DETAILS FOR AIME OPERATING UNITS

NOVEMBER 30, 1976

The following pages are Statements of AIME Assets and Liabilities under Custodial Assignment to

- AIME Headquarters
- Society of Mining Engineers of AIME
- The Metallurgical Society of AIME
- Iron and Steel Society of AIME
- Society of Petroleum Engineers of AIME
- Notes: (1) The financial details in the following schedules were prepared by the AIME Headquarters and Constituent Society staffs and represents the financial positions at November 30, 1976 of the various operating units of AIME. They have not been modified to eliminate inter-unit receivables and payables and other consolidating reclassifications.
 - (2) The statements do not include the funds managed by AIME local sections, which totalled approximately \$614,000 at 11/30/76.

American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.

STATEMENT OF ASSETS AND LIABILITIES

UNDER CUSTODIAL ASSIGNMENT TO

AIME HEADQUARTERS

November 30, 1976

ASSETS:

Cash and Temporary Investments	\$ 79,163
Accounts Receivable	26,588
Prepaid Expenses	17,060
Endowment and Custodian Funds:	
Investments \$4,387,259	
Inventories 143,454	4,530,713
Fixed Assets, Net of Accumulated	
Depreciation	6,222
Founder Society Advances to	
United Engineering Trustees	265,000
TOTAL ASSETS	\$4,924,746
LIABILITIES AND FUND BALANCES:	
Accounts Payable and Accrued Liabilities	\$ 43,935
Annual Meeting Surplus Fund	51,500
Surplus	100,196
Endowment and Custodian Funds:	
Endowment Funds \$4,442,028	
Custodian Funds 22,087	4,464,115
Property Fund	265,000
TOTAL LIABILITIES AND FUND BALANCES	\$4,924,746

AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, INC.

STATEMENT OF AIME ASSETS AND LIABILITIES UNDER CUSTODIAL ASSIGNMENT TO SOCIETY OF MINING ENGINEERS November 30, 1976

مضد			
ASS	ETS:		A FA FAO FF
	Cash		\$ 59,588.55
	Short Term Investments and Accrued		EEO /00 07
	Interest		559,482.27
	Accounts Receivable:		
	Trade	\$ 76,139.70	
	Other	<u>8,597.54</u>	
			84,737.24
	Inventories, at Cost, Lower than Market:		
	Paper	24,645.09	
	Books in Process	28,439.28	
	Finished Publications	150,989.12	204,073.49
		and the same of th	
	TOTAL CURRENT ASSETS		907,881.55
	Iona oodani noomo		
		*	
	Deferred Charges	•	11,527.28
	Deposits		2,974.00
	Office Furniture and Equipment	57,001.87	-, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
		11,956.00	
	Leasehold Improvements	68,957.87	
•		00,937.07	
	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1		
	Less Accumulated Depreciation and	10 /16 67	58,541.20
	Amortization	10,416.67	20,241.20
			\$980,924.03
T T	ABILITIES, FUNDS AND SURPLUS:		
1111	Accounts Payable and Accrued Expenses		\$166,348.34
	Accounts rayable and Accided Expenses		Q#00,540,54
	Defense 3 Torons		309,995.99
	Deferred Income		202,222.22
		ė 1 000 00	
	Reserve Life Membership Fund	\$ 1,880.00	144,752.93
	Custodian Funds Assigned SME	142,872.93	144,732.33
	Surplus:	100 /07 00	
	Balance, November 30, 1975	192,427.08	
	Transfer from Operating Reserve Fund	29,512.33	
	Excess of Income over Expense for		
	Year Ended November 30, 1976	137,887,36	359,826.77
			\$980,924.03
			<u> </u>

American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.

STATEMENT OF AIME ASSETS AND LIABILITIES UNDER CUSTODIAL ASSIGNMENT TO THE METALLURGICAL SOCIETY NOVEMBER 30, 1976

Assets:

Cash Accounts Receivable Prepaid Expenses, Deferred Charges	\$313,405.91 27,866.42
and other Assets	29,308.97
Total Assets	\$370,581.30
Liabilities and Fund Balances:	
Accounts Payable and Accrued Liabilities Deferred Credits to Income:	\$ 13,236.79
Member Dues Received in Advance	70,400.25
Life Memberships	1,840.00
Other	19,723.20
Surplus	35,192.80
Endowment and Custodian Funds	230,188.26
Total Liabilities and Fund Balances	\$370,581.30

AMERICAN INSTITUTE OF MINING, METALLURGICAL,

AND PETROLEUM ENGINEERS, INC.

STATEMENT OF AIME ASSETS AND LIABILITIES

UNDER CUSTODIAL ASSIGNMENT TO

IRON AND STEEL SOCIETY OF AIME

Date: November 30, 1976

Assets

Cash		\$ 15,304.19
Accounts Reco	eivable	27,891.00
Inventories		48,564.04
Deferred Exp	ense	25,160.39
Investments:	Reserve Fund	201,204.86
	Award Fund	79,023.96
	Total Assets	\$ 397,148.44

Liabilities and Fund Balances

Accounts Payable and Accrued Liabilities	\$ 8,932.71
Deferred Credits	25,114.00
Dues Received in Advance	43,640.00
Funds	294,956.34
Other	24,505.39
Total Liabilities and Fund Balances	\$ 397,148.44

AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, INC.

STATEMENT OF AIME ASSETS AND LIABILITIES

UNDER CUSTODIAL ASSIGNMENT TO

SOCIETY OF PETROLEUM ENGINEERS OF AIME AT NOVEMBER 30,1976

	1976	1976	1975	1975
sets en la companya de la companya d Sets en la companya de la companya d				
Cash		\$ 58,257		\$ 73,050
Accounts Receivable				
Trade	\$ 40,329		\$ 29,586	
Regional Meeting Local Sections				
& Staff Expense Advance	10,179		6,090	
Interest	850		1,618	
Miscellaneous	497	\$ 51,855	191	37,485
Inventories		\$ 88,438		\$ 89,984
Prepaid Expenses		\$ 19,192		\$ 9,703
Investments				
Short Term Investments	\$ 375,000		\$ 375,000	
Vaughan, Nelson Boston-Houston	592,400		464,917	
Thorndyke, Doran, Paine & Lewis	612,537	\$1,579,937	469,518	\$1,309,43
		in the later with the second		
		**		
TAT. ASSETS		\$ 1 707 670		5 1 5 1 9 65
ABILITIES AND FUND RALANCES		<u>\$1,797,679</u>		\$1,519,65
ABILITIES AND FUND BALANCES Accounts Payable Trade	\$ 29,748	<u>\$1,797,679</u>	\$ 37,069	\$1,519,65
ABILITIES AND FUND BALANCES Accounts Payable Trade Refunds	984	<u>\$1,797,679</u>	941	\$1,519,65
ABILITIES AND FUND BALANCES Accounts Payable Trade Refunds Taxes			•	
ABILITIES AND FUND BALANCES Accounts Payable Trade Refunds	984	\$1,797,679 \$31,286	941	\$ 1,519,65
ABILITIES AND FUND BALANCES Accounts Payable Trade Refunds Taxes	984		941	
ABILITIES AND FUND BALANCES Accounts Payable Trade Refunds Taxes AIME Accrued Scholarships	984	\$ 31,286	941	\$ 38,214
ABILITIES AND FUND BALANCES Accounts Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits	984 554	\$ 31,286	941 204	\$ 38,214
ABILITIES AND FUND BALANCES Accounts Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits	\$ 4,838	\$ 31,286	941 204 \$ 3,241	\$ 38,214
ABILITIES AND FUND BALANCES Accounts Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits Employee Withholding	\$ 4,838 1,118	\$ 31,286	\$ 3,241 1,379	\$ 38,214
ACCOUNTS Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits Employee Withholding Dues - Members	\$ 4,838 1,118 103,211	\$ 31,286	\$ 3,241 1,379 169,835	\$ 38,214
ABILITIES AND FUND BALANCES Accounts Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits Employee Withholding Dues - Members Dues - New Members	\$ 4,838 1,118 103,211 3,020	\$ 31,286	\$ 3,241 1,379 169,835 4,597	\$ 38,214
ABILITIES AND FUND BALANCES Accounts Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits Employee Withholding Dues - Members Dues - New Members Subscriptions	\$ 4,838 1,118 103,211 3,020 25,083	\$ 31,286 \$ 40,525	\$ 3,241 1,379 169,835 4,597 24,914	\$ 38,214 \$ 36,665
ACCOUNTS Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits Employee Withholding Dues - Members Dues - New Members Subscriptions Entrance Fees	\$ 4,838 1,118 103,211 3,020	\$ 31,286	\$ 3,241 1,379 169,835 4,597	\$ 38,214
ACCOUNTS Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits Employee Withholding Dues - Members Dues - New Members Subscriptions Entrance Fees Funds	\$ 4,838 1,118 103,211 3,020 25,083	\$ 31,286 \$ 40,525	\$ 3,241 1,379 169,835 4,597 24,914	\$ 38,214 \$ 36,665
ACCOUNTS Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits Employee Withholding Dues - Members Dues - New Members Subscriptions Entrance Fees Funds Life Member Fund	\$ 4,838 1,118 103,211 3,020 25,083 494	\$ 31,286 \$ 40,525	\$ 3,241 1,379 169,835 4,597 24,914 1,428 \$ 4,163	\$ 38,214 \$ 36,665
ACCOUNTS Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits Employee Withholding Dues - Members Dues - New Members Subscriptions Entrance Fees Funds Life Member Fund Senior Member Fund	\$ 4,838 1,118 103,211 3,020 25,083 494	\$ 31,286 \$ 40,525	\$ 3,241 1,379 169,835 4,597 24,914 1,428	\$ 38,214 \$ 36,665
ACCOUNTS Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits Employee Withholding Dues - Members Dues - New Members Subscriptions Entrance Fees Funds Life Member Fund	\$ 4,838 1,118 103,211 3,020 25,083 494 \$ 4,963	\$ 31,286 \$ 40,525	\$ 3,241 1,379 169,835 4,597 24,914 1,428 \$ 4,163	\$ 38,214 \$ 36,665 \$ 205,394
ACCOUNTS Payable Trade Refunds Taxes AIME Accrued Scholarships Deferred Credits Advance Deposits Employee Withholding Dues - Members Dues - New Members Subscriptions Entrance Fees Funds Life Member Fund Senior Member Fund	\$ 4,838 1,118 103,211 3,020 25,083 494 \$ 4,963 2,468	\$ 31,286 \$ 40,525 \$ 137,764	\$ 3,241 1,379 169,835 4,597 24,914 1,428 \$ 4,163 2,265	\$ 36,665

\$9,093,612

TOTAL FINANCIAL RESOURCES OF AIME

AS AT NOVEMBER 30, 1976

	\$ 100,196	330, 315 255, 500 216, 144 1, 580, 669 \$2, 482, 824	\$ 614,000			
OPERATING SURPLUS FUNDS	AIME Corporate Headquarters Operating Reserve All-Institute Deficit from Prior Years Net Headquarters Reserve \$100,196	SME-AIME TMS-AIME ISS-AIME SPE-AIME TOTAL OPERATING SURPLUS FUNDS	FUNDS HELD BY LOCAL SECTIONS Approximate value based on 1975 Section Treasurers' Reports		\$4,442,028 375,620 2,482,824 7,300,472 EES, INC. 265,000	
AIME ENDOWMENT FUNDS	Medal and Plaque Award Funds \$ 196,156 Scholarship Funds 186,605 Specific Use Funds 1,815,215 General Purpose Funds 2,244,052 TOTAL ENDOWMENT FUNDS \$4,442,028	FUNDS UNDER ASSIGNMENT TO CONSTITUENT UNITS Custodian Funds:	AIME Corporate Headquarters \$ 73,587 SME-AIME 172,385 TMS-AIME 185-AIME	SUMMARY	ENDOWMENT FUNDS CUSTODIAN FUNDS OPERATING SURPLUS FUNDS SUBTOTAL ADVANCES TO UNITED ENGINEERING TRUSTEES, RESOURCES SET ASIDE TO WEET LIABILITIES	či ro

American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.

MEMBERSHIP DATA

Year	Member Total								
1870	22	1880	832	1890	2,000	1900	2,450	1910	4,210
1871	157	1881	1,031	1891	2,134	1901	2,897	1911	4,169
1872	254	1882	1,213	1892	2,258	1902	3,262	1912	4,290
1873	273	1883	1,345	1893	2,392	1903	3,741	1913	4,284
1874	345	1884	1,467	1894	2,391	1904	3,530	1914	4,150
1875	554	1885	1,439	1895	2,437	1905	3,886	1915	4,650
1876	628	1886	1,504	1896	2,390	1906	4,048	1916	5,880
1877	732	1887	1,615	1897	2,455	1907	4,191	1917	6,597
1878	734	1888	1,714	1898	2,562	1908	4,241	1918	7,856
1879	7 88	1889	1,857	1899	2,564	1909	4,284	1919	8,426

Year	Corporate Members	Student Members	Grand Total	Year	Corporate Members	Student Members	Grand Total
1920	8,388	1,920	10,308	1940	10,828	4,171	14,999
1921	8,879	1,326	10,205	1941	11,334	4,179	15,513
1922	8,805	1,328	9,413	1942	11,675	3,489	15, 164
1923	7,813	1,315	9,128	1943	12,081	2,707	14,788
1924	7,555	1,263	8,818	1944	12, 334	1,497	13,83
1925	7,569	1,157	8,726	1945	12,910	1,088	13,998
1926	7,385	1,131	8,516	1946	14, 119	1,737	15,850
1927	7,434	1,004	8,438	1947	15,000	3,117	18, 11
1928	7,488	1,000	8,488	1948	15,580	4,069	19,649
1929	7,823	1,033	8,856	1949	16,315	4,952	21,26'
1930	7,831	1,162	8,993	1950	17,082	4,534	21,61
1931	7,843	1,131	8,974	1951	17,482	2,229	19,71
1932	7,685	975	8 ,660	1952	18,643	1,964	20,60
1933	7,155	672	7,827	1953	19,718	2,195	21,91
1934	6,887	628	7,515	1954	21,816	2,179	23,99
1935	6,916	1,006	7,922	1955	23,723	2,825	26, 54
1936	7,326	1,620	8,946	1956	26, 29 8	3,415	29,71
1937	8,279	2,147	10,426	1957	28,823	3,974	32,79
1938	9,005	2,898	11,903	1958	30, 553	3,757	34, 31
1939	9,614	3,760	13, 374	1959	33, 378	2,332	35, 71
	Corporate	Student	Grand		Corporate	Student	Grand
Year	Members	Members	Total	Year	Members	Members	Total
1960	34,852	1,893	36,745	1970	43,095	3,863	46,95
1961	34,368	1,633	36,001	1971	44,627	3,962	48,58
1962	34,437	1,857	36, 294	1972	45,742	3,652	49,39
1963	34,838	2,289	37, 127	1973	45, 154	4,572	49,72
1964	35,740	2,370	38,110	1974	46,702	4,988	51, 69
1965	36, 878	2,561	39, 439	1975	50,085	6,663	*56,15
1966	38,912	2,706	41,618	1976	52,642	7,131	59,77
1967	40, 27 8	3,183	43,461			٠	
1968	42,015	3,437	45, 4 88				
1969	43,300	3,438	46,738				

^{*}Actual Grand Total; 596 TMS-AIME/ISS-AIME Joint Corporate Members included once in 1975.

AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, INC. MEMBERSHIP STATISTICS January 1, 1977

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		Total	1,596 22 22 3 27	1	1,134 344 43	4,126 131 9 860 17	1 1 232 19	773 6 1,125	40	476 2 1	45 359 192 62	8 64 953 34 3	53 245 85 221 1,162	129 17 356 26	158 72 70 9 1,045	87 296 182 1,039	872 116 61	120 92 233 54 69
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	ľ	Drilling & Well Comp. N	336 7 2 3		320 93 6	1,148 34 1 173	1 81 4	210 3	9	136	14 116 79 8	1 14 76 13	16 71 12 63 63	39 78 9	223 19 3 266	23 29 40 236	346 25 20	33 63 14 16
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AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, INC. MEMBERSHIP STATISTICS January 1, 1977

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American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.

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CLASSIFICATION OF MEMBERS

AIME - THREE YEAR TALLY

					1976	Breakdown	
	1974	1975	1976	SME	TMS	ISS	SPE
Honorary Members	37	37	40	15	6	4	15
Members	30,667	32,263	33,575	11,852	3,930	2,673	15,120
Associates	8,006	8,827	9,842	3,411	1,273	931	4,227
Juniors	7,992	8,958	9,031	3,506	635	277	4,613
Assoc. Juniors		***	154	80	, 	**************************************	74
TOTAL	46,702	50,085	52,642	18,864	5,844	3,885	24,049
Students	4,988	6,663	7,131	3,608	1,971	6	1,546
GRAND TOTAL	51,690	56,748 - 596	59,773	22,472	7,815	3,891	25,595
		56,152*					

1976 NET MEMBERSHIP GAINS (LOSSES)

SME-AIME	1,529
TMS-AIME	(252)
ISS-AIME	261
SPE-AIME	1,487
	-
A TMF	3 025

APPROXIMATE MEMBERSHIP RATIO BY SOCIETY FOR LAST 15 YEARS

DECEMBER	SME-AIME	TMS-AIME	ISS-AIME	SPE-AIME
1961	35.3%	25.4%		39.3%
1962	34.5	26.7		38.8
1963	33.6	28.0		38.4
1964	33.0	29.1		37.9
1965	32,2	29.5		38.3
1966	32.9	29.6		37.5
1967	33.7	29.2		37.1
1968	33.7	29.1		37.2
1969	33.7	29.1	a state of the sta	37.2
1970	34.0	29.0		37.0
1971	35.4	26.9		37.7
1972	36.7	25.6		37.7
1973	36.9	22.3		40.8
1974	36.8	20.5		42.7
1975	36.9	14.2	6.4	42.5
1976	37.6	13.1	6.5	42.8
		Annual Control of the		and the second of the second o

^{*} Actual Grand Total; 596 TMS-AIME/ISS-AIME Joint Corporate Members included once in 1975.

AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, INC.

REPORT ON THE

105th AIME ANNUAL MEETING

The Las Vegas Hilton, Hotel Sahara and Las Vegas Convention Center were used for the 105th AIME Annual Meeting. All technical meetings were held in the Las Vegas Convention Center.

The Southern Nevada Section Annual Meeting Committee, under the chairmanship of Mr. Warren Warhol, was very active in planning and organizing the meeting. A special thank you was extended to the committee for their outstanding contribution.

A comparison of estimated and actual registration figures and percent of member attendance is shown below:

Registration

Estimate	Actual
2400	2885
450	761
150	332
200	263
300	750
3500	4991
	2400 450 150 200 300

Percent of Member Attendance

Society of Mining Engineers of AIME	54%
The Metallurgical Society of AIME	29ક
Iron and Steel Society of AIME	_
Society of Petroleum Engineers of AIME	. 3%

A comparison of budgeted and actual registration revenue and expense is shown below:

is snown below:		Actual	Budget
Registration revenue Total expenses charged to	· · · · · · · · · · · · · · · · · · ·	\$\frac{173,545.00}{83,216.78}	\$129,150.00 113,655.00
registration revenue			
Revenue over expenses		90,328,22	15,495.00
Distribution of Revenue:			
SME-AIME S	553,827.43		
TMS-AIME	20,892.71		
ISS-AIME	1,699.74		
SPE-AIME	2,418.37		
Annual Mtg. Surplus			
Fund	11,489.97		
Total Distribution		\$90,328.22	

SOCIETY OF MINING ENGINEERS OF AIME

REPORT

of the

Executive Secretary

1976

1976 was another good year!

Financially, the \$137,887 surplus was the largest in the history of the Society and brings operating reserves up to \$359,827 or 24.8% of the anticipated operating costs for 1977 (AIME Board established goal is 50%).

Membership continued to grow. The Corporate Member growth rate of 3.6% was down from 6.4% in 1975 because of a change in the procedures for upgrading graduating student members. In 1976, only those graduates who reported their graduations and employment in a related job were upgraded to Corporate Member. Prior to 1976 all students expected to graduate were upgraded and then dropped at the end of the year if they did not accept their new membership grade. Those not graduating and remaining students were returned to student status. As a result of this change, 408 student members were dropped as students in 1976. Special follow-up efforts will be made to determine why the number not responding with the required information is so high. On a directly comparable basis with past years, a record Corporate Member growth rate of 6.8% would be reported. Student Membership increased by 32.4% from 2,726 to 3,608. Overall membership increased by 1,529 from 20,943 to 22,472, an increase of 7.3%.

The AIME Sections administered by SME increased from 52 to 59 and Student Chapters increased from 37 to 45.

The trend toward greater activity, attendance and exhibits at SME Meetings continued. Attendance at the AIME Annual Meeting set a record and 64% of that attendance was attracted by the activities of SME. For the second year in a row, a new Fall Meeting record was set in number of exhibit spaces sold and the number of companies exhibiting. Attendance was a near record and was enhanced by more than 100 members of the Mining and Metallurgical Institute of Japan (MMIJ) who participated in the 3rd Joint Meeting of MMIJ and AIME which was held as part of the Fall Meeting. The two previous joint meetings were held in Japan. A strengthened mining program at the Offshore Technology Conference (OTC) attracted greater interest and resulted in a larger financial return to the Society. The society staff continued to manage the Rapid Excavation and Tunneling Conference (RETC), a joint venture of AIME and the American Society of Civil Engineers (ASCE). The 1976 Conference and Proceedings, the 3rd RETC, were technical and financial successes.

More members used more of the Society's publications than in any previous year. In 1976, the society printed or reprinted 15 titles in its book publishing activities. The Book Sales Department mailed over 18,000, up from less than 14,000 in 1975, and produced more than \$300,000 in revenue for the Society and various funds.

Significant changes were made in the way the Society does business. The cost accounting system was implemented, and revised as operating experience showed where changes were needed. The "in-house" mini-computer, which had reached its expansion limits, was exchanged for an on-line terminal capability to an IBM 370 providing cost and capability advantages. To meet the increased requirements for telephone capacity, at an actual reduction in cost, two WATS lines were installed providing economic long-distance capability throughout the contiguous 48 states. Economics in printing are anticipated from a conversion to advanced photocopy technology.

It is the people who have made this all possible. Again the Society acknowledges its debt to them all.

FINANCES

The following shows the surplus (deficit) for the Society since it was started in 1957 (000's omitted):

1957	1958	1959	1960	1961	1962	<u>1963</u>
\$11.4	\$.7	\$(.8)	\$4.5	\$1.0	\$(1.7)	\$(14.8)
		The second of th				
1964	1965	1966	1967	1968	1969	<u>1970</u>
\$20.1	\$1.2	\$52.6	\$30.1	-0-	\$(10.5)	\$(17.6)
<u>1971</u>	1972	1973	1974	1975	1976	
\$(58.9)	\$(32.5)	\$10.7	\$16.6	\$120.4	\$137.9	

PUBLICATIONS DEPARTMENT

During 1976, the financial performance of publications continued to reflect the inflationary pressures of the printing industry, with an overall cost increase of about 15%. A contributing factor, too, is the escalation in postal costs.

Although there was some staff turnover in the department (one magazine staffer was promoted within the Society and a second person resigned when her husband relocated), the relative stability of personnel has contributed to a breadth and maturity of operation. One position for projects-book production has been added.

In the first year of operation, the reorganization of the Society's publishing committees has operated extremely well. Each one of the three committees of the Publications Board--Transactions, MINING ENGINEERING, and Book Publishing--has been a working group, with accomplishments as described under the appropriate headings in this report.

MINING ENGINEERING

Escalating costs continue to be a major concern, particularly in the production area, with rising prices for paper, printing, ink, postage. Every cost-saving measure continues to be investigated; during 1976 the magazine size was reduced slightly, paper weight was reduced, somewhat fewer pages were run (1130 in 1976 vs. 1154 in 1975), and tight control was exercised over the number of color groupings included in each issue. Offsetting factors were increased number of advertising four-color pages (127 vs. 82 in 1975) and increased circulation—number of issues printed in 1976 fluctuated in the 25,000-26,000 area, whereas in 1975 the range was 23,000-24,000. Net effect, in spite of the vigilance, was about a 15% increase in production costs.

Editorial highlights of the year began with the two annual review issues in February and March, the first devoted to mining and exploration and mineral processing, the second to coal and industrial minerals. A number of staff-written reports included Asarco's Tennessee mines; survey of the Idaho Coeur d'Alene district; a report on Alaska's mining industry, present and future potential; and the bicentennial feature, "Great Men in Mining".

A staff tabulation of the source of feature articles in the period January 1975-June 1976 showed that, of the 180 features published, 36 or 20% were staff written or developed, 123 or 68+% were solicited, 8 or 4+% were directly submitted for publication, 6 or 3+% came from Fall or Annual Meetings, and 6 or 3+% came from other AIME-sponsored meetings.

Alan Burton, author of the "Off-Highway Trucks" series that began in August 1975 and concluded in January 1976, has been awarded the Peele Award by the Mining & Exploration Division for his articles.

Continuing a Society-support feature that was initiated in 1975, the magazine contained a pre-Fall Meeting Exhibit report in the August issue. In addition, there were three special inserts during the year: two on the Fall Meeting in the February and October issues and a special membership development one in October. The magazine continues its in-depth coverage of Society affairs--meetings, nominations, awards, and other events of interest to the membership.

Among the editorial features planned for 1977, in addition to the annual reviews in February and March, are a report on phosphate development in eastern Idaho-western Wyoming, special issue in October devoted to coal, and the pre-Fall Meeting Exhibit feature in September. The January issue is devoted to a report on Australia. For the membership Directory, published annually in the July issue, refinements continue to be made in the computer system initiated last year. This year's Directory contained approximately 2000 more entries than that in 1975, and was 20 pages larger.

One area receiving increased support this year was advertising promotional tools to assist the advertising salesmen. Rather than doing brochures during the year on advertising to be mailed separately, a series of house ads, featuring special issues and editorial plans, have been printed in the magazine. After the magazines have been mailed, copies of these ads are then mailed to

the advertising prospect list. For the salesmen, an advertising media kit has been developed. In addition to the standard "tools" such as rate card, circulation audit statement, and standard media report, the kit contains a booklet describing what the Society is and several booklets showing what the circulation is by industry. These cover the iron, copper, and phosphates and potash industries. Next year circulation studies on other facets of the minerals industry will be developed. The final advertising promotional tool was a professionally conducted readership survey, the results of which should be available shortly after the beginning of the year.

The most significant contribution by the MINING ENGINEERING Committee has been to work toward a change in the annual review system. The Divisions of SME-AIME have appointed coordinating editors for the annual reviews, and these editors are working closely with staff to set up a year-long information gathering system. In 1978, the annual reviews will be published in the May issue and will be staff written, based upon the information supplied by the Division editors and their information sources.

Efforts continue to try and improve delivery of MINING ENGINEERING outside the United States. Commencing with the January 1976 issue, magazines for European destinations are being air-freighted to Amsterdam and mailed from there. From the survey taken when the service was initiated, it appears that those magazines are reaching their destination in about two weeks, whereas surface mail was taking about three months. MINING ENGINEERING is also being sent to all U.S. trade missions and commercial libraries overseas.

TRANSACTIONS

In calendar year 1976, 376 pages were published, which included 69 technical papers, 8 technical notes, and the annual index in the December issue. Financial support was provided by the Mineral Processing, Mining & Exploration, and Coal Divisions for extra pages for their respective backlogs.

A major problem in regard to Transactions, discussed by the SME-AIME Board in September and the Transactions Committee throughout the year, was escalating production costs. Headquarters overhead for Transactions has remained relatively constant or even decreased slightly, but printing costs have risen dramatically. In hopes of increasing circulation, the Transactions Committee authorized a sample mailing to those SME-AIME members not currently subscribing. Results of this effort were disappointing.

The alternative to increasing circulation was to find ways to produce Transactions less expensively, particularly since the \$1 subsidy from dues authorized by the SME-AIME Board several years ago was exceeded in 1976. Most publishers of limited-circulation scholarly journals are faced with similar problems and there are a number of pilot projects being conducted on alternative methods of production. The one that seemed most practical to the Transactions Committee is the method being used by the American Geophysical Union for a number of its journals—the author-composition method. Once papers have been accepted, the author is supplied with typing forms for the text and very specific instructions for preparation. Staff then combines the typed text with illustrations and tabular material for the final pages. This, then, is photographed to produce printing plates. Since composition in 1976 cost about \$16,000, this method should result in a substantial saving.

The Transactions Committee continues to monitor review procedures and quality of accepted papers. Time is spent at each meeting discussing ways to "tighten" reviews and communicate the need for quality. Presently the Committee is working on a draft of instructions for reviewers and possibly a revised review form which, by modernizing, will make the reviewer's work easier.

PREPRINTS

Another publishing program that requires subsidy, the Preprint program, is being scrutinized for ways to make it more economically viable. Attention continues to be paid to production methods. A change in equipment at SME-AIME Headquarters may effect a saving, but a year's experience is necessary before that can be determined. An increase in the price of preprints is also being considered. Staff is currently keeping a count of coupons returned by mail and will count those used at meetings to try and develop some meaningful statistics upon which decisions can be made. If every member used all his free coupons, the program would cost over \$120,000 per year. This year 181 papers (123 Annual Meeting, 58 Fall Meeting) were preprinted, and the total number of copies printed was 30,310.

BOOK PUBLISHING

In 1976, SME-AIME newly printed or reprinted 15 titles. New titles are:

"Economics of the Mineral Industries", 3rd ed., W. A. Vogely, ed., 863 pp., hard-cover, illus., May 1976 (published for S. W. Mudd Fund).

"World Mining and Metals Technology", A. Weiss, ed., 2 vols., 1107 pp., hard-cover, illus., September 1976.

"Adventure Beacons" by Ira B. Joralemon, 487 pp., hard-cover, illus., indexes, September 1976 (published for Mining & Metallurgical Society of America).

"1976 RETC Proceedings", R. J. Robbins, R. J. Conlon, eds., 888 pp., hard-cover, illus., September 1976.

"Flotation", M.C. Fuerstenau, ed., 1371 pp., hard-cover, illus., index, October 1976.

Reprinted in 1976 were Coal Preparation (twice), International Symposium on Hydrometallurgy, Monograph on Gold and Silver Cyanidation Plants, the two volumes on Mining and Metallurgy of Lead & Zinc, SME Mining Engineering Handbook, Froth Flotation, Elements of Practical Coal Mining, Surface Mining. Of special interest is the reprint by SME-AIME of Mine Plant by B. F. Tillson, originally published by AIME in 1938.

Book projects that have been approved and are in various stages of development (anticipated publication date is given in parentheses) are: Proceedings of 14th Apcom (early 1977), Monograph on Rock Mechanics Applications in Mining (early 1977), Agglomeration 77 (March 1977), Lead-Zinc Update (October 1977), SME Mineral Processing Handbook (1977), Monograph on Primary Crushers (1977), Coal Preparation 4th ed. (1977), Mine Investment Analysis (late 1977/early 1978), Asbestos (February 1978), Mineral Processing Plant Design (February 1978), and two volumes for the 1979 Apcom (September 1979).

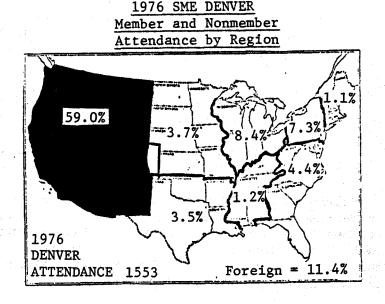
The Book Publishing Committee, in addition to reaching decisions on the various publishing proposals made to it, has held several in-depth discussions of what the Society's publishing policy in regard to books should be, and ways to accomplish the objectives set for each project. The Committee submitted a draft of a "Symposium Planning Guidebook" to the Publications Board which has been accepted and finalized. This will be distributed to future symposia committees as Society policy for their guidance in conducting symposia and any published proceedings generated therefrom. The Committee has also authorized two author's guides, one for author-composition type books, such as symposium proceedings, and one for handbook-type projects.

Book sales of all types grossed over \$300,600 in 1976, and over 18,428 books were mailed.

<u>MEETINGS</u>

The 1976 SME-AIME Fall Meeting and Technological Information Exchange Exhibit (TIE) and the third MMIJ/AIME Meeting was held September 1-3 in Currigan Hall in Denver, Colorado. This was among the best attended Fall Meetings with 3,323 registrants as follows:

Members	1,340
Nonmembers	213
Students	133
Complimentary	22
Ladies	297
Exhibitors	494
Exhibits Only	215
Guests of Exhibitors	609
TOTAL REGISTRATION	3,323



The 1976 Exhibit set a record for participating companies and booths sold:

SME-AIME Fall Meeting - Exhibiting Companies and Booths Sold

Year	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Companies	79	57	34	88	56	18	37	37	-0-	97	108
Booths	102	71	47	117	76	28	52	45	-0-	125	151

As reported in prior years, Fall Meetings have been purposefully moved around the United States to take the Society to the membership. It is thought that this practice would allow attendance at a national meeting by members who might not otherwise be able to. Analysis seems to indicate that this is so as attendance at Fall Meetings continues to be strongly oriented to the region in which the meeting is held. Successful attendance, enough to pay the bills, seems to depend: (1) on the number of members in a region; and, (2) the propensity of the members in that region to support the meeting. The following chart on member-nonmember attendance indicates the validity of these conclusions.

SME-AIME FALL MEETING ATTENDANCE BY GEOGRAPHIC REGIONS

(Members & Nonmembers only)

				ALIENDA	ANCE BY GEC	JGHAPMIC	REGIONS	(IMembe	rs of Monthelliper	z Oniy)	
REGION	1966 TAMPA	1967 LAS VEGAS	1968 MPLS.	1969 S.L.C.	1970 ST. LOUIS	1971 SEATTLE	1972 B'HAM.	1973 PGH.	1974 ACAPULCO	1975 S.L.C.	1976 DENVER
:1	23	20	14	22	23	3 :	8	10	10 A 4.1	, 11), 2	. 17
2	240	145	135	181	162	63	71	244	77	113	112
3	417	69	55	58	74	28	88	66	45	47	68
4	186	122	235	139	133	54	97	. 81	51	(14. 11 4) (15.	129
5	62	17	18	14	44	4	177	21	10	20	18
6	56	54	. 338	93	199	28	39	31	19	- 54	57
°, . 7	94	97	43	79	107	30	27	15	19	. 64	53
8	80	424	98	1,048	285	154	29	48	135	\$97	781
9	56	241	51	215	97	185	27	24	64	163	124
10	51	59	126	163	288	95	22	28	218	57	175
TOTAL	1,265	1,248	1,113	2,012	1,412	644	585	568	642	1,340	1,534

REGION LEGEND

- NEW ENGLAND: Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.
- 2. MIDDLE ATLANTIC: New York, New Jersey, Pennsylvania.
- 3. SOUTH ATLANTIC: Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida.
- 4. EAST NO. CENTRAL: Ohio, Indiana, Illinois, Michigan, Wisconsin.
- EAST SO. CENTRAL: Kentucky, Tennessee, Alabama, Mississippi.

- 6. WEST NO. CENTRAL: Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, Kansas.
- 7. WEST SO. CENTRAL: Arkansas, Louisiana, Oklahoma, Texas.
- 8. MOUNTAIN: Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada.
- 9. PACIFIC: Washington, Oregon, California.
- 10. CANADA FOREIGN UNCLASSIFIED

SME-AIME MEMBER ATTENDANCE - AIME ANNUAL MEETING

		Atter	ndance	
<u>Year</u>	Location	Number	Percent	
1963	Dallas, Texas	1079	47.0%	
1964	New York, New York	1221	44.2%	
1965	Chicago, Illinois	1073	48.2%	47.8% Average
1966	New York, New York	1438	47.7%	
1967	Los Angeles, California	1421	48.5%	
1968	New York, New York	1632	51.1%	
1969	Washington, D.C.	1478	63.1%	
1970	Denver, Colorado	2399	69.4%	
1971	New York, New York	1460	62.0%	
1972	San Francisco, California	1581	72.8%	• 65.3% Average
1973	Chicago, Illinois	1145	62.9%	
1974	Dallas, Texas	1235*	63.2%	
1975	New York, New York	1263	65.0%	
1976	Las Vegas, Nevada	1840	64.0%	
1967 1968 1969 1970 1971 1972 1973 1974	Los Angeles, California New York, New York Washington, D.C. Denver, Colorado New York, New York San Francisco, California Chicago, Illinois Dallas, Texas New York, New York	1421 1632 1478 2399 1460 1581 1145 1235* 1263	48.5% 51.1% 63.1% 69.4% 62.0% 72.8% 62.9% 63.2% 65.0%	• 65.3% Aver

SME-AIME

FINANCIAL PERFORMANCE - OFFSHORE TECHNOLOGY CONFERENCE (OTC)

FY70 THROUGH FY75

Year		Surplus to SME-AIME
1970		\$ 12,198
1971		11,994
1972	* *	19,731
1973	A STATE OF THE STA	31,187
1974		40,824
1975		57,838
1976		75,497
Total		\$ 249,269

Plans for the fourth RETC on June 14-17, 1979 in Atlanta, Georgia are now being developed. The SME-AIME staff provides meeting services for this joint AIME/ASCE venture. The ASCE staff will provide staff support for the Exhibit in 1979.

A Lead-Zinc Update will be held with the SME-AIME Fall Meeting and Exhibit in St. Louis, Missouri, October 19-21, 1977. Plans for this meeting are well under way.

The 1978 SME-AIME Fall Meeting will be held September 11-13 in Orlando, Florida.

The 1979 SME-AIME Fall Meeting and the 17th Ap Com will be held October 17-19 in Tucson, Arizona.

MEMBERSHIP

Total membership in SME was reported at 22,472, up 7.3% from the previous year.

Membership Development

Membership development in 1976 centered on both attracting new members and sustaining current members.

In attracting new members, four contests were continued in 1976. They included: Two individual programs (continuing incentive and annual contest); the Divisional; and Local Sections Contests. Charles Speltz, Earth Resources Inc. of Golden, Colorado, maintained the lead in the Continuing Incentive Contest with 92 members at year's end and was also the winner of the Annual Contest with 39 member credits. Since their inception, a total of 1264 members has been obtained by the individual contests.

The 1976 Divisional winner was the Coal Division which registered a 47.8% gain. Most improvement at the local section level was made by the Utah Coal Section, AIME, with a 40% increase in membership.

Other programs developed in 1976 included SME participation at various mining trade shows and exhibits, including the National Western Mining Conference, Denver, Colorado; AIME Annual Meeting, Las Vegas, Nevada; Offshore Technology Conference, Houston, Texas; Mining and Petroleum Days, Grand Junction, Colorado; SME Fall Meeting and Exhibit, Denver, Colorado; and the National Coal Association Meeting, Louisville, Kentucky.

For the SME Fall Meeting, incentive checks to be applied against the entrance fees were distributed to non-member registrants. In Louisville, a drawing was conducted with SME books being offered as prizes. Results of the drawing brought in a good prospective member list of 100 persons who indicated, on the drawing stub, an interest in joining SME.

Sustaining Members Programs

To maintain current members, several programs were initiated or continued in 1976. They included the development of an SME Locator Service in MINING ENGI-NEERING magazine; mailing of a dues payment reminder notice in March, 1976; and a listing of delinquent members (with gummed mailing labels) to AIME local sections administered by SME. Responses by sections to the latter were good as many of them assisted by making separate mailings. Total corporate members at year's end stood at 18,864 -- up 647 from the previous year.

SME-AIME

Membership by Divisional Interest

AS OF	M&E	COAL	IndMD	MPD	EDUC	ECON	STUD	UNCLASS	TOTAL MEMBERS	MEMBERS
1/1/1968	7,074	1,377	766	2,284	83	273	773	1,849	14,489	13,716
1/1/1969	7,423	1,435	793	2,384	86	300	1,005	2,001	15,427	14,422
1/1/1970	7,782	1,436	795	2,416	90	301	995	2,360	16,175	15,180
1/1/1971	8,035	1,413	811	2,448	95	321	864	2,655	16,642	15,778
1/1/1972	8,288	1,501	838	2,538	99	348	1,170	3,059	17,841	16,671
1/1/1973	8,348	1,518	851	2,541	104	364	1,129	3,474	18,329	17,200
1/1/1974	8,151	1,517	834	2,517	106	349	1,442	3,413	18,329	16,887
1/1/1975	8,222	1,615	824	2,506	104	354	1,872	3,500	18,997	17,125
1/1/1976	8,517	1,860	864	2,638	115	388	2,726	3,835	20,943	18,217
1/1/1977	10,345	2,749	999	3,116	149	502	3,608	1,004	22,472	18,864

Membership by Grade

AS OF	TOTAL MEMBERS	CORPORATE MEMBERS	FULL MEMBERS	ASSOC. MEMBERS	JUNIOR MEMBERS	*ASSOC. JUNIOR MEMBERS	STUDENT MEMBERS
1/1/1968	14,489	13,716	9,892	2,214	1,610	-0-	773
1/1/1969	15,427	14,422	10,763	2,449	1,786	-0-	1,372
1/1/1970	16,175	15,180	11,089	2,583	2,141	-0-	1,330
1/1/1971	16,642	15,778	11,503	2,753	2,305	-0-	1,653
1/1/1972	17,841	16,671	11,343	2,840	2,488	-0-	1,170
1/1/1973	18,329	17,200	11,410	3,054	2,736	-0-	1,129
1/1/1974	18,329	16,887	11,203	2,950	2,734	-0-	1,442
1/1/1975	18,997	17,125	11,096	3,036	2,992	-0-	1,872
1/1/1976	20,943	18,217	11,506	3,210	3,501	-0-	2,726
1/1/1977	22,472	18,864	11,867	3,411	3,506	80	3,608

^{*} New member grade established during 1976.

Corporate Membership Changes -- 1974/1975/1976

Losses	1974	1975	<u>1976</u>
Deaths	175	124	132
Resignations	324	188	276
Drops & Changes of Status	889	1,032	1,137
Unaccepted	<u>36</u>	44	23
TOTAL	1,424	1,388	1,568
Gains	1974	<u>1975</u>	1976
Total	1,662	2,480	2,215
Net	238	1,092	647
Corporate Members	17,125	18,217	18,864
Student Members	1,872	2,726	3,608
TOTAL	18,997	20,943	22,472

BUSINESS SERVICES

1976 was a year of challenge and change for the administrative staff to meet the needs of expanding activities of the Society.

A full allocation cost accounting system was implemented at the start of the year. The system has achieved its objectives of providing more timely information and records to meet the Society's requirements because of growth, particularly in the book and meetings areas, and meeting the Internal Revenue Service requirements regarding the accounting for unrelated business income. Revision of the "first edition" accounting manual, based on the years experience is at the printers and will be distributed shortly.

In September, the "in house" IBM system 3 Computer was exchanged for an IBM 3770 terminal with access to the IBM 370 Computer at the Mining & Metals Division Computer Center of Kennecott Copper Corporation. This change should provide the Society with the advantages of processing records on a large computer at a cost lower than that of the smaller computer which had reached its expansion limits. Reprogramming is continuing to make the most of this opportunity.

Based on a survey of the Society's toll call activity, two Band 5 WATS long distance lines were installed on our switchboard in November. Analysis of the first bill for this service indicates that the expected control and savings in this area will be effected.

As the year closes, the back office area is being arranged to provide space for a Xerox 9200 collating copier and stitcher, which will arrive the last week in December. It is expected this equipment will reduce the cost and the printing time for the Society's "preprints" and other "in house" printing activities.

LOCAL SECTIONS

AIME local sections administered by the Society of Mining Engineers of AIME boasted a very active year in the areas of technical programming, social activities, and field trips. Technical programming efforts resulted in a reported 110 different technical presentations at various luncheon or dinner meetings throughout the Society's 60 administered sections. In addition, regional meetings (consisting of at least one full day of technical programming) that were hosted or co-sponsored by AIME local sections provided another opportunity to exchange technical information as well as to renew friendships. In 1976, the list of meetings included:

Meeting	Participating Sections
Pacific Southwest Mineral Industry Conference San Francisco, California	Northern Nevada San Francisco Southern Nevada Southern California
Arizona Conference Annual Meeting Tucson, Arizona	Arizona Conference
Intermountain Minerals Conference Vail, Colorado	Intermountain
Mining & Petroleum Days Grand Junction, Colorado	Colorado Plateau
Carolinas Fall Meeting New Bern, North Carolina	Carolinas
Central Appalachian Annual Meeting Roanoke, Virginia	Central Appalachian
Minnesota Section Annual Meeting Duluth, Minnesota	Minnesota
Mineral Economics Symposium Washington, D.C.	Washington, D.C. Mineral Economics Subsection
Pacific Northwest Metals and Minerals Conference Coeur d'Alene, Idaho	North Pacific Columbia Oregon

Local Section Profile

The total number of local sections administered by the Society of Mining Engineers of AIME was 60 at year's end.

In 1976, organizational changes in the Arizona Section resulted in the creation of the Arizona Conference, seven local sections and two subsections. The new sections include: Central Arizona, Cochise, Maricopa, Morenci, Pinal Mountain, Southwest Desert, and Tucson. The former Kingman and Yavapai subsections remained as such and were assigned to the Maricopa Section.

The North Dakota Section, AIME, also received full section status in 1976. It serves all AIME members (excluding petroleum members in the western part of the state) in North Dakota.

For subsections, 1976 saw the formation and approval of two AIME subsections. First, the Central Tennessee-South Central Kentucky Subsection was created and assigned to the East Tennessee Section, AIME. It will serve all AIME members residing in 38 counties in Central Tennessee and in 16 counties of Central Kentucky.

Second, the Mineral Economics Subsection of the Washington, D.C. Section, AIME was created to serve members with predominant interests in subjects related to mineral economics in Maryland, the District of Columbia, and 22 counties located in Northern Virginia.

By year's end, additional geographic areas anticipating formation of new AIME local sections to be administered by SME included: Southern Alaska, Grand Canyon (combining Yavapai and Kingman Subsections) and Sacramento.

The Section Representatives

The Section Representatives of AIME local sections administered by SME had an eventful third year of operation. The Eastern Region met in Roanoke, Virginia. The Central and Western Regions held a joint meeting in Denver, Colorado, during the annual SME Fall Meeting.

Both meetings focused on the relationships and roles between SME national officers, the local section, and SME staff headquarters in Salt Lake City. In the area of technical programming, announcement of the Henry Krumb Lecture Series was moved ahead to allow for better utilization and scheduling of the series. In total, the three distinguished Krumb lecturers were hosted in 18 AIME local sections in 1976. Additional technical programming ideas were compiled from local section programs and distributed by SME headquarters to its administered sections.

AIME local sections administered by the SME also began to receive improved administrative support, made possible by the Data Processing capabilities at SME headquarters. Improved services included better turnaround time in handling change of addresses and low cost mailing labels to local sections, when requested.

Progress in the formation and functioning of local section GEM committees was encouraging in 1976. By year's end, nine sections had functioning committees, 16 were formed, and another 15 were anticipating formation by the end of their fiscal year. Thus, 67% of AIME local sections administered by SME indicated or acted to fulfill the mineral-industry communication need at the local community level.

STUDENT CHAPTERS

The number of AIME Student Chapters administered by the Society of Mining Engineers grew significantly in 1976. Various factors contributed to this growth including:

- Rising enrollments in U.S. schools that teach mineral-industry related curricula,
- 2. Appearance of two-year technology schools related primarily to the coal mining technology,
- 3. Creation of AIME's new "associate junior" member grade, and
- 4. Modifications in the requirements for the formation of Student Chapters in AIME.

In 1976, the Central Sacramento Student Chapter of AIME was approved by the AIME Executive Committee. This new chapter involves six schools located in the Sacramento, California area including:

- 1. University of California at Davis
- 2. Consumnes River College
- 3. American River College
- 4. Sacramento City College
- 5. California State University at Sacramento
- 6. Sierra College

The coordinating school is located at Davis. This new concept was designed so as to provide an atmosphere for students that traditionally could not form a formal chapter because of numbers, geographic factors, and regional non-association with mining firms, to meet and discuss various aspects of the mineral industry.

Turning to the area of new chapters at the mining technology schools, the following chapters were approved by the AIME Executive Committee and assigned for administrative purposes to the SME:

- 1. Madisonville Community College, Madisonville, Kentucky
- 2. Rend Lake Junior College, Ina, Illinois
- 3. Southeastern Illinois College, Harrisburg, Illinois
- 4. Southern Illinois University, Carbondale, Illinois

In addition, the following schools are in varying stages for formation:

- 1. Penn State at Fayette
- 2. Indiana State University, Evansville, Indiana
- 3. Sheridan College, Sheridan, Wyoming
- 4. Southern West Virginia Community College, Williamson, Virginia
- 5. Bluefield State College, Bluefield, West Virginia
- 6. Southwest Virginia Community College, Richlands, Virginia
- 7. Pikeville College, Pikeville, Kentucky

Rounding out the new Student Chapters admitted in 1976 are:

- 1. University of California at Berkeley
- 2. University of Sydney, Sydney, Australia

Other Chapters in the formulative stages include:

- 1. University of Pittsburgh
- 2. Colorado State University at Fort Collins
- 3. Idaho State University at Pocatello

Chapter Operations

In 1976, AIME Student Chapters covered the entire spectrum of activities, which reflected total professionally-oriented operations, as was in evidence by the general quality of Student Chapter Annual Reports. The judging committee for Student Contests awarded the 1976 Outstanding Student Chapter to the University of Alabama. In addition, the best student paper awards went to:

<u>Bill A. Hancock</u>, University of Minnesota-Minneapolis, (Undergraduate Division) - "Uranium In Situ Leaching: Its Advantages, Practice, Problems and Computer Simulation."

Kenneth H. Krivanek, Southern Illinois University at Carbondale, (Graduate Division) - "Influence of pH on Adsorption of Various Metals on Clays: Application to Treatment of Palzo Acid Mine Spoil by Sewage Sludge."

It is clear that the number of Student Chapters will continue to grow. Rising enrollments at existing chapters can be expected to enforce the nucleus so as to further develop better technical programming, more interaction with local sections, and service to the appropriate local communities.

HONORS AND AWARDS

The following honors and awards were selected in 1976 for presentation to SME-AIME members during 1977:

Installed as Honorary Member of AIME Dennis L. McElroy

Erskine Ramsay Medal James D. Reilly

Robert H. Richards Award
Denis F. Kelsall

Hal Williams Hardinge Award
Thomas D. Murphy

Daniel C. Jackling Award Forbes K. Wilson

Young Engineer Award Michael P. Miano

A.M. Gaudin Award D.W. Frommer (1975) W.A. Griffith

> Taggart Award J.B. Hiskey

Robert Peele Award
A.K. Burton

SME Best Presentation Award

J. David Rogers

J. Philip Bromberg

Environmental Conservation
Distinguished Service Award
Max J. Spendlove

AIME LEGION OF HONOR
(50 Years of Continuous Membership)

The following 17 SME-AIME Members will become members of the AIME Legion of Honor during 1977:

Raymond R. Beard

George B. Blonsky

Michael J. Callow

Philip W. Chase

Benjamin H. Cody

Frank Ebbutt

Howard P. Eells

Charles C. Goddard, Jr.

R.H.B. Jones

Frank A. Moss

H.A. Neustaedter

George H. Newman

C.M. Romanowitz

Earl F. Salisbury

G.A. Vissac

A.E. Weissenborn

Clarence L. Woods

COAL DIVISION SCHOLARSHIP RECIPIENTS

197	6-I	9//	

Richard A. Donnelly	University of Missouri-Rolla	\$650.00
David M. Dopp	University of Missouri-Rolla	650.00
John J. Roman, Jr.	University of Missouri-Rolla	650.00
Randall J. Tomic	University of Missouri-Rolla	650.00
Randall J. Tomic	University of Alssouri-Kolla	050.00
Benny J. Ison	University of Kentucky	650.00
Donald R. Emmett, Jr.	University of Kentucky	650.00
		650.00
Douglas R. York	University of Kentucky	
Luther A. Miracle	University of Kentucky	650.00
The second secon		
Renetta Scacchitti	The Pennsylvania State University	650.00
Mark Balchar	The Pennsylvania State University	650.00
Gregory Lewicki	The Pennsylvania State University	650.00
James D. McConnell	The Pennsylvania State University	650.00
Patrick Artrip	Virginia Polytechnic Institute	650.00
Steven J. Abbatello	Virginia Polytechnic Institute	650.00
Jerry L. Neal	Virginia Polytechnic Institute	650.00
Patrick J. Malamisura	Virginia Polytechnic Institute	650.00
Donald Morrow	University of Alabama	650.00
Charles C. Stewart	University of Alabama	650.00
Jerry M. Hendon	University of Alabama	650.00
Ricky Reid	University of Alabama	650.00
Daniel D. DeBolt	West Virginia University	650.00
Michael J. Smith	West Virginia University	650.00
Robert A. Berry	West Virginia University	650.00
Jill Buchanan	West Virginia University	650.00

GEORGE C. BREIDENBACH SCHOLARSHIP*

Aaron D. Jackson	University of Missouri-Rolla	650.00
	Rolla, Missouri	

^{*} Administered by the Coal Division

Respectfully submitted,

Claude L. Crowley, Executive Secretary

REPORT

of the

EXECUTIVE SECRETARY OF THE METALLURGICAL SOCIETY OF AIME

for 1976

The United States Bicentennial Year, 1976, marked the first full year of Society operations under its reorganized structure. The transition year has gone extremely smooth with only minor refinements required to a few committees which is evidence of the thorough and outstanding job of the Ad Hoc Reorganization Committee.

Financially 1976 was the third straight year the Society operated with a surplus which also was a record \$35,192. The continued improved financial position of the Society is primarily due to increased book sales and JOM subscriptions. In addition larger attendance at all meetings in 1976 added to the revenue, while expenses remained close to budget forecasts.

The 105th AIME Annual Meeting held in Las Vegas was the second largest in attendance in the history of AIME. It also marked the resumption of programming by the Metals Science and Application Metals Program Areas of TMS-AIME. More than 1,300 of the overall 4,241 registrants attended the 101 technical sessions which comprised the metals portion of the technical program. Of special note was the International Symposium on Copper Extraction and Refining sponsored by the Copper, Nickel, and Precious Metals Committee of TMS-AIME held in conjunction with the Annual Meeting. This symposium and its proceedings were highly successful with an average attendance of more than 300 and sales of the proceedings topping 1,100.

Changes were also made in the Fall Meeting format in 1976 with TMS-AIME assuming the management role in the conduct of the meeting from ASM. The new schedule for TMS-AIME technical programming is now the AIME Annual Meeting in February and a Society Fall Meeting in September programmed in cooperation with ASM. This format provides time balance and a sufficient number of sessions for all technical committees to present papers of interest to the membership. The 1976 Fall Meeting held in Niagara Falls, New York, had an attendance of 852 with 72 technical sessions.

Publications, as noted earlier, continue to be a growth part of our services to members. Some 6 new books, 1 short course notebook, 3 abstract bulletins and 99 paper selections were published in 1976. The number of book orders topped 3,400 and paper selections numbered some 3,000 for a total income exceeding \$90,000.

Journal of Metals (JOM) increased its nonmember subscription to 2,352 with a record subscription income of \$58,000+. Metallurgical Transactions experienced an increase in subscriptions with Section B-Process Metallurgy up from 1,250 in 1975 its first year to 1,600 in 1976, and Section A-Physical Metallurgy rising from a subscription level of 4,800 in 1975 to 5,300 for 1976.

A newly designed and written career booklet was published and distributed to some 100 universities offering curriculum in metallurgy, metallurgical engineering and materials science. Requests from high schools and individuals for the booklet are quite high requiring almost a daily distribution.

Total membership at year end was 7,815; with 5,844 members and 1,971 student members. There was no appreciable gain or loss for 1976. Greater emphasis will be placed on membership development/recruitment in 1977 with new application forms and membership brochures.

President Paxton visited six local sections to present a technical talk and discuss Society matters. The four Regional Directors established contact with the sections and student chapters in their region; however, administration of sections and particularly the TMS-AIME members participation in local sections is a problem area. The Board of Directors will be looking at this and long-range planning in 1977.

Miscellaneous activities of the Society saw continued study by the Ad Hoc Certification Committee into developing a proposal for a certification program to be administered by TMS-AIME. A three-part series of articles was published in JOM on this topic and member input requested before the proposal is submitted to the Board of Directors. With increased operating costs in New York City, a Relocation Committee was formed and has begun investigation of alternative sites for the Society headquarters.

TMS-AIME looks forward to 1977 its 20th anniversary year as a constituent society of AIME (the Institute established constituent societies in 1957) proud of its past and determined to be The MetalleaderS of the future.

TMS-AIME

STATEMENT OF INCOME AND EXPENSE

YEAR END, NOVEMBER 30, 1976

REVENUE	
Publications: Books, Paper Selections and Proceedings Publication: Monthly Journal AIME Endowment Funds Interest and Dividends Meetings: AIME Annual Offshore Technology TMS-AIME Fall Electronic Materials Conference	3,145.00 6,333.74 6,087.71 5,013.55 0,815.66 8,346.81 9,112.34 9,405.00 9,183.00 7,125.00 3,582.60 4,225.60
	2,376.01
EXPENSE	
Society Headquarters and Business Services Publications: Books, Paper Selections and Proceedings Publicaton: Monthly Journal Membership Development Section and Student Chapter Rebates Meetings: AIME Annual Offshore Technology TMS-AIME Fall Electronic Materials Conference Short Course Miscellaneous Meetings Other	26,053.35 87,944.31 95,952.53 89,892.98 24,904.86 0,413.41 28,215.00 2,911.74 24,179.61 9,195.60 3,547.15
Awards: TMS-AIME	3,615.17
TOTAL EXPENSE	7,183.21

REVENUE OVER EXPENSE

MEETINGS DEPARTMENT

TECHNICAL CONFERENCES

The Metallurgical Society of AIME, sponsored or co-sponsored four technical conferences during 1976.

<u>Conference</u>	Attendance	1,02,202	umber of S Scheduled
105th AIME Annual Meeting Las Vegas Convention Center, Las Vegas, Nevada February 22-26	4,241 842 TMS		
8th Annual Offshore Tech- nology Conference, Astrodomain, Houston, Texas, May 3-6	61,784 27 TMS		
18th Electronic Materials Conference, University of Utah, Salt Lake City, Utah June 23-25	250	10	75
TMS-AIME Fall Meeting Materials Science Symposium, Niagara Falls, New York, September 20-23	852	72	486

SCHEDULE OF TMS-AIME CONFERENCES FOR 1977 AND 1978

1977

March 6-10 106th AIME Annual Meeting; Hyatt-Regency Atlanta,

Atlanta Marriott, and Atlanta Hilton Hotels;

Atlanta, Georgia

May 2-5 9th Annual Offshore Technology Conference; Astro-

dome, Astrohall; Houston, Texas

June 19-23 International Conference on Radiation Effects in

Breeder Reactor Structural Materials; Camelback

Inn; Scottsdale, Arizona

June 29 - July 1 19th Electronic Materials Conference; Cornell

University; Ithaca, New York

October 24-27 TMS-AIME Fall Meeting; Sheraton-Chicago Hotel;

Chicago, Illinois

1978

February 26 - March 2 107th AIME Annual Meeting; Denver Hilton, Brown

Palace and other hotels; Denver, Colorado

April 16-20 International Conference on Composite Materials II;

Harbour Castle Hotel; Toronto, Canada

May 8-11 10th Annual Offshore Technology Conference; Astro-

dome, Astrohall; Houston, Texas

May 15-18 International Resource Management Conference;

Lakeside Hotel; Canberra, Australia

June 20th Electronic Materials Conference; To be an-

nounced

September 18-21 TMS-AIME Fall Meeting; Stouffer's Riverfront

Towers; St. Louis, Missouri

MEMBERSHIP DEPARTMENT

This department continued in 1976 with one full-time staff member and one parttime temporary employee. Included in its activities are processing new member applications, change of address and status, and membership promotion.

Membership promotion campaigns through meetings, direct mail, and various follow-up work brought in 366 new members in 1976. The membership contest initiated in 1975 had participation by approximately 150 members.

TMS-AIME MEMBERSHIP JANUARY 1, 1977 BY GRADE CLASSIFICATION

Member Associate Member Junior Member Student Member		1,971
Honorary Member		
Senior Member Life Member	and the first of the second section is a second section of the second section in the second section is a second section of the second section of the second section is a second section of the second section of the second section is a second section of the second section of the second section of the section of the second section of the sec	171 10
GRAND TOTAL	and the first of the contract	7,815

The following table shows TMS-AIME Membership by Division for 1972 - 1976.

TMS-AIME MEMBERSHIP 1972 - 1976

	1972	1973	<u>1974</u>	<u> 1975</u>	1976
EMD	1,616	1,552	1,560	1,715	1,863
IMD	3,741	3,268	3,126	2.973	2,998
ISD	3,198	2,974	3,031		
Education	% 30 ,	30	29	25	39
Economics	64	55	56	51	52
Unclassified	1,345	1,155	950	1,124	892
Total Members	9,994	8,994	8,760	5,888	5,844
No. of Members Gained (Lost)	(388)	(1,000)	(232)	167	(44)
Percent Change	(3.73)	(10.00)	(2.57)	2.83	(.99)
Student	1,785	2,113	1,846	<u>2,183</u>	1,974
GRAND TOTAL	<u>11,779</u>	11,107	10,606	8,071	<u>7,815</u>

PUBLICATION DEPARTMENT

The Publication Department continued with four (4) full-time staff members and two (2) part-time assistants due to its expanded work load.

A new abstract form was designed and distributed to enable the direct photooffset printing of abstracts in programs, an effort to reduce type-setting expenses. Refinements to JOM included new layout design, type style for department heads and improved paper stock to provide better quality for photographs.

An updated publication brochure/promotional flyer was mailed to the entire membership and a special mailing list in June, 1976. A special mailing list of libraries, companies and other interested individuals is being maintained and now numbers more than 2,500. This will be used in future years for book promotion.

PAPER SELECTION

In 1976 there were 99 papers published in conjunction with the Annual Meeting.

1976 TMS-AIME PUBLICATIONS

Computer Control in Process Metallurgy: 1976, 105th AIME Annual Meeting, paper-back, 143 pages.

Effect of Hydrogen on the Behavior of Materials: 1975, Jackson Lake, Wyoming, paperback, illustrated, indexed, 712 pages.

Extractive Metallurgy of Copper (Volumes 1 and 2): 1976, 105th AIME Annual Meeting, hard cover, illustrated, indexed, 1055 pages total.

Failure Modes in Composites III: 1976, 105th AIME Annual Meeting, paperback, illustrated, 460 pages.

ICCM-I Proceedings (International Conference on Composite Materials): 1975, Geneva and Boston, hard cover, illustrated, edited discussions, indexed, list of registrants, 2,300 pages total.

<u>Light Metals 1976</u> (Volumes 1 and 2): 1976, 105th AIME Annual Meeting, paperback, illustrated, Volume 1 - 584 pages, Volume 2 - 631 pages.

1976 TMS-AIME REPRINTED PUBLICATIONS

Applications of Thermodynamics to Metallurgical Processes: 1975, Continuing Education Committee, 104th AIME Annual Meeting.

Energy Use and Conservation in the Metals Industry: 1975, Physical Chemistry and Process Technology Division Meetings, 104th AIME Annual Meeting, 298 pages.

ABSTRACT BOOKS

1976 Fall Meeting Program with abstracts 1976 AIME Annual Meeting (TMS-AIME) Electronic Materials Conference program with abstracts

INVENTORY AND BOOK STATUS YEAR END, NOVEMBER 30, 1976

							#	
	Number	Cost	Inventory	ory /76	1976	Overall		Income
<u>Title</u>	Printed	Per Copy	Quantity	Value	Income	Income	Expense	(Expense)
Failure Modes II ('74)	550	\$ 4.33	383	\$ 1.658.39	\$ 1,125,00	\$ 2,489,00	\$ 1,480,11	\$ 1,008.89
	220	6.65	189	1,256,15	1,050.90	1,050.90	1,684.94	(40.489)
Light Metals (174)	1.768	4.33	399	1,727,67				
	1.147	5.00	165	825.00				- 1
Light Metals ('76)	1,210	5.16	315	1,625.24	18,951.10	33,059.50*	17,048.	16,011.48*
Energy: Use Conservation ('75)	1,042**	2.33	512	1,192,96	2,761,75	8,506.00	4,103,60	4,402,40
	330	7,66	169	787.54	2,023,00	2,191,00	1,555.00	636.00
Applic. of Thermodynamics (175	**167	3.40	313	1.064.20	6.067.00	7,332,00	2,265,59	.066.
	0††	4.33	159	688.47	697.00	2,538.80	1,477.29	1,061.51
Extractive Metallurgy of								- 1
Copper (176)	1,528	7.56	321	2,426,76	32,778.00	32,778.00	10,929.74	21,848,26
٠.,								,
rmations	161	2.19	139	304.41	2,507.00	2,765.00	885.92	1,879.08
ICCM Proceedings ('76)	800	20.99	256	5,814.02	8,347.59	8,347.59	16,770.88	-1
_	275	3.23	186	600.78	2,796.00	2,796.00	1,104.54	1,691,46
Rey								
1	550	8.89	265	2,355,85	90 300 ہا	h 300 90	46.429.4	(324.04)
	ره							
** Reprinted in 1976								
							-	
				\$22,327.44	\$83,405.24	\$108,154.69	\$63,930.57	\$44,224.12

JOURNAL OF METALS

For the fiscal year ending November 30, 1976, the Journal of Metals published 636 pages including covers. The total included the following:

Editorial		339	1/2	pages
Society, News,	Meetings	130	2/3	pages
House Advertis	ements	33		pages
Classified Adv	ertisements	21	1/2	pages
Display Advert	isements	19	1/3	pages
Membership Dir	ectory	92		pages

There were three conference programs published during the year:

105th AIME Annual Meeting

1976 Offshore Technology Conference (TMS-AIME sessions only)

1976 TMS-AIME Fall Meeting

The 1976 special theme issues were as follows:

December

January	Planning for the Future
February	TMS-AIME New Officers and Board Members
March	Annual Review of Extractive Metallurgy
April	Marine Technology
May	HSLA Steels
June	Energy Production and Materials
July	Copper Technology
August	Fall Meeting issue
September	Alluminum Technology
October	Directory
November	Lead and Zinc

Superalloys

JOINT PUBLICATION PLAN

Under the Joint Publication Plan with ISS-AIME, TMS-AIME agreed to equally share the surplus or deficit of the combined publication of the IRON AND STEELMAKER magazine and the JOURNAL OF METALS for a three-year period ending November 30, 1977. The combined revenue-expense report of the two publications for 1976 is listed below.

	Journal of Metals	Iron and Steelmaker
REVENUE		
Subscriptions Advertising Reprints Single Issues Directory	\$ 58,432.04 40,056.95 7,312.90 110.82 175.00	\$ 4,891.06 91,662.65 2,065.75 29.40 175.00
Total Revenue	\$106,087.71	\$ 98,823.86
EXPENSE		
Editorial Advertising	\$115,733.48 16,482.95	\$ 98,313.13 41,992.55
Total Expense	\$132,216.43	\$140,305.68
EXPENSE OVER REVENUE	\$ 26,128.72	\$ 41,481.82
TMS-AIME Deficit ISS-AIME Deficit	\$ 26,128.72 \$ 41,481.82	
Combined Deficit	\$ 67,610.54	
Half Combined Deficit	\$ 26,128.72 33,805.27	\$ 41,481.82 33,805.27
	\$ 7,676.55	\$ 7,676.55
Due ISS-AIME from TMS-AIME, Difference on Combined Deficit	\$ 7,676.55	

In 1975 ISS-AIME paid TMS-AIME \$9,762, the difference on the combined deficit. In 1976 TMS-AIME paid ISS-AIME \$7,676 for a net of \$2,086 in favor of TMS-AIME for the first two years.

METALLURGICAL TRANSACTIONS A AND B - Report for 1976

METALLURGICAL TRANSACTIONS A

Technical Papers Published

		No. of TPs	No. of Pages	Total Pages
EMD++ ISS IMD+ and ASM		1 0 <u>208</u>	5 0 1,616	
Totals		209	1,621	1,621
	Communic	ations Published		
EMD++ ISS IMD+ and ASM		0 1 <u>71</u>	0 3 <u>176</u>	
Totals		72	179	179
Title Pages Table of Contents, Bland Pages	etc.			12 3 ⁴ 116
Total Pages in 197	6 MET TRANS A	•		1,962*

METALLURGICAL TRANSACTIONS B

Technical Papers Published

		No. of TPs	No. of Pages	Total Pages
EMD++ ISS IMD+ and ASM		49 18 <u>12</u>	383 155 <u>86</u>	
Totals		79	624	624
	Communicat	ions Published		
EMD++ ISS IMD+ and ASM		13 2 <u>5</u>	22.5 3.5 <u>9.0</u>	
Totals		20	35.0	35
Title Pages Table of Contents, etc. Blank Pages				14 14 43
Total Pages in 1976 MET	TRANS B			720*

METALLURGICAL TRANSACTIONS A AND B COMBINED

Technical Papers Published

	No. of TP's	No. of Pages	Total Pages
EMD++ ISS IMD+ and ASM	50 18 <u>220</u>	388 155 1 , 702	
Totals	288	2,245	2,245
	Communications Publishe	<u>d</u>	
EMD++ ISS IMD+ and ASM	13 3 <u>76</u>	22.5 6.5 <u>185.0</u>	
Totals	92	214.0	214
Title Pages Table of Contents, Author Blank Pages	Instructions, etc.		16 48 <u>159</u>
Total Pages in 1976 METALI	URGICAL TRANSACTIONS A a	and B	2,682*

^{*} An Annual Index appears in the December issue of both A and B.

METALLURGICAL TRANSACTIONS is intended to serve the needs of the entire metallurgical profession. Thus, Society distinctions are eliminated throughout both the review and publication process. Consequently, the tabular data represents the distribution of effort in the Board of Review and not the source of the papers.

⁺ Now Metallurgical Transactions A Subcommittee.

⁺⁺ Now Metallurgical Transactions B Subcommittee.

HONORS AND AWARDS

TMS-AIME Board of Directors has elected the following members to the grade of Fellow in 1977:

> Jagdish C. Agarwal William T. Lankford, Jr. Arthur S. Nowick William R. Opie

The following awards were presented by The Metallurgical Society of AIME to recognize our 1976 award recipients.

Robert Lansing Hardy Gold Medal

Robert Sinclair is the recipient of the Robert Lansing Hardy Gold Medal in recognition of exceptional promise of a successful career in the field of metallurgy. This award is given annually to a metallurgist who has not reached his thirtieth birthday before the end of the calendar year during which his selection is made.

Champion H. Mathewson Gold Medal

The Champion H. Mathewson Gold Medal was bestowed upon Johannes Weertmann for his outstanding contributions to the theory of high temperature deformation and fracture of solids.

Extractive Metallurgy Science Award

R. Schuhmann, Jr., Pei-Cheh Chen, P. Palanisamy and D. H. R. Sarma were selected for this award for their paper "Thermodynamics of Converting Lead Sulfide."

Extractive Metallurgy Technology Award

A. R. Gordon and R. W. Pickering were selected for this award for their paper "Improved Leaching Technologies in the Electrolytic Zinc Industry."

William Hume-Rothery Award

The William Hume-Rothery Award was bestowed upon Jacques Friedel.

LECTURES

ASM/TMS-AIME Joint Distinguished Lecture in Materials and Society

Dr. William O. Baker: "Materials Proficiency for National Progress"

Extractive Metallurgy Lecture

Professor Paul E. Queneau: "Oxygen Technology and Conservation"

Institute of Metals Lecture and R. F. Mehl Award

"Interrelations of Composition, Transformation Kinetics, Professor Earl R. Parker: Morphology, and Mechanical Properties of Alloy Steels"

ACKNOWLEDGEMENT

Appreciation is extended to all members, Officers, and Directors of The Metallurgical Society of AIME. Special thanks to President Harold W. Paxton.

Thanks also to the staff who have performed most admirably. The staff as of January 1, 1977 by position are:

<u>Title</u>	<u>Name</u>	Years of Service
Executive Secretary	Alexander R. Scott	6
Administrative Assistant	Julie-Anne Argila	2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
Conference Manager	Corinne Kiely	2
Director of Publications	Konrad J. A. Kundig	3 · · · · · · · · · · · · · · · · · · ·
Manager of Publications	Darda Lourie	
Publications Production Coordinator	Estelle Tsantes	2
Publications Design Coordinator	Ruth McMurray	
Business Manager	Peter DeLuca	1 3 .
Membership Manager	Carole Chavanne	4
Book Order and Subscription Coordinator	Michael Moroses	
Mail Room Supervisor	Ed Willis	4

Respectfully submitted,

alexander but

Alexander R. Scott Executive Secretary REPORT

of the

EXECUTIVE SECRETARY OF THE IRON AND STEEL SOCIETY OF AIME

for 1976

The Iron and Steel Society continued its efforts to meet the needs of its members during the year. In addition to holding four National Conferences during the year, the Society took major steps in expanding its efforts in Continuing Education Programs, Book Publications, and Student Porgrams.

The Ironmaking Division of ISS-AIME joined in an effort with the Minerals Processing Division of SME-AIME to present the Symposium on Agglomeration to be presented at the 106th AIME Annual Meeting in Atlanta. The Ironmaking Division is planning a joint conference with the Coal Division of SME-AIME for the Spring of 1978 in Pittsburgh.

Perhaps the largest undertaking facing the Society in the coming year is the planning and preparation for the Third International Iron and Steel Congress which ISS-AIME will co-host with ASM in April 1978. The Congress will be held in conjunction with the 61st National Open Hearth and Basic Oxygen Steelmaking Conference and the 38th Ironmaking Conference in Chicago. Preparations are being made to welcome over 2000 people to the four day conference. Over 200 papers will be presented on subjects ranging from raw materials for ironmaking through the casting or teeming of molten steel. Over 400 foreign iron and steelmakers are expected to attend.

Finally in June 1976 the Executive Committee of the ISS-AIME Board of Directors decided to relocate Society Headquarters to Pittsburgh. The Society gave notice to vacate the United Engineering Building July 1, 1976. Under current lease ISS-AIME Headquarters must give a three-year notice to vacate. In December of 1976 the Board of Directors approved the formation of a Site Selection and Relocation Finance Committee to seek out suitable Headquarters offices in the Pittsburgh area. Part of the committee's function will be the study of the feasibility of building an office building versus leasing space in an existing building. The committee has already begun deliberations on this issue.

FINANCE

The Society's consolidated income for fiscal 1976 totaled \$486,133. Total operating expense equaled \$474,484. The surplus for the year was \$8,649. In 1975, the Society incurred a \$26,319 deficit which included \$13,500 start-up cost.

ISS-AIME LOCAL SECTIONS

At the end of fiscal 1976, there were seven local sections under the administration of ISS-AIME. The sections are listed below with the number of AIME members in good standing as of November 30, 1976.

1)	Eastern Iron and Steel Section of AIME	587
	Cleveland Iron and Steel Section of Aime	256
	Detroit Iron and Steel Section of AIME	146
4)	Globetrotters Iron and Steel Section of AIME	423
5)	Niagara Section of Aime	142
6)	Penn-Ohio Section of AIME	150
7)	Western Iron and Steel Section of AIME	101

In December of 1976 the Executive Committee of the Chicago AIME Section voted to transfer the administration of the Section from TMS to ISS, effective January 1, 1977. The Chicago Section has over 1,050 members, including 568 members of the Iron and Steel Society.

In addition to the local sections, there are three study groups affiliated with the above ISS-AIME Sections. There is the Northern Ohio Steel Making Division, which operates in the Penn-Ohio geographical area, the Chicago Steelmaking Group which is negotiating for a sub-section status with the Chicago AIME and the Buffalo Hamilton NOH group which operates in the Niagara geographical area.

AWARDS

The James B. Austin Award will be presented to Dr. Harry L. Bishop, 1976 President of ISS-AIME on March 8, 1977 at the Iron and Steel Society PTD Luncheon. The Past President Award was named after Dr. Austin to honor him for his contribution of time, effort, and ability toward the formation of the Iron and Steel Society of AIME.

The Grade of Distinguished Member will be presented to six members of the Society in 1977. A Distinguished Member of the Iron and Steel Society of AIME is a member of the Society who has made outstanding contributions toward the production of iron and steel or in fields embracing the activities of iron and steel technology and the Iron and Steel Society of AIME.

The six members who will be elevated to the Grade of Distinguished Member in 1977 are:

Lawrence J. Darken for his creative leadership in metallurgical research and contribution to the knowledge of the physical chemistry of iron and steelmaking.

William O. Philbrook for his leadership in metallurgical research and contribution to the knowledge of the physical chemistry of iron and steelmaking, and to his dedication and service to AIME.

Edgar B. Speer for imagination, leadership and management skill and his dedication to the welfare and progress of the iron and steel industry.

Dr. Karl L. Fetters for his long service in the Iron and Steel Division of AIME. For his outstanding contributions to the ferrous industry in both management and development.

George R. Fitterer for his imaginative leadership in metallurgical research and his contribution to the knowledge of the physical chemistry of steelmaking.

Dr. Donald J. Blickwede for his participation in research and development activities leading to the introduction of new products and his management resulting in successful development of numerous innovative processes in the iron and steel industry.

The following awards were presented by the Iron and Steel Society of AIME during 1976:

Robert W. Hunt Silver Medal Award

Donald C. Hilty and John W. Farrell were selected for this award for the best original paper on iron and steel, "Modifications of Inclusions by Calcium."

J. E. Johnson, Jr. Award

This award is given to encourage young men in creative work in the metallurgy or manufacture of pig iron. The recipient of this award must be under forty years of age when he completes the work that merits recognition. The 1976 recipient was Thomas R. Meadowcroft for his contribution to the advancement of the art and science of ironmaking, and his efforts towards the development of the SL/RN direct reduction process to a commercially viable process, and his deep involvement in the utilization aspects of the sponge iron product.

Frank B. McKune Award

This award is given for the best paper on open hearth or basic oxygen steelmaking written by an author or authors under forty years of age. The recipients of the 1976 award were Jayesh G. Dalal and Edward H. Wozniak for their paper "Effect of Controlled Variables upon Efficiencies of In-Furnance Scrap Preheating."

Conference Award

This award is the "runner-up" to the Frank B. McKune Award and was presented in 1976 to Jan O. Kristianson and John E. Hartmann for their paper "Effect of Operating Variables on Sulfur Removal Performance in a BOF Shop."

Charles H. Herty, Jr. Award

Edgar Spetzler and Jochen Wendorff were selected for this award for the best paper presented at the 1975 National Open Hearth and Basic Oxygen Steel Conference, and published in the Conference Proceedings. The title of their paper is "Deoxidation and Desulfurization by Blowing of Calcium Compounds into Molten Steel and Its Effect on the Mechanical Properties of Heavy Plates."

John Chipman Award

This award was established in April 1971 by the Process Technology Division of the Iron and Steel Society to perpetuate the inspiration of John Chipman's outstanding contribution to the science of iron and steelmaking. In 1976, the award was bestowed upon Dr. S. N. Singh for his paper "Mechanism of Alumina Buildup in Tundish Nozzles during Continuous Casting of Aluminum-Killed Steels."

Ironmaking Conference Award

The 1976 Ironmaking Conference Award was presented to Masaaki Higuchi, Teiji Shibuya, and Yasuo Niwa for the best paper presented at the 1975 Ironmaking Conference. The paper title is "Large Capacity Blast Furnances at Nippon Kokan KK."

Mechanical Working and Steel Processing Conference Highest Award

Established in 1971 by the Mechanical Working and Steel Processing Division of the Iron and Steel Society, this award is given for the best paper presented at the previous year's conference and published in the proceedings. In 1976 the award was presented to N. Iwasaki, T. Yamaguchi and T. Taira for their paper "Characteristics of Drop-Weight Tear Tests in the Line Pipe Steel."

Mechanical Working and Steel Processing Conference Meritorious Award

This award is a "runner-up" to the Mechanical Working and Steel Processing Conference Highest Award and is given for the paper chosen as "runner-up" to the best paper presented at the previous year's conference and published in the Proceedings. The 1976 recipients of this award were J. Bell and R. Crawford for their paper "Continuous Casting at McLouth Steel."

Charles W. Briggs Award

This award is conferred for the best paper presented at the annual Electric Furnance Conference. The 1976 award was given to Suresh C. Ghorpade, Richard W. Heine and Ralph G. Gilliland for their paper "Measurement of Dissolved Oxygen in the Electric and Induction Melted Cast Steel."

Joseph Becker Award

This award is given for distinguished achievements in coal carbonization and was presented in 1976 to Dr. William Spackman.

T. L. Joseph Award

The award is conferred for distinguished contributions to ironmaking operations, to a person who has significantly increased iron production or decreased the cost of doing so. The 1976 award was presented to Kenneth M. Haley.

Reinhartz Scholarship Award

This award was established by AIME in honor of Leo R. Reinartz, a graduate of Carnegie-Mellon University, to recognize each year an outstanding student in the University's Department of Metallurgy and Materials Science. The award, a \$1500 scholarship was presented in 1976 to Mark Sherwin.

CONTINUING EDUCATION

The Iron and Steel Society's continuing education programs have been enthusiastically received by our members, and almost an equal number of non-members. The concept of the program is to bring one and two day short courses to be presented either immediately before or following one of our four national conferences.

To date, courses have been offered in Continuous Casting, Use of Ferro Alloys and, Rolling Mill Lubrication. Courses now in the planning stage include Electric Furnance Melt Shop Management, Cast House Management, and Direct Reduction to cite a few. The Continuous Casting Course will be offered again in April following the National Open Hearth and Basic Oxygen Steel Conference in Pittsburgh. This course was first offered in Houston in December 1975 and was presented to 105 registrants.

MEETINGS DEPARTMENT

TECHNICAL CONFERENCES

The Iron and Steel Society of AIME, through its Divisions, sponsored or co-sponsored five technical conferences during 1976.

Conference	Attendance	Number of Tech- nical Sessions	Number of Pa- pers Scheduled
18th Mechanical Work- ing and Steel Process- ing Conference, Holiday Inn, Harvey, Illinois	193	6	27
January 21-22, 1976			
105 AIME Annual Meet- ing, Las Vegas Convention Center, February 22-26, 1976	104	27	155
59th National Open Hearth and Basic Oxygen Steel Conference, The Chase Park Plaza Hotel, St. Louis, Missouri, March 28-31, 1976	855		30
35th Ironmaking Conference The Chase Park Plaza Hotel, St. Louis, Missouri, March 28-31, 1976	656	12 - 12 - 13 - 14 - 15 - 15 - 15 - 15 - 15 - 15 - 15	50
34th Electric Furnace Conference, The Chase Park Plaza Hotel, St. Louis, Missouri, December 7-10, 1976	1210	12	52

SCHEDULE OF ISS_AIME CONFERENCES FOR 1077 AND 1078

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January 26-27	19th Mechanical Working and Steel Processing Conference, William Penn Hotel, Pittsburgh, Pennsylvania
March 6-10	106th AIME Annual Meeting, Hilton, Hyatt Regency & Marriott Hotels, Atlanta, Georgia
April 17-20	60th National Open Hearth and Basic Oxygen Steel Conference and 36th Ironmaking Conference, Pittsburgh Hilton, Pittsburgh, Pennsylvania
December 7-9	35th Electric Furnace Conference, Palmer House, Chicago, Illinois

1978

January 18-19

20th Mechanical Working and Steel Processing Conference

107th AIME Annual Meeting, Denver, Colorado

March 2

April 16-20

61st National Open Hearth and Basic Oxygen Steel Conference and 37th Ironmaking Conference. International Iron and Steel Congress, The Palmer House, Chicago, Illinois

December 6-8

35th Electric Furnace Conference, The Royal York Hotel, Toronto, Ontario

TECHNICAL INFORMATION EXCHANGE

Technical Information Exchange is a small exhibit that is put on at three of the Iron and Steel Society's Conferences each year: the National Open Hearth and Basic Oxygen Steel Conference/Ironmaking Conference, and the Electric Furnace Conference.

The purpose of the Technical Information Exchange program is to provide an opportunity for supplier companies of the iron and steel industry to display their products and services by purchasing exhibit space at these conferences.

Each exhibit is held adjacent to the registration area at a conference thus promoting maximum interchange between conference attendees and representatives from the supplier companies demonstrating the equipment the attendees use every day in their jobs.

Results of the TIE programs held during 1976 are as follows:

Conference	Number of Exhibitors
59th National Open Hearth and Basic Oxygen Steel Conference/35th Ironmaking Conference	20
34th Electric Furnace Conference	23

MEMBERSHIP DEPARTMENT

The Iron and Steel Society has a membership target of 5,000 members in good standing by January 1, 1980. To meet this goal, the Society must show a net gain of 10% annually for the next three years.

As of December 31, 1976 there were 3,891 members in good standing. This accounted for an increase of 261 during the year for a net increase of 7%.

This increase in membership is significant in light of the AIME Board decision in 1975 eliminating reduced dues for Joint membership in two Constituent Societies of AIME. In 1975 ISS-AIME membership roles included 596 "Joint" members. Of these "Joint" members, 428 elected to remain in ISS-AIME as full dues paying members.

ISS-AIME MEMBERSHIP

December 1, 1976

By Grade Classification

Member Associate Member Junior Member Student Member		2574 931 277 6
Honorary Member		4
Senior Member		90
Life		8
Rocky Mountain		1
	Grand Total	3891

PUBLICATION DEPARTMENT

During the year, the Publication Department published four conference proceedings books and the third volume of the BOF Monograph Series.

ISS PUBLICATIONS IN 1976

- Electric Furnace Proceedings 1975, Volume 33, Houston, Texas 50 papers, 239 pages.
- <u>Ironmaking Proceedings 1976, Volume 35</u>, St. Louis Missouri 49 papers, 653 pages.
- Open Hearth Proceedings 1976, Volume 59, St. Louis Missouri 32 papers. 486 pages.
- Mechanical Working and Steel Processing Proceedings, Vol. XIV Harvey, Illinois, 26 papers 375 pages.
- BOF Steelmaking Volume I Introduction Editorial Board: R. D. Pehlke, Chairman, W. F. Porter, R. F. Urban, and J. M. Gaines, Editor, 120 pages.
- BOF Steelmaking Volume II Theory Editorial Board: R. D. Pehlke, Chairman, W. F. Porter, R. F. Urban, and J. M. Gaines, Editor, 321 pages.
- BOF Steelmaking Volume III Design Editorial Board: R. D. Pehlke, Chairman, W. F. Porter, R. R. Urban, and J. M. Gaines, Editor, 309 pages.
- Volumes 4 & 5 of BOF Monograph Series will be published in 1977.

The Publication Committee commissioned Dr. Charles R. Taylor to edit the Electric Furnace Steelmaking Volumes. In addition, the committee appointed Dr. Jack R. Miller, Editorial Director of the Direct Reduction Book Committee.

PROCEEDINGS ADVERTISING

The Iron and Steel Society of AIME sells advertising to help offset the cost of three of the conference proceedings. Following are results of the three committees' efforts during 1976:

Conference	Number of Ads	Net Billed
59th National Open Hearth and Basic Oxygen Steel Conference	50	\$24,888.25
34th Ironmaking Conference	50	\$24,776.75
33rd Electric Furnace Con- ference	31	\$15,639.75

IRON AND STEELMAKER (1&SM) MAGAZINE

The Iron and Steelmaker (I&SM) magazine is the monthly publication of the Iron and Steel Society. The magazine publishes award winning conference papers, papers of wide interest to Society members, Society conference programs, news of the iron and steel industry plus news of Society activities.

In 1976, the Board of Directors voted to establish an Editorial Advisory Committee made up of one representative and one alternate from each of the five operating divisions of the Society. All committee appointments were made by the Division Executive Committees and approved by the Society Board of Directors at their December Board Meeting. With the establishment of the Advisory Committee, the Society Board hopes to provide more articles of current interest to the readers of I&SM.

From a financial standpoint, the Society magazine continued to be plagued by higher paper, printing, and distribution costs. Advertising revenue has not increased as rapidly as projected initially for the magazine. However, revenue from members and non-member subscriptions more than doubled in 1976. Activity in subscriptions this year indicate the revenue will increase.

JOINT PUBLICATION PLAN

Under the Joint Publication Plan with TMS-AIME, ISS-AIME agreed to equally share the surplus or deficit of the combined publication of the Iron and Steelmaker magazine and the Journal of Metals for a three-year period ending November 30, 1977. The combined revenue-expense report of the two publications for 1976 is listed below.

i	REVENUE	I&SM	JOM	COMBINED
	Subscriptions Advertising Reprints Miscellaneous	\$ 4891.06 91662.65 2065.75 204.40	58,432.04 40,056.95 7,312.90 285.82	
	Total Revenue	98,823.86	106,087.71	\$204,911.57
	EXPENSE			
	Editorial Advertising	\$ 98,313.13 41,992.55	115,733.48 16,482.95	
	Total Expenses	\$140,305.68	132,216.43	\$272,522.11
	Deficit	\$ 41,481.82	26,128.72	67,610.54

ISS-AIME's share of the joint publication deficit is \$33,805.27. Because the incurred deficit of I&SM exceeds the Society's share of the Joint Deficit, by \$7,676.55, this amount will be paid to the Iron and Steel Society by The Metallurgical Society.

ISS-AIME HEADQUARTERS STAFF

Lawrence G. Kuhn - Executive Secretary	Otto Johnson - Managing Editor: I&SM Production Manager, ISS-AIME Book Publications
Claire Schmitt - Conference Director	BOOK Publications
Lilou Irvine - Ass't. to Executive Secretary	Vera Dailey - Associate Editor: I&SM Editor: ISS-AIME Book Publications
Susan Zeloznicki - Production Ass't.	Yolanda Chan - Manager, Membership Rolls
	Rosa Rivera - Business Manager
	Terry Segni - Bookkeeper

Louise Miller - Secretary

Respectfully submitted,

Lawrence G. Kuhn Executive Secretary **REPORT**

of the

EXECUTIVE DIRECTOR OF THE SOCIETY OF PETROLEUM ENGINEERS OF AIME

OVERVIEW

Board approval of the Long Range Goals for SPE, implementation of new programming and publications guidelines, a continued expansion of the Society's meetings program, and a record membership were features of the Society's 1976 year.

PLANNING

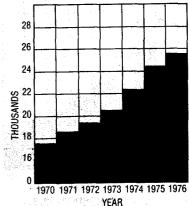
The SPE Board approved a Long Range Plan outlining nine major objectives for SPE. The document recommends future directions for SPE in areas ranging from breadth of technical coverage and information dissemination techniques to continuing education programs and interdisciplinary and public interface activities. A Long Range Planning Implementation Committee was approved by the Board in mid-1976, and this Committee will present final recommendations to the SPE Board in mid-1977 on programs to meet the goals objectives. E. E. Runyan, 1975 SPE President, is chairman of the Implementation Committee and members are: E. C. Babson, 1977 Director for Region I; J. E. Little, 1977 Director for Region VII; George Sawyer, 1977 Director At-Large; and R. L. Whiting, 1977 Director At-Large.

MEMBERSHIP

SPE continued as the largest of the four AIME constituent societies. Membership at year end 1976 was 25,595. The increase of 1,486 over 1975 (24,109) represents a 5.8 percent net increase.

A record 2,540 new member and reinstatement applications for membership (excluding students) were processed. The previous high was 2,273 in 1975. During the year 3,722 members (corporate and student) were added and cumulative drops (excluding students) were 1,073.

A new member grade, Associate Junior Member, was approved by the SPE and AIME Boards in June, 1976. The new grade permits two-year engineering technology graduates and persons with non-engineering and scientific degrees working in the industry to be SPE members. Changes in the student member grade also were approved to permit students enrolled in two-year technology programs to participate in Society activities.



SPE MEMBERSHIP

SPE MEMBERSHIP
APPLICATIONS RECEIVED

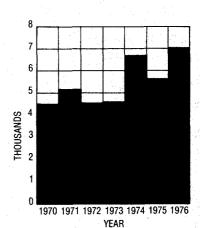
SPE MEMBERSHIP STATISTICS	1972	1973	1974	1975	1976
SPE Membership	19,286	20,290	22,087	24,109	25,595
New Member/Reinstatement Applications Received (Excluding Students)	1,523	1,888	2,212	2,273	2,540
Members Lost (Resigna- tions, Deaths, Dropped Owing Dues) (Excluding Students)	1,034	1,347	1,100	1,258	1,073

MEETINGS

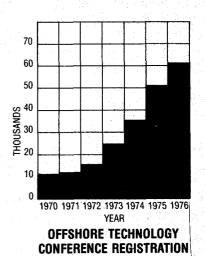
Announcement of a major new Society meeting in London, a record-breaking registration for the Society's Annual Technical Conference and Exhibition, a leading role in the Offshore Technology Conference, and conduct of 11 special topic symposia and regional meetings highlighted the Society's 1976 meetings activities.

The Society's Board of Directors announced plans for the European Offshore Petroleum Conference and Exhibition to be held in London on October 24-27, 1978. The Institute of Petroleum, The Institution of Civil Engineers, The Institution of Electrical Engineers, and The Institution of Mechanical Engineers will be joint sponsors of the conference and exhibition, which will feature the technology of exploration, drilling, production, and transportation of North Sea petroleum and natural gas.

More than 7,000 persons registered for the Society's 1976 Technical Conference and Exhibition in New Orleans. The total eclipsed the previous record of 6,723 set in 1974 for the meeting in Houston. A 211-paper technical program with special emphasis on "Synergy For Recovery" and a 212-booth technical, educational exhibit display were meeting features.



SPE ANNUAL TECHNICAL CONFERENCE AND EXHIBITION REGISTRATION



SPE continued as the dominant Sponsor Society in the Offshore Technology Conference. Society members comprised 37.1 percent of the paid Sponsor Society registrations for the Conference held annually in Houston's Astrodomain. Wilfred R. McLeod, representing SPE, was chairman of the Program

Committee for the Conference, and the Society's Program Subcommittee was responsible for soliciting some 35 percent of the more than 650 papers submitted for Program Committee consideration. OTC is the largest annual technical conference and exhibition in the U.S., and OTC is recognized as the world's leading forum on offshore resources development.

SPE and participating local sections conducted 10 topical and regional meetings during 1976. Technical subjects covered included improved oil-recovery methods, drilling, well completion, production operations, formation damage, numerical simulation methods, and abnormal formation pressures.

SPE TOPICAL-REGIONAL MEETING PROFILE

Meeting & Meeting Site	Registration	Papers on Program
Formation Damage Control Houston, Texas	432	21 7.5
California Regional Long Beach, California	848	
Improved Oil Recovery Tulsa, Oklahoma	1328	41, 200
Numerical Simulation Los Angeles, California	183	22
Southwest Texas Regional Corpus Christi, Texas	100	
Rocky Mountain Regional Casper, Wyoming	262	(1) (23) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
Production Technology Hobbs, New Mexico	118	15
Eastern Regional Columbus, Ohio	232	13
European Spring Amsterdam, Holland	600	26
Offshore Southeast Asia Conference Singapore	400 (1994) 400 (1994) 404 (1994) (1994) (1994) 404 (1994) (1994) (1994)	

PROGRAMMING

Programming for Society meetings is one of the major member service activities. Society technical programming is under the direction of the SPE Program Chairman Claude P. Coppel, Chevron Oil Field Research Company, and chairmen of the

14 SPE technical committees. The SPE Program Committee has principal responsibility for soliciting and selecting papers for the Annual Technical Conference and Exhibition, but the Committee provides assistance to program committees for other SPE regional and topical meetings. SPE is a major programming Society for the annual Offshore Technology Conference.

In addition to programming and publishing operations conducted for SPE meetings, the Society annually prepares the proceedings volumes for the Offshore Technology Conference and for the AIME Council of Economics.

	Papers	
Meeting	on Program	
AIME Council of Economics	30	
Offshore Technology Conference	285	

PUBLICATIONS

Implementation of the revised editorial review procedures, publication of one new monograph and completion of work on another, and the introduction of a bimonthly newsletter for SPE members overseas highlighted the Society's publications program for 1976.

Publication of the monthly <u>Journal of Petroleum Technology</u>, bimonthly <u>Society of Petroleum Engineers Journal</u>, quarterly <u>Improved Oil-Recovery Field Reports</u>, annual <u>Transactions</u>, and <u>Membership Directory</u> highlighted the periodicals activity. Papers and/or <u>Proceedings for 15 symposia ranging from the Annual Technical Conference and Exhibition to regional and topical meetings and staff support for TIC Facts, Monograph, Reprint Series, Improved Recovery, Editorial Review, Ferguson Medal, and Symbols and Metrication committees were other significant activities.</u>

Editorial review procedures approved by the Board in 1975 were successfully implemented in 1976. J. G. Richardson, Exxon Production Research Company, was named to the new position of Senior Technical Editor and his monthly JPT "Technology Summary" has become a major new publication feature.

The new publications policies were directed at streamlining paper review procedures and ensuring that both programming and publication efforts were directed at all interest areas encompassed by Society members.

Efforts to reduce the number of papers reviewed by the Transactions and General Editorial Committees by formation of a three-committee review system had good first-year success; as expected, some modification and reevaluation are being considered for 1977. For 1976, the three review committees evaluated more than 530 manuscripts, a slight increase over the number of papers reviewed in recent years.

Cementing by Dwight K. Smith of Halliburton Services was the new addition to the Monograph Series. Additionally, work was completed during the year on the book Advances in Well Test Analysis, by R. C. Earlougher, Jr., Marathon Oil Company. Publication on this book is expected by mid-1977, and these two books join the previously available texts: Pressure Buildup and Flow Tests in Wells, Hydraulic Fracturing, and The Reservoir Engineering Aspects of Water-flooding.

Manuscript approval has been given for a sixth volume -- Acidizing by B. B. Williams and J. L. Gidley of the Exxon organization and R. S. Schechter of the University of Texas -- and this monograph should be available by late 1977 or early 1978. Other monographs in various stages of preparation cover the following topics: well logging, thermal recovery, fluid behavior, numerical simulation, drilling practices, operational aspects of waterflooding, gas well performance, miscible displacement, and a revision of Hydraulic Fracturing.

At year-end, final production was under way on a two-volume reprint booklet on gas technology. The 13th booklet in the reprint series, <u>Gas Technology</u>, includes papers on reservoir engineering, gas well test analysis, pressure-volume-temperature, storage, pipeline and multiphase flow, and completions.

Other reprint booklets in preparation cover phase behavior, offshore technology, economics and finance, formation evaluation, and updates of existing texts on well logging, well completions, pressure and analysis methods, thermal recovery techniques, and oil-gas property evaluation and reserve estimates.

The Society's Board of Directors endorsed a metric conversion plan for the SPE programming and publications effort. Under guidance of the SPE Symbols and Metrication Committee, a plan was approved to provide guidelines for authors on metric conversion, and a timetable of January 1, 1980 was set for the Society to be prepared to convert totally to metric units in paper presentations and publications.

The international posture assumed by SPE has resulted in problems in providing timely delivery of publications to members residing outside the U.S. and Europe. Need for timely communication, a vital member service, led to introduction of JPT In Brief, a synopsis of current Society news, that is forwarded via air mail to more than 2,000 members outside the U.S. and Europe. This bimonthly newsletter contains timely news of a nontechnical nature reprinted from JPT.

Editorial review committees were headquartered in Houston, Midland, and Chicago, and review responsibilities were divided into specific areas of technology. The 11-member Houston committee reviewed more than 230 papers; the 9-member Midland committee reviewed 150 manuscripts; and more than 130 papers were reviewed by the 6-member Chicago committee.

Although evaluation of the newly implemented procedures has not been completed, there are some definite positive signs. The new procedure and publication guidelines have resulted in publication of more papers dealing with practical operations subjects. Continuing effort will be directed at encouraging members who voluntarily provide paper critiques to prepare more thorough and detailed reviews to assist both the review committees and the authors.

CONTINUING EDUCATION

The Society's continuing education efforts continue to be a major component of SPE's programs. The Distinguished Lecturer program continues to be rated by members as a major member service. The program is financed by participating local sections, the AIME Henry L. Doherty Fund, and the SPE Operating Fund. Some 159 presentations were made to 55 domestic sections and student chapters. The 1975-76 Distinguished Lecturers were:

Hugh B. Barton, Exxon Company USA
L. B. Curtis, Continental Oil Company
R. D. Grimm, Intermountain Gas Company
Joseph Pasini, III, Energy Research
and Development Administration

L. L. Handy, U. of Southern California R. F. Krueger, Union Oil of California Raj Phansalkar, Continental Oil Company

Continued development work was done on the Video-Tape and Short Course programs during 1976. Since inception of the program in 1967, 46 local sections and schools have conducted at least one video-tape program, and 3,509 members have participated. Production work should be completed during early 1977 on "Production Operations III -- Well Simulation", "Production Operations IV -- Workovers", "Production Operations V -- Gas Lift", "Production Operations VII -- Beam Pumping", and "Drilling Operations I -- Well Planning". "Production Operations VI -- Rodless Pumping", and "Drilling Operations II, III, and IV" are planned for production during summer and fall.

The SPE Short Course Series (previously Traveling Lecture Series) had participation from seven sections during 1976. Some 228 SPE members took part in the program in 1976, and more than 1,503 members have completed these courses since 1971.

A revised Audio-Visual Catalogue was published in 1976 to assist local sections in obtaining petroleum oriented continuing education material from sources outside SPE.

In 1976, SPE released a pilot programmed learning text, "Fundamentals of Reservoir Engineering", as a continuing education program. Reaction from members to the new continuing education medium is being measured by the Continuing Education Committee to determine future direction for this program.

TECHNICAL INFORMATION COMMITTEE

The Society's Technical Information Committee program (TIC) saw increased activity at both the Society and local section levels during 1976. The "TIC Facts" page appeared monthly in <u>JPT</u>, highlighting the role of technology in energy-related matters. A special Technical Information Committee workshop was held in conjunction with the SPE Annual Meeting in October, 1976. Representatives from some 30 SPE local sections attended the workshop to learn and to share methods to improve communication between the industry and government, the news media, and the general public.

More than half of the Society's local sections have active Technical Information

Committees. These local section committees conduct ongoing programs to improve public understanding of technical matters relating to the exploration, drilling, and production segments of the petroleum and natural gas industry. Many of the sections conduct "Community Relations" programs in which public officials and media representatives attend special section programs.

LOCAL SECTIONS

The Society's worldwide network of local sections was expanded to 70 with the addition of the Egyptian Section (April, 1976), the Northern Michigan Section (September, 1976), and the Pensacola-Mobile Section (December, 1976). The Northern Michigan Section formerly was a Subsection of the Michigan Section. The SPE Board approved dissolution of the Eastern Venezuela Section.

Society local sections continue as the principal link between Society members and the overall SPE. More than 24,000 SPE members reside in one of the SPE sections or in a section administered by another of the AIME constituent societies.

The Society's officers - 1977 President F. F. Craig, Jr.; 1976 President C. A. Hutchinson, Jr.; 1975 President E. E. Runyan; and SPE Treasurer C. A. Bare - and members of the Headquarters staff made visits to 35 local sections and student chapters - a record visitation schedule.

Local section leaders met with Society officers and directors in New Orleans during the Annual Technical Conference and Exhibition for the Third Annual Section Officers Workshop. More than 60 section officers representing 39 local sections participated in programs designed to provide section officers with information about Society programs and to discuss effective methods for section administration.

SCHOLARSHIPS

The Society and its 70 local sections have now committed more than \$103,115 to the support of the SPE Local Section Scholarship Support Program since the program was initiated in 1974. The Society's Board of Directors has committed \$39,725 to match contributions of 46 local sections participating in the program for the 1977-78 school year.

The Society and the Petroleum Equipment Suppliers Association are entering the tenth year of the PESA Scholarship Program, which provides annual scholarship awards to outstanding petroleum engineering students. Recipients of the 1976 PESA Scholarships were Alex M. Cranberg, University of Texas at Austin; Mark P. Evans, University of Texas at Austin; and James W. Jennings, Jr., University of Wyoming.

AWARDS

The Society's Honors and Awards programs recognize distinguished achievements in, or contributions to, petroleum engineering technology and to the profession.

The Society presented the following major awards during 1976:

John Franklin Carll Award: Wilbur F. Cloud, retired

DeGolyer Distinguished Service Medal: Robert H. McLemore, retired

Cedric K. Ferguson Medal: Robert H. Rossen, Exxon Production Research Co.

SPE Distinguished Service Award: L. B. Curtis, Continental Oil Company Kenneth W. Robbins, Otis Engineering Corp.

Lester C. Uren Award: Herald W. Winkler, Texas Tech University

Outstanding Student Chapter: University of Texas at Austin

FINANCE

For 1976, income exceeded expenses by \$299,458, with income totaling \$2,265,824, compared with expenses of \$1,966,366. The figures do not reflect annual earnings of \$48,259 for the SPE Reserve Account.

HEADQUARTERS STAFF

The Society's headquarters staff consisted of the following persons as of December 31, 1976:

Headquarters Administration

David L. Riley, Executive Director Corky Barth, Secretary

Dan K. Adamson, General Manager Dee Brint, Secretary

Douglas L. Ducate, Associate General Manager Ann Hurley, Secretary

Administrative Services

Richard C. Vilven, Manager
Hazel Gullatt, Data Supervisor
Sandra Irons, Data Control Clerk
Betty Newcomb, Senior Bookkeeper
Marietta Crow, Departmental Secretary
Susan McHam, Membership Secretary
Corinne Smith, Receptionist
Judy Thompson, Book Order Supervisor
M. C. Sirles, Mailroom Supervisor

Communications Department

John C. Rash, Manager Continuing Education Martha Staggs, Secretary

Sherry A. Lombana, Manager Public Relations Frances Deuser, Secretary

Meetings and Advertising Department

Douglas L. Ducate, Manager
Karen Lee, Assistant Meetings Manager
Jack Cozier, Advertising Sales Manager
Ann Hurley, Departmental Secretary
Cyndy Davis, Exhibits Manager
Cathy Jones, Assistant Exhibits Manager
Pamela Butler, Departmental Secretary

Technical Services Department

Thomas A. Sullivan, Manager
Dan K. Adamson, Programming Manager
Ann Gibson, Production Manager
Rebecca Baker, Programming Secretary
Bridget Wilson, Special Publications Supervisor
Georgeann Bilich, Assistant Editor
Jim McInnis, Assistant Editor
Melissa Schuchard, Publications Secretary

Respectfully submitted,

David L. Riley SPE Executive Director REPORT

of the

WAAIME

The Auxiliary continues to flourish through the dedication and tireless efforts of its membership. We are a proud group of ladies who have chosen this method of aiding the young people of our country with scholarships to study the field of earth sciences and also are proud that we contribute to our husbands' professions by sending these young people into the field.

During the year of 1976 we regretfully lost one Section by the withdrawal of the Texas-Permian Basin Section. With that withdrawal, we lost 128 members. This was a drastic drop in our membership, but over the months we have gained some new members, bringing our total as of Jan. 1, 1977 to 2,998. The Section and National Membership Chairmen are working together to try and increase this total, and can use any suggestions from AIME. Though we lost one Section, we gained two-- Arizona-Morenci and Arizona-Silver Bell. The Arizona Sections are quite strong in our Auxiliary and their works are appreciated by the AIME members of the Region. We now have 46 Sections.

Our number one goal is to raise as much money as possible for our Scholarship Loan Fund, and this was a successful year indeed with many new Section fun and fund-raising projects. This year we granted 62 loans in the amount of \$65,000, ten of whom are women. We are happy to see women coming into the professions and are always pleased when we can award a scholarship to them. Our repayment program is in one of its best stages with almost no delinquincy.

The Engineers For Tomorrow program has taken great strides under the direction of its National Chairman. One of the new features added for use in the schools is a kit called the Career Guidance Box. This is a magnificent piece of work that is quite well accepted in the Arizona schools, and I'm sure will be put to much use by other Sections when they develop their own. There are also other kits available - Curiosity Kit - Metals from Mrs. Ernest Spokes, Rt. 1, Box 115, Rolla, Mo. 65401 at a cost of \$1.25. Curiosity Kit-Minerals, from Dr. Richard Ber, Montana College of Minerals and Technology, Butte, Mt. 59701 at a cost of \$1.75. Rock and Mineral Box, Arizona Bureau of Mines, 845 N. Park Ave., Tucson, Az. 85719 at a cost of \$2.75. One of each of these kits was placed in the Career Guidance Box, and there is a waiting list for all six of the boxes

that the Arizona-Tucson Section has available. There are also many publications, film strips and brochures that are generating interest, particularly one entitled "Womengineers", these have been mailed to all Sections.

Newsletter continues to draw a great deal of praise, and once again a special mention is made of thanks to the AIME gentlemen in the Pittsburgh area for their continued help and support of this publication. It is also gratifying to have WAAIMEs come back and say that their husbands enjoyed reading their copy. Publicity continues strong, with WAAIME activities appearing in several trade magazines on a monthly basis. We're grateful for this acknowledgement. Library has instigated several new programs that have been adopted by many of the Sections, and proved to be of great value to our out-of-the-way mining camps.

Chest has been active with some disasters where we have industry, but the big accomplishment here was in the formation of a new program called Chest Assistance for Students. Several letters of grateful appreciation from students have been received since this program was begun.

On the National Board level, two major accomplishments were made through the year. Last February, 1976, at the AIME Board Meeting, Mr. Granville Dutton requested that the WAAIMEs participate in It was an honor to be asked, but at first it their GEM program. was felt that we would be of no help since we are not technically-Throughout the year and with the generous assistance of AIME, a great deal of time has been put into research and study of this program, and at our November Board meeting, it was voted to establish a WAAIME GEM Committee, and to give AIME as much assistance as possible. This program has been discussed with the membership, and it is now quite obvious that a large percent of the WAAIMEs are looking forward to actively working with AIME. thanks to Mr. Julius Harwood, Mr. Joe Alford, Mr. Granville Dutton, Dr. Donald Dahlstrom and Mr. Fred Motts for all the help they gave in presenting information on this program to the WAAIME membership. Also with the help of Mr. Robert Shoemaker and Mr. Claude Crowley, interest in Technical Sessions for the ladies continues to grow.

Last but not least, after a full year of study and many long hours of labor by the By-laws Chairman and her committee, our revised By-laws have been completed and are now in the hands of the members for study and approval. A great deal of work went into this rennovation, and particular appreciation goes to Mrs. Peter B. Nalle for her time and effort. When they are put into their final form, we

will have a much more workable set of By-laws.

There are many other committees that have worked equally as hard as those mentioned, all of whom deserve credit, but space will only allow a hearty thanks to all the ladies who have worked so hard to make this the successful year that it was, and to all the AIME gentlemen who have helped in many ways. Our History has been published by the SME Society, they were thanked in last years report, and the thanks are repeated for this year. It is a most interesting reading.

Once again, a deep measure of thanks to Mr. Alford and all of the AIME for the assistance they have given us so generously. We will always stand willing to help in any way we can.

Respectfully submitted,

Betty Ensign

Mrs. Chester O. Ensign, Jr. National President WAAIME to AIME



AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS

AIME ORGANIZATION

AIME is the internationally recognized technical and professional organization for more than 59,000 individual engineers and scientists engaged in exploration for and production of minerals and minerals fuels and the manufacture of products from them. The technical coverage of the Institute has constantly broadened throughout its existence, until now over 30 different areas of technology are encompassed by AIME. In order to serve its membership effectively, AIME is organized with an AIME Headquarters Office, four Constituent Societies, two Institute Councils, and numerous AIME local Sections and Student Chapters. How these groups relate to one another is illustrated on the attached AIME Organization Chart.

AIME CORPORATE HEADQUARTERS

The AIME Corporate Headquarters handles the administration of activities that relate to AIME as a single organization and functions in ways that will benefit all AIME members and the Institute as a whole. Internally, the Headquarters executes directives of the AIME Board of Directors, manages the AIME Annual Meeting, provides staff support for AIME Councils and committees, administers AIME awards, and manages the AIME Endowment Funds. External functions of the Headquarters are on interdisciplinary activities, relations with other engineering societies and federations, communications with government agencies, and long range planning for the future.

AIME CONSTITUENT SOCIETIES

The four Constituent Societies of AIME are: Society of Mining Engineers of AIME, The Metallurgical Society of AIME, Iron and Steel Society of AIME and Society of Petroleum Engineers of AIME. Their objectives are, in broad terms, to function in ways that will benefit members of the Society by providing exchange of new developments, ideas and concepts within specified areas of technology. To achieve these objectives each Constituent Society conducts technical meetings throughout the year, each publishes a monthly technical journal as well as other publications that deal with specific topics, and each handles the accounting and data processing for its members. Additionally, the Constituent Societies administer, for the Institute, AIME local Sections and AIME Student Chapters based on specific interests of the members of those groups. Present administration is assigned as follows:

Society of Mining Engineers of AIME

61 AIME Local Sections

53 AIME Student Chapters

The Metallurgical Society of AIME

11 AIME Local Sections

39 AIME Student Chapters

Iron and Steel Society of AIME

8 AIME Local Sections

Society of Petroleum Engineers of AIME

70 AIME Local Sections

25 AIME Student Chapters

AIME LOCAL SECTIONS AND STUDENT CHAPTERS

AIME local Sections, through their monthly meetings, provide technical programs to Section members, as well as providing a place for social exchange and development of professional acquaintance. The local Section is a significant means by which AIME members can communicate with the administering Constituent Society and with the Institute.

Students are recognized as the future of AIME and engineering. The Institute has 117 Student Chapters throughout the United States and the world. These Chapters have full status within AIME and work closely with AIME local Sections in developing student engineers.

AIME COUNCILS OF ECONOMICS AND EDUCATION

The AIME Council of Economics is a group within AIME which focuses attention on economics as it relates to the fields of technology encompassed by the Institute. The Council programs comprehensive technical sessions on economics each year at the AIME Annual Meeting. The AIME Council of Education focuses its attention on matters relating to engineering education, accreditation of curricula, and other projects. It also programs each year at the AIME Annual Meeting on topics relating to engineering education.

AIME MEMBERSHIP

Membership in AIME means membership in the Institute as well as membership in one or more of the four Constituent Societies. A person selects a Society affiliation based on interest or field of work. This enables new members to interact with others in a specific field and in related fields. In AIME there is continuing interaction among the technical areas encompassed by the Institute. A person may qualify in one of four grades of membership offered - Member, Associate Member, Junior Member or Student Member. The current dues structure for these grades of membership in each Constituent Society is outlined below.

Society of Mining Engineers of AIME	Iron and Steel Society of AIME
Member \$30	Member \$30
Associate Member \$30	Associate Member \$30
Junior Member (over 6 yrs) \$26	Junior Member (over 6 yrs) \$26
Junior Member (under 6 yrs) \$18	Junior Member (under 6 yrs) \$18
Student Member \$ 4.50	Student Member \$ 4.50
The Metallurgical Society of AIME	Society of Petroleum Engineers of AIME
Member	Member \$20
Associate Member \$30	Associate Member \$20
Junior Member (over 6 yrs) \$26	Junior Member (over 6 yrs) \$17
Junior Member (under 6 yrs) \$18	Junior Member (under 6 yrs)\$12
Student Member \$ 4.50	Student Member \$ 4.50

1977 AIME REVENUE AND EXPENSES PER MEMBER

59,773 MEMBERS - JANUARY 1, 1977

TOTAL BUDGETED REVENUE	• • • • • • • •	\$5, 176, 850
Revenue Per Member:		
Dues and Fees	\$21.92	
Publications	32.07	
Meetings	26.61	
Endowment Funds	2.65	
Miscellaneous	3.36	
Total Revenue Per Member	\$86.61	
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TOTAL BUDGETED EXPENSE	• • • • • • • •	\$4,801,365
Expense Per Member:		
Publications	\$39.34	
Constituent Society HQ and Services	15.65	
Meetings	15.09	
Membership and Special Programs	1.98	
Section and Student Chapter Support	1.39	
AIME Corporate HQ	4.79	
Federations and Other All-Institute	2.09	
Total Expense Per Member	\$80.33	

AIME CORPORATE HEADQUARTERS

Joe B. Alford, Executive Director 345 East 47th Street New York, New York 10017 212/644-7679

SME-AIME HEADQUARTERS

Claude L. Crowley, Executive Secretary 540 Arapeen Drive - Research Park Salt Lake City, Utah 84108 801/582-2744

TMS-AIME HEADQUARTERS

Alexander R. Scott, Executive Secretary 345 East 47th Street
New York, New York 10017
212/644-7637

ISS-AIME HEADQUARTERS

Lawrence G. Kuhn, Executive Secretary 345 East 47th Street New York, New York 10017 212/644-7639

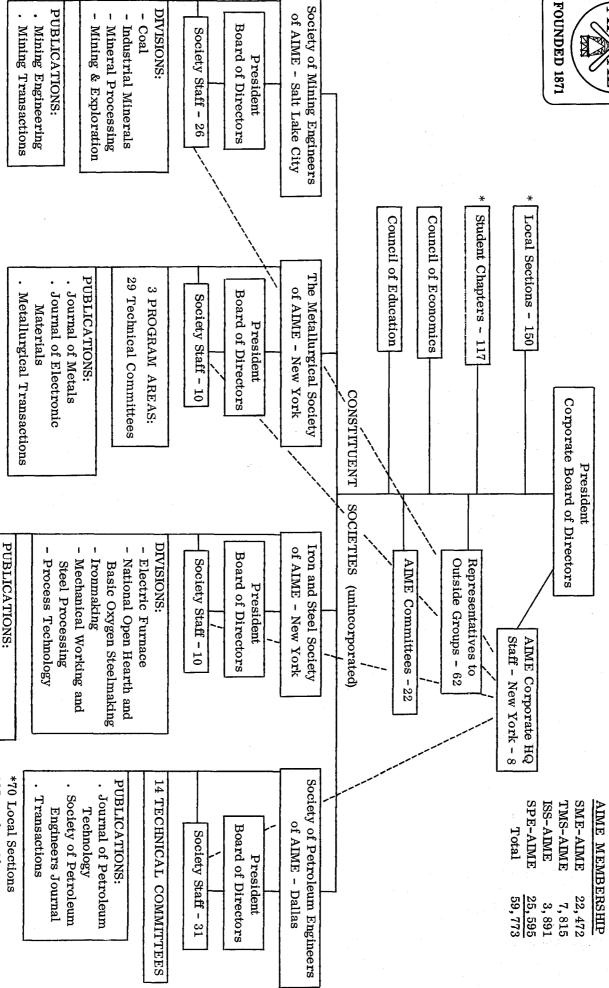
SPE-AIME HEADQUARTERS

David L. Riley, Executive Director 6200 North Central Expressway Dallas, Texas 75206 214/361-6601

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THE AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEER

CORPORATE ORGANIZATION CHART



*8 Local Sections

Conference Proceedings Metallurgical Transactions

* AIME Local Sections and Student Chapters are administered

by the four Constituent Societies of AIME.

*61 Local Sections *53 Student Chapters

*39 Student Chapters

*11 Local Sections

Iron & Steelmaker

*25 Student Chapters

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