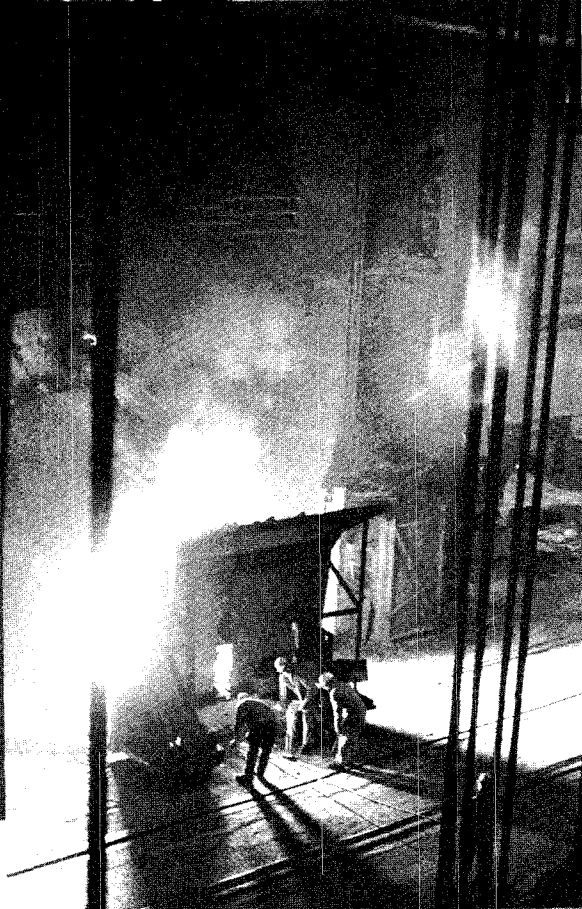
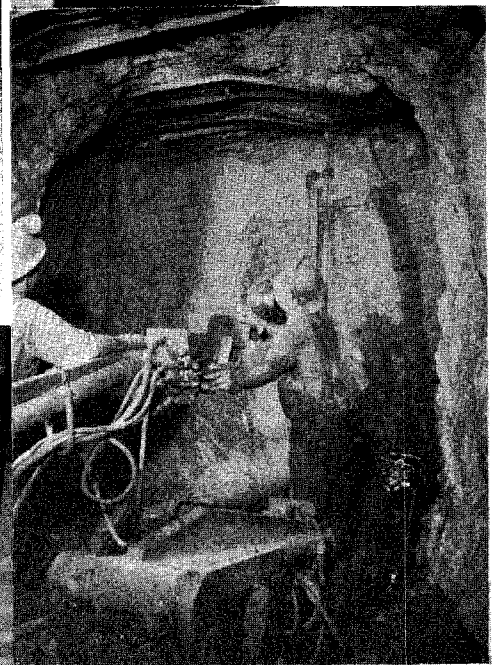
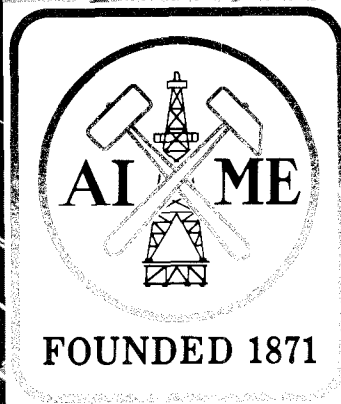
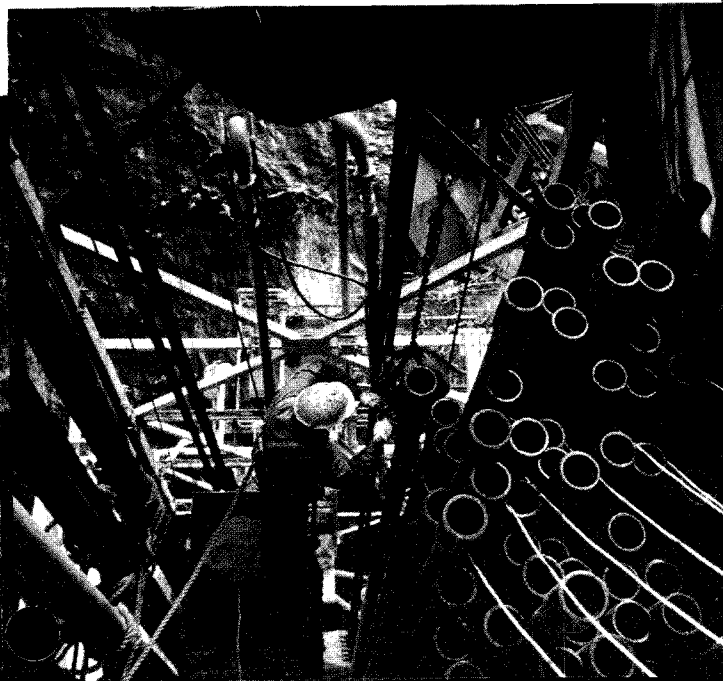


# AIME ANNUAL REPORT · 1977

*Mining, Metallurgical, Iron & Steel and Petroleum Progress*



## A Report from the AIME Board of Directors:



H. A. Nedom, 1977 President

### Dear Member:

The 1977-78 year was one of solid achievement for AIME. All-time highs were reached in many areas, including membership, number of meetings, meeting attendance and pages of publication. In its 108th year, AIME is continuing to improve the quality of services to members and to the public.

AIME's decentralized form of operation in which maximum responsibility is placed upon each Society for the conduct, quality and financing of its program is working well. The Societies are doing a commendable job and are coordinating well with AIME headquarters and with each other. There is now more internal closeness within AIME and better cooperation between Societies than at any time in the past.

An interesting event during 1977 was the unusual number of Society headquarters moves. The ISS and TMS have purchased land at Pittsburgh and will complete their building and move in this coming autumn. SME is planning to buy land and build a building near Denver this year, subject to the approval of a membership referendum. The SPE has substantially enlarged its rented space in Dallas which they have on a long-term lease at very favorable rates. The Institute (including the Societies) now has 83 full-time staff members. After the TMS-ISS move this year, only eight employees will remain in the United Engineering Center in New York. During the last two years, an increasing amount of the time of the officers and headquarters staff of AIME has been devoted to the outreach of the Institute with the general public, government and with other engineering societies. Effective strides are being made in each of these areas.

The GEM (Government, Energy, Minerals) Committee is developing a more effective public affairs program each year and involving more GEM Committees in local sections. The Committee's effort on its own and in cooperation with the other engineering organizations has caused AIME to take public policy positions on a number

of national issues and to communicate our views to the Executive Branch of the U.S. Government and to Congress. During the past year, many letters were written to Government on behalf of AIME stating the engineering position and many speeches were made to outside groups. We believe that approach plus Washington conferences and meetings with the press are causing more factual information to be brought to bear on important public questions, such as energy and mineral policy. The government policy and decision making area is complex and our effort is a small part of the total picture, but we are moving toward a fuller and more productive involvement.

Our close working relationship with other major engineering societies during the year such as ASCE (Civil), ASME (Mechanical), AIChE (Chemical) and IEEE (Electrical), is producing excellent results that are benefiting all organizations. In particular, these societies are working with the officers and staff leaders of the Engineers Joint Council (EJC) and the Engineers' Council for Professional Development (ECPD) to consolidate their services in order to make them more effective and representative of the engineering profession. Four detailed planning task forces are active on this work. The end result is expected to be of great long-range value to all engineering societies and their members.

The recent Annual Meeting in Denver was one of the largest in AIME history, and shows the progress that is being made in top quality inter-disciplinary programming.

This Annual Report and the AIME NEWS insert that appears every few months in the Society journals are designed to keep you better informed on AIME activities that extend beyond the technical and service functions that are handled by each Society. In future issues the AIME NEWS will report to you on a number of ongoing activities of wide interest. One of these will be the work of a Long Range Planning Committee composed of Past Presidents of each Society and AIME that will recommend future courses of action for the Institute. The AIME NEWS will also cover an important joint conference that we are sponsoring with the Australasian Institute of Mining and Metallurgy in Canberra, Australia in May. The conference is entitled "International Resource Management" and has an excellent program, half of which was arranged by AIME.

This Annual Report will cover other phases of AIME programs. We appreciate the continued support and personal input from all members that have made AIME what it is today.

Yours sincerely,

A handwritten signature in dark ink, appearing to read "H. A. Nedom".

H. A. Nedom  
FOR THE BOARD OF DIRECTORS

## Highlights of AIME Operations:

### *AIME Headquarters*

The key role of the AIME Headquarters now is to handle activities which involve the Institute as a whole and serve all AIME members irrespective of Society affiliation. These functions include internal administration, support of the AIME Board of Directors and All-Institute committees and Councils, finance, publications, awards, coordination of AIME units, and management of the AIME Annual Meeting. A major part of Headquarters activities is the representation of AIME externally in a variety of activities which provide an interface between AIME and the rest of the engineering profession, the government, and various other organizations. These "outreach" activities are handled by AIME officers, appointed representatives and the Headquarters staff. During 1977, the Headquarters continued to perform these functions with good results. AIME is one of the nation's leading engineering societies, and continuance of this position in the profession is important to all AIME members.

### *Society of Mining Engineers of AIME*

Much was accomplished in 1977 despite a number of complex matters coming before Society officers, directors and staff. A comprehensive study on long range office arrangements was conducted with the recommendation that the Society headquarters be moved to the Denver area and a building be constructed for it there. More information on this proposal will be published subsequently. The Society enjoyed a good financial year, and membership increased by 7.7 percent to a total of 24,211. Four new Sections were established and two discontinued, bringing the total number of AIME Sections administered by SME to 62. Member attendance at the Annual and Fall Meetings declined slightly, partly because of location and scheduling conflicts. The Society publications program continued to be a major activity with several significant changes covered more fully in the Publications section of this report.

### *The Metallurgical Society of AIME*

The year 1977 was marked by an introspective look for the Society with the conduct of several surveys of the membership on member services, Section and Student Chapter activities, and certification/registration. The TMS Long Range Planning Committee began a study of Section and Student Chapter activities, services, and support from the Society headquarters. The publications

program continued at a strong pace during the year, and attendance at all meetings was especially good.

Membership increased by some 4 percent, reaching a total of 8,067. A major activity during the year was the study of relocation with ISS-AIME to new headquarters offices in Warrendale, Pennsylvania, in a building to be constructed there in 1978. The Society enjoyed a small surplus for the fourth straight year, and internal administration, business office functions and member services continued to operate smoothly.

### *Iron and Steel Society of AIME*

The momentum of the newest Constituent Society of AIME exceeded the projections of even the most optimistic goals for the Society when it was established in 1974. Membership grew by 8.9 percent, totalling 4,248 members and making the goal of 5,000 members by the end of 1979 quite realistic. A key activity during the year was the development of plans for relocation of the Society headquarters and construction of a joint building with TMS-AIME on a four-acre wooded site in the Thorn Hill Industrial Park in Warrendale, Pennsylvania. Completion of the building is expected in late 1978. During 1977, the eight AIME Sections administered by ISS were very active in programs, local meetings and membership development. The Society enjoyed a financial surplus for the year, and the future outlook for ISS continues to be strong.

### *Society of Petroleum Engineers of AIME*

Implementation of a long range plan for the Society was actively begun in 1977, including reevaluation of programs in all areas and the launching of numerous pilot programs involving education, meetings, public interface activities and publications. The Society had its largest membership growth in history in 1977, achieving an increase of 10.5 percent, to 28,284 members. Three new Sections were established, totalling 72 Sections administered by SPE, and extensive visitation to Sections in the U.S. and abroad was made by officers and staff. The publications program continued strong, and meeting attendance hit all time records during the year. A major expansion of the Society headquarters offices in Dallas was accomplished, along with staff additions to provide necessary support for ongoing activities and new programs. Public interface activities of the Society were strong, and dissemination of technical information in the petroleum and energy industries was expanded.

## Membership Development:

Membership development was again a key factor in the operation of the Institute in 1977. Total membership increased by 8.4 percent to a new high of 64,810 corporate and student members. Each of the Constituent Societies of AIME increased their respective membership roles—SME-AIME by 1,739 to 24,211; TMS-AIME by 252 to 8,067; ISS-AIME by 357 to 4,248; SPE-AIME by 2,689 to 28,284.

One of the primary methods of membership development is through the efforts of individual AIME members. There are many members who have convinced colleagues to join AIME, but relatively few who have achieved the recruitment of over 200 new members. The Institute would like to recognize these men for their outstanding service.

Pictured below are three men who have contributed to membership development by recruiting over 200 new members. They are Deral H. Brewer, Harry D. Krebs and James R. Paul. Also pictured is Mr. Robert B. Giles who has recruited over 300 new members.



From left: Brewer, Krebs, Paul and Giles

## Conferences and Meetings:

### *106th AIME Annual Meeting*

The 106th AIME Annual Meeting was held in Atlanta in March. Over 4,000 people attended. One highlight of the meeting was the new AIME All-Institute Program, which consisted of ten interrelated sessions with the theme "Challenges to Resource Development." A second highlight was the Second International Symposium on Agglomeration, co-sponsored by SME-AIME and ISS-AIME. It was the first state-of-the-art presentation since the symposium in Philadelphia in 1961. A second symposium, presented by the Process Technology Division of ISS-AIME, dealt with Automation in the Iron and Steel Industry. Over and above these special sessions, there were 150+ sessions covering all the disciplines encompassed by SME-AIME and TMS-AIME and also several sessions programmed by the two Councils of AIME—Economics and Education.

### *Iron & Steel Conferences*

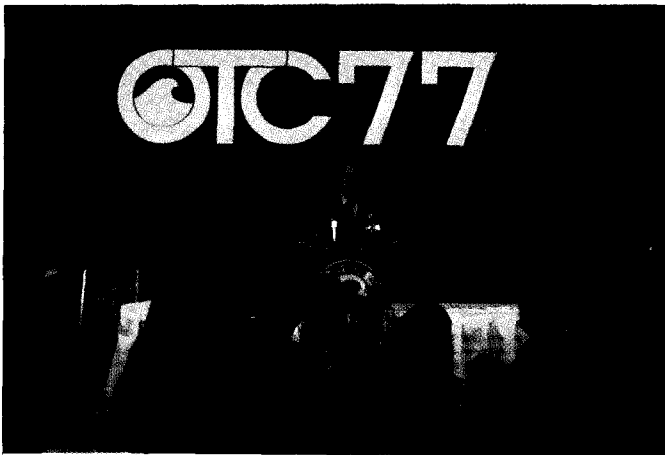
In addition to its participation in the AIME Annual Meeting, the Iron & Steel Society, through its Divisions, sponsored four other technical conferences in 1977. The 19th Mechanical Working and Steel Processing Conference held in January in Pittsburgh had an attendance of 240 engineers. The program consisted of 23 papers presented in the areas of Tubular Products, Flat Rolled Products and Bar and Semi-Finished Products. The 60th National Open Hearth and Basic Oxygen Steel Conference and the 36th Ironmaking Conference were held jointly in Pittsburgh in April. Over 1800 registrants came to listen to a total of 76 papers on the art and science of primary iron and steelmaking.

Over 1200 engineers attended the 35th Electric Furnace Conference held in Chicago in December. Fifty-nine papers were presented in fourteen sessions covering the technology involved in electric furnace steelmaking.

### *Offshore Technology Conference*

OTC, the world's largest technical meeting and exhibition on offshore resource development, again provided registrants with a comprehensive look at the latest technology, equipment and services available to meet the offshore challenge. More than 65,000 of the offshore industry's leading engineers, scientists and managers attended the 1977 Conference. They came to listen to 270 technical papers and view the largest technical-educational exhibition in the Conference's nine year history.

SPE-AIME maintained its role of leadership in the Conference. Of the total registered Sponsor Society members, 43.1% were SPE-AIME members.



Red Adair addresses Press Conference at 1977 OTC

### *SME-AIME Fall Meeting*

The Society of Mining Engineers' Fall Meeting and Exhibit was held at the St. Louis Convention Center in October. Thirty-nine sessions were presented during the course of the meeting by the programming committees of the four Divisions of SME-AIME—Coal, Industrial Minerals, Mining and Exploration and Mineral Processing. Included in the program was a special four session Lead-Zinc Update. Over 2,000 people attended the meeting to listen to the technical papers presented and to see the second largest exhibit since 1966. Two Short Courses on Longwall and Shortwall Mining and Economic Principles for Coal Property Valuation were well attended. Also well attended were the five Field Trips.

### *TMS-AIME Fall Meeting*

The Fall Meeting of TMS-AIME held in October in Chicago attracted over 1200 metallurgical engineers. There were 104 sessions, with over 550 papers presented. The program contained something of interest for everyone attending. To name a few, there were three sessions on phase transformations, four on composite materials and a six-session special symposium on environment sensitive fracture of engineering materials. Also, there were three sessions on directionally aligned superalloys, three on the uses of nonferrous metals in electronics and three on the metallurgy of steels for reactor pressure vessels and piping. On a somewhat broader base, two sessions on materials stability in energy technology were presented.

### *SPE-AIME Fall Meeting*

An all-time record of 7,279 people registered for the SPE Annual Technical Conference and Exhibition in Denver in October. "Energy Strategies," the theme of the meeting, focused on the need for a coordinated plan to provide short-term energy demands, while ensuring adequate supplies for future generations. The program consisted of 34 sessions in which 195 papers were presented, covering the total spectrum of technical areas encompassed by SPE-AIME.

The 245 booth exhibition provided a first hand look at the latest hardware and services available in exploration, drilling and production activities in the oil, natural gas and related energy areas.

### *Regional/Specialty Meetings*

In 1977 SPE-AIME held 13 regional/topical meetings. Total registration at these meetings was 5,353. 261 papers were presented on topics such as economics and evaluation, practical aspects of drilling and production, deep drilling and production, and oil field and geothermal chemistry.

The 19th Annual Conference of the Electronic Materials Committee of TMS-AIME was held in late June at Cornell University. 318 people attended to hear a total of 88 papers on various aspects of electronic materials.

The International Conference: Radiation Effects in Breeder Reactor Structural Materials was held in Scottsdale, Arizona in June. Co-sponsors of the conference were The Metallurgical Society of AIME, the American Society for Testing and Materials, The American Nuclear Society and The U.S. Energy Research and Development Administration. The conference focused on the technological aspects of radiation effects in structural materials in the LMFBR environment. Over 60 invited and contributed papers were presented.

## Publications:

Publishing continues to be a major activity of all four of AIME's Constituent Societies, providing diversified information and ideas in the fields encompassed by the Institute.

In 1977, The Society of Mining Engineers of AIME published four new volumes: *Agglomeration 77*, *Monograph on Rock Mechanics Applications in Mining*, *14th Application of Computer Methods in the Mineral Industry*, and *Lead-Zinc Update*. Reprinted in 1977 were: *Coal Preparation*, *Surface Mining*, *Solution Mining*, *A Decade of Digital Computing in the Mineral Industry*, and *Elements of Practical Coal Mining*. At year-end reprints had also been ordered of *Gold and Silver Cyanidation Plant Practice Monograph*, *Stability in Open Pit Mining*, *International Symposium on Hydrometallurgy and Ore Deposits of the United States*.

A number of special issues or special features were highlighted in SME's monthly journal, *MINING ENGINEERING*, during the year, including the Mining and Exploration and Mineral Processing annual reviews in February, Coal and Industrial Minerals reviews in March, and the largest Membership Directory ever published by SME in July. A pre-Fall Meeting report was included in the September issue. Other special features were a report on the Australian mining industry, survey of the North Dakota lignite industry, a report on Boliden Metall's Stekenjokk mine and a summary of *Lead-Zinc Update* prior to its publication.

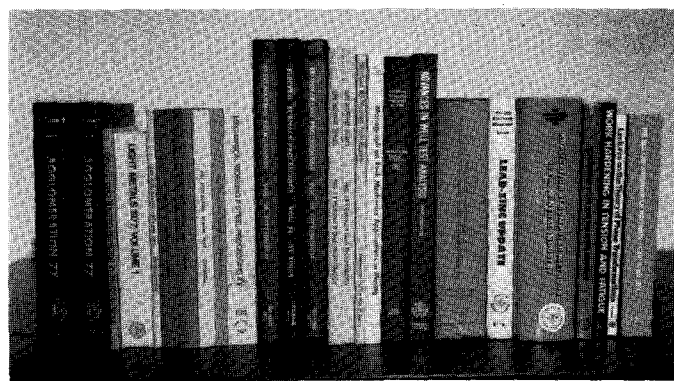
After thorough study by the SME Publications Board, two significant changes were made in the Society's publications program. Commencing in 1978, the separate quarterly *TRANSACTIONS* journal will be discontinued, and a 32-page Technical Papers section will be added to *MINING ENGINEERING*. The annual bound volume will still be published containing the technical papers from *MINING ENGINEERING* and a section of papers of limited interest but of importance to the record. A decision was also made to discontinue the practice of distributing coupons for free preprints to members upon payment of dues and at Society meetings. The preprint program will be put on a self-sustaining basis, and preprints will now be sold at as close to cost as possible.

Publications for The Metallurgical Society of AIME continued at a strong pace in 1977. Six new volumes were published: *Lectures on the Theory of Phase Transformations*, *The Hot Deformation of Austenite*, *Work Hardening in Tension and Fatigue*, *Electro- and Thermo-transport in Metals and Alloys*, *Light Metals 1977*, and *Radiation Effects in Breeder Reactor Structural Materials*. One short course notebook, *Materials Selections for the Minerals Industry*, and four abstract bulletins were published in 1977 as well as a reprint of the volume, *Effect of Hydrogen on Behavior of Materials*.

*JOURNAL OF METALS* published 778 pages in 1977, showing significant gains in advertising revenue. Special theme issues featured articles on the following: HSLA Steels, annual review of Extractive Metallurgy, Materials for Offshore Technology, Environmental Issues, Welding and Joining Technology, Copper Technology, Fracture in Engineering Applications, Light Metals Technology, Lead and Zinc Technology and High Temperature Materials.

*METALLURGICAL TRANSACTIONS*, published jointly with the American Society for Metals, continued to maintain its subscription levels in 1977. A total of 2,736 pages were published in *TRANSACTIONS A* and *B* during the year.

In 1977, the Iron and Steel Society of AIME published five new conference proceedings and the final two volumes of their BOF Monograph Series: *Electric*



*Furnace Proceedings 1976, Volume 34, Ironmaking Proceedings 1977, Volume 36, Open Hearth Proceedings 1977, Volume 60, Mechanical Working and Steel Processing Proceedings, Volume XV, Automation in the Iron and Steel Industry, BOF Steelmaking Volume IV-Operation, and BOF Steelmaking Volume V-Special Topics.*

*THE IRON AND STEELMAKER*, the monthly journal of the Iron and Steel Society, published award winning conference papers, papers of wide interest to those engaged in iron and steel production, Society conference programs, news of the iron and steel industry and news of Society members and activities.

The publications program of the Society of Petroleum Engineers of AIME reflected continued activity in all areas. Publication of the monthly *JOURNAL OF PETROLEUM TECHNOLOGY*, bimonthly *SOCIETY OF PETROLEUM ENGINEERS JOURNAL*, quarterly *ENHANCED OIL-RECOVERY FIELD REPORTS*, bimonthly *JPT IN BRIEF* (for SPE members outside the U.S. and Europe), annual *TRANSACTIONS*, and the Membership Directory highlighted the periodicals effort.

*Advances in Well Test Analysis* became the fifth Monograph published by SPE. Production is also underway on the Monograph *Acidizing Fundamentals*, and a revised version of *Reservoir Engineering Aspects of Waterflooding* was completed in 1977. A two-volume *Gas Technology* booklet was also added to the Society's Reprint Series.

Special feature issues of *JOURNAL OF PETROLEUM TECHNOLOGY* on the SPE Annual Meeting and the Offshore Technology Conference were joined by a special July issue highlighting "Synergy," and a popular new feature, "Technology Summary." The preliminary report of the Society's Symbols and Metrication Committee was published in the December JPT and will be included in the 1977 SPE *TRANSACTIONS*. As part of the continuing effort to reduce delay in publication of papers, the Society has increased the number of papers published in both JPT and SPEJ.

In addition to the publications of the Constituent Societies, the AIME Council of Economics produced two new proceedings volumes in 1977: *Proceedings of the Council of Economics*, 106th AIME Annual Meeting, Atlanta, and *Proceedings of the Second Mineral Economics Symposium*, Washington D.C., November 9, 1976, entitled, "A Challenge for the Materials Industry: Changing Energy Economics."

The AIME Corporate Headquarters also completed plans for publication of a special news insert, entitled *AIME NEWS*, scheduled to appear four times a year in all of the Institute's monthly journals beginning in January 1978. *AIME NEWS* is intended to supplement the news published by the societies and will occasionally analyze issues of broad interest to all AIME members.



## Professional Recognition:

AIME each year recognizes meritorious service of its members and distinguished contributions to the fields of engineering and science that it encompasses. The following prestigious honors and awards were conferred by the Institute in 1977:

### HONORARY MEMBERSHIP

James B. Austin  
Lincoln F. Elkins  
M. King Hubbert  
Frank W. McQuiston, Jr.  
Stanley D. Michaelson

### JAMES DOUGLAS GOLD MEDAL

Carleton C. Long

### BENJAMIN F. FAIRLESS AWARD

Edgar B. Speer

### HAL WILLIAMS HARDINGE AWARD

Thomas D. Murphy

### ANTHONY F. LUCAS GOLD MEDAL

Marshall B. Standing

### ROBERT EARLL MCCONNELL AWARD

Geoffrey G. Hunkin

### ERSKINE RAMSAY MEDAL

James D. Reilly

### CHARLES F. RAND MEMORIAL GOLD MEDAL

Albert P. Gagnebin

### ROBERT H. RICHARDS AWARD

Denis F. Kelsall

### WILLIAM LAWRENCE SAUNDERS GOLD MEDAL

Frank Coolbaugh

### ENVIRONMENTAL CONSERVATION DISTINGUISHED SERVICE AWARD

Max J. Spendlove

### MINERAL ECONOMICS AWARD

John J. Schanz, Jr.

### MINERAL INDUSTRY EDUCATION AWARD

Robert Stefanko

### ROSSITER W. RAYMOND MEMORIAL AWARD

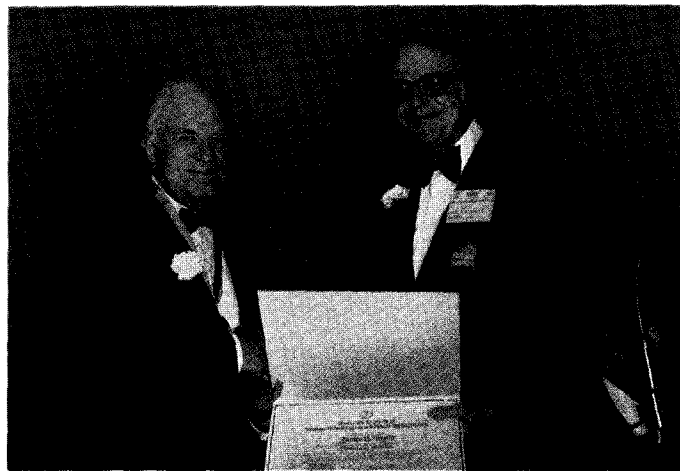
John E. Killough

Outstanding contributions in its fields were also recognized by each of the Constituent Societies of AIME. In 1977 seven outstanding honor and/or achievement awards were conferred by the Society of Mining Engineers of AIME, seven by The Metallurgical Society of AIME, eleven by the Iron and Steel Society of AIME, and five by the Society of Petroleum Engineers of AIME. In addition SME-AIME, TMS-AIME, and ISS-AIME each honored select members by inducting them as Fellows or Distinguished Members of the Society.



John E. Killough (center) receives Alfred Noble Prize from ASCE President William R. Gibbs (right) and congratulations from F. F. Craig, Jr., 1977 SPE-AIME President

F. F. Craig, Jr. died unexpectedly on March 8, 1978



AIME Past President, James B. Austin (left) receives Honorary Membership from President Nedom at 1978 AIME Annual Banquet

## Scholarships

Traditional in AIME is assistance to young men and women in preparing for careers in the minerals, materials and energy fields. Approximately 174 young people in 1977 have benefited from five scholarship programs conducted by AIME and the Constituent Societies.

## 25 Year/Legion of Honor 50 Year Members

As an expression of appreciation of their sense of professional responsibility evidenced by their long-time loyalty to the Institute, Twenty-five Year Certificates were issued to 712 members in 1977. 33 members were inducted in the Legion of Honor, Fifty-Year Members and a certificate and a gold lapel pin designating this class of membership were awarded to each of them.

## Engineering Societies Joint Awards

AIME with its sister Founder Societies and other professional organizations participates on the Board of Award of the John Fritz Medal, Hoover Medal, Alfred Noble Prize, and the Washington Award. In 1977 the following AIME members were selected for three out of four of these coveted awards:

George R. Brown JOHN FRITZ MEDAL

John E. Killough ALFRED NOBLE PRIZE

Michael Tenenbaum WASHINGTON AWARD

## The Woman's Auxiliary to AIME

The national office of The Woman's Auxiliary to AIME and its 42 Sections in the United States and 2 foreign Sections continued its effective programs in 1977 both to attract young people to careers in the minerals, materials, and energy fields and to assist them financially to achieve their goals. With financial support by AIME, an Engineers-for-Tomorrow project, production of a film entitled "A World Without", was accomplished and distributed to almost all of the WAAIME Sections. The film received wide acceptance as a valuable tool in educating the young about the nation's resources. 47 scholarships were granted in 1977 bringing the total number of students in the scholarship program to 80. Approximately \$80,000 is committed in the WAAIME scholarship program. In addition to its educational activities for the benefit of young people, WAAIME cooperated with AIME in its interface with government by establishing programs in a number of Sections in connection with the activities of the Governmental, Energy and Mineral Affairs Committee (GEM).

## 1977 AIME Financial Summary:

During 1977 AIME total operating expenses were \$5,053,330. This was almost \$78 per member, considerably above individual member dues. The charts illustrate where revenue came from and functions for which it was spent.

AIME Revenue Dollar



AIME Expense Dollar



Society Business Services and Operations 20¢  
Membership Development and Section Rebates 4¢  
AIME Institute-Wide and Engineering Federations 8¢

## AIME Balance Sheet

November 30, 1977  
(dollars in thousands)

### Assets

Cash and Temporary cash investments	\$1,480
Receivables	184
Inventories of Publications	596
Investments (Market \$6,788)	6,515
Plant and Equipment, net of depreciation	202
Advances to United Engineering Trustees, Inc.	265
Other assets	63
	<u>\$9,305</u>

### Liabilities and Fund Balances

Accounts payable	\$ 228
Dues received in advance	336
Other advance revenues	165
Annual Meeting surplus fund	50
Endowment and custodian funds	4,978
Property fund	265
Operating surplus	3,283
	<u>\$9,305</u>

## 1977 Officers and Directors:

### AIME BOARD OF DIRECTORS

#### PRESIDENT

H. Arthur Nedom, Weeks Petroleum Limited, Westport, CT

#### PRESIDENT-ELECT

Wayne L. Dowdey, Envirotech Corporation, Salt Lake City, UT

#### PAST PRESIDENT

Julius J. Harwood, Ford Motor Company, Dearborn, MI

#### VICE PRESIDENT-FINANCE

John K. Hammes, Citibank, N.A., New York, NY

#### VICE PRESIDENTS

Harry L. Bishop, Jr., Allegheny Ludlum Steel Corporation, Brackenridge, PA

Thomas V. Falkie, Berwind Corporation, Philadelphia, PA

John F. Havard, Kaiser Engineers, Oakland, CA

Charles A. Hutchinson, Jr., Atlantic Richfield Company, Houston, TX

Harold W. Paxton, U.S. Steel Corporation, Pittsburgh, PA

Kenneth W. Robbins, Otis Engineering Corporation, Dallas, TX

#### DIRECTORS

Hugh B. Barton, Exxon Company, U.S.A., Houston, TX

F. F. Craig, Jr., Amoco International Oil Company, Chicago, IL

Robert I. Jaffee, Electric Power Research Institute, Palo Alto, CA

Marvin L. Katz, Atlantic Richfield Company, Dallas, TX

Robert E. Lund, St. Joe Zinc Company, Monaca, PA

Arthur Marcantonio, Republic Steel Corporation, Cleveland, OH

R. Gill Montgomery, Consultant, Eldorado, IL

Edward J. Ostrowski, National Steel Corporation, Pittsburgh, PA

Donald O. Rausch, NL Industries, Inc., Golden, CO

Robert S. Shoemaker, Bechtel Corporation, San Francisco, CA

Arlie M. Skov, Sohio Petroleum Company, San Francisco, CA

Robert Stefanko, Pennsylvania State U., University Park, PA

#### EXECUTIVE DIRECTOR

Joe B. Alford, AIME, New York, NY

### SOCIETY OF MINING ENGINEERS OF AIME

#### PRESIDENT

Donald O. Rausch, Golden, CO

#### PRESIDENT-ELECT

Robert S. Shoemaker, San Francisco, CA

#### PAST PRESIDENT

John F. Havard, Oakland, CA

#### TREASURER

Alfred Weiss, Washington, D.C.

#### EXECUTIVE DIRECTOR

Claude L. Crowley, Salt Lake City, UT

### THE METALLURGICAL SOCIETY OF AIME

#### PRESIDENT

Robert E. Lund, Monaca, PA

#### PRESIDENT-ELECT

Robert I. Jaffee, Palo Alto, CA

#### PAST PRESIDENT

Harold W. Paxton, Pittsburgh, PA

#### TREASURER

William R. Opie, Carteret, NJ

#### EXECUTIVE DIRECTOR

Alexander R. Scott, New York, NY

### IRON AND STEEL SOCIETY OF AIME

#### PRESIDENT

Edward J. Ostrowski, Pittsburgh, PA

#### PRESIDENT-ELECT

Arthur Marcantonio, Cleveland, OH

#### PAST PRESIDENT

Harry L. Bishop, Jr., Brackenridge, PA

#### TREASURER

George W. Kneppshield, Pittsburgh, PA

#### EXECUTIVE DIRECTOR

Lawrence G. Kuhn, New York, NY

### SOCIETY OF PETROLEUM ENGINEERS OF AIME

#### PRESIDENT

F. F. Craig, Jr., Chicago, IL

#### PRESIDENT-ELECT

Hugh B. Barton, Houston, TX

#### PAST PRESIDENT

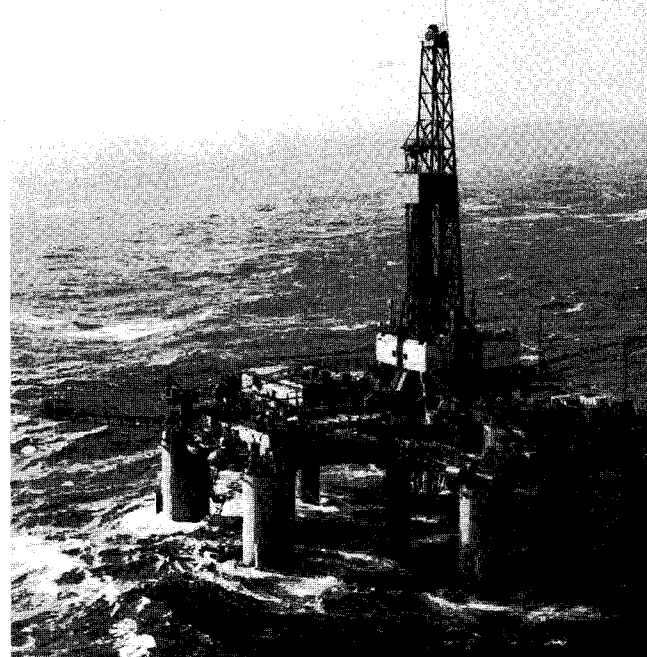
Charles A. Hutchinson, Jr., Houston, TX

#### TREASURER

Charles L. Bare, Houston, TX

#### EXECUTIVE DIRECTOR

David L. Riley, Dallas, TX



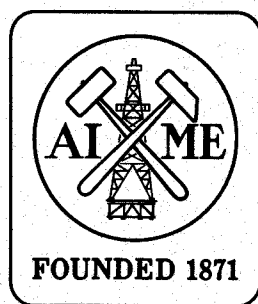
**American Institute of Mining, Metallurgical and Petroleum Engineers**

**345 East Forty-Seventh Street, New York, New York 10017**



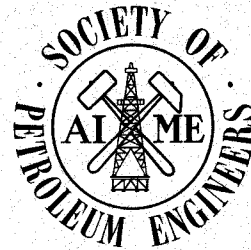
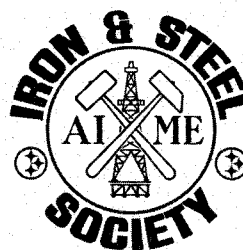
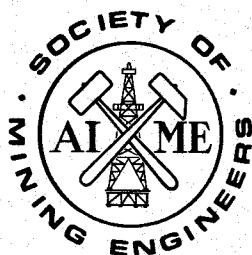
# 1977

# OFFICIAL ANNUAL REVIEW



# AIME

and its  
FOUR CONSTITUENT SOCIETIES



1977

OFFICIAL AIME ANNUAL REVIEW

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

REPORT OF THE EXECUTIVE DIRECTOR, AIME  
FOR 1977

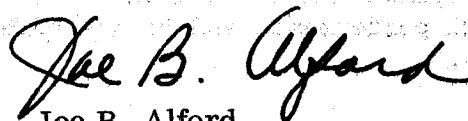
This Annual Review is the official record of operations of AIME for the year 1977. It contains extensive data on the Institute, the Constituent Societies, Councils and Sections. The data reveal that 1977 was a highly successful year for AIME. All activities were well conducted, and the basic operations efficiently handled. Meetings were well attended; overall membership increased by 5,030 members to 64,803, for an 8.4 percent increase; financial resources and assets increased as reflected in the auditor's report herein; and all operating units ended the fiscal year with a surplus.

During the year a significant event occurred when the Iron and Steel Society of AIME made a firm decision to relocate its headquarters from the United Engineering Center in New York to the Pittsburgh area. After study, The Metallurgical Society of AIME joined in the decision to relocate, and plans were developed for the construction of a joint headquarters building for the two Societies in Thorn Hill Industrial Park, some 25 miles northwest of downtown Pittsburgh. The building will consist of 12,000 square feet on 4.369 acres in an excellent setting adjacent to the headquarters of the Society of Automotive Engineers which moved to Thorn Hill in 1974. Financing for the building will be 60 percent by a loan from the AIME Endowment Funds Portfolio and 40 percent from the Pennsylvania Industrial Development Authority.

The year 1977 brought closer cooperation between the Engineering Founder Societies - ASCE, AIME, ASME, IEEE and AIChE. In particular, the Presidents of the societies developed a proposal for the restructuring of some of the joint activities in the engineering profession into a more effective umbrella organization for the profession. AIME President Nedom was Chairman of the task force of the Presidents which developed the proposal, and implementation is now moving forward.

The Institute is indebted to President Nedom for his strong leadership during the year. We are also indebted to other AIME officers and directors, to the Society officers and directors, and all of our efficient staff members. On behalf of all AIME members, I express gratitude to everyone who contributed so much to the Institute during 1977, and confident optimism that our future will remain bright with the continuing contributions of so many dedicated people.

Respectfully submitted,



Joe B. Alford  
Executive Director

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

RECORD OF HONORS AND AWARDS PRESENTED BY AIME IN 1977

The following Honors and Awards were presented by AIME in 1977, in addition to those presented by our Constituent Societies and described elsewhere in this Annual Review:

HONORARY MEMBERSHIP was conferred upon

John S. Bell, "In recognition of his valuable contributions to the profession as a petroleum engineer and executive, his sound leadership of AIME affairs from the local Section to the Institute level, and his devoted assistance to young people."

Dennis L. McElroy, "For his distinguished service to AIME and to the Society of Mining Engineers; for his contribution to Coal Mining through advances in ventilation technology and corporate leadership; and, for his inspirational guidance of young Mine managers and engineers."

Robert H. McLemore, "For his many important contributions to the advancement of petroleum production technology and for outstanding service to the Society of Petroleum Engineers and the Institute."

Clarence E. Sims, "In recognition of his significant contributions to ferrous metallurgy which combined an unusual understanding of both process and physical metallurgy; and for his pioneering work on inclusions in steel, on the effect of lead on machinability and on the role of hydrogen in steel weldments."

The JAMES DOUGLAS GOLD MEDAL to Carleton C. Long, "For his outstanding dedication and uniquely distinguished contributions to the metallurgy of zinc, lead, and their alloys--as a research scientist, and engineer and an educator."

The BENJAMIN F. FAIRLESS AWARD to Edgar B. Speer, "For his outstanding leadership in the growth and technical advancements of the iron and steel industry, and his well proven ability in steel industry management."

The HAL WILLIAMS HARDINGE AWARD to Thomas D. Murphy, "Prominent geologist, engineer and author. For his praiseworthy accomplishments in the development of silica sand and dolomite resources, as well as his dedication and contributions to the Industrial Minerals Division of the Society of Mining Engineers, AIME."

The ANTHONY F. LUCAS GOLD MEDAL AWARD to Marshall B. Standing, "In recognition of his continuing three decades of contribution to the knowledge of reservoir and well performance and to the effective teaching of their practical applications."

The ROBERT EARLL McCONNELL AWARD to Geoffrey G. Hunkin, "For the development of in-situ leaching of uranium by the innovative adaptation of oil field technology, thus extending uranium reserves recoverable with minimum environmental impact."

The ERSKINE RAMSAY MEDAL to James D. Reilly, "An outstanding executive and leader in the Coal Mining Industry, who rose through the ranks to become an authority in mining, labor relations and management."

The CHARLES F. RAND MEMORIAL GOLD MEDAL to Albert P. Gagnebin, "In recognition of more than four decades of innovative ferrous metals research, inspired leadership, and dedication to technology and the society which it serves."

The ROBERT H. RICHARDS AWARD to Denis F. Kelsall, "In recognition of his outstanding contributions to mineral processing in the theory, operation and development of equipment in at least three areas: analysis of performance of Hydro-cyclones and development of the Cyclosizer, pioneering control and modeling of grinding circuits and the simulation of flotation circuits."

The WILLIAM LAWRENCE SAUNDERS GOLD MEDAL to Frank Coolbaugh, "For recognized accomplishments as mining engineer, operator and manager, particularly his initiative and leadership in the development of the new Henderson Mine."

The ENVIRONMENTAL CONSERVATION DISTINGUISHED SERVICE AWARD to Max J. Spendlove, "For successfully achieving the direct research of processes and equipment to treat urban waste and industrial refuse for improvement of the environment; and for the recovery of essential metallic materials through these processes that would otherwise have been lost to the nation."

The MINERAL INDUSTRY EDUCATION AWARD to Robert Stefanko, "For hard, dedicated, and enthusiastic work directed to sustaining and improving education in mineral engineering. In times when others pulled back, he continued to press for strong and significant programs."

The MINERAL ECONOMICS AWARD to John J. Schanz, Jr., "To recognize distinguished contributions to the advancement of mineral economics for leadership and research in energy and mineral affairs, and for training a generation of mineral economists."

The ROSSITER W. RAYMOND AWARD to John Edwin Killough, for his paper, "Reservoir Simulation with History-Dependent Saturation Functions."

LEGION OF HONOR FIFTY-YEAR MEMBER INSIGNIA were conferred upon the following thirty-three members: Raymond R. Beard, George B. Blonsky, Robert L. Boggs, Richard L. Bowron, Michael John Callow, Philip W. Chase, Francis H. Clark, Benjamin H. Cody, Frank Ebbutt, Howard P. Eells, Charles C. Goddard, Jr. Bruce W. Gonser, R. H. B. Jones, Frank M. Levy, Ernest R. Lilley, Thomas F. McCormick, Weston Morrill, Frank A. Moss, H. A. Neustaedter, Jerry B. Newby, George H. Newman, J. R. Reeve, C. M. Romanowitz, Earl F. Salisbury, Charles F. Schmid, O. Cutler Sheppard, Carl A. Steiner, Mark L. Terry, Kent R. Van Horn, G. A. Vissac, Thomas S. Washburn, Albert E. Weissenborn, Clarence L. Woods.



COOPERS & LYBRAND

CERTIFIED PUBLIC ACCOUNTANTS

IN PRINCIPAL AREAS  
OF THE WORLD

Board of Directors,

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

We have examined the balance sheets of AMERICAN INSTITUTE of MINING, METALLURGICAL, and PETROLEUM ENGINEERS, INC. as of November 30, 1977 and 1976, and the related statements of revenue and expenses (including the individual statements of revenue and expenses of the Institute's Headquarters and the four constituent societies for 1977), surplus, and changes in endowment and custodian funds for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our report dated January 14, 1977, we expressed an opinion that the 1976 financial statements fairly presented the financial position, results of operations, and changes in endowment and custodian funds in conformity with generally accepted accounting principles, except for the Institute's treatment of expenditures for equipment, furniture and fixtures. Such expenditures were generally charged to expense as incurred, a practice followed by many nonprofit organizations. As described in Note 2, the Institute has restated its 1976 financial statements to conform with generally accepted accounting principles. Accordingly, our present opinion on the 1976 financial statements, as presented herein, is different from that expressed in our previous report.

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, 1977 and 1976, and the results of its operations and the changes in its endowment and custodian funds for the years then ended, and the individual revenue and expenses of the Institute's Headquarters and the four constituent societies for the year ended November 30, 1977, all in conformity with generally accepted accounting principles applied on a consistent basis after retroactive adjustment for the change, with which we concur, in accounting for equipment, furniture and fixtures as described in Note 2 to the financial statements.

*Copies & hybrid.*

New York, January 16, 1978.

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

BALANCE SHEETS, November 30, 1977 and 1976

ASSETS:		LIABILITIES and FUND BALANCES:	
	<u>1977</u>	<u>1976</u> (Note 2)	<u>1977</u>  <u>1976</u> (Note 2)
Operating fund:			
Cash and temporary cash investments	\$1,171,678	\$1,384,608	\$ 228,086 \$ 299,390
Accounts receivable	183,661	187,878	
Inventories of publications, at cost (Note 1b)	473,841	369,649	49,664 51,500
Investments, at cost plus accrued interest (at market quotations plus accrued interest, approximately \$1,986,000 in 1977 and \$1,481,000 in 1976) (Notes 1d and 3)	1,966,866	1,373,059	335,915 487,913
Equipment, furniture and fixtures, net of accumulated depreciation of \$38,400 and \$25,500, respectively (Notes 1c and 2)	202,238	116,980	164,875 126,837
Prepaid expenses, deferred charges and other assets	<u>63,846</u>	<u>68,507</u>	<u>3,283,590</u> <u>2,535,041</u>
	<u>4,062,130</u>	<u>3,500,681</u>	<u>4,062,130</u> <u>3,500,681</u>
Endowment and custodian funds:			
Investments, at cost plus accrued interest (at market quotations plus accrued interest, approximately \$4,802,000 in 1977 and \$4,986,000 in 1976) (Notes 1d and 3)	4,547,870	4,424,330	4,627,831 4,442,028
Inventories of books, at cost (Note 1b)	121,992	143,454	<u>349,966</u> <u>324,120</u>
Cash and temporary cash investments	<u>307,935</u>	<u>198,364</u>	<u>4,977,797</u> <u>4,766,148</u>
	<u>4,977,797</u>	<u>4,766,148</u>	
Founder Society advances to United Engineering Trustees, Inc. (Note 4)	265,000	265,000	<u>265,000</u> <u>265,000</u>
	<u>\$9,304,927</u>	<u>\$8,531,829</u>	<u>\$9,304,927</u> <u>\$8,531,829</u>

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

STATEMENTS of REVENUE and EXPENSES  
for the years ended November 30, 1977 and 1976

	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 1977	Total 1976 (Note 2)
Revenue:								
Members' dues and entrance fees	\$230,033	\$ 541,796	\$163,740	\$112,245	\$ 485,400	(\$230,033)	\$1,303,181	\$1,240,424
Advertising and publication sales		651,033	243,775	216,755	950,662		2,062,225	1,838,852
Appropriations from endowment funds (Note 6)	129,500	10,000	2,290	35,946			177,736	148,776
Offshore Technology Conference:								
Attendance and membership distribution	49,838	84,518	20,932	10,450	626,033		791,771	653,463
Management fees					147,000		147,000	134,800
Exhibit space commission					41,215		41,215	35,477
Meetings, interest and miscellaneous	10,237	357,492	148,292	176,035	557,183		1,249,239	1,059,418
	419,608	1,644,839	579,029	551,431	2,807,493	(230,033)	5,772,367	5,111,210
Expenses:								
Publications		980,559	252,767	242,956	1,008,495		2,484,777	2,044,782
Society direct expenses		463,071	292,483	254,288	1,152,928		2,162,770	2,121,912
AIME headquarters	405,783	81,495	25,819	16,757	105,962	(230,033)	405,783	376,917
	405,783	1,525,125	571,069	514,001	2,267,385	(230,033)	5,053,330	4,543,611
Excess of revenue over expenses	\$ 13,825	\$ 119,714	\$ 7,960	\$ 37,430	\$ 540,108	-	\$ 719,037	\$ 567,599

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

STATEMENTS of SURPLUS  
for the years ended November 30, 1977 and 1976

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	<u>1977</u>	<u>1976</u>
Balance, beginning of year, as previously reported		\$1,927,642
Add, Adjustment for the cumulative effect on prior years of change in accounting for equipment, furniture and fixtures (Note 2)		<u>42,800</u>
Balance, beginning of year, as adjusted	\$2,535,041	1,970,442
Excess of revenue over expenses for the year	<u>719,037</u>	<u>567,599</u>
	3,254,078	2,538,041
Transfers from (to) custodian funds	<u>29,512</u>	<u>(3,000)</u>
Balance, end of year	<u>\$3,283,590</u>	<u>\$2,535,041</u>

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, 1977 and 1976

	1977		1976			
	Endowment Fund Accounts	Custodian Fund Accounts	Total	Endowment Fund Accounts	Custodian Fund Accounts	Total
Balance of fund accounts, beginning of year	<u>\$4,442,028</u>	<u>\$324,120</u>	<u>\$4,766,148</u>	<u>\$4,279,352</u>	<u>\$272,821</u>	<u>\$4,552,173</u>
Revenue:						
Contributions	15,928	19,436		9,423	15,018	
Net gain on sale of investments	140,666	90		7,620	1,533	
Interest and dividends	246,134	20,919		243,007	15,849	
Sales of books, volumes, etc.	137,034	55,616		154,300	44,744	
Revenue from conferences and committee meetings, net		34,212			3,690	
Royalties from publishers and oil deeds	27,766			50,565		
Other	<u>455</u>	<u>1,611</u>		<u>2,765</u>	<u>1,132</u>	
	<u>567,983</u>	<u>131,884</u>	<u>699,867</u>	<u>467,680</u>	<u>81,966</u>	<u>549,646</u>
			<u>5,466,015</u>			<u>5,101,819</u>
Expenses and appropriations:						
Publication expenses	101,842	40,041		101,317	14,640	
Awards	22,532	27,583		25,733	10,790	
Lecture series and student travel	8,729	333		7,644		
Sundry expenses	20,783	8,569		21,534	8,237	
Appropriations to operating fund	<u>228,294</u>			<u>148,776</u>		
	<u>382,180</u>	<u>76,526</u>	<u>458,706</u>	<u>305,004</u>	<u>33,667</u>	<u>338,671</u>
	<u>4,627,831</u>	<u>379,478</u>	<u>5,007,309</u>	<u>4,442,028</u>	<u>321,120</u>	<u>4,763,148</u>
Transfers from (to) operating fund surplus		<u>(29,512)</u>	<u>(29,512)</u>		<u>3,000</u>	<u>3,000</u>
Balance of fund accounts, end of year	<u>\$4,627,831</u>	<u>\$349,966</u>	<u>\$4,977,797</u>	<u>\$4,442,028</u>	<u>\$324,120</u>	<u>\$4,766,148</u>

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

## NOTES to FINANCIAL STATEMENTS

### 1. Summary of Significant Accounting Policies

#### 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. The 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, 1977 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

Salable publications and books are carried at the lower of cost or net realizable value.

#### c. Equipment, Furniture and Fixtures

Equipment, furniture and fixtures are recorded at cost and are depreciated on the straight-line method over their estimated useful lives. Depreciation expenses for 1977 and 1976 were as follows:

	<u>1977</u>	<u>1976</u>
Charged to publications	\$ 900	\$ 2,700
Charged to Society direct expenses	30,800	18,700
Charged to AIME Headquarters	<u>1,800</u>	<u>1,500</u>
	<u>\$33,500</u>	<u>\$22,900</u>

#### d. 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

Continued

## NOTES to FINANCIAL STATEMENTS, Continued

significantly below the aforementioned carrying value.

e. 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.

f. Interest and Dividend Income

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.

g. Membership Dues

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

h. Pensions

The Institute has a contributory pension plan covering substantially all full-time employees. 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 1977, the Institute adopted the policy of capitalizing the cost of equipment, furniture and fixtures, and depreciating such assets over their estimated useful lives (see Note 1c). Prior to 1977, such expenditures were generally charged to expense as incurred, a practice followed by many nonprofit organizations. This change in accounting was made in order to conform with generally accepted accounting principles, and accordingly, the 1976 financial statements have been restated to apply the new method retroactively. The effect of this accounting change on the excess of revenue over expenses is to increase the excess by \$39,300 in 1977 and \$9,400 in 1976. The balance of the operating fund surplus at December 1, 1975 has been adjusted for the effect of applying retroactively the new method of accounting.

Continued

# NOTES to FINANCIAL STATEMENTS, Continued

## 3. Changes in Investments

	<u>1977</u>	<u>1976</u>
Operating Fund:		
Investments at cost, beginning of year	\$1,373,059	\$1,041,764
Purchases of securities	<u>1,667,358</u>	<u>867,225</u>
Sales of securities	<u>3,040,417</u> <u>1,073,551</u>	<u>1,908,989</u> <u>531,220</u>
Net loss on sales of securities*	<u>1,966,866</u>	<u>1,377,769</u> <u>(4,710)</u>
Investments at cost, end of year	<u>\$1,966,866</u>	<u>\$1,373,059</u>
Endowment and Custodian Funds:		
Investments at cost, beginning of year	\$4,424,330	\$4,169,503
Purchases of securities	<u>2,147,130</u>	<u>3,028,288</u>
Sales of securities	<u>6,571,460</u> <u>2,164,346</u>	<u>7,197,791</u> <u>2,782,614</u>
Net gain on sales of securities*	<u>4,407,114</u> <u>140,756</u>	<u>4,415,177</u> <u>9,153</u>
Investments at cost, end of year	<u>\$4,547,870</u>	<u>\$4,424,330</u>

\*Amounts shown represent realized gains and losses based on the original cost of the investments sold.

## 4. 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.

## 5. Pensions

Pension expense amounted to \$60,500 in 1977 and \$46,700 in 1976. The actuarially computed value of vested benefits exceeded pension fund assets by approximately \$35,000 at November 30, 1977.

Continued

## NOTES to FINANCIAL STATEMENTS, Continued

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The provisions of the Employee Retirement Income Security Act of 1974 (ERISA) became effective December 1, 1976 for the Institute's pension plan. The increase in pension expense is due principally to the reduced participation requirements provided by ERISA.

### 6. Appropriations from Endowment Funds to the Operating Fund

The Institute's Board of Directors periodically makes appropriations from interest and dividend income of endowment funds to AIME Headquarters and the individual constituent societies based on their respective operating requirements. In 1977, appropriations of \$50,558 to TMS-AIME relate to relocation expenses to be incurred in fiscal 1978, and accordingly, have been included in deferred credits at November 30, 1977.

### 7. Commitments

Rental commitments under leases primarily for office space approximate \$82,000 in 1978, \$81,000 in 1979, and \$60,000 in 1980. Rental expense under these leases was approximately \$87,000 and \$85,000 during 1977 and 1976, 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 4). 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 1977 and 1976 was \$85,000 and \$81,000, respectively.



# TOTAL FINANCIAL RESOURCES OF AIME

AS AT NOVEMBER 30, 1977

## AIME ENDOWMENT FUNDS

Medal and Plaque Award Funds	\$ 203,079
Scholarship Funds	189,212
Specific Use Funds	1,897,500
General Purpose Funds	2,338,040
<b>TOTAL ENDOWMENT FUNDS.....</b>	<b><u>\$4,627,831</u></b>

## FUNDS UNDER ASSIGNMENT TO CONSTITUENT UNITS

### Custodian Funds:

AIME Corporate Headquarters	\$ 76,943
SME-AIME	155,093
TMS-AIME	11,565
ISS-AIME	80,976
SPE-AIME	-0-
Equity in Undistributed OTC Surplus	75,053*
<b>TOTAL CUSTODIAN FUNDS.....</b>	<b><u>\$ 399,630</u></b>

\*Represents surplus distributable to  
AIME and Constituent Societies

## OPERATING SURPLUS FUNDS

AIME Corporate Headquarters	
Operating Reserve	\$152,516
All-Institute Deficit from	
Prior Years	(38,495)
Net Headquarters Reserve	

\$ 114,021

SME-AIME  
TMS-AIME  
ISS-AIME  
SPE-AIME

479,541  
263,460  
253,574  
2,172,994  
\$3,283,590

**TOTAL OPERATING SURPLUS FUNDS.....**

## FUNDS HELD BY LOCAL SECTIONS

Approximate value based on 1976 Section  
Treasurers' Reports.....

\$ 654,000

## SUMMARY

ENDOWMENT FUNDS.....	\$4,627,831
CUSTODIAN FUNDS.....	399,630
OPERATING SURPLUS FUNDS.....	3,283,590
<b>SUBTOTAL</b>	<b><u>8,311,051</u></b>
ADVANCES TO UNITED ENGINEERING TRUSTEES, INC.....	265,000
RESOURCES SET ASIDE TO MEET LIABILITIES.....	728,876
<b>TOTAL RESOURCES EXCLUDING SECTIONS</b>	<b><u>9,304,927</u></b>
<b>LOCAL SECTION FUNDS.....</b>	<b><u>654,000</u></b>
<b>TOTAL FINANCIAL RESOURCES OF AIME.....</b>	<b><u>\$9,958,927</u></b>

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

**MEMBERSHIP DATA**

Year	Member Total	Year	Member Total	Year	Member Total	Year	Member Total	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	788	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	13,831
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	15,856
1927	7,434	1,004	8,438	1947	15,000	3,117	18,117
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	21,267
1930	7,831	1,162	8,993	1950	17,082	4,534	21,616
1931	7,843	1,131	8,974	1951	17,482	2,229	19,711
1932	7,685	975	8,660	1952	18,643	1,964	20,607
1933	7,155	672	7,827	1953	19,718	2,195	21,913
1934	6,887	628	7,515	1954	21,816	2,179	23,995
1935	6,916	1,006	7,922	1955	23,723	2,825	26,548
1936	7,326	1,620	8,946	1956	26,298	3,415	29,713
1937	8,279	2,147	10,426	1957	28,823	3,974	32,797
1938	9,005	2,898	11,903	1958	30,553	3,757	34,310
1939	9,614	3,760	13,374	1959	33,378	2,332	35,710

Year	Corporate Members	Student Members	Grand Total	Year	Corporate Members	Student Members	Grand Total
1960	34,852	1,893	36,745	1970	43,095	3,863	46,958
1961	34,368	1,633	36,001	1971	44,627	3,962	48,589
1962	34,437	1,857	36,294	1972	45,742	3,652	49,394
1963	34,838	2,289	37,127	1973	45,154	4,572	49,726
1964	35,740	2,370	38,110	1974	46,702	4,988	51,690
1965	36,878	2,561	39,439	1975	50,085	6,663	*56,152
1966	38,912	2,706	41,618	1976	52,642	7,131	59,773
1967	40,278	3,183	43,461	1977	56,008	8,802	64,810
1968	42,015	3,437	45,488				
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, 1978

SOCIETY OF MINING ENGINEERS OF AIME										THE METALLURGICAL SOCIETY OF AIME										IRON & STEEL SOCIETY OF AIME					SOCIETY OF PETROLEUM ENGINEERS OF AIME															GRAND TOTAL	NO.	
NO.	SECTION	Min. & Explor. A	M.P.D. B	Coal F	Ind. Min. H	Educ. J	Econ. K	Un-class	Total	Extr. & Proc. Met. D	App. of Met. Sci. E	Educ. J	Econ. K	Un-class	Total	Division MNOPO	Educ. J	Econ. K	Total	Drilling & Well Comp. N	Educ. & Management U	Reser. Eng. W	OP & TECH Y	Econ. & Eval. P	Form Eval. R	Prod. Oper. V	Fl. Mech. & Rec. Proc. X	Gas Tech. S	Geol. Eng. T	Un-class	Total	GRAND TOTAL	NO.									
000	OUT OF SECTION	1,600	486	168	75	22	80	192	2,623	502	292	15	5	98	912	579		1	580	338	61	17	349	74	108	92	266	62	33	31	240	1,671	5,786	000								
1	ALASKA	31	3	1	2	2	14	36	40	62	11	3	1	8	85	13			13	3	1	1				2	4						4	44	1							
2	TUCSON	523	200	11	13	6	3	4	803	62	11			5	8					3													5	920	2							
3	BLACK HILLS	44	11	3	7	2	4	6	74	4	4			8	13					1	1	1										1	30	3								
4	BOSTON	25	16	1	12				115	53	164		4	24	235					4	3	3	5	6	1							6	150	4								
5	CARLSBAD POTASH	65	17	1	9				54					1	1																			155	5							
6	CENTRAL APPALACHIAN	98	15	502	17	4	5	33	674	6	15	1	4	3	25	19			6															718	6							
7	CHICAGO	107	55	97	35	1	8	12	315	55	180	2		53	294	649			6															1,264	7							
8	CLEVELAND	919	1	142	53	9	50	58	1,436	25	127	2		12	109																			1,777	8							
9	COLORADO	237	35																															1,545	9							
10	COLUMBIA	919	205	145	53	2	5	23	1,311	18	3			11	127																		3	341	10							
11	CONNECTICUT	16	13	3	3	1	1	3	39	32	122		4	19	177																			222	11							
12	DELTA	27	16	13	4	2	2	2	44	21	151	1	1	18	29					1	10	109	95	36	37	244	20	23	28	182	1,153	6	1,226	12								
13	DETROIT	66	16	13	22	2	2	6	127	24	151			2	195					107	9	8	26	6	14	15	135	5	14	8	61	408	323	13								
14	EAST TEXAS	16	12	1	1				20	42	8			3	53					6	1	16											40	428	14							
15	EL PASO	41	11	7	3		1	2	65											107														158	15							
16	GULF COAST																																									
17	WICHITA VALLEY	14	2	2	2	1	1	1	23	1	5		1	1	1					1,176	153	103	528	259	302	195	687	173	122	132	669	4,498	4,500	16								
18	LEHIGH VALLEY	82	39	30	11	6	13	16	172	31	53			8	93	18				31	3												140	17								
19	MID CONTINENT	325	191	6	6				563	9	18			7	34	19				216	34	15	92	11	84	37	184	2	27	34	134	930	273	18								
20	MINNESOTA																			6														2	246	21						
21	MONTANA	131	27	17	12	3	2	12	203	33	7			3	43																			313	22							
22	NORTH NEVADA	236	37	52	15	11	96	38	836	183	304	5	16	68	576					81	5	12	2	6	10	61	12						1,412	23								
23	NEW YORK	440	157	52	42	3	2	5	256	42	53			8	103	92				2													239	24								
24	N. TEXAS - S.W. OKLAHOMA	182	33	10	10	3	6	15	259																									398	25							
25	NORTH PACIFIC																																									
26	OHIO VALLEY	2		3					5	31	133		1	15	180																			277	26							
27	OKLAHOMA CITY	85	14	12	12	1	1	9	134	46	27			7	80	9				240	30	16	85	7	47	37	194	12	20	19	117	824	524	27								
28	OREGON	38	3	89	2		1	2	145	5				1	6					2														229	28							
29	PENNANTHRAICITE	13																		301	34	26	123	11	50	33	349	16	24	27	163	1,157	1,175	29								
30	PERMIAN BASIN																																									
31	PHILADELPHIA	71	38	31	29	2	6	8	185	18	85	3	2	29	135	818				5	2	1	4	3									39	359	31							
32	PITTSBURGH	166	71	51	31	5	18	46	497	126	240	1	2	21	460	19			1														2,179	32								
33	ST. LOUIS	211	56	175	30	8	23	19	816	56	56	1		9	160																		816	33								
34	SAN FRANCISCO	396	284	42	45	3	23	7	337	22	10				41					6		1		2		1							397	34								
35	ALABAMA																																									
36	SO. CALIFORNIA	360	129	26	61		15	21	612	41	114	2		26	183					168	15	48	10	23	21	102	7	22	9	69	505	795	36									
37	SOUTHWEST TEXAS	81	28		2	1	3	4	119	10	2			4	16																			505	37							
38	S.W. NEW MEXICO																																									

**AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, INC.**  
**MEMBERSHIP STATISTICS** January 1, 1978

[illegible]

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

CLASSIFICATION OF MEMBERS

AIME - THREE YEAR TALLY

	1975	1976	1977	1977 Breakdown			
				SME	TMS	ISS	SPE
Honorary Members	37	40	41	13	7	4	17
Members	32,263	33,575	34,944	12,149	4,062	2,936	15,797
Associates	8,827	9,842	10,199	3,659	1,187	1,011	4,342
Juniors	8,958	9,031	10,509	3,848	814	288	5,559
Assoc. Juniors	--	154	315	115	--	--	200
<b>TOTAL</b>	<u>50,085</u>	<u>52,642</u>	<u>56,008</u>	<u>19,784</u>	<u>6,070</u>	<u>4,239</u>	<u>25,915</u>
Students	6,663	7,131	8,802	4,427	1,997	9	2,369
<b>GRAND TOTAL</b>	<u>56,748</u> <u>- 596</u> <u>56,152*</u>	<u>59,773</u>	<u>64,810</u>	<u>24,211</u>	<u>8,067</u>	<u>4,248</u>	<u>28,284</u>

1977 NET MEMBERSHIP GAINS (LOSSES)

SME-AIME	1,739
TMS-AIME	252
ISS-AIME	357
SPE-AIME	<u>2,689</u>
<b>AIME</b>	<b>5,037</b>

APPROXIMATE MEMBERSHIP RATIO BY SOCIETY FOR LAST 17 YEARS

<u>DECEMBER</u>	<u>SME-AIME</u>	<u>TMS-AIME</u>	<u>ISS-AIME</u>	<u>SPE-AIME</u>
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		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
1977	37.4	12.4	6.6	43.6

\*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  
106th AIME ANNUAL MEETING

The Atlanta Hilton, Hyatt Regency and Atlanta Marriott were used for the 106th AIME Annual Meeting.

The Georgia/Alabama Section Annual Meeting Committee, under the chairmanship of Mr. Nelson Severinghaus, Jr. was 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

	<u>Estimate</u>	<u>Actual</u>
AIME Member	2200	2529
Non-Member	400	838
Authors	300	334
Students	125	305
WAAIME	400	671
TOTAL	3425	4677

Percent of Member Attendance

Society of Mining Engineers of AIME.....	55%
The Metallurgical Society of AIME.....	35%
Iron and Steel Society of AIME.....	8%
Society of Petroleum Engineers of AIME.....	2%

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

	<u>Actual</u>	<u>Budget</u>
Registration revenue	\$163,908.00	\$124,075.00
Total expenses charged to registration revenue	96,626.71	118,150.00
Revenue over expenses	67,281.29	5,925.00
Distribution of Revenue:		
SME-AIME	\$30,085.89	
TMS-AIME	29,888.82	
ISS-AIME	9,130.41	
SPE-AIME	871.45	
Annual Mtg. Surplus Fund	( 2,695.28)	
Total Distribution	\$67,281.29	

## REPORT

of the

Executive Secretary

1977

Much was accomplished in 1977, but it was a difficult year as the officers and directors considered an unusual number of controversial and complex matters. Significant changes were made in most of the Publications programs with Transactions being recombined into MINING ENGINEERING and a page charge being initiated. The practice of distributing coupons for free preprints was discontinued and members and subscribers in the European area were required to pay the added cost of their airlift delivery of MINING ENGINEERING. After more than 30 years of no change in student dues (a period during which the dues of other members were raised twice), the Board approved an increase from \$4.50 to \$9.00 for 1978. Most of these actions were financially motivated as costs continue to inflate faster than revenues increase. Such actions as these, in the continuing effort to reduce the draw on dues for services used by a limited number of members, have enabled the Society to delay a general dues increase. It is noteworthy that the 1978 dues dollar will have virtually the same purchasing power it had in 1972 when the decision was made to raise dues from \$20 to \$30 for 1973.

The most controversial issue considered by the Board, and one that was not settled as the year ended, was a Working Party recommendation that the Society buy land at the Ken-Caryl Ranch, near Denver, Colorado, and build its headquarters there. In 1973 when SME-AIME moved to Salt Lake City, it was expected that the Society would build its headquarters in the University of Utah Research Park on land which would likely be donated by the state of Utah. However, restrictions in the patent which transferred the land from the U.S. Government to the University of Utah prohibit transfer of ownership to a third party. Land was available on a long-term lease with ownership of improvements thereon passing to the University at lease-end. Convinced that the Society should hold title to the land upon which its headquarters was built, the Working Party caused an extensive site search which was expanded beyond Salt Lake City when the limited possibilities there became known--this search ended in the selection of the Ken-Caryl Ranch.

At its October meeting, the Board accepted the recommendations of the Working Party "in principle" and instructed the Executive Committee to develop building and financing plans for decision at the Annual Meeting in February 1978. While considering the recommendations of the Working Party, the Board received a report from a delegation of the Utah Section expressing disagreement with the recommendation of the Working Party and suggesting further study and consideration of alternatives in Salt Lake City, including the land-lease options from an economic viewpoint.

The relative staff stability of 1976 was disrupted in 1977 with a 47% turnover rate. Many reasons contributed to this high turnover including the elimination of three positions. Some of the departing employees returned to school on a full-time basis; some were terminated for sub-standard performance; and, some

left to accept other jobs. Until the question of office location is finally settled, the Society can continue to expect apprehension and turnover among the staff.

Despite these difficulties, the Society had a good year. The financial surplus of \$119,714 brought the surplus fund to \$479,541. Membership increased by 7.7%--22.7% in student membership and 4.89% in corporate membership. Four new sections were started while two were discontinued bringing the total number of AIME Sections administered by SME-AIME to 62. The Society added 11 new student chapters and now administers 55--51 domestic. Society attendance at the Annual and Fall Meetings was down partly because of location (Atlanta and St. Louis compared to Las Vegas and Denver in 1976) and partly because of a direct scheduling conflict between the Fall Meeting and a meeting of the National Coal Association in the same region. Efforts continue to avoid such conflict.

Probably at no time in its history has the Society been so indebted to its key staff for the success of an operational year. For notwithstanding the fact that the key staff spent most of the year at the vortex of the storm of controversy and conflict (and often unavoidably caught between the opposing forces), the Society experienced one of the best years of its history. This must be attributed to exceptional loyalty, dedication and capability on the part of the following four people:

Miss Marianne Snedeker - Manager of Publications  
 Mr. Dave Rome - Manager of Administrative Services  
 Mr. Ta Li - Editor, MINING ENGINEERING and part of  
                     the year, Manager, General Member Services  
 Mrs. Ruth Orologio - Meetings Manager

These four were assisted by others who also played an important role and their contributions are acknowledged and appreciated. Special appreciation is expressed to two: Mrs. Darline Daley, Publicity Coordinator, and Miss Linda Kingsley, Meetings Secretary and Secretary to the Executive Secretary, for their extra support efforts.

#### FINANCES

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

<u>1957</u>	<u>1958</u>	<u>1959</u>	<u>1960</u>	<u>1961</u>	<u>1962</u>	<u>1963</u>
\$11.4	\$ .7	\$ (.8)	\$4.5	\$1.0	\$ (1.7)	\$ (14.8)
<u>1964</u>	<u>1965</u>	<u>1966</u>	<u>1967</u>	<u>1968</u>	<u>1969</u>	<u>1970</u>
\$20.1	\$1.2	\$52.6	\$30.1	-0-	\$ (10.5)	\$ (17.6)
<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
\$ (58.9)	\$ (32.5)	\$10.7	\$16.6	\$120.4	\$137.9	\$119.7

## PUBLICATIONS DEPARTMENT

During 1977, publishing activities continued at a brisk pace in the journals, books, and preprint areas. As in previous years, escalating costs, particularly for printing, binding, paper, and postage, continued to be of concern.

Because publishing is a major activity of the Society, the Publications Board was charged by the SME-AIME Board of Directors in the fall of 1976 with making a thorough study of the publications program, both from a service and a financial aspect. The results of this study were approved in March 1977 and implemented by Board decision in late spring. All aspects of the program except book publishing are affected by the changes to take place in 1978. Because of the inability over the years to make Transactions self-supporting, it was decided that, since a dues subsidy is required, Transactions should reach all members. Commencing in 1978, the separate quarterly journal will be discontinued and a 32-page Technical Papers section will be added to MINING ENGINEERING. The annual bound volume will still be published and will contain the technical papers from MINING ENGINEERING and a section of papers that, in the judgment of the various publications committees, are of limited interest but of importance to the record. To help offset the increased cost of publishing technical papers for an audience of over 27,000 (1,200 for the quarterly) and the loss in quarterly subscription income, the Society staff was authorized to purchase in-house typesetting equipment, and a page-charge levy was established. The Publications Board believes that the addition of the Technical Papers section to MINING ENGINEERING will enhance the technical and professional stature of the magazine.

The other aspect of the publishing program studied was preprints. Currently all members receive five coupons with their dues bill entitling them to preprints without charge, and members attending meetings receive an additional five coupons at each meeting they attend. Tabulations of coupons distributed vs. coupons redeemed has shown that of the over 121,500 coupons distributed annually, only about 12,800 are redeemed, a usage of 10%, although all members are providing a subsidy to the program through a dues allocation. Therefore, in order to try and put the program on a self-sustaining basis, the "free" coupons will be eliminated 1978 and preprints will be sold at as close to cost as possible.

The changes in the publications program formulated by the Publications Board and adopted by the SME-AIME Board of Directors reflect the basic philosophy that, if a program should be continued and can only be supported by a subsidy from dues income, that program should be available to all members. Those portions of the program enjoyed as a unique service to only a segment of the membership should be priced so as to be self-supporting (preprints, book publishing, for example).

## MINING ENGINEERING

Because of the inflationary situation in the printing industry (an average 12-15% increase in costs in the last five-six years), every effort is being made to control costs by tight grouping of color, anticipatory paper purchases, control of page budgets, and close attention to advance planning. A complicating factor has been the increase in use of color, particularly four-color, by advertisers. A comparison of costs for color vs. black and white has indicated that the average color page costs \$297.71, while a black and white

page costs \$173.10.

Magazine staff changes entailed one resignation and two shifts within the staff. Eugene Guccione resigned as editor in March to join the staff of Coal Mining and Processing, and Ta M. Li, formerly technical editor and serving at the time as Manager of General Member Services, was promoted to Editor. Carolyn Barnes, who had been a part-time assistant editor, was made book production secretary and Charelaine Franks, publicity secretary, was made publications secretary and part-time assistant editor. The relative stability of the staff for the last few years has made possible a continuing education and growth in technical journalism as well as in knowledge of the industry and technology the Society serves.

A number of special issues or special features were highlighted in the magazine during the year. The Mining & Exploration and Mineral Processing annual reviews were published in February, and Coal and Industrial Minerals in March. July, of course, included the Membership Directory, the largest ever, with 288 pages and 22,311 individuals listed. A pre-Fall Meeting report was included in the September issue. Other special features were a report on the Australian mining industry in January, survey of the North Dakota lignite industry in August, an issue devoted to the coal industry in October, and a report on Boliden Metall's Stekenjokk mine, visited by the editor, in December. A summary of the Lead-Zinc Update in November emphasized programming at the Fall Meeting and the book published at that time.

Comparison advertising statistics are:

	<u>FY 1977</u>		<u>FY 1976</u>	
	<u>Pages</u>	<u>\$ Income</u>	<u>Pages</u>	<u>\$ Income</u>
Display	335-2/12	350,206.82	335-4/12	346,401.22
Class.	49	46,170.83	32-8/12	29,989.87
Prof. Ser.	<u>57-6/12</u>	<u>12,070.50</u>	<u>49-10/12</u>	<u>7,290.00</u>
Totals	441-8/12	\$408,448.15	417-10/12	\$383,681.09

Advertising display rates were increased July 1, 1977, by approximately 10%. Advertising promotional efforts continue through the use of the audited circulation statement, authorized media data form, media kit, house ads in MINING ENGINEERING with followup mailing to advertisers and prospects, and letter mailings. A professionally conducted readership survey was again conducted for a fall issue.

#### TRANSACTIONS

In calendar year 1977, 364 pages were published, including 50 technical papers, 7 technical notes, discussion, and the annual index in the December issue. Financial support for extra pages was provided by the Coal Division in an effort to reduce the backlog of accepted papers awaiting publication.

The Transactions Committee of the Publications Board had been looking in 1976 for ways to reduce the production costs in order to reduce the dues subsidy required. As an interim measure in 1977 the Committee adopted "author

composition", whereby the author typed his paper on special forms according to instructions provided. These forms were then photographed for printing purposes. In 1978, the Technical Papers section of MINING ENGINEERING will be set on the SME-AIME in-house typesetting equipment and the printer provided with camera-ready material. The author-composition approach did reduce printing costs from \$32,238 in FY 1976 to \$19,745 in FY 1977. A disadvantage of this approach is the loss in space utilization using a typewriter rather than typesetting.

The Transactions Committee had been reviewing since fall 1976 the review form and criteria. A new form was presented in the spring 1977 and was activated in June. The new review form implements the decision that a paper be published in the Technical Papers section of MINING ENGINEERING or in the annual bound volume only.

#### PREPRINTS

In FY 1977, a total of 33,975 copies of preprints were produced: 800, 1976 Fall Meeting; 14,766, 1977 Annual Meeting; 13,334, 1977 Fall Meeting; and 5,095, 1978 Annual Meeting. Of the 121,505 coupons distributed, 3,898 were redeemed by mail and 8,928 used at meetings. The total cost of the program was \$40,325.60, and the cost per preprint in FY 1977 was \$1.19.

The Publications Board recommended a change in format in 1978. The 6 by 9 inch size will be discontinued and an 8½ by 11 size with a two-column text format will become standard.

When the decision was made to discontinue the "free" coupon distribution, the Publications Board recommended that the present price structure (\$1 to AIME members, and \$2.50 to nonmembers) be continued in 1978 until a year's experience has been gained with demand for and cost of providing preprints. At the end of the year the program will be evaluated to determine if a change in price is indicated in order to make the program self-sustaining. Income from preprints sold in FY 1977 was \$14,565.71.

#### BOOK PUBLISHING

In 1977, SME-AIME newly printed or reprinted 9 titles. New titles are:

"Agglomeration 77", K.V.S. Sastry, ed., 2 vols., 1094 pages, hardcover, illus., index, March 1977.

"Monograph on Rock Mechanics Applications in Mining", W.S. Brown, S.J. Green, W.A. Hustrulid, eds., 249 pages, soft-cover, illus., May 1977.

"14th Application of Computer Methods in the Mineral Industry", R.V. Ramani, ed., 1207 pages, hardcover, illus., June 1977.

"Lead-Zinc Update", D.O. Rausch, B.C. Mariacher, F.M. Stephens, Jr., eds., 414 pages, hardcover, illus., index, October 1977.

Reprinted in 1977 were "Coal Preparation" (with a second reprint underway at the close of the fiscal year), "Surface Mining", "Solution Mining", "A

Decade of Digital Computing in the Mineral Industry", and "Elements of Practical Coal Mining". At fiscal-year end reprints had been ordered of "Gold and Silver Cyanidation Plant Practice Monograph", "Stability in Open Pit Mining", and "International Symposium on Hydrometallurgy". "Ore Deposits of the United States, 1933-1967" will be reprinted shortly after the first of the year.

New books to be published early in 1978 are "Geology of the Porphyry Copper Deposits of the Western Hemisphere" by Victor F. Hollister and "Mineral Processing Plant Design", R.B. Bhappu and A.L. Mular, editors, to be produced in time for distribution at the 1978 Annual Meeting. Nine other books, to be published in 1978 and 1979, are in process.

Book sales of all types grossed \$193,274 in 1977, cost of sales was \$123,492, and 18,786 books were mailed.

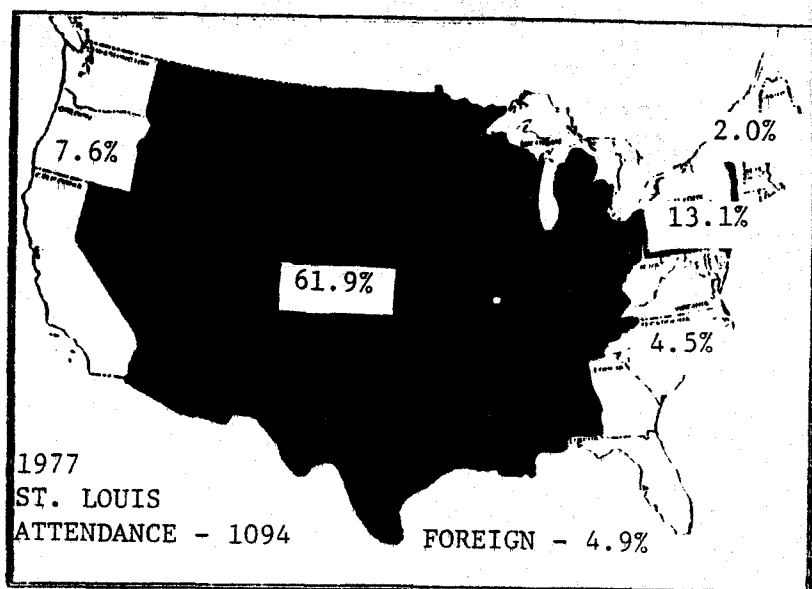
The Book Publishing Committee closely monitors books in progress, asking for periodic reports from the persons involved. New proposals are scrutinized carefully to determine if there is judged to be a market for the particular title and to ascertain that the work will be of high quality and developed in a well-organized, readable manner. The Committee also deals with matters of policy that arise and makes recommendations to the Publications Board.

### MEETINGS

The 1977 SME-AIME Fall Meeting and Technological Information Exchange Exhibit (TIE) and the Lead-Zinc Update was held October 19-21 at the St. Louis Convention Center, St. Louis, Missouri. Registration was down for this meeting with 2,039 registrants as follows:

Members	919
Nonmembers	179
Students	108
Ladies	177
Exhibitors	350
Exhibits Only	137
Guests of Exhibitors	143
<b>TOTAL REGISTRATION</b>	<b>2,039</b>

### 1977 SME ST. LOUIS Member and Nonmember Attendance by Region



The 1977 Exhibit was the second largest since 1966:

SME-AIME Fall Meeting - Exhibiting Companies and Booths Sold

Year	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977
Companies	79	57	34	88	56	18	37	37	-0-	97	108	96
Booths	102	71	47	117	76	28	52	45	-0-	125	151	144

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 continue 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)

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	1977 ST. LOUIS
1	23	20	14	22	23	3	8	10	4	11	17	22
2	240	145	135	181	162	63	71	244	77	113	112	143
3	417	69	55	58	74	28	88	66	45	47	68	49
4	186	122	235	139	133	54	97	81	51	114	129	205
5	62	17	18	14	44	4	177	21	10	20	18	55
6	56	54	338	93	199	28	39	31	19	54	57	220
7	94	97	43	79	107	30	27	15	19	64	53	61
8	80	424	98	1,048	285	154	29	48	135	697	781	202
9	56	241	51	215	97	185	27	24	64	163	124	83
10	51	59	126	163	288	95	22	28	218	57	175	54
TOTAL	1,265	1,248	1,113	2,012	1,412	644	585	568	642	1,340	1,534	1,094

REGION LEGEND

1. 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.
5. 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

<u>Year</u>	<u>Location</u>	<u>Attendance</u>		
		<u>Number</u>	<u>Percent</u>	
1963	Dallas, Texas	1079	47.0%	47.8% <u>Average</u>
1964	New York, New York	1221	44.2%	
1965	Chicago, Illinois	1073	48.2%	
1966	New York, New York	1438	47.7%	
1967	Los Angeles, California	1421	48.5%	
1968	New York, New York	1632	51.1%	-----Institute of Metals Div. of TMS Stopped Programming
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%	
1973	Chicago, Illinois	1145	62.9%	64.1% <u>Average</u>
1974	Dallas, Texas	1235*	63.2%	
1975	New York, New York	1263	65.0%	
1976	Las Vegas, Nevada	1840	64.0%	
1977	Atlanta, Georgia	1381	55.0%	

SME-AIME

FINANCIAL PERFORMANCE - OFFSHORE TECHNOLOGY CONFERENCE (OTC)

FY70 THROUGH FY77

<u>Year</u>	<u>Surplus to SME-AIME</u>
1970	\$ 12,198
1971	11,994
1972	19,731
1973	31,187
1974	40,824
1975	57,838
1976	75,497
1977	<u>84,518</u>
	\$333,787

Plans for the fourth RETC on June 17-21, 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.

The 1978 SME-AIME Fall Meeting will be held September 11-13 in Orlando, Florida, and reconvenes in Nassau, Bahamas, September 13-16. Programming will be held in both places, along with extensive short course offerings.

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

### MEMBERSHIP

At the end of 1977 membership in SME was 24,211.

#### Membership Development

For 1977 membership development has taken the form of the Annual Membership Contest, the Continuing Incentive Contest, and the President's Letter.

For the third year in a row the annual contest was won by Charles Speltz. He recruited 25 members during the year's time and as of 10/1/77 has recruited 111 members over the three-year period.

The continuing incentive contest has shown increasing results during the three years it has been in progress. Prizes are awarded for recruiting members in the following increments: Five (award is a mounted membership certificate), 10 (a desk clock with an AIME emblem affixed), 25 (a gold pen and pencil set with emblem affixed), 50 (no set prize; in the one instance given a plaque was presented), and 100 (life membership in the Society).

	<u>1975</u>	<u>1976</u>	<u>1977</u>	<u>Total Prizes</u>
5 - Certificate	17	25	30	72
10 - Desk Clock	4	6	16	26
25 - Pen and Pencil Set	1	1	1	3
50 - Award Plaque	1	-	-	1
100 - Life Membership	-	-	1	1

To date, the total participants in the continuing incentive contest who have recruited one or more new members is 1,008. The average number of recruits per member participating is 2.05, as the total number recruited is 2,068. The number of members participating in the contest equals approximately 8.5% of the membership.

Efforts are being made to expand the number of participants in the contests by greater recognition via publication of efforts in MINING ENGINEERING, letters of thanks and recognition from officers, and other means of recognition. There is also a movement in the direction of expanding the number of prizes at each level, thus offering more choice to the recruiter and, subsequently, more incentive.

### Sustaining Members Program

In maintaining the membership rolls, membership recruitment is tremendously important. However, sustaining current membership is a factor concomitant with recruitment. To this end, surveys are being done to determine reasons for membership losses. Some of the reasons include retirement from the industry, job changes moving people out of the industry, etc. In a survey of member losses in 1976, it was found that 1,545 members were dropped for the following reasons:

Lack of dues payment or update card	1,137	(73.6%)
Death	132	( 8.5%)
Resignations	276	(17.9%)

Those falling into the above listed categories can be further listed in the following:

<u>Membership Grade</u>	<u>Number</u>	<u>Percentage</u>
Member	309	20
Associate Member	185	12
Junior Member	417	27
Student Member	634	41

It should be noted that 881, or 57%, of those lost from the rolls had been members for three years or less.

With this information, efforts are being made to determine why losses occur and if they are preventable. Lack of dues payment is a prime cause of membership loss. As in years past, notices and letters are sent to those late in dues payments. When no response is received, lists of nonpaying members are sent to the Section Chairmen asking them to contact the members and elicit some response. This program has been fairly successful.

By far, the largest number of nonpaying members is found within the ranks of the student members. Student members are lost not only from nonpayment but also from lack of response to update cards.

When student members join the Society, they are required to list their proposed graduation date. Yearly, those who are graduating during the year are mailed a card requesting information so that their records may be updated after graduation. Thus, when student members graduate, they have their membership status changed to either a Junior or Associate Junior Member. If they do not graduate in the year originally listed, they simply list a new proposed graduation date.

Lack of response to the update card is a prime cause of lost membership. During 1977 an effort was made to locate, by school, those not responding. A second mailing on the update cards was sent along with a letter to the Student Chapter Faculty Sponsor. The Sponsor was provided with a list of members not responding and was asked to contact the students and make them aware of the results of not responding.

After the first mailing in 1977 there were 1,252 who did not respond to the mailing. At year's end it was found that 733 had not replied. Thus, the second mailing and personal contact of the sponsors elicited responses from 519 students who would not have responded had not a greater effort been made.

A working party has been formed to determine the philosophy and methodology of the student member program. Greater understanding of the aforementioned should eventually aid in member retention.

At the first meeting of the working party, held at the Fall Meeting in St. Louis, a recommendation was made to increase student member dues from \$4.50 to \$9.00 per year. This recommendation was implemented after receiving approval from the AIME Board of Directors. At present, it is too early to tell if the increase will have any effect on membership growth.

At year's end total membership was 24,211 up 7.7 % from 1976. Membership breakdown was as follows:

#### SME-AIME

##### Membership by Divisional Interest

<u>AS OF</u>	<u>M &amp; E</u>	<u>COAL</u>	<u>IndMD</u>	<u>MPD</u>	<u>EDUC</u>	<u>ECON</u>	<u>STUD</u>	<u>UNCLASS</u>	<u>TOTAL MEMBERS</u>	<u>CORPORATE MEMBERS</u>
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
1/1/1978	10,812	3,098	1085	3,267	146	527	4,427	849	24,211	19,784

##### Membership by Grade

<u>AS OF</u>	<u>TOTAL MEMBERS</u>	<u>CORPORATE MEMBERS</u>	<u>FULL MEMBERS</u>	<u>ASSOC. MEMBERS</u>	<u>JUNIOR MEMBERS</u>	<u>*ASSOC. JUNIOR MEMBERS</u>	<u>STUDENT MEMBERS</u>
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	11,367	3,411	3,506	80	3,608
1/1/1978	24,211	19,784	12,162	3,659	3,848	115	4,427

\* New member grade established during 1976.

Corporate Membership Changes -- 1975/1976/1977

<u>Losses</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
Deaths	124	132	141
Resignations	188	276	241
Drops & Changes of Status	1,032	1,137	653
Unaccepted	44	23	11
TOTAL	<u>1,388</u>	<u>1,568</u>	<u>1,046</u>
 <u>Gains</u>	 <u>1975</u>	 <u>1976</u>	 <u>1977</u>
Total	2,480	2,215	1,966
Net	1,092	647	920
 Corporate Members	 18,217	 18,864	 19,784
Student Members	2,726	3,608	4,427
TOTAL	<u>20,943</u>	<u>22,472</u>	<u>24,211</u>

ADMINISTRATIVE SERVICES

The "in house" print shop was discontinued in January, the equipment was sold, and the printing personnel (2) were terminated. Printing for the Society's "preprints" and for the majority of other activities is now being done on a Xerox 9200 collating copier and stitcher by other members of the staff at a significant reduction in cost and printing time.

In connection with providing working space for the 9200 copier, the office layout was redesigned. By using movable accoustical panels, 7 additional work stations and a lunch room have been provided in the same office area.

Computer reprogramming continued throughout the year to effect the savings and the improvements in membership record keeping which are possible by using the large IBM 370 computer at Kennecott Copper Corporation (the conversion date was September 30, 1976). The Society now provides mailing labels to the local sections and student chapters each month on a no charge basis. Thirty sections requested this service for the month of October 1977 for a total of about 10,000 mailing labels.

The Society's full allocation cost accounting system was transferred successfully to the 370 computer as of August 31. The present manual system is being operated in parallel until the end of the fiscal year (November 30) and will be discontinued then. Review of first two months computer activity indicates that improvements in control, reductions in report preparation time, and other savings in this area will be effected.

Bankcard and Visa charge cards were accepted from members for book and pre-print sales for the first time during the AIME annual meeting in Atlanta. This service was further expanded to cover registration, short course, and social activity charges for the SME fall meeting in St. Louis.

### LOCAL SECTIONS

The AIME Sections administered by SME again experienced a very active year. Most sections held regular monthly or bimonthly meetings. Reports were received from sections showing that approximately 175 technical reports were given in the 62 sections during the year. Many field trips and seasonal parties were also held. In addition to the technical and social aspects of local section meetings, many one- or two-day symposiums were held. Listed below are the regional and local symposiums held during the year 1977.

<u>Meetings</u>	<u>Participating Sections</u>
Intermountain Minerals Conference Vail, Colorado	Intermountain
Mining & Petroleum Days Grand Junction, Colorado	Colorado Plateau
Carolinas Fall Meeting Wrightsville Beach, North Carolina	Carolinas
Central Appalachian Annual Meeting Lexington, Kentucky	Central Appalachian
Minnesota Section Annual Meeting Duluth, Minnesota	Minnesota
Mineral Economics Annual Symposium Washington, D.C.	Mineral Economics Subsection Washington, D.C. Section
Arizona Conference Tucson, Arizona	Arizona Conference
Pacific Northwest Metals and Minerals Conference Seattle, Washington	North Pacific Columbia Oregon
Pacific Southwest Mineral Industry Conference Lake Tahoe, Nevada	Northern Nevada San Francisco Southern Nevada Southern California

### Local Section Profile

The total number of AIME Sections administered by the Society of Mining Engineers grew from 60 in 1976 to 62 in 1977. Although four new sections were established, the Tri-State and India Sections were disestablished, thus bringing the total number of sections to 62.

Newly established sections include the Grand Canyon Section, the Southern Alaska Section, the Sierra Nevada Section, and the Ohio Mining Section.

Some of the new sections evolved from subsection to section status. Such was the case for the Grand Canyon (combining the Yavapai and Kingman Subsections) and Sierra Nevada Section (formerly the Sacramento Subsection of the San Francisco Section). The Ohio Mining Section was established by combining the SME membership in the Penn-Ohio, Cleveland and Ohio Valley Sections-AIME.

### The Section Representatives

The Section Representatives were again active in 1977. A meeting of the Executive Committee was held in Atlanta on March 5. Later in the year, the three regions met individually and collectively at the Fall Meeting in St. Louis.

The general areas of discussion at all the meetings centered around the GEM program, section visits by SME-AIME officers, and the proposed Guidelines for Professional Employment.

Regarding the GEM program, a few of the sections were not sure as to how to implement the program. Reports from the Snake River Section helped those in the Western Region to understand that each section has a different approach to the implementation of the GEM program as problems differ from area to area. A general consensus was reached that the GEM program should be implemented as an educational approach to the general populace on the benefits that mining has to the country.

There was also some confusion as to the reasons for visitations by SME-AIME officers to the sections. Casey Davis articulated the posture of the Society as being that of a program whereby a free flow of communications could exist between the local sections and their representative to the SME Board of Directors. He was careful to make note of the fact that the purpose of the visits was not to "check-up" on the sections.

Decisions at the Combined Section Representatives Fall Meeting were as follows: It was resolved to drop, without further consideration, the subject of Guidelines for Professional Employment. It was decided to allow subsections representation at Section Representatives meetings.

Chairman Rowland of the GEM Committee reported that 57.5% of the Sections now have functioning GEM Committees. Many of the Sections have become extremely active in this area and have been helped by such things as the WAAIME production of the film entitled "A World Without."

### STUDENT CHAPTERS

The number of AIME Student Chapters administered by SME grew by 11 in 1977. As of December 31, 1977, SME administered 55 Student Chapters; 51 domestic and 4 foreign.

Those Chapters added in 1977 are as follows:

1. Pennsylvania State University - Fayette Campus
2. The University of Pittsburgh - Pittsburgh
3. Colorado State University - Fort Collins
4. Indiana State University - Evansville
5. West Virginia Institute of Technology - Montgomery
6. University of North Dakota - Grand Forks
7. Michigan State University - East Lansing
8. University of Georgia - Athens
9. California State University - Los Angeles
10. Georgia State University - Atlanta
11. Bluefield State College - Bluefield, West Virginia

Schools which at the end of the year were in varying stages of formation of Chapters are listed below:

1. Sheridan College - Sheridan, Wyoming
2. Southern West Virginia Community College - Williamson, West Virginia
3. John A. Logan College - Centerville, Illinois
4. Wabash Valley College - Mt. Carmel, Illinois
5. Indiana Vocational Technical College - Terre Haute, Indiana
6. University of Kentucky - Hazard, Kentucky
7. Southwest Virginia Community College - Richlands, Virginia
8. Pikeville College - Pikeville, Kentucky

#### Chapter Operations

The AIME Student Chapters showed a considerable amount of activity in 1977. Eleven Chapters entered the annual Outstanding Student Chapter Contest and evidenced varying degrees of activity ranging from civic service projects to publications in student journals. The Outstanding Student Chapter award was presented to The Ward Beetham Student Chapter-AIME of the University of Wisconsin-Platteville.

Additionally, the following were awarded prizes for the best student papers in the undergraduate and graduate divisions:

Dale T. Higgs, University of Arizona, (Undergraduate Division) -  
 "Porphyry Copper Exploration in the Desert Pediment Areas of  
 the Southwestern United States."

Richard P. Mignogna, Colorado School of Mines, (Graduate Division) -  
 "Prediction and Control of Mine Subsidence."

Student membership is growing. Large numbers have come from the mining technology schools. These increases are hoped to have the effect of strengthening existing programs as well as helping to bring about new and innovative programming.



## HONORS AND AWARDS

The following honors and awards were selected in 1977 for presentation to SME-AIME members during 1977 and 1978:

### Installed as Honorary Member of AIME

Frank W. McQuiston, Jr.  
Stanley D. Michaelson

### SME Best Presentation Award

E. R. Dotson  
George W. Luxbacher

James Douglas Award  
Milton E. Wadsworth

Howard N. Eavenson Award  
Otes Bennett, Jr.

A.M. Gaudin Award  
Douglas W. Fuerstenau

Hal Williams Hardinge Award  
Robert L. Bates

Daniel C. Jackling Award  
Alfred Weiss

Robert Earll McConnell Award  
Carl Rampacek

Mineral Economics Award  
William A. Vogely

Robert Peele Award  
Pierre J. Goossens

Erskine Ramsay Medal  
Nicholas T. Camicia

Robert H. Richards Award  
Frank F. Aplan

Taggart Award  
Bruce R. Palmer  
Maurice C. Fuerstenau

Young Engineer Award  
James W. Francis

1977

### AIME Henry Krumb Lecturers

Arthur A. Brant  
Carl A. Rampacek  
Norman L. Weiss

AIME LEGION OF HONOR

(50 Years of Continuous Membership)

The following 33 SME-AIME Members will become members of the AIME Legion of Honor during 1978:

Floyd E. Albertson  
B. R. Albin  
Walter V. Aldridge  
Joseph C. Allen  
Helen A. Antonova  
Vearle W. Balderson  
Harold T. Blackwood  
James Boyd  
Kenneth R. Eckrote  
Julian W. Feiss  
Arthur W. Furbank  
Philip D. P. Hamilton  
Henry B. Hanson  
L. G. Immonen  
D. Ingle  
Godfrey F. Kaufmann  
Charles P. Knaebel  
Karl V. Lindell  
Henry S. McQueen  
C. P. Overfield  
John W. Pamplin  
Robert N. Pursel  
Spangler Ricker  
Lynton W. Shaner  
John F. Shaw  
Quentin D. Singewald  
Cloyd M. Smith  
Laurence E. Snow  
Hugh Sweyn Spence  
Noel H. Stearn  
Blair W. Stewart  
Robert E. Tally  
Clyde H. Wilson

## COAL DIVISION SCHOLARSHIP RECIPIENTS

1977-1978

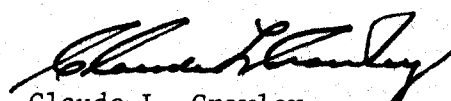
John M. Tinklepaugh, III	University of Alabama	\$650.00
Larry S. Wood	University of Alabama	650.00
Bonny B. Bailey	University of Alabama	650.00
Bradley W. Settles	University of Kentucky	650.00
Julian A. Deaton, Jr.	University of Kentucky	650.00
Luther A. Miracle	University of Kentucky	650.00
John J. Ronan, Jr.	University of Missouri-Rolla	650.00
Dan Vaughn	University of Missouri-Rolla	650.00
Mark R. White	University of Missouri-Rolla	650.00
Scott Andrew Johnson	Pennsylvania State University	650.00
Mark Zik	Pennsylvania State University	650.00
David Chernuta	Pennsylvania State University	650.00
Lewis E. Kanode, Jr.	Virginia Polytechnic Institute	650.00
Danny W. McGlothlin	Virginia Polytechnic Institute	650.00
Glenn T. Yost	Virginia Polytechnic Institute	650.00
Chester A. Badowski	West Virginia University	650.00
Michael J. Smith	West Virginia University	650.00
S. Dan Thompson	West Virginia University	650.00

## GEORGE C. BREIDENBACH SCHOLARSHIP\*

Aaron D. Jackson	University of Missouri-Rolla	650.00
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\*Administered by the Coal Division

Respectfully submitted,

  
 Claude L. Crowley  
 Executive Secretary

REPORT  
of the  
EXECUTIVE DIRECTOR OF THE METALLURGICAL SOCIETY OF AIME  
for 1977

The year 1977 was marked by an introspective look for TMS-AIME with several surveys of the membership in the areas of member services, local section and student chapter activities and certification/registration being conducted. The Long-Range Planning Committee began a study of local section and student chapter activities, services and support from TMS-AIME headquarters. This will continue into 1978 with a report due by mid-year. The Ad Hoc Certification Committee also expects to conclude its study in 1978 and come forth with a recommendation to the Board of Directors on whether or not TMS-AIME should establish a certification program.

For the fourth straight year, the Society operated with a surplus of some \$7,960. While the surplus was small, the Society showed significant gains in advertising for JOURNAL OF METALS up from \$40,056 to \$68,852 for a 59% gain and record meeting attendance.

The 106th AIME Annual Meeting held in Atlanta, Georgia, saw near record attendance with TMS-AIME copping a 43% share of the overall attendance of 4,000 of which 889 were TMS-AIME members and 647 nonmembers with a metals interest. The Society programmed 96 technical sessions with 639 papers presented.

The nonmember attendance clearly demonstrates our potential for membership growth as well as our high technical programming recognition in the metals/materials science community.

The 1977 TMS-AIME Fall Meeting saw record breaking attendance in Chicago with 1,207 attendees and 104 technical sessions with a total of 559 papers presented.

Publications for the Society continued at a strong pace for 1977. Five new books, one reprinted book, one short course notebook and three abstract bulletins were published along with 107 paper selections. Book orders exceeded 3,000, and more than 4,900 paper selections were sold for a total book and paper selection income of \$102,000.

JOURNAL OF METALS, as noted earlier, had a record-breaking advertising year with total income of \$134,00. Subscriptions to JOM were at 2,294 at year-end. METALLURGICAL TRANSACTIONS maintained its subscription levels with 4,637 subscriptions for Met Trans A and 1,617 for Met Trans B.

Membership statistics for the year saw almost a 4% growth rising to over 8,000. A new prospectus for the Society is now in the final design stage and will be utilized in 1978 to spur membership recruitment.

A major activity in 1977 was the study of relocation which culminated in June 1977 with a decision to relocate the Society headquarters to Warrendale, Pennsylvania. A joint headquarters building will be constructed with ISS-AIME in

the Thorn Hill Industrial Park. Implementation of the relocation and design of the building was begun by an ad hoc committee and ground breaking is scheduled for February 1978 with occupancy by September 1, 1978. This will add a unique challenge for 1978 to implement the relocation and at the same time continue the services and activities of the Society.

TMS-AIME enters 1978 with great anticipation to move into its new home and stabilize its staff and bring a measure of financial security to the future operation of the Society.

TMS-AIME  
STATEMENT OF INCOME AND EXPENSE  
YEAR END, NOVEMBER 30, 1977

REVENUE

Member Dues and Fees	\$163,740
Publications: Books, Paper Selections and Proceedings	114,813
Publication Monthly Journal	134,078
AIME Endowment Funds	4,445
Interest and Dividends	16,212
Meetings: AIME Annual Meeting	47,381
Offshore Technology Conference	20,932
Fall Meeting	41,295
Electronic Materials Conference	13,023
Short Course	3,575
Breeder Reactor International Conference	15,338
Other	4,197

TOTAL REVENUE\$579,029EXPENSE

AIME Corporate Headquarters	\$ 25,819
Society Headquarters and Business Services	153,216
Publications: Books, Paper Selections and Proceedings	86,107
Publication Monthly Journal	166,660
Membership Development	24,701
Section and Student Chapter Rebates	9,410
Meetings: AIME Annual Meeting	34,408
Offshore Technology Conference	4,698
Fall Meeting	36,267
Electronic Materials Conference	9,493
Short Course	4,369
Breeder Reactor International Conference	15,132
Awards: TMS-AIME	789

TOTAL EXPENSE\$571,069REVENUE OVER EXPENSE\$ 7,960

MEETINGS DEPARTMENTTECHNICAL CONFERENCES

The Metallurgical Society of AIME, sponsored or co-sponsored four technical conferences during 1977.

<u>Conference</u>	<u>Attendance</u>	<u>Number of Technical Sessions</u>	<u>Number of Papers Scheduled</u>
106th AIME Annual Meeting, Hyatt Regency Atlanta, Atlanta Marriott, and Atlanta Hilton Hotels; Atlanta, Georgia, March March 6-10	4,006 889 TMS	96	639
9th Annual Offshore Tech- nology Conference, Houston Astrodome; Houston, Texas May 2-5	65,511 79 TMS		
19th Electronic Materials Conference, Cornell Univer- sity; Ithaca, New York June 29 - July 1	318	10	88
1977 TMS-AIME Fall Meeting, Sheraton-Chicago Hotel; Chicago, Illinois October 23-27	1,207	104	559

# SCHEDULE OF TMS-AIME CONFERENCES FOR 1978 AND 1979

## 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; Toronto Hilton Harbour Castle Hotel; Toronto, Canada
May 8-11	10th Annual Offshore Technology Conference; Houston Astrodome; Houston, Texas
May 15-17	International Resource Management Conference; Lakeside Hotel; Canberra, Australia
June 28-30	20th Electronic Materials Conference, University of California-Santa Barbara; Santa Barbara, California
October 15-19	TMS-AIME Fall Meeting; Stouffer's Riverfront Towers; St. Louis, Missouri

## 1979

February 18-22	108th AIME Annual Meeting; New Orleans Marriott, New Orleans Hilton, and International Hotels; New Orleans, Louisiana
April 30 - May 3	11th Annual Offshore Technology Conference; Astrodome; Houston, Texas
June	21st Electronic Materials Conference; To be announced
June 18-21	Rapid Excavation and Tunneling Conference and Exhibit, Atlanta Hilton; Atlanta, Georgia
September 17-20	TMS-AIME Fall Meeting; Milwaukee Exposition Center; Milwaukee, Wisconsin

## MEMBERSHIP DEPARTMENT

This department continued in 1977 with one full-time staff member and one part-time 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 380 new members in 1977; in addition, 235 students were elevated to automatic Junior member status. The membership contest initiated in 1975 had participation by approximately 109 members.



TMS-AIME MEMBERSHIP  
JANUARY 1, 1978  
BY GRADE CLASIFICATION

Member	3,859
Associate Member	1,187
Junior Member	814
Student Member	1,997
Honorary Member	9
Senior Member	193
Life Member	<u>8</u>
GRAND TOTAL	8,067

The following table shows TMS-AIME Membership by Division for 1972 - 1977.

TMS-AIME MEMBERSHIP 1973 - 1977

	<u>1973</u>	<u>1974</u>	<u>1975</u>	<u>1976</u>	<u>1977</u>
EMD	1,552	1,560	1,715	1,863	2,103
IMD	3,268	3,126	2,973	2,998	3,090
ISD	2,974	3,031	---	---	---
Education	30	29	25	39	44
Economics	55	56	51	52	53
Unclassified	<u>1,155</u>	<u>950</u>	<u>1,124</u>	<u>892</u>	<u>780</u>
Total Members	8,994	8,760	5,888	5,844	6,070
No. of Members Gained (Lost)	(1,000)	(232)	167	(44)	226
Percent Change	(10.00)	(2.57)	2.83	(.99)	3.84
Student	<u>2,113</u>	<u>1,846</u>	<u>2,183</u>	<u>1,974</u>	<u>1,997</u>
GRAND TOTAL	<u>11,107</u>	<u>10,606</u>	<u>8,071</u>	<u>7,815</u>	<u>8,067</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.

Special projects included the design of an all-purpose exhibit booth for use in membership development and OTC.

An updated publication brochure/promotional flyer was mailed to the entire membership and a special mailing list in August 1977 and inserted in JOM.

### PAPER SELECTION

In 1977 there were 107 papers published in conjunction with the Annual Meeting.

### 1977 TMS-AIME PUBLICATIONS

Lectures on the Theory of Phase Transformations: 1974, Pittsburgh, 6th Annual Spring Meeting, H. I. Aaronson, Editor, Paperback, illustrated, 178 pages.

The Hot Deformation of Austenite: 1975, Cincinnati, TMS-AIME Fall Meeting, illustrated, discussions, Subject index, 631 pages.

Work Hardening in Tension and Fatigue: 1975, Cincinnati, TMS-AIME Fall Meeting, sponsored by Mechanical Metallurgy Committee, Anthony Thompson, Editor, paperback, illustrated, 268 pages.

Electro- and Thermo-transport in Metals and Alloys: 1976, Niagara Falls, TMS-AIME Fall Meeting, R.E. Hummel, Editor, paperback, illustrated, 168 pages.

Materials Selections for the Minerals Industry: 1977, Atlanta, 106th AIME Annual Meeting, George Krauss, Coordinator, spiral bound, illustrated 75 pages.

Light Metals 1977: 1977, Atlanta, 106th AIME Annual Meeting, paperback, illustrated, 2 volumes, Volume 1, 560 pages, Volume 2, 451 pages.

### 1977 TMS-AIME REPRINTED PUBLICATIONS

Effect of Hydrogen on Behavior of Materials: 1975, Jackson Lake, Wyoming, sponsored by TMS-AIME Mechanical Metallurgy Committee, A. W. Thompson and I. M. Bernstein, Editors, paperback, illustrated, indexed, 712 pages.

### ABSTRACT BOOKS

1977 Fall Meeting Program with abstracts

1977 AIME Annual Meeting (TMS-AIME)

Electronic Materials Conference program with abstracts

Radiation Effects Program with abstracts

## TMS-AIME

\* Combined Income and Expense  
\*\*\* Reprinted in 1977

## JOURNAL OF METALS

For the fiscal year ended November 30, 1977, the JOURNAL OF METALS published 778 pages. This breaks down as follows:

Technical articles	220 1/3 pages
Society News & Promotion of Society sponsored events (e.g. meeting programs)	197 1/3 pages
Directory	106 pages
Departments	151 1/3 pages
Display Advertising	42 1/3 pages
Classified Advertising	28 5/6 pages
House Advertisements	19 1/2 pages
Covers	12
TOTAL	778 pages

There were three conference programs published during the year:

106th AIME Annual Meeting (All Institute Program)  
 1977 Offshore Technology Conference (TMS-AIME Sessions only)  
 1977 TMS-AIME Fall Meeting

The 1977 special theme issues were as follows:

January	HSLA Steels
February	Electron Microscopy/Awards & New TMS-AIME Officers and Board
March	Annual Review of Extractive Metallurgy
April	Materials for Offshore Technology
May	Environmental Issues
June	Welding and Joining Technology
July	Copper Technology
August	Fracture in Engineering Applications
September	Light Metals Technology
October	Membership Directory
November	Lead and Zinc Technology
December	High Temperature Materials

## JOINT PUBLICATION PLAN

By mutual agreement of the ISS-AIME and TMS-AIME Boards, the Joint Publication Plan was terminated, effective December 1, 1976. The plan upon termination left a net of \$2,086 in favor of TMS-AIME.

## METALLURGICAL TRANSACTIONS A AND B COMBINED

Technical Papers Published

	<u>No. of TPs</u>	<u>No. of Pages</u>	<u>Total Pages</u>
A Sub+ and ASM	226	1,765	
B Sub++	48	351	
ISS	<u>26</u>	<u>186</u>	
TOTAL	300	2,302	2,302

Communications Published

A Sub+ and ASM	71	168	
B Sub++	16	31	
ISS	<u>3</u>	<u>6</u>	
TOTAL	90	205	205

Title Pages			16
Table of Contents, etc.			48
Blank Pages			<u>165</u>

Total Pages in METALLURGICAL TRANSACTIONS A AND B 2,736\*

- 
- \* An Annual Index appears in the December Issue of both A and B  
 + TMS-AIME A Subcommittee  
 ++ TMS-AIME B Subcommittee

METALLURGICAL TRANSACTIONS serves the needs of the entire metallurgical profession. Thus, Society distinctions are eliminated through both the review and publication process. Consequently, the tabular data represent the distribution of effort in the Board of Review and not the source of the papers.

METALLURGICAL TRANSACTIONS A AND B - REPORT FOR 1977

## METALLURGICAL TRANSACTIONS A

Technical Papers Published

	<u>No. of TPs</u>	<u>No. of Pages</u>	<u>Total Pages</u>
A Sub+ and ASM	218	1,709	
B Sub++	0	0	
ISS	<u>0</u>	<u>0</u>	
TOTAL	218	1,709	1,709

Communications Published

A Sub+ and ASM	66	157.5	
B Sub++	1	1.5	
ISS	<u>0</u>	<u>0</u>	
TOTAL	67	159.0	159

Title Pages	12
Table of Contents, etc.	35
Blank Pages	<u>119</u>

Total Pages in 1977 MET TRANS A 2,034\*

## METALLURGICAL TRANSACTIONS B

Technical Papers Published

	<u>No. of TPs</u>	<u>No. of Pages</u>	<u>Total Pages</u>
A Sub+ and ASM	8	56	
B Sub++	48	351	
ISS	<u>26</u>	<u>186</u>	
TOTAL	82	593	593

Communications Published

A Sub+ and ASM	5	10.5	
B Sub++	15	29.5	
ISS	<u>3</u>	<u>6</u>	
TOTAL	23	46.0	46

Title Pages	4
Table of Contents, etc.	13
Blank Pages	<u>46</u>

Total Pages in 1977 MET TRANS B 702\*

### HONORS AND AWARDS

TMS-AIME Board of Directors has elected the following members to the grade of Fellow in 1978.

Robert W. Balluffi  
Thomas A. Henrie  
Carl Jack McHargue  
Terkel Rosenqvist  
Fred D. Rosi

The following awards were presented by The Metallurgical Society of AIME to recognize our 1977 award recipients.

#### Robert Lansing Hardy Gold Medal

Clyde L. Briant 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 Clarence M. Wayman for his outstanding contributions to the thermoelastic martensitic transformations in alloys.

#### Extractive Metallurgy Science Award

J. Paul Pemsler and Carl Wagner were selected for this award for their paper "Thermodynamic Investigations on Chalcopyrite."

#### Extractive Metallurgy Technology Award

Takeshi Nagano and Takashi Suzuki were selected for this award for their paper "Commercial Operation of Mitsubishi Continuous Copper Smelting and Converting Process."

#### William Hume-Rothery Award

The William Hume-Rothery Award was bestowed upon Karl A. Gschneidner, Jr.

### LECTURES

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

Sir Montague Finniston: "The Shape of Things to Come"

#### Extractive Metallurgy Lecture

Professor Terkel Rosenqvist: "Phase Equilibria in the Pyrometallurgy of Sulfide Ores"

#### Institute of Metals Lecture and R. F. Mehl Award

Professor James C. M. Li: "Physical Chemistry of Some Microstructural Phenomena."

ACKNOWLEDGEMENT

Appreciation is extended to all members, Officers, and Directors of The Metallurgical Society of AIME. Special thanks to President Robert E. Lund.

Thanks also to the staff who have performed most admirably. The staff as of January 1, 1978 by position are:

<u>Title</u>	<u>Name</u>	<u>Years of Service</u>
Executive Director	Alexander R. Scott	7
Administrative Assistant	Julie-Anne Argila	3
Member Services and Meetings Manager	Thomas J. DeSalvo	1
Director of Publications	Konrad J. A. Kundig	4
Manager of Publications	Darda Harris	5
Publications Production Coordinator	David Kellner	1
Director of Administration	Peter D. DeLuca	4
Membership Manager	Carole Chavanne	5
Book Order and Subscription Coordinator	Michael Moroses	4
Mail Room Supervisor	Ed Willis	5

Respectfully submitted,



Alexander R. Scott  
Executive Director



REPORT  
of the  
EXECUTIVE DIRECTOR OF THE IRON AND STEEL SOCIETY OF AIME  
for 1977

The momentum of the newest Constituent Society of AIME exceeded the projections of even the most optimistic goals of the Society. Membership ranks swelled by over 400 making the goal of 5,000 members by the end of 1979 quite realistic. All four annual National Conferences of the Society had record or near record attendance. Furthermore the number of ISS members attending the Annual Meeting of the joint ISS (Ironmaking Division) SME (Minerals Processing Division) effort in presenting a Symposium on Agglomeration and the ISS Process Technology Division's theme session "Automation in the Iron and Steel Industry." All totaled over 3,500 people attended ISS-AIME conferences during 1977.

During the latter part of 1977, committees of the Society's operating divisions were busy preparing for two additional conferences over and above the four national conferences sponsored by ISS-AIME. In April of 1978 the Society will co-host the Third International Iron and Steel Congress with the American Society for Metals. The Congress will be held concurrently with the 37th Annual Ironmaking Conference and the 61st Annual National Open Hearth and Basic Oxygen Steelmaking Conference. All of these events will take place April 16-20 at the Palmer House in Chicago. All told over 200 papers will be presented at the four day meeting. It is a tribute to the Iron and Steel Society that it has been able to hold an International Conference on iron and steel technology in its fourth year of existence. In addition to the Congress, the Ironmaking Division of the Society will join with the Coal Division of SME to hold a 1½ day symposium on Coking Coal. This conference is scheduled to be held in the fall. It is projected that over 4,000 people will attend ISS-AIME sponsored conferences in 1978.

The growth of Society activities was not limited to conferences. The ISS-AIME standing committee on Continuing Education sponsored four short courses in 1977 that attracted over 200 registrants. At least five courses will be offered in 1978. Similarly in Book Publications, the Society published an additional Proceedings plus completing the final two volumes of the five volume reference BOF Steelmaking.

From the administrative point of view, the Board of Directors, under the direction of President Edward J. Ostrowski, set a target date of July 1, 1978 for the relocation of ISS-AIME Headquarters from the Engineering Center in New York to Thorn Hill Industrial Park in Warrendale, Pennsylvania approximately

twenty miles north of Pittsburgh at the intersection of Interstate Highway 79 and the Pennsylvania Turnpike. ISS and TMS have joined efforts to build a headquarters building on a four acre campus-like site in the Industrial Park. Upon completion in July of 1978, AIME's two Constituent Societies will move all of their present offices in the Engineering Center in New York to the new headquarters location.

Finally, during 1977 the Society fulfilled one of the most pleasant duties of a Constituent Society of AIME, the nomination of William H. Wise to be the 1979 President of AIME. The Iron and Steel Society of AIME is fortunate to be represented by Bill Wise who as President of ISS-AIME during its first full year of operation as the fourth Constituent Society of AIME was quite instrumental in the establishment of a sound fiscal organization.

#### FINANCE

The Society's consolidated income for fiscal 1977 totaled \$551,431. Total operating expense equaled \$514,001. The surplus for the year was \$37,430.

#### ISS-AIME LOCAL SECTIONS

At the end of fiscal 1977, there were eight 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, 1977.

1) Eastern Iron and Steel Section of AIME	577
2) Cleveland Iron and Steel Section of AIME	274
3) Detroit Iron and Steel Section of AIME	162
4) Globetrotters Iron and Steel Section of AIME	347
5) Niagara Section of AIME	148
6) Penn-Ohio Section of AIME	156
7) Western Iron and Steel Section of AIME	113
8) Chicago Section of AIME	655

In November 1977, the AIME Executive Committee approved the formation of a subsection of the Chicago AIME Section. The new subsection, which will be affiliated with ISS-AIME has taken the name of the Greater Chicago Steelmaking Group.

In addition to the local sections and subsection there are two study groups affiliated with the above ISS-AIME Sections. There is the Northern Ohio Steelmaking Division, which operates in the Penn-Ohio geographical area, and the Buffalo Hamilton NOH group which operates in the Niagara geographical area.

#### AWARDS

The James B. Austin Award will be presented to Edward J. Ostrowski, President of ISS-AIME on April 18, 1978 at the Iron and Steel Fellowship Dinner. 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 four members of the Society in 1978. 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 four members who will be elevated to the Grade of Distinguished Member in 1978 are:

Donald C. Hilty, in recognition of his outstanding contributions to electric furnace steelmaking, deoxidation and mechanism of inclusion formation and his dedication and service to the Society.

Melvin E. Nickel, in recognition of his contributions to the initial development of operating practices in basic oxygen steelmaking and his 41 years of outstanding service to the Iron and Steel Society and AIME.

Bernard R. Queneau, in recognition of his technical contributions to steel melting practices, solidification, heat treatment of steel and his time and effort spent toward the advancement of the Society and AIME.

Theodore B. Winkler, in recognition of his leadership in the application of technology to steelmaking and his dedication and service to the Society.

The following awards were presented by the Iron and Steel Society of AIME during 1977:

#### Robert W. Hunt Silver Medal Award

Edgar Spetzler and Jochen Wendorff were selected for this award for the best original paper on iron and steel, "Injection of Alkaline Earth into Steel Melts and Its Effects on Steel Properties."

#### 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 1977 recipient was Allen K. Garbee for his great deal of work in making the coal-injection system on Armco's Amanda Blast Furnace a successful installation.

#### Frank B. McKune Award

This award is given for the best paper on open hearth or basic oxygen steel-making written by an author or authors under forty years of age. The recipients of the 1977 award were Donald J. Muscatello and Gerald J. Grasley for their paper "Striving for Optimum BOF Efficiency - Improving Process Practices, Slags, and Charge Calculations."

#### Conference Award

This award is the "runner-up" to the Frank B. McKune Award and was presented in 1977 to Dennis M. Balla and Charles R. Beechan for their paper "Development of a Guideline for the Efficient Use of Dolomitic Lime in BOF Operation."

#### Charles H. Herty, Jr. Award

P. L. Jackson was selected for this award for the best paper presented at the 1976 National Open Hearth and Basic Oxygen Steel Conference, and published in the Conference Proceedings. The title of the paper is "The Ford Oxygen Cell."

#### 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 1977, the award was bestowed upon Harry P. Leckie and Yong-Wu Kim for their paper "An Analysis of the Open-Coil Decarburization of Steel."

#### Ironmaking Conference Award

The 1977 Ironmaking Conference Award was presented to M. Fukuda and M. Hatand for the best paper presented at the 1976 Ironmaking Conference. The paper title is "The Effect of Coke Properties on the Blast Furnace Operation."

#### Mechanical Working and Steel Processing Conference Highest 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 1977 recipients of this award were T. Taira, T. Yamaguchi, N. Iwasaki, K. Tsukada, F. Koshiga, J. Tanaka, T. Osuka for their paper "Development of Heavy Wall X65 Line Pipes Manufactured from Quenched and Tempered Plates for Low Temperature Service."

#### Charles W. Briggs Award

This award is conferred for the best paper presented at the annual Electric Furnace Conference. The 1977 award was given to A. McLean, W. J. Maddever, R. Nikolic, and R. S. Segsworth for their paper "Influence of Electrode Gas Injection on Arc Furnace Steelmaking."

#### Joseph Becker Award

This award is given for distinguished achievements in coal carbonization and was presented in 1977 to Dr. K. G. Beck.

### 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 1977 award was presented to John A. Peart.

### 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 \$2,000 scholarship was presented in 1977 to Gerrit Bucheim.

### 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 Furnace Melt Shop Management and Direct Reduction. A course in Blast Furnace Burden Distribution will be offered following the International Iron and Steel Congress and National Open Hearth and Ironmaking Conferences in April in Chicago.

MEETINGS DEPARTMENTTECHNICAL CONFERENCES

The Iron and Steel Society of AIME, through its Divisions, sponsored or co-sponsored five technical conferences during 1977.

<u>Conference</u>	<u>Attendance</u>	<u>Number of Tech- nical Sessions</u>	<u>Number of Pa- pers Scheduled</u>
19th Mechanical Work- ing and Steel Process- ing Conference, William Penn Hotel, Pittsburgh, Pennsylvania January 26-27	240	6	23
106th AIME Annual Meet- ing, Hyatt Regency, Atlanta, Georgia March 6-10, 1977	190	28	161
60th National Open Hearth and Basic Oxygen Steel Conference, Pittsburgh Hilton, Pittsburgh, Pennsylvania April 17-20, 1977	1,003	8	31
36th Ironmaking Conference Pittsburgh Hilton, Pittsburgh, Pennsylvania April 17-20, 1977	800	12	45
35th Electric Furnace Con- ference, Palmer House, Chicago, Illinois December 6-9, 1977	1,246	14	59

SCHEDULE OF ISS-AIME CONFERENCES FOR 1978 AND 19791978

January 25-26	20th Mechanical Working and Steel Processing Conference McCormick Inn, Chicago, Illinois
February 26- March 2	107th AIME Annual Meeting, Holiday Inn Downtown, Denver, Colorado
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	36th Electric Furnace Conference, The Royal York Hotel, Toronto, Ontario

1979

February 18-22	108th AIME Annual Meeting, New Orleans, Louisiana
March 25-28	62nd National Open Hearth and Basic Oxygen Steel Conference and 38th Ironmaking Conference, Detroit Plaza, Detroit, Michigan
October 24-25	21st Mechanical Working and Steel Processing Conference, Cleveland, Ohio
December 5-7	37th Electric Furnace Conference, Detroit Plaza, Detroit, Michigan

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 1977 are as follows:

<u>Conference</u>	<u>Number of Exhibitors</u>
60th National Open Hearth and Basic Oxygen Steel Conference/36th Ironmaking Conference	16
35th Electric Furnace Conference	28

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 two years.

As of December 31, 1977 there were 4,239 members in good standing. This accounted for an increase of 348 during the year for a net increase of 8.9%.

### PUBLICATION DEPARTMENT

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.

During the year, the Publication Department published five conference proceedings books and the fourth and fifth volumes of the BOF Monograph Series.

#### ISS PUBLICATIONS IN 1977

Electric Furnace Proceedings 1976, Volume 34, St. Louis, Missouri

49 papers, 312 pages.

Ironmaking Proceedings 1977, Volume 36, Pittsburgh, Pennsylvania

53 papers, 533 pages.

Open Hearth Proceedings 1977, Volume 60, Pittsburgh, Pennsylvania

36 papers, 412 pages.

Mechanical Working and Steel Processing Proceedings, Volume XV,

Pittsburgh, Pennsylvania, 22 papers, 521 pages.

BOF Steelmaking Volume IV - Operation, Editorial Board: R. D. Pehlke, Chairman

W. F. Porter, R. R. Urban, and J. M. Gaines, Editor, 294 pages.

BOF Steelmaking Volume V - Special Topics, Editorial Board: R. D. Pehlke, Chairman,

W. F. Porter, R. R. Urban, and J. M. Gaines, Editor, 199 pages.

Automation in the Iron and Steel Industry, Proceedings of the Automation

Symposium, Atlanta Georgia, 302 pages.



ISS-AIME HEADQUARTERS STAFF

Lawrence G. Kuhn - Executive Director

Claire Schmitt - Conference Director

Lilou Irvine - Advertising Manager

Peter Haft - Administrative Assistant  
to Director

Terry Nine - Assistant Conference  
Director

Hope Morrill - Secretary

Otto Johnson - Managing Editor: I&SM  
Production Manager, ISS-AIME  
Book Publications


Vera Dailey - Associate Editor: I&SM  
Editor: ISS-AIME Book  
Publications

Yolanda Chan - Manager, Membership Rolls

Rosa Rivera - Business Manager

Velvet Busch - Bookkeeper

Respectfully submitted,

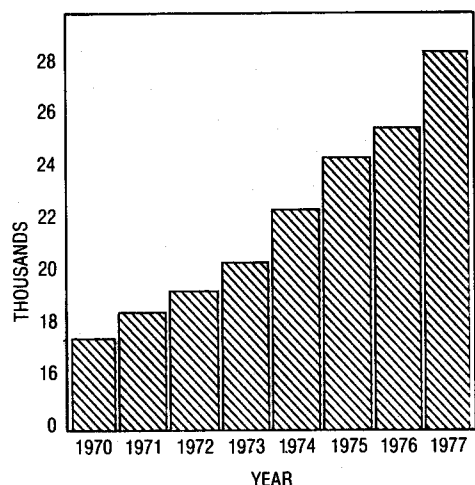


Lawrence G. Kuhn  
Executive Director

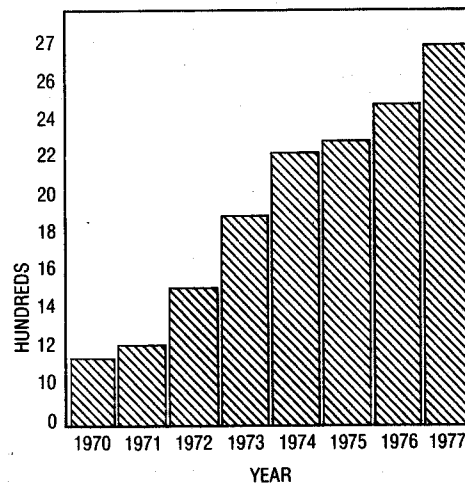
REPORT  
of the  
EXECUTIVE DIRECTOR OF THE SOCIETY OF PETROLEUM ENGINEERS OF AIME

### OVERVIEW

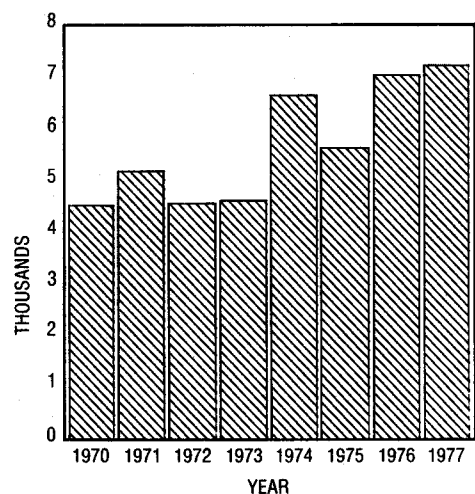
From goals setting to implementation--record membership and meeting activities--the 1977 SPE year highlights. Record registrations were recorded for the Society's Annual Technical Conference and Exhibition, and for the Offshore Technology Conference and Exhibition. And SPE enjoyed its best membership year in history with a year-end total of 28,284 members.



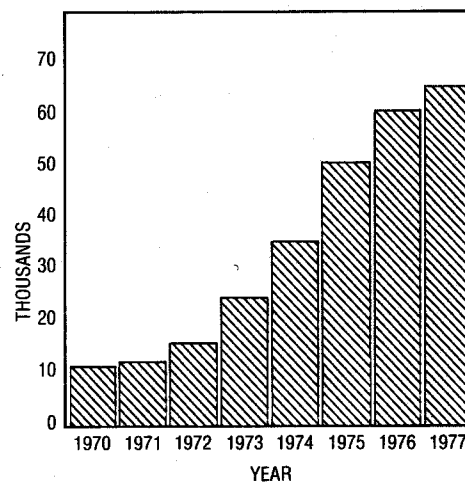
**SPE MEMBERSHIP**



**SPE MEMBERSHIP  
APPLICATIONS RECEIVED**



**SPE ANNUAL TECHNICAL CONFERENCE  
AND EXHIBITION REGISTRATION**



**OFFSHORE TECHNOLOGY  
CONFERENCE REGISTRATION**

## PLANNING

Three years in development, the Society's Long Range Plan, approved by the SPE Board in 1976, thrust the Society actively into efforts to re-evaluate programs in all areas and to launch numerous pilot programs to enhance services to individual members and local sections involving continuing education, meetings, public interface activities, and publications.

During the year, the Long Range Planning Implementation Committee completed its analysis of existing SPE programs and review of the Goals Report. Considering the entire scope of the Society's activities, the Implementation Committee submitted detailed recommendations for Board consideration. New meeting formats, expansion of programming efforts, and enlargement of the scope of the publications program were approved; several ad hoc Committees were appointed to study and make recommendations on programs--including admissions, career guidance, continuing education, membership, and local section support.

Former SPE President E. E. Runyan, WPC, Inc., was Chairman of the Implementation Committee. Members were G. H. Sawyer, Esso Europe, Inc.; R. L. Whiting, Texas A & M University; J. E. Little, Shell Oil Company; and E. C. Babson, Babson and Burns.

## MEMBERSHIP

SPE recorded the largest single-year growth in its history--2,689 members during 1977. The 28,284 members on record at year-end represented a 10.5 percent increase over the 25,595 in 1976, the previous record. The membership activity reflected the expansion of the Society's member services programs, and the extension of these programs to a worldwide scale.

For the third consecutive year, a record number of new member-reinstatement applications (excluding students) was received--2,710 as compared with 2,540 in 1976, and 2,273 during 1975. Total members added to the Society's membership rolls during 1977 were 4,700, a dramatic 26 percent increase over the 3,722 added during 1976.

A major study of the Society's membership policies was made during 1977. An ad hoc Committee headed by Director Paul L. Crenshaw, Dowell; Admissions Committee Chairman E. Z. Scott, D. R. McCord and Associates; and Membership Chairman J. E. Smith, Polaris Production, examined membership programs and admissions procedures and requirements. Recommendations of the Committee were approved by the SPE Board in October, 1977, and changes in admission requirements and procedures, and in membership activities were implemented. Work is underway on a new Membership Application Form.

SPE MEMBERSHIP STATISTICS	1972	1973	1974	1975	1976	1977
Society Membership	19,286	20,290	22,087	24,109	25,595	28,284
New Member/Reinstatement Applications Received*	1,523	1,888	2,212	2,273	2,540	2,710
Members Dropped (Resignations, Deaths, Dues Arrears)*	1,034	1,347	1,100	1,258	1,073	1,088
*Excludes Students						

Seven local sections were recognized for outstanding membership development efforts. The Bolivian (Santa Cruz, Bolivia); South Plains (Lubbock, Texas); Coastal Bend (Bay City); Lagos, Nigeria; Aberdeen Petroleum (Aberdeen, Scotland); London Petroleum; and Permian Basin (Midland, Texas) sections were the 1976-77 winners.

Two active membership development workers--Reese T. Bennett, Dowell, and James R. Paul, Dow Chemical, U.S.A., received special awards for their efforts. Bennett was credited with having 150 application credits and Paul topped the 200-credit mark. David C. Robertson, Amoco Production Company, was the winner of the special Membership Development Contest.

#### LOCAL SECTIONS

Three new SPE Local Sections were added during 1977--Argentine (Buenos Aires), Pensacola-Mobile (Pensacola, Florida/Mobile, Alabama), and Western Wyoming-Rock Springs (Rock Springs, Wyoming). The new additions give SPE 72 local sections.

More than 93 percent of the Society's 28,000 members reside in areas encompassed by one of the SPE Local Sections. The Gulf Coast Section (Houston) the Society's largest section, had 4,499 members at the end of 1977, some 16 percent of the total SPE membership. The majority of SPE sections--58--have fewer than 300 members, with 21 sections having memberships of less than 100 members in 1977.

Local sections offer SPE members regular opportunities for discussion of important technical issues. SPE sections offer an active continuing education and public interface program for members. Many sections regularly sponsor regional and topical meetings as part of their activities.

Some 700 SPE members annually serve in the capacity of a local section officer or director. Representation for sections on the SPE Board is through ten Regional Directors whose responsibilities include regular liaison with local sections in the ten Administrative Regions. SPE officers and staff made visits to 53 local sections during the year. As part of a continuing effort to provide services to local sections, a new position of Local Section Coordinator was added to the SPE Headquarters staff in September.

### STUDENT ACTIVITIES

SPE's Student Chapter and Student Development Programs were major activity areas during 1977. Student membership jumped 53 percent--from 1,549 in 1976 to 2,369 in 1977.

Three regional student paper contests, an intensified student chapter visitation program, and the addition of three new chapters were features of the student program. New chapters were established at the University of Alabama, Lincoln Trail College, and Midland College; the chapter at the University of Pittsburgh was reactivated. The University of Tulsa was recognized as the Outstanding SPE Student Chapter for 1977. Presentation of the award was made during the SPE Annual Meeting in Denver.

SPE Board approval of an ad hoc Committee report on Student Matters resulted in increased support and funding for student chapter travel to Society meetings, an increase in the number of Student Chapter appearances by Distinguished Lecturers, and increased coverage of student activities in JPT.

### SCHOLARSHIPS

The SPE Board approved \$52,155 to match commitments of 52 SPE Local Sections for the SPE Scholarship Program for 1978-79. Since its inception in 1975, the SPE and participating local sections have committed more than \$300,000 for scholarships.

SPE and the Petroleum Equipment Suppliers Association (PESA) again cooperated in the PESA Scholarship Program, which provides annual scholarship awards to outstanding petroleum engineering students. The 1977 recipients were Joseph Johnson, University of Kansas; David Dugas, University of Southwestern Louisiana; and James W. Jennings, University of Wyoming.

### MEETINGS

An all-time record 7,279 persons registered for the SPE Annual Technical Conference and Exhibition in Denver--topping the previous mark set in 1976 at the meeting in New Orleans. With a theme of "Energy Strategies", the program featured a 245-booth technical exhibition and a 195-paper program.

SPE maintained its role of leadership in the Offshore Technology Conference. More than 65,000 registered for the Conference in 1977, and OTC continued its ranking as the world's leading forum for the exchange of technology on offshore resources development in addition to being the largest annual technical conference and exhibition in the U.S. SPE had 43.1 percent of the registered Sponsor Society members at the 1977 Conference. The SPE staff managed the Conference, as it has done annually since the eleven Sponsor Societies approved formation of the Offshore Technology Conference in 1968.

Plans for two new meeting formats were endorsed by the SPE Board during 1977. A Petroleum Industry Manpower Conference was set for mid-1978, and will bring together representatives of industry and the academic community to discuss forecasts for future industry manpower requirements for engineers in the petroleum industry as well as look at its past manpower demand and university enrollment statistics. Two SPE "Forum Series" programs, designed as off-the-record conferences to provide in-depth looks at specific technical areas, were approved for 1978. Topics for the first two conferences are "petrophysics" and "sweetening of gas streams".

## 1977 REGIONAL-TOPICAL MEETINGS

Meeting/ Meeting Site	Registration	Papers on Program	Number of Papers Printed
Economics and Evaluation Symposium Dallas	605	30	29
Practical Aspects of Drilling and Production Oklahoma City	364	19	17
Permian Basin Oil and Gas Recovery Conference Midland, Tex.	630	22	20
California Regional Bakersfield, Calif.	981	55	32
Midwest Gas Storage Production Symposium Indianapolis, Ind.	249	14	7
Southwest Texas Regional Corpus Christi, Tx.	131	6	8
Deep Drilling and Production Symposium Amarillo, Tx.	970	21	16
Symposium on Oilfield and Geothermal Chemistry San Diego, Calif.	104	25	23
Eastern Regional Meeting Pittsburgh, Pa.	292	15	14
Mississippian Formation Wichita, Kan.	165	7	7
Petroleum Exposition and Conference Port-of-Spain, Trinidad	200	17	17
Production Technology Symposium Lubbock, Tx.	266	15	13
Sour Gas and Crude Symposium Tyler, Tx.	396	15	14

## PROGRAMMING

The Society's Technical Coverage Committee, a recommendation by the Long Range Planning Implementation Committee, was established in late 1977. Under direction of Chairman James A. Klotz, Union Oil Company of California, the Technical Coverage Committee is charged with ensuring thorough coverage of areas encompassed in the Society's technology scope, with specific emphasis being directed to emerging areas.

The Society's Program Committee and the 14 Technical Committees, under direction of Stan C. Jones, Marathon Oil Company, developed programming for the 1977 Annual Meeting. SPE, together with the American Society of Civil Engineers, continued to be the leading programming units for the Offshore Technology Conference. SPE and ASCE programmed more than 50 percent of the 300-paper program.

SPE and participating local sections conducted 13 topical and regional meetings during 1977. Subjects ranging from economics and evaluation to deep drilling to sour gas production were featured.

## PUBLICATIONS

The Society's 1977 publications program reflected continued activity in all areas.

Publication of the monthly Journal of Petroleum Technology, bimonthly Society of Petroleum Engineers Journal, quarterly Enhanced Oil-Recovery Field Reports, bimonthly JPT In Brief, annual Transactions, and the Membership Directory, highlighted the periodicals effort. A new Monograph was published, another Monograph was approved for publication, and a new Reprint Booklet was produced.

Publications policies adopted in late 1976 by the SPE Board received favorable member reaction. "Technology Summary" prepared by Senior Technical Editor J. G. Richardson, Exxon Production Research Company, has been a popular feature for JPT. As part of the continuing effort to reduce further the delay in publication of papers, the Society increased the number of papers published in JPT and SPEJ. The editorial review program is handled by three Editorial Review Committees, and 26 Society members serve on these committees. Technical Editors were A. C. Perricone, Milchem, Inc.; James T. Smith, Texas Tech University; and Wayne A. Ingram, Fugro-Gulf, Inc.

JPT's feature issues on the Annual Meeting and the Offshore Technology Conference were joined by a special July issue highlighting "Synergy". The preliminary report of the Society's Symbols and Metrication Committee was published in the December JPT, and will be included in the 1977 SPE Transactions.



Advances in Well Test Analysis by Robert C. Earlougher, Jr., became the fifth Monograph published by SPE. Production work was underway on the Monograph Acidizing Fundamentals, and publication was expected in late 1978. Authors are J. L. Gidley, R. S. Schechter, and B. B. Williams. A revised version of Reservoir Engineering Aspects of Waterflooding, by F. F. Craig, Jr., was produced in 1977, and studies were underway to revise the book Hydraulic Fracturing.

A two-volume Gas Technology booklet was added to the Society's Reprint Series. JPT in Brief continues to be mailed bimonthly to SPE members outside the U.S. and Europe. The quarterly Improved Oil-Recovery Field Reports underwent a name change to Enhanced Oil-Recovery Field Reports, and subscriptions for this publication, begun in 1976, topped the 800 mark.

A new Copyright law went into effect on January 1, 1978. Although the Society's basic policies regarding copyright of papers and publications remained unchanged, steps taken to comply with the provisions of the new law include the obtaining of written releases from authors. As a service to readers, the Society has begun participation in the new Copyright Clearance Center.

#### CONTINUING EDUCATION

The Society's Continuing Education Program was the subject of considerable attention in the Goals Report and in the studies of the Long Range Planning Implementation Committee. In response to a Board directive to increase program production, the Continuing Education Committee submitted a major report outlining plans for new programs to the SPE Board.

Work on revision of existing video-tape courses--"Fundamentals of Reservoir Engineering", "Statistics", "Well Diagnosis", and "Well Completions"--was begun. New Short Course topics are scheduled to be added during 1978, and the Committee will pursue new programmed learning instruction techniques.

During 1977, more than 200 SPE members participated in the video-tape and live Short Course programs. The Short Course in conjunction with the SPE Annual Meeting, and courses in London and Aberdeen, Scotland, were highlights of the activity.

A new course "Production Operations--Well Stimulation" was completed and released. Production work has begun on four additional courses in the Production Operations area--Workovers, Gas Lift, Rodless Pumping, and Well Planning.

The SPE Distinguished Lecturer Program continued to be one of the most popular member services programs. Financed by the SPE Operating Fund and by a grant from the AIME Doherty Fund, the eight lecturers on the 1976-77 series presented some 170 talks to SPE sections.

The lecturers were:

Thomas C. Barger, Consultant; ARAMCO (retired)  
 H. R. Brannon, Jr., Exxon Production Research Company  
 Todd M. Doscher, University of Southern California  
 J. S. McNiel, Jr., Mobil Tyco Solar Energy Corporation  
 Thomas B. O'Brien, Consultant  
 A. (Turk) Timur, Chevron Oil Field Research Company  
 David B. Walker, BP Alaska  
 Earl Ray West, E. R. West Engineering

The SPE Board, as part of the recommendations of the Society's Long Range Planning Implementation Committee, approved changes in funding for the program. A service charge, previously made to participating sections, was dropped, and the Distinguished Lecturer Committee was asked to take steps to ensure that each SPE Section and Student Chapter had at least one Distinguished Lecturer appearance beginning with the 1977-78 season. Board policy limits the number of Distinguished Lecturer appearances to any one section to three per season.

#### PUBLIC INTERFACE AND THE TIC

An ad hoc Public Interface Committee was another product of the Society's Long Range Planning Implementation Program. SPE Director E. C. Babson chaired the Committee and members were Hugh B. Barton, Exxon Company, U.S.A.; Granville Dutton, Sun Oil Company; Marvin Katz, Atlantic Richfield Company; M. Scott Kraemer, Amoco Production Company; W. C. Barton, Jr., Union Oil Company of California; F. F. Craig, Jr., Amoco International Oil Company; E. E. Runyan, WPC, Inc.; and Donald G. Russell, Shell Oil Company.

The Committee was charged with examining the Society's public interface programs and presenting recommendations to the SPE Board that would ensure that the programs in this area are consistent with the Society's over-all objectives.

The Society's Technical Information Committee continued efforts on both national and local levels to offer technical assistance to public groups including governmental agencies, civic groups, and the news media on matters encompassed by the Society's technical scope. Some 25 SPE local sections currently have active TIC groups.

Monthly "TIC FACTS" are published in JPT. The one-page features illustrate technological and economic facts on energy-related matters, and these features are reprinted for distribution by the TIC and local section groups.

During the 1977 Annual Meeting in Denver, the TIC staged a Public Interface Workshop for TIC chairmen, local section officers, and interested SPE members.

SPE's TIC group cooperated with the GEM (Government, Energy, Minerals) Committee of AIME in an AIME Congressional Advisors Program. SPE members at present serve as GEM representatives to some 25 senators and representatives. SPE also continued its cooperation with the American Association of Geologists, the American Association of Petroleum Landmen, and the Society of Exploration Geophysicists in the conduct of two Energy Seminars for members of the press and public officials.

#### AWARDS

The Society presented the following major awards during 1977:

John Franklin Carll Award: F. F. Craig, Jr., Amoco International Oil Company

DeGolyer Distinguished Service Medal: Charles R. Dodson, Consultant

Cedric K. Ferguson Medal: Medhat M. Kamal, Amoco Production Company  
William E. Brigham, Stanford University

SPE Distinguished Service Award: John P. Hammond, Amerada Hess (retired)

Lester C. Uren Award: Joseph G. Richardson, Exxon Production Research Company

#### FINANCE

For 1977, income for Society operations exceeded expenses by \$382,550 with income totaling \$2,649,860, compared with expenses of \$2,267,310. These figures do not reflect annual earnings of \$42,476 from the Society's Reserve Account.

#### HEADQUARTERS STAFF

The SPE Board approved a major expansion for the Society's Headquarters operation in Dallas. Seven new staff positions were authorized, and at year's end there were 38 staff members. The staff additions were made to provide proper support for ongoing activities and for new programs approved as part of the Long Range Plan. Major remodeling of the staff offices was completed in late 1977, and the Board also authorized the purchase of an in-house data processing system for the Headquarters operation.

##### Headquarters Administration

David L. Riley, Executive Director  
Corky Barth, Secretary

Dan K. Adamson, General Manager\*  
LaMerle Martin, Secretary

Douglas L. Ducate, Associate General Manager\*\*  
Pam Butler, Secretary

\*Also serves as Programming Manager

\*\*Also serves as Manager Meetings and Conventions Department

Administrative Services

Richard C. Vilven, Manager  
Marietta Crow, Secretary  
Betty Newcomb, Senior Bookkeeper  
Sandra Irons, Data Supervisor  
Pat Ellis, Data Control Clerk  
Judy Thompson, Book Order Supervisor  
Ruth Slaughter, Book Order Clerk  
M. C. Sirles, Mailroom Supervisor  
Alfredo Arroyo, Mailroom Clerk  
Carol Arensman, Receptionist

Communications Department

John C. Rash, Manager Continuing Education  
Beverly Smith, Secretary

Bridget Wilson, Manager Public Relations  
Frances Deuser, Secretary

Susan McHam, Membership Supervisor  
Cathy Atkins, Membership Clerk

Dee Brint, Local Section Coordinator

Meetings and Conventions Department

Karen Lee, Manager Meetings  
Melissa Schuchard, Secretary

Cynthia Davis, Exhibits Sales Manager  
Donna Anderson, Assistant Exhibits Sales Manager  
Pati Berger, Secretary

Jack Cozier, Advertising Sales Manager

Technical Services Department

Georgeann Bilich, Manager Publications, Editor JPT  
Ann Gibson, Production Manager  
Jim McInnis, Associate Editor  
Sondra Stewart, Assistant Editor  
Libby Afflerbach, Editorial Assistant  
Barbara Pritchard, Secretary

Rebecca Baker, Programming Assistant  
Betty Dillard, Special Publications Supervisor  
Linda Sergeant, Programming Clerk

Respectfully submitted,

*David L. Riley*

David L. Riley  
Executive Director, SPE-AIME

## REPORT

of the

WAAIME

During the year of 1977, we suffered a loss in our membership of approximately 200 ladies. Also, we lost one of our Sections. The Kentucky-Virginia Black Mountain Section was forced to disband due to a lack of interest in most of the members. However, several of the ladies expressed a desire to remain Members At-Large, and they have hopes of forming another Section in the future. Interest has been expressed and is being worked on in the formation of two new Sections.

In May of 1977, WAAIME Granted forty-seven Scholarships, which brings our total number of students to eighty. Approximately forty graduated. We now have a little under \$80,000 in approved scholarships. Our repayment program is satisfactory.

Our GEM Committee is active in a number of our Sections, and we hope this is proving of some value to AIME.

Library continues to flourish with many mining areas being the recipients of books, magazines and technical material.

Publicity has also been a producing Committee with many writings in technical magazines.

Newsletter was able to expand through generous contributions and we are always pleased when we hear how much the husbands enjoy this publication.

After three years of study and revising, the new By-laws were passed and are now being used.

Possibly the largest accomplishment for the Auxiliary through the year was the concept of our newest EFT project, a film entitled "A World Without". This has been produced and is in the hands of almost all our Sections, and we were delighted to find that it had a tremendous impact on areas outside the WAAIME. AIME has been most complimentary and helpful about this film.

Our Chest Committee has a new project for the year, "Chest Assistance to Students", and has been most helpful to many.

The Woman's Auxiliary to AIME continues to be proud of its existence and the assistance it offers to AIME and Industry. Our most grateful thanks to Mr. Joe B. Alford and many others throughout AIME who have so generously offered their assistance whenever and wherever it has been needed.

Respectfully submitted,

*Betty Ensign*

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