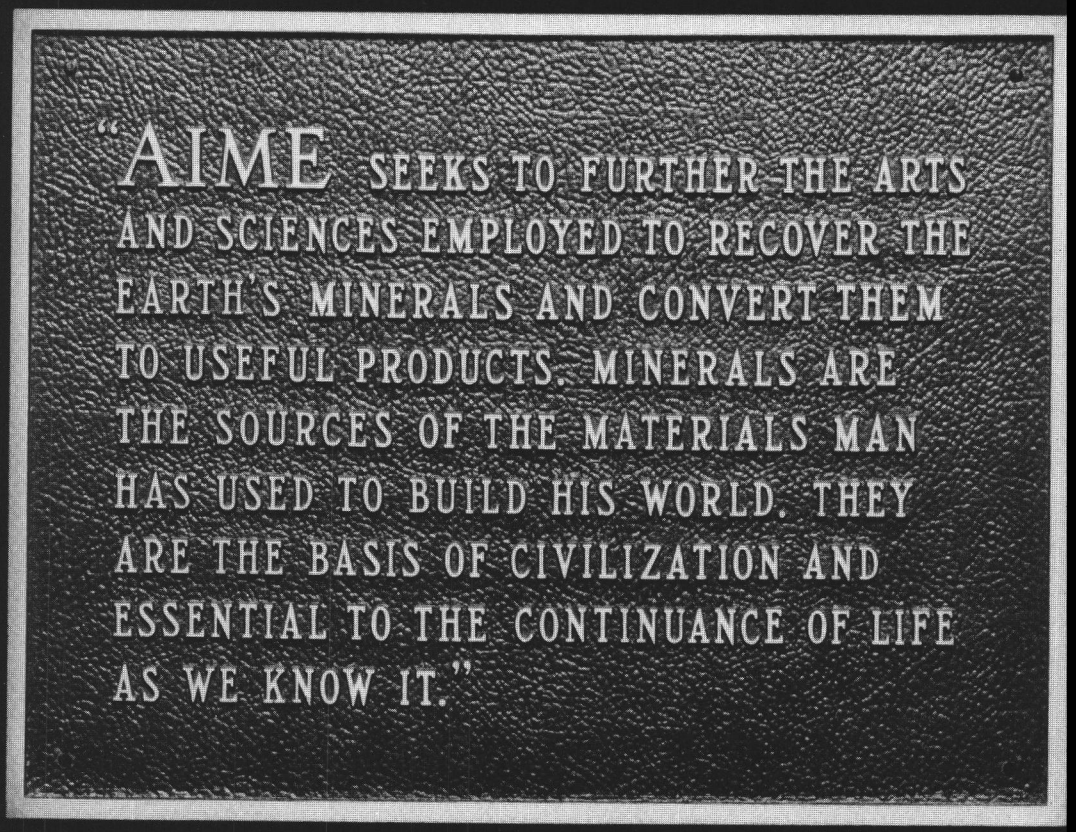
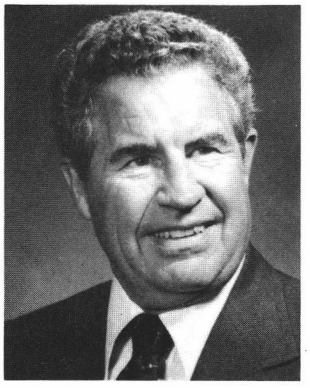


AIME
FOUNDED 1871

ANNUAL REPORT 1981

American Institute of Mining, Metallurgical and Petroleum Engineers, Inc.
345 East Forty-seventh Street, New York, New York 10017



Robert H. Merrill
President, 1981
American Institute of Mining, Metallurgical and Petroleum Engineers

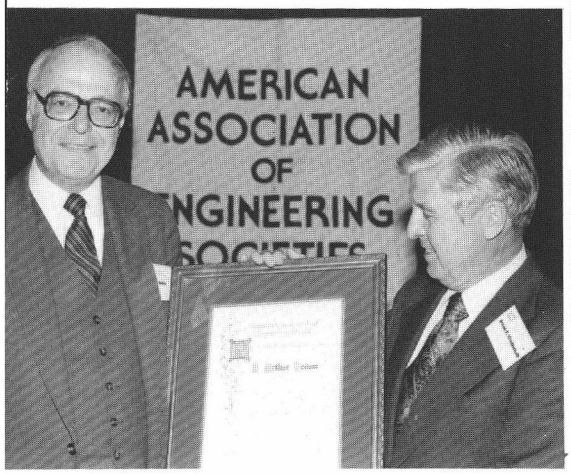
Despite the negative economic climate, 1981 was another year of solid growth and activity for the Institute. Total membership was 86,279 at year end and AIME will likely pass the 100,000 member mark within the next few years as this rate of growth continues. Increased activity by AIME Societies in technical conferences and meetings was also apparent during this past year.

However, 1981 may best be remembered as a year of change. Dr. Edward Buckley succeeded Joe Alford as AIME Executive Director on December 1. The AIME Board of Directors adopted a new protocol for the Annual Meeting giving the Constituent Societies greater responsibility in the management of this conference in the future. The Ad Hoc Transition Committee, charged with defining the future relationship between the Institute and its Constituent Societies under the decentralized mode of operation, began its deliberations and was active throughout the year. In addition to my responsibilities as your president, I have had the privilege of serving as chairman of this most important committee, which is scheduled to complete its recommendations on a revised AIME structure early next year.

The Institute continues to play a key role as one of the five Founder Societies, as a Trustee of the United Engineering Center and as a member of the American Association of Engineering Societies. Although AIME has been an active contributor to the goals of these organizations, I have sought to ensure that our relationship with these groups has been in the best interest of our membership.

When I became president, I felt confident that AIME was effectively meeting the needs of its members. The opportunity to talk with many of you at numerous conferences and section meetings over the past year has reaffirmed this confidence. Your cooperation on the many committees and operating units of the Institute is truly appreciated, and your continued efforts will result in an even stronger AIME in the future.

Robert H. Merrill



Left to right:
H. Arthur Nedom (l), 1981 AAES Chairman and 1977 AIME President, was presented with a scroll citing his contributions to AAES by Irvan Mendenhall, incoming chairman, at the AAES Annual Business Meeting in December.

AIME Executive Consultant Joe B. Alford (l) with Edward A. Buckley, who succeeded him as AIME Executive Director in December.

110th Annual Meeting

The 110th AIME Annual Meeting was held in Chicago, February 22-26, 1981. Over 4,000 registrants and 300 WAAIME attendees participated in the meeting. Some 930 papers were presented in over 190 technical sessions sponsored by the Society of Mining Engineers of AIME, The Metallurgical Society of AIME, The Iron and Steel Society of AIME, and the All-Institute Program Committee. Further Annual Meeting plans include Atlanta in 1983, Los Angeles in 1984, New York in 1985, New Orleans in 1986, and Las Vegas in 1989. Sites for 1987 and 1988 have not yet been approved.

American Association of Engineering Societies

The American Association of Engineering Societies, a federation of 43 engineering organizations representing nearly 1 million engineers, completed its second year of operation in 1981. As a central coordinating organization, AAES seeks to focus the resources of the engineering societies on technical issues of national and international importance.

AAES is structured into four operating Councils in Education, Engineering, Public and International Affairs. During the past year more than 48 AIME volunteers served on various AAES Councils and Committees. The governing body of this umbrella organization is the Board of Governors comprised of 2 representatives from each member society, but with weighted voting related to the membership of each Constituent society. In 1981 President Robert Merrill and Executive Director Joe Alford served as the Institute's representatives.

The Association is headquartered in the United Engineering Center in New York, which is the home of AIME Headquarters and the other Founder Societies. However, the close relationship between AAES and the Institute is more than physical. The Institute has a special interest in the success of AAES since many AIME leaders played a vital role in its foundation.

H. Arthur Nedom, Past President of SPE and AIME, served as Chairman of the Board of Governors in 1981. Art Nedom will continue to provide key leadership during these formative years through his continued service on the AAES Executive Committee in 1982.

Accreditation Board for Engineering and Technology

The Accreditation Board for Engineering and Technology is the agency responsible for accrediting college programs in engineering and engineering technology in the United States. All programs accredited by the Board meet the minimum criteria established by the professional societies represented in ABET.

AIME is one of 19 Participating Bodies that supervise ABET operations through representation on the Board of Directors. Because of the Institute's diverse constituency, AIME is responsible for developing accreditation guidelines in a wide variety of technical disciplines. In 1981, 31 programs for which the Institute holds curricular responsibility were evaluated and approved and more than 50 AIME members from industry and the academic community volunteered to serve on ABET evaluation teams in their areas of individual expertise.

Change in Executive Director

On December 1 Dr. Edward Buckley became the thirteenth chief staff officer of the Institute Headquarters succeeding Joe Alford, who will serve as Executive Consultant until his retirement on July 1, 1982. Mr. Alford was affiliated with AIME for more than 33 years. He originally joined the AIME staff in 1949 as the Editor of the JOURNAL OF PETROLEUM TECHNOLOGY in Dallas, and in 1950 was named Executive Secretary of the Society of Petroleum Engineers of AIME. Mr. Alford served in that position until becoming AIME Executive Director in 1968.

Dr. Buckley came to AIME from the staff of the Society of Plastics Engineers. As Programs Director, he was responsible for all conferences, educational activites, and management of the Society's geographic sections, technical divisions and student chapters. In addition to affording many opportunities for interaction with educational institutions, government agencies and professional associations, Dr. Buckley's former responsibilities have provided him with broad experience in membership services, fiscal management and international relations.

Society of Mining Engineers of AIME

In 1981, extensive efforts by the Society in the areas of membership development and retention contributed to a 6.3% growth in corporate membership, reflecting a total year-end membership of 28,404. One new Local Section was formed, two new Subsections, and three new Student Chapters. With revenue up 3.5% and expense down 6%, SME realized a surplus of $530,106.

Of particular note was the 4.1% growth in student membership, a reversal of a two-year downtrend. SME-AIME devoted a great deal of attention to student affairs, including an extensive survey to determine the needs of student chapters and participation in a survey to compare student programs among the five Founder Societies.

The Fall Meeting in Denver, the first to exceed 4,000 in attendance, additionally set records for exhibit sales, quality of programming, and surplus earned. Overall, meetings provided 20.4% of the revenue and 17.2% of the expense, and contributed 35.2% of the surplus.

Book sales were strong—18,428 copies distributed—but fell short of anticipation because of delays in some projects. In all, 11 new titles were published, with an additional 26 projects in progress. Publications provided more than 46% of the revenue and 67% of the expense for 1981.

The emerging reality of oil shale and use of minicomputers in the minerals industry were topics covered in two of the four special issues of MINING ENGINEERING. Other specials were the directory issue and the pre Fall Meeting show issue. The magazine's advertising continues to provide almost half the publications revenue.

The Society continued its emphasis during 1981 on ways to improve services to members. As conversion to the in-house computer, installed in October 1980, was completed, new services were added: additional support for Local Sections, registration support for meetings, and background information support for advertising sales. Implemented were an increased discount on the car rental program and a new insurance program especially designed for consultants. As the year ended, SME-AIME was in the process of setting up an information retrieval system through Information on Demand, a Berkeley, CA, firm. Once operational, a member can utilize the service by calling an SME "hot line," thereby easily accessing the number of computer-based information banks.

The Metallurgical Society of AIME

Growth in several key areas provided TMS-AIME with a financial surplus in 1981. Membership was up over 9%, the largest gain in recent years, for a total membership of 9,290. Improvement in the rate of retention for student members also set a new record, 41% over the previous record in 1980.

Revenues of $1,447,420 over expenses of $1,404,766 yielded $42,654, bringing total TMS reserves to $335,727. At its conclusion in 1981, the "Foundations for the Future" fund raising campaign had amassed $150,026 to support the continuation and expansion of the Society's services.

The Annual Meeting in Chicago attracted 1,789 TMS members and "metals interest" attendees, while the Fall Meeting in Louisville, held jointly with the American Ceramic Society and ASM, had 1,025 attendees. The Annual Conference of the Electronic Materials Committee, which has seen dramatic increases in the past few years, drew over 550 people to Santa Barbara. The overall good attendance demonstrated the continued strong support of TMS members and the valuable service provided to the metallurgical community through TMS-sponsored meetings.

Seeming to reflect the general high level of technical developments in metallurgical engineering and its related fields, both the publication and sale of new books saw high growth: 16 new conference proceedings were published and 9,000 books sold, setting an income record up 52% over 1980.

The JOURNAL OF METALS increased its pages devoted to technical and feature articles by 27%. At the request of the Society's Electronic Materials Committee, TMS prepared to take over the publishing of *Journal of Electronic Materials* from Plenum Publishing in 1982. Revenue from Paper Selections increased 42%, with a total of 85 titles published and 7,400 copies sold.

Highlighting 1981 was the first USA-China Bilateral Metallurgical Conference in Beijing, co-sponsored with ASM and the Chinese Society for Metals. Some 120 Chinese metallurgists attended the four-day conference, which had a U.S. delegation of 41. The two-week trip included the Conference, technical tours and sightseeing. Under discussion with CSM is a continuation of the exchange, with a small CSM delegation coming to the United States possibly in 1983.

Iron and Steel Society of AIME

The Iron and Steel Society of AIME completed its most successful year in its brief seven year history. 1981 was a year of harvest, in which every area of the Society's endeavors succeeded beyond the most optimistic projections made at year-end 1980.

In the face of employment curtailment in the industry through plant closings and modernization, membership continued its growth of 10% or more, with corporate membership reaching 6,355. By maintaining the current rate, ISS will meet the goal of 8,000 members, set by the ISS Board for year-end 1985, by mid-1984.

Revenues were $1,125,799, an increase of over 32%, while cost cutting efforts, primarily in publishing, held expenses to $953,079. At the end of fiscal year 1981, the Society had an operating reserve of $427,847, approximately 36% of the projected 1982 operating revenues.

Through its divisions, ISS sponsored or co-sponsored six technical conferences during 1981. Though the number of conferences was fewer than in some previous years, total number of registrants, at 4,086, exceeded all previous years.

The thirst for technology by managers and engineers in the industry lies at the base of the Society's success this year. Seven continuing education courses offered during the year attracted 394 people. The program's growth is reflected in the increase both in number of courses offered and in variety of topical material, and in the expansion of the program into local section and regional areas.

IRON AND STEELMAKER published 58 technical articles, an increase of 10 over last year. Contributing to the 20% increase in circulation was a significant rise in nonmember subscriptions. The number of advertising pages continues to climb: over 30% for the second consecutive year. Underway are plans to improve the content of the magazine. 1982 will see a 13th issue of the magazine, which will include an annual statistical review of the steel industry worldwide and a membership directory.

The publications staff also produced five conference proceedings books, and is reprinting the text of *BOF Steelmaking,* which has sold out. The volume of books distributed almost doubled, with over 7,000 mailed.

In December, the Pittsburgh Iron and Steel Section of AIME was formed, bringing total ISS sections to nine.

Society of Petroleum Engineers of AIME

The Society of Petroleum Engineers continued a growth and expansion program in all operating areas during 1981. A new record level for Society membership, new SPE local sections, and record attendance at Society meetings were 1981 highlights.

Membership reached 42,175, and new SPE local sections were established in the Philippines and in Santa Maria (California). Record attendance at Society-sponsored meetings was recorded—more than 125,000 registrants including 11,441 at the Society's Annual Technical Conference and Exhibition in San Antonio.

In publications, the Society's two periodicals, JOURNAL OF PETROLEUM TECHNOLOGY and SOCIETY OF PETROLEUM ENGINEERS JOURNAL, added more than 2,000 pages of technical information to the permanent literature. Work continued on the completion of six new Monographs, two Textbooks, and numerous Reprint Series Booklets. The release of the "SPE Technical Paper Microfiche Collection" in 1981 gave industry a single source for more than 8,000 technical papers.

In the area of professional development, two continuing education video-tape programs were released and work continued toward the release in 1982 of four more such courses. Numerous SPE short courses were held throughout the year, including six courses at the Annual Technical Conference and Exhibition.

The Society made significant inroads in supporting petroleum engineering education. Through its local Section General Scholarship Program, SPE made available more than $145,000 in aide to students in 1981-82. New programs in graduate engineering assistance and faculty salary supplements were designed and implemented.

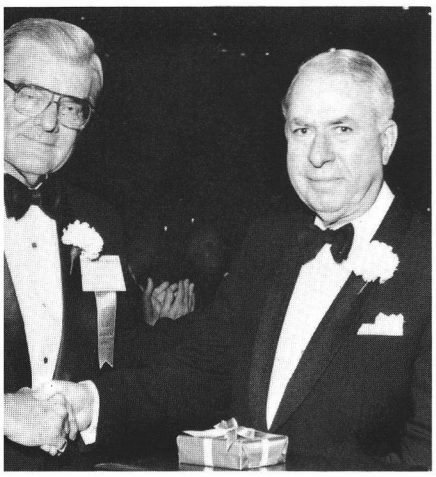
Since its adoption in 1976, the Society's Long Range Plan has provided direction for program assessment and new program development. During 1981, a Long Range Plan Review Committee examined the objectives of the Plan in light of today's environment and found the Plan still pertinent to today's petroleum engineer and to the Society. According to the Committee, "... the Society has done an excellent job in implementing the Long Range Plan. The Plan itself continues to be an excellent document with most of the objectives continuing to be good guides for the Society."

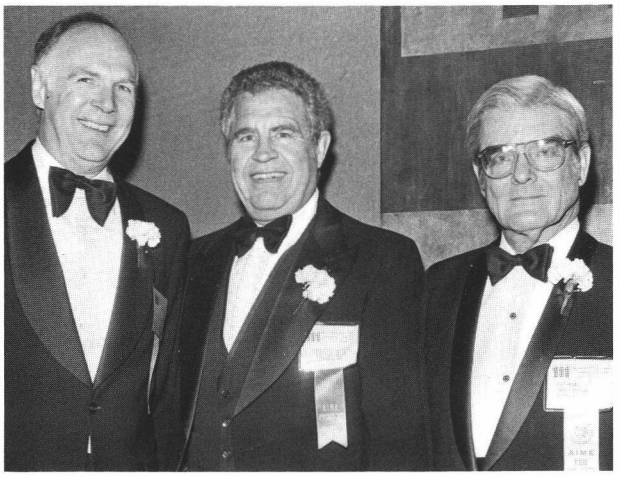
Professional Recognition

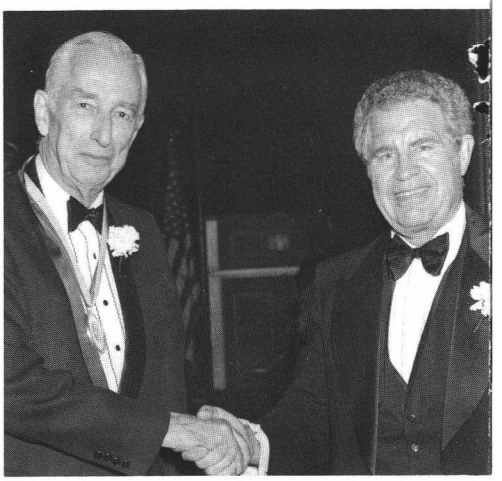
Left: Ian MacGregor (r), Chairman and Chief Executive, British Steel Corporation, receiving the John Fritz Medal from 1980 AIME President M. Scott Kraemer at the 1981 Annual Banquet.

Center: President-Elect, Harold W. Paxton; President, Robert H. Merrill; 1981 Past President, M. Scott Kraemer.

Right: Henry T. Mudd (l) receives AIME Honorary Membership Certificate and medallion from 1981 AIME President Robert H. Merrill.







In recognition of meritorious service and distinguished contributions to the fields of engineering and science it encompasses, AIME conferred the following prestigious HONORS AND AWARDS in 1981:

HONORARY MEMBERSHIP
Mr. Henry T. Mudd
Mr. H. Arthur Nedom

JAMES DOUGLAS GOLD MEDAL
Mr. George E. Atwood

CHARLES F. RAND MEMORIAL GOLD MEDAL
Dr. Paul C. Henshaw

ANTHONY F. LUCAS GOLD MEDAL
Dr. Claude R. Hocott

ERSKINE RAMSAY MEDAL
Mr. William N. Poundstone

ROBERT H. RICHARDS AWARD
Mr. William A. Griffith

BENJAMIN F. FAIRLESS AWARD
Mr. Howard O. Beaver, Jr.

HAL WILLIAMS HARDINGE AWARD
Dr. Sam H. Patterson

ROBERT EARLL McCONNELL AWARD
Dr. Franklyn K. Levin

ENVIRONMENTAL CONSERVATION DISTINGUISHED SERVICE AWARD
Dr. Fred A. Glover

ROSSITER W. RAYMOND AWARD
Dr. Robert H. Wagoner

MINERAL INDUSTRY EDUCATION AWARD
Professor Milton E. Wadsworth

MINERAL ECONOMICS AWARD
Professor Richard L. Gordon

ROCK MECHANICS AWARD
Mr. Charles T. Holland

Outstanding contributions in its field were also recognized by each of the Constituent Societies of AIME. In 1981, eight outstanding honor and/or achievement awards were conferred by the Society of Mining Engineers of AIME, nine by the Metallurgical Society of AIME, twenty-four by the Iron and Steel Society of AIME, and twelve 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.

Scholarships Approximately $170,000 was distributed to young people preparing for careers in minerals, materials and energy fields through the scholarships programs directed by AIME, the Constituent Societies and their Divisions and Local Sections.

Engineering Societies Joint Awards With its sister Founder Societies and other professional organizations, AIME sits on the Boards of Award of the John Fritz Medal, Hoover Medal, Alfred Nobel Prize and the Washington Award. In 1981 an AIME member, Ian MacGregor, was the recipient of the John Fritz Medal.

25 Year/Legion of Honor 50 Year Members In appreciation of their professional responsibility evidenced by their long-time loyalty to the Institute, AIME issued Twenty-Five Year Certificates to 1,139 members. Inducted into the Legion of Honor in 1981: 49 Fifty-Year Members each received a certificate and gold lapel pin.

THE WOMAN'S AUXILIARY TO AIME

The oldest program of WAAIME, the Scholarship Loan Fund (SLF) continues to flourish. During 1980-81, 85 students were advanced funds totaling over $72,000.00. 39 new loans were approved, 28 men and 11 women. 33 recipients attained "paid up" status.

The Engineers for Tomorrow (EFT) program, started in 1960 for the purpose of encouraging students to enter the earth science field, has expanded with the use of films, speakers, and field trips as well as awards at Science Fairs.

Chest and Chest Assistance to Students (CAS) program continues to help students, proposed by WAAIME Sections, with funds for books, field trips, living and one time expenses.

The Library program contributes technical and non-technical books and magazines to schools and libraries where our Sections find a need.

GEM, *Newsletter* and Publicity have all been active with each Section receiving Gem bulletins. *Newsletter* is sent to every member five or six times a year.

1981 FINANCIAL SUMMARY

Statement of Revenue and Expense

	1981	1980
Revenue:		
Members' dues and entrance fees	**$ 2,375,000**	$ 1,593,000
Advertising and publication sales	**5,215,000**	3,936,000
Meetings	**3,940,000**	2,975,000
Funds, interest, and miscellaneous	**884,000**	905,000
	12,414,000	9,409,000
Expense:		
Publications	**5,422,000**	4,270,000
AIME Headquarters and Society direct expense	**5,150,000**	4,189,000
	10,572,000	8,459,000
Excess of Revenue over Expense	**$ 1,842,000**	$ 950,000

AIME Balance Sheet

	1981	1980
Assets		
Cash, Temporary Cash Investments	**$ 3,942,000**	$ 1,552,000
Receivables	**1,826,000**	473,000
Inventories of Publications	**1,705,000**	1,395,000
Investments (Market $8,494,000)	**8,057,000**	8,382,000
Plant and Equipment, net of depreciation	**2,114,000**	2,039,000
Advances to United Engineering Trustees, Inc.	**265,000**	265,000
Other Assets	**110,00**	167,000
	$18,019,000	$14,273,000

	1981	1980
Liabilities and Fund Balances		
Accounts Payable	**$ 622,000**	$ 442,000
Dues Received in Advance	**677,000**	673,000
Other Advance Revenues	**1,208,000**	268,000
Annual Meeting Surplus Fund	**59,000**	60,000
Endowment and Custodian Funds	**7,214,000**	6,455,000
Property Fund	**265,000**	265,000
Operating Surplus	**7,974,000**	6,110,000
	$18,019,000	$14,273,000

AIME BOARD OF DIRECTORS, OCTOBER 23, 1981, NASHVILLE, TENNESSEE
Seated, Left to Right: Marvin L. Katz, Bruce A. Kennedy, M. Scott Kraemer, Robert H. Merrill, Harold W. Paxton, Robert S. Cooke, Arlen L. Edgar, John K. Hammes; Standing, Left to Right: Dale F. Stein, Kenneth J. Richards, Joe E. Wirsching, W. Clyde Barton, Jr., Norman T. Mills, Maurice C. Fuerstenau, Francis D. Nelson, Louis Kuchinic, Jr., Charles W. Arnold, Alfred Weiss, Franklin T. Davis, Joe B. Alford, J. S. Anslow

AIME BOARD OF DIRECTORS

PRESIDENT
Robert H. Merrill, Stearns-Roger, Denver, CO

PRESIDENT-ELECT
Harold W. Paxton, U.S. Steel Corporation, Pittsburgh, PA

PAST PRESIDENT
M. Scott Kraemer, Champlin Petroleum Company, Houston, TX

VICE-PRESIDENT—FINANCE
John K. Hammes, Citibank, N.A., New York, NY

VICE PRESIDENTS
Robert S. Cooke, Union Oil Co. of California, Midland, TX
Marvin L. Katz, ARCO Oil and Gas Co., Dallas, TX
Bruce A. Kennedy, Thyssen Mining Construction, Inc., Lakewood, CO
Francis D. Nelson, Inland Steel Co., East Chicago, IN
Nelson Severinghaus, Jr., Franklin Limestone Company, Nashville, TN
Dale F. Stein, Michigan Technology University, Houghton, MI

DIRECTORS
John S. Anslow, The Steel Company of Canada, Ltd., Hamilton, Ontario
Charles W. Arnold, Exxon Production Research, Houston, TX
W. Clyde Barton, Jr., Union Oil Co. of California, Los Angeles, CA
Franklin T. Davis,
Colorado School of Mines Research Institute, Golden, CA
Arlen L. Edgar, Consultant, Midland, TX
Maurice C. Fuerstenau,
South Dakota School of Mines & Technology, Rapid City, SD
Louis Kuchinic, Jr., Penn Virginia Resources Corp., Duffield, VA
Alan Lawley, Drexel University, Philadelphia, PA
Norman T. Mills, Inland Steel Co., East Chicago, IN
Kenneth J. Richards, Kennecott Minerals Co., Salt Lake City, UT
Alfred Weiss, Mineral Systems, Inc., Stamford, CT
Joe E. Wirsching, Canus Petroleum, Inc., Corpus Christi, TX

EXECUTIVE DIRECTOR
Joe B. Alford, AIME, New York, NY

SOCIETY OF MINING ENGINEERS OF AIME

PRESIDENT, Alfred Weiss, Stamford, CT
PRESIDENT-ELECT, Maurice C. Fuerstenau, Rapid City, SD
PAST PRESIDENT, Nelson Severinghaus, Jr., Nashville, TN
TREASURER, Bruce A. Kennedy, Lakewood, CO
EXECUTIVE DIRECTOR, Claude L. Crowley, Denver, CO

THE METALLURGICAL SOCIETY OF AIME

PRESIDENT, Kenneth J. Richards, Salt Lake City, UT
PRESIDENT-ELECT, Alan Lawley, Philadelphia, PA
PAST PRESIDENT, Dale F. Stein, Houghton, MI
TREASURER, George S. Ansell, Troy, NY
EXECUTIVE DIRECTOR, Alexander R. Scott, Warrendale, PA

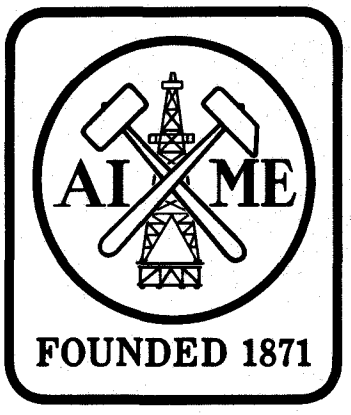
IRON AND STEEL SOCIETY OF AIME

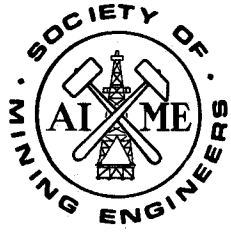
PRESIDENT, Norman T. Mills, East Chicago, IN
PRESIDENT-ELECT, J. S. Anslow, Hamilton, Ontario
PAST PRESIDENT, Francis D. Nelson, East Chicago, IN
TREASURER, G. W. Knepshield, Pittsburgh, PA
EXECUTIVE DIRECTOR, Lawrence G. Kuhn, Warrendale, PA

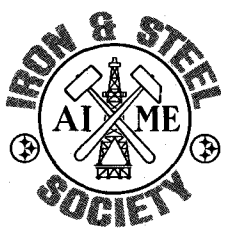
SOCIETY OF PETROLEUM ENGINEERS OF AIME

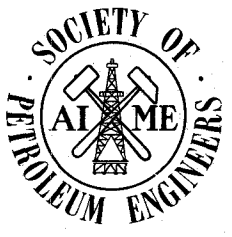
PRESIDENT, Arlen L. Edgar, Midland, TX
PRESIDENT-ELECT, W. Clyde Barton, Jr., Los Angeles, CA
PAST PRESIDENT, Marvin L. Katz, Dallas, TX
TREASURER, Bill M. Thompson, Bartlesville, OK
EXECUTIVE DIRECTOR, Dan K. Adamson, Dallas, TX

AIME Official Annual Review/1981









American Institute of Mining, Metallurgical and Petroleum Engineers, 345 East Forty-Seventh Street, New York, New York 10017

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

AIME OFFICIAL ANNUAL REVIEW

1981

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

REPORT OF THE AIME EXECUTIVE DIRECTOR FOR 1981

1981 was another significantly successful year for the Institute in terms of the high level of service to AIME members as well as increased financial strength and membership growth.

Overall AIME membership increased by nearly 6 per cent for a total of 86,279 at year end. This was well below the 12 per cent growth rate that the Institute enjoyed in 1980, but it represents a very respectable gain in view of the negative economic conditions that persisted for the better part of 1981. Not surprisingly our student members were most adversely affected by the recession.

The financial growth of the Institute was most impressive. The balance sheet assets increased by 26.6 per cent from $14,273,266 at the end of 1980 to $18,019,388 at the end of 1981.

Specific data on operations for each of the AIME Societies are contained in the reports of the Executive Directors of each of the Constituent Societies in this Annual Review.

For the Institute Headquarters 1981 was a year of mixed emotions and many changes. I was particularly gratified to assume the position of AIME Executive Director on December 1, 1981. Coming from a background of more than 20 years in association management, professional educational and industrial experience, I look forward to the unique challenges of working with an organization that has such deep historical roots and traditions on the one hand and such modern diverse autonomy on the other.

This was also the year in which Joe B. Alford announced his planned retirement after more than 33 years of exemplary service to the Institute. Mr. Alford originally joined the AIME staff in 1949 as Editor of the Journal of Petroleum Technology in Dallas, and in 1950 was named Executive Secretary of the Society of Petroleum Engineers of AIME. He served in that position until becoming AIME Executive Director in 1968. It would take the major portion of this Annual Review to catalog his contributions to AIME. His leadership and counsel will be sorely missed.

The Institute is indebted to President Merrill for his dedication and positive leadership throughout the year, and to the Institute and Constituent Society Boards of Directors and many thousands of members who worked on committees, meetings, presented papers and served in the general operation of the Institute. The success of the past year and the bright future for 1982 are directly attributable to the efforts of a dedicated membership.

Respectfully submitted,

Edward A. Buckley

Edward A. Buckley
Executive Director

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

RECORD OF HONORS AND AWARDS PRESENTED BY AIME IN 1981

The following Honors and Awards were presented by AIME in 1981, in addition to those presented by the Constituent Societies and described elsewhere in this Annual Review:

HONORARY MEMBERSHIP was conferred upon

> Morris Cohen, "In recognition of original research and advancement of knowledge of the physical and mechanical metallurgy of iron and steel, and for his contributions to the profession."
>
> Julius J. Harwood, "For distinguished service to AIME and to The Metallurgical Society; for his significant contributions to materials science in industry practice and in the establishment of national policy."
>
> Simon D. Strauss, "For his many important contributions to the advancement of the non-ferrous mining and metals industry and for his continuing service in the profession."

The JAMES DOUGLAS GOLD MEDAL to George E. Atwood, "In recognition of his technical and management leadership contributing to important progress in methods for recovery of potash and for hydrometallurgical processing of copper concentrates."

The BENJAMIN F. FAIRLESS AWARD to Howard O. Beaver, Jr., "For his strong commitment to advance technology in the development, production and application of specialty metal, and outstanding contribution to the growth of the metals industry."

The HAL WILLIAMS HARDINGE AWARD to Sam H. Patterson, "Geologist, mineral economist, and noted author. For world recognized contributions toward the geology of bauxite, bentonite, and other important industrial minerals."

The ANTHONY F. LUCAS GOLD MEDAL to Claude R. Hocott, "For contributions in the fields of fluid mechanics formation evaluation, geochemistry, hydrocarbon recovery and reservoir engineering and for distinguished service to industry and professional groups."

The ROBERT EARLL McCONNELL AWARD to Franklyn K. Levin, "Distinguished geophysicist whose more than thirty years of research, teaching and practice in the area of exploration seismology have helped lead to the discovery of major petroleum reserves."

The ERSKINE RAMSAY MEDAL to William N. Poundstone, "In recognition of his outstanding engineering accomplishments in coal mining and transportation systems and his being an outstanding Coal Industry executive and representative."

The CHARLES F. RAND MEMORIAL GOLD MEDAL to Paul C. Henshaw, "For his unique combination of skills in innovating mining exploration, development, technology, and financial management, while serving fully his professional and civic responsibilities."

The ROBERT H. RICHARDS AWARD to William A. Griffith, "In recognition of his many contributions to the mineral industry in research and development and particularly his imaginative application of metallurgical principles to those ores not yielding to conventional processing."

The ENVIRONMENTAL CONSERVATION DISTINGUISHED SERVICE AWARD to Fred A. Glover, "Wildlife biologist and ecologist-in recognition of his distinguished professional career embracing government service, research, teaching and management; his extensive contributions to professional societies, and his dedication to harmonization of environmental and natural resource development goals for society's total advancement."

The MINERAL INDUSTRY EDUCATION AWARD to Milton E. Wadsworth, "In recognition of the inspiration given by his enthusiastic, effective teaching and creative research in extractive metallurgy and for his interest and contributions to the professional advancement of his students and colleagues."

The MINERAL ECONOMICS AWARD to Richard L. Gordon, "For his thoughtful and rigorous economic analyses presented in books, papers, and teaching which have provided an outstanding guide toward a more rational allocation of society's scarce resources to meet the world's fuel needs, especially coal; and for his leadership, as Chairman in 1975, which strengthened the Council of Economics of AIME."

The ROSSITER W. RAYMOND MEMORIAL AWARD to Robert H. Wagoner, for his paper, "Measurement and Analysis of Plane-Strain Work Hardening."

LEGION OF HONOR FIFTY-YEAR MEMBER INSIGNIA were conferred upon the following forty-nine members: Leo M. Abell, Marshall B. Ames, William J. Bennett, Horace D. Bevan, Edward C. Borrego, John N. Butler, Samuel M. Cassidy, John Chipman, Russell L. Christie, Carrol E. Craven, Howard D. Crawford, Frank J. Cuddeback, T.A. Devore, Jules A. Durand, Marvin P. Egleston, Edward J. Foley, John C. Franz, M. Luther Fuller, George D. Gardner, Sidney S. Goodwin, Lyman H. Hart, Carl C. Henning, G.W. Holbrook, Randolph W. Howe, Arthur F. Johnson, Heine Kenworthy, Frederick L. Knouse, Charles A.R. Lambly, Plato Malozemoff, Richard R. Matthew, Virgil Miller, George E. Morris, Vernon O. Murray, Ira D. Odgers, Ralph D. Parker, G.T. Pearson, Frank O. Prior, Edward Prostel, Bernard R. Queneau, Paul E. Queneau, John G. Reilly, J. Patrick Ryan, Merrill A. Scheil, W.C. Schott, John T. Sherman, R. Joe Stephens, Weston G. Thomas, Walter H. Voskuil, Clarence F. Zeuch.

Coopers & Lybrand

certified public accountants

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, 1981 and 1980, 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 1981) and surplus, and changes in endowment, quasi-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 opinion, the financial statements referred to above present fairly the financial position of American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. at November 30, 1981 and 1980, and the results of its operations and the changes in its endowment, quasi-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, 1981, all in conformity with generally accepted accounting principles applied on a consistent basis.

Coopers & Lybrand

New York, New York
January 13, 1982.

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

BALANCE SHEETS, November 30, 1981 and 1980

ASSETS:	1981	1980
Operating fund:		
Cash and temporary cash investments	$ 3,642,449	$ 1,317,543
Accounts receivable (Note 1c)	526,460	473,238
Note receivable (Note 3)	1,300,000	
Inventories of publications (Note 1b)	1,482,656	1,166,181
Investments, at cost (at market quotations approximately $2,617,147 in 1981 and $3,690,605 in 1980) (Notes 1d and 4)	2,379,889	3,435,041
Property, buildings and equipment (Notes 1c and 2):		
Land	137,016	137,016
Buildings, less accumulated depreciation of $86,226 in 1981 and $53,043 in 1980	1,237,544	1,265,586
Equipment, furniture and fixtures, less accumulated depreciation of $517,190 in 1981 and $350,800 in 1980	739,297	636,847
Prepaid expenses, deferred charges and other assets	110,003	167,468
	11,555,314	8,598,920
Endowment, quasi-endowment and custodian funds:		
Investments, at cost plus accrued interest (at market quotations plus accrued interest, approximately $5,050,428 in 1981 and $4,933,109 in 1980) (Notes 1d and 4)	4,850,742	4,096,413
Inventories of books (Note 1b)	221,893	228,684
Cash and temporary cash investments	299,972	234,116
Loan receivable from operating fund plus accrued interest (Note 2)	726,467	750,133
Advance to operating fund for SME land and building investment (Note 2)	100,000	100,000
	6,199,074	5,409,346
Founder Society advances to United Engineering Trustees, Inc. (Note 5)	265,000	265,000
	$18,019,388	$14,273,266

LIABILITIES and FUND BALANCES:	1981	1980
Operating fund:		
Accounts payable and accrued liabilities	$ 622,525	$ 442,257
Membership dues received in advance	677,212	673,526
Other deferred credits, principally publications and meetings	1,207,855	267,630
Mortgage loan payable (Note 2)	188,052	195,378
Loans payable to endowment fund plus accrued interest (Note 2)	726,467	750,133
Advance from endowment fund for SME land and building investment (Note 2)	100,000	100,000
Annual meeting surplus fund	59,576	60,070
Surplus - unrestricted (per statement annexed)	7,973,627	6,109,926
	11,555,314	8,598,920
Endowment, quasi-endowment and custodian funds:		
Accounts payable and accrued liabilities	276,265	32,725
Fund balances (per statement annexed) (Note 1a):		
Endowment and quasi-endowment funds	5,419,922	4,989,101
Custodian funds (unrestricted)	502,887	387,520
	6,199,074	5,409,346
Property fund (no change during 1981 and 1980) (Note 5)	265,000	265,000
	$18,019,388	$14,273,266

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

2

STATEMENTS of REVENUE and EXPENSES and SURPLUS
for the years ended November 30, 1981 and 1980

	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	Eliminations	Total 1981	Total 1980
Revenue:								
Members' dues and entrance fees	$286,566	$ 868,404	$ 280,899	$ 202,640	$1,022,648	($286,566)(1)	$ 2,374,591	$1,591,705
Advertising and publication sales		1,378,538	523,558	502,956	2,810,183		5,215,235	3,936,367
Appropriations from endowment funds	182,300						182,300	182,300
Offshore Technology Conference:								
Attendance and membership distribution	93,818	111,846	35,913	21,664	1,147,839		1,411,080	1,143,948
Management fees					299,100		299,100	255,600
Exhibit space commission					63,610		63,610	48,608
Meetings, interest and miscellaneous	22,508	619,516	248,867	398,539	1,583,530	(5,000)(2)	2,867,960	2,250,243
	585,192	2,978,304	1,089,237	1,125,799	6,926,910	(291,566)	12,413,876	9,408,771
Expenses:								
Publications		1,658,518	576,976	526,279	2,660,748		5,422,521	4,269,728
Society direct expenses		693,270	444,000	404,863	3,044,915		4,587,048	3,676,730
AIME Headquarters	567,538	96,410	25,607	21,938	142,609	(291,566)	562,536	512,470
	567,538	2,448,198	1,046,583	953,080	5,848,272	(291,566)	10,572,105	8,458,928
	17,654	530,106	42,654	172,719	1,078,638	-	1,841,771	949,843
Contributions for SME building construction, net of fund raising expenses of $2,504 in 1981 and $6,827 in 1980 (Note 1c)		21,930					21,930	24,962
Excess of revenue over expenses	$ 17,654	$ 552,036	$ 42,654	$ 172,719	$1,078,638	-	1,863,701	974,805
Surplus (unrestricted):								
Balance, beginning of year							6,109,926	5,135,121
Balance, end of year							$ 7,973,627	$6,109,926

(1) Elimination of dues allocated to Headquarters from societies.

(2) Elimination of appropriation from AIME Headquarters to Society of Mining Engineers.

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

3

STATEMENTS of CHANGES in ENDOWMENT, QUASI-ENDOWMENT and CUSTODIAN FUNDS
for the years ended November 30, 1981 and 1980

	1981			1980		
	Endowment and Quasi-Endowment Fund Accounts	Custodian Fund Accounts Unrestricted	Total	Endowment and Quasi-Endowment Fund Accounts	Custodian Fund Accounts Unrestricted	Total
Balance of fund accounts, beginning of year	$4,989,101	$387,520	$5,376,621	$5,033,516	$409,373	$5,442,889
Revenue:						
Contributions	12,064	31,213		10,168	20,661	
Net gain (loss) on sale of investments	269,618	3,743		(190,425)	(7,436)	
Interest and dividends	348,992	49,133		335,002	39,779	
Sales of books, volumes, etc.	101,660	71,677		87,381	20,030	
Revenue from conferences and committee meetings, net		131,759			191	
Royalties from publishers and oil deeds	38,432	1,146		24,918		
Other	10			442	1,232	
	770,776	288,671	1,059,447	267,486	74,457	341,943
			6,436,068			5,784,832
Expenses and appropriations:						
Publication expenses	115,308	58,227		95,848	42,453	
Awards	26,197	20,638		12,850	28,887	
Lecture series and student travel	7,000			11,500		
Sundry expenses	9,150	94,439		9,403	24,970	
Appropriations to operating fund	182,300			182,300		
	339,955	173,304	513,259	311,901	96,310	408,211
Balance of fund accounts, end of year	$5,419,922	$502,887	$5,922,809	$4,989,101	$387,520	$5,376,621

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) and the Society of Mining Engineers (SME), the Society of Petroleum Engineers (SPE), The Metallurgical Society (TMS), and the Iron & Steel Society (ISS), the four societies being referred to as the constituent societies.

Custodian funds are either set aside for or generated by the conduct of specific activities within AIME and its constituent societies. While the Institute retains ownership and AIME directors remain responsible for proper use, the operating control has generally been delegated to the AIME body that manages the related activity.

Quasi-endowment funds of $4,247,355 and $3,818,787 at November 30, 1981 and 1980, respectively, represented amounts which have been restricted by the Institute's Board of Directors. The Board of Directors has also determined that such funds be retained and invested.

The financial statements do not include assets, liabilities, revenue 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, 1981 and 1980, the OTC's net assets were comprised principally of cash and temporary cash investments) are included in endowment and custodian fund cash and temporary cash investments on the balance sheets.

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.

b. Inventories

Salable publications and books are carried at the lower of cost (first-in, first-out) or net realizable value.

c. Property, Buildings and Equipment (See Note 2)

Land and buildings comprise the headquarters for SME in Denver, Colorado and TMS and ISS in Warrendale, Pennsylvania. The land and buildings are recorded at

Continued

cost and the buildings are depreciated on the straight-line method over their estimated useful lives. Depreciation expense for 1981 and 1980 was as follows:

	1981	1980
Charged to publications		$ 2,318
Charged to society direct expenses	$33,183	30,712
	$33,183	$33,030

In connection with the construction of the SME headquarters, SME has, since 1978, recorded contributions, net of fund-raising expenses, for the restrictive purpose of defraying the cost of the headquarters. Contributions that are not expended for the headquarters may be used to repay the $467,000 floating interest loan from the endowment funds (see Note 2) or for future building improvements. In connection with the aformentioned contributions, pledges of $31,050 and $51,084 have been included in accounts receivable at November 30, 1981 and 1980, respectively.

Equipment, furniture and fixtures are recorded at cost and are depreciated on the straight-line method over their estimated useful lives. Depreciation expenses for 1981 and 1980 were as follows:

	1981	1980
Charged to publications	$ 46,800	$ 22,700
Charged to society direct expenses	121,000	108,700
Charged to AIME Headquarters	4,000	4,500
	$171,800	$135,900

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 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 to the individual funds based on their relative book values at the end of each quarter.

Continued

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's pension plan was revised and amended as of December 1, 1980. The revised plan covers substantially all full-time employees, and is non-contributory with regard to the first $10,000 of salary. Contributions are required from eligible employees for salaries in excess of $10,000. Actuarially computed pension costs, including amortization of prior service costs over a thirty-year period are funded and charged to expense each year. Pension expense amounted to $92,500 and $55,700 in fiscal 1981 and 1980, respectively.

Accumulated plan benefits and plan net assets as of the last actuarial valuation date, December 1, 1980, are as follows:

Actuarial present value of accumulated plan benefits:	
Vested	$ 822,200
Nonvested	42,000
	$ 864,200
Net assets available for benefits	$1,278,471

The assumed rate of return used in determining the actuarial present value of accumulated plan benefits was 7.0%.

2. Financing of TMS/ISS and SME Headquarters Facilities

TMS/ISS Headquarters

During 1978, the operating fund obtained a $300,055 loan from the endowment fund, payable over twenty years at a floating interest rate based on the endowment fund's prior year's net earnings after management fees. At November 30, 1981 and 1980, the balance of the loan plus accrued interest at 6.3% (1981) and 7.5% (1980) per annum was $275,461 and $285,003, respectively.

Continued

On December 8, 1978, the Institute obtained a mortgage loan of $206,400 from the Pennsylvania Industrial Development Authority to finance the remaining portion of the construction costs. The loan, collateralized by a mortgage on the building, bears interest at the rate of 4% per annum and is payable in 240 equal monthly instalments which began May 1, 1979. At November 30, 1981 and 1980, the balance of the loan plus accrued interest was $188,052 and $195,378, respectively.

SME Headquarters

On February 28, 1978, the Institute's Board of Directors approved an investment of $100,000 from the endowment fund (Rocky Mountain Fund) for the facility and stipulated that the Fund shall hold a proportional share of the facility and receive a proportional share of any proceeds from its sale or disposition.

During fiscal 1979, the operating fund obtained a $467,000 loan from the endowment fund, payable over twenty years at a floating interest rate based on the endowment fund's prior year's net earnings after management fees. At November 30, 1981 and 1980, the balance of the loan plus accrued interest at 6.3% (1981) and 7.5% (1980) was $451,006 and $465,130, respectively.

3. Note Receivable

On November 20, 1981, a non-interest-bearing loan of $1,300,000, evidenced by a note was made by SPE to the SPE Foundation. The SPE Foundation was formed for the purpose of furthering the interests of SPE and its members.

The loan was made to the Foundation for the construction of a building, and is secured by land owned by the SPE Foundation. The note is repayable on November 20, 1983.

4. Changes in Investments

	1981	1980
Operating fund:		
Investments at cost, beginning of year	$3,435,041	$2,585,268
Purchases of securities	316,897	1,532,130
	3,751,938	4,117,398
Sales of securities	(1,372,049)	(682,357)
Investments at cost, end of year	$2,379,889	$3,435,041

Continued

	1981	1980
Endowment, quasi-endowment and custodian funds:		
Investments at cost plus accrued interest, beginning of year	$4,096,413	$4,186,369
Purchases of securities	3,483,564	2,714,602
	7,579,977	6,900,971
Sales of securities	(3,014,628)	(2,601,872)
	4,565,349	4,299,099
Net gain (loss) on sales of securities*	273,361	(197,861)
Net change in accrued interest	12,032	(4,825)
Investments at cost plus accrued interest, end of year	$4,850,742	$4,096,413

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

5. Advances to United Engineering Trustees, Inc.

In accordance with an agreement between the Institute and the United Engineering Trustees, Inc. (UET), the Institute has agreed to maintain permanently its principal offices in the United Engineering Center Building and to pay a pro rata portion of the operating costs of the building. The Institute's share of these costs during 1981 and 1980 was $46,000 and $42,000, respectively. The advance to UET, made in connection with the erection of the United Engineering Center Building, is repayable only out of available reserve funds on dissolution of UET and earns interest at an annual rate of 4%.

6. Commitments

Rental commitments under leases for office space and computer equipment approximate $116,000 in 1982, $89,000 in 1983 and $21,000 in 1984. Rental expense was approximately $183,000 and $149,000 during 1981 and 1980, respectively.

See Note 5 with respect to the Institute's commitment related to the United Engineering Center.

TOTAL FINANCIAL RESOURCES OF AIME

AS AT NOVEMBER 30, 1981

AIME ENDOWMENT FUNDS

Medal and Plaque Award Funds	$ 218,877
Scholarship Funds	196,607
Specific Use Funds	2,049,835
General Purpose Funds	2,954,603
TOTAL ENDOWMENT FUNDS.....	$5,419,922

FUNDS UNDER ASSIGNMENT TO CONSTITUENT UNITS

Custodian Funds:

AIME Corporate Headquarters	$ 110,797
SME-AIME	299,418
TMS-AIME	22,913
ISS-AIME	98,000
SPE-AIME	-0-
Equity in Undistributed OTC Surplus	31,335*
TOTAL CUSTODIAN FUNDS . .	$ 562,463

*Represents surplus distributable to AIME and Constituent Societies

OPERATING SURPLUS FUNDS

AIME Corporate Headquarters Operating Reserve	$183,211	
All-Institute Deficit from Prior Years	(38,495)	
Net Headquarters Reserve		$ 144,716
SME-AIME		1,755,969
TMS-AIME		312,813
ISS-AIME		427,641
SPE-AIME		5,332,488
TOTAL OPERATING SURPLUS FUNDS . . .		$7,973,627

FUNDS HELD BY LOCAL SECTIONS

Approximate value based on 1980 Section Treasurers' Reports.	$1,300,000

SUMMARY

ENDOWMENT FUNDS.....	$ 5,419,922
CUSTODIAN FUNDS.....	562,463
OPERATING SURPLUS FUNDS.....	7,973,627
SUBTOTAL	13,956,012
ADVANCES TO UNITED ENGINEERING TRUSTEES, INC.....	265,000
RESOURCES SET ASIDE TO MEET LIABILITIES.....	3,798,376*
TOTAL RESOURCES EXCLUDING SECTIONS.....	18,019,388
LOCAL SECTION FUNDS.....	1,300,000
TOTAL FINANCIAL RESOURCES OF AIME.....	$19,319,388

*Includes Endowment Fund Loans and Investments as follows:

Loan for Society Buildings	$726,467
Investment in SME Building	100,000
Total	$826,467

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	1975	50,085	6,663	*56,152
1961	34,368	1,633	36,001	1976	52,642	7,131	59,773
1962	34,437	1,857	36,294	1977	56,008	8,802	64,810
1963	34,838	2,289	37,127	1978	59,385	9,285	68,670
1964	35,740	2,370	38,110	1979	63,712	9,289	73,001
1965	36,878	2,561	39,439	1980	70,791	10,942	81,733
1966	38,912	2,706	41,618	1981	76,600	9,679	86,279
1967	40,278	3,183	43,461				
1968	42,015	3,437	45,488				
1969	43,300	3,438	46,738				
1970	43,095	3,863	46,958				
1971	44,627	3,962	48,589				
1972	45,742	3,652	49,394				
1973	45,154	4,572	49,726				
1974	46,702	4,988	51,690				

*Actual Grand Total; 596 TMS-AIME/ISS-AIME Joint Corporate Members included once.

AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, INC. — MEMBERSHIP STATISTICS January 1, 1982

NO.	SECTION	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.
		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. & Met. Sci. E	Educ. J	Econ. K	Un-class	Total	Division MNOPQ	Econ. K	Total	Drilling & Well Comp. N	Educ. & Prof. O	Econ. & Eval. P	Form Eval. R	Gas Tech. S	Geol. Eng. T	Manage-ment U	Prod. Oper. V	Reser-voir Eng. W	Fl. Mech. & Oil Rec. Proc. X	OP & TECH Y	Un-class	Total		
P63	ABERDEEN PETROLEUM	5							5																							
50	ADIRONDACK	28	11	1	12			1	53	9	22			1	32	3		3	267	17	14	40	3	8	24	112	63	19	92	13	266	677	P63
35	ALABAMA	106	31	219	18	2		4	380	30	22	1		3	56					1	4				1	1				366	90	50
1	ALASKA	46	3	5			2	1	57										3						4		1		1	23	459	35
P11	ALASKA PETROLEUM													1	1				96	2 7	10	19	11	6	5 26	4 127	1 35	1 8	25	14	9 384	66 385	1 P11
P50	AMARILLO PETROLEUM									12				1	13				51	4	15	13	7	16	11	24	21	1	1	15	179	192	P50
P22	ANADARKO BASIN		1					1	2		1				1				27	1	5	5	7	3	8	25	2		1	5	89	92	P22
P38	APPALACHIAN PETROLEUM																		53	6	10	14	11	15	10	26	15	1		18	179	179	P38
P72	ARGENTINE PETROLEUM	19	14		3	1			37										42		18	14	4	4	11	54	71	25	8	10	261	298	P72
58	ARKANSAS	36	9	4	6			1	56	9	5				14				4	2	1	1	2	2	2	4	1				19	89	58
P35	BALCONES									1	1				2				102	12	30	29	11	25	29	67	46	19	4	36	410	412	P35
P44	BARTLESVILLE																		17	2	16	14	5	8	16	24	32	47	5	10	196	196	P44
P45	BIG HORN BASIN																		36	1	4	2	3	5	2	53	4	9	4	6	129	129	P45
P19	BILLINGS PETROLEUM									1					1	1		1	32		4	2	4	5	9	30	11	3		10	117	119	P19
3	BLACK HILLS	61	11	1	5	3	1	2	84	2	6			4	12				2							1				3	99	3
143	BOISE	108	19	51	7	1	6	7	199							1		1							2					2	202	143
P60	BOLIVIAN PETROLEUM	17	8		1	1		1	28										12	2	7	5	8	1	5	10	9		7	66	94	P60
4	BOSTON	78	26	19	8		9	4	144	45	163	2	6	13	229	1		1	4	1	10	1	2	3	5	4	5	7	1	44	418	4
P32	CALIFORNIA COASTAL																		77	6	17	16	2	12	13	81	30	11	37	20	322	322	P32
P31	CARACAS PETROLEUM	16	1	1	3		3		24	1	1	1			3				15	2	9	16	3	4	21	15	55	13	7	11	171	198	P31
5	CARLSBAD POTASH	38	18		13			2	71	1				1	2																73	5
92	CAROLINAS	93	42	15	31	2	6	7	196	31	35			9	75				1			1	1	2	1	1		2		3	12	283	92
6	CENTRAL APPALACHIAN	154	28	734	18	7	13	28	982	11	18			3	32	25		25														1,039	6
146	CENTRAL ARIZONA	23	7				1	1	32																							32	146
127	CENTRAL INDIANA	3		5	1				9	4	14			2	20	15		15														44	127
60	CENTRAL NEW MEXICO	330	29	64	25	1	9	13	471	12	24			7	43	1		1	21		6	4	2	3	3	5	6	18		4	72	587	60
I-1	CHICAGO									64	215	4	3	31	317	768	10	778													1,095	I-1
P48	CHICAGO PETROLEUM	112	65	112	40		10	7	346										11	1	16	3	18	3	20	24	13	20	2	6	137	483	P48
8	CLEVELAND									38	127	1	1	14	181																181	8
I-3	CLEVELAND IRON & STEEL															380	6	386													386	I-3
P41	COASTAL BEND																		76	2	2	12	10	4	12	62	6	3	1	16	206	206	P41
147	COCHISE																															45	147
163	COEUR D'ALENE	113	19	1	4	1	6	4	148																							148	163
P55	COLOMBIAN	17	3	7	1		2	3	33										20	2	1	1		2	4	6	12	1	1	1	51	84	P55
9	COLORADO	1,510	391	365	93	11	75	71	2,516	69	46	1	1	8	125																	2,641	9
57	COLORADO PLATEAU	323	27	83	10	1	6	6	456				1		1																	457	57
10	COLUMBIA	192	23	7	4		4	6	238	22	13			1	36				2								1			3	277	10
11	CONNECTICUT	21	12	2	1			2	38	33	128		2	16	179				6		1		1	2	3	1	2	1	1	18	235	11
P16	DALLAS									7	16		1	4	28				359	24	219	111	43	83	150	254	302	117	68	116	1,846	1,874	P16
P 6	DELTA	32	10	5	7		2	6	62	29	9		1	3	42				506	29	52	82	18	39	94	323	185	24	127	75	1,554	1,658	P6
P18	DENVER PETROLEUM																		575	33	153	120	64	106	170	377	267	100	25	101	2,091	2,091	P18
13	DETROIT	43	14	13	12	1		3	86	30	177	3	1	15	226	229	4	233														312	13
I-5	DETROIT IRON & STEEL																															233	I-5
P46	EAST KENTUCKY																		33	1	1	3	2	7	4	9	2	1		8	71	71	P46
95	EAST TENNESSEE	136	30	51	16	2	4	4	243	33	53			10	96				3						3	3	2	1			12	351	95
P 3	EAST TEXAS									1	1				2																		
I-7	EASTERN	5	3	8			2		18							787	15	802	232	17	29	42	15	10	45	181	31	17	7	58	684	686	P3
121	EASTERN NEVADA	29	3					3	35																			1		1	821	I-7
P68	EGYPTIAN	2	1		1		1		5																						35	121
15	EL PASO	51	12	1	3		2	2	71	31	10			4	45				50 6	8	5 1	21 3	8 5	6 3	6 4	48 3	15 11	9 1	29	27 2	232 39	237 155	P68 15
P28	EVANGELINE	12		5	5			2	24	1	1				2																		
161	EVANSVILLE	24	1	118	1	6	2	6	158	5	3			1	9				553	14	30	59	15	22	69	279	109	26	107	81	1,364	1,390	P28
45	FLORIDA	279	156	31	129	3	9	7	614	18	45			6	69				13	1	11	3	1	4	11	6	2	3	5	8	68	167	161
P13	FORT WORTH									3	2			1	6				113	8	40	30	2	11	37	59	27	17	8	28	380	751	45
P33	FOUR CORNERS		1	1			1		3		1				1				58	2	2	8	1	2	3	37	1	3	1	8	126	386	P13
110	GEORGIA	65	36	18	68			4	191	13	13	1	1	4	32				1		1				1		1			5	130	130	P33
I-9	GLOBETROTTERS															684	8	692												3	228	110
P53	GOLDEN GATE PETROLEUM																							1	1	1	1				695	I-9
152	GRAND CANYON	72	17	1	2		2	1	95										54	1	35	27	8	20	35	60	78	25	20	24	387	387	P53
P29	GREAT BEND	3	1						4																1							96	152
																			24		2	6		2	3	20	6		6	69	73	P29
P 2	GULF COAST										1				1				1,904	89	434	384	148	206	566	1,090	739	312	395	379	6,646	6,647	P2
P23	HOBBS PETROLEUM	3							3										78	3	5	13	4	11	17	75	20	9	1	14	250	253	P23
85	HUDSON-MOHAWK	18	8	4	7		2		39	12	99			13	124	8		8	1		1	1		1	3	1	2	1			12	183	85
P24	ILLINOIS BASIN PETROLEUM															4		4	74	7	14	17	4	13	12	66	21	21	4	24	277	281	P24
114	INTERMOUNTAIN	61	20	2	1			5	89																							89	114
P66	JAPAN	14	9	1			1		25	52	46	2		7	107				8	1	6	4	6	2	7	20	38	18	12	2	124	256	P66
P73	KALIMANTAN																		40	6	10	16	10	4	21	48	32	7	11	7	212	212	P73
18	LEHIGH VALLEY	58	43	36	9		3	5	154	39	57			5	101				1				2		2	2	2		1	11	266	18
51	LIMA, PERU	65	17	2	2		6	4	96	2					2				22	2	6		1	1	3	13	20	2	1	3	74	172	51
P58	LONDON PETROLEUM																		211	12	52	67	12	30	94	140	170	35	196	38	1,057	1,057	P58
P26	LOS ANGELES BASIN										1				1				271	15	96	39	17	44	110	269	142	104	68	67	1,242	1,243	P26
P14	LOU-ARK	6		9	1				16	2	1				3				145	11	22	31	5	12	21	61	37	9	2	30	386	405	P14
P76	MALAYSIAN																		36	3	13	9	5	3	10	15	34	3	13		144	144	P76
148	MARICOPA	177	60	8	7	3	6	6	267	4	3				7	10		10				1			1					3	287	148
47	MEXICO	112	20	4	8	3	8	5	160	12	4				16				20	2	5	7	1		11	10	19	8	3	6	92	268	47
P59	MICHIGAN									1	3				4				49	1	8	16	9	17	11	32	14	15	1	5	178	182	P59
P 1	MID-CONTINENT										1			1	2				298	18	116	68	34	46	97	272	151	122	31	98	1,351	1,353	P1
124	MIDWEST COAL	37	8	151	5	2		2	205	1	3			1	5																	210	124
P51	MIDWEST GAS STORAGE									1					1	6		6	21	4	2	5	17	10	12	10	11	2		11	105	112	P51
20	MINNESOTA	348	170	9	10	5	13	12	567	16	24			1	46	22	1	23	9			1	1	3		1	1	5		1	22	658	20
P17	MISSISSIPPI	9	1	2	1	1			14		1				1				78	4	10	21		7	11	43	13	7		10	204	219	P17
21	MONTANA	164	30	21	7	1	5	7	235	22	8			4	34																	269	21
149	MORENCI	81	24		1	1	4	6	117	5	1		1	1	8																	125	149
P56	NATIONAL CAPITAL																		22	5	55	2	16	16	32	12	13	12	14	16	215	215	P56
P40	NETHERLANDS	15	7		2		1	1	26	3	1				4				66	5	7	27	11	5	23	37	38	11	27	18	275	305	P40
23	NEW YORK	403	172	63	49	8	102	35	832	163	286	3	21	39	512																	1,344	23

AMERICAN INSTITUTE OF MINING, METALLURGICAL, AND PETROLEUM ENGINEERS, INC.
MEMBERSHIP STATISTICS January 1, 1982

NO.	SECTION	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.
		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. & Met. Sci. E	Educ. J	Econ. K	Un-class	Total	Division MNOPQ	Econ. K	Total	Drilling & Well Comp. N	Educ. & Prof. O	Econ. & Eval. P	Form Eval. R	Gas Tech. S	Geol. Eng. T	Manage-ment U	Prod. Oper. V	Reser-voir Eng. W	Fl. Mech. & Oil Rec. Proc. X	OP & TECH Y	Un-class	Total		
P25	NEW YORK PETROLEUM																		30	5	70	10	3	13	40	24	14	16	13	28	266	266	P25
I-11	NIAGARA	20	15	1	7				43	26	60			10	96	197	2	199	4		3	4	3		1	6		4	1	2	28	366	I-11
P61	NIGERIA (LAGOS)	21	1	3	4		1	3	33										45	4	9	10	14	8	10	40	43	5	11	9	208	241	P61
145	NORTH DAKOTA	23	1	68	1	1	1	5	100										1									1			2	102	145
25	NORTH PACIFIC	107	15	11	6	2	6	6	153	44	57			4	105	24		24	3		4	2	1	6	8	7	5	2	1		39	321	25
P 4	NORTH TEXAS-SW OKLAHOMA										2				2				90	7	10	27	3	5	21	60	17	31	4	21	296	298	P4
159	NORTHEASTERN NEVADA	98	18		13		1	1	131																						131	159
122	NO. CALIFORNIA METALLURGICAL									85	183	1	1	19	289	33		33													322	122
P69	NORTHERN MICHIGAN																		13	1		5	1	6	1	24	2	2	1	5	61	61	P69
22	NORTHERN NEVADA	317	39	1	13	2	6	9	387	9	2			3	14				3		1									4	405	22
P39	NORTHERN OKLAHOMA										1				1				29	3	1	17	3	2	5	22	9	26	12	8	137	138	P39
P42	NORTHERN PLAINS	9	1	1	1	1	1		14		1				1				4	2	9	1	12	2	6	5	5		2	6	54	69	P42
P49	NORTHERN WEST VIRGINIA										1				1				43	2	2	8	5	4	7	9	9	5		9	103	104	P49
144	NORTHWEST TEXAS	13	6	1	2			1	23																						23	144
155	OHIO MINING	166	59	162	31	3	7	11	439																						439	155
P47	OHIO PETROLEUM															8		8	113	4	14	27	8	19	20	44	16	14	7	25	311	319	P47
26	OHIO VALLEY	17	4	30	6		1	1	59	35	168	1	3	11	218	132		132	1							1				2	411	26
P 8	OKLAHOMA CITY									5	1				6				474	24	74	75	26	44	86	304	128	28	16	89	1,368	1,374	P8
125	OKLAHOMA METALS & MINING	131	28	59	11		5	4	238	11	10		1	1	23																261	125
28	OREGON	80	18	26	7		3	2	136	41	30			6	77	12		12	6		2	1		3	1		1			14	239	28
P21	PANHANDLE																		31		1	11	7		4	20	8	1		6	89	89	P21
I-13	PENN-OHIO	1							1	5	27	1	1	2	36	223	1	224													261	I-13
P70	PENSACOLA-MOBILE	3							3										23	1	5	2	5	3	9	15	9	2		6	80	83	P70
29	PENNSYLVANIA ANTHRACITE	44	7	98	5	2	3	3	162	1	5				6																168	29
P 5	PERMIAN BASIN	22	5	1	1	1	1	1	32										483	22	67	66	36	51	117	516	180	40	11	99	1,688	1,720	P 5
31	PHILADELPHIA	56	48	35	26		13	3	181	26	97	5		14	142				5	1	2		2	3	4	8	2	14	2	2	45	368	31
P77	PHILIPPINE																		26	2	1	3		2		5	8			11	58	58	P77
46	PHILIPPINES	126	26	7	2	1	9	6	177	4				1	5										1					1	183	46
150	PINAL MOUNTAIN	139	47	3	3	1	5	1	198	1	2				3				1								2			3	203	150
32	PITTSBURGH	225	94	662	26	8	28	23	1,066	130	281	4	3	49	467																1,533	32
I-14	PITTSBURGH IRON & STEEL															1,199	19	1,218													1,218	I-14
P57	PITTSBURGH PETROLEUM																		79	6	19	15	16	7	24	23	20	33		14	256	256	P57
162	POWDER RIVER BASIN	30	3	102	3	2	2	2	144																						144	162
33	ST. LOUIS	100	25	171	31	2	3	12	344	76	57			9	142	13		13													499	33
P74	SALT LAKE PETROLEUM																		59	3	3	8	6	8	5	20	12	4	2	7	137	137	P74
34	SAN FRANCISCO	451	318	71	47	6	36	18	947		1				1	3		3													951	34
P20	SAN JOAQUIN VALLEY	28	2	1	3		2		36	1					1				124	8	39	22	3	19	30	230	61	30	9	39	614	651	P20
P78	SANTA MARIA																		13	1	1		1	1	4	31	12	7	4	7	82	82	P78
P37	SAUDI ARABIA	6	6	1	3	1			17	1					1				77	29	23	27	18	11	24	120	90	19	12	37	487	505	P37
154	SIERRA NEVADA	98	23	5	7	1	3	6	143										1													143	154
P67	SINGAPORE	6							6										89	11	9	31	4	4	18	38	15	9	23	7	258	264	P67
112	SNAKE RIVER	53	14	1	17	1	1	1	88	5	4			3	12											1					101	112
P34	SNYDER	1							1										16	2	1	2	1		3	27	2	1	2	2	59	60	P34
P54	SOUTH LOUISIANA	4		1	1			1	7										87	6	4	14	4	2	12	47	18	5	30	14	243	250	P54
P15	SOUTH PLAINS	2		1	1				4	1	1				2				31	2	1	10	7	1	7	69	7	12	1	10	158	164	P15
137	SOUTH TEXAS MINERALS	152	34	38	13	2	3	8	250																						250	137
157	SOUTHEAST MISSOURI	102	22	10	9	6	1	3	153	5	8	1		2	16																169	157
75	SOUTHEASTERN UTAH	38	15		5		1	2	61	1				1	2																63	75
153	SOUTHERN ALASKA	81	1	3	2		1	2	90																						90	153
36	SO. CALIFORNIA MINING	379	129	35	51	3	10	17	624							1		1													625	36
158	SO. CALIF. METALLURGICAL									48	119	3	1	17	188																188	158
118	SOUTHERN NEVADA	96	17		9		2	4	128	8	10			1	19				5		1	4		1	2	1	2			1	17	164	118
151	SOUTHWEST DESERT	40	7		1	3	1	1	53	2	1				3																56	151
P 7	SOUTHWEST TEXAS																		288	9	27	49	25	14	46	161	53	16	18	64	770	770	P7
38	SOUTHWESTERN NEW MEXICO	90	41		2	2	3	3	141	10				2	12																153	38
126	SOUTHWESTERN WYOMING	47	5	38	24			4	118					1	1	1		1													120	126
P27	SPINDELTOP	1			1		1	1	4										59	4	2	22	4		12	66	2	2	16	10	199	203	P27
P64	STAVANGER PETROLEUM																		149	6	16	33	3	3	22	111	103	17	113	30	606	606	P64
99	TEXAS COAST MINING & METALS	269	71	97	40	3	25	17	522	53	73	3	1	9	139																661	99
P75	THAILAND																		17	2	1		2		1	6	2	1	9	5	46	46	P75
P52	TRANS-PECOS	10	1		1				12										22	1	1	6	1	3	1	20	5	2		2	64	76	P52
P62	TRINIDAD & TOBAGO																		46	3	5	5	12	11	9	37	28	7	6	11	180	180	P62
156	TRINITY	139	15	99	6	1	7	6	273																						273	156
2	TUCSON	611	280	18	17	8	28	21	983	97	26	2	2	9	136	2		2	4		2		1	4	2	2		2	4	21	1,142	2
P43	UINTAH BASIN																		44	3		5	3	3	5	26	2	7		6	104	104	P43
P65	UNITED ARAB EMIRATES	1							1	1					1				87	3		10	5	2	13	53	54	10	12	5	254	256	P65
74	UPPER MISSISSIPPI VALLEY	17	1	5		1	1		25		1			1	2																27	74
40	UPPER PENINSULA	153	59	3	6	1	3	8	233	8	15			2	25				1	1								1		3	261	40
41	UTAH	429	142	89	13	8	14	15	710	39	14		1	11	65																775	41
90	UTAH COAL	12		87		1	1	1	102																						102	90
97	VIRGINIA	17	4	12	5		2	3	43	12	32		1	4	49																92	97
42	WASHINGTON, DC	240	35	75	31	2	35	11	429	41	123	3	2	14	183																612	42
P12	WEST CENTRAL TEXAS																		50	2	11	41	4	14	6	53	12	7		13	213	213	P12
I-15	WESTERN IRON & STEEL															149	4	153													153	I-15
P30	W. VENEZUELA PETROLEUM	6	1	2		1	1		11										21	2	2	6	4	2	9	18	23	7	2	10	106	117	P30
P71	W. WYOMING ROCK SPRGS.																		52	1		14		2	4	19	2	5		6	105	105	P71
P 9	WICHITA PETROLEUM	11	4	7	1	1	2		26	2	4			3	9				53	3	12	11	4	15	11	50	20	13	1	12	205	240	P9
P36	WILLISTON BASIN	4		16				1	21										62	7	2	22	4	4	8	25	6	1	2	6	149	170	P36
93	WISCONSIN	72	54	11	8	2	4	5	156	12	53			4	69	39		39	1				1	1							3	267	93
83	WYOMING MINING & METALS	215	31	35	14	1	8	7	311		2				2																	313	83
P10	WYOMING PETROLEUM									1					1				181	8	7	28	5	17	19	138	42	19	3	34	501	502	P10
000	OUT OF SECTION	1,755	615	261	118	32	93	69	2,943	680	382	6	13	99	1,180	1,283	21	1,304	531	24	118	183	38	36	155	338	613	153	134	131	2,454	7,881	000
	TOTALS	13,191	4,085	4,721	1,314	183	710	636	24,840	2,428	3,564	49	71	552	6,664	6,264	91	6,355	10,590	622	2,225	2,301	905	1,235	2,731	7,481	4,663	1,843	1,852	2,293	38,741	76,600	
	STUDENTS								3,564						2,626			55													3,434	9,679	
	TOTAL MEMBERSHIP								28,404						9,290			6,410													42,175	86,279	

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

CLASSIFICATION OF AIME MEMBERS

THREE-YEAR TALLY - 1979, 1980, 1981

				1981 Breakdown			
	1979	1980	1981	SME	TMS	ISS	SPE
HONORARY MEMBERS	46	48	49	17	8	6	18
MEMBERS	37,865	40,989	43,315	14,470	4,312	4,539	19,994
ASSOCIATE MEMBERS	11,282	12,655	13,774	4,251	1,112	1,393	7,018
JUNIORS	13,602	15,938	18,152	5,800	1,232	417	10,703
ASSOCIATE JUNIORS	917	1,161	1,310	302			1,008
TOTAL	63,712	70,791	76,600	24,840	6,664	6,355	38,741
STUDENTS	9,289	10,942	9,679	3,564	2,626	55	3,434
GRAND TOTAL	73,001	81,733	86,279	28,404	9,290	6,410	42,175

1981 NET MEMBERSHIP GAINS

SME-AIME	1,618	+6.0%
TMS-AIME	653	+7.6%
ISS-AIME	598	+10.3%
SPE-AIME	1,677	+4.1%
AIME	4,546	+5.6%

APPROXIMATE MEMBERSHIP RATIO BY SOCIETY FOR LAST 20 YEARS

DECEMBER	SME-AIME	TMS-AIME	ISS-AIME	SPE-AIME
1961	35.3%	25.4%		39.3%
1962	34.5	26.7		38.8
1963	33.6	28.0		38.4
1964	33.0	29.1		37.9
1965	32.2	29.5		38.3
1966	32.9	29.6		37.5
1967	33.7	29.2		37.1
1968	33.7	29.1		37.2
1969	33.7	29.1		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
1978	36.8	12.0	6.5	44.7
1979	35.5	11.0	7.1	46.4
1980	32.8	10.6	7.1	49.5
1981	32.9	10.8	7.4	48.9

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

REPORT ON THE

110th AIME ANNUAL MEETING

The 110th AIME Annual Meeting was held in Chicago, Illinois, February 22-26, 1981. AIME Headquarters, the Society of Mining Engineers of AIME, the Society of Petroleum Engineers of AIME, and the Woman's Auxiliary to AIME (WAAIME) were located at the Hyatt Regency Chicago; The Metallurgical Society of AIME and the Iron and Steel Society of AIME were headquartered at the Chicago Marriott. Technical sessions were conducted at the Hyatt Regency, the Marriott and the Radisson Chicago. The Chicago Section, under Annual Meeting General Chairman Melvin E. Nickel, hosted the meeting.

REGISTRATION DATA

	ESTIMATED	ACTUAL
AIME Members	2,875	2,686
Non-Members	825	717
Non-Member Authors	395	379
SEG, CIM, AIMMG, Founder Societies		69
Student Members	250	259
Student Non-Members	125	26
WAAIME	300	287
TOTAL REGISTRATION	4,770	4,423

PERCENTAGE OF MEMBER ATTENDANCE

Society of Mining Engineers of AIME	52.1%
The Metallurgical Society of AIME	36.1%
Iron and Steel Society of AIME	10.2%
Society of Petroleum Engineers of AIME	1.6%

REGISTRATION REVENUE AND EXPENSE

	BUDGETED	ACTUAL
Registration Revenue	$300,425	$279,255.00
Total Expenses Charged to Registration Revenue	289,930	270,042.70
REVENUE OVER EXPENSE	$ 10,495	$ 9,212.30

DISTRIBUTION OF REVENUE SURPLUS

Society of Mining Engineers of AIME	$ (2,584.25)
The Metallurgical Society of AIME	7,883.66
Iron and Steel Society of AIME	8,993.49
Society of Petroleum Engineers of AIME	(3,326.59)
Annual Meeting Surplus Fund	(1,754.01)
TOTAL DISTRIBUTION	$ 9,212.30

SOCIETY OF MINING ENGINEERS OF AIME

REPORT

OF THE

EXECUTIVE DIRECTOR

1981 was a good year. Membership growth was strong. Services to members, divisions, sections, and student chapters continued to improve and to strengthen ties to the Society. The Fall Meeting set records. Book sales were strong, but fell short because of delays in some projects. Preprints contributed to a record surplus. Revenue was up 3.5% and expense was down 6%. These combined to provide a surplus of $530,106 which is $255,966 greater than the $274,200 surplus anticipated in the budget.

Corporate membership increased 6.3% even after a 1.98% greater than usual loss attributed to the dues increase. This compares to a growth rate of 6.9% in 1980 and 5.8% in 1979. Student membership arrested its two year downtrend and increased by 4.1% -- this compares with losses of 14.8% in 1980 and 12.9% in 1979. Extra efforts at retention contributed significantly to these results.

An Annual Meeting that was barely the moderate success expected in Chicago was offset by records in attendance, exhibit sales, and surplus for both the Offshore Technology Conference (OTC) and the Fall Meeting. The Fall Meeting, which was held in Denver, was the first to exceed 4,000 in attendance and further demonstrates that meeting attendance is location sensitive. With changes that may reduce OTC surplus to SME by $50,000 annually, financial success at other meetings becomes essential. Overall, meetings provided 20.4% ($607,432) of the revenue; 17.2% ($421,099) of the expense; and, contributed 35.2% ($186,333) of the surplus.

Publications provided more than 46% of the revenue and 67% of the expense for 1981 — compared to 52% and 69% in 1980. MINING ENGINEERING advertising continues to provide almost half of the Publications Revenue as means to increase market share are under consideration. MINING ENGINEERING lost $379,694; however, when dues are allocated as subscriptions income to determine possible income tax liability, the loss is reduced to $5,084.

Book sales were less than expected because of delays; however, 11 new titles were published and 18,428 books were sold. Books provided 17.1% ($510,441) of the revenue; 17.0% ($416,658) of the expense; and, contributed 17.7% ($93,783) of the surplus. Book inventory and work in process were more than a million dollars at year-end with 26 projects in various stages. The goal of a self-sustaining cash flow remains.

The prices of Preprints were raised from $1.00 to $2.00 for members and $2.50 to $3.50 for nonmembers effective with sales after the Annual Meeting. These increases and the greater sales to the record Fall Meeting attendance provided a surplus of $5,930 in this program -- a step toward sustaining the program on a break-even basis.

The Minerals Resource Management Committee (MRMC) represents the Society in all programs concerning mineral economics and is a liaison group among the Divisions, the Society, and the AIME Economics Committee. The Committee also

endeavors to stimulate interest and promote progress in the broad economic aspects concerned with the search for, finding, developing, producing, transporting, refining, marketing, and use of minerals. The SME Board took two major actions in 1981 that underscore the importance of mineral economics and the MRMC to the Society. The Admissions Committee was instructed to consider management science and mineral economics as one of the areas of engineering and science in the minerals industry qualifying a person for membership by virtue of experience therein and to evaluate each applicant on individual merit, with the basic guideline that a mineral economist is eligible for full Member status. The Board also went on record that it considers the MRMC (not the AIME Economics Committee) the appropriate group to provide economics news for publication in MINING ENGINEERING. The significant measure of how the MRMC is performing its role is that the Divisions and their unit committees have started to approach the MRMC for joint programming and other activities.

The year ends with several issues unsettled. 1981 President Weiss continues to participate in the AIME Ad Hoc Transition Committee's efforts to define the future role and structure of AIME and the Corporate Headquarters Office. The Planning Committee has not completed its assignments on whether the name of the Society should be changed; on whether the Society is adequately covering all appropriate technology and has a mechanism to ensure such adequate coverage; on a long-term meetings policy; and on a stronger policy on endorsement of outside activities.

The following comparison between 1981 and 1973, the year of the previous dues increase, is provided as a measure of accomplishment.

	1973	1981
Dues Increased	$20 to $30	$30 to $40
Reason	4 deficit years	anticipated deficits
Members Lost	2%	1.98%
Corporate Members, year-end	16,887	24,840
Dues Revenue	$449,663	$868,404
Total Revenue	$965,995	$2,978,306
Surplus	$10,575	$530,106
Surplus Fund	$85,050	$1,755,969
Authorized Staff	35*	34**

*34 full time -- only 27 filled (77%) because of limited income
**30 full time and 8 part time -- all positions filled

Mode IV was implemented in 1973 and the Society started its move out of New York — ending the year with a split operation with books, transactions, and the business office remaining in New York. Six staff members were eventually relocated from New York. Four of those six remain, the other two having retired before the move to Denver. One of those staff members initially hired in Salt Lake City remains. These five who were on the staff at the end of 1973 are the writer and M. Snedeker, Manager of Publications; D. W. Rome, Manager of Administrative Services; R. M. Orologio, Meetings Manager; and D. D. Daley, Manager of General Member Services. The opportunities provided (and taken) by Mode IV; the operating advantages provided by relocation; the quality leadership provided by the officers and directors; the dynamism provided by a continuously greater member involvement and participation; and, the

sustained superior performance of this stable senior staff are the essential ingredients of these past successes of the Society. They will also be essential to future success.

No key personnel were lost in 1981; however, a high turnover rate in administrative positions was experienced early in the year. The decision was made to upgrade the departmental secretary positions with an added aim to free department managers of some details. Implementation of this decision has resulted in stability and appears to have also met the other desired objectives.

ADMINISTRATIVE SERVICES

The major requirement was the completion of the conversion to the in-house computer installed in October 1980. New computer services have been added (such as those for Sections, reported later, registration support for meetings, and background information for advertising sales studies) and efforts continue to identify additional cost-effective computer uses.

The lock box collection system inaugurated in 1979 enabled the Society to maximize its temporary cash investments to take advantage of the high interest rates in 1981. The average amount invested was $534,200 with an average earning rate of 16.1% for a total earnings of $86,000 of which $23,407 was allocated to the various funds. The year ended with $1,108,033 in temporary investments -- the first time over a million.

The problems with the new headquarters building have been few; however, a major problem occurred in summer 1981. The failure of the chilling tower compressor (presumed but not proven to be caused by lightning) limited the effectiveness of the air conditioning for about six weeks. Operating problems with the computer and Xerox were somewhat lessened by early morning and late night schedules. The comfort problem of the employees was eased by buzz fans. The mounting of a new compressor by helicopter was entertainment for the neighbors and relief for the occupants. A separate computer room air conditioner will be installed in 1982 and air flow improvements will be made in the Xerox room.

The lease of the tenants, Association of Surgical Technologists (AST), ends August 31, 1982. AST has asked that the lease be extended. Studies are being made to see if this can be done. The open space presently occupied by SME was designed for the open office landscape concept; however, costs prohibited the implementation of this concept upon move-in. The thought is to find a plan to accommodate extension of the lease and use of the money from the lease to pay for the plan. This would benefit the tenants by letting them remain in their present space and would benefit SME by providing needed furniture and fixtures at little if any out-of-pocket costs. A decision will be sought at the February Board Meeting.

FINANCES

The following shows the Operating Surplus (Deficit) for the Society since it was started in 1957 (000's omitted):

1957	1958	1959	1960	1961	1962	1963
$11.4	$.7	$(.8)	$4.5	$1.0	$(1.7)	$(14.8)
1964	**1965**	**1966**	**1967**	**1968**	**1969**	**1970**
$20.1	$1.2	$52.6	$30.1	-0-	$(10.5)	$(17.6)
1971	**1972**	**1973**	**1974**	**1975**	**1976**	**1977**
$(58.9)	$(32.5)	$10.7	$16.6	$120.4	$137.9	$119.7
1978	**1979**	**1980**	**1981**			
$(19.4)*	$239.8	$106.0	$530.1			

*Resulting from one time relocation related expenses of $184,191.

The following shows the status of the Society Surplus Fund since it was started in 1957 (000's omitted):

1957	1958	1959	1960	1961	1962	1963
$100.9	$101.6	$100.8	$105.3	$106.3	$104.6	$89.8
1964	**1965**	**1966**	**1967**	**1968**	**1969**	**1970**
$109.9	$111.1	$163.7	$193.8	$193.8	$183.3	$165.7
1971	**1972**	**1973**	**1974**	**1975**	**1976**	**1977**
$106.8	$74.3	$85.0	$101.6	$222.0	$359.9	$479.6
1978	**1979**	**1980**	**1981**			
$629.0	$1,082	$1,204	$1,756*			

*$428.9 total net from Building Fund Drive ($168.8 in 1978; $213.2 in 1979; $25.0 in 1980; and $21.9 in 1981)

PUBLICATIONS

Inflation continues to have a major impact on the publications program of the Society. The cost of manufacturing in 1981 was almost three times what it was ten years ago. This impacts not only on the magazine but on other areas of publishing as well, particularly books. Cost of delivery has been similarly impacted by inflation. Economies are made whenever possible. One such measure is prebuying paper to ensure a price. The US Postal Service continues its yearly increase of second class nonprofit rates, a 16-year plan, now in year 10. So far the threat of a "leapfrog" increase to the rate to be charged in year 16 has not materialized.

MINING ENGINEERING

Four special issues were published in 1981. The first, in January, discussed the "emerging reality of oil shale" and covered mining methods, recovery methods, environmental issues, and the governmental role in leasing and developing oil shale. The issue seems to have been well received, with individual requests for it exceeding supply.

Three regularly scheduled special issues were the Annual Review in May, Directory in July, and the Fall Meeting Pre-Show report in October. Both staff and the SME-AIME MINING ENGINEERING Committee continue to seek improvement in the information input for the Annual Review. Questionnaires have been sent to mining companies. This year that mailing will be expanded to include manufacturers and state mining and geological organizations. A letter requesting information for the Review has been sent to all the technical committee personnel of the Divisions.

The final special of the year was Minicomputers in the Minerals Industry, published in November. Oriented toward answering some of the basic questions concerning computer applications in the industry, articles in the issue covered minicomputer development, mining applications, how to shop for software, and several case studies. For those frustrated by the technical jargon contained in computer ads and sales presentations, a glossary and two articles on selection considerations were provided.

Among other special features published during the year were a series on design of tailings impoundments, selecting slurry pumps, and carbon-in-pulp processing of gold and silver ores. The Engineering Fundamentals series, begun in 1980, was continued; three articles in the series covered blasting techniques.

In the area of staffing, while Barbara C. Schickner, Managing Editor, is on maternity leave, Raymond E. Blair, a Denver-based consultant, is assisting with magazine duties two days per week. Tim O'Neil, Associate Editor, has been named Assistant Managing Editor to provide administrative continuity. The Technical Editor Advisory Committee consisting of Louis W. Cope, Paul L. Russell, Paul R. Smith, Jr., and Bernard Washington has been meeting monthly with staff, assisting with editorial planning, article solicitation, and article reviewing when needed.

A readership survey of the magazine was conducted on the April issue by READEX, a St. Paul-based research firm. As a result of the survey and ques-

tions raised by some members regarding the content of the magazine, the Publications Board and MINING ENGINEERING Committee authorized an audience profile-reader preference study, which now is in progress. The Committee hopes to have some results for its February meeting, at which future editorial direction of the magazine will be discussed.

There were increases in advertising pages in all categories: display, classified, and professional services. The percentages of increase are shown in the advertising statistics table. Advertising rates were increased July 1, 1981, by about 16.6%, partly to cope with inflation and rising costs and partly to stay competitive in the marketplace. Comparative advertising statistics are:

COMPARATIVE ADVERTISING STATISTICS (FY80 vs. FY81)

	FY 1980		FY 1981		Change,
	Pages	$ Income	Pages	$ Income	Pages
Display	326 8/12	503,513	330 5/12	566,475	+ 1.2%
Classified	50 5/12	73,844	55 1/12	93,362	+ 9.2%
Professional Services	90	22,687	105	27,549	+14.3%
	467 1/12	$600,044	490 6/12	$687,386	

In FY81, 644 8/12 editorial pages of all types (feature articles, regular columns, Society news, etc.) were published. In addition, 32 pages of material for other aspects of the Society's operations were published: advance publicity for the Fall Meeting, AIME newsletters, SME's annual report in April, AIME's annual report in June, and a special insert in March to publicize books published by the Society.

Advertising promotion efforts are divided between purchased services and in-house produced material. The purchased services are circulation audit, an annual media data booklet that can be used by advertisers as a comparability document, a professional readership survey, and seven advertisements in "Standard Rate and Data," an advertising rate publication used by advertisers and their agencies. A series of ads for MINING ENGINEERING has been produced in-house and a number of promotional mailings have been made.

TECHNICAL PAPERS

The Technical Papers Section was published in 10 issues of MINING ENGINEERING (omitted in May and July, the Annual Review and Directory issues because of the size of those two issues). A total of 256 pages was published plus 10 pages of abstracts of papers to be published in Vol. 270, the 1981 Transactions volume. The papers published included 51 technical papers, 1 technical note, and 2 discussions. Scheduled for publication in the annual volume are 32 additional papers, all of those accepted within a 12-month period since the last volume was produced. A recommendation by the Technical Papers Subcommittee one and one-half years ago that authors be asked to limit their papers to 4-6 printed pages has begun to impact on the backlog of papers awaiting publication. By year-end this backlog for the Technical Papers Section had been reduced to about 20 papers, all of which have been scheduled for publication through summer of 1982.

PREPRINTS

In FY81, 287 papers were printed: 108, 1981 Annual Meeting plus 5 mini symposia containing 29 papers; 122, 1981 Fall Meeting; and at year-end, 28 for the 1982 Annual Meeting. Revenue from preprint sales at the 1981 Annual Meeting was $10,410.75 compared with $13,255.50 at the 1980 meeting; 7,710 preprints were distributed. Revenue at the Fall Meeting was $14,738 compared to $4,501.50 at the 1980 meeting; 9,111 preprints were distributed. After the 1981 Annual Meeting preprint prices were increased from $1 to $2 for AIME members and from $2.50 to $3.50 for nonmembers. The price increase was put into effect to see if the program could become selfsustaining. Total revenue in FY81 for the program was $39,509 and expense was $33,579.

BOOK PUBLISHING

In FY81, 11 new titles were published:

- First International Conference on Uranium Mine Waste Disposal, C. O. Brawner, editor;
- Fourth Annual Uranium Seminar (South Texas Minerals Section);
- Gold and Silver Cyanidation Plant Practice, Vol. 2, by F. W. McQuiston, Jr., and R. S. Shoemaker;
- Process and Fundamental Considerations of Selected Hydrometallurgical Systems, M. C. Kuhn, editor;
- 1981 RETC Proceedings, R. L. Bullock and H. J. Jacoby, editors;
- Longwall-Shortwall Mining: State-of-the-Art, R. V. Ramani, editor;
- Gold and Silver Leaching, Recovery and Economics, W. J. Schlitt, W. C. Larson, and J. B. Hiskey, editors;
- Design and Operation of Caving and Sublevel Stoping Mines, D. R. Stewart, editor;
- Mine Ventilation Engineering by C. J. Hall;
- Geology of Asbestos Deposits, P. H. Riordon, editor;
- Elements of Practical Coal Mining, 2nd edition, D. F. Crickmer and D. A. Zegeer, editors.

Currently 26 book publishing projects have been approved by the SME-AIME Publications Board as recommended by the SME-AIME Book Publishing Committee.

An increasing number of proposals have come from outside the Society structure. Before these can be considered, the Book Publishing Committee requires that they be peerreviewed by 3-5 people. Internally generated proposals from within the Divisions or other Society groups are also carefully scrutinized and evaluated for content, marketability, and value to the public the Society serves.

The Society also acts as publishing agent for mining-related meetings sponsored by other organizations. To be published in January are the proceedings of the Third International Conference on Stability in Surface Mining, held in Vancouver in May 1981, and the International Conference in Radiation Hazards in Mining, held at Colorado School of Mines, Golden, in October. In 1982 the Society will publish the proceedings of the 17th APCOM and the 23rd Symposium on Rock Mechanics, the former to be held at Colorado School of Mines and the latter at the University of California-Berkeley.

SME-AIME supports regional and Local Section sponsored meetings. The Society has been publishing the proceedings of the annual uranium seminars and will publish the proceedings of the regional Black Hills Conference held in 1980.

During 1981 Publications Board awards were given to 14 individuals and a Local Section whose endeavors resulted in books published by the Society. The list of award winners is contained elsewhere in this report.

Book inventory is a sizable part of the Society's assets and keeping that inventory moving is an important part of the Society's operational efforts. A special booklist insert was published in the March issue of MINING ENGINEERING and as new books are issued, ads are run in the magazine. A consolidated list of titles available through September was sent with the 1982 dues bill.

Book production secretary/editor Suzanne Proulx left in August for maternity reasons. Carmel Huestis, who had book publishing experience with Marcel Dekker and Praeger Press in New York, was hired as her replacement.

Book sales of all types grossed $443,316, compared with $396,266 in 1980. Of this, $153,467 was for Fund Books (compared to $110,883 in 1980) and $298,473 was for SME, plus $77,445 in handling and postage fees (compared to $285,383 and $54,817 in 1980). Cost of SME sales was $282,135, for a net surplus of $93,783 (compared to $271,174 and $69,026 in 1980). Cost recovery from book editing (the transfer of staff time and overhead to inventory and work-in-process) was $134,523 compared to $132,698. The number of books sold was 18,428 compared to a previous record 17,653 in 1980.

INFORMATION RETRIEVAL

At the November 1981 meeting, the SME-AIME Board of Directors approved, for a one-year trial, an information retrieval system through Information on Demand, a Berkeley, CA, firm. IOD will establish a phone line to be answered in the Society's name. Available through the firm's system will be bibliographic data base searches. Document hard copies can be supplied through IOD's library "stringers" in key libraries throughout the country. SME-AIME is in the process of implementing the system, announcing its availability through the magazine in January.

MEETINGS

1981 was a most significant year for the SME-AIME Meetings program. The role of the Society at the AIME Annual Meeting was clarified to permit continued participation. Changes in the frequency of the OTC and surplus distribution formula are likely to cost SME $30,000-$50,000 annually in the next few years but provide the basis for long-term stability for the well being of the Conference. Significant progress has been made in program planning for the First International SME Fall Meeting to be held in Honolulu, Hawaii, September 5-9, 1982, with cooperating sponsorship by:

The Australasian Institute of Mining and Metallurgy
The Institution of Mining and Metallurgy
The Mining and Metallurgical Institute of Japan
The South African Institute of Mining and Metallurgy

The 1981 Fall Meeting in Denver set records for attendance, exhibit sales, surplus earned, and quality of programming. Overall, Meetings brought in $607,432 in Revenue and cost $421,099 to conduct, thereby contributing $186,333 to surplus (35.2% of the Society's surplus for 1981).

ANNUAL MEETING

Based upon recommendations developed by SME-AIME, the AIME Board, on February 24, agreed to the following points to be effective beginning with the 1982 Annual Meeting:

1. That what is commonly referred to as the AIME Annual Meeting is in reality three meetings: (1) the AIME Annual Meeting; (2) the TMS Annual Meeting; and (3) the SME Annual Meeting. (This is not to ignore that ISS participates in joint programming with TMS through its PTD and may elect greater participation at some locations.)

2. That the AIME Annual Meeting consists of the Annual Meeting Luncheon and Business Meeting; the All-Institute Program; and, the Annual Banquet. And, that these activities should be under the operational and policy control of the AIME Board of Directors.

3. That policy and operational control of SME's Annual Meeting should be with the SME Board, working in concert with all other AIME units. This would include responsibility for all administrative activities such as site selection; facility arrangements; pre-registration; etc.

4. That other participating Constituent Societies should have similar control of, and responsibility for, their functions. Coordination would be direct by Society Boards through their Executive Directors or other designated representatives.

5. That SME, and all other participating societies, should provide a "welcome-host" environment for the AIME Annual Meeting. Certainly, the AIME Corporate Headquarters Office should be a partner in the planning.

6. That All-Institute Programming should not conflict, from a content standpoint with programming by a Society nor should it be used as a substitute for programming by a Society which elects not to participate.

The Presidents of the Constituent Societies agreed to a Protocol detailing these arrangements for review and comment by the AIME Executive Committee which approved the Protocol at its July 22 meeting.

The following chart indicates attendance by SME-AIME members at the Annual Meeting since 1963:

SME-AIME MEMBER ATTENDANCE -- ANNUAL MEETINGS

		Attendance		
Year	Location	Number	Percent	
1963	Dallas, Texas	1079	47.0%	
1964	New York, New York	1221	44.2%	
1965	Chicago, Illinois	1073	48.2%	47.8% Average
1966	New York, New York	1438	47.7%	
1967	Los Angeles, California	1421	48.5%	
1968	New York, New York	1632	51.1%	
			→	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%	65.49% Average
1973	Chicago, Illinois	1145	62.9%	
1974	Dallas, Texas	1235	63.2%	
1975	New York, New York	1263	65.0%	
			→	Institute of Metals Div. of TMS Resumed Programming
1976	Las Vegas, Nevada	1840	64.0%	
1977	Atlanta, Georgia	1381	55.0%	
1978	Denver, Colorado	2076	66.0%	
1979	New Orleans, Louisiana	1777	59.1%	59.0% Average
1980	Las Vegas, Nevada	2066	58.0%	
1981	Chicago, Illinois	1400	52.1%	

For a comparison of attendance and financial performance between the Annual and Fall Meetings, refer to the chart at the end of the report on the Fall Meeting.

FALL MEETING

The 1981 SME-AIME Fall Meeting and Technological Information Exchange Exhibit was held November 18-20, at the Denver Convention Complex, Denver, Colorado. Attendance, exhibit sales, and surplus were all at record levels.

As reported in prior years, Fall Meetings have been purposefully moved around the United States to take the Society to the membership. It was thought that this practice would allow attendance at a national meeting by members who might not otherwise be able to. This seems to have worked and attendance at the Fall Meeting has been strongly oriented to the region in which the meeting has been held. However, experience has shown a strong Westernly bias in obtaining the number of registrants and exhibits to make the meeting a financial success. The map on the next page indicates where the registrants for the 1981 meeting were from. The following charts compare attendance and financial performance between the Fall and Annual Meetings since 1973.

SME Fall Meeting—1973 Through 1981 by Location-Registration-Exhibit Sales-Financial Performance

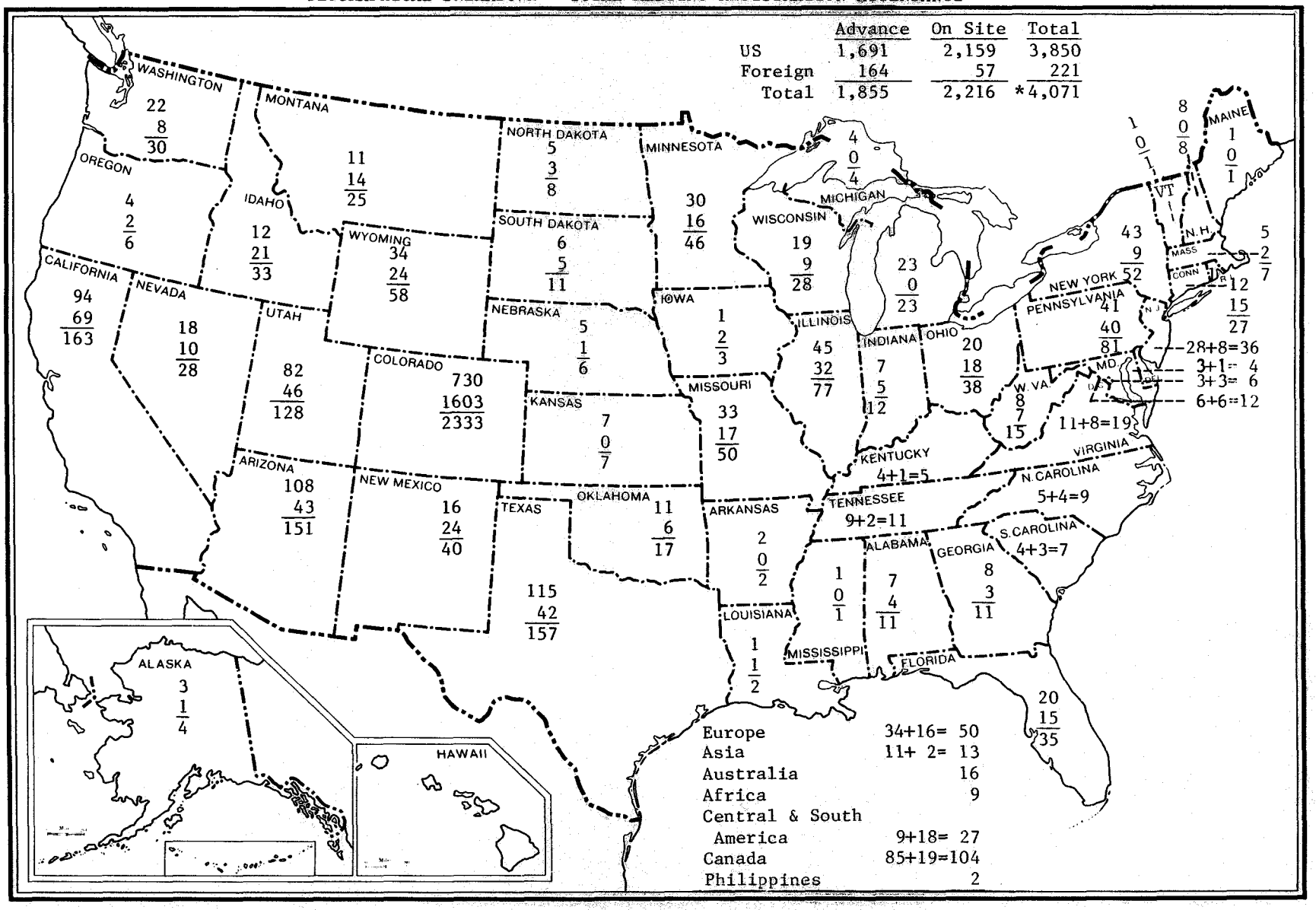
Registration	1973 Pittsburgh	1974 *Acapulco	1975 Salt Lake City	1976 **Denver	1977 St. Louis	1978 *Orlando/ Nassau	1979 Tucson	1980 Minneapolis	1981 Denver
Members	490	550	1,131	1,340	915	637	1,702	804	1,789
Nonmembers	78	93	209	216	179	84	343	115	311
Student Members	– 0 –	– 0 –	53	133	103	20	104	85	234
Student Nonmembers	– 0 –	4	13	19	5	3	31	6	36
WAAIME's	78	411	315	297	177	287	452	135	294
Exhibitors***	74	– 0 –	413	494	350	– 0 –	517	185	701
Exhibits Only	– 0 –	– 0 –	– 0 –	215	137	– 0 –	175	50	502
Guests of Exhibitors	– 0 –	– 0 –	1,237	609	350	– 0 –	273	76	498
Total Registration	**720**	**1,058**	**3,371**	**3,323**	**2,039**	**1,031**	**3,597**	**1,456**	**4,365**
Exhibit Booths Sold	44	– 0 –	125	151	144	– 0 –	157	81	187
Exhibiting Companies	38	– 0 –	97	108	96	– 0 –	112	53	130
Surplus (Loss)	$(8,387)	$ 408	$40,961	$2,076	$11,954	$(33,654)	$57,873	$(12,646)	$70,998

*1974 and 1978, the AMC Equipment Show was held in Las Vegas and no exhibit was held at the Fall Meeting.
**Included 3rd MMIJ/AIME Joint Meeting. Member registration includes 88 MMIJ members.
***A significant number of the people registered as exhibitors are also members of SME.

SME Annual Meeting—1973 Through 1981 by Location-Registration-Financial Performance

Registration	1973 Chicago	1974 Dallas	1975 New York	1976 Las Vegas	1977 Atlanta	1978 Denver	1979 New Orleans	1980 Las Vegas	1981 Chicago
Members	1,145	1,235	1,202	1,840	1,381	2,072	1,777	2,066	1,400
Nonmembers				423	188	270	247	350	208
Nonmember Authors				75	77	89	126	175	110
SEG				31	9	51	55	39	21
CIM	Not Available by Society			35	10	12	19	15	10
AIMMG	Procedure Changed for 1976			8	– 0 –	– 0 –	1	1	1
Founder Societies				– 0 –	– 0 –	– 0 –	9	8	3
Student Members				133	136	268	212	240	135
Student Nonmembers				35	14	30	27	23	7
Total Registration				**2,580**	**1,815**	**2,792**	**2,446**	**2,917**	**1,895**
Surplus (Loss)	$(11,938)	$(10,940)	$(13,424)	$35,860	$ 32	$16,967	$19,830	$30,280	$ 6,674

GEOGRAPHICAL BREAKDOWN - TOTAL MEETING REGISTRATION ATTENDANCE



*Does not include WAAIME Registration

OFFSHORE TECHNOLOGY CONFERENCE (OTC)

Since 1970, SME-AIME has received the following surplus from the OTC:

OTC SURPLUS DISTRIBUTED TO SME

Year	Surplus	Year	Surplus
1970	$12,198	1976	$75,497
1971	11,994	1977	84,518
1972	19,731	1978	70,005
1973	31,187	1979	98,592
1974	40,824	1980	83,896
1975	57,838	1981	111,846
		TOTAL	$698,126

The financial success of the OTC has caused problems with the sponsors because of AIME's 25% override and the tremendous sensitivity of the distribution base (less that 10% of total attendance) to manipulation. To return harmony among the sponsors for the well being of the Conference, an ad hoc Income Distribution Committee made the following recommendations:

1. The AIME share of surplus be reduced from the present 25 percent to 12.5 percent; and that a phased reduction take place over three years -- to 22.5 percent in 1982; 17.5 percent in 1983; and 12.5 percent in 1984 and following.

2. The OTC Surplus Distribution formula be fixed on the basis of the best 10 of 11 years (1970-1980), with the sum of the 11 Societies' portion moved from 75 percent to 77.5 percent for 1982; 82.5 percent for 1983; and 87.5 percent for 1984 and following years.

3. A contract be signed with the Society of Petroleum Engineers of AIME for management of the Offshore Technology Conference at a rate based on the 1982 fee adjusted against a modified consumer price index for years 1983 through 1986. SPE-AIME will submit to the OTC Executive Committee, by October 10, 1981, a proposed Management Services Contract.

The SME Board voted to instruct the Society representative on the OTC Executive Committee to support the recommendations in the long-term best interest of the Conference. On December 8, 1981, the OTC Executive Committee voted unanimously to recommend that the Memorandum of Agreement be amended to accommodate the proposed changes. The matter is now pending approval of at least nine of the 11 sponsor society boards. The impact of these changes, when coupled with the OTC Finance Policy of surplus distribution at 78 levels adjusted for inflation, could mean a reduction of about 50% in distribution to SME-AIME.

RETC

The 1981 RETC was held May 3-7 at the Hyatt Regency Embarcadero, San Francisco, California, and was enlivened by a strike by the exhibit installers. However, the meeting was a technical and financial success with attendance of well over 1,000. The conference continues to grow in importance in the international tunneling community.

GENERAL MEMBER SERVICES

Membership services expanded during 1981 with the introduction of new computer services to Local Sections, a new insurance program designed especially for consultants, an increased discount on the car rental program, as well as the formation of a new Section in the Western Region, a new Subsection in the Eastern Region, and three new Student Chapters, one in each Region. Membership increased 6.0% for a total membership of 28,404 at year-end.

MEMBERSHIP DEVELOPMENT ACTIVITY

The focus of the Society's membership development efforts shifted from an incentive program to the present Membership Development Recognition Program. Under this effort, four forms of recognition continued:

Annual Membership Development Recognition Program: This program was developed to recognize the individual SME-AIME member who has contributed the most to the Society's membership development activities within the year October 1, 1980, to September 30, 1981. For 1981 this honor again went to Gordon C. Presley of the Colorado Section. Mr. Presley will be recognized at the SME-AIME Dinner at the Annual Meeting for having added 321 to the professional membership roles. For his efforts Mr. Presley receives round-trip air fare to the Annual Meeting, free room, and two sets of social function tickets. In its seventh year, recipients of this special form of recognition have included:

1975	Charles N. Speltz	54	Colorado Section
1976	Charles N. Speltz	39	Colorado Section
1977	Charles N. Speltz	23	Colorado Section
1978	Charles N. Speltz	24	Colorado Section
1979	Joy J. Merz	50	Philippines Section
1980	Gordon C. Presley	66	Colorado Section
1981	Gordon C. Presley	321	Colorado Section

Continuing Membership Development Recognition Program: Also in its seventh year, the continuing program has had 2,010 participants and recruited 5,095 new members since the program's inception in 1974. Forms of recognition and number of participants by year are as follows:

	1975	1976	1977	1978	1979	1980	1981	TOTAL
1-Set of Coasters	-	-	-	-	-	269	271	540
5-Paper Clip Holder	17	25	30	30	25	29	34	190
10-Desk Clock	4	6	16	6	12	13	16	73
25-Pen/Pencil Set	1	1	1	2	5	1	7	18
50-Special Plaque	1	-	-	-	1	1	-	3
100-Life Membership	-	-	1	-	-	1	-	2

The use of the set of coasters for members who sponsor one new member was introduced in 1980. All items carry the SME-AIME logo. Coasters are sent directly to the individual; all others are sent to the appropriate Local Section Chairman for presentation at a Local Section meeting. Section Chair-

men are reminded of the importance of professional development and the forms of recognition afforded those who participate.

The most successful membership development tool for 1981 was the Annual President's letter encouraging members to recruit at least one new member. This effort brought in 497 new members.

Division Membership Program: The Division recording the highest percentage membership growth in 1981 was the Coal Division with an 11.2% increase, from 4,243 to 4,721.

Local Section Membership Program: The SME-AIME Local Section recording the highest percentage growth in 1981 was the Cochise Section with a 76.9% increase, from 26 to 46.

MEMBERSHIP STATISTICS

In 1981 SME-AIME membership grew from 26,786 to 28,404 for a net increase of 6.0%.

MEMBERSHIP BY DIVISIONAL INTEREST

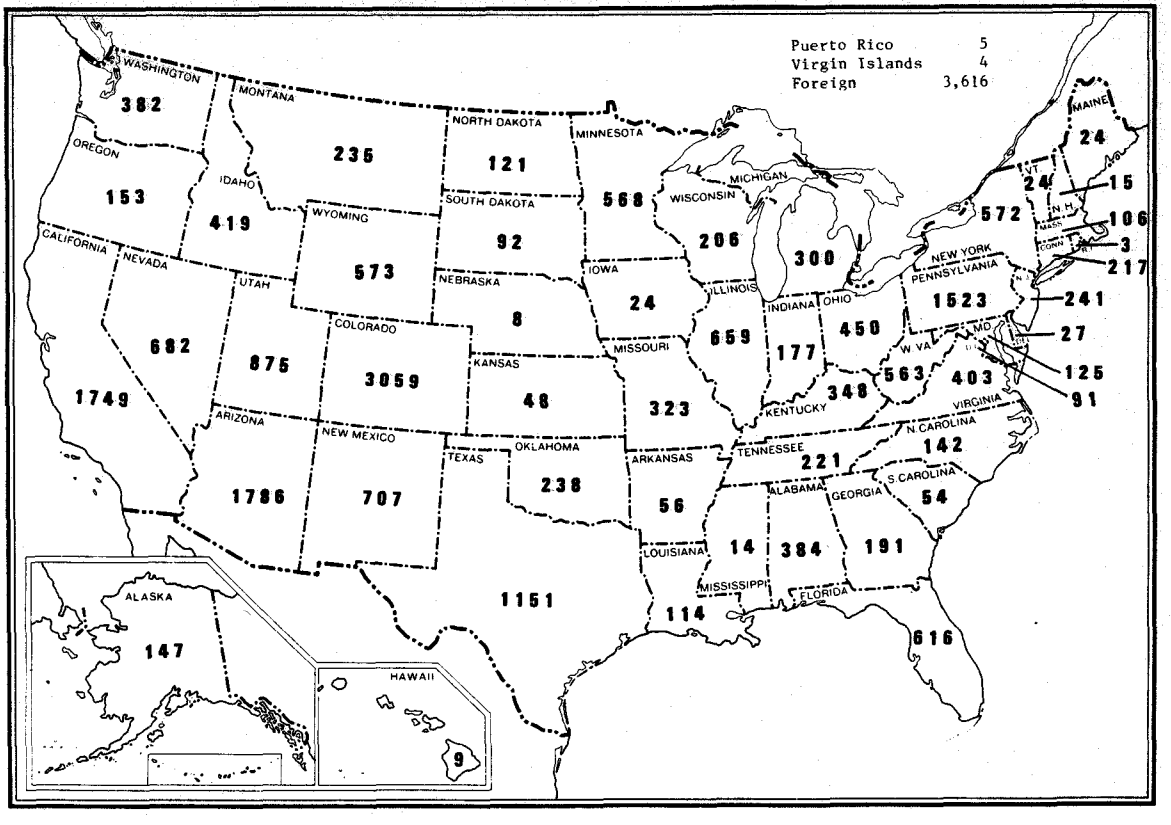
AS OF	M&E	COAL	INDMD	MPD	EDUC	ECON	STUD	UNCLASS	TOTAL MEMBERS	CORPORATE MEMBERS
1/1/1968	7,074	1,377	766	2,284	83	273	773	1,849	14,489	13,716
1/1/1969	7,423	1,435	793	2,384	86	300	1,005	2,001	15,427	14,422
1/1/1970	7,782	1,436	795	2,416	90	301	995	2,360	16,175	15,180
1/1/1971	8,035	1,413	811	2,448	95	321	864	2,655	16,642	15,778
1/1/1972	8,288	1,501	838	2,538	99	348	1,170	3,059	17,841	16,671
1/1/1973	8,348	1,518	851	2,541	104	364	1,129	3,474	18,329	17,200
1/1/1974	8,151	1,517	834	2,517	106	349	1,442	3,413	18,329	16,887
1/1/1975	8,222	1,615	824	2,506	104	354	1,872	3,500	18,997	17,125
1/1/1976	8,517	1,860	864	2,638	115	388	2,726	3,835	20,943	18,217
1/1/1977	10,345	2,749	999	3,116	149	502	3,608	1,004	22,472	18,864
1/1/1978	10,812	3,098	1,085	3,267	146	527	4,427	849	24,211	19,784
1/1/1979	11,240	3,485	1,079	3,395	177	563	4,612	729	25,280	20,668
1/1/1980	11,856	3,818	1,108	3,566	186	585	4,019	739	25,877	21,858
1/1/1981	12,523	4,243	1,249	3,819	176	632	3,425	719	26,786	23,361
1/1/1982	13,191	4,721	1,314	4,085	183	710	3,564	636	28,404	24,840

MEMBERSHIP BY GRADE

AS OF	TOTAL MEMBERS	CORPORATE MEMBERS	FULL MEMBERS	ASSOC. MEMBERS	JUNIOR MEMBERS	ASSOC. JUNIOR MEMBERS	STUDENT MEMBERS
1/1/1968	14,489	13,716	9,892	2,214	1,610	-0-	773
1/1/1969	15,427	14,422	10,763	2,449	1,786	-0-	1,372
1/1/1970	16,175	15,180	11,089	2,583	2,141	-0-	1,330
1/1/1971	16,642	15,778	11,503	2,753	2,305	-0-	1,653
1/1/1972	17,841	16,671	11,343	2,840	2,488	-0-	1,170
1/1/1973	18,329	17,200	11,410	3,054	2,736	-0-	1,129
1/1/1974	18,329	16,887	11,203	2,950	2,734	-0-	1,442
1/1/1975	18,997	17,125	11,096	3,036	2,992	-0-	1,872
1/1/1976	20,943	18,217	11,506	3,210	3,501	-0-	2,726
1/1/1977	22,472	18,864	11,867	3,411	3,506	80	3,608
1/1/1978	24,211	19,784	12,631	3,671	3,782	121	4,427
1/1/1979	25,280	20,668	12,476	3,597	4,426	169	4,612
1/1/1980	25,877	21,858	12,813	3,766	5,059	220	4,019
1/1/1981	26,786	23,361	13,817	3,792	5,492	260	3,425
1/1/1982	28,404	24,840	14,487	4,251	5,800	302	3,564

U.S. MEMBERSHIP BY STATE

As of January 1, 1982



FOREIGN MEMBERSHIP BY LOCATION

As of January 1, 1982

Africa	219
Asia	385
Australia	539
Canada	1,232
Central America	20
Europe	544
Mexico	189
South America	460
West Indies	28

CORPORATE MEMBERSHIP CHANGES 1975-1981

Losses	1975	1976	1977	1978	1979	1980	1981
Deaths	124	132	141	178	122	135	128
Resignations	188	276	241	385	367	506	812
Drops & Changes of Status	1,032	1,137	653	858	1,213	987	1,143
Unaccepted	44	23	11	--	16	51	70
TOTAL	1,388	1,568	1,046	1,421	1,718	1,679	2,153
Gains	**1975**	**1976**	**1977**	**1978**	**1979**	**1980**	**1981**
Total	2,480	2,215	1,966	2,305	2,908	3,182	3,632
NET	1,092	647	920	884	1,190	1,503	1,479
Corporate Members	18,217	18,864	19,784	20,668	21,858	23,361	24,840
Student Members	2,726	3,608	4,427	4,612	4,019	3,425	3,564
TOTAL	20,943	22,472	24,211	25,280	25,877	26,786	28,404

CORPORATE MEMBERSHIP CHANGES BY REGION (1977-1981)

	1977	1978	1979	1980	1981	Change (1977-1981)
Eastern	4,807	4,851	4,999	5,264	5,567	+ 760
Central	3,466	3,882	4,107	4,571	4,686	+1,220
Western	9,364	9,803	10,202	11,015	11,772	+2,408

SUSTAINING MEMBERS PROGRAM

Early in the year it appeared the increase in dues effective with the 1981 billing would adversely effect membership growth. Though there has been an increased loss of members, this effect was minimized by an extensive membership retention program. Members who do not pay their dues by the end of March are considered delinquent. The followup dues billing, mailed in January, carries the notation that bylaws require that mailings be suspended for delinquent members at the end of March.

At the end of March, collections indicated a possible problem as the number who had not paid was up from the previous year. Through an extensive effort the difference was reduced; however, resignations for 1981 are up 306 over 1980 (from 506 to 812) and the unpaids will be up 156 (from 987 to 1,143). This combined loss of 462 over the previous year is 1.98 percent of the corporate membership, virtually repeating the 2 percent loss attributed to the 1973 dues increase.

These extra retention efforts produced dramatic results with the student members with greater than average payments and the year-end unpaids down 302 from the year before (from 776 to 474).

A total of 1,669 members were identified as unpaid when the 1982 dues billing was mailed on September 25. Consequently, this group did not receive a 1982 billing. Those people who paid their 1981 dues, as a few did every week, will receive a supplementary dues bill in January -- those who did not pay by December 31, 1981, were dropped from membership.

A comparison of unpaid members for 1980 vs. 1981 follows:

	Unpaid 1980 Dues Dropped 12/31/80	Unpaid 1981 Dues Dropped 12/31/81
Members	987	1,143
Students	776	474
TOTAL	1,763	1,617

ADMISSIONS ACTIVITY

In addition to its routine business of reviewing all applications for membership to the Society, the Admissions Committee met added responsibilities. At its February meeting the Board considered recommendations on the impact of the reconstitution of the AIME Council of Economics. The Board referred one

item to the Committee for evaluation and comment before decision by the Board. The recommendation by the Working Party was "that the SME-AIME Board ascertain that management science and mineral economics is considered one of the areas of engineering and science in the minerals industry qualifying a person for membership by virtue of experience therein." The Admissions Committee considered this question and elected to present both majority and minority views to the Board for its consideration.

The majority recommendation, as approved by the Board of Directors at the Fall Meeting, asks "that the Board instruct the Admissions Committee to review and evaluate each applicant on individual merit, with the basic guideline that a mineral economist is eligible for full Member status."

During the year the Committee formally incorporated into its procedures AIME bylaw changes related to admission to the grade of Associate Junior Member. The new requirements affect not only employment, but age for admission and the automatic upgrade to Associate Member. Associate Junior Members must be employed in work related to mining and must have one of the following qualifications: 1) A minimum of two years of education or technical training in science or engineering, or 2) A four-year degree in a discipline other than science or engineering, or 3) Six years of experience in work related to mining engineering or the mining industry. These new qualifications recognize the value of experience. Additionally, the applicant must not be over age 33 at the time of application and will be automatically upgraded to Associate Member beginning at age 33 and after four years of continuous membership.

APPLICATIONS REVIEWED
BY SME-AIME ADMISSIONS COMMITTEE

	1978	1979	1980	1981
January	146	201	173	187
February	135	94	118	176
March	157	159	269	275
April	116	140	130	151
May	154	123	385*	382
June	127	156	376*	234
July	64	122	147	178
August	57	88	120	191
September	95	126	118	0**
October	84	137	199	296
November	113	140	281	179
December	99	99	190	144
TOTAL	1,347	1,585	2,506	2,393

*Increased activity due to one-time change of status mailing, reminding Associate Members of qualifications and procedures for change of status to full Member.

**Meeting cancelled due to lack of a quorum.

The Admissions Committee requested that the Board consider restructuring the Committee to increase it from its present membership of 8 to 12, with three representatives from each Division instead of two. At least three members are needed at each monthly meeting at SME-AIME Headquarters to constitute a quorum. Because of the continued difficulty in getting a quorum and the increased admissions activity as evidenced in the previous chart, the Board approved the new structure at the Fall Meeting. Not only was the size of the Committee increased, but the terms were changed from an annual appointment to three-year terms.

LOCAL SECTION ACTIVITY--NATIONAL SERVICES

Final computer programming was completed on three new services to Local Section members. These new activities, announced to the Sections in the spring, encompass dual section assignments, affiliate members, and local section dues designation.

Via the dual section assignment program, members may maintain two Sections on their computer records: one for administrative purposes, i.e., an automatic assignment based on location to be used for membership counts and rebates and the second one to be an optional Section assignment for personal preference only. Members who select a second Section (alternate Section) will be included on the mailing labels of both Sections.

Computer capabilities were expanded to incorporate affiliate members in the data base. The purpose behind this program is the capability to include Local Section affiliate members on the mailing labels provided to that Section. Thus far, the Snake River and Washington, DC, Sections have provided a list of affiliate members to SME Headquarters. These "affiliates" have been included in the data base and are accessed for Local Section use only.

Since some SME-AIME Sections collect local dues and include only local dues paying members in their local activities, a system was designed to accommodate this. Local Sections may now provide SME Headquarters with a list of local dues paying members. All Section members will be included on the monthly galley printout and will continue to be included in all national member services. However, only those people designated by the Section will be included on the Section's mailing labels.

A new insurance program, designed especially for members of the Society of Mining Engineers, was announced in the fall. Aimed particularly at consultants and/or their employees, the program offered group term life insurance with accidental death and dismemberment benefits plus $1,000,000 group comprehensive major medical. The participation in the plan will be monitored.

Since the Avis/SME discount program began in August of 1980, the rental activity has grown to about $2,000 per month (net revenue). Total revenues for 1980 were $8,000. Revenue through June of 1981 showed $10,000. In an effort to further enhance the program, Avis increased its discount to SME members to a larger time and mileage discount, as well as a discount on the commerical rates that includes 100 free miles per day. The new discount is for 35% off

normal time and mileage rates, an increase from the previous discount of 25%. This increased benefit was announced in the November issue of MINING ENGINEERING.

LOCAL SECTION ACTIVITY--BY REGION

Eastern Region: The 11 sections of the region continued routine activities and stressed the need for Section activities in liaison with Student Chapters. The Eastern Region conducted their Section representatives meeting in Pipestem, West Virginia, in April in conjunction with the Central Appalachian Section Meeting. The meeting was well attended by Section representatives, as well as by students from the Ralph Ratliff Student Chapter at Bluefield State College and the Burkhart Mining Society at Virginia Polytechnic Institute and State University. Activity in the Region expanded with the year-end establishment of the Middle Georgia Subsection of the Georgia Section. Increased activity in this area warranted a separate organization to report to the Section. Additional expansion included the establishment of the Student Chapter at the Southeast Community College of the University of Kentucky. The Central Appalachian Section sponsored the Chapter. Due to low admissions to the mining program at Alderson-Broaddus College, the program was cancelled. Subsequently, the Mine Management Society of Alderson-Broaddus College, a Student Chapter of SME-AIME, was disestablished. Two Eastern Region Sections: the Washington, D.C., Section and the New York Section, hosted AusIMM Lecturer Sir James Foots at the conclusion of his speaking tour in the US. Foots was the second lecturer in the jointly sponsored AIME and Australasian Institute of Mining and Metallurgy Lecture program.

Central Region: Routine activity in the region included the revision of the bylaws for the South Texas Minerals Section to accommodate a new article detailing the control of scholarship funds. Region expansion included the development of a new Student Chapter at Ohio State University, sponsored by the Ohio Mining Section. Further expansion has been proposed, but approval is pending recommendations by a presidential fact-finding committee consisting of the three Regional vice presidents. A group of members in Northern Ohio has proposed the formation of a Northeastern Ohio Section for SME members in the Cleveland area. The organizers have requested a release of territory from the Ohio Mining Section, which has protested the formation of a new Section in Ohio. Board action on the formation of the new Section is pending the committee report due at the Annual Meeting. AusIMM Lecturer Foots addressed a joint meeting of the St. Louis and Southeast Missouri Sections on "Australia's Contribution to the Development of Minerals Technology."

Western Region: Increased activity in the largest region was as a result of a newly formed Section, Subsection, and Student Chapter. The Coeur d'Alene Subsection petitioned the Montana and Columbia Sections for territory to establish the Coeur d'Alene Section encompassing the panhandle counties of Idaho and Mineral County, Montana. Section status was granted at year-end. Approved earlier in the year was the Hams Fork Subsection of the Southwestern Wyoming Section and the Student Chapter of the University of California at Los Angeles, sponsored by the Southern California Section. In routine business, the Colorado Section submitted bylaw changes revising the date of installation of newly elected officers. Additionally, the Colorado Section was the first section visited and played a key role in the AusIMM and AIME Distinguished Lecturer Program and hosted the 1981 SME-AIME Fall Meeting. All Sections in

the Region met regularly. Significant meeting activity included the successful conduct of the Fifth Annual Uranium Seminar, sponsored by the Central New Mexico Section. The meeting was successful in spite of the difficulties encountered from the depressed uranium industry.

STUDENT AFFAIRS ACTIVITY

The number of SME-AIME Student Chapters increased by three in 1981 to include Southeast Community College of the University of Kentucky, the Ohio State University, and the University of California at Los Angeles. The disestablishment of the Student Chapter at Alderson-Broaddus resulted in a net gain of two chapters to bring the total number of SME-AIME student chapters to 63; 60 domestic, 3 foreign.

At the time of the 1982 dues billing the end of September, 350 students graduating in 1981 had not yet responded to three requests for graduation and employment information. A final mailing and continued followup reduced this number to 202 who were dropped at year end for not supplying this required information. Additionally, another 474 were dropped for nonpayment of dues. This brought the year-end total of student members to 3,564. This is in comparison to last year's 430 and 776 who were dropped for nonresponse to graduation information and nonpayment of dues, respectively. The previous two years have seen a downward trend in student membership. This trend has stabilized with an increase in student membership of 139 over 1980. New student member statistics for the past four years follow:

STUDENT MEMBERSHIP CHANGES 1978-1981

Losses	1978	1979	1980	1981
Deaths	--	8	2	--
Resignations	27	--	--	--
Drops	807	1,126	1,213	676
Changes of Status	812	1,085	1,020	1,005
TOTAL	1,646	2,219	2,235	1,681
Gains	**1978**	**1979**	**1980**	**1981**
Total	1,831	1,626	1,641	1,820
NET	185	(593)	(594)	139
TOTAL STUDENT MEMBERS	4,612	4,019	3,425	3,564

Student affairs are administered by the Career Guidance and Educational Statistics Committees of the Education Board. An extensive survey was conducted to determine the needs of the student chapters and how they may best be served. The Committees are formulating recommendations to the Education Board for presentation at the Annual Meeting.

The competition within the SME-AIME student awards program drew continued interest this year. The recipients were:

Best Student Chapter

Michigan Technological University	(Winner)
University of Alabama	(1st Runner-Up)
Burkhart Mining Society, Virginia Polytechnic Institute and State University	(2nd Runner-Up)
University of Arizona	(3rd Runner-Up)

Best Undergraduate Student Paper

"Heap Leaching and the Small Scale Miner: A Profitable Combination"
Steven C. Holmes, University of Arizona

Best Graduate Student Paper

"Optimal Siting and Production Scheduling for a Centralized Preparation Plant"
Ralph W. Barbaro, The Pennsylvania State University

DIVISION ACTIVITY

Coal Division: The Division's second edition of "Elements of Practical Coal Mining" was published at year end. The inventory of the first edition has been offered to the membership at the student member price of $8.50. Additionally Local Sections were notified that Sections could purchase the book for the student price for donation to high schools or libraries in their areas.

The joint Coal/M&E Division Mine Ventilation Technical Committee was conditionally approved by the Coal Division, pending a change in the Division's bylaws and approval of the selection of committee members.

The Coal Division Scholarship Endowment Fund was established December 1, 1979, to provide the Division with a vehicle to obtain sustaining donations. The principal of $14,423.16 was established by a transfer from the Coal Division Scholarship Fund. In May, the Division Executive Committee met to specifically discuss an Endowment Fund Drive. The consensus of the committee was that the preparation for solicitation should get underway. During the Fall Meeting, various Division Committees responsible for scholarship activities met. Items of concern include the goal for the fund drive, solicitation and recognition methods, and the number and amounts of scholarships. Due to these deliberations, the Coal Division did not complete recommendations for 1981 scholarship recipients prior to the end of FY81.

Industrial Minerals Division: This year the Division has concentrated on increasing interaction among itself and the Forum on the Geology of Industrial Minerals, an informal but strongly knit group, and also with the Society of Economic Geologists. Many Forum members, formerly inactive in SME-AIME, are included on the slate of officers and committee members for the Division in 1982. In routine business the Division's Scholarship Committee was reviewing scholarship applicants at year end. The Division voted to rename its annual

scholarship competition "The Gerald V. Henderson Memorial Scholarship of the Industrial Minerals Division." This action was taken upon the death of Mr. Henderson who spearheaded the formation of the IndMD scholarship program, but died shortly before he was to assume the Division Chairmanship for 1981.

Mining and Exploration Division: The Division approved bylaw changes to strengthen its representation on the SME-AIME Nominating Committee. The Division representatives to the Nominating Committee must be officers or past officers of the Division and the alternates must be officers, past officers, or Division members currently active on Unit Committees. The Division's Planning Committee was charged with reviewing the orientation of the Division's unit committee structure. The present organization has remained virtually unchanged for many years except for the merger last year of the Geological Engineering and Rock Mechanics Unit Committees to form the Geomechanics Unit Committee. The Planning Committee was examining the rapidly developing areas of technology and how best to accommodate these evolving fields in the Division's programming and publications activities. Efforts in this area are continuing.

Mineral Processing Division: The Division's scholarship program took some dramatic steps as the previous scholarship of $500 to one student was expanded to $2,000 plus an expense-paid trip to the Annual Meeting for the first place winner, in addition to three other $1,000 scholarships. The Division hopes to continue this level of activity through individual and corporate donations.

The Division has several programming functions underway. A symposium on "Design and Installation of Comminution Circuits" will be conducted during the International Fall Meeting of the Society in 1982. The Symposium, dedicated to Fred Bond, has the purpose of documenting current comminution circuit design and installation practice employed in the minerals industry. The organizing committee plans to have the proceedings volume available at the meeting. Plans are also progressing on two other approved symposia, joint efforts with TMS: the International Symposium on Hydrometallurgy (1983 Annual Meeting) and the International Symposium on Modeling and Control (1984 Annual Meeting).

SME proposed to TMS that TMS' Process Mineralogy Committee become a joint SME/TMS Committee because of the preponderance of SME members on the Committee -- almost half are SME members. The TMS Board approved this concept at its June meeting; however, the constraints imposed by TMS were such that MPD declined to participate. The terms approved by the TMS Board included its first right to publish all publications/proceedings; program coordination, session request, and staff support would be handled by TMS; paper titles and abstracts would appear in both SME and TMS pocket programs, and the chairmanship would rotate between both Societies. After the TMS Board rescinded these constrictions and agreed to a working relationship of coequal partners, MPD accepted the joint committee. Further thought will be given to the committee membership.

EDUCATIONAL ACTIVITY

Education Board activities were expanded this year to encompass an ad hoc educational planning committee. The initial considerations of the committee were broad, but reflected concern for mineral industry education as it appears

today. The purpose of the committee was identified as follows: to sort out the most serious problems facing education, such as people, funding, research, and industry communication, and bring these to the attention of the Education Board in order of priority. Preliminary discussions were held prior to any educational committee meetings at the Fall Meeting and a session was held after the Education Board meeting to summarize the activities of the week and identify items for action. The ad hoc committee will go beyond the planning stages, and through a serious discussion of possible solutions, identify these in order of usefulness, achievability, and practicality. The ad hoc committee identified the following for further evaluation: quantity of faculty, financial needs of institutions, curricular guidelines, and structure of the Education Board, which would also address the continuing problems of committee attendance and continuity. Further evaluation of these items is forthcoming.

The recipients of the Engineering Foundation Research Initiation Grants for 1981-1982 included SME member M. A. Mahtab, Associate Professor of Mining at the Henry Krumb School of Mines, Columbia University. He was selected for his proposal, "Mechanics of Gas Outbursts in Louisiana Salt Mines." The award was for $14,000 and was one of three awarded to AIME members.

The Foundation announced the availability of research initiation grants for 1982-1983 and an increase to $16,000 per grant. This program is directed toward starting fulltime engineering faculty members who are without research support. Those with industrial-type experience, but who are beginning an academic career, are particularly encouraged to apply. The Education Board continues to be active in the support, review, and announcement of these proposals.

Accreditation: The Accreditation Committee's responsiblities range from the selection and training of inspectors, to the evaluation of reports of inspection, to the continuous review and upgrading of curricular guidelines. In its activities this year the Committee addressed most of these charges.

The ABET visitors training session will be conducted during the Annual Meeting. There were six vacancies in the SME-AIME list of ABET visitors: two in Geological Engineering, three in Mining Engineering, and one in Mineral Processing Engineering. The Committee narrowed down an extensive list of nominees to twice the number of vacancies. Election as an ABET visitor is by the Education Board. The Board elected Nils I. Johansen and James M. Neilson in Geological Engineering; John F. Abel, Joseph W. Leonard, and Stanley Suboleski in Mining Engineering; and Frank F. Aplan in Mineral Processing Engineering. These visitors, as well as three visitors who were elected last year but were unable to attend the training session, will be invited to attend and reminded that attendance at a training session is required prior to being listed as an ABET visitor.

The Committee has trained and provided accreditation visitors for five visits to three schools this year, including three visits in mining engineering and two in geological engineering.

A final draft of the revisions of the SME-AIME Accreditation Guidelines in Geological Engineering, Geophysical Engineering, Mineral Processing Engineering, Mining Engineering, Mineral Engineering, and the two-year and four-year

mining technology programs was postponed and the scope of the guidelines re-evaluated in light of recent ABET decisions. ABET has approved the publication of disciplinary supplemental criteria along with the general criteria. Thus the Society's role has been strengthened since the supplementary criteria will be requirements imposed by ABET and the Society guidelines will fade out of the picture. The Committee digested this new information and elected to form subcommittees to specifically review each discipline and propose supplemental criteria for consideration at the next meeting. Ideally, ABET would like to make the transition by its June 1982 meeting.

AIME Headquarters requested a position statement from SME on the National Society of Professional Engineers Guidelines for Recognition of Professional Schools of Engineering. At the AIME Executive Committee meeting on July 22, SME reported that the matter had been referred to the Society's Education Board and that an official position will be considered by the Society's Board at the Annual Meeting. This gave the Accreditation Committee an opportunity to evaluate the proposal and refer it to the Education Board for a formal recommendation to the SME Board. The Accreditation Committee opposed the concept of NSPE's Recognition of Professional Schools of Engineering with the notation that they consider accredited schools to be of professional stature. The Education Board approved the Committee's recommendation. The Education Board's report and recommendations will be presented to the SME Board at the Annual Meeting.

The Committee has adopted, with Education Board support, the concept that ABET visitors will be elected to five-year terms subject to annual confirmation. The Committee will request that ABET provide an evaluation of visitors to the team leader for referral to the Committee. This concept was endorsed to alleviate the problems associated with visitors who do not perform adequately on a visit. Previously, team leaders were only able to register a verbal complaint and elect not to use that particular individual in future visits. The problem arose, however, that even though the visitor might never be called upon again, he was filling a crucial spot on the visitor's list, in effect diminishing the number of available visitors.

Career Guidance: The Society participated in a study compiled by the American Institute of Chemical Engineers comparing student programs among the five Founder Societies. The Committee will be reviewing this information at the Annual Meeting.

The main thrust of the Committee this year was the development of the Career Planning Workshop presented at the Fall Meeting. The workshop, designed for the upperclassman, was conducted by placement professionals and covered the following topics: Identification of Rewarding Career Areas, Necessary Preparation for Interviewing, Successful Interviewing Techniques, and Benefits of Postgraduate Education. The Committee was pleased as the workshop was well attended, topping the 100 mark. Early comments indicated the workshop was well received, with students composing about half the audience and school and industry representatives the other half.

The Committee concluded that it was a worthwhile activity and much improved over the first workshop the Committee sponsored in 1976. Consideration will be given to gathering the information from the authors, to be distributed to the Local Sections with the thought that local workshops might be conducted.

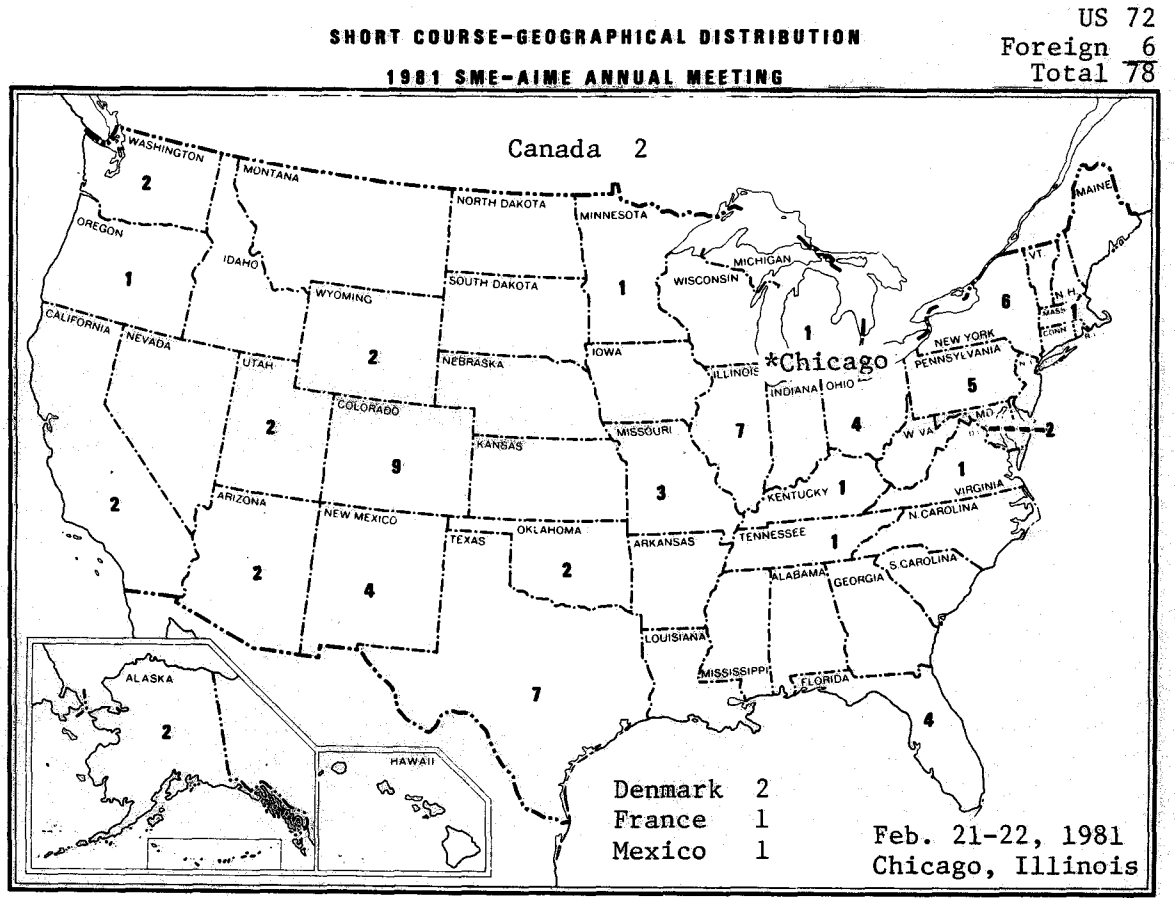
A sampling of SME members are participating in an Engineering Career Development Study being conducted under a grant from the National Science Foundation and with the cooperation of the leading engineering societies. The project director at Purdue University explained that it is a comprehensive study of career patterns of engineering graduates and their relationship to interest inventories. Millions of interest inventories are administered annually to counsel high school/college students and adults in conjunction with educational and career planning. However, there is a continual problem of keeping the normative data for various career fields up-to-date and valid, especially in engineering because of the continuing changes that characterize the engineering profession. This is especially true in view of the large number of women who have entered engineering in recent years. The information collected will be used for research and normative purposes only; all individual data will be kept confidential. The materials and procedures were approved by Purdue's Committee on Human Subjects and conforms with all federal requirements regarding privacy. The project director anticipates that the analysis of the data will begin early next year with a draft report available by next summer. Prior to the conclusion of the project the end of next year, copies of the report will be distributed to the sponsoring societies for information. The Committee will continue to monitor the status of this study.

The Committee, in conjunction with the Educational Statistics Committee, conducted a survey of the SME-AIME Student Chapters to determine the trends in student membership and to provide input to the Committees for an evaluation of the needs of the SME student program. Responses from the Student Chapters were analyzed and the Committee noted that student membership declines were mainly due to decreased enrollment and poor communication, while increased student chapter membership reflected increased communication and recruitment efforts. The Committee formed a subcommittee to develop a plan coordinating suggestions from the survey to include: 1) the format a student chapter might use for seeking financial support from private industry, 2) the distribution of the best Student Chapter reports to stimulate higher quality presentations, and 3) how to encourage regular communication between Local Sections and Student Chapters.

The Career Guidance Committee assumed its new responsibilities for the evaluation of entries in the Best Student Paper and Best Student Chapter contests. The Committee noted the entries ranged in quality from poor to outstanding. The Committee will continue to monitor these contests with appropriate recommendations for their continued improvement. One change already recommended by the committee will be to move the deadline for submission of papers and reports from November to May with implementation as soon as practicable.

It has been noted that in 1979 the SME-AIME Board of Directors decided that Student Chapter rebates should go only to those Student Chapters that submit an annual report. The only other qualification for a rebate is that the chapter must have a minimum of 15 members. All reports are automatically entered in the Outstanding Student Chapter contest. The Committee will continue to monitor this program. Though the number of chapters reporting has increased from 12 in 1978 to 23 in 1981, the reporting is still from only one-third of the SME-AIME Student Chapters.

Continuing Education: A total of 228 registrants participated in SME-sponsored continuing education activities in 1981, less than 1% of the total membership. The Committee noted that short course attendance in Denver was largely attributable to the location. The geographic spread of short course attendees illustrates this point.

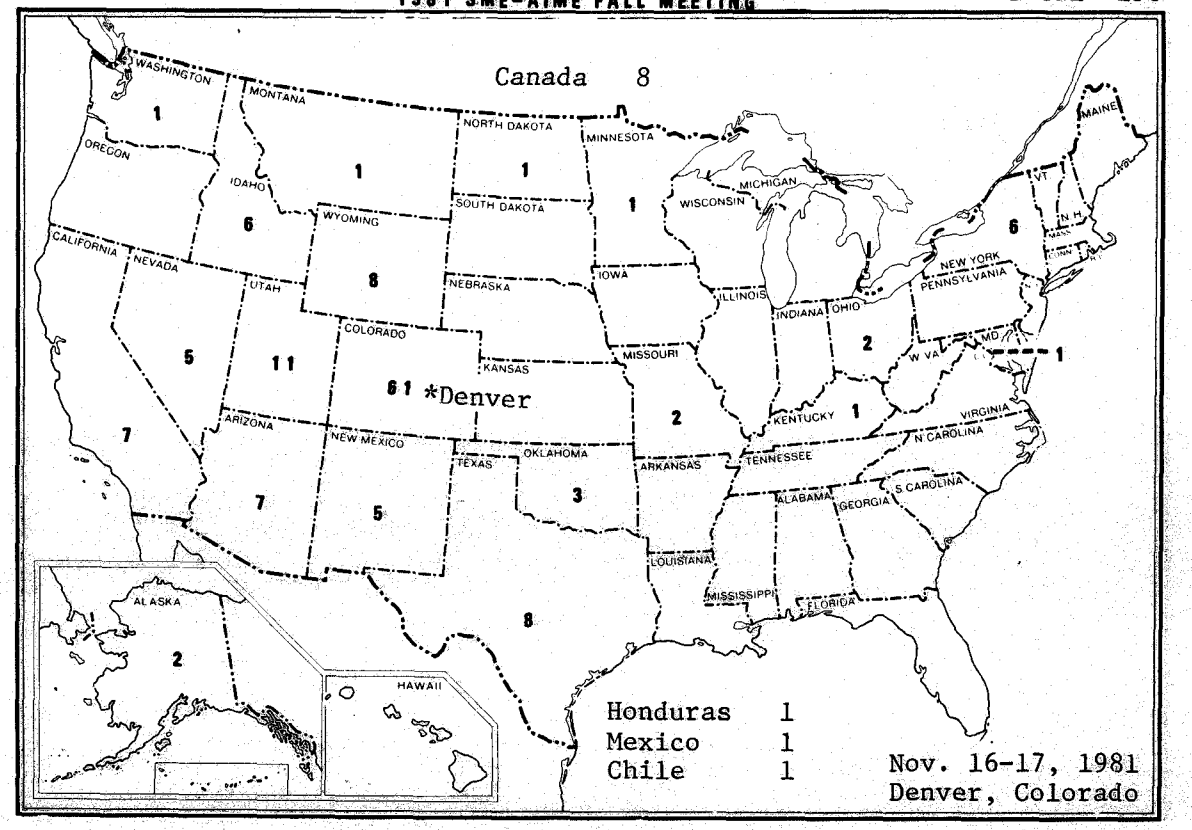


Courses Presented	Registrants
Economic and Econometric Forecasting	14
Project Financing in the Development of Mineral Resources	41
Professional Engineer Review Course in Mining Engineering, Part II	23
TOTAL	78

Low registration and a 30-day cancellation clause with the instructors of the Art of Technical Presentation course necessitated cancellation of the course. Historically, the trend for attendance at short courses is for a surge of registrants in the last three weeks. This pattern continued at the Fall Meeting; however, a great number of attendees registered the last 10 days before the courses.

SHORT COURSE-GEOGRAPHICAL DISTRIBUTION
1981 SME-AIME FALL MEETING

US	139
Foreign	11
Total	150



Courses Presented	Registrants
Design of Non-Water Impounding Mine Waste Dumps	42
Professional Engineer Review Course in Mining Engineering, Part I	21
The Economics of Minerals and Energy Projects	46
Production System Analysis in Underground Mines	28
Introduction to Thermodynamic Analysis of Mine Ventilation	13
TOTAL	150

Courses scheduled for presentation at the 1982 SME Annual Meeting include Professional Engineer Review Course in Mining Engineering -- Part II; Economic and Econometric Forecasting; Project Financing in the Development of Mineral Resources; Spontaneous Combustion of Coal -- Causes, Mechanism, and Related Mining Problems; and Design of Geophysical Field Programs: A Course for Mining Geologists.

At the Fall Meeting the Committee gave consideration to revising the short course budget. The Committee recommended, and the Education Board approved, an increase in honorarium from $300 to $600 a day and an increase in per diem from $75 to $100 a day. These recommendations will be presented to the SME-AIME Board for action.

The Society received a proposal from Education for Management to cooperatively sponsor management-related correspondence courses. Nearly 80 courses are available through this program. This proposal was sent to the Continuing Education Committee for review and evaluation. The Committee voted to postpone any evaluation of the proposal pending further investigation by the staff on reactions to the program by other professional societies.

There was considerable discussion on the method of accounting used regarding the short courses. The Committee perceives a need to establish short courses on a separate funding basis to enable the Committee to use the income over expenses generated through the continuing education program. It was anticipated any available funds would be used to sponsor less successful courses or to increase short course advertising. Committee members were reminded that short course accounting presently includes direct expenses only. However, with the Continuing Education line item added to the FY81 budget, the program would now receive its share of overhead, supplies, staff time, etc. The Committee indicated a separate funding status would be pursued.

Educational Publications: The major functions of the SME-AIME Educational Publications Committee are to determine the teaching aids needs of colleges, universities, and technology schools offering mineral industry related curricula and to supply those needs. During the last several years a number of surveys of needs has been conducted and the Committee is now working on implementing projects identified as having a high priority.

A textbook need identified was one on mine plant design to replace the out-of-date, out-of-print Staley volume originally published by McGraw-Hill. Organization of that text was completed and the Committee recommended it to the Book Publishing Committee as a viable project in February. Publication by SME of "Introduction to Mine Plant Design," R. H. Trent, editor, was approved and actual preparation of the text is underway.

The Committee is investigating a number of other texts. Because of the demonstrated need for a text on operations research and because an existing text by Charles Manula, The Pennsylvania State University, had already been submitted to the Book Publishing Committee, the Educational Publications Committee recommended that the Manula text be approved and that those persons doing the final editing pattern their work on the results of the Committee's survey regarding an operations research text and the reviews of the Manula manuscript. The publication was approved with those caveats.

The Committee is currently reviewing an outline of a text, "Introduction to Mining," compiled by John Husted, Georgia Institute of Technology. To facilitate the review, a copy of the outline has been sent to colleges, universitites, and technology schools with a request for input. Results of that survey will be studied at the February 1982 Annual Meeting.

The Committee has also requested that the US Bureau of Mines proceed as expeditiously as possible with publication as a text of the two-volume work on Mine Electricity by L. A. Morley of Penn State.

Educational Statistics: The major project of this Committee was the update and distribution of the SME-AIME Guide to Minerals Schools. One copy was

provided to each school participating in the Guide and the availability of the Guide was announced in the November issue of MINING ENGINEERING. Earlier in the year, the Committee conducted an enrollment survey. After analyzing this information, the Committee found the survey valuable and approved including it in future Guides to Minerals Schools. The Committee noted that in the future a separate survey need not be conducted since the information could be compiled from the updated guide. Additionally, the Committee reviewed available salary statistics and voted to prepare a table indicating salary median ranges in mining, petroleum, metal, and geology industries for inclusion in the Guide. The Committee reviewed the Student Chapter Survey conducted jointly with the Career Guidance Committee and plans to discuss the following items at the next meeting: 1) membership drive and direct mailing to increase student membership, 2) listing of summer job availability, 3) contests with SME-AIME involvement, 4) increase Student Chapter travel allowance, and 5) an annual visit to each Student Chapter by an SME-AIME officer.

Scholarship: The Education Board instructed the Scholarship Committee to either decide to abolish the SME-AIME National Merit Scholarship program or to recommend a continuation of it and prepare a complete document justifying this recommendation for presentation to the Education Board for transmittal to the SME-AIME Board of Directors. Pending this report, the Education Board voted to discontinue any further solicitation for funds, including the dues checkoff on the 1982 membership dues statement. In response to this assignment the Committee presented two recommendations to the Education Board: 1) that the present SME-AIME National Merit Scholarship be discontinued and 2) be replaced with one prestigious award to benefit the whole Society.

The Scholarship Committee voted, and the Education Board endorsed, a new program: one four-year scholarship each four years for $1,500 a year, plus administrative costs, to be administered through the National Merit Scholarship Corp. and awarded to a high school senior planning to attend an accredited mining school in one of the following fields of study: mining engineering, mineral engineering, mineral processing engineering, geological engineering or geophysical engineering. This program will be referred to the SME-AIME Board of Directors for action at the Annual Meeting.

PROFESSIONAL REGISTRATION ACTIVITY

Major functions of the SME-AIME Professional Registration Committee are: 1) preparing the examination in Mining/Minerals Engineering, 2) grading the exam questions once the examination has been administered by the state registration boards, 3) informational services to those persons interested in the examination, and 4) monitoring professional registration activities through its representative on the National Council of Engineering Examiners' UEQ/PE Committee.

At its meeting in February the Committee selected questions for the November 1981 examination. The examination itself, after preparation by NCEE, was subsequently reviewed by members of the Committee. At the November meeting preliminary selection was made of questions for the November 1982 exam; the selection process will be completed in February 1982. Until 1982, the examination was given in April and October-November. Starting in 1982, the

specialty examinations, of which Mining/Minerals Engineering is one, will be given once a year, in the fall. This will help ease the Committee's workload, especially now that Colorado is using the national examination, with the resulting increase of 57% in number of questions to be graded.

Besides the regular Committee meetings during the Annual and Fall Meetings, the Committee members met twice at SME headquarters (in December 1980 and June 1981) to grade the examination questions. A tabulation follows of the number of questions graded by syllabus area, number of states administering the exams, and number of applicants.

NUMBER OF QUESTIONS ASKED

	11/79	4/80	11/80	4/81	11/81
Economics	39	--	--	--	--
Exploration	60	98	77	86	129
Mine Planning	83	99	123	156	200
Mine Operations	159	159	113	124	190
Ground Control	16	84	44	43	79
Mineral Processing	50	56	70	35	131
Environmental & Government	64	29	91	16	75
TOTAL	471	525	518	460	804*
Number of States	N/A	26	20	18	23
Number of Applicants	N/A	91	86	84	171

*Colorado questions added.

The Committee will meet in January 1982 to grade the 804 questions.

As part of its informational services to those interested in the exam, the Committee has been working on a study guide. The preliminary draft of the first part of the guide was reviewed at the February meeting. In November the Committee decided that it would ask NCEE to release one of the exams already given for inclusion in the guide. Negotiations with NCEE for this release are now underway.

H. S. (Pete) Fowler has been the representative to NCEE's UEQ/PE Committee. He keeps the Committee informed of developments that pertain to the Mining/Minerals Engineering examination. In November, the Committee reviewed the results of the NCEE Task Analysis study conducted in late 1980 and early 1981. It was felt that the results did not really contribute to more meaningful examination preparation except that it did reemphasize the fact that those taking the exams generally have had between five and 10 years of experience.

LECTURE SERIES ACTIVITY

Now in its 15th year, the Henry Krumb Lecture program continued as a popular lecture series with many more requests for the lecturers than the budget could accommodate. Lecturers for 1981 included Eugene N. Cameron, Van Hise Professor of Geology at the University of Wisconsin-Madison; Raymond L. Smith,

retired, President of Michigan Technological University; and Simon D. Strauss, retired, Vice Chairman of the Board of Asarco, Inc. Topics included:

"Changes in the Mineral Position of the United States: Implications for National Policy"

"Materials Supplies in the Next Decade"

"The Impolitic Engineer"

"The Impact of More Federal Regulations"

"Monetary Aspects of Gold and Silver"

The lecturers made 19 appearances to SME-AIME and TMS-AIME Local Sections in the United States and Mexico.

The Australasian Institute of Mining and Metallurgy and AIME conducted a joint conference in Australia in 1978. The conference resulted in a surplus of $60,000. The AusIMM proposed that the earnings from the money be used to establish and pay the expenses for a Distinguished Speaker Exchange Program between the Institutes.

The first speaker was 1981 AIME President Robert H. Merrill, who lectured in Australia in 1980. This year AusIMM sponsored Sir James Foots, Chairman of MIM Holdings, Ltd., on a lecture tour of the US. Sir James spoke on five occasions on the following topics:

"Round-Up of the Australian Mining Industry"

"The Australian Minerals Industry--The Climate for Investment"

"The Australian Minerals Industry--Some Issues"

"Australia's Contribution to the Development of Minerals Technology"

Sir James and Lady Foots were well received by the following Sections: Colorado Section, St. Louis and Southeast Missouri Sections' joint meeting, Pittsburgh Section, Washington, DC, and Virginia Sections' joint meeting, and the New York Section. Activities along the way included tours of the Colorado School of Mines, Henry Krumb School of Mines, and the national headquarters for the US Bureau of Mines and US Geological Survey.

GOVERNMENT, ENERGY, AND MINERALS (GEM) COMMITTEE ACTIVITY

Now in its seventh year, GEM program activities included the approval of The Policy Statement on Disposal of High-Level Radioactive Waste and the continued interface with the Mineral Information Institute.

The Policy Statement on Disposal of High-Level Radioactive Waste, prepared by the Association of Engineering Geologists, was endorsed by the GEM Committee and recommended to the Board of Directors for endorsement. The Board endorsed the Policy at the Fall Meeting.

The publication of "Energy, Resources, and Environment" by John H. Christensen was completed. In mid-September an announcement with a copy of the book was sent to all Local Sections announcing the availability of the text, the accompanying lab manual, and the teacher's guide, all published with the assistance of the GEM Committee. The brochure included ordering information should a Section be interested in obtaining additional copies.

The first printing of 1000 copies of the "Resource Encyclopedia and Directory, a Catalog of Mineral and Environmental Aids for Science Teachers and Librarians," has been distributed and an additional 300 were printed. The Mineral Information Institute has indicated they are in the process of updating the Encyclopedia.

The GEM Committee has continued its role of screening and distributing factual information to the public via the GEM Facts Columns published in MINING ENGINEERING. F. T. (Casey) Davis has accepted the primary responsibility for the compilation and production of GEM Facts.

At the Fall Meeting, the Mineral Information Institute met with the GEM Committee to outline its goals and their five-year plan. After reviewing this information the GEM Committee voted to continue its support of MII activities to the extent possible.

HONORS AND AWARDS ACTIVITY

The following honors and awards were selected in 1981 for presentation to SME-AIME members during 1981 and 1982:

AIME Honorary Member
Henry T. Mudd

AIME Rock Mechanics Award
Jack Parker

Howard N. Eavenson Award
Douglas F. Crickmer

Antoine M. Gaudin Award
Iwao Iwasaki

Hal Williams Hardinge Award
John F. Havard

Daniel C. Jackling Award
William H. Callahan

1981 Henry Krumb Lecturers
Eugene N. Cameron
Simon D. Strauss

Mineral Economics Award
Simon D. Strauss

Percy W. Nicholls Award
Jack A. Simon

Robert Peele Award
J. Richard Kyle

Erskine Ramsay Medal
Woods G. Talman

Charles F. Rand Memorial Gold Medal
Edward S. Frohling

Robert H. Richards Award
A. R. MacPherson

SME Distinguished Member Award
James S. Browning
Charles H. Burgess
William H. Dresher
Paul C. Henshaw
Frederic L. Kadey, Jr.
Laurence H. Lattman
J. Richard Lucas
John D. Morgan, Jr.
Sam H. Patterson
John Peperakis
Nelson Severinghaus, Jr.
Lawrence E. Smith
John W. Straton

SME Publications Board Awards
South Texas Minerals Section
Charles O. Brawner
Christopher J. Hall
J. Brent Hiskey
William A. Hustrulid
Martin C. Kuhn
William C. Larson
Frank W. McQuiston, Jr.
Pierre and Ethnea Mousset-Jones
Oliver S. North
Raja V. Ramani
W. Joseph Schlitt
Robert S. Shoemaker
Daniel R. Stewart

Arthur F. Taggart Award
Iwao Iwasaki

Young Engineer Award
William D. Hake

AIME LEGION OF HONOR
(50 Years of Continuous Membership)

The following 29 SME-AIME members will become members of the AIME Legion of Honor during 1982:

Fred W. Bailey
Robert W. Baltosser
John A. Bowsher
Henry L. Brunjes
John R. C. Dinsdale
Herman R. Eberle
Lawson P. Entwistle
Herbert A. Franke
E. A. Hammermeister
Milton A. Lagergren
Gilbert J. Matthews
Andrew Meyer
Domingo Moreno
George H. Musson
George W. Pawel
Robert F. Playter
Joseph Pursglove, Jr.
Albert V. Quine
Allan R. Reiser
Bertrand G. W. Robinson
Richard L. Sayrs
Arch L. Slaughter
James R. Sweet
L. Newton Thomas
R. L. Tobie
Myles A. Walsh
Benjamin N. Webber
Sheldon P. Wimpfen
Robert J. Woody

Respectfully submitted,

Claude L. Crowley
Executive Director

THE METALLURGICAL SOCIETY OF AIME

REPORT
of the
EXECUTIVE DIRECTOR OF THE METALLURGICAL SOCIETY OF AIME
for 1981

Growth in several key areas provided TMS-AIME with a modest financial surplus in 1981. The Society was particularly pleased to see significant growth in the recruitment of new members and also the continuing expansion of book publication and sales.

Membership growth in 1981 was up over 9%, with some 627 new members and reinstatements added to the rolls. This was the largest gain in recent years. Improvement in the rate of retention for student members who transfer to Automatic Junior Membership also set a new record with 424 graduating seniors electing to continue their membership in TMS-AIME. This was up 41% over our previous record year in 1980. The Society recognized our potential for membership growth and the Board of Directors authorized a staff position in membership recruitment which should aid our efforts in 1982.

Publication of new books and their sales, both saw dramatic growth in 1981. This can perhaps be tied to our growth in membership. The interest in publishing and purchasing books seem to reflect the general high level of technical developments in metallurgical engineering and its related fields. Some 16 new conference proceedings were published in 1981, along with 1 reprint. The quantity sold equalled 1980, with 9,000 books sold, but set an income record of $255,000. Income was up 52% over 1980, a significant increase.

The meetings of the Society continued to draw good attendance, with the Annual Meeting in Chicago drawing 1,789 TMS members and "metals interest" attendees, and an overall attendance of 4,426. The Society members presented 744 papers in 112 sessions. The Fall Meeting held jointly with the Basic Science Division of the American Ceramic Society and continuing jointly with the Materials Science Division of ASM, drew 1,025 attendees in Louisville. Some 86 sessions were scheduled with 599 papers presented. The Electronic Materials Committee of TMS-AIME sponsored its 23rd Annual Conference at Santa Barbara, California, drawing 566 attendees to hear 151 papers within 20 sessions. This Conference has seen dramatic increases in attendance the past couple of years rising from about 200 to over 550 in 1980 and 1981. All of these meetings demonstrated the continued strong support of the Society's members of its meetings and the valuable service provided to the metallurgical community through TMS-AIME sponsored meetings.

Metallurgical Transactions continued in its role as the archival journal of the Society. Met Trans A - Physical Metallurgy subscriptions were 4,782; while Met Trans B - Process Metallurgy were 2,345. The number of pages published was up over 1980, with a total of 2,920, of which 2,146 were in Met Trans A and 774 in Met Trans B, almost 300 pages more.

The Paper Selection Program continued as an integral part of the Society's overall publication services. Some 85 papers were published with sales totaling 7,400 copies for an income of $24,750.

The "Foundations for the Future" fund raising campaign was concluded in 1981. This special campaign raised a total of $150,026 to support the continuation and expansion of the Society's services. The Committee consisted of Chairman Robert E. Lund, Robert I. Jaffee, Harold W. Paxton, Dale F. Stein and Gareth Thomas.

On the international scene, TMS-AIME co-sponsored with ASM and the Chinese Society of Metals in Beijing, the first USA-China Bilateral Metallurgical Conference in November 1981. The U.S. delegation consisted of 41 representatives who presented 36 papers. The two week trip included the Conference, technical tours and sightseeing. Some 120 Chinese metallurgists attended the four day Conference. Discussions were held with representatives of CSM about continuing the exchanges perhaps in 1983, with a small CSM delegation coming to the United States.

The Society had a good year in 1981; we anticipate an even better year in 1982.

TMS-AIME

STATEMENT OF INCOME AND EXPENSE

YEAR END, NOVEMBER 30, 1981

REVENUE		
Member Dues and Fees		$ 280,899
Publications: Books, Paper Selections and Proceedings		325,580
Publication Monthly Journal		203,707
Publication Metallurgical Transactions		358,182
Interest and Dividends		28,773
Meetings:	AIME Annual Meeting	95,304
	Offshore Technology Conference	35,913
	Fall Meeting	60,105
	Electronic Materials Conference	28,975
	Miscellaneous Meetings	2,650
Other		27,332
TOTAL REVENUE		$1,447,420
EXPENSE		
AIME Corporate Headquarters		$ 25,608
Society Headquarters and Business Services		157,557
Publications: Books, Paper Selections and Proceedings		236,309
Publication Monthly Journal		330,233
Publication Metallurgical Transactions		368,617
Membership and Meeting Services		74,386
Section and Student Chapter Rebates		18,160
Meetings:	AIME Annual Meeting	85,672
	Offshore Technology Conference	5,347
	Fall Meeting	60,006
	Electronic Materials Conference	21,501
Awards:	TMS-AIME	952
Other		20,418
TOTAL EXPENSE		$1,404,766
REVENUE OVER EXPENSE		$ 42,654
TOTAL TMS-AIME RESERVES		$ 335,727

MEETINGS DEPARTMENT

TECHNICAL CONFERENCES

The Metallurgical Society of AIME sponsored or co-sponsored the following technical conferences during 1981:

Conference	Attendance	Number of Technical Sessions	Number of Papers Scheduled
110th AIME Annual Meeting; Hyatt Regency Chicago, Radisson Chicago and Chicago Marriott; Chicago, IL February 22-26	4,426 1,789 TMS	115	754
13th Annual Offshore Technology Conference; Houston Astrodomain; Houston, TX May 4-7	100,329	42	204
23rd Annual Electronic Materials Conference; University of California-Santa Barbara; Santa Barbara, CA June 24-26	566	20	152
International Conference on Applied Mineralogy (ICAM) '81; Carlton Hotel; Johannesburg, South Africa June 23-26	400-500	-	-
International Conference on Thermomechanical Processing of Microalloyed Austenite Greentree Marriott, Pittsburgh, PA August 16-19	71	6	31
Joint TMS-AIME and BSD-ACerS Fall Meeting; Galt House, Hyatt Regency-Louisville and Commonwealth Convention Center; Louisville, KY	1,025	94	698

SCHEDULE OF TMS-AIME CONFERENCES FOR 1982 AND 1983

1982

February 14-18	111th AIME Annual Meeting; Hyatt Regency, Hilton, Fairmont and Dallas Convention Center; Dallas, TX
April 19-21	International Recycling Congress; Berlin, West Germany
May 3-6	14th Annual Offshore Technology Conference; Astrodomain; Houston, TX
June 23-25	24th Annual Electronic Materials Conference; Fort Collins, Colorado
October 24-28	Joint TMS-AIME Fall Meeting and ASM Metals/Materials Congress; Sheraton St. Louis and Cervantes Convention Center; St. Louis, Missouri
October 25-28	ICCM IV; Tokyo, Japan
November	Pittsburgh Off-the-Record Meeting; Pittsburgh, PA

1983

January	Golden Gate Metals and Welding Conference; Sheraton Palace Hotel; San Francisco, CA
March 6-10	112th AIME Annual Meeting; Hilton, Peachtree Plaza, Marriott and Hyatt Regency; Atlanta, Georgia
May 2-5	15th Annual Offshore Technology Conference; Astrodomain; Houston, TX
June	25th Annual Electronic Materials Conference
June 19-23	Conference on Ferritic Alloys for Use in Nuclear Energy Technologies; Snowbird Conference Center; Salt Lake City, Utah
October 2-6	Joint TMS-AIME Fall Meeting and ASM Metals/ Materials Congress; Cleaning, Coating & Finishing; Sheraton and Franklin Plaza; Philadelphia, PA
November	Pittsburgh Off-the-Record Meeting; Pittsburgh, PA

TMS Technical Program

The 1981 TMS-AIME Fall Meeting, Louisville, KY, was held jointly for the first time with the Basic Science Division of the American Ceramic Society. In addition to the traditional Fall Meeting program, four symposia, consisting of 20 sessions with 157 papers, were sponsored jointly by TMS and ACS-BSD. The following topics of common interest to metallurgists and ceramists were covered: Application of Electron Microscopy in Materials Science, Powder Processing, Degradation of Materials, Transition Metal Carbides and Cemented Carbides. Response to the joint programming with ACS-BSD was favorable, and future joint programming may be considered. A total of 86 sessions with 599 papers in the physical metallurgy technical area were presented at the 1981 Fall Meeting in Louisville.

At the 1981 AIME Annual Meeting in Chicago, IL, 112 TMS sessions were held consisting of 744 papers covering both physical and extractive metallurgy. 129 TMS sessions with 811 papers are planned for the 1982 AIME Annual Meeting in Dallas, TX, reflecting an increase in TMS programming at the Annual Meeting.

The annual 1981 Electronic Materials Conference was held at the University of California, Santa Barbara, June 24-26, 1981. Record attendance of 566 was attained. There were a total of 20 sessions with 151 technical papers, covering the technical areas of photovoltaics, compound semiconductors, polycrystalline silicon, laser and electron beam processing, display materials, photoresist, defects and silicides.

We are pleased to announce that the TMS-AIME Board of Directors has approved establishment of a new annual conference in the technical area of extractive and process metallurgy. Plans are underway to conduct the first conference in 1982. This new conference will serve an increasing need for a special forum for specific topics in the extractive metallurgy area and is evidence of our continuing growth.

MEMBERSHIP DEPARTMENT

This department continued in 1981 with one full-time staff member and one part-time employee through October. Continued growth of the department's responsibilities and duties necessitated adding a Membership Promotion Coordinator effective in 1982. Our staff liaison to the TMS-AIME Admissions Committee is handling all Membership Department responsibilities, which include new member applications, change of address and status, membership promotion, follow-up of senior members and terminations of membership. An additional terminal/work station was added to the Sperry Univac BC/7 computer, as well as a permanent computer operator, which has greatly improved and expedited our record-keeping.

Membership promotion campaigns through meetings, direct mail, and various follow-up work brought in 627 new members in 1981. In addition, 424 graduating students joined the Society as Automatic Junior Members, a record total. Both new member and AJM's were record numbers, with new members up 55% and AJM's up 41%. The membership contest, initiated in 1975, had participation by 180 members.

A new incentive was added this year to encourage members to sign up new members in the form of a book discount coupon worth $5.00, with no expiration date. This met with great success at our Fall Meeting in Louisville, with a total of 48 new members signed up as a result of this campaign.

TMS-AIME MEMBERSHIP BY GRADE CLASSIFICATION

JANUARY 1, 1982

Member	4,003
Associate Member	1,112
Junior Member	1,232
Student Member	2,626
Honorary Member	8
Senior Member	304
Life Member	5
GRAND TOTAL	9,290

TMS-AIME MEMBERSHIP 1976 - 1981

	1976	1977	1978	1979	1980	1981
E&PM	1,863	2,103	2,041	2,038	2,176	2,428
AM&MS	2,998	3,090	2,964	2,978	3,224	3,564
Education	39	44	53	55	51	49
Economics	52	53	47	48	60	71
Unclassified	892	780	704	616	582	552
Total Members	5,844	6,070	5,809	5,735	6,093	6,664
No. of Members Gained (Lost)	(44)	226	(261)	(74)	358	571
Percent Change	(.99)	3.84	(4.30)	(.99)	6.24	9.38
Student	1,974	1,997	2,290	2,326	2,544	2,626
GRAND TOTAL	7,818	8,067	8,099	8,061	8,637	9,290

1981 NEW MEMBERS

Technical Interest

Ext. & Process Met.	323
Metals Sci. & Appl. Met.	290
Economics	14
	627
AJM's	424
Total	1,051

MEMBERSHIP GRADE

New Member

Member	430
Associate	38
Junior	80
	548
Reinst.	79
	627

Reinstatements

Junior	14
Associate	4
Member	61
	79

TMS-AIME PUBLICATIONS DEPARTMENT

Journal of Metals

Journal of Metals published 1,108 pages in FY 1981, compared with 1,114 in 1980. Despite the fact that the number of pages was held constant, the number of pages devoted to technical and feature articles increased by 97.4 or 27%, accomplished primarily by decreasing the number of department pages. Unfortunately, the number of display advertising pages was down considerably; classified advertising increased significantly, thus easing the extent of revenue loss.

The breakdown of 1981 pages was as follows:

	No. pages
Technical and feature articles	456.6
Departments	142.9
Society News (TMS)	18.7
Display advertisements	36.2
Classified advertisements	47.3
House advertisements	37.7
Reader service cards	48.0
Membership Directory	93.4
Fall and Annual Meeting material	183.0
AIME News	16.7
Miscellaneous	27.8
Total	1108

Net advertising revenues for FY 1981 totaled $101,178, 60% of which was from classified advertising.

On the editorial side, the practice was begun of choosing two technical emphasis topics for each month, one for the physical/mechanical metallurgy side and one for the extractive/process metallurgy side. This practice worked quite well and will be continued in 1982. Technical emphasis topics chosen for 1981 were as follows:

	Physical/Mechanical Metallurgy	Extractive & Process Metallurgy
January	Powder Metallurgy	Lead, Zinc, Tin
February	Alloy Development	Copper
March	Microscopy	Sulphur Dioxide
April	Surface Analysis	Annual Review
May	Mechanical Testing	Refractory Metals
June	Heat Treating	Energy Conservation
July	Nondestructive Evaluation	Emissions Control
August	Advanced Materials Technology	Advanced Extraction Methods
September	Fracture Toughness	Aluminum
October	High-Temperature & Corrosion Resistant Materials	Precious Metals
November	Melting and Casting	Nickel
December	Welding and Joining	Process Control

Book Publishing Activities

TMS published 16 conference proceedings in 1981. Revenue increased by 50%, ending the year at $253,382.

The year-end inventory and status for books-in-print are tabulated elsewhere in this report.

Books published in FY 1981 were:

1. Sanders and Starke, Aluminum-Lithium Alloys
2. Marder and Stephenson, Energy-Efficient Electrical Steels
3. Buck and Wolf, Nondestructive Evaluation
4. Holland, Mansur, and Potter, Phase Stability During Irradiation
5. Lee, Interatomic Potentials and Crystalline Defects
6. Bernstein and Thompson, Hydrogen Effects in Metals
7. Hausen and Park, Process Mineralogy
8. Brody and Apelian, Modeling of Casting and Welding Processes
9. Tien and Elliott, Metallurgical Treatises
10. Gokcen, Chemical Metallurgy: A Tribute to Carl Wagner
11. Kot and Bramfitt, Fundamentals of Dual-Phase Steels
12. Murty and Mollard, Continuous Casting of Small Cross Sections
13. Mukherjee and Mazumder, Lasers in Metallurgy
14. Eylon, Titanium for Energy and Industrial Applications
15. George and Taylor, Copper Smelting - An Update
16. Andersen, Light Metals 1982

It was necessary to reprint for the second time the Society's first textbook, Handbook on Material and Energy Balance Calculations in Metallurgical Processes, by Fine and Geiger. The interest in this book remains quite high.

Other TMS Publishing Activities

Journal of Electronic Materials

At the request of the Society's Electronic Materials Committee, TMS prepared to take over the publishing from Plenum Publishing Corporation of Journal of Electronic Materials, beginning with the January 1982 issue.

This request has been fully implemented. The editorial office has been supplied with the necessary forms and procedures for the shift in publishing responsibility. Printing and distribution has been arranged with a printer in the area of the Society's headquarters, and circulation procedures have been set up in-house. It is likely that a circulation drop of about 30% will occur because Plenum refused to give TMS the list of subscribers, but most of the current subscribers have been reached indirectly.

Paper Selections

A Total of 85 titles were published as Paper Selections in 1981. This is less than the 157 published in 1980, because the Society stopped issuing the Light Metals papers as Paper Selections, an action taken because the increased success of Light Metals book has resulted in a decrease in the sales of the Light Metals Papers Selections until they failed to recover their cost.

Revenue for Paper Selections sales in FY 1981 amounted to $24,743, an increase of 42%.

Abstracts Bulletin

Abstracts of TMS papers for the AIME Annual Meeting and the TMS Fall Meeting were published in the December 1980 and September 1981 issues, respectively, of Journal of Metals. This portion of the Journal was overprinted and combined with updated frontmatter and covers to provide the Pocket Program for the meetings.

Abstract bulletins were also prepared for the 1981 Electronic Materials Conference in Santa Barbara in June.

TMS-AIME
INVENTORY AND BOOK STATUS
YEAR END, NOVEMBER 30, 1981

TITLE	Number Printed	Cost Per Copy	Inventory 11-30-81 Quantity	Inventory 11-30-81 Value	1981 Income	Total Income	Expense	Income Over Expense
Extractive Met. of Copper ('76	2540	$ 5.65	338	$ 1909.70	$ 4009.30	$61403.40	$ 17512.99	$ 43890.41
Lect.Phase Trans ('76)	1555	2.10	105	220.50	1856.80	12424.20	2726.50	9697.70
Light Metals 1979 ('79)	1056	8.84	292	2581.28	2962.60	23594.90	12482.42	11112.48
Light Metals 1980 ('80)	1042	10.75	223	2397.25	4733.20	27107.20	15051.98	12055.22
Light Metals 1981 ('81)	1028	10.12	240	2428.80	27606.40	27606.40	10403.61	17202.79
Breeder Reactor ('78)	695	11.85	254	3009.90	1297.20	11892.00	6480.86	5411.14
Hardenability Concepts ('78)	1257	5.48	277	1517.96	2693.00	14389.40	7075.47	7313.93
Failure Modes IV ('79)	552	6.09	394	2399.46	1098.00	3069.00	3360.18	(291.18)
Formability ('79)	1022	5.17	541	2796.97	1377.50	5740.50	5279.16	461.34
Environ. Sens. Frac. ('79)	1082	9.03	326	2943.78	6442.00	18070.00	9773.94	8296.06
Copper & Nickel Conv. ('79)	1314	4.75	455	2161.25	3973.80	17347.00	6388.33	10958.67
New Dev & App in Comp ('79)	560	6.90	350	2415.00	1739.60	5290.60	3863.34	1427.26
Met Sci of Stain. Steel ('79)	519	5.21	188	979.48	1766.00	6344.00	2703.24	3640.76
Toughness Character. ('79)	496	7.14	221	1577.94	2002.00	6631.00	3539.89	3091.11
HSLA & Dual Phase Stls. ('79)	802	3.91	487	1904.17	1695.20	5742.20	3137.13	2605.07
Precip. Processes ('79)	1046	4.97	269	1336.93	3264.85	11193.35	5196.43	5996.92
Phase Diagrams ('79)	1009	3.65	466	1700.90	3423.80	8215.80	4630.38	3585.42
Thermomechanical Proc. ('79)	509	6.53	254	1658.62	1844.40	4305.00	3324.95	980.05
Dual Phase Steels ('80)	512	7.54	138	1040.52	4875.40	9204.40	3862.87	5341.53
Handbook ('80)	2231	6.74	833	5614.42	14580.00	24159.00	23758.81	400.19
Alloy Phase Formation ('80)	518	10.51	81	851.31	6853.40	9534.80	5446.01	4088.79
Corrosion-Erosion ('80)	777	5.70	523	2981.10	4435.60	5592.60	4480.14	1112.46
Ion Implantation ('80)	754	4.87	300	1461.00	3767.00	7300.60	3673.87	3626.73
Lead-Zinc-Tin 80' ('80)	2066	8.26	241	1990.66	9912.00	54235.75	17072.06	37163.69
Powder Metallurgy ('80)	531	8.86	230	2037.80	5356.70	6767.30	4702.34	2064.96
Creep-Fat.-Environment ('80)	746	4.69	454	2129.26	3487.60	4131.40	3497.04	634.36
Physical Metallurgy ('80)	516	7.49	197	1475.53	4565.00	5479.00	3862.47	1616.53
Advanced Fibers ('80)	530	7.91	305	2412.55	4103.60	4704.20	4193.00	511.20
Boron in Steel ('80)	1021	3.90	73	284.70	4321.80	9682.80	3977.52	5705.28
Titanium 80' ('81)	1499	35.00	520	18200.00	63762.50	63762.50	52465.88	11296.62
Sulphur Dioxide ('81)	798	6.31	442	2789.02	7995.60	7995.60	5038.36	2957.24
High Speed Tool Steels ('81)	778	4.35	672	2923.20	1528.20	1528.20	3382.54	(1854.34)
Ext. Met. Refractory Met.('81)	808	6.35	515	3270.25	6291.60	6291.60	5133.66	1157.94

TMS-AIME
INVENTORY AND BOOK STATUS
YEAR END, NOVEMBER 30, 1981

TITLE	Number Printed	Cost Per Copy	Inventory 11-30-81 Quantity	Inventory 11-30-81 Value	1981 Income	Total Income	Expense	Income Over Expense
Metastable Phases ('81)	529	$ 5.55	456	$ 2530.80	$ 1234.60	$ 1234.60	$ 2934.88	$ (1700.28)
Alum.-Lithium Alloys ('81)	827	6.95	603	4190.85	5086.00	5086.00	5747.62	(661.62)
Energy Eff.Electrical Stl.('81	764	4.71	687	3235.77	1217.20	1217.20	3598.32	(2381.12)
Non Destructive Evalu. ('81)	796	6.19	687	4252.53	2401.60	2401.60	4929.92	(2528.32)
Chemical Metallurgy ('81)	502	9.10	478	4349.80	950.00	950.00	4569.73	(3619.73)
Hydrogen Effects in Met. ('81)	998	11.52	699	8052.48	9767.00	9767.00	11496.21	(1729.21)
Interatomic Potentials ('81)	541	8.09	470	3802.30	772.00	772.00	4376.86	(3604.86)
Metallurgical Treatises ('81)	1046	10.69	828	8851.32	1768.00	1768.00	11177.02	(9409.02)
Modeling of Casting ('81)	755	7.92	695	5504.40	1206.00	1206.00	5976.02	(4770.02)
Phase Stability ('81)	525	11.17	491	5484.47	946.00	946.00	5863.09	(4917.09)
Process Mineralogy ('81)	1022	9.70	996	9661.20	625.00	625.00	9901.08	(9276.08)
				$145317.13	$245595.05	$516709.10	$338048.12	$178660.98

METALLURGICAL TRANSACTIONS A AND B - REPORT FOR 1981

METALLURGICAL TRANSACTIONS A

Technical Papers Published

	No. of TPs	No. of Pages	Total Pages
A Sub+ and ASM	223	1,869	
B Sub++	-	-	
TOTAL	223	1,869	1,869

Communications Published

A Sub+ and ASM	40	103	
B Sub++	-	-	
TOTAL	40	103	103
Title Pages and Table of Contents, etc.			55
Blank Pages			119
Total Pages in 1981 MET TRANS A			2,146

METALLURGICAL TRANSACTIONS B

Technical Papers Published

	No. of TPs	No. of Pages	Total Pages
A Sub+ and ASM	4	44	
B Sub++	75	624	
TOTAL	79	668	668

Communications Published

A Sub+ and ASM	0	0	
B Sub++	13	37	
TOTAL	13	37	37
Title Pages and Table of Contents, etc.			21
Blank Pages			48
Total Pages in 1981 MET TRANS B			774

METALLURGICAL TRANSACTIONS A AND B COMBINED

Technical Papers Published

	No. of TPs	No. of Pages	Total Pages
A Sub+ and ASM	227	1,913	
B Sub++	75	624	
TOTAL	302	2,537	2,537

Communications Published

A Sub+ and ASM	40	103	
B Sub++	13	37	
TOTAL	53	140	140

Title Pages and Table of Contents, etc.	76
Blank Pages	167
Total Pages in METALLURGICAL TRANSACTIONS A AND B	2,920 *

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* 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.

HONORS AND AWARDS

TMS-AIME Board of Directors has elected the following members to the grade of Fellow in 1982:

G. Robert Couch
Robert A. Rapp

The following awards were presented by The Metallurgical Society of AIME to recognize our 1981 award recipients.

Robert Lansing Hardy Gold Medal

Robert H. Wagoner 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 their thirtieth birthday before the end of the calendar year during which their selection is made.

Champion H. Mathewson Gold Medal

The Champion H. Mathewson Gold Medal was bestowed upon John P. Hirth for outstanding theoretical studies on effects of adsorption and hydrogen on metals and alloys.

Extractive Metallurgy Science Award

Robert G. Robins was selected for this award for his paper "Solubility of Metal Arsenates".

Extractive Metallurgy Technology Award

J. Keith Brimacombe and Enrique O. Hoefele were selected for this award for their paper "Flow Regimes in Submerged Gas Injection".

William Hume-Rothery Award

The William Hume-Rothery Award was bestowed upon Pol Duwez.

Acta Metallurgica Gold Medal

The Acta Metallurgica Gold Medal is an international award recognizing outstanding contributors to materials science. The 1981 award recipient is Morris Cohen.

LECTURES

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

The 1982 award recipient is Morris Cohen.

Extractive Metallurgy Lecture

Walter Hibbard: "Extractive Metallurgy for the Recycle of Scrap"

Institute of Metals Lecture and R. F. Mehl Award

Robert W. Balluffi: "Grain Boundary Diffusion Mechanisms"

ACKNOWLEDGMENT

Appreciation is extended to all members, Officers and Directors of The Metallurgical Society of AIME. Special thanks to President Kenneth J. Richards.

Thanks also to the staff who have performed most admirably. The staff as of January 1, 1982, by position:

Title	Name	Years of Service
Executive Director	Alexander R. Scott	11
Administrative Assistant	Rosey Kaufman	2
Director of Administration	Peter DeLuca	8
Meetings Manager	Thomas DeSalvo	5
Administrative Assistant	Joanne Melder	2
Membership Promotion Coordinator	Mark O'Connor	-
Program Coordinator/Assistant Meetings Manager	Marilyn Zabel	4
Computer Services Manager	Frank Denio	4
Data Entry Clerk	Anna Marie Miller	1
Publications Order Assistant	Elaine Rouda	3
Director of Publications	John B. Ballance	4
Administrative Assistant	Mary Jane Alsing	2
Managing Editor	Gail Oare	1
Advertising Manager	Linda Morgan	4
Manager of Book Publishing	Barbara Pontello	4
Administrative Assistant, Book Production	Patricia Kwiatek	3
Graphic Artist	Robert Makowski	2

Respectfully submitted,

Alexander R. Scott
Executive Director

IRON & STEEL SOCIETY OF AIME

REPORT

OF THE

EXECUTIVE DIRECTOR OF THE IRON AND STEEL SOCIETY OF AIME

FOR 1981

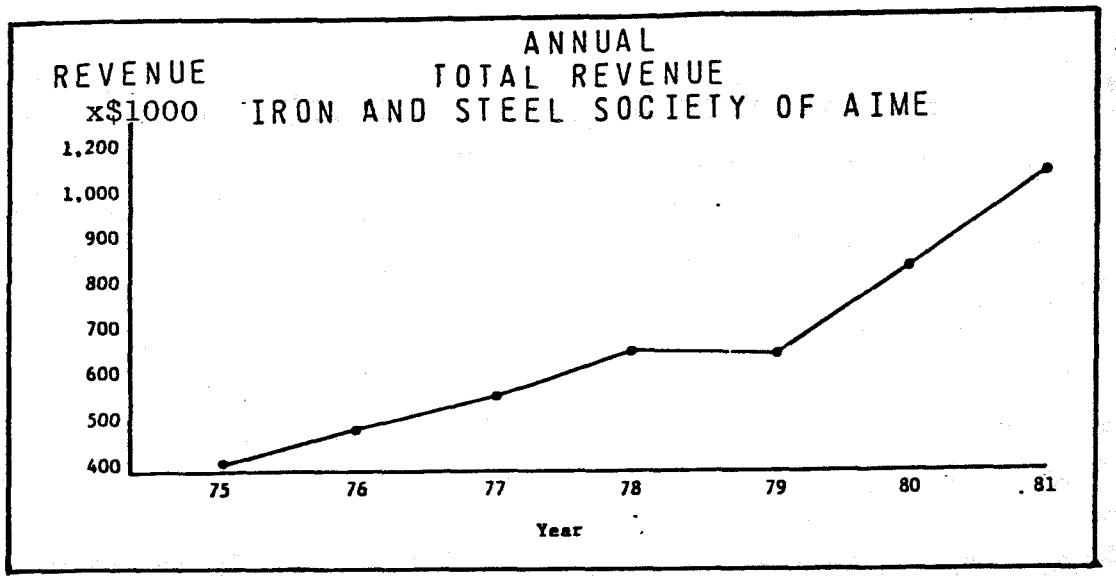
The Iron and Steel Society (ISS) of AIME completed its most successful year in its brief seven year history. 1981 was a year of harvest. Every area of the Society's endeavors succeeded beyond the most optimistic projections made at year-end 1980.

The Society's membership continued its growth rate of 10% or more even in the face of employment curtailment in the industry through plant closings and modernization. This growth in the face of curtailed employment exemplifies the calibre of ISS member rolls. The Society is attracting the key people in the iron and steel industry, people who are the leaders in technological innovations.

The thirst for technology by the managers and engineers in the iron and steel industry lies at the base of the Society's most successful year. Seven continuing education courses were offered during the year attracting an overwhelming attendance. Total registration at the five national conferences exceeded all previous totals including 1978 when the Society hosted the Third International Iron and Steel Congress that brought an additional 500 conference attendees from all over the world. Furthermore, it should be noted that in 1980 and 1978 the Society hosted at least one additional conference.

The Society magazine, Iron and Steelmaker, continued to grow and establish itself as a part of the periodicals serving the industry. Besides the increased membership receiving Iron and Steelmaker, nonmember subscriptions rose significantly. The magazine's acceptance was further typified by the increase in advertising pages of over 30% for the second consecutive year.

The number of books sold also increased dramatically as the volume of books distributed almost doubled. Over 7,000 books were mailed in 1981. Some of this increase can be attributed to the fact that three of the Society publications in 1980 were available late in the last quarter of 1980 and were not distributed until the first quarter of 1981.

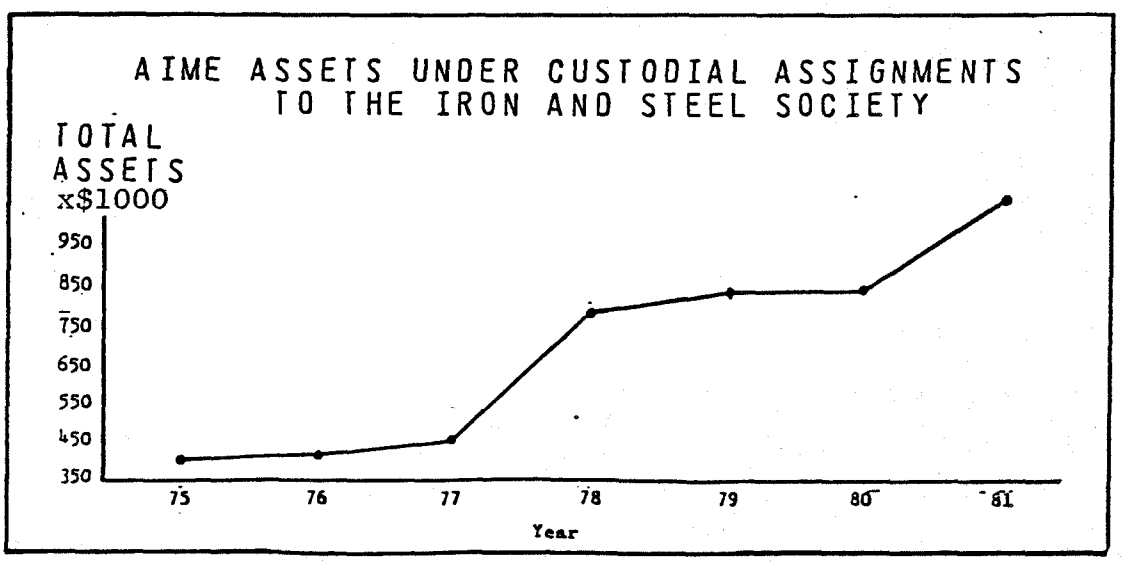


All of these endeavors increased the Society revenues to $1,125,799, an increase of over 32% over 1980 revenues. Cost cutting efforts, primarily in publishing, held expenses to $953,079, an increase of 12% over 1980 operating expenses.

The Society had assets under custodial assignment of $395,747 at the end of 1975, its first year of existence. At year-end 1981, the assets of the Society were $990,829 an increase of 250% in six years. The Society share of the building and property is valued at $285,000. This valuation does not include any real estate appreciation. Property values in Thorn Hill Industrial Park, Warrendale, have increased 50% since AIME purchased 4 acres in 1978.

At the end of fiscal 1981, the Society will have an operating reserve fund of $427,847.00 approximately 36% of the projected 1982 operating revenues. On 11/30/75 the Society had an operating revenue of $210,493, 43% of the 1976 operating revenue.

The Society Award Fund was $70,698 at year-end 1975. The fund grew to $98,000 as of 11/30/81. Six new awards have been added since 1975.



AWARDS

James B. Austin Award

The James B. Austin Award will be presented to Norman T. Mills, 1981 President of the Iron and Steel Society of AIME. The past-president award was named after Dr. Austin to honor him for his contributions of time, effort and ability towards the formation of the Iron and Steel Society of AIME.

Distinguished Member

The grade of Distinguished Member will be presented to three members of the Society in 1982. 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 three members who will be elevated to the grade of Distinguished Member in 1982 are:

Dr. George Sibakin

"For his significant technical contributions to the steel industry, particularly in the fields of direct reduction and electric arc furnace steelmaking."

Dr. Ernest Kirkendall

"For his contributions to the science of metals, service to AIME and the Iron and Steel Society."

Dr. Michael O. Holowaty

"For his achievement and contributions in the technology of sintering and agglomeration."

Robert W. Hunt Silver Medal Award

This award is given for the best original paper on iron and steel. Richard S. Hostetter, Helmut Kranenberg and David C. Ronemus were the 1981 recipients for their paper, "A New Method of Controlling Finishing Temperature in Modern High Speed Bar Rolling Mills".

John Chipman Award

This award was established in 1971 by the Process Technology Division of the Iron and Steel Society of AIME to perpetuate the inspiration of John Chipman's outstanding contribution to the science of iron and steelmaking by granting an award to the author(s) of the best paper of the year. In 1981 the award was bestowed upon K. Upadhya, I. D. Sommerville, P. Grieveson and J. Taylor for their paper, "Kinetics of Reduction of Iron Oxide in Slag by Carbon in Iron".

Charles H. Herty Award

Marcel LeMaire, Guy Denier, Jean-Claude Grosjean, Romain Henrion, Ferdinand Goedert and Francis Schleimer were selected for this award for their paper, "Industrial Development of Bottom Gas Injection in Top Blown Converters". This award recognizes the best paper presented at the 1980 Steelmaking Conference.

Ironmaking Conference Award

The 1981 award was presented to John D. Ashton and Richard R. Schat for their paper, "Blast Furnace Slag Control at DOFASCO". This award is given to the best paper presented at the annual Ironmaking Conference.

Michael C. Tenenbaum Award

This award was established in 1971 as the Mechanical Working and Steel Processing Division's highest award, given for the best paper presented at the previous year's conference and published in the proceedings. In 1978, the award was re-named the Michael C. Tenenbaum Award, honoring one of the earliest chairmen of the Mechanical Working and Steel Processing Committee. In 1981, the award was presented to D. B. McCutcheon, B. Armitage, K. Mullins and H. Wade, for their paper, "Mechanically Expanded Stelform Pipe".

Mechanical Working and Steel Processing Meritorious Award

This award is "runner-up" to the Michael C. Tenenbaum Award. Runner-up in the Roll Technology Division for 1981 was William Tait for his paper, "An Automatic NDT Inspection System for Forged Steel Work Rolls".

Runner-up in the Flat Rolled Products Division in 1981 was Ronald P. Krupitzer, Fritz Reis, Raymond E. Mintus and Joseph E. Franklin for their paper, "The Effects of Strain-Aging, Temper Rolling and Galvanizing on the Properties of Dual-Phase Steels".

Runner-up in the Bar, Rod and Semi-Finished Products Division in 1981 was G. Schanne, E. Wohlfahrt and J. B. Lajournade for their paper, "High Temperature Ultrasonic Testing of Steel Mill Products During Rolling".

Reinartz 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 that university's Department of Metallurgy and Materials Science. The award, a 2,700 dollar scholarship, was presented in 1981 to John F. Erdeljac.

Charles W. Briggs Award

This award is conferred to the best paper presented at the annual Electric Furnace Conference. The 1981 award was given to W. L. Wilbern and C. T. Ray for their paper, " The Operation of a Two-Furnace Ferrosilicon Plant Under Process Computer Control".

Joseph Becker Award

This award is given for distinguished achievements in coal carbonization and in 1981 the award was presented to Michael O. Holowaty.

> "For his work which led to more efficient use of coke in the blast furnace, as well as improvements in the operation and productivity of coke plants."

T. L. Joseph Award

The award is conferred for distinguished contributions to ironmaking operations which significantly increases production or decreases the cost of production. The 1981 winner was Richard J. Wilson.

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 1981 recipient was Joseph J. Poveromo.

> "For work in the area of blast furnace burden and gas distribution, which developed alternative charging practices which resulted in smoother operation of the furnace."

Frank B. McKune Award

This award is given for the best paper on open hearth or basic oxygen steelmaking written by an author or authors under forty years of age. The recipients of the 1981 award are Chris Zimmerman and Eric D. Anderson for their paper, "Bath Oxygen analysis and Utilization".

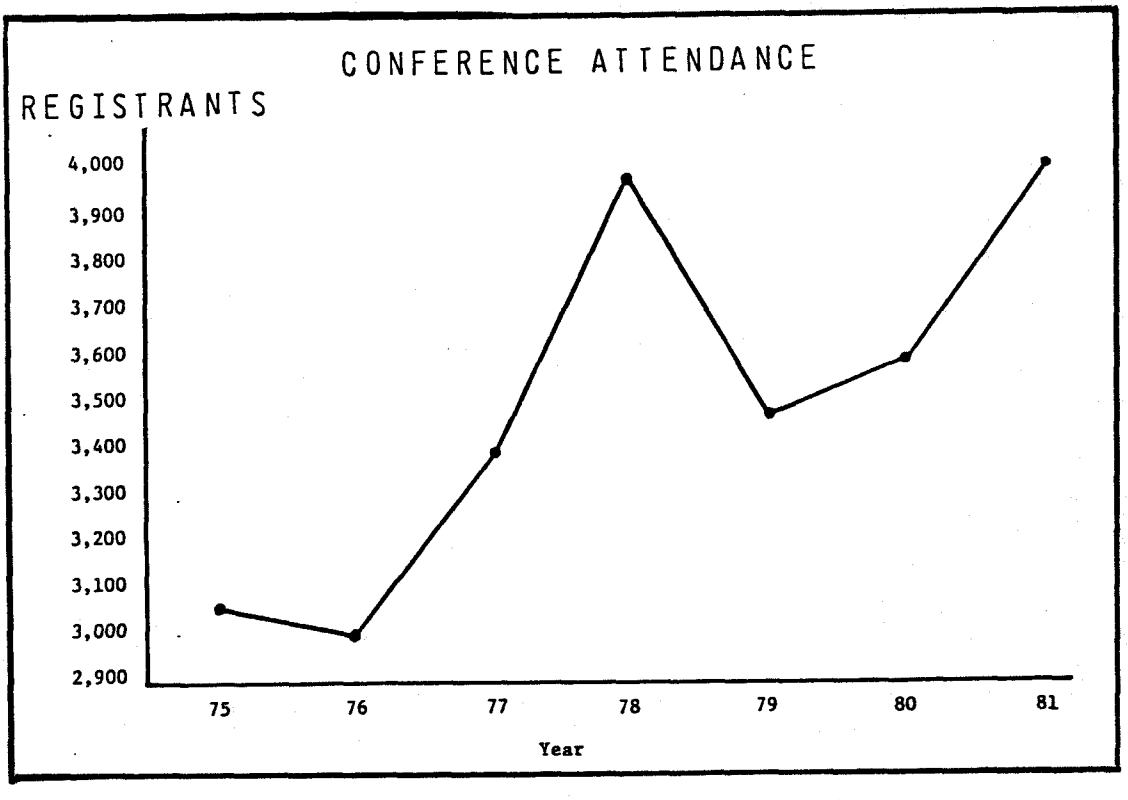
Steelmaking Conference Award

This award is presented each year for the best paper on some phase of primary steelmaking, and was presented in 1981 to Daniel Rellis and Clifford C. Smith for their paper, "Implementation of Automatic Metal Level Control at Inland's No. 1 Slab Caster.

MEETINGS DEPARTMENT

TECHNICAL CONFERENCES

The Iron and Steel Society of AIME, through its divisions, sponsored or co-sponsored six technical conferences during 1981. The conferences attracted 4,086 registrants. This number of registrants was the most ever to attend ISS conferences exceeding 1978 when the Society hosted the 3rd International Iron and Steel Congress.



The actual attendance at each of the conferences and the number of sessions and papers presented is listed below:

Conference	Attendance	Sessions	Papers Presented
110th AIME Annual Meeting Chicago, Illinois Hyatt Regency February 22-26, 1981		11	51
2nd Process Technology Conference Continuous Casting Chicago, Illinois Hyatt Regency February 22-26, 1981	431*	6	36
64th Annual Steelmaking Conference Royal York Hotel Toronto, Ontario March 29-April 1, 1981	1037	8	38
40th Annual Ironmaking Conference Royal York Hotel Toronto, Ontario March 29-April 1, 1981	734	13	59
23rd Annual Mechanical Working and Steel Processing Conference Hilton Hotel Pittsburgh, PA October 27-30, 1981	316	8	33
39th Annual Electric Furnace Conference Shamrock Hilton Houston, Texas December 7-10, 1981	1558	11	55
Totals	4076	57	272

*Total attendance at both meetings. ISS registrants attending PTD Conference were not separated from those attending the AIME Annual Meeting.

SCHEDULE OF ISS-AIME CONFERENCES FOR 1982 AND 1983

1982

February 14-18	111th AIME Annual Meeting, Dallas, Texas
March 28-31	65th Steelmaking Conference and 41st Ironmaking Conference and 3rd PTD Conference, Pittsburgh Convention Center, Pittsburgh, PA
October 26-29	24th Mechanical Working and Steel Processing Conference, Sheraton-Houston, Houston, Texas
December 7-10	40th Electric Furnace Conference, Radisson Muehlbach, Kansas City, Missouri

1983

March 6-10	112th AIME Annual Meeting Atlanta, Georgia
April 17-20	66th Annual Steelmaking Conference 42nd Annual Ironmaking Conference Peachtree Plaza Atlanta, Georgia
October 26-28	25th Annual Mechanical Working and Steel Processing Conference Franklin Plaza Philadelphia, PA
December 6-9	41st Annual Electric Furnace Conference 4th Process Technology 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 Steelmaking/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 1981 are as follows:

Conference	Number of Exhibitors
64th Steelmaking Conference and 40th Ironmaking Conference	35
39th Electric Furnace Conference	45

CONTINUING EDUCATION

In 1981 the Iron and Steel Society held a total of seven short courses - three at national conferences, two in conjunction with local section meetings and two not tied to any other activity drawing attendees from a specific region. A total of 394 people attended these seven courses.

The growth of the Society's Continuing Education Program is reflected in the increase in courses offered - five in 1980 with a total attendance of 325 people to seven in 1981 with a total attendance of 394 people. More important, though, is the increase in variety of topical material offered and the expansion of the program into the local section and regional areas.

The 1981 Continuing Education Program includes:

Date		Topic	Attendance
March 28-29, 1981	-	An Overview of Steelmaking	29
March 29, 1981	-	Coal and Cokemaking II	38
April 28, 1981	-	Iron and Steel Desulfurization	93
October 15, 1981	-	Tonnage Maximization of Electric Arc Furnace Steel Production	30
November 12, 1981	-	Iron and Steel Desulfurization	84
November 18, 1981	-	An Overview of Steelmaking	43
December 7-8, 1981	-	Continuous Casting	77
		Total Attendance	394

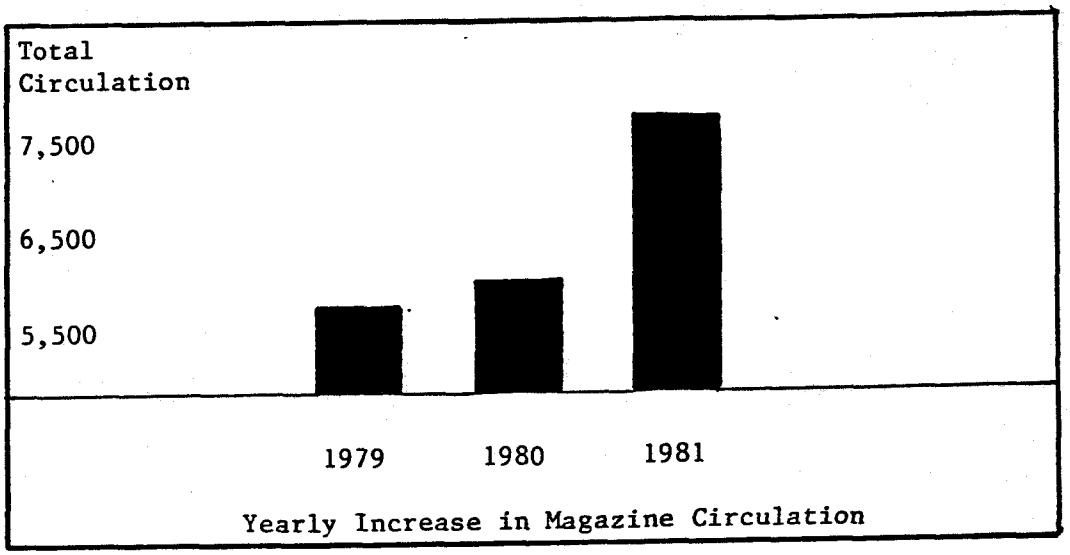
PUBLICATIONS DEPARTMENT

The Iron and Steelmaker 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 foreign and domestic steel industries, plus news of Society activities.

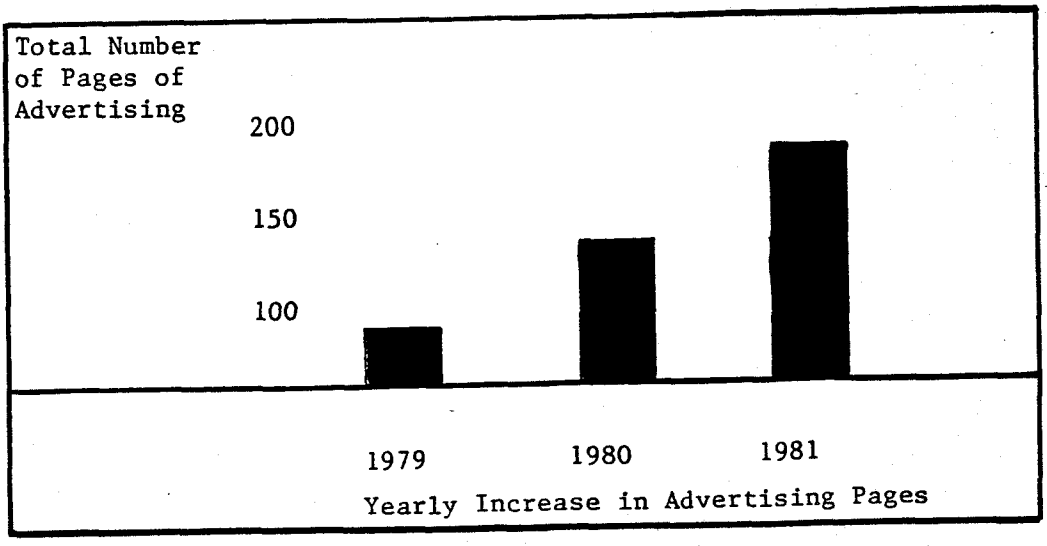
In 1981, a total of 58 technical articles, approximately a five per month average, were published in the Iron and Steelmaker. This is an increase of 10 technical papers over last year's 48 papers. An index to these articles is published in every December issue. The number of technical articles printed under the various subject headings are as follows:

Economics	9	Steelmaking	4
Metallurgy	8	Blast Furnace	3
Oxygen Steel	7	Coke	3
E. I. Furnace	5	Refractories	2
Raw Materials	5	Rolling	2
Continuous Casting	4	Ferroalloys	1
Direct Reduction	4	Foundry	1

Circulation of the magazine has increased by 20% over last year and by 35% over two years ago.



The number of advertising pages in the Iron and Steelmaker continues to climb. This year's number of advertising pages is double that of two years ago. Thus, 1981 was a record year.



Plans are also underway to upgrade and improve the content of the Iron and Steelmaker. In 1982 there will be a 13th issue of the magazine. This will be our first annual statistical review of the steel industry, worldwide.

In addition to publishing the magazine, the publications staff produced five conference proceedings books on the following subjects:

Electric Furnace Proceedings, 1980, Volume 38

Pittsburgh, Pennsylvania
293 pages, 43 papers

Ironmaking Proceedings, 1981, Volume 40

Toronto, Ontario
477 pages, 60 papers

Steelmaking Proceedings, 1981, Volume 64

Toronto, Ontario
309 pages, 41 papers

Process Technology Proceedings, 1981, Volume 2

Chicago, Illinois
317 pages, 34 papers

Mechanical Working and Steel Processing, 1980, Volume 18

Toronto, Ontario
560 pages, 32 papers

The Society is also reprinting the text of BOF Steelmaking because the first edition has sold out. The previous five softback volumes have been placed into two hardback volumes:

BOF Steelmaking, Volume 1 - Introduction, Theory and Design Part I

651 pages, 8 chapters

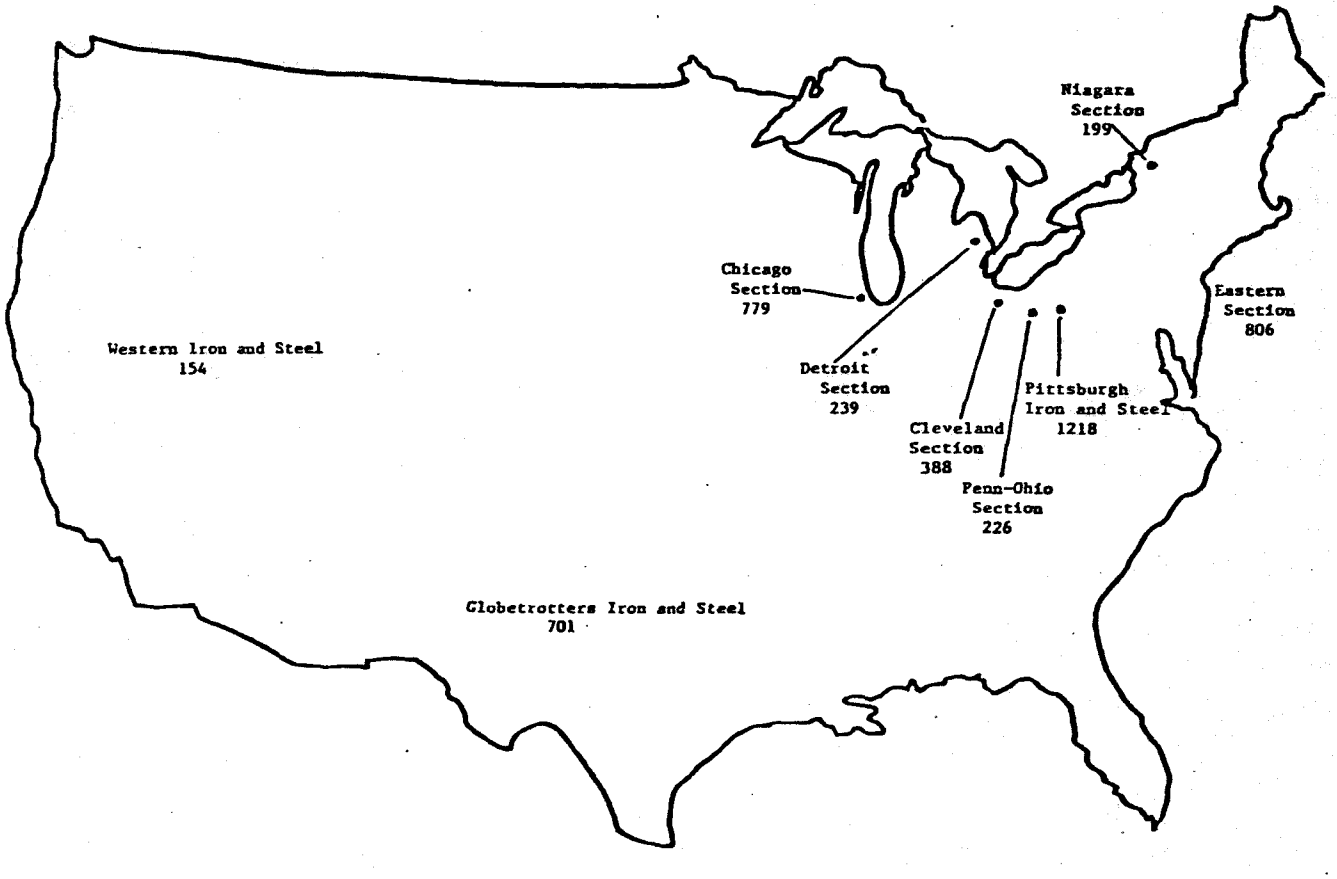
BOF Steelmaking, Volume 2 - Design Part II, Operations and Special Topics

636 pages, 10 chapters

ISS-AIME LOCAL SECTIONS

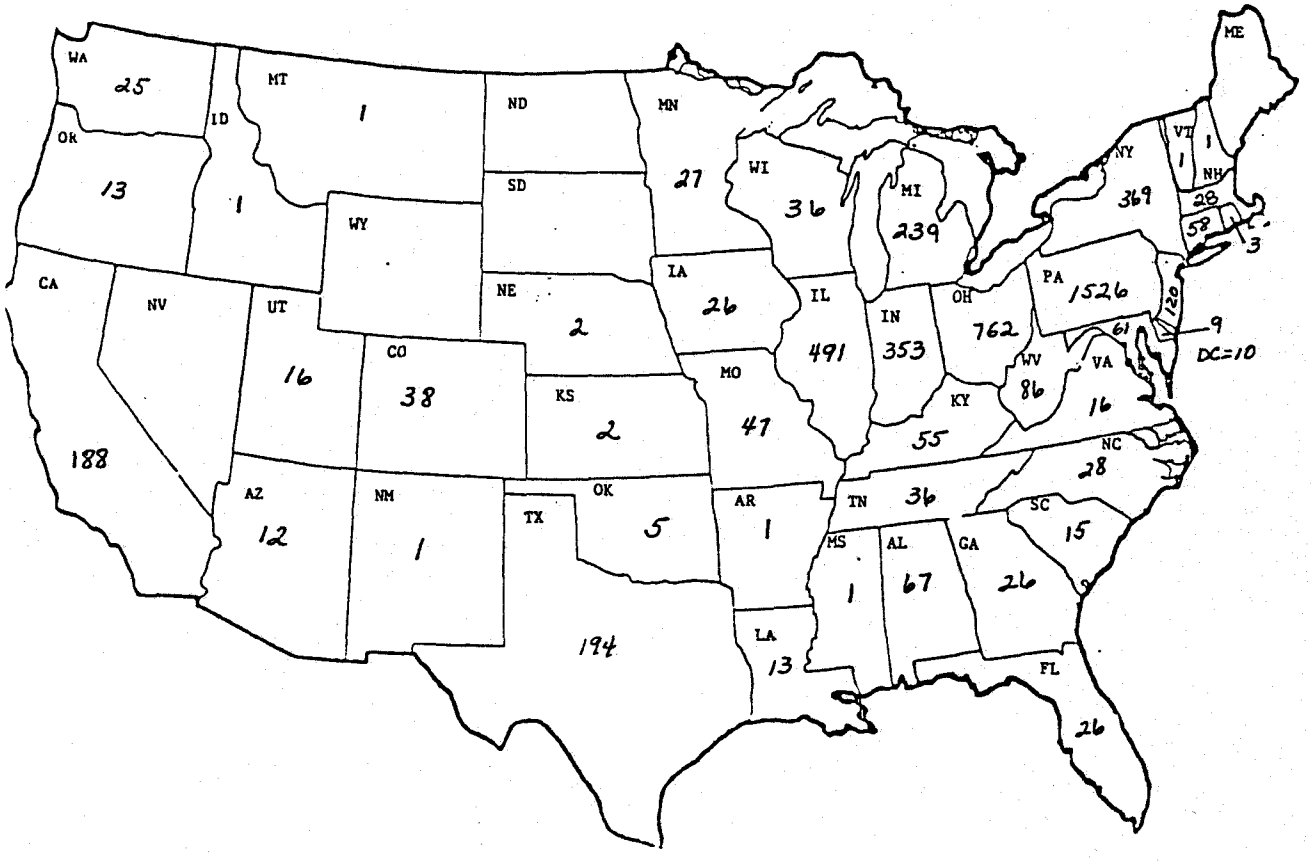
On December 11, 1981, the ISS-AIME Board of Directors approved the formation of the Pittsburgh Iron and Steel Section of AIME. The nine sections administered by ISS-AIME are listed below with the number of AIME members in good standing. The map shows the geographic distribution of members by section.

1.	Chicago Section AIME	779
2.	Cleveland Iron and Steel Section of AIME	388
3.	Detroit Iron and Steel Section of AIME	239
4.	Eastern Iron and Steel Section of AIME	806
5.	Globetrotters Iron and Steel Section of AIME	701
6.	Niagara Section of AIME	199
7.	Penn-Ohio Section of AIME	226
8.	Pittsburgh Iron and Steel Section of AIME	1218
9.	Western Iron and Steel Section of AIME	154



MEMBERSHIP DEPARTMENT

The Iron and Steel Society upon its inception, December 1, 1974, had an approximate census of 3100 members. We met the first five-year goal of 5000 members by December 31, 1979 set by the Board of Directors. In 1979 the Board set a goal of 8000 members by year-end 1985. By maintaining a 10% growth rate we will meet the second goal of 8000 members in the middle of 1984. As of December 31, 1981 there were 6410 members (including 55 students) in good standing in ISS-AIME.

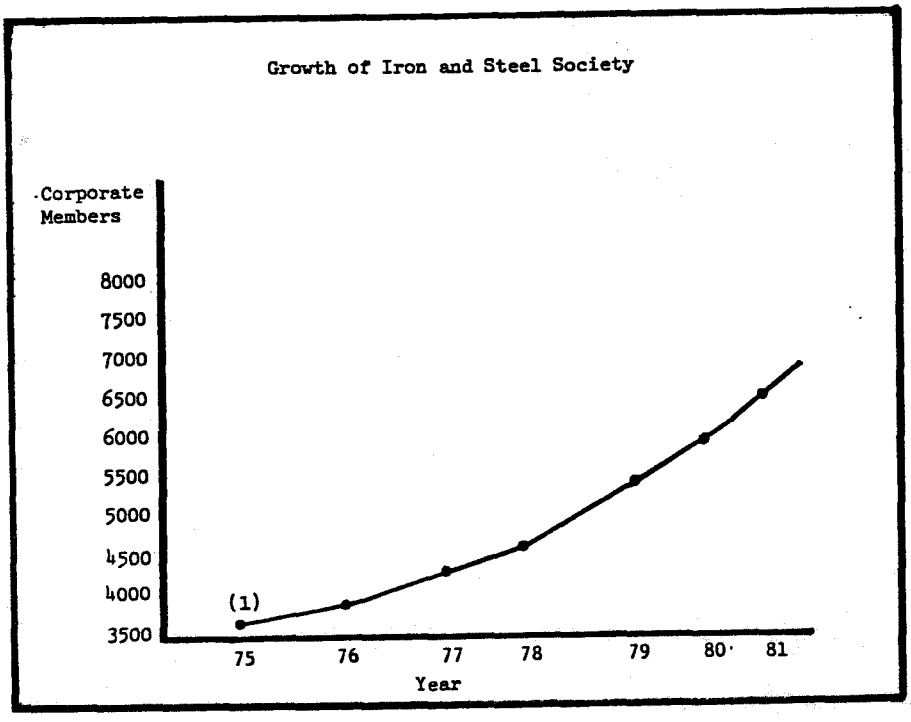


FOREIGN MEMBERSHIP

CANADA	688	AUSTRALIA	26
MEXICO	111	SOUTHEAST ASIA	21
EUROPE	237	JAPAN	36
SOUTH AMERICA	59	AFRICA	12
MIDDLE EAST	24	OTHER	161

*CORPORATE MEMBERSHIP

Year	NUMBER
75	3616**(596) Joint
76	3885
77	4239
78	4470
79	5150
80	5772
81	6355



*Student members are not included in corporate membership.

**In 1975 there were 596 joint members of TMS and ISS. Joint membership was discontinued in 1976.

OFFICERS OF THE IRON AND STEEL SOCIETY OF AIME

N. T. Mills	President
J. S. Anslow	President-Elect
F. D. Nelson	Past President
George W. Knepshield	Treasurer

IRON AND STEEL SOCIETY OF AIME

HEADQUARTERS STAFF

Lawrence G. Kuhn	Executive Director and Publisher
Frederick C. Motts	General Manager
Elizabeth M. McGrath	Membership Services Manager
Bernard Queneau	Technical Editor
Claire G. Schmitt	Conference Director
Altha Shoup	Executive Secretary
Peg Simanaitis	Marketing Manager
Helen Slack	Special Projects
David Staniszewski	Accountant
Lelia Fisher	Clerk
Bea Gondek	Conference Secretary
Cheryl Hiles	Graphics/Production Books
J. Dennie Laughlin	Membership Fulfillment
Thomas McAloon	Associate Editor
Martha Novak	Accounts Receivable/Fulfillment Clerk
Leo Priore	Graphics/Production Magazine
Melinda Sample	Clerk/Typist

Respectfully submitted,

Lawrence G. Kuhn

Lawrence G. Kuhn
Executive Director

REPORT

of the

Executive Director, Society of Petroleum Engineers of AIME

OVERVIEW

SPE began fiscal 1981 with unparalleled growth in all areas. Through the year these trends continued with substantial gains in membership, local section operations, meetings, publications, and continuing education.

The Society is now into its sixth year of operation under a Long Range Plan. To assure that the ongoing growth and development of SPE is in keeping with the objectives of that plan, an ad hoc Long Range Plan Review Committee was appointed in early 1981. The ad hoc committee already has made substantive review of all areas, and plans to issue its final report in early 1982. The report should further codify SPE's directions and programs for the next 5 to 10 years.

MEMBERSHIP

SPE membership once again increased dramatically in 1981, adding 5,318 new members to the corporate roster. The total membership of 42,175 represents a 12.7 percent increase over the previous year and an average growth rate of 12.3 percent per year for the period 1977-81. Some 6,427 applications for membership were received in 1981.

Recognition of outstanding membership development work by individuals and local sections was made at the Society's Annual Technical Conference and Exhibition. J. R. Paul, Horgen, Switzerland, was recognized for his efforts in obtaining 300 new members. One-hundred-member awards were presented to H. J. Bell, Jr., Abilene, TX; J. W. Chrisman, Houston; D. N. Mooney, Oklahoma City; and F. A. Pace, Tyler, TX. Winners of the Local Section Membership Development Contest were the Northern Michigan, Japan, South Plains, United Arab Emirates, Saudi Arabia, Aberdeen, and Permian Basin Sections.

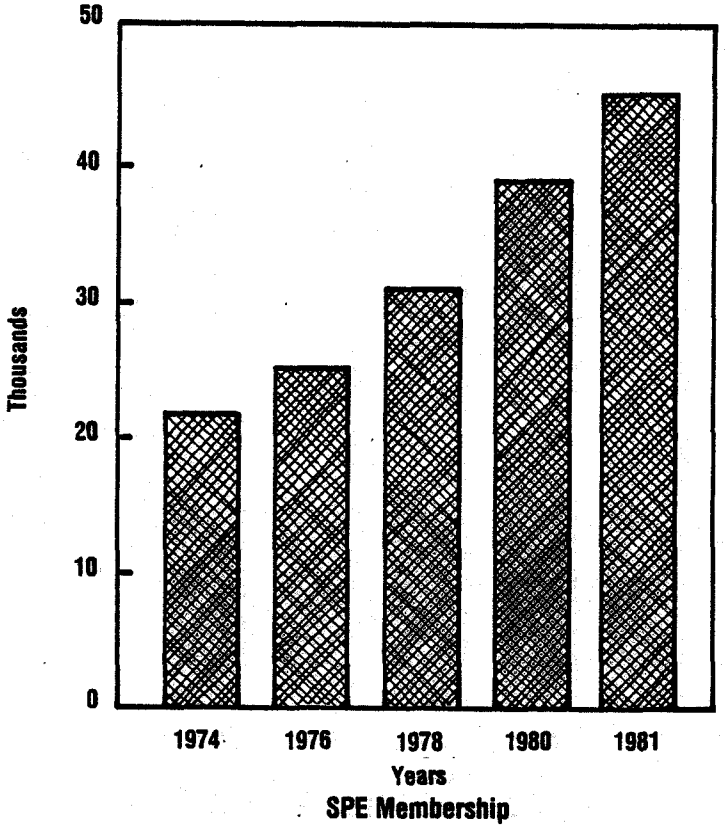
LOCAL SECTIONS

SPE added three local sections in 1981, bringing the total to 78. Sections were established in Malaysia, the Philippines, and Santa Maria, CA.

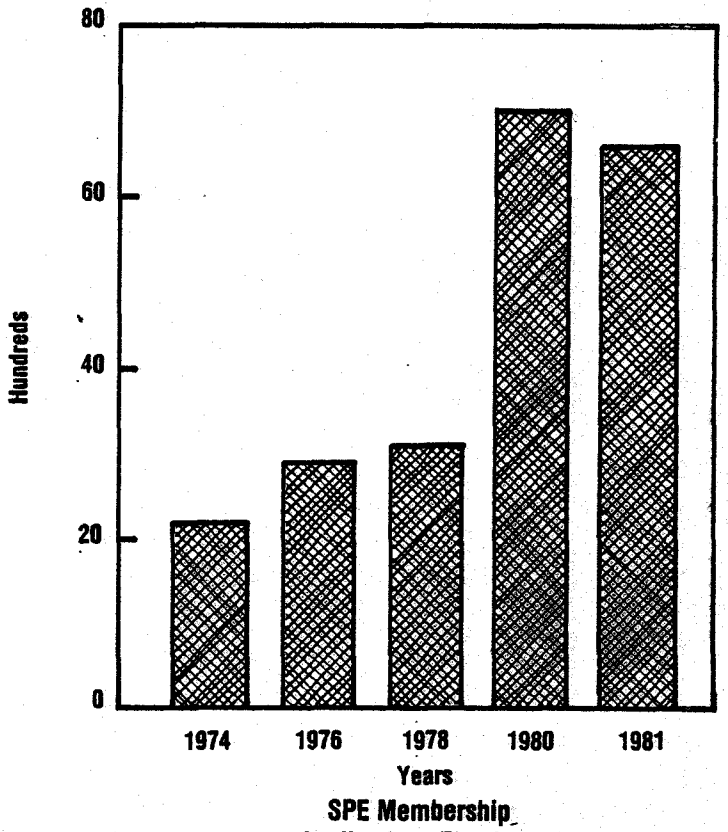
Local sections provide strong impetus in attaining the over-all goals of the Society. Through regular section meetings, continuing education programs, study groups, and civic and professional activities, sections provide many vehicles for members to maintain their technical competence and to fulfill their professional commitments.

To facilitate successful section operations, SPE inaugurated a new section officer newsletter, "The Pipeline," in 1981. The newsletter is issued every other month and provides information on new programs and special section activities.

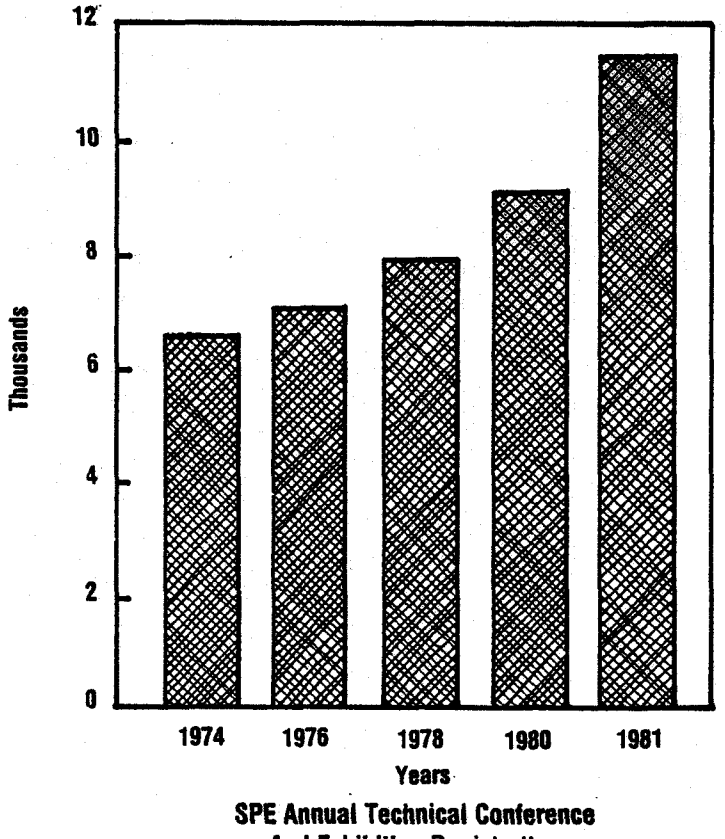
Many section officers participated in Section Officer Workshops and Conferences at the SPE Annual Meeting. The workshops were "how-to" sessions on section operations, while the conferences provided forums for discussion with SPE Directors on policy and program matters.



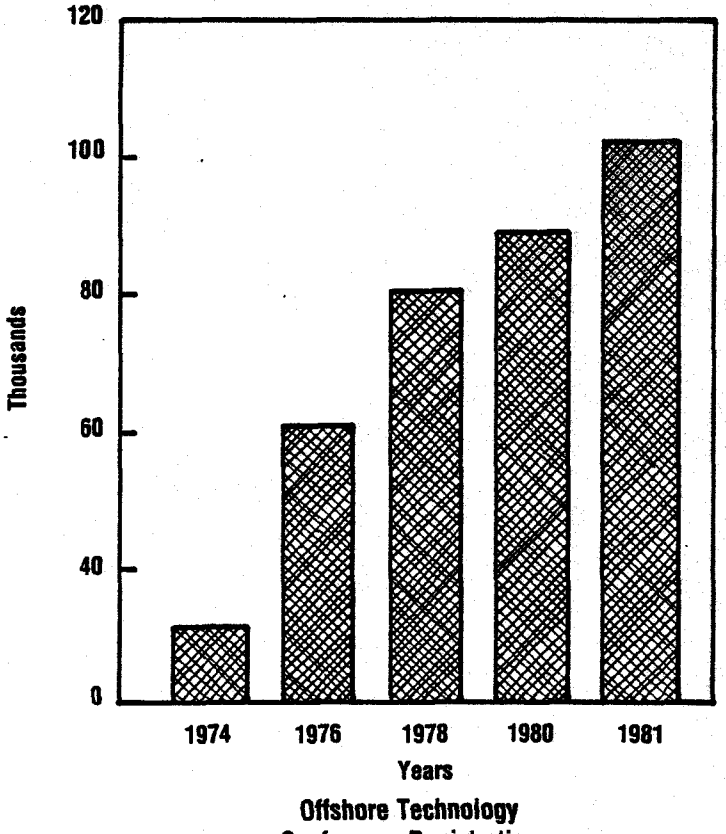
SPE Membership



SPE Membership
Applications Received



SPE Annual Technical Conference
And Exhibition Registration



Offshore Technology
Conference Registration

STUDENT ACTIVITIES

The U. of Alaska-Fairbanks became the newest SPE Student Chapter in 1981. Student membership in the Society in 1981 reached 3,434.

Several hundred student members participated in the Student Session at SPE's Annual Technical Conference and Exhibition. A panel discussion on drilling, production, and reservoir engineering highlighted the session. Imperial College, London, was recognized as the year's Outstanding Student Chapter at the Student Session.

SCHOLARSHIPS AND EDUCATION

The Society's Scholarship Support Program totaled $145,885 in scholarships awarded in 1981. Local sections contributed the majority of the funds ($82,885) with the SPE Foundation and SPE operating funds contributing $63,000. During the past five years, more than $594,000 has been awarded through the program.

The Society adopted a new SPE Local Section General Scholarship Support Program in 1981, which establishes a $75,000 support level for over-all Society contributions effective for the 1982-83 academic year. Additionally, a pilot Graduate Fellowship Support Program was created, with SPE committing $27,500 in available matching funds.

Again in 1981, SPE cooperated with the Petroleum Equipment Suppliers Association in administering $4,000 in scholarships. Debra Grove, Texas A&M U., received a $1,200 Junior PESA Scholarship, and Christy Parsons, U. of Texas, and Lowell Crane, Marietta College, each received a $1,400 Senior PESA Scholarship.

Another education-oriented program initiated in 1981 was the awarding of $18,000 to six petroleum engineering faculty members. The "Distinguished Achievement Awards for Petroleum Engineering Faculty," recognizes excellence in teaching, research, and student counseling. The program also addresses the problems associated with a growing faculty shortage in petroleum engineering by seeking to establish a model program whereby faculty salaries can be supplemented to offset the attraction of high salary offers in industry. Inaugural winners of the $3,000 awards were A. T. Bourgoyne, Jr., Louisiana State U.; S. A. Holditch, Texas A&M U.; L. W. Lake, U. of Texas; R. Raghavan, U. of Tulsa; J. T. Smith, Texas Tech U.; and G. P. Willhite, U. of Kansas.

MEETINGS

Close to 125,000 people attended various SPE-sponsored regional, topical, and international meetings in 1981. Thousands more benefited from the published information and discussions emanating from these meetings.

Annual Technical Conference and Exhibition — San Antonio

The SPE Annual Technical Conference and Exhibition, held Oct. 4-7 in San Antonio, was the largest in the 56-year history of the event, attracting more than 11,000 registrants from around the world. (The 1980 Conference had set the attendance record at 9,390).

More than 250 technical papers were presented in 48 sessions. The theme of the Conferene, "Impact of High Energy Costs," was addressed by a panel of industry experts in a special session.

The technical exhibition in 1981 swelled to 72,000 sq ft with 340 exhibiting companies. Both established new records for size and number of exhibitors.

Regional, Topical, and International Meetings

Sixteen regional, topical, and international meetings in 1981 provided 60 days of discussions, paper presentations, and exhibitions of products and services. They ranged in size from the Offshore Technology Conference (cosponsored with 10 other societies), which drew 100,000+ registrants, to the limited-registration Forum Series Meetings. The technical scope ranged from hydrocarbon economics and evaluation to low-permeability gas recovery.

Four meetings were cosponsored by SPE and other technical, professional, or governmental organizations. The remainder were produced by individual sections or regions.

All 16 meetings enjoyed remarkable success, netting a 10-percent increase in total meeting attendance over the previous year. The 1982 Meetings Calendar has various symposia and conferences slated for Dallas; New Orleans; Singapore; Beijing, China; Lafayette, LA; San Francisco; Tulsa; Houston; Pittsburgh; Billings, MT; Tyler, TX; Glenwood Springs, CO; London; Washington, D.C.; and Hobbs, NM.

1981 SPE Meetings

Meeting	Location	Registration	Papers
Hydrocarbon Economics & Evaluation Symposium	Dallas	607	32
Production Operations Symposium	Oklahoma City	645	20
Middle East Oil Technical Conference & Exhibition	Bahrain	4,578	67
Permian Basin Oil & Gas Recovery Conference	Midland,TX	640	21
California Regional Meeting	Bakersfield	866	57
Corpus Christi Regional Meeting	Corpus Christi, TX	113	12
Deep Drilling & Production Symposium	Amarillo, TX	1,001	18
Enhanced Oil Recovery Symposium*	Tulsa	1,627	44
Offshore Technology Conference*	Houston	100,329	184
Rocky Mountain Regional/ Low Permeability Gas Recovery*	Denver	1,273	60
Forum Series Meetings	Glennwood Springs, CO	411	N/A
SPE Annual Technical Conference and Exhibition	San Antonio	11,441	263
Eastern Regional Meeting	Columbus, OH	393	18
Production Technology Symposium	Lubbock, TX	301	11

*Cosponsored with other organizations

PUBLICATIONS

The Society's publications program marked substantial gains in 1981. Both SPE periodicals, Journal of Petroleum Technology and Society of Petroleum Engineers Journal, witnessed increases in size and circulation.

The number of technical pages published in JPT increased 11 percent to 1,339, while advertising pages climbed 38 percent to 757 pages. Technical pages in SPEJ increased 30 percent to 751. Readership of JPT in 1981 reached 46,878, a 23-percent increase, while readership of SPEJ topped 12,581, a 26-percent increase.

Work in other publications areas continued in 1981. One Monograph was completed and is now in typesetting stage. Five other monographs are in various stages of production. Two textbooks were written in 1981, with publication anticipated in 1982. One Reprint Series Booklet was published with several titles expected in 1982. Enhanced Oil Recovery Field Reports continued on its semiannual publication schedule and included reports on 27 EOR projects.

Significant work was done on establishing a computerized data base and information retrieval system that will cover the entire known literature associated with petroleum engineering technology. Additionally, the Society released a complete microfiche collection of its 8,000+ technical paper library.

CONTINUING EDUCATION

The Society's Continuing Education Program continued to build on previous success in two major areas; live short course presentations and video-tape courses.

Six short courses, attended by 285 people, were presented at the SPE Annual Technical Conference and Exhibition. Numerous other courses were produced and presented by local sections throughout the year.

The SPE video-tape course "Fundamentals of Reservoir Engineering" received widespread exposure in 1981 with nine sections leasing the course to present to a total audience of 543. "Drilling Fluids," an 8-hour video-tape course and the first in a three-part series of courses on drilling technology was released late in 1981. The two remaining courses — "Rotary Drilling" and "Cementing" — together with a 12-hour course on pressure buildup analysis will be released in 1982.

DISTINGUISHED LECTURER PROGRAM

Nine SPE Distinguished Lecturers made more than 200 presentations during the 1980-81 section year. The program, funded from SPE operating funds and a grant from the AIME H. L. Doherty Fund, provides programs for local sections and student chapters by some of the leading names in industry. The 1980-81 slate of Distinguished Lecturers included B. F. Abernathy, Abernathy Oil Exploration; R. L. Edwards, Columbia Gas Transmission Corp.; W. H. Fertl, Dresser Atlas; K. E. Gray, U. of Texas; G. H. Holliday, Shell Oil Co.; E. F. Klementich, Great Lakes Engineering, Inc.; R. M. Knapp, U. of Oklahoma; G. P. Maly, consultant; and J. T. Smith, Texas Tech U.

AWARDS

SPE recognized seven individuals for outstanding contributions to petroleum engineering technology, the industry, the profession, and the Society. Receiving awards at the Annual Technical Conference and Exhibition were

John Franklin Carll Award
Leo W. Fagg, Fagg Engineering Co.

DeGolyer Distinguished Service Medal
H. A. Nedom, Weeks Petroleum, Inc.

Lester C. Uren Award
Julius S. Aronofsky, Southern Methodist U.

Cedric K. Ferguson Medal
R. E. Jones, Carless Exploration

Cedric K. Ferguson Certificate
Geoffrey Thorp, Shell BP & Todd Services Ltd.

SPE Distinguished Service Award
Charles L. Bare, Conoco, Inc.
Jan Geertsma, Shell U.K. Exploration and Production

FINANCE

For 1981, income for Society operations exceeded expenses by $1,052,002, with income totaling $6,900,274, compared with expenses of $5,848,272.

Respectfully submitted,

Dan K. Adamson, Executive Director
Society of Petroleum Engineers of AIME

REPORT

of the

WAAIME

The year 1981 has been a stable, constructive one for WAAIME. Although most volunteer organizations have membership problems in these changing times, WAAIME membership has remained the same in spite of the loss of three Sections in 1980-1981. Upon the disbanding of the Montana-Anaconda, Nevada-Eastern, and Texas-Northern Sections, many of their members became Members-at-Large. This category of membership has shown great growth recently. One Section, New Mexico-Socorro, was reestablished after a seven year absence. Our Sections now number forty-one (Members-At-Large considered a Section).

WAAIME's basic committee, Scholarship Loan Fund (SLF), continues to aid students majoring in the mining engineering and related fields. In 1980 to 1981 eighty-five students were advanced funds that totaled over $72,000.00. Repayments were almost $27,500.00; thirty three recipients attained "paidup" status; thirty-nine students graduated during the year. Contributions from the Sections and others totaled almost $12,000.00. The total funds available any year are the sum of interest income from SLF Endowment Funds, 75% of contributions (25% is added to the Section SLF Endowment Funds), and 100% of repayments from loan recipients. At the May 1981 National Board meeting, which has traditionally been turned over to the SLF presentation of loan candidates for the year, thirty nine new loans were approved. These covered twenty-eight men and eleven women attending a wide spectrum of accredited colleges, persuing degrees in mining and petroleum engineering, metallurgy, geology, environmental engineering and material science. Since 1920, $1,402,594.00 has been granted.

The Engineers for Tomorrow (EFT) program is active with its purpose of encouraging students to enter the earth science field. The film, made in 1977, "A World Without", continues to be ordered. The McBiles teaching program, "Mining, Minerals, and Me", for elementary school children, encouraged and supported by WAAIME since early 1979, has caused great excitement. With the support of the Arizona Mining Association is has been developed to the point that the Arizona Department of Education will test it in fifteen schools around the state. Cost of the program will be about $300,000.00 over the next two years, which will be paid by seventeen firms from the mining industry. WAAIME has invited Larry McBiles to be the featured speaker at its EFT Annual Meeting, February '82; he will display and explain his materials and teaching method at that time for all interested.

The Chest Assistance to Students (CAS) program continues to help students, proposed by Sections, with funds for books, field trips, living and one time expenses involved.

The Library program contributes technical and non-technical books and magazines to schools and libraries where our Sections find a need.

The Government, Energy and Minerals (GEM) committees continue to be active, especially where AIME GEM committees are active.

Newsletter is sent to each member on a regular basis, five or six times a year. The pre-convention issue, containing forms and meeting information in addition to the usual content, is sent by first class mail to insure arrival before the Annual Meeting.

Publicity continues to send a number of releases on WAAIME activities to the various Society and Mining magazines.

The WAAIME is proud of its role as the auxiliary to AIME, of its past accomplishments, and its current work and efforts in our industry. We are most appreciative of the help and cooperation that have been given us whenever needed. Our grateful thanks to Mr. Joe Alford for his wonderful guidance over the years, and to the many others in AIME who have been so generous with their assistance.

Respectfully submitted,

Mrs. George E. Kruger
President, WAAIME