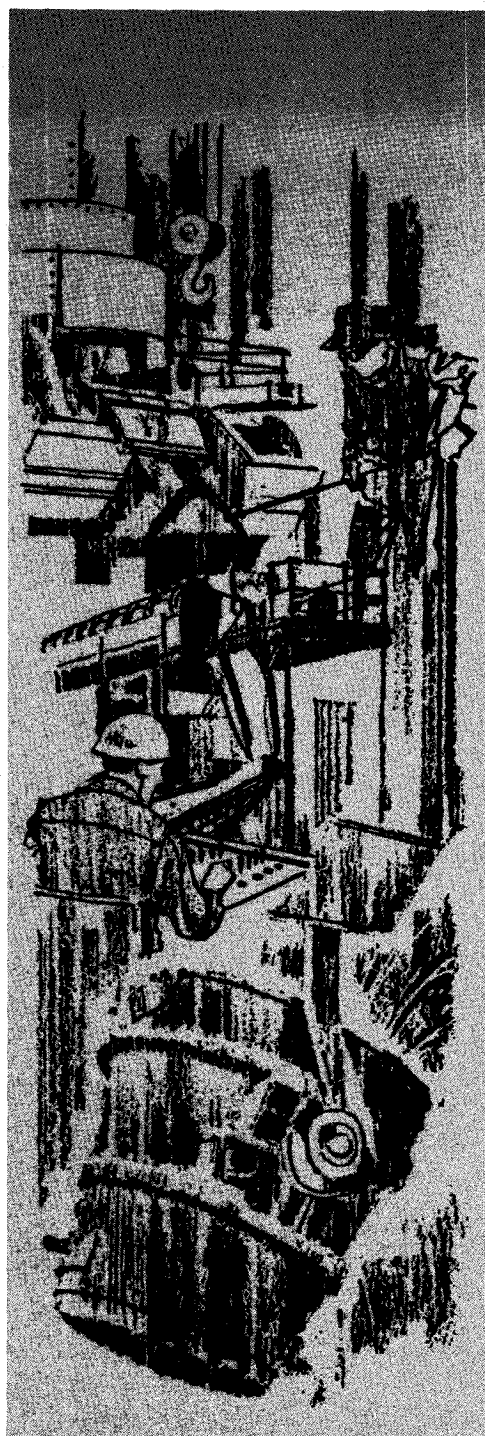
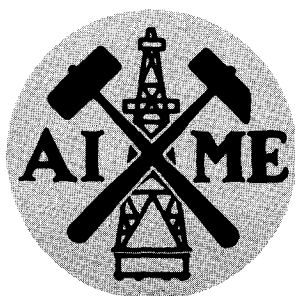


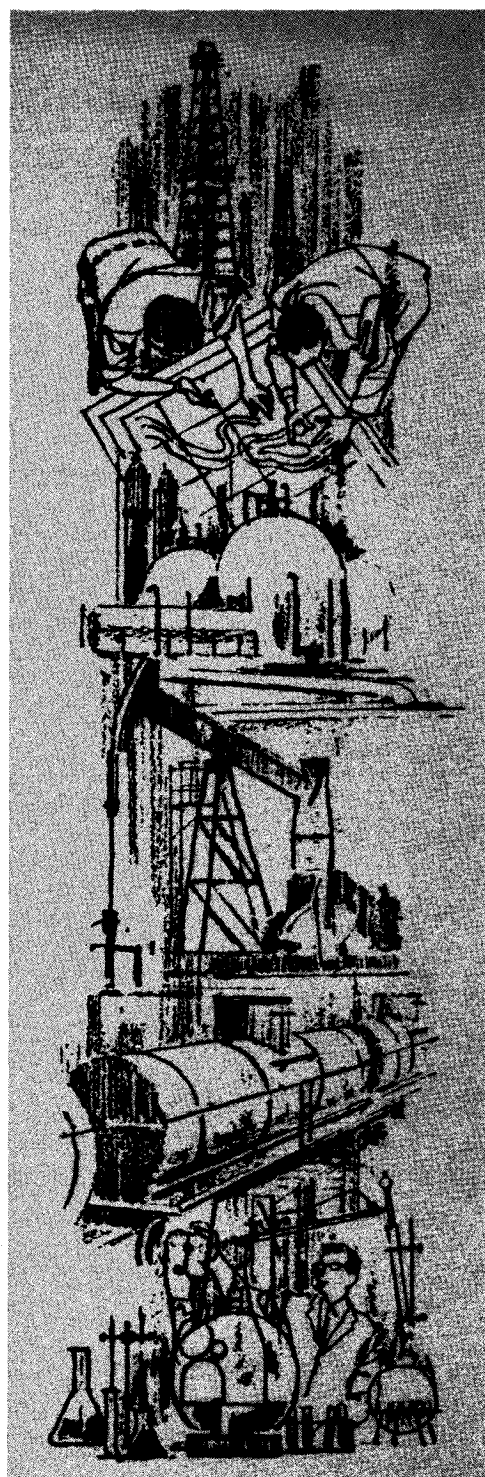
Annual Report 1964 **AIME**



MINING



METALLURGICAL



PETROLEUM



KARL L. FETERS President AIME

1964

Message of the President

PRESTIGE, AND IMPROVING THE IMAGE

by Karl L. Feters

"...to promote the arts and sciences connected with the economic production of the useful minerals and metals, and the welfare of those employed in these industries..."

The above statement appears in the Constitution of AIME, the American Institute of Mining, Metallurgical, and Petroleum Engineers. The Institute, founded in 1871, is one of the oldest technical and professional societies in the United States and is one of the Engineering Founder Societies. We have a great heritage—an important work to do. How did we accomplish our goals in 1964?

SERVING THE STUDENT ENGINEER

We took the Institute to the college campus to find out what the students and faculty are thinking. From this we determined the type of AIME which they want for the future.

Our Directors visited most of our 73 AIME Student Chapters—and we organized two new ones. We created new incentives for our Student Paper Contests. We increased our prizes in the National Science Fair, International. We began publication of the "AIME Student News."

At our Annual Meeting in Chicago students were given a special welcome, their own hospitality room and access to less costly housing. This supplements the continuing good work of our Women's Auxiliary (WAAIME) through its Scholarship Loan Fund and "Engineers for Tomorrow" program. AIME must never lose sight of its obligations to students—to serve and help them during undergraduate days, and to develop in them a sense of professionalism which is so important to the work of a successful engineer.

COHESIVENESS WITHIN AIME

Our leaders of the past clearly recognized the need for flexibility within the Institute structure to serve our diversified membership. The needs of the physical metallurgist and the geological engineer are quite different, but the membership of all of these groups and all others in the minerals and metals profession is desirable in the best interests of all.

Our structure of three semi-autonomous societies permits the desired flexibility on technical matters. The AIME Board of Directors and our headquarters office's activities bring us together. Without an overall AIME structure, we would have three relatively small societies whose voices would not be heard in matters affecting the engineering profession as effectively as is the total voice of AIME, the professional society for the entire minerals field.

In 1964 we continued to make progress in the formulation of administrative practices which permit the maximum possible autonomy for our three Constituent Societies while providing necessary authority to the parent organization.



THE GRASS ROOTS

The most important unit of the Institute is the local Section, for this is where most of our members have their primary opportunity to participate in, contribute to, and gain from AIME.

The 1964 Board felt that our ever-changing Section officers should have direct communication with the AIME headquarters and the Board, so that ideas on membership service and Section operation might be maintained. This communication is most effectively accomplished in two ways—(1) through our Council of Section Delegates and (2) through Section visitation by our officers and staff. In 1964 we have attempted to strengthen the former by creating new materials for use by the Section Delegates and increasing rebates to small Sections sending representatives to Regional Delegates Meetings.

Also, we set out in 1964 to establish personal communications with all of our Sections. Through considerable personal sacrifice on the part of our officers, we accomplished our goal of visiting virtually all of our Mining and Metallurgical Sections throughout the nation, while the Society of Petroleum Engineers continued its active visitation program to Petroleum Sections.

OTHER AREAS OF ACTIVITY

Space does not permit us to detail the many other noteworthy actions taken by our Institute Board during the year. These were in the areas of: embarking on a new public relations program aimed primarily at improving the image of the minerals engineer and engaging the interest of young people in this field of endeavor, reducing costs in our AIME Headquarters Office, creating a new committee to guide our increased interest in Government Affairs, and providing incentive in the formation of new AIME Sections. We are optimistic about the future of the Institute because of its devoted leaders and competent staff.

The Institute suffered a great loss in 1964 through the death of Herbert Hoover, our 1920 President. Mr. Hoover said prior to his death: *"The Institute has served me well over the years and I feel that the contribution I have given in time and dollars has been repaid many times. Whatever success I may have achieved has been due to many people and many opportunities. Among the important of these is my membership in AIME."* What finer tribute could an organization have than these words from this great man?

by Sanford S. Cole, President

Continuing Education

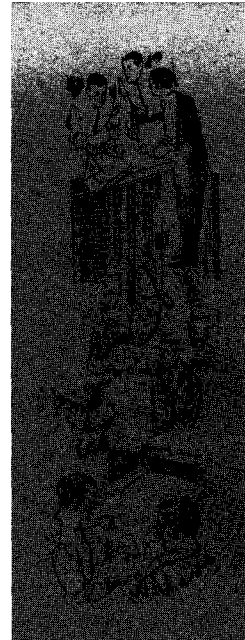
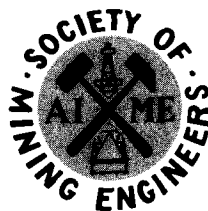
Only by maintaining continued alertness can the engineer and geologist keep up with advances in the technology of locating, mining, processing and marketing metal ores, industrial minerals and fossil fuels. Through the publications and meetings of the Society of Mining Engineers of AIME, members enjoy unique opportunities for continuing their education.

During 1964 the Society of Mining Engineers maintained an active program to highlight technical advances through the AIME Annual Meeting, the SME Fall Meeting (held jointly with the VII International Minerals Processing Congress), regional meetings and co-sponsored meetings on Rock Mechanics and Computer Applications. In addition to the papers appearing in MINING ENGINEERING and Transactions, which are received regularly by members, participants in the SME Fall Meeting and VII IMPC received valuable additions to their libraries in the form of special volumes on mineral processing and milling practice.

New emphasis has been placed on the important subject of Rock Mechanics by a proposal to form an interdisciplinary committee to handle meetings and papers on this subject. Close liaison has been maintained by your officers with this emerging technology. Your Society, directly and through members active in this field, has fostered this activity.

Section Visitations

During the year it was my privilege as your President to visit 35 sections, and attend seven regional and field meetings of particular interest to members of the Society of Mining Engineers. It was an inspiring experience to meet so many



SME members and very gratifying to find our sections functioning as strong elements of AIME. Without exception they are serving their members well locally, contributing to the advance of knowledge and fostering a sound approach to engineering practice and ethics.

Cooperative Insurance

The Society of Mining Engineers introduced a new membership benefit during 1964 in the form of a Group Insurance Program. The first plan offered to SME members was our Group Disability Program of Accident-Sickness Income Replacement Insurance. During 1965 the following additional programs will be offered: Group Life Insurance, Worldwide Group Accidental Death Coverage, Group Major Hospital Insurance, and a Group Pension Plan. It is my belief that these insurance programs will add an important plus to SME membership.

Membership Builds Prestige

The challenges that mineral engineering offers to young engineers entering this field are legion and well attested by the accomplishments of those who have gone before. Membership in the Society of Mining Engineers of AIME provides prestige and honor to all engineers, as well as serving their technological needs.



SANFORD S. COLE
President



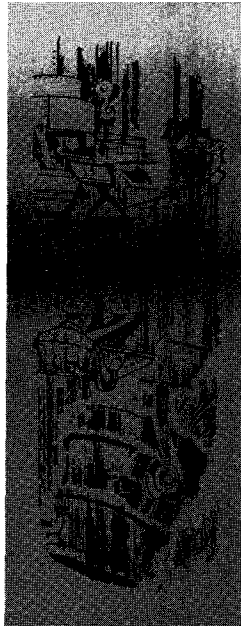
JACK M. EHRHORN
President-Elect



EDWARD G. FOX
Past President



JOHN G. HALL
Treasurer



AIME



The Metallurgical Society

by Jack H. Scaff, President

A Year of Progressive Change

1964 was a year when important decisions were made toward progress and change.

The Metallurgical Society serves its members and the profession primarily through technical conferences and technical publications related both to the operating field and to research in physical metallurgy.

New Plans for Meetings and Publications

In the operating field, the Society's First Operating Metallurgy Conference and Exposition will be held in late 1965 (Pittsburgh, November 29-December 3). Most of our conferences and symposia on process metallurgy will be grouped within a single week. Operating and research personnel interested in both ferrous and nonferrous process metallurgy should benefit greatly from the discussion of new advances and interchange of new ideas relevant to their respective fields. Financial success of the Exposition seems assured with nearly 40 percent of the rentable space already committed or requested by suppliers to the iron and steel and nonferrous metal producing industries.

To strengthen further our activities in the operating field, the JOURNAL OF METALS will become, in effect, the "Magazine of Operating Metallurgy" with greatly increased editorial coverage. To improve service to the physical metallurgist, Transactions of The Metallurgical Society are now published monthly starting in January, 1965, in contrast to the bi-monthly publication heretofore. This speed up in communication will be of real service to the research community.

Joint Study with ASM

Following informal conversations, task forces and a steering committee have now been appointed to study the possibilities of affiliation or merger with the American Society

for Metals. A recommendation for a closer relationship will be made to our members if a plan can be developed that will strengthen both organizations and that is recognized to be of obvious benefit to the members of both organizations.

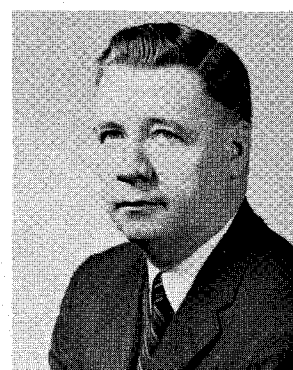
Major Meetings During the Year

Eleven major meetings were sponsored by the Society in 1964 at which 950 papers were presented before a combined audience of 7,447. Also, six books were published during the year, three of which were issued in inexpensive paperback form.

In the many areas of professional activity, as well as in the various fields of technology, the Society remains active through the various engineering federations. We urge all members of the metallurgical profession to participate in these vital areas through service on committees, participation in Section affairs, and attendance at conferences.



J. C. SCAFF
President



HAROLD B. EMERICK
President-Elect



R. C. COLE
Past President



R. L. HENNEBACH
Treasurer

AIME

Society of Petroleum Engineers

by John C. Calhoun, Jr., President

The Advance of Petroleum Technology

As the discovery of new oil deposits has become more difficult in the United States, in recent years greater emphasis has been placed on the *recovery* of more oil from the known fields and reservoirs. This has caused a rapid advance in the application and utilization of petroleum engineering. Technological improvements in drilling and well completion have enhanced the development and exploitation of reservoirs once they are discovered, and new methods of oil production have increased the amount of recovery from the reservoirs.

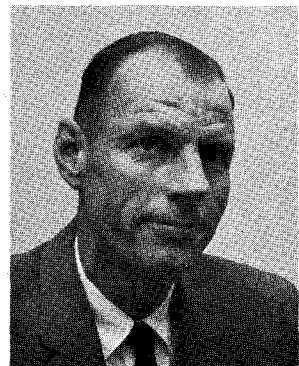
These advances continued with mammoth strides in 1964. Waterflooding remains as the foremost method of supplementary oil recovery; it is now estimated to be in use in some 6,000 oil fields in the United States, and approximately 30 percent of the nation's oil production comes from these fields.



JOHN C. CALHOUN, JR.
President



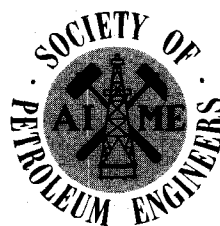
HERMAN A. ENGEL, JR.
Vice President



J. M. C. GAFFRON
Vice President



ROBERT H. McLEMORE
Treasurer



Tribute to Success of Petroleum Engineering

The injection of dry gas or liquefied gas as recovery agents has apparently reached a plateau, but the methods of thermal recovery expanded rapidly in 1964. Substantial deposits of oil that is too viscous to be produced by natural reservoir energy exist in the United States, and the thermal methods now hold high promise of significantly increasing the nation's oil reserves from these sources.

The outlook now is that we can reasonably hope to recover 40 to 50 percent of the oil that we have found to date, which is about double the recovery expected 30 years ago. We can expect to recover about six years' supply of crude oil through engineering advances and the supplementary processes that have been developed.

Although this is a glowing tribute to the success of petroleum engineering, we cannot rest on our laurels. Growth in the demand for petroleum in the form of crude oil and natural gas will continue. To meet this demand, new oil reserves will be found through exploration, but recovery must continue to increase through the application of technology.

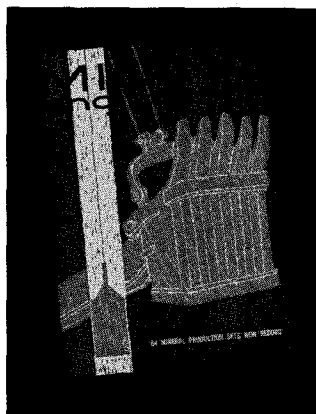
Petroleum Engineering Forum

The Society of Petroleum Engineers of AIME is the leading forum in the nation through which knowledge is exchanged on the new advances in petroleum technology and engineering. The Society is the only channel through which the knowledge of the petroleum engineering profession is evaluated for its impact upon the creativeness of the engineer who works in the profession.

In these roles the Society has made a major contribution to the nation in the past. It will continue to make its contribution in the future. The Society also will continue to stimulate the growth of the individual petroleum engineer toward maintaining his ability to serve the nation in a world where technical ideas are undergoing rapid change.



Mining Engineering



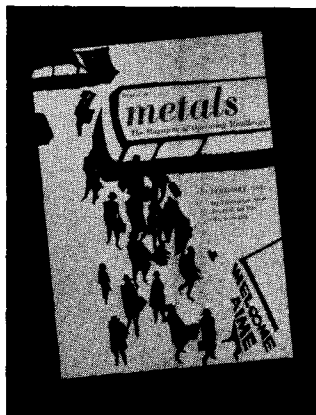
"Converting Rail Pit to Trucks," January 1964, is a solid case history on how a large copper mining operation engineered the successful changeover from rail to truck haulage. . . . Technical accomplishments in the fields of exploration, mining and minerals beneficiation during 1963 were reviewed in the February issue which provides a handy idea reference for operating engineers and a compendium of mineral production statistics. . . . "Permanente Cement" described up-grading limestone by flotation—an innovation for Permanente and a scoop for the March issue of MINING ENGINEERING.

The Jackling Award winner's thought-provoking lecture on Earth and the Universe examines Man, the engineer, and where he fits in the grand scheme. . . . The exclusive report on newest centrally-controlled copper concentrator at Butte employing the first large-scale autogenous grinding circuit, was a report eagerly read. . . . How mining men may soon be putting nuclear energy to work, with an expert's cost and comparison report on tests of overburden removal by nuclear blasting was in the June issue.

Coal dust control overseas—a special report on methods of handling this ever-present problem in coal mining appeared in July. . . . In August an account of close-to-shore undersea mining tells about new knowledge of mineral occurrences and hardware for extracting them from the deep sea. . . . Broad interests of mining engineers were illustrated in September by separate articles on application of geothermal steam for power, boring a shaft to 1500 feet, and the outlook for fuel cells.

The October issue featured an on-the-spot report by staff on the exploration boom in Australia, complete with descriptions of the major mines and processing plants. . . . A knowledgeable panel studies a social problem, air pollution and the coal user. Their discussion was reported in November. . . . A group of experts look at the application of longwall mining to a variety of mineral deposits as a means of achieving both high recovery and effective ground support economically—a year end story of significance.

Journal of Metals



Important decisions affecting the future of The Metallurgical Society's publications were made during 1964. Transactions of The Metallurgical Society will be published monthly starting in January, 1965. In line with other technical societies, \$35 per page charges have been adopted in order to maintain the publication on a firm financial basis and keep in line with increasing costs. During 1964, 1731 pages of technical notes and technical papers were published in Transactions, a new high.

JOURNAL OF METALS will be doubled in editorial content through inclusion of all papers presented at the three major conferences of the Iron and Steel Division—Electric Furnace Conference, Ironmaking Conference and National Open Hearth and Basic Oxygen Steel Conference.

Some outstanding issue features during 1964 were: April—emphasizing ironmaking and open hearth steelmaking; June—devoted to basic oxygen steelmaking; August—featured the modernized facilities

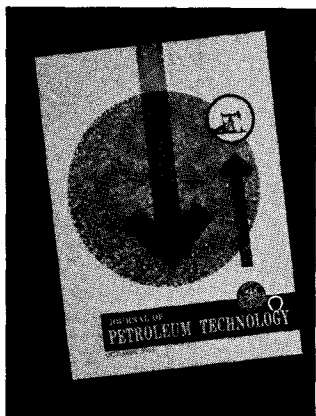
at the Ashland Works of Armco Steel Corporation; and in December—electric furnace operations.

Publication of abstracts with key words, links and roles, in accordance with the system recommended by Engineers Joint Council, commenced with the September issue.

Issued during the year were the first of the books of The Metallurgical Society Conference series. Four books have been published, three of which are available in paperback form at extremely low cost to AIME members (only 1.5 cents per printed page). These books are: "Mechanical Working of Steel I," "Metallurgy at High Pressures and High Temperatures," "New Types of Metal Powders," and the 22nd Ironmaking Proceedings Volume.

Two other books published by The Metallurgical Society are: "Compounds of Interest in Nuclear Reactor Technology" and the 46th Volume of the Open Hearth Proceedings.

Journal of Petroleum Technology



Diversification was the byword in SPE publications during 1964—thanks to the foresight and long-range planning of the Society's Board of Directors two years ago.

Recognizing the heterogeneity of interests created among its members by the rapid growth and development of the petroleum engineering technology during recent years, the 1962 SPE Board made sweeping changes in its procedures for disseminating technical material to members. Ten standing technical committees were created, each charged with the responsibility of developing material within its own area of interest.

Programming improved at SPE technical meetings, and JOURNAL OF PETROLEUM TECHNOLOGY reaped the full benefits of the new plan in 1964. More than ever before, the magazine's editorial content offered a broad range of technical material tailored to the specific needs of its 15,000 readers. For example, on a recent survey one out of every four SPE members listed a primary interest in Pro-

duction Operations, a field covered by 24% of the technical papers published in JPT during 1964. In like manner, 17% of the papers published in JPT during the year covered Reservoir Engineering, chosen by 16% of the members as their primary interest.

In correspondingly decreasing numbers, the remainder of the papers published in the magazine treated the other interest fields represented by the technical committees: Drilling and Well Completions, Formation Evaluation, Fluid Mechanics, Gas Technology, Management, Education and Professionalism, Economics, and Geological Engineering.

But diversification has not been achieved at the expense of quality. The SPE publications program is still guided by the same rigorous editorial review system which assures that only the most significant and useful of technical contributions are disseminated to members and retained in the permanent petroleum engineering literature.



1964 CONDENSED FINANCIAL STATEMENT

INCOME	Mining	Metals	Petroleum	AIME Total
Membership Dues & Fees	\$226,310	\$173,054	\$259,574	\$ 658,938
Publications Sales	48,416	109,670	32,389	190,475
Advertising	199,729	72,143	176,049	447,921
Other	4,310	2,987	3,769	11,066
TOTAL	\$478,765	\$357,854	\$471,781	\$1,308,400
EXPENSE				
Sections & Student Chapters	\$ 15,481	\$ 11,298	\$ 22,157	\$ 48,936
Society Secretaries' Offices	44,352	50,076	88,844	183,272
Institute Activities	14,398	13,868	11,811	40,077
Publicity	5,104	4,599	4,297	14,000
Special Membership Activities	3,112	3,388	10,642	17,142
Library Support	4,359	3,680	5,094	13,133
Cost of Advertising Pages	101,800	35,381	88,470	225,651
Publications—Editorial and Production..	178,109	205,323	153,623	537,055
General Secretary's Office	16,643	14,051	19,452	50,146
Business Office	33,366	26,456	31,093	90,915
Western Field Secretary's Office	14,447	2,717	1	17,165
Provision for Depreciation	3,213	2,777	2,929	8,919
Pensions and Related Expenses	15,518	12,006	14,333	41,857
ECPD and EJC Assessments	5,439	4,592	6,356	16,387
Miscellaneous Expenses	5,711	4,822	6,675	17,208
TOTAL	\$461,052	\$395,034	\$465,777	\$1,321,863
Net Income or (Expense)	\$ 17,713	(\$ 37,180)	\$ 6,004	(\$ 13,463)
Metals Research Publication Fund	—	\$ 15,771	—	\$ 15,771
Metallurgical Society Royalties Fund	—	10,000	—	10,000
Metallurgical Society Projects Fund	—	4,617	—	4,617
AIME Working Fund Reserve	2,879	1,732	1,833	6,444
NET BALANCE OR (DEFICIT)	\$ 20,592	(\$ 5,060)	\$ 7,837	\$ 23,369

FUNDS AND MEMBERSHIP

In addition to operations income and expense detailed above, AIME benefited from contributions from various funds which were applied as follows:

Name of Fund	Applied To	Amount
Met. Soc. Conference	Reimburse for Services	\$ 24,409
Various Endowment & Custodian	Reimburse for Services	12,794
SPE Activities	Various Services	14,500
Daniel C. Jackling Building	Reduce space charge	11,179
Daniel C. Jackling	Public Relations	11,152
Various Awards	Awards	9,187
Rocky Mountain Club	Salt Lake City office	6,000
James Douglas Library	Reduce Library Assessment	4,291
Charles Hayden Memorial	Student Services	1,929
Karl Eilers Memorial	U. S. Comm., World Power Conf.	267
Henry Krumb	Public Relations	11,008
Henry Krumb	Data Processing Conversion	22,866
	Total From Funds	\$129,582

As in the past, certain meetings and publications received advances from conference and endowment funds. In practice, money advanced by these funds is usually returned to the fund by the proceeds of these self-supporting activities. Availability of this capital, however, makes possible many worthwhile activities that could not otherwise be undertaken. Advances in 1964 amounted to approximately \$156,000.

MEMBERSHIP

As of January 1, 1965, corporate and student membership totals were:

Society of Mining Engineers	12,542
The Metallurgical Society	11,100
Society of Petroleum Engineers	14,468
AIME (Total)	38,110



Officers and Directors (1964-1965)

PRESIDENT AND DIRECTOR

KARL L. FETTERS, *Youngstown, Ohio*

PAST PRESIDENT AND DIRECTOR

ROGER V. PIERCE, *Salt Lake City, Utah*

PRESIDENT-ELECT AND DIRECTOR

THOMAS C. FRICK, *Dallas, Texas*

TREASURER AND DIRECTOR

GAIL F. MOULTON, *New York, New York*

VICE PRESIDENTS AND DIRECTORS

RICHARD C. COLE, *White Pine, Michigan*

EDWARD G. FOX, *Washington, D.C.*

WILLIAM J. HARRIS, JR., *Washington, D.C.*

DOUGLAS RAGLAND, *Houston, Texas*

NORMAN L. WEISS, *Tucson, Arizona*

L. PRESTON WHORTON, *Dallas, Texas*

DIRECTORS

THOMAS A. ATKINSON, *Los Angeles, Calif.*

JOHN C. CALHOUN, JR., *Washington, D.C.*

SANDFORD S. COLE, *South Amboy, N.J.*

WAYNE L. DOWDEY, *Salt Lake City, Utah*

JACK M. EHRHORN, *Salt Lake City, Utah*

LINCOLN F. ELKINS, *Oklahoma City, Okla.*

HAROLD B. EMERICK, *Pittsburgh, Penna.*

RAYMOND H. FEIERABEND, *New York, N.Y.*

MICHEL T. HALBOUTY, *Houston, Texas*

JACK H. SCAFF, *Murray Hill, New Jersey*

ALBERT W. SCHLECHTEN, *Golden, Colorado*

MICHAEL TENENBAUM, *East Chicago, Indiana*

GENERAL SECRETARY

R. WILLIAM TAYLOR, *AIME, New York*

ASSISTANT SECRETARIES

JOE B. ALFORD, *SPE Executive Secretary*

H. NEWELL APPLETON, *Activities Manager*

JOHN C. FOX, *SME Secretary*

CLIFFORD J. HICKS, *Western Secretary*

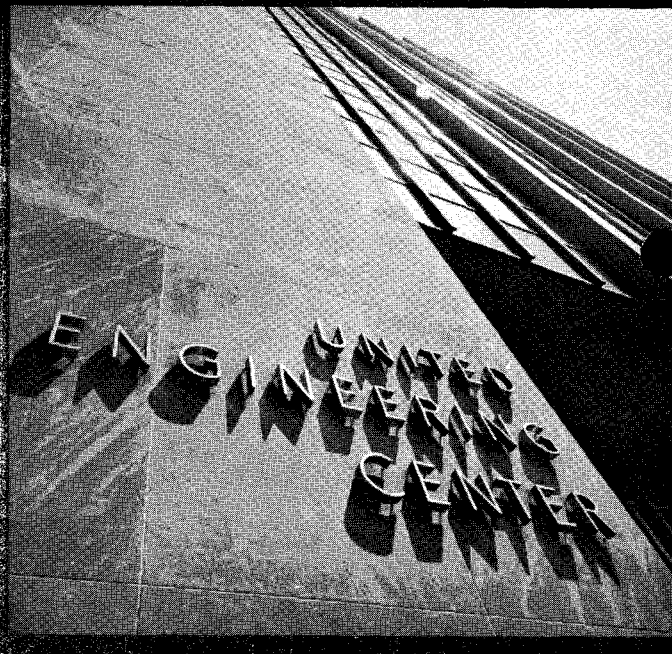
ROBERT W. SHEARMAN, *TMS Secretary*

ASSISTANT TREASURER

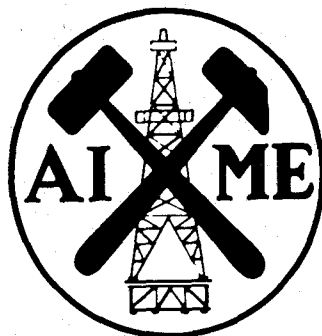
DOMINIC A. LISANTI, *AIME, New York*

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

345 East 47th Street • New York, N.Y. 10017



OFFICIAL AIME ANNUAL REPORT FOR 1964



**AMERICAN INSTITUTE OF
MINING, METALLURGICAL, & PETROLEUM ENGINEERS
345 EAST 47TH STREET
NEW YORK, N. Y. 10017**

OFFICIAL AIME ANNUAL REPORTS COVERING THE YEAR 1964

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REPORT
of the
GENERAL SECRETARY
OF AIME

No major engineering society is so well equipped administratively to serve the diverse needs of its members as is AIME. Our three Constituent Societies enjoy a high degree of autonomy which permits effective and timely action within each area of the Institute's technical activity. At the same time, an organization with four Presidents, four Boards of Directors and four Secretaries must strive constantly for maximum coordination of activities in order to efficiently function as a single entity in the excessively-splintered engineering profession.

Outstanding cooperation by Institute and Society officers, by Institute and Society staffs has produced the required unity for AIME to achieve significant gains in 1964. Subsequent statements in this Annual Report will detail the operation of the Societies and Departments which comprise AIME. This report will focus on the actions of the officers and staff of the parent organization.

Administrative Changes

To Streamline Board Operations

1. Annual AIME Board Indoctrination Meetings have been established to explain the complex workings of the Institute to incoming members.
2. Greater responsibility has been assigned to the Executive Committee in handling of non-controversial items of Institute business, relieving the Board agenda of these items.
3. An Operating Committee has been formed to handle difficult administrative problems which might arise.
4. An Ad Hoc Committee of Vice Presidents worked during the year to prepare items for Board consideration which have long-range impact on the Institute and the engineering profession.
5. Action has been taken so that effective in February, 1965, the membership of the Executive Committee will be increased to provide equal representation from our three Societies and include participation of current Society Presidents or Past-Presidents.

To Create Better Working Relationships

1. A document entitled "Operating Procedures for the General Secretary of AIME" has been approved.

2. A monthly column entitled "Perspective--AIME" is published in the three monthly journals of the Institute to keep members informed of broad-interest matters relating to the Institute and the entire profession.

To Enhance Effectiveness in Government Affairs

1. An AIME Seminar on Problems Affecting the Profession was held in Washington, D. C., on June 22, under the leadership of Vice-President William J. Harris, Jr.
2. An AIME Committee on National Affairs has been appointed to guide the provision of AIME-member expertise to government in areas where we can be helpful.

Section Affairs

1. Officers and staff members have conferred with Executive Committees of virtually every AIME Section administered by the AIME Headquarters Office, to maintain effective liaison.
2. New incentive has been provided for formation of new Sections through grants of \$100 from Barron Fund to help them get started. A detailed study is being done on areas in which new AIME Sections might be formed in order to better serve members.
3. The size of rebates has been increased for small AIME Sections which need help in sending representatives to Regional Meetings of the Council of Section Delegates.
4. New aids to Sections have been created by the Institute Activities Office:
 - a. AIME Section Manual, described by Section Delegates as the best tool the Institute has ever produced for guidance in Section administration.
 - b. AIME Film List to assist Section and Student Chapter Program Chairmen.
 - c. List of Speakers at Recent Section Meetings to be published on quarterly basis to provide additional help to Section Program Chairmen.

Student Affairs

To Assist Student Chapters

1. Members of the AIME Board accepted the responsibility for visiting virtually every Student Chapter of AIME, followed by detailed Board consideration of how AIME can better serve students, Chapters and faculty members.
2. AIME Senior Member Fund, to be supported by non-dues-paying members (Senior, Legion of Honor and Honorary), was established for use as directed by the Board within the Student Chapter sphere of activity.

3. Student Chapter Officer Kits were distributed to assist new student officers in leading their Chapters.
4. The organization of the Student Affairs Committee was changed to provide for activity on a regional basis including continuing visitation and close contact with Chapters in future years.
5. In an effort to stimulate the holding of more local student paper contests throughout AIME, the granting of matching funds up to \$25 to Sections which hold such contests was approved. The money is for purchase of prizes.

To Assist Student Members

1. An AIME Student and Section Newsletter was started to provide an interchange of information on Student Chapter activity and items of special interest to students and Section officers.
2. AIME's Eastern Summer Employment Program was revived to assist students in obtaining summertime jobs in the mineral industries complementing the Western Summer Employment Program which has functioned successfully for several years.
3. New Student Member pins were designed to replace less-attractive and more-expensive pins used in the past.
4. The Committee composition and rules of the National Student Paper Contest were revised to provide for more effective publicity and judging procedures. New wall plaques also were produced for presentation to schools of the winning students in the National Contest.

To "Sell" Mineral Engineering

1. AIME participated for the first time in the National Science Fair--International. The success of this participation prompted the Board to increase participation and prizes for 1965 contest.
2. A full time AIME Public Relations and Student Development Manager, William F. Haddon, was employed to disseminate continuous news coverage of Institute activities and to prepare materials to enhance the image of the mineral engineer, aimed particularly to attract young people to this profession.

Business and Finance

To Reduce Expenses

1. A new data processing contract was negotiated, resulting in a savings of several thousand dollars over the previous contract with another service bureau.
2. Additional AIME space in the United Engineering Center,

including the AIME Board Room, was rented to other non-profit organizations.

3. A less-expensive Directory Supplement was published through use of a different printing process.

To Increase Efficiency

1. A new AIME Salary Administration Policy was formulated to provide guidance to staff supervisors and the AIME Salary Committee.
2. A travel policy designed to secure maximum coverage from foreign trips by staff members was approved.
3. An AIME Endowment Funds booklet was prepared to assist Board members in understanding approved uses of Institute funds.

To Stimulate the AIME Economy

1. A resolution was passed by the Board urging that projects be formulated by officers and staff and financed by AIME Endowment Funds to provide more effective Institute service and to assist in additional membership development.
2. A loan was made to The Metallurgical Society to permit the creation of the promising "new look" in Journal of Metals.

Inter-Engineering Society Cooperation

AIME's role as an Engineering Founder Society provides the Institute with significant influence in dealing with matters relating to the engineering profession. AIME members were particularly instrumental in the formation of the new National Academy of Engineering, which was established in early December. The first President of the Academy is Dr. A. B. Kinzel, a Past-President of AIME. Its Secretary is AIME Member Harold Work. Four AIME members are included in the 25 Charter Members of the Academy: Dr. Kinzel, A. M. Gaudin, M. L. Haider and J. Herbert Hollomon, Jr.

ENGINEERS JOINT COUNCIL

At the September, 1964 meeting of the AIME Board, Dr. Carleton C. Long, Senior AIME Member on the EJC Board of Directors reported: "Beginning approximately with A. B. Kinzel's term of office as President (1960), EJC has expanded its influence and activities remarkably. Under 1963 President Eric Walker and 1964 President Walker Cisler the influence of EJC has attained a new, high level".

Dr. Long described the work of the Engineering Manpower Commission of EJC which develops and disseminates information on the demand for engineers, physical scientists and technicians. Also, he told of EJC's increased role in international relations and their continuing leadership in developing information retrieval tools and methods.

"Under the indefatigable, thoroughly-competent leadership of AIME's William J. Harris, Jr., the activities of the Government Liaison Committee have dominated EJC workings in 1963-64", Long stated. He mentioned EJC's new Washington office, their new monthly newsletter on legislative matters entitled "National Engineering News", work in conjunction with various Congressional committees on technical problems and progress toward a National Academy of Engineering. EJC is the "umbrella organization" created to promote unity among technical societies. In 1964 approximately 26¢ of each AIME member's dues have gone to support the work of EJC.

ENGINEERS' COUNCIL FOR PROFESSIONAL DEVELOPMENT

At the September Board Meeting, Dr. Walter R. Hibbard, Jr., AIME representative on the ECPD Executive Committee, discussed changes now taking place in the primary activity of the federation--its Education and Accreditation (E&A) Committee. This is the committee which is charged with inspecting and accrediting engineering curricula, assuring a nationwide uniformity of high standards in engineering education.

Dr. Hibbard indicated that the E&A Committee is undergoing a self-reappraisal as evidenced by special studies which are taking place in the following areas: indoctrination of inspectors, participation of non-educators, NCSBEE participation, degrees and program categories, engineering education and its characteristics, regional accrediting, graduate study, engineering technology and committee membership.

"There is considerable concern about the E&A Committee operation which is exhibited by resolutions concerning this subject submitted to ECPD by ASCE, AICHE, NCSBEE and AIME", Hibbard stated. He pointed out that a very important national study of engineering education ("Goals of Engineering Education") is underway and that AIME's Council of Education is participating. ECPD requested the American Society for Engineering Education to make the study, and they are proceeding under a \$307,000 National Science Foundation grant.

Indicating the breadth of ECPD activity, Dr. Hibbard enumerated other committees which are functioning in the federation: Guidance, Student Development, Development of Young Engineers, Recognition, Ethics and Information. In 1964 approximately 18¢ of each AIME member's dues have gone to support the work of ECPD.

UNITED ENGINEERING TRUSTEES

Two years ago it was determined that a maximum of \$900,000 would be needed to complete the two unfinished floors in the United Engineering Center and to pay the outstanding bank loan. The Ford Foundation offered to match other new gifts received during 1963 and 1964 on a one for two basis up to \$300,000. AIME quickly raised money to meet its goal and other Societies followed, so that now sufficient funds are in hand to complete the 15th and 16th floors and the bank loan has been repaid. The Institute of Electrical and Electronic Engineers (IEEE) is planning to occupy these vacant floors in early 1965 and has installed a computer center in the Building's Exposition Hall.

The United Engineering Trustees is in charge of the Engineering Societies Library and Engineering Foundation. A concentrated study is now underway to determine whether the Library operation can be revised to better serve our members and to handle the explosion of technical literature which is taking place. Also, the UET has charge of Engineering Foundation, with an endowment of almost \$3 million. Engineering Foundation funding was of significant value in work toward establishing the American Academy of Engineering. In addition, Engineering Foundation is establishing an interdisciplinary committee on Communication under the guidance of AIME.

ENGINEERING SOCIETIES PERSONNEL SERVICE

ESPS reorganized its New York office under a new director in 1964, but continued to experience financial difficulties. Its Chicago office had a good year financially, but the San Francisco office continued to experience monetary problems. ESPS was established 46 years ago to make it possible for the Founder Societies to better serve their members in job placement. AIME pays no subsidy to ESPS.

OTHER ORGANIZATIONS

In addition to the above, AIME continued to provide representatives who work with various organizations. These include: National Council of State Boards of Engineering Examiners, American Association for the Advancement of Science, American Standards Association, American Power Conference, American Geological Institute, Joseph A. Holmes Safety Association, Hoover Medal Board of Award, John Fritz Medal Board of Award, Alfred Noble Prize, and the World Power Conference. Beginning in July, 1965, AIME will provide a representative to the Earth Sciences Division of the National Academy of Sciences, National Research Council. Already AIME participates in the following activities of NAS-NRC: Division of Chemistry and Chemical Technology, Division of Engineering and Industrial Research and Division of Physical Sciences.

Honors and Awards

The following Honors and Awards were presented at the 1964 Annual Meeting held in New York City:

A CERTIFICATE OF HONORARY MEMBERSHIP to Edgar C. Bain, "for leadership in advancing the science of metallurgy in its most rapidly developing period and in particular for his contributions to the understanding of the kinetics of the phenomena involved in the heat treatment of steel, including those associated with the microconstituent which carries his name, Bainite."

A CERTIFICATE OF HONORARY MEMBERSHIP to Michael L. Haider, "distinguished petroleum engineer and outstanding business executive whose skill and experience in research, exploration, and production have greatly contributed to the progress of the petroleum industry throughout the world; and whose imaginative leadership as president of a great company

has earned him the esteem of the entire business community."

A CERTIFICATE OF HONORARY MEMBERSHIP to Nils H. Magnusson, "for his many outstanding contributions to the knowledge of Swedish mineral deposits, particularly of its iron ores, and for his years of devotion to the advancement of the sciences of geology, geodesy and geophysics in Sweden as Professor and then Chairman of the Royal Institute of Technology, as Director of the Swedish Geological Survey and as Chairman of the National Committee of Geodesy and Geophysics."

A CERTIFICATE OF HONORARY MEMBERSHIP to Sir Maurice Mawby, "for his outstanding contributions to the World lead and zinc mining industry and for his able and constructive services in developing the raw material resources of Australia."

A CERTIFICATE OF HONORARY MEMBERSHIP to Reno H. Sales, "for his long years of leadership in the study of metalliferous ore deposits during which period he has contributed immeasurably not only to our knowledge of them but particularly to the methods of their study by meticulous observations underground."

The JAMES DOUGLAS GOLD MEDAL to T. D. Jones, "for outstanding contributions in adapting scientific knowledge to commercial applications in nonferrous metallurgy, for his tireless efforts in helping young metallurgists, for his devotion to AIME and use of his administrative talents in its behalf."

The BENJAMIN F. FAIRLESS AWARD to Thomas L. Joseph, "his achievements in advancing blast furnace technology and his accomplishments as a teacher have made outstanding contributions to progress in the steel industry."

The HAL WILLIAMS HARDINGE AWARD to Louis Ware, "eminent mining engineer and executive, for his vision and success in promoting the development and widespread commercialization of industrial minerals."

The ANTHONY F. LUCAS GOLD MEDAL to William Hurst, "for his outstanding contribution to the understanding of the performance of petroleum reservoirs and his untiring counsel and guidance of young engineers in the petroleum industry."

The ERSKINE RAMSAY GOLD MEDAL to James C. Gray, "for his contributions and achievements in the safe application of modern technology in coal mining and for his distinguished leadership in the coal industry."

The CHARLES F. RAND MEMORIAL GOLD MEDAL to Howard I. Young, "in recognition of his able stewardship of his company's affairs, effective leadership in the lead-zinc and mining industries, and dedicated public service."

The ROBERT H. RICHARDS AWARD to Ira B. Humphreys, "for his advancement of the minerals industry by devising and applying

novel concentrating devices enabling economic utilization of many millions of tons of previously submarginal ores."

The WILLIAM LAWRENCE SAUNDERS GOLD MEDAL to Walter C. Lawson, "for his discerning perception of orebody geometry in planning open-pit development of previously submarginal mineral deposits, and his outstanding administrative skill in highly efficient management of several large copper mines."

Other AIME Awards and Honors presented at the Annual Meeting:

The EXTRACTIVE METALLURGY DIVISION AWARD to Leonard Klein, for his paper, "Gaseous Reduction of Oxygen-Containing Copper."

The ROBERT W. HUNT SILVER MEDAL to J. C. McKay and John A. Peart for their paper, "Blast Furnace Practice With Very Low Slag Volume."

The DANIEL C. JACKLING AWARD to Arthur A. Brant, "for his leadership in and important contributions to research, development, and the application of geophysical methods to mineral exploration and for his lecture, 'Where Are We?'."

The J. E. JOHNSON, JR. AWARD to Ralph T. Hanna, "for his contribution in achieving record production and coke rates on blast furnaces through the use of increased instrumentation, operating controls, and hot blast temperatures in excess of 1900° F."

LEGION OF HONOR INSIGNIA were conferred upon the following forty-seven members: Edgar Taylor Austin, Frank Ashton Ayer, Henry Nicholas Baumann, Guy Norman Bjorge, William Hawes Coghill, Theodore Benton Counselman, Daniel Cushing, Albert Wright Dickinson, William Crawford Douglass, Douglas MacDonald Dunbar, Donald Dyrenforth, Lloyd Lynn Farnham, Walter Fitch, George Edward Goodspeed, Charles Walter Griggs, Victor Carl Grubnau, Harry Frank Guggenheim, Charles Walter Hamilton, John Bradstreet Harper, Warren Hastings, Samuel Pinkney Hatchett, Otto Herres, Percy Edward Holme, J. Fred Johnson, James Taylor Kemp, L. W. Kemp, Marcus L. Latham, Raymond B. Ladoo, Charles Elmer Lawall, Joseph P. Lyden, Eduardo I. Montoulieu, Harry Ellsworth Nold, Fred Stephenson Norcross, Jr., Henry H. Otto, Sidney Paige, Joseph Ezekiel Pogue, Walter Leigh Remick, William Allen Scheuch, Richard Warren Senger, Stanislaus Skowronski, Charles Albert Smith, Cecil Weldon Smith, Ray Emerson Walters, Jesse B. Warriner, George Harrison Wigton, Merl Ruskin Wolfard, Horace Greeley Young.

The MATHEWSON GOLD MEDAL to Pol Duwez and Ronald H. Willens for their paper, "Rapid Quenching of Alloys."

The MINERAL INDUSTRY EDUCATION AWARD to Harry Harrison Power, "distinguished petroleum engineer, educator and author whose pioneering work was preeminent in achieving recognition of petroleum engineering curricula by industry and engineering education."

The ROSSITER W. RAYMOND MEMORIAL AWARD to Larry Kaufman for his paper, "Estimation of the Entrophy of NaCl Type Compounds."

STUDENT PRIZE-PAPER AWARDS in the Graduate Division to: Robert P. Wylie, University of Oklahoma, for a paper entitled "An Investigation of Cement Bonding Strength", entered by the Oklahoma City Section.

Undergraduate Division to: William C. Owens, St. Louis University, for a paper entitled "The Aleutian Island Arc Structure", entered by the St. Louis Section; W. S. Foster, Oklahoma State University, for a paper entitled "Relative Permeability Hysteresis in Two Phase Flow", entered by the Northern Oklahoma Section.

The following gave Lectures during the Annual Meeting:

EXTRACTIVE METALLURGY DIVISION LECTURER - Philip T. Stroup.

HOWE MEMORIAL LECTURER - Frederick Denys Richardson

INSTITUTE OF METALS LECTURER - Jacques Friedel

Other national awards made during the year, but not presented during the Annual Meeting were:

ACID CONVERTER AND BASIC OXYGEN STEEL COMMITTEE AWARD to Bo M. S. Kalling.

JOSEPH BECKER AWARD to Philip S. Savage.

ELECTRIC FURNACE CONFERENCE AWARD to Donald Rosenblatt.

ROBERT LANSING HARDY GOLD MEDAL to Peter R. Swann

CHARLES H. HERTY, JR. AWARD to G. R. Curtis for his paper "Statistical Analysis of Operating Data from Number 2 Open Hearth Shop, Middletown Works, Armco Steel Corporation."

IRONMAKING CONFERENCE AWARD to Ralph T. Hanna for his paper, "Blast Furnace Operations at High-Blast Temperatures."

F. B. MCKUNE MEMORIAL AWARD to J. C. Seastone for his paper, "The Effect of Mold Wall Preparation on Seams in Semikilled Steel Slabs."

OPEN HEARTH CONFERENCE AWARD to G. C. Smith and D. A. Dukelow for their paper, "Hot Model Studies of the Basic Oxygen Processes."

LEO F. REINARTZ AIME-NOHC SCHOLARSHIP to Richard Warren Grefrath.

COAL DIVISION AIME SCHOLARSHIPS were awarded to the following students: John Edward Hull, Jr., Warren Joseph Kmetz,

Douglas Thipps, Richard M. Avner, William Piper, and R. Anderson.

PERCY W. NICHOLLS AWARD (Joint Award of the Coal Division of the Society of Mining Engineers of AIME and Fuels Division of ASME) to Carroll F. Hardy, posthumously.

JOHN FRANKLIN CARLL AWARD to Donald L. Katz, "In recognition of his important pioneering research on the critical properties of hydrocarbon systems and the performance of petroleum reservoirs; his outstanding activity as an educator, and as an engineering consultant to both industrial and governmental agencies; and his prolific published contributions which have so greatly enriched the petroleum literature".

CEDRIC K. FERGUSON MEDAL to Elmer L. Dougherty for his paper, "Mathematical Model of an Unstable Miscible Displacement".

LESTER C. UREN AWARD to Gustave E. Archie, "In recognition of distinguished contribution to the technology of petroleum engineering as a pioneer in the field of electric log interpretation. His work provided the foundation for quantitative determination of reservoir fluid saturations and thereby increased significantly the ability to evaluate and efficiently produce petroleum reservoirs".

Appreciation

This was the first full year of service for AIME's new General Secretary. The conscientious help of Newell Appleton, Dominic Lisanti, William Haddon, Wanda Laskowski, Secretaries of our three Constituent Societies and the entire staff is gratefully acknowledged. Of special importance was the support and freedom of action given to me by President Karl Fethers, acknowledged by one of the Institute's past presidents as being the "most effective and energetic President AIME has ever had".

Having visited 17 Sections and 16 Student Chapters with Dr. Fethers during the year, plus a number of other meetings of various types, I can confirm that the Institute has never had a more able leader. His devotion to AIME Student Chapters was particularly encouraging at a time when AIME badly needed to rebuild its communications with these groups. President Fethers was backed by a conscientious Board of Directors which never failed to undertake any assignment asked of them--even though they were requested to do more travel in behalf of the Institute than has any Board in the past.

Of most importance to the successful operation of the Institute in 1964 was the outstanding support of our members throughout the United States and the world. I often marvel at the devotion of our members who are willing to spend personal time and funds to undertake any task requested of them in the interest of the profession. With members of this caliber, AIME has a rewarding future.

Respectfully submitted,

R. William Taylor
General Secretary

AMERICAN INSTITUTE OF MINING, METALLURGICAL AND PETROLEUM

ENGINEERS, INC.

REPORT OF THE TREASURER

FOR

YEAR ENDED DECEMBER 31, 1964

February 2, 1965
New York, N. Y.

Respectfully Submitted

GAIL F. MOULTON
TREASURER

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

BALANCE SHEET

DECEMBER 31, 1964 AND DECEMBER 31, 1963

ASSETS

WORKING FUND

	<u>DECEMBER 31, 1964</u>	<u>DECEMBER 31, 1963</u>
Cash Unappropriated.....	\$ 131,495	\$ 109,526
Cash-Interest Bearing Savings A/C.....	202,648	247,699
Accounts Receivable.....	125,583	95,583
Inventories:		
Publications on hand.....	\$ 28,035	\$ 25,792
Postage, Stationery & Supplies.....	8,415	8,313
Equipment, Furniture & Fixtures.....	118,950	116,833
Less: Reserve for depreciation.....	60,212	52,061
Prepaid Expenses, Deferred Charges...	58,970	86,026
TOTAL WORKING FUND.....	\$ 613,884	\$ 637,711

ENDOWMENT AND CUSTODIAN FUNDS

Investment at cost.....	\$2,645,507	\$2,486,931
Cash in Savings Account.....	651,674	529,258
	3,297,181	3,016,189

PROPERTY FUND

Founder's interest in real estate & other assets of United Engineering Trustees.....	265,000	265,000
	<u>\$4,176,065</u>	<u>\$3,918,900</u>

LIABILITIES AND RESERVES

WORKING FUND

Accounts Payable General.....	\$ 150,726	\$ 127,237
Life Membership Fund.....	20,160	22,280
Special Fund For Publications.....	-	26,690
Annual Meeting Surplus Fund.....	4,511	63
Appropriations for Journal of Metals	26,629	-
Deferred Income from Members Dues....	\$ 290,965	\$ 318,346
Other Deferred Credits.....	29,779	73,780
Surplus Beginning year.....	69,315	90,354
Unexpended Income.....	23,369	(21,039)
Amounts transferred to funds.....	(1,570)	69,315
TOTAL WORKING FUND.....	\$ 613,884	\$ 637,711

ENDOWMENT AND CUSTODIAN FUNDS

Endowment Funds.....	\$2,953,424	\$2,671,290
Custodian Funds.....	343,757	344,899
	3,297,181	3,016,189

PROPERTY FUND

AIME portion of contribution from Andrew Carnegie and others.....	265,000	265,000
	<u>\$4,176,065</u>	<u>\$3,918,900</u>

INCOME AND EXPENSE STATEMENT

TWELVE MONTHS ENDING DECEMBER 31, 1964

INCOME:	MINING	METALS	PETROLEUM	TOTALS
<u>Membership:</u>				
Current Dues (1)	\$211,570	\$156,120	\$236,395	\$ 604,085
New Member Dues	6,785	9,169	10,132	26,086
Entrance Fees	7,955	7,765	13,047	28,767
TOTAL	<u>\$226,310</u>	<u>\$173,054</u>	<u>\$259,574</u>	<u>\$ 658,938</u>
<u>Publications:</u>				
Monthly Journal Adv. (Net)	\$182,924	\$ 72,143	\$169,346	\$ 424,413
Directory Advertising	16,805	-	6,703	23,508
Monthly Journal Sales	10,525	21,278	7,042	38,845
Non-Monthly Journal Adv.	-	-	-	-
Non-Monthly Journal Sales	9,085	45,336	3,655	58,076
Transactions Volume Sales	16,337	18,161	17,396	51,894
Reprint Sales (6)	6,678	24,895	4,296	35,869
Mining Preprint Sales	5,791	-	-	5,791
TOTAL	<u>\$248,145</u>	<u>\$181,813</u>	<u>\$208,438</u>	<u>\$ 638,396</u>
<u>Other Income:</u>				
Interest & Dividends (2)	\$ 2,670	\$ 2,255	\$ 3,121	\$ 8,046
Annual Meeting Credit	1,640	732	648	3,020
TOTAL	<u>\$ 4,310</u>	<u>\$ 2,987</u>	<u>\$ 3,769</u>	<u>\$ 11,066</u>
TOTAL INCOME	<u>\$478,765</u>	<u>\$357,854</u>	<u>\$471,781</u>	<u>\$1,308,400</u>
<u>EXPENSES:</u>				
<u>AIME Headquarters: (2)</u>				
General Secretary's Office NY	\$ 16,643	\$ 14,051	\$ 19,452	\$ 50,146
Secretary's Office SLC (4)	14,447	2,717	1	17,165
Business Office (5)	33,366	26,456	31,093	90,915
Institute Activities (3)	14,398	13,868	11,811	40,077
Public Relations (2)	3,604	3,099	4,297	11,000
Pensions & Related	7,525	6,014	6,752	20,291
Provision for Depreciation (2)	2,437	2,134	2,802	7,373
Engineering Society Library (2)	4,359	3,680	5,094	13,133
E.J.C. & E.C.P.D. Assessment (2)	5,439	4,592	6,356	16,387
Miscellaneous Expenses (2)	5,711	4,822	6,675	17,208
TOTAL	<u>\$107,929</u>	<u>\$ 81,433</u>	<u>\$ 94,333</u>	<u>\$ 283,695</u>
<u>Society Direct Expense:</u>				
Local Sections & Student Chapt	\$ 15,481	\$ 11,298	\$ 22,157	\$ 48,936
Membership Development	3,112	3,388	10,642	17,142
Society Headquarters' Office	44,352	50,076	88,844	183,272
Pension & Related	7,993	5,992	7,581	21,566
Provision for Depreciation	776	643	127	1,546
Public Relations	1,500	1,500	-	3,000
TOTAL	<u>\$ 73,214</u>	<u>\$ 72,897</u>	<u>\$129,351</u>	<u>\$ 275,462</u>
<u>Publications:</u>				
Monthly Journal Adv. Exp.	\$101,800	\$ 35,381	\$ 88,470	\$ 225,651
Monthly Journal Prod. & Edit.	125,702	102,904	113,397	342,003
Directory	7,624	(43)	6,009	13,590
Non-Monthly Journal-Adv. Exp.	-	-	51	51
Non-Monthly Jnl. Prod. & Edit.	18,775	82,267	12,541	113,583
Transactions Volume	13,014	9,258	18,660	40,932
Reprint Expenses (6)	4,229	10,937	2,965	18,131
Mining Preprint Expenses	8,765	-	-	8,765
TOTAL	<u>\$279,909</u>	<u>\$240,704</u>	<u>\$242,093</u>	<u>\$ 762,706</u>
TOTAL EXPENSES	<u>\$461,052</u>	<u>\$395,034</u>	<u>\$465,777</u>	<u>\$1,321,863</u>
Less: Received from Funds*	\$ 2,879	\$ 32,120	\$ 1,833	\$ 36,832
TOTAL NET EXPENSES	<u>\$458,173</u>	<u>\$362,914</u>	<u>\$463,944</u>	<u>\$1,285,031</u>
INCOME OR (EXPENSES)	<u>\$ 20,592**</u>	<u>\$ (5,060)</u>	<u>\$ 7,837</u>	<u>\$ 23,369</u>

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

NOTES TO INCOME AND EXPENSE STATEMENT

TWELVE MONTHS ENDED DECEMBER 31, 1964

1. Current dues are credited to each individual Society.
2. These items are being pro-rated to the societies based on the percentage of membership as at 12/31/63 as follows:

MINING - 33.19% METALS - 28.02% PETROLEUM - 38.79%

3. Institute Activities expenses are net after certain items chargeable against Annual Meeting. The use percentage for 1963 is:

MINING - 36.9% METALS - 37.0% PETROLEUM - 26.1%

4. Secretary's Office - Salt Lake City - Distributed as follows:

MINING - 84.2% METALS - 15.8% PETROLEUM - \$1.00

5. Business Office Expense - Allocated on use basis:

MINING - 36.7% METALS - 29.1% PETROLEUM - 34.2%

6. Metals Reprint Sales and Expenses included the following:

	<u>SALES</u>	<u>EXPENSES</u>
Bi-monthly Reprint	\$19,680.87	\$ 7,424.47
Journal of Metals Reprints....	5,214.45	3,513.56
	<u>\$24,895.32</u>	<u>\$10,938.03</u>

* Amount Transferred from Funds:

	<u>MINING</u>	<u>METALS</u>	<u>PETROLEUM</u>	<u>TOTAL</u>
From Metals Research Publications Fund	-	\$15,771	-	\$15,771
From Metallurgical Society Royalties Fund	-	10,000	-	10,000
From Metallurgical Projects Fund		4,617	-	4,617
From AIME Working Fund Reserve	\$2,879	1,732	\$1,833	6,444
TOTALS	<u>\$2,879</u>	<u>\$32,120</u>	<u>\$1,833</u>	<u>\$36,832</u>

** Society of Mining Engineers - Income over Expense 1964	\$20,592
Less: 1963 Mining Society Deficit Carried Forward	6,687
Balance - SME Income over Expense	<u>\$13,905</u>

STATEMENT OF ENDOWMENT & CUSTODIAN FUND BALANCES
FOR THE YEAR ENDED DECEMBER 31, 1964

Balance - January 1, 1964

Endowment Funds	\$2,671,290	
Custodian Funds	<u>344,899</u>	\$3,016,189

Receipts & Credits

Cash received from Estate of Elizabeth W. Young	\$ 69,490	
Cash received from Estate of Daniel C. Jackling	4,278	
Cash received from Estate of Walter H. Aldridge	14,712	
Securities received from Henry DeWitt Smith Trust	18,200	
Cash received for Unrestricted Contribution Fund	20,005	
Cash received for Mineral Industry Education Award	3,100	
Cash received for Coal Division AIME Scholarship Fund	2,568	
Other Cash Contributions	921	
Gain from Sale of Securities	133,171	
Dividends and Interest	142,747	
Income from Oil Royalties	5,791	
Sale of Books, Volumes etc.	51,693	
Income from Conferences and Meetings	104,184	
Income from Royalties-Book Publishers	12,843	
Advance for Metallurgical Society Exposition	9,538	
Sundry Income and Receipts	<u>2,600</u>	
		<u>595,841</u>
		\$3,612,030

Less: Disbursements, expenses etc.

Scholarship Awards	\$ 1,067	
Other Awards, medals, plaques, and related expenses	8,120	
Publication of Books, volumes etc.	51,551	
Expenses of Conferences and meetings	91,305	
Public Relations expenses	22,160	
Conversion cost for Data Processing	22,866	
Other Expenses and payments	9,198	

Transfers:

For Business and other services	12,794	
of Investment income to cover portion of Library Assessment	4,291	
of Investment income to other income -		
Dividends and Interest	1,929	
of Investment income to cover portion of rent expense	11,179	
For Metallurgical Society Services	24,409	
To defray portion of the cost of Salt Lake City Office	6,000	
To cover portion of 1964 Transactions expense	15,771	
For appropriation to Journal of Metals	5,310	
For Mining Society 1963 Deficit	4,034	
For Metallurgical Society 1963 Deficit	8,248	
For portion of Metallurgical Society 1964 Deficit	<u>14,617</u>	<u>\$ 314,849</u>

Balance of fund accounts, December 31, 1964

per Balance Sheet		
Endowment Funds	\$2,953,424	
Custodian Funds	<u>343,757</u>	<u>\$3,297,181</u>

AIME AND CONSTITUENT SOCIETIES
INCOME AND EXPENSE STATEMENT
1965 PRELIMINARY BUDGET

<u>INCOME:</u>	<u>MINING</u>	<u>METALS</u>	<u>PETROLEUM</u>	<u>TOTAL</u>
<u>Membership:</u>				
Current Dues (1)	\$211,000	\$159,000	\$240,000	\$ 610,000
New Member Dues	7,000	9,000	11,000	27,000
Entrance Fees	7,800	9,000	13,000	29,800
TOTAL	<u>\$225,800</u>	<u>\$177,000</u>	<u>\$264,000</u>	<u>\$ 666,800</u>
<u>Publications:</u>				
Monthly Journal Adv. (net)	\$175,000	\$ 84,000	\$175,000	\$ 434,000
Directory Advertising	17,000	-	6,000	23,000
Monthly Journal Sales (8)	13,000	26,000	7,000	46,000
Non-Monthly Journal Adv.	-	-	-	-
Non-Monthly Journal Sales (7)	9,000	45,000	3,000	57,000
Transactions Volume Sales	17,000	22,600	15,000	54,600
Reprint Sales (6)	7,000	62,300	4,000	73,300
Mining Preprint Sales	5,400	-	-	5,400
TOTAL	<u>\$243,400</u>	<u>\$239,900</u>	<u>\$210,000</u>	<u>\$ 693,300</u>
<u>Other Income:</u>				
Interest, Dividends & Misc. (2)	\$ 3,250	\$ 2,800	\$ 4,000	\$ 10,050
Annual Meeting	2,000	3,300	1,000	6,300
TOTAL	<u>\$ 5,250</u>	<u>\$ 6,100</u>	<u>\$ 5,000</u>	<u>\$ 16,350</u>
TOTAL INCOME	<u>\$474,450</u>	<u>\$423,000</u>	<u>\$479,000</u>	<u>\$1,376,450</u>
<u>EXPENSES:</u>				
<u>AIME Headquarters:</u>				
General Secretary's Office - N.Y. (2)	\$ 17,700	\$ 15,600	\$ 20,900	\$ 54,200
Secretary's Office - S.L.C. (4)	21,050	3,950	-	25,000
Business Office (5)	33,000	28,900	32,600	94,500
Institute Activities (3)	12,700	14,400	9,900	37,000
Public Relations (2)	3,600	3,200	4,200	11,000
Pensions & Related (2)	6,200	5,500	7,300	19,000
Provision for Depreciation (2)	2,300	2,000	2,700	7,000
Eng. Society Library (2)	4,400	3,900	5,200	13,500
E.J.C. & E.C.P.D. Assessment (2)	5,450	4,800	6,400	16,650
Miscellaneous Expenses (2)	3,900	3,500	4,600	12,000
TOTAL	<u>\$110,300</u>	<u>\$ 85,750</u>	<u>\$ 93,800</u>	<u>\$ 289,850</u>
<u>Society Direct Expense:</u>				
Local Sections & Student Chapter	\$ 16,500	\$ 11,500	\$ 24,000	\$ 52,000
Membership Development	8,000	4,000	9,000	21,000
Society Headquarters' Offices	51,800	50,871	95,000	197,671
Pension & Related	8,500	7,000	7,800	23,300
Provision for Depreciation	900	800	200	1,900
Public Relations	1,500	1,500	-	3,000
TOTAL	<u>\$ 87,200</u>	<u>\$ 75,671</u>	<u>\$136,000</u>	<u>\$ 298,871</u>
<u>Publications:</u>				
Monthly Journal Adv. Exp.	\$101,000	\$ 46,000	\$ 97,500	\$ 244,500
Monthly Journal Prod. & Edit.	121,000	127,500	118,000	366,500
Directory	10,000	-	6,000	16,000
Non-Monthly Journal-Adv. Exp.	-	-	-	-
Non-Monthly Journal Prod. & Edit.	18,000	106,000	12,500	136,500
Transactions Volume	13,000	12,600	19,000	44,600
Reprint Expenses (6)	4,000	13,600	3,000	20,600
Mining Preprint Expenses	9,000	-	-	9,000
TOTAL	<u>\$276,000</u>	<u>\$305,700</u>	<u>\$256,000</u>	<u>\$ 837,700</u>
TOTAL EXPENSES	<u>\$473,500</u>	<u>\$467,121</u>	<u>\$485,800</u>	<u>\$1,426,421</u>
Less: Received from Funds	-	44,121	11,000	55,121
TOTAL NET EXPENSES	<u>\$473,500</u>	<u>\$423,000</u>	<u>\$474,800</u>	<u>\$1,371,300</u>
INCOME OR (EXPENSES)	<u>\$ 950</u>	<u>\$ -</u>	<u>\$ 4,200</u>	<u>\$ 5,150</u>

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

NOTES TO 1965 PRELIMINARY BUDGET

1. Current Dues are credited to each Society.
2. These items are being pro-rated to the Societies based on the percentage of Membership as at 12/31/64 as follows:

MINING - 32.7%	METALS - 28.8%	PETROLEUM - 38.5%
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3. Institute Activities expenses are net after certain items chargeable against Annual Meeting. The use percentage for 1965 is:

MINING - 34.4%	METALS - 38.8%	PETROLEUM - 26.8%
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4. Secretary's Office - Salt Lake City - Distributed as follows:

MINING - 84.2%	METALS - 15.8%
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5. Business Office - allocated on use basis:

MINING - 34.9%	METALS - 30.6%	PETROLEUM - 34.5%
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6. Metallurgical Society Reprint Sales and Expenses includes the following:

	<u>SALES</u>	<u>EXPENSES</u>
Monthly Transactions reprints.....	\$ 9,500	\$ 2,900
Journal of Metals Reprints.....	7,000	4,000
Page Charges - Transactions Monthly.....	45,800	6,700
	<u>\$62,300</u>	<u>\$13,600</u>

7. Metals Monthly Transactions Sales are pro-rated, 1/12 of actual Sales is taken into income, the balance being deferred over the balance of the year.
8. Journal Sales are pro-rated, 1/12 of Actual Sales is taken into income, the balance being deferred over the balance of the year.

GENERAL

Sections and Student Chapters rebates and expenses are pro-rated over the year in order to prevent too great a distortion in any one month.

REPORT of the BUSINESS MANAGER

The AIME Business Office continues to strive for service and accuracy at minimum cost. Over the last eight years, the work load of the Business Office has continually increased as the Institute has grown by over 8,000 Members and the number of services and publications increased. In spite of this, we have reduced the Business Office by six employees. In 1964 we carried out further staff reductions as dictated by economic pressures; however, we feel that the dedicated work of our present staff members has permitted this economy to be realized without reducing the effectiveness of our output.

During 1964, under the guidance of the General Secretary, the Business Manager undertook a study of our data processing system to determine if further economies and greater accuracy could be realized. AIME President Fethers provided the assistance of two computer experts who worked with us to devise new ways of handling our data processing problems. This resulted in a decision to move our keypunching operation back into our offices as a staff function instead of contracting it to a data processing firm. We did this in September--without increasing staff. Next, we re-designed our entire data processing program to effect economies and presented our new specifications to five data processing services for competitive bids. After considerable study of both the reputation for dependability of these companies and the price which they offered, we signed a contract with a firm which has offices nationwide. This move cut our data processing costs in half. As in all data processing work (particularly when a new company is taking over an account), we have had considerable trouble since signing this contract; however, it is our hope that all of these problems will be ironed out and that our move will not only prove to offer a monetary savings but will result in better service to our Members.


What is the work of the 14-man Business Office staff? It covers the following: Accounting, purchasing, keypunching of data processing cards, changes of address, non-member subscription fulfillment, book sales and billing, addressing, tabulating, shipping, preparation of vast numbers of financial statements and publications audit reports. In addition, the Business Office maintains all personnel records, administers the Endowment and Custodian Funds and all employee fringe benefit plans. Each month a financial statement is prepared showing the month to month changes in income and expenses with a comparison to previous year and current year budgets. Special reports are prepared regularly for the various divisions and committees of the Societies which maintain separate funds. Institute Investments are handled out of the Business Office, as is the financial records of the Women's Auxiliary of AIME. Presently, the Endowment and Custodian Funds total over \$3,000,000; the Annual Budget of the Institute amounts to about \$1,400,000--giving the Business Office a large responsibility in the handling of AIME money.

To provide some idea of the work load carried in the Business Office during 1964, the following figures are provided:

- (1) Over 3,000 checks were drawn for payment for supplies and services.
- (2) Over 100,000 checks were credited to the proper accounts and deposited in the AIME bank account.
- (3) Over 6,500 invoices were issued for book sales, advertising and various other charges.
- (4) Over 20,000 changes of address were processed, coded, keypunched, and transmitted to the data processing service bureau.
- (5) Approximately 75,000 letters and other data were received from Members and other sources and filed in Member folders and to various accounts.
- (6) Approximately \$24,800 was expended for postage on materials handled by the AIME Mailing Office.

Your present Business Manager assumed his job on June 1, 1963. Since that time it has been our constant desire to offer improved service for decreased costs, and we feel that progress is being shown. We are particularly grateful to a dedicated Business Office staff which has handled an ever increasing volume of work, each to the best of his ability. Also, we are very grateful to Treasurer, Gail Moulton, for his advice and supervision, and to President Fethers for his special help in providing expert guidance in our successful effort to decrease data processing costs.

Respectfully submitted,



Dominic A. Lisanti
Assistant Treasurer &
Business Manager

REPORT
of the
INSTITUTE ACTIVITIES DEPARTMENT

Membership

The data in succeeding pages details the gains and losses in 1964 affecting AIME and its constituent Societies.

In briefest form, 1963 and 1964 comparison is:

	<u>SME</u>	<u>SPE</u>	<u>MET. SOC.</u>	<u>AIME</u>
1963 Corporate	11,913	13,854	9,071	34,838
1963 Students	523	416	1,350	2,289
1963 Total	12,436	14,270	10,421	37,127
1964 Corporate	12,019	14,062	9,659	35,740
1964 Students	523	406	1,441	2,370
1964 Total	12,542	14,468	11,100	38,110

Meetings

The many meetings in 1964 were self-supporting. There was no strain on the Institute treasury so far as the meetings were concerned.

Student Relations

Much remains to be done in this area. Significantly, the joint Met. Soc. - ASM membership has increased the Student Member total in the Metallurgical Society. The inauguration of a film list and the forthcoming speaker list will do much to improve our relationship.

Council of Section Delegates

Six Regional meetings were held in 1964. Results of points raised will be finalized at the 1965 Annual Meeting.

Council of Education

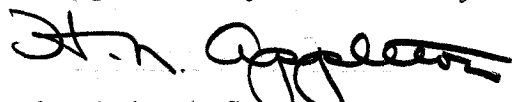
The newsletter continues. Future programs in the Student Relations area will continue to require the assistance of this Council.

Council of Economics

Not only has this Council expanded on its newsletter distribution but also it has taken an enlarged area of the Annual Meeting Program.

The Institute has again gained ground. This gain has, as in the past, been due to the efforts of a great many persons.

Respectfully submitted,


Assistant Secretary

REPORT

of the

CHAIRMEN OF THE ADMISSIONS COMMITTEES

Applications for new membership, reinstatements and change of status, to the number of 4017 came before the Committee during 1964.

The statistical record of Committee actions is given in the following tabulation.

The Chairmen gratefully acknowledge the painstaking work of the Committee.

E. C. Kenney
Metallurgical Society

H. Rush Spedden
Society of Mining
Engineers

H. N. Reavis
Society of Petroleum
Engineers

Classification of Applications received and elections made by the Admissions Committees:

	1963	1964	<u>Mining</u> 1964	<u>Metals</u> 1964	<u>Petr.</u> 1964
New Applications and Reins:					
Members	1,241	1,335	348	361	626
Associates	358	374	118	93	163
Juniors	470	521	70	160	291
	<u>2,069</u>	<u>2,230</u>	<u>536</u>	<u>614</u>	<u>1,080</u>

Applications for C/S

Associate to Member	401	431	64	82	285
Junior to Member	34	36	7	5	24
Junior to Associate	2	2	1	1	--
Student to Member	--	3	1	--	2
Student to Junior	9	8	1	3	4
Member to Student	2	2	1	--	1
Associate to Student	2	--	--	--	--
Junior to Student	3	7	1	5	1
Junior to Joint Student	4	14	--	14	--
Student to Joint Student	161	12	--	12	---
Associate to Joint Student	--	1	--	1	--
Joint Student to Associate	--	--	--	--	--
Joint Student to Student	1	--	--	--	--
	<u>619</u>	<u>516</u>	<u>76</u>	<u>123</u>	<u>317</u>

Applications for Student Mbrs.	1,373	1,271	311	682	278
Grand Total	4,061	4,017	923	1,419	1,675

Automatic Change of Status are not included in above figures due to the fact that applications are not necessary.

Total AIME Membership 1962 through 1964

Classification of Members

	<u>1962</u>	<u>1963</u>	<u>1964</u>	<u>SME</u>	<u>MET. SOC.</u>	<u>SPE</u>
Honorary Members	15	21	18	8	5	5
Members	21,819	22,321	23,048	8,616	5,693	8,739
Associates	5,234	5,435	5,572	1,824	1,614	2,134
Juniors	<u>7,349</u>	<u>7,061</u>	<u>7,102</u>	<u>1,571</u>	<u>2,347</u>	<u>3,184</u>
Total	34,417	34,838	35,740	12,019	9,659	14,062
Student Members	<u>1,857</u>	<u>2,289</u>	<u>2,370</u>	<u>523</u>	<u>1,441</u>	<u>406</u>
	36,274	37,127	38,110	12,542	11,100	14,468

MEMBERSHIP LOSSES, 1964

	<u>SME</u>	<u>SPE</u>	<u>MET.SOC.</u>	<u>AIME</u>
Deaths	117	49	42	208
Resignations	102	72	78	252
Drops	470	936	722	2128
Unaccepted	27	92	5	124
	<u>716</u>	<u>1149</u>	<u>847</u>	<u>2712</u>

Distribution of Members in Societies
During Last Decade as Approximate Percentage

Date	<u>Mining</u> Members %	<u>Metallurgical</u> Members %	<u>Petroleum</u> Members %
December 31, 1955	44.7	24.8	30.5
December 31, 1956	42.2	24.0	33.8
December 31, 1957	39.1	23.0	37.9
December 31, 1958	37.5	22.8	39.7
December 31, 1959	36.0	23.5	40.5
December 31, 1960	35.6	24.1	40.3
December 31, 1961	35.3	25.4	39.3
December 31, 1962	34.5	26.7	38.8
December 31, 1963	33.6	28.0	38.4
December 31, 1964	33.0	29.1	37.9

Membership Data

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

1871 to 1964

<u>Year</u>	<u>Members</u>	<u>Year</u>	<u>Corporate Members</u>	<u>Student Members</u>	<u>Total</u>
	22				
1871	157	1918	7,237	619	7,856
1872	254	1919	7,385	1,041	8,426
1873	273	1920	8,388	1,920	10,308
1874	345	1921	8,879	1,326	10,205
1875	554	1922	8,085	1,328	9,413
1876	628	1923	7,813	1,315	9,128
1877	732	1924	7,555	1,263	8,818
1878	734	1925	7,569	1,157	8,726
1879	788	1926	7,385	1,131	8,516
1880	832	1927	7,434	1,004	8,438
1881	1,031	1928	7,488	1,000	8,488
1882	1,213	1929	7,823	1,033	8,856
1883	1,345	1930	7,831	1,162	8,993
1884	1,467	1931	7,843	1,131	8,974
1885	1,439	1932	7,685	975	8,660
1886	1,504	1933	7,155	672	7,827
1887	1,615	1934	6,887	628	7,515
1888	1,714	1935	6,916	1,006	7,922
1889	1,857	1936	7,326	1,620	8,946
1890	2,000	1937	8,279	2,147	10,426
1891	2,134	1938	9,005	2,898	11,903
1892	2,258	1939	9,614	3,760	13,374
1893	2,392	1940	10,828	4,171	14,999
1894	2,391	1941	11,334	4,179	15,513
1895	2,437	1942	11,675	3,489	15,164
1896	2,390	1943	12,081	2,707	14,788
1897	2,455	1944	12,334	1,497	13,831
1898	2,562	1945	12,910	1,088	13,998
1899	2,564	1946	14,119	1,737	15,856
1900	2,450	1947	15,000	3,117	18,117
1901	2,897	1948	15,580	4,069	19,649
1902	3,262	1949	16,315	4,952	21,267
1903	3,741	1950	17,082	4,534	21,616
1904	3,530	1951	17,482	2,229	19,711
1905	3,886	1952	18,643	1,964	20,607
1906	4,048	1953	19,718	2,195	21,913
1907	4,191	1954	21,816	2,179	23,995
1908	4,241	1955	23,723	2,825	26,548
1909	4,284	1956	26,298	3,415	29,713
1910	4,210	1957	28,823	3,974	32,797
1911	4,169	1958	30,553	3,757	34,310
1912	4,290	1959	33,378	2,332	35,710
1913	4,284	1960	34,852	1,893	36,745
1914	4,150	1961	34,368	1,633	36,001
1915	4,650	1962	34,437	1,857	36,294
1916	5,880	1963	34,838	2,289	37,127
1917	6,597	1964	35,740	2,370	38,110

Membership Contest - All AIME Sections
January 1 to December 31 inclusive

<u>Name of Section</u>	<u>Base</u>	<u>Jan-Dec.</u>	<u>Percent</u>
<u>Group A-00-99</u>			
Alaska	28	2	7.14
Amarillo	6	0	0
Appalachian Petr.	51	4	7.84
Arkansas	57	6	10.52
Big Horn Basin	41	5	12.19
Billings Petr.	89	4	4.49
Black Hills	59	5	8.47
Carlsbad Potash	56	2	3.57
Chicago Petr.	63	16	25.39
Coastal Bend	81	5	6.17
East Kentucky	40	2	5.
Eastern Venezuela	84	23	27.37
Four Corners	85	7	8.23
Great Bend	70	21	30.
Lone Star Met.	65	2	3.07
Northern Plains	55	5	9.09
Northern West Virginia	38	28	73.68
Ohio Petroleum	86	5	5.81
Philippine	82	10	12.19
Richmond	40	2	5.
Roswell	51	8	15.68
Saudi Arabia	73	5	6.84
Snyder	39	2	5.12
South Plains	64	15	23.43
Southwest Alaska	76	1	1.31
Southwestern New Mexico	65	3	4.61
Trans-Pecos	19	0	0
Tri-State	52	2	3.84
Uintah Basin	339	0	0
Upper Mississippi	26	2	7.69
Uranium	62	17	27.41
Utah Coal	51	3	5.88
Williston Basin	62	11	17.74
TOTAL	1855	223	

Group B-100-199

Adirondack	113	44	3.53
Anadarko	104	8	7.69
Balcones	141	6	4.26
Bartlesville	122	11	9.02
California Coastal	105	8	7.62
Caracas	1266	9	7.14
Carolinas	119	5	4.20
Colorado Plateau	1566	4	2.56
East Tennessee	171	8	4.67
CIM-AIME Edmonton	108	8	7.41
El Paso	168	7	4.16
Hobbs	191	22	11.52
Hudson-Mohawk	192	6	3.12
Netherlands	115	20	17.39
Northern Oklahoma	100	8	8.
Oregon	157	8	5.09
Penn Anthracite	193	7	3.62
Texas Coast Min. & Met.	144	5	3.47
Upper Peninsula	196	12	6.12
West Central Texas	139	14	10.07
Western Venezuela	161	14	8.70
Wichita	170	8	4.71
Wisconsin	178	9	5.05
Wyoming Min. & Met.	101	8	7.92
TOTAL	3470	219	

<u>Name of Section</u>	<u>Base</u>	<u>Jan-Dec.</u>	<u>Percent</u>
<u>Group C-200-299</u>			
CIM-AIME Calgary	285	12	4.21
Central New Mexico	210	30	14.28
Connecticut	285	19	6.66
East Texas	209	5	2.39
Fort Worth	212	12	5.66
Illinois Basin	260	31	11.92
Lou Ark	223	7	3.14
Mexico	217	22	10.13
Mississippi	209	17	8.13
Montana	220	2	.90
Nevada	286	8	2.79
Niagara Frontier	233	16	6.86
Panhandle	201	16	7.96
North Texas	244	15	6.14
Peru	232	5	2.15
Spindletop	213	24	11.26
Wyoming Petroleum	<u>212</u>	<u>33</u>	15.56
TOTAL	3951	274	
<u>Group D-300-599</u>			
Boston	395	15	3.79
Central Appalachian	379	12	3.16
Colorado	552	20	3.62
Columbia	310	12	3.87
Denver Petroleum	357	26	7.28
Detroit	491	26	5.27
Evangeline	384	22	5.73
Florida	302	12	3.97
Lehigh Valley	344	20	5.81
Minnesota	495	18	3.63
New York Petroleum	334	22	6.59
North Pacific	308	10	3.24
Ohio Valley	449	26	5.79
Oklahoma	474	29	6.12
Philadelphia	513	33	6.43
St. Louis	540	33	6.11
San Joaquin Valley	325	36	11.08
Southeast	356	36	10.11
Southwest Texas	489	38	7.77
Washington, D.C.	<u>549</u>	<u>15</u>	2.73
TOTAL	8346	461	
<u>Group E-600 & over</u>			
Arizona	844	34	4.02
Chicago	1066	66	6.19
Cleveland	685	26	3.78
Dallas	844	40	4.74
Delta	689	67	9.72
Gulf Coast	1736	101	5.82
Los Angeles Basin	674	34	5.04
Mid-Continent	753	59	7.84
New York	1827	89	4.87
Permian Basin	791	72	9.10
Pittsburgh	1780	126	7.08
San Francisco	1058	35	3.31
Southern California	719	26	3.61
Utah	<u>603</u>	<u>15</u>	2.48
TOTAL	14,069	790	
OUT OF SECTION	<u>3172</u>	<u>229</u>	7.22
	34,863	22,196	

1964 AIME Student Chapter Contest

<u>University</u>	<u>Base</u>	<u>Jan-Dec.</u>	<u>Percent</u>
<u>Group A-60 and Above</u>			
University of Arizona	67	49	73.13
Colorado School of Mines	110	59	53.63
Massachusetts Inst. of Tech.	65	27	41.53
Michigan College of Min. & Tech.	87	49	56.32
Missouri School of Mines	143	73	51.04
Montana School of Mines	90	30	33.33
Pennsylvania State Univ.	63	20	31.74
<u>Group B-40-59</u>			
Case Inst. of Technology	52	35	67.30
Univ. of Illinois	54	21	38.88
Lafayette College	46	30	65.21
New Mexico Inst. of Min. & Tech.	51	16	31.37
Purdue University	45	22	48.88
University of Wisconsin	41	27	65.85
<u>Group C-20-39</u>			
Univ. of Alabama	22	9	40.90
Univ. of California	33	6	18.18
Carnegie Inst. of Tech.	36	36	100.
City College of New York	20	13	65.
Colorado School of Mines (Petr)	34	2	5.88
Columbia Univ. School of Mines	25	8	32.
Cornell University	28	15	53.57
Univ. of Idaho	20	2	10.
Illinois Inst. of Tech.	23	10	43.47
Louisiana State University	34	21	61.76
Mapua Institute of Technology	37	42	113.51
Univ. of Michigan	39	11	28.20
Univ. of Minnesota	24	8	33.33
Ohio State University	20	18	90.
University of Pittsburgh	21	23	109.52
Poly. Institute of Brooklyn	28	10	35.71
Stanford University	38	11	28.94
A & M College of Texas (Petr.)	25	20	80.
University of Texas	26	7	26.92
Texas Western College	33	14	42.42
University of Tulsa	26	15	57.69
University of Washington	27	11	40.74
Washington University	27	1	37.01
<u>Group D-10-19</u>			
University of Houston	11	3	27.27
University of Kansas	15	8	53.33
University of Kentucky	16	4	25.
Marietta College	14	12	8.57
New York University	16	7	43.75
University of Oklahoma	17	13	7.64
University of Pennsylvania	15	--	---
South Dakota School of Mines	17	14	8.23
Texas Technology College	13	3	23.07
University of Utah	18	23	12.77
Virginia Poly. Institute	10	8	80.
Wayne University	11	6	54.54
University of Wyoming	11	1	9.09
Yale University		1	8.33

	<u>Base</u>	<u>Jan-Dec.</u>	<u>Percent</u>
<u>Group E-9 and Under</u>			
University of Alaska	5	8	16.
Calif. State College at L.A.	1	-	
Dartmouth	1	-	
University of Florida	-	2	100.
Lehigh University	2	9	900.
Louisiana Poly. Inst.	9	1	11.11
University of Nevada	5	10	200.
University of New Mexico	-	7	350.
North Carolina State College	2	--	
University of North Dakota	-	7	87.50
Oklahoma State University	8	7	700.
University of Oregon	1	9	150.00
Pennsylvania State University	6	-	
Princeton University	-	15	300.
University of S. W. Louisiana	5	1	25.
St. Louis Univ. Inst. of Tech.	4	5	55.55
Univ. of Southern California	9	3	50.
Syracuse University	6	14	200.
Texas College of Arts & Industry	7	9	180.
Washington State University	5	2	25.
West Virginia University	8	-	
University of Wichita	-	-	
Wisconsin Institute of Tech.	4	3	300.
 Out of Section	 429	 285	 66.43

REPORT
of the
WESTERN FIELD SECRETARY

To provide a geographically appropriate agency for communication, liaison and coordination among the widespread Western Sections, Subsections and Student Chapters the Institute maintains a Western Field Office at 707 Newhouse Building, Salt Lake City, Utah. This office is staffed by the Western Field Secretary and a stenographer. It is the intent of the Secretary to offer the manifold services of AIME to Western Mining and Metallurgical Society members with a maximum of personal contact and individual attention. So that the functions of the office could be carried out in this spirit during 1964, visits were made to 24 Sections and Subsections, nine Student Chapters and nine major conferences plus AIME and Society Boards of Directors meetings and three meetings of Regional Councils of Section Delegates. Realizing the importance of a close relationship between an individual member and the officers who represent him, arrangements were made for the attendance of Institute and Society Officers at 34 meetings during the year.

Sections and Subsections Visited During 1964 By C. J. Hicks

1. Arizona Section, (Annual Meeting)
2. Arizona Section, Ajo Subsection
3. Arizona Section, Bisbee-Douglas Subsection
4. Arizona Section, Maricopa Subsection
5. Arizona Section, Morenci Subsection
6. Arizona Section, Yavapai Subsection
7. Black Hills Section
8. Carlsbad Potash Section
9. Central New Mexico Section
10. Colorado Plateau Section
11. Columbia Section
12. El Paso Section (2)
13. Montana Section (Annual Meeting)
14. Nevada Section
15. Nevada Section, Eastern Nevada Subsection
16. Southeast Section
17. San Francisco Section (2)
18. Southern California Section
19. Southern California Section, Southern Sierra Subsection
20. Southwestern New Mexico Section
21. Texas Coast Mining and Metals Section
22. Uranium Section
23. Utah Section (7)
24. Utah Coal Section

Conference Assistance

The Western Field Office directly assisted in the planning and execution of three major Western mineral conferences

held during 1964 and acted in an advisory capacity for several others.

Meetings and Conferences Attended by C. J. Hicks in 1964

1. Annual Meeting, Idaho Society of Professional Engineers, Boise, Idaho.
2. National Western Mining Conference, Denver, Colorado.
3. 93rd AIME Annual Meeting, New York, N.Y.
Including: Committee of Region Representatives
TMS Board of Directors
SME Board of Directors
AIME Board of Directors
Institute Annual Business Meeting
4. Utah Society of Professional Engineers, Salt Lake City, Utah.
5. Pacific Southwest Metals and Minerals Conference, Los Angeles, California.
6. Ninth Annual Minerals Symposium, Moab, Utah.
7. VIIth Annual International Minerals Processing Congress and SME Fall Meeting, New York, N.Y.
Including: Northeast Region Council of Section Delegates
SME Board of Directors
AIME Board of Directors
8. Intermountain Symposium on Fossil Hydrocarbons, Salt Lake City, Utah.
9. Pacific Northwest Metals and Minerals Conference, Vancouver, B.C.
Including: Northwest Region Council of Section Delegates

Meetings and conferences attended by the Western Field Secretary were written up in a form suitable for publication and submitted, together with appropriate captioned photographs, to the editorial staffs of Mining Engineering and the Journal of Metals.

Monthly Report

A comprehensive monthly report of the activities and plans of the Western Field Office was submitted to the General Secretary with copies to the three Society Secretaries. Included in these reports were comments believed worthy of staff attention, gained from correspondence and conversation. These reports will be continued during the coming year.

Student Members

To maintain contact with graduating Student Members, 214 brief questionnaires were mailed to 16 western colleges of mineral engineering. Seventy-three members receiving degrees in mineral engineering, excluding petroleum, responded. Of special interest were the 32 who indicated that they were entering industry shortly after the receipt of their degrees. These men were sent personal letters from this office informing them of the names and addresses of the officers of the AIME Section appropriate to the geographical area in which they were to reside.

Also listed were the usual meeting time and place of the Section. Chairmen and Secretaries of the involved Section received copies of the letters and were requested to place the new members on their mailing lists and urged to personally invite them to a Section meeting.

A program designed to help students of mineral engineering obtain temporary summer employment was continued by this office. Two hundred ten western companies actively engaged in mining and/or metallurgical operations were contacted with the request that they consider offering summer employment to students of mineral engineering. Eighty-six companies responded with 134 job openings. Faculty Sponsors of Student Chapters of 22 western colleges of mineral engineering were simultaneously supplied with the necessary information regarding the openings so that interested students might make application directly to the employer.

Student Chapters Visited during 1964 by C. J. Hicks

1. University of Arizona
Tucson, Arizona
2. University of California
Berkeley, California
3. University of Idaho
Moscow, Idaho
4. University of Oregon
Eugene, Oregon
5. Oregon State University
Corvallis, Oregon
6. Stanford University
Stanford, California
7. University of Utah
Salt Lake City, Utah
8. University of Washington
Seattle, Washington
9. Washington State University
Pullman, Washington

Membership

In addition to supplying routine aids to Section Membership Chairmen and giving talks familiarizing prospective members and students with the functions and aims of AIME, the Western Field Office has put various other sources of potential members to good use. Conference registration lists were screened for non-member participants. The names, addresses and company affiliations of these men were sent with a letter of transmittal to the appropriate Section Chairman, Secretary and Membership Chairman. The names of prospective members obtained from trade journals, industrial communications and newspapers were treated in a like manner.

A general mailing of a list of 14 "Suggestions for Stimulating Attendance at AIME Section Meetings" was made to all Chairmen of Sections whose interests are dominantly mining or

metallurgy. Officers and Directors of AIME, TMS and SME also received the list. It is recognized that increased meeting attendance and increased membership are directly related.

AIME Display

A three-panel folding portable display of AIME and Society informational and promotional material was prepared for the purpose of publicizing the Institute at a meeting of the Utah Society of Professional Engineers. Other constituent technical groups displayed similar exhibits. The three 24" x 48" masonite panels were painted in colors representing the three constituent Societies of AIME and appropriately titled. Promotional pieces were affixed with mastic to facilitate change. It is believed that this display could be studied as a possible prototype for additional units that would be circulated among various regional meetings and Student Chapters to stimulate membership. Mr. William Haddon, Director of Public Relations for AIME, is charged with the continuation of this project.

Plans for 1965

Plans are to continue and expand all aforementioned services and functions.

Sincerest thanks are offered to the many Institute members whose helpful comments, willing cooperation and warm hospitality made 1964 a successful and rewarding year.

Respectfully submitted,

CLIFFORD J. HICKS

Western Field Secretary, AIME

REPORT

of the

SECRETARY OF THE SOCIETY OF PETROLEUM ENGINEERS OF AIME

Publications: Journal of Petroleum Technology

A total of 1,502 pages were published in Journal of Petroleum Technology during the year, compared to 1963's previous record total of 1,442. This total includes the largest number of editorial pages -- 1,008 -- ever published in the monthly magazine, comparing to 979 in 1963, 956 in 1962, and 829 in 1961.

Advertising revenues in Journal of Petroleum Technology kept pace with the growth in editorial material during 1964. Net income from advertising in the monthly magazine and in the 1964-65 SPE Membership Directory totaled \$176,049, a 6.1 per cent increase from last year's income of \$165,989.

Publications: Society of Petroleum Engineers Journal

Since its founding in 1961, the Society's quarterly journal has experienced a steady growth in both size and circulation -- and 1964 saw this growth continue. In 1961 the Journal contained 295 pages of technical material, compared to 372 pages published in 1964 -- an increase of approximately 25 per cent during the four-year period. The December, 1961 issue of the Journal had a circulation of 1,625; the same issue in 1964 had a circulation of 3,059, a growth of 88 per cent in four years. The Journal is mailed free of charge to all SPE-AIME Members who request it. Production expenses for the periodical during 1964 totaled \$12,540. Income from sale of non-member subscriptions amounted to \$3,655.

Publications Transactions

Transactions Volume 231, to be available around March 1, 1965, will contain 684 pages, down slightly from last year's record-size volume which contained 704 pages. Although more manuscripts were submitted for publication in Transactions than ever before, fewer were judged to be significant enough for retention in this, the permanent literature of the petroleum engineering profession.

During 1964 papers were selected for inclusion in two new Transactions Reprint Series booklets. No. 7--Thermal Recovery Processes will be published during the first quarter of 1965, while No. 8--Miscible Displacement should be available for sale by mid-year. Net income from the sale of reprint booklets in 1964 amounted to \$2,715, compared to \$5,793 in 1963, and \$3,581 in 1962. Net income to the SPE Activities Fund during 1964 from sale of reprinted Petroleum Transactions volumes (1925-1953) was \$920.

Publications: 1964-65 SPE Membership Directory

The SPE Membership Directory more than paid for itself during 1964, for the first time in the five years during which it has been produced as a separate publication. Advertising income of \$6,703 exceeded production costs of \$5,859 by \$844. For the second successive year, the Directory was composed by computer printout and then printed by offset lithography. It is issued free of charge to all SPE-AIME members who request it.

Publications: Commercial

SPE continued to sell to members, at reduced prices, books printed by commercial publishers. The gross income from this activity was \$14,764, with a net income to the Society of \$2,272.

Publications: Special

Sales continued for SPE's two previously published books. Income from Anti-trust Laws et al vs Unit Operations of Oil or Gas Pools was \$86. Income from Elements of Petroleum Reservoirs amounted to \$2,015.

Meetings:

The Society this year conducted the largest Annual Fall Meeting in the history of the Society. This 39th Annual Fall Meeting was held in Houston on October 11-14. Total attendance was 3,748, with 2,740 men and 1,008 women. The meeting included the presentation of 114 technical papers and the staging of 165 oil industry exhibits.

SPE regional meetings were held in the following cities, with attendance as indicated: Ft. Worth, Texas - 379; Wichita Fall, Texas - 774; Hobbs, New Mexico - 278; Casper, Wyoming - 368; Farmington, New Mexico - 118; Pittsburgh, Pennsylvania - 177; and Los Angeles, California - 700. A total of 110 technical papers were presented at these meetings. For the first time the Society held one day regional meetings in Farmington and Pittsburgh to better serve the membership. These one day regional meetings will be expanded during 1965 and will give more SPE members the opportunity to keep abreast of changing technology.

Membership:

During 1964 the Society received 1,202 new member applications as compared with 1,118 for 1963 and 950 for 1962. This year the Society awarded prizes to individuals rather than to Local Sections and the outcome was quite rewarding. After subtracting the member losses during the year for non-payment of dues and other reasons, our net membership increase is 198. Society membership at December 31, 1964 was 14,468 as compared to 14,270 at December 31, 1963. The following is a breakdown by category, the Society's membership at December 31, 1964:

Section Visitation:

The SPE officers and staff visited some 28 Sections during 1964. A list of these, plus those Sections visited by T. C. Frick, AIME President elect, is as follows:

Anadarko Basin	North Texas
Bartlesville	Oklahoma City
Chicago	Permian Basin
Dallas	Pittsburgh Subsection
Evangeline	Saudi Arabia
Ft. Worth	South Plains
Four Corners	Southwest Texas
Gulf Coast	West Central Texas
Hobbs Petroleum	Wyoming
Los Angeles	Texas Technological College
Mid-Continent	University of Kansas
Mid-West Gas Storage	University of Tulsa
Netherlands	Oklahoma State University
Panhandle	Libya

Finance:

Society income from membership dues and fees, publication sales, and miscellaneous in 1964 was \$ 471,780, compared with \$ 460,790 in 1963.

Special Activities:

With the rapid advance in technology in recent years the problem of continuing education to maintain technical competence has become a serious one for many members of the Society. The Society Board of Directors has recognized this problem, and during 1964 the Board retained Mr. Monroe W. Kriegel to conduct a study of it. He conducted the study during the summer months and submitted a report, analysis and recommendations to the Board of Directors in October. The report was published in the December, 1964 issue of Journal of Petroleum Technology. With the study, the Society has taken a lead in developing a program of continuing education to serve its members, and the next few years will undoubtedly bring forth activities and programs in this field which will be of significant value to members.

Awards:

Major Society awards presented during 1964 include:

John Franklin Carll Award

Donald L. Katz, The University of Michigan

Cedric K. Ferguson Medal

Elmer L. Dougherty, Standard Oil Co. of California

Lester C. Uren Award

Gustave E. Archie, Shell Development Company

Members	<u>8,744</u>
Associate Members	<u>2,134</u>
Junior Members	<u>3,184</u>
Student Members	<u>406</u>
TOTAL	<u><u>14,468</u></u>

This year the Society changed its membership award to make it an individual contest instead of one between Local Sections. The contest is still conducted on a Section basis, divided according to size. The Local Sections are divided into five groups; less than 100 members - group A; 100 to 199 members - group B; 200 to 299 members - group C; 300 to 499 members - group D; and 500 or more members - group E. One Member within each group was awarded a gold desk clock, appropriately engraved with his name and citation. The award was made to the individual obtaining the largest number of new applications within the Local Section which had the largest percentage increase in new members for the year. The winners of the individual membership clock awards are listed below with their respective Sections and the number of new applications obtained by each.

<u>Group</u>	<u>Winners Name</u>	<u>Number Applications Obtained</u>	<u>Local Section</u>	<u>Total Local Section Applications</u>	<u>Percent Increase</u>
A	James N. Ryan	15	Northern W. Va.	28	73.68
B	O. T. Maxwell	7	Hobbs Petroleum	22	11.58
C	Robert B. Giles	21	Wyoming	33	15.57
D	R. L. Johnson, Jr.	11	Southwest Texas	38	7.79
E	E. E. Runyan	18	Permian Basin	72	10.45

Section Development:

Three new Sections were established in 1964 -- The Trans-Pecos Section, the Amarrillo Section and the Midwest Gas Storage Section. In addition to these, three Sections we now have an affiliate group of petroleum engineers in Libya. This Section is not an AIME Section but is called the Libian Association of Petroleum Technologists and they meet in Tripoli, Libya. This brings our number of Petroleum Sections to 55 not including the Libian Association and we have three Subsections predominantly petroleum in membership.

Report of 1964 Editorial Committees:

Total Number of Papers Handled by 1964 Editorial Committees:

Carried over from 1963.....	113
Papers received in 1964.....	301
TOTAL.....	414

Disposition:

Papers published as Technical Papers in JPT.....	37
Papers published as Technical Articles in JPT.....	79
Papers published in SPEJ.....	36
Papers declined.....	111
Papers withdrawn.....	14
Papers pending action at present.....	70
Papers approved for Technical Articles in 1965 JPT.....	38
Papers approved for Technical Papers in 1965JPT.....	15
Papers approved for 1965 SPEJ.....	14
TOTAL.....	414

Distinguished Lecturer Program:

During the 1963-64 season, the following Distinguished Lecturers presented a total of 85 lectures before SPE Local Sections throughout the United States:

William S. Eggleston	10
M. King Hubbert	15
Paul D. Torrey	17
Arthur Lubinski	17
Lincoln F. Elkins	20
Hallan N. Marsh	6
Total	85

Respectfully submitted,

Joe B. Alford
Executive Secretary

REPORT
of the
SECRETARY OF THE SOCIETY OF MINING ENGINEERS

This report covers the period February 1964 - February 1965. For SME this was a successful year in every respect.

It is our intent here to examine all phases of Society activity and report briefly on each.

PUBLICATIONS

Transactions of the Society of Mining Engineers of AIME and AIME Transactions Volume 229 Mining

During 1964 two hundred eighty-eight papers were processed. This is 12% more than 1963. The Quarterly was distributed as usual in March, June, September and December. Bound Volume No. 229, 450 pages, was ready for distribution on January 29.

Total income, resulting from sale of 967 subscriptions and 1710 copies of the bound volume, was \$25,422. Total expense to produce these was \$31,795. Net cost per member is \$0.5124. The table below shows how the Divisions contributed to the 288-paper total.

<u>Division</u>	<u>Papers Processed</u>	<u>Declined</u>
M & E Div.	71	8
MBD	109	12
Coal	51	5
IndMD	43	3
Economics	14	3
Total	<u>288</u>	<u>31</u>

The members of SME owe a debt of gratitude to the Publications Committees of all four Divisions of the Society and to Mrs. Louise Capria who kept track of all 288 papers and the complex correspondence concerning each of them.

PREPRINTS

In 1964, 121 Annual and Fall Meeting papers were pre-printed. These were distributed in exchange for coupons at the meetings and via mail. One hundred complete sets of preprints were mailed free of charge to 100 mineral industry schools at home and abroad, with compliments of the Society. Net cost of the Preprint Program in 1964 was \$2,973 or \$0.2391 per member.

MINING ENGINEERING

During 1964 MINING ENGINEERING enjoyed its most successful year. Advertising volume was up 41.5% to 575 pages. Industrial Marketing, the magazine of the advertising industry, reported that MINING ENGINEERING ranks tenth among more than 200 industrial magazines in new advertising pages gained in 1964. We were first among mineral industry magazines. MINING ENGINEERING now has a larger share of the total market (18.5 percent) than ever before.

Through courtesy of Mr. Clyde E. Weed, The Anaconda Co. chairman, MINING ENGINEERING presented the first detailed report on the new concentrator at Butte.

Editorial Director, J. V. Beall, toured the mining areas of Australia and New Zealand to gather material for the October issue. His report has become required reading for the many U. S. mining men visiting that part of the world.

Managing Editor, Paul C. Merritt and his editorial team, Mr. Serge Delinois and Miss Fairley Muehleck, are responsible for the lively modern appearance, pithy material and general excellence of the magazine. Western Field Secretary, C. J. Hicks, did yeoman duty with news and photographs for 'Around the Sections' and SME News. R. W. Wilson and R. W. Hoppe are commended on their fine sales job.

Artist Herb McClure again did all our covers as he has for many years. His versatility and change of pace make MINING ENGINEERING the envy of the other books in the field.

The 827 pages of editorial material in MINING ENGINEERING is classified in the table below. It is difficult to maintain a balance of articles and keep costs within bounds. The SME Publications Department does very well in this respect as this classification shows.

<u>Division</u>	<u>Articles Supplied</u>	<u>Pages</u>
Mining and Exploration	30	68
Coal	12	55
Industrial Minerals	12	47
Minerals Beneficiation	25	105
Economics, Management	31	120
Departments*	--	432
Total	110	827

* Includes Section News, Personals, Obituaries, Book Reviews, Abstracts, SME & AIME News, Letters to the Editor, etc.

FINANCES

As intimated in the introduction to this report, 1964 was a most successful year financially for SME. The Society not only made restitution for the 1963 operating deficit of \$6,687 but finished the year with a spanking \$13,903 excess of income over expense.

The table below gives the over-all financial picture at year end in dollars and dollars per member. (Membership for this purpose is taken as 12,436.)

	<u>I N C O M E</u>		<u>E X P E N S E</u>	
	<u>Total</u>	<u>Per Member</u>	<u>Total</u>	<u>Per Member</u>
Membership	\$226,310	\$18.197		
Publications	248,145	19.955	\$279,914	\$22.508
Other	4,313	.346		
Society Direct			73,214	5.887
AIME Headqtrrs.			107,155	8.616
To or From Funds	<u>2,105</u>	<u>.169</u>	<u>6,687</u>	<u>0.538</u>
Totals	\$480,873	\$38.667	\$466,970	\$37.549
To SME Activities Fund			<u>13,903</u>	<u>1.118</u>
Totals	\$480,873	\$38.667	\$480,873	\$38.667

MEMBERSHIP

The SME Admissions Committee considered a total of 923 applications during 1964. This includes applications for change of status and 311 student membership applications. Automatic Students to Juniors and Juniors to Member (or Associate Member) are not counted. Losses amounted to 716 for the following reasons:

117 Deaths
 102 Resigned
 27 Failure to accept election
 103 Failure to accept change in status
 367 Dropped for failure to pay dues

Total membership at the end of 1963 was 12,436. On December 31, 1964 it was 12,542. Thus, the Society enjoyed a net gain of 106 members, including students.

The AIME Membership Chairman for 1964 was James E. Bilderback, last year's SME Chairman. He was as energetic in the over-all job as in the Society role.

Frank Gaddy, 1964 SME Membership Chairman, was particularly active all during the year.

At the American Mining Congress Coal Show AIME had an impressive display that attracted more than 800 prospective members. A copy of "De Re Metallica" was presented each day to the holder of a "lucky" number. The names of registrants were checked against our files and the resulting prospect list is being actively followed up. The exhibit was planned and manned by SME Ass't. Secretary, D. R. Tone and AIME Public Relations Manager, Wm. F. Haddon.

Membership booths were set up and manned also at the Coal Division Field Meeting, the Illinois Mining Association Annual Meeting, the West Virginia Coal Mining Institute-Central Appalachian Section Spring and Fall Meetings. Again this year we had a membership display at the Duluth Meeting of the Minnesota Section.

The SME Fall Meeting-VII International Mineral Processing Congress netted its quota of prospects and new members. However, it is difficult to forecast how many members any particular effort will net, or when. For example, in September 1964 we received a completed coded application form distributed in 1959!

That efforts at Membership development during 1964 and previous years have been successful is evidenced by the net increase of 106 members during 1964 compared to a net decrease of 86 members in 1963.

Five Year Membership Comparison

<u>Year</u>	<u>Total</u>	<u>Students</u>
1964	12,542	523
1963	12,436	523
1962	12,522	524
1961	12,694	541
1960	13,083	652

MEETINGS

Starting with the 93rd Annual AIME Meeting in New York just a year ago, the Society of Mining Engineers has had a very busy year.

The Society was a co-sponsor with the Henry Krumb School of Mines of Columbia University of the IV International Symposium on Rock Mechanics and Strata Control, May 4-8. More than 495 registrants from 25 countries attend this meeting.

SME Coal Division Annual Field Meeting in Marion, Ill., attracted about 175 members and non-members.

IV International Symposium on Applications of Statistics, Operations Research and Computers in the Mineral Industries, April 20-24, was organized by the Colorado School of Mines and co-sponsored by SME.

SME members took active part in the Southwest Minerals and Metals Conference, May 14-15, in Los Angeles although the Society itself just served as a publications medium in connection with this meeting. Approximately 250 people registered.

SME was represented at the AAPG-SEPM Meeting in Toronto, May 18-21, and at the AGI House of Representatives Meeting, there by W. S. White who served as Proxy for Ernest Ohle.

The 9th Annual Minerals Symposium at Moab, Utah, May 22-24, attracted many SME members. Actually 60 of the 64 members of the Uranium Section are affiliated with SME.

From September 20-25 more than 930 mining men and ladies from 25 countries attended the 1964 SME Fall Meeting and VII International Minerals Processing Congress. Each year the SME Fall Meeting has increased in size and importance. In 1965 it will be a joint venture with the Rocky Mountain Minerals Conference in Phoenix, Arizona, October 7,8,9.

At the G.S.A. Meeting in Miami, Florida, on November 17 there was another AGI House of Representatives Meeting at which Norman Donald represented AIME as proxy for Ernest Ohle.

The Society also co-sponsored the VI Symposium on Rock Mechanics at the School of Mines and Metallurgy, Rolla, Mo., October 28-30, attended by 200 persons. Organization for this meeting, too, was carried out by the other sponsors while SME supplied publicity, etc. Other sponsors were University of Minnesota, Colorado School of Mines, University of Missouri and Pennsylvania State University. SME will co-sponsor the VII Symposium of Rock Mechanics at Pennsylvania State University, University Park, Pa., on June 14-16, 1965. For this meeting we will not only do the publicizing but also preprint the papers to be presented.

I would like to take this opportunity to express the thanks of the Society to SME Program Chairman, Deane F. Kent, Assistant Chairman, J. R. Lucas, the Program Chairmen of the four divisions-Messrs. J. E. Brown, Jr., S. J. Lefond, Wm. T. Marston, R. M. Stewart and all the members of their Committees. The Programs they put together for the Fall Meeting and the 94th AIME Annual Meeting this year will be hard to beat. Mrs. L. E. Donaldson has been invaluable in keeping track of all the correspondence that goes into putting on a convention. She and Miss Ruth M. Cruz handled all the advance registration, ticket sales, etc. in connection with the SME Fall Meeting-VII IMPC in addition to the usual multitude of chores in connection with a meeting that fall to the lot of the 'Girls Friday' of the Society Secretary.

During the year SME Officers, Directors and Staff Members did a lot of visiting - from Alaska to Australia and New Zealand. A month by month account of these travels is given below. On most of the occasions listed the man whose initials appear was the principal speaker. The key to initials is as follows:

SSC	-	Sandford S. Cole	-	1964 President
JME	-	Jack M. Ehrhorn	-	1965 President
WLD	-	Wayne L. Dowdey	-	AIME-SME Director
JP	-	John Peperakis	-	SME Director
JCF	-	John C. Fox	-	SME Secretary
JVB	-	John V. Beall	-	Editorial Director
DRT	-	Donald R. Tone	-	Ass't. SME Secretary
PCM	-	Paul C. Merritt	-	Managing Editor
RJL	-	Robert J. Lacy	-	SME Director
RWW	-	Robert W. Wilson	-	Western Advert. Mgr.
RWH	-	Richard W. Hoppe	-	Eastern Advert. Mgr.

January

<u>Dates</u>	<u>Event</u>	<u>Attended</u>
8-10	Southeast Section	JCF
12	University of Minnesota	DRT
13-15	Minnesota Section Annual Meeting	DRT, PCM
12-14	E.J.C. Meeting in Washington, D.C.	SSC

February

5	Engineering Foundation Research Com.	SSC
14-21	AIME Annual Meeting	SSC, JCF, JVB, DRT, PCM

March

5	Mudson Mohawk Section	SSC
12	Inter-American Round Table	JCF
12	Connecticut Section	SSC
7	Opening Ceremonies Columbia School of Mines Centenary Year	JCF
7	Colorado Plateau Section Annual Mtg.	JP
13	EJC Executive Committee Meeting	SSC
11	Uranium Section	WLD
18	Niagara Section	SSC, JCF
19-21	Alaska Section	SSC
19	New York Section	JCF, JVB

Travel-2

April

<u>Dates</u>	<u>Event</u>	<u>Attended</u>
8	Investment Committee AIME	SSC
9	Engineering Foundation Research Comm.	SSC
15-18	Coal Division Field Meeting	SSC, JCF, DRT, PCM
17	Utah Section	JME
28-29	American Geological Institute Advisory Committee	JCF
24	Colorado Plateau Section	RJL
30	AIME Staff Meeting - Chicago	JCF
30	Columbia Section	JME

May

1	Washington State University Students	JME
1	University of Idaho Students	JME
1-2	Chicago Section	JCF
6	AIME Finance Committee	SSC
7	Engineering Foundation Board of Dir.	SSC
3-8	IV International Conference on Rock Mechanics & Strata Control	JCF, JVB, DRT, PCM
11-14	AMC Coal Show	JVB, DRT, RWW, RWH
14-16	Southwest Minerals & Metals Conf.	SSC, JVB
14	Ambrose Monnet Award Presentation	JCF
18	Morenci Subsection	SSC
18	Industrial Min. Div. Executive Comm.	JCF
19	Bisbee Douglas Subsection	SSC
20	Yavapai-Maricopa Subsection	SSC
20	Mining & Metallurgical Society of America	JCF
21	Ajo Subsection	SSC
22-23	IX Annual Minerals Symposium	SSC, PCM
25	Southwestern New Mexico Subsection	SSC
26	Carlsbad Potash Section	SSC
28	Texas Coast Mining & Metall. Section	SSC

June

5-24	Australia Visit - addressed Darwin Australia Branch AUSIM	JVB
12	Utah Coal Section	JME
15	National Coal Association	JCF
19	Pennsylvania Anthracite Section	JCF
21	SME Executive Committee	SSC, JCF
22	National Problems Affecting Mineral Industry	SSC, JCF
23	AIME Board of Directors	SSC, JCF

Travel-3

July

<u>Dates</u>	<u>Event</u>	<u>Attended</u>
25-28	New Zealand	JVB

August

5	Latin American Students at UEC	JCF
29	Adirondack Section	SSC

September

2	Investment Committee	SSC
11	EJC Executive Committee	SSC
16	Engrng Foundation Research Comm.	SSC
20-25	SME Fall Meeting-VII IMPC	SSC, JME, WLD, JVB, PCM, DRT, JCF
26	Central New Mexico Section	JME

October

7	Richmond Section	SSC
8-9	Eriez Magnetics	SSC, JCF
8	Engineering Foundation	SSC
10	East Tennessee Section	SSC
14	San Francisco Section	SSC
15	Univ. of Calif. at Berkeley Students	SSC
16	Stanford University Students	SSC
17	Eastern Nevada Subsection	SSC
19	Utah Section	SSC
21	Montana Section	SSC
	University of Washington Students	JME
22	University of Oregon Students	JME
23	Oregon State Students	JME
23	Columbia Section	SSC
23-24	Carlsbad N. Mexico Intl. Mining Days	JCF
	S.W. Regional Conference Section Del.	JCF, HNA
25	N.W. Regional Conference Section Del.	SSC
25-26	Maricopa Subsection Committees	JCF, HNA
26-28	Pacific N.W. Metals & Minerals Conf.	SSC
27	Mackay School of Mines	JCF, HNA
28	San Francisco Section	JCF, HNA
28-30	VII Symposium on Rock Mechanics, Rolla	JVB
30	Chicago Section Committees	JCF, HNA
28	Missouri School of Mines Students	JVB

November

<u>Dates</u>	<u>Event</u>	<u>Attended</u>
5	Wisconsin Section	SSC
6	Pittsburgh Off-the-Record Meeting	SSC
	Lehigh Valley Section Meeting	DRT
13-14	Central Appalachian Section Fall Mtg.	SSC, JCF
16	Arkansas Section	SSC
24	Mining Club	JCF
	Upper Mississippi Section	SSC

December

1	Washington, D.C. Section	SSC
2-4	National Academy of Science Rock Mechanics Committee	JME, JCF
3	New York Section	SSC, JVB, DRT
4	EJC Executive Committee Meeting	SSC
6	Arizona Board of Governors	JCF
7	Arizona Section Annual Meeting	JCF
	University of Arizona Students	JCF
	Florida Section	SSC
16	AIME Investment Committee	SSC

There are only 20 Honorary Members of AIME in the world at any one time. The SME members listed below were inducted into this select group in 1964.

Mr. Nils H. Magnusson
Sir Maurice Mawby
Mr. Reno H. Sales

The following SME members were awarded Society and Institute Honors:

Walter C. Lawson	The William Lawrence Saunders Medal
James C. Gray	Erskine Ramsay Gold Medal
Ira B. Humphreys	Robert H. Richards Vanning Plaque
Louis Ware	Hal Williams Hardinge Plaque
Arthur A. Brant	Daniel C. Jackling Plaque
Arthur W. Ruff	Robert Peele Memorial Award
James R. Garvey	Percy Nicholls Award for 1963

Of the 47 AIME Members awarded the Legion of Honor after fifty years of continuous membership, 37 were SME members. Their names are as follows:

E. T. Austin	S. P. Hatchett
F. A. Ayer	O. Herres
H. N. Baumann	P. E. Holme
G. N. Bjorge	J. F. Johnson
W. H. Coghill	L. W. Kemp
T. B. Counselman	R. B. Ladoo
A. W. Dickinson	M. L. Latham
W. C. Douglas	C. E. Lawall
D. MacD. Dunbar	J. P. Lyden
D. Dyrenforth	E. I. Montoulieu
L. L. Farnham	H. E. Nold
W. Fitch	F. S. Norcross, Jr.
G. E. Goodspeed	H. H. Otto
C. C. Griggs	S. Paige
V. C. Grubnow	W. L. Remick
H. F. Guggenheim	R. E. Walters
J. B. Harper	J. B. Warriner
W. Hastings	M. R. Wolfard
	H. G. Young

ORGANIZATION

On December 3rd J. C. Fox, SME Secretary and J. M. Ehrhorn, SME President-elect, met with members of a National Academy of Science Committee and representatives of other professional organizations interested in Rock Mechanics, to discuss ways in which communications can be improved in this fast growing field.

This NAS Committee, in existence for more than a year before this meeting, has done a tremendous amount of research and generated a number of ideas. Consensus of this meeting was that, if a Professional Society home for those working in the field of Rock Mechanics is needed, AIME already provides such a home. However, an interdisciplinary committee should be set up including representatives of all interested societies. This committee will provide the liaison necessary to arrange for annual Rock Mechanics meetings in conjunction with the Fall Meeting of one of the Societies each year. These meetings can be national or international in scope as well as interdisciplinary in character.

In the matter of publication of papers on Rock Mechanics, it was agreed that a professional market survey should be launched to determine whether a separate periodical would be economically feasible. Results of the survey will be made available to all interested Societies. Here again it was the consensus that the publications of AIME already offer a logical medium for publication of most of the papers generated on the subject of Rock Mechanics.

During 1964 Miss Jean G. Blair, Associate Editor of MINING ENGINEERING resigned to be married. Mr. Serge Delinois is now efficiently performing the duties of Associate Editor.

At the end of the year Mr. Richard W. Hoppe, Eastern Advertising Manager, resigned to accept a position as Research Engineer with Kennecott Copper Co. in Salt Lake City. His leaving, after a very successful two years with MINING ENGINEERING, has occasioned considerable staff shifting. Mr. Donald R. Tone, Ass't. Secretary-SME, has taken over the position of Eastern Advertising Manager. Mr. John V. Beall adds the title Assistant Secretary to the one he already holds-Editorial Director. Mr. Paul C. Merritt moves up to the post of Editor SME from Managing Editor, MINING ENGINEERING. Mr. Joel A. Roth has been hired to fill the post of Associate Editor. Mrs. Lillian E. Donaldson moves up to the post of Administrative Assistant from Secretary to J. C. Fox.

In this new position Mrs. Donaldson will handle the details of the Annual and Fall Meetings' Programs that she has so ably managed over the past few years. She will now add to these the duties in connection with meetings formerly discharged by Mr. Tone.

In the course of this report I have mentioned gratefully a number of the people who have been so helpful in making this SME's most successful year. Now I would like to express the thanks of the Officers and Staff to all the other members of SME whose support and understanding are vital to our operations this year and every year.

Last, I want to express our appreciation for the fine cooperation we have had from General Secretary, R. W. Taylor and his staff; Assistant AIME Secretary, H. N. Appleton and the ladies in his department; and Assistant AIME Treasurer, Dominic Lisanti and the Business Office.

The end of the old year marks the beginning of a new year-a time for resolutions. We, the Staff of SME of AIME, resolve that 1965 shall be an even better year than was 1964.

Submitted,

John C. Fox
John Cameron Fox
Secretary - SME

February 5, 1965

REPORT
of the
SECRETARY OF THE METALLURGICAL SOCIETY OF AIME

Summary

The year 1964 was one of decision for The Metallurgical Society. In order to fulfill its objectives and to improve its finances, the Society made these decisions of far reaching importance for the future:

1. The First Operating Metallurgy Conference and Exposition will be held in Pittsburgh in 1965, and annually thereafter. This will be the first time that our Society has sponsored an exposition. We believe it should prove both a rewarding educational service to members and a source of needed income to the Society and its units.
2. The JOURNAL OF METALS will virtually double its editorial material by increasing its coverage of iron and steel papers on metallurgical operations. This is made possible by publishing all papers presented at the Electric Furnace Conference, the Ironmaking Conference, and the National Open Hearth and Basic Oxygen Steel Conference. This move should not only make the Journal more attractive to a majority of the readership, but should also prove more attractive to advertisers.
3. TRANSACTIONS OF THE METALLURGICAL SOCIETY OF AIME will be published monthly starting in January, 1965, and will publish an increased volume of technical papers. This results from the adoption of page charges. (Each author will be billed at the rate of \$35.00 per page.) These charges are being made to stabilize the financing of TRANSACTIONS, and to improve the speed of communicating the results of research in the basic science of metals.

During 1964, The Metallurgical Society sponsored 11 major meetings at which 950 technical papers were presented at 166 technical sessions before a total audience of 7,447. Pages of printed material in books and periodicals totalled 5,946.

Membership growth continued at a steady rate. At the end of the year, membership totalled 11,100, including student members.

Conversations aimed at increased cooperation with the American Society for Metals were conducted. If it can be shown to be in the best interest of the members of both Societies, the possibility of merger will be considered.

Finances

Because 1964 was a year of transition - a year of preparation for projecting a better Society - expenses were high, and exceeded income by \$19,677. Overall, operating expenses for 1964 were \$420,663 in comparison with \$398,954 in 1963. Exclusive of TRANSACTIONS, operating expenses for 1964 totalled \$321,774, vs. \$307,136 in 1963.

Expenses of TRANSACTIONS in 1964 were \$98,949 vs. \$91,818 in 1963.

The major source of income is revenue from members' dues. In 1964 this amounted to \$173,054, as compared to \$168,325 in 1963. Based on its proportion of total membership, The Metallurgical Society receives 28.02 per cent of Institute dues income. On a use basis, the Society pays its share of Institute services at the rate of 29.1 per cent for the Business Office, and 37.0 per cent for Institute Activities.

The following major additional sources of funds were used in 1964 to meet expenses of running the Society:

1. Iron and Steel Division Conferences paid for staff office services, \$18,409 in 1964 (\$12,676 in 1963).
2. The Institute of Metals Division paid for staff office services, \$6,000 in 1964 (\$4,333 in 1963).
3. Net income from 1964 AIME Annual Meeting, \$4,032 (\$2,260 in 1963).
4. From The Metallurgical Society Royalties Fund, \$10,000 (\$8,281 in 1963).
5. From The Metallurgical Society Projects Fund, \$4,617, plus additional sum of \$2,530 if approved by Society Board of Directors.

6. From a loan from AIME for special transitional advertising expenses, \$5,371, to be repaid in 1966.
7. From AIME sources, \$2,530, to be repaid in 1965 from anticipated increased advertising income.

The final income and expense statement for The Metallurgical Society in 1964 compared with 1963 is shown in Appendix A. Note that income and expenses for TRANSACTIONS are recorded on a separate page.

Metals Research Publications Fund

Although revenue from subscriptions is a major source of income for publishing TRANSACTIONS OF THE METALLURGICAL SOCIETY, it is not sufficient to meet expenses. The Metals Research Publications Fund has continued to provide income beyond what subscriptions and sale of bound volumes, reprints, and off-prints can provide. Withdrawal in 1964 was \$15,771 (in 1963, \$8,396).

The status of the Metals Research Publications Fund as of December 31, 1964, is shown as Appendix B. Balance in the Fund at the end of the year totalled \$115,451 (vs. \$133,894.47 at the end of 1963). A substantial withdrawal from the Fund of \$11,489 was made to establish the Metallurgical Society Royalty Fund. Royalty income is now being assigned to this latter Fund, rather than to the Metals Research Publications Fund, as was the case prior to 1963.

TRANSACTIONS OF THE METALLURGICAL SOCIETY

Again, TRANSACTIONS OF THE METALLURGICAL SOCIETY increased in size. The number of published pages of technical papers and notes in 1964 numbered 1,730 (vs. 1,472 in 1963). A comparison with 1963 is given below by Divisions:

	<u>No. of Papers and Notes</u>		<u>Pages</u>	
	<u>1964</u>	<u>1963</u>	<u>1964</u>	<u>1963</u>
Extractive Metallurgy	25	22	148.50	141.50
Institute of Metals	261	210	1,411.50	1,116.00
Iron and Steel	27	34	170.00	214.50
	<u>313</u>	<u>266</u>	<u>1,730.00</u>	<u>1,472.00</u>
Masthead pages	-	-	8.00	6.00
Annual Index	-	-	34.00	30.00
	<u>313</u>	<u>266</u>	<u>1,772.00</u>	<u>1,508.00</u>

TRANSACTIONS in 1964 was issued seven times instead of the usual six. The additional "special" issue, constituting the Proceedings of the Second Conference on Electronic Materials (Boston, August 26-28, 1963), appeared in March. This procedure will be continued. The Proceedings of the Technical Conference on "Solid-Solid Interfaces, Electronic Properties, Preparation, and Applications" (Boston, August 31-September 2, 1964) will be published as a special issue in March, 1965.

The increased size of TRANSACTIONS has resulted in the decision to issue the 1964 bound volume in two parts.

In 1965, TRANSACTIONS will be published as a monthly journal. This will speed communicating the results of research. An essential step to make this possible is the adoption of page charges for papers published after January 1, 1965. The Metallurgical Society is following the procedure recommended by the Federal Government and by the National Science Foundation. The American Institute of Physics, the American Chemical Society, and a number of other leading scientific and technical societies had earlier adopted this procedure. The charge of \$35.00 per page (including 200 offprints) to authors was determined after making a detailed study of present costs and projecting growth of TRANSACTIONS for the next five years.

JOURNAL OF METALS

Undoubtedly the most important event of 1964 for the JOURNAL OF METALS was the decision to commence the publication of papers presented at three of the operating conferences of the Iron and Steel Division. This decision was implemented in December with the publication of the first five papers from the Electric Furnace Conference. Over a four-month period it is planned to publish in the JOURNAL OF METALS the complete text of each of the papers presented at the conference. The photo-offset printing process is being used, with the films held for the subsequent publication of bound Proceedings volumes.

Several special issues were produced during the year. What is fast becoming a tradition is the annual basic oxygen steelmaking issue; in 1964 it was the June issue. Another special issue appeared in August when articles were devoted to a description of the new and modernized facilities of the Ashland Works of Armco Steel Corporation. Ironmaking and open hearth steelmaking were emphasized in the April issue; electric furnace operations were emphasized in December.

During the year, extensive coverage was also given to such subjects as continuous casting, trends in magnesium production, prosthetic metals, powder metallurgy, electrowinning techniques, and metallurgical education.

Another important development was the publication of abstracts with key words, links, and roles. Abstracts have been prepared for technical articles in JOURNAL OF METALS according to the system proposed by the Engineers Joint Council. These abstracts are published in the front section of each issue where they can be clipped. Publication of abstracts according to the system recommended by EJC began in the September issue.

The total number of pages printed for the year was 1,032, an increase over the 1963 figure of 960. During the course of the year the print order averaged about 14,500 copies per issue, an increase of 1,000 over the previous year, largely due to increased student membership. Non-member subscriptions numbered 2,299, compared with 2,250 in 1963. Of these subscriptions, 1,499 were foreign (vs. 1,486 for 1963).

Advertising, JOURNAL OF METALS

Advertising declined in both pages and advertising income during 1964. Comparisons are indicated below:

	<u>1964</u>	<u>1963</u>	<u>1962</u>
Number of pages of Advertising	187.2	210.0	226.5
Advertising Income	\$72,143	\$80,428	\$71,817
Advertising Expense	<u>35,381</u>	<u>38,550</u>	<u>35,185</u>
	\$36,762	\$41,878	\$36,632

The continued decline in advertising income led to an important decision by the Board of Directors:

1. To change the method of selling space advertising from a firm of advertising representatives (Dolan-Kent Company, Inc.) to personal selling by Society staff.
2. To increase the editorial content of JOURNAL OF METALS in the direction of iron and steel operations, a matter deemed to be of importance to suppliers and potential advertisers.

We are hopeful that these changes, attractive to readers, will be greeted with favor by advertisers and encourage them to

advertise in JOURNAL OF METALS on a continuing basis.

Publications Through Gordon and Breach (See Appendix C)

A publishing arrangement was concluded in 1963 with Gordon and Breach, Science Publishers, Inc. Most books will be published in both paperbound and hardbound editions. Members of AIME will be able to purchase paperbound books at the rate of 1.5 cents per printed page.

The first four books under this new publishing arrangement were published by Gordon and Breach in 1964, and copyrighted by AIME. The first three listed below were published in paperbound editions as well as hard cover editions:

1. Volume 21 - Mechanical Working of Steel I

(Proceedings of the Fifth Technical Conference sponsored by the Mechanical Working and Steel Processing Committee of the Iron and Steel Division, and the Pittsburgh Section; Pittsburgh, January 15-16, 1963.) 426 pages. Edited by Phillip H. Smith.

2. Volume 22 - Metallurgy at High Pressures and High Temperatures

(Proceedings of a Symposium sponsored by the ISD Physical Chemistry of Steelmaking Committee, the EMD Physical Chemistry of Extractive Metallurgy Committee, and the IMD Committee on Alloy Phases; Dallas, February 25-26, 1963.) 422 pages. Edited by K. A. Gschneidner, Jr., M. T. Hepworth, and N. A. D. Parlee.

3. Volume 23 - New Types of Metal Powders

(Proceedings of a Symposium sponsored by the Powder Metallurgy Committee, Institute of Metals Division; Cleveland, October 24, 1963.) 178 pages. Edited by Henry H. Hausner.

4. Ironmaking - 22nd Proceedings Volume

(Proceedings of the 22nd Conference sponsored by the Ironmaking Committee of the Iron and Steel Division; Buffalo, April 1-3, 1963.) 688 pages. Edited by D. E. Regelin and W. D. Gifford.

Other Publications (See Appendix C)

The National Open Hearth and Basic Oxygen Steel Committee published Volume 46 (624 pages) of its Proceedings.

Nuclear Metallurgy, Volume 10 (804 pages) was published as Number 13 of the IMD Special Report Series under the title, "Compounds of Interest in Nuclear Reactor Technology." The editors were J. T. Waber, P. Chiotti, and W. N. Miner.

Meetings and Technical Conferences

Data on 11 major conferences held during 1964 and sponsored by The Metallurgical Society and units are given in Appendix D. At these meetings, a total of 950 technical papers were presented at 166 technical sessions before an audience of 7,447. Through its nine local sections, the National Open Hearth and Basic Oxygen Steel Committee conducted a comprehensive series of technical meetings.

These 12 major technical conferences and meetings will be held in 1965 under sponsorship of The Metallurgical Society, for which active planning proceeded during 1964:

1. January 19 7th Mechanical Working Conference,
Pittsburgh Hilton Hotel, Pittsburgh,
Pa.
2. February 14-18 94th AIME Annual Meeting, Conrad
Hilton Hotel, Chicago
3. April 5-7 48th AIME National Open Hearth and
Basic Oxygen Steel Conference,
Sheraton-Cleveland Hotel, Cleveland,
Ohio
4. May 13-14 AIME 19th New England Regional
Conference, Hotel America, Hartford,
Conn.
5. June 7-8 Conference on Environment-Sensitive
Mechanical Behavior of Materials,
RIAS Laboratories, Baltimore, Md.
6. June 9-11 4th Engineering Management
Conference, Northwestern University
and North Shore Hotel, Evanston,
Ill. (Sponsored jointly by The

- Metallurgical Society and American Society for Metals)
7. June 14-17 Second International Powder Metallurgy Conference, Statler Hilton Hotel, New York, N. Y. (Sponsored jointly by The Metallurgical Society and the Metal Powder Industries Federation)
 8. September 7-9 Electronic Materials Conference, St. Francis Hotel, San Francisco, Calif.
 9. September 8-10 Conference on Radiation Effects, Jack Tar Grove Park Inn, Asheville, N. C.
 10. October 4-5 Conference on Physical Metallurgy of Refractory Metals, French Lick Hotel, French Lick, Ind.
 11. October 17-21 Annual Fall Meeting of The Metallurgical Society of AIME, Cobo Hall and Pick-Fort Shelby Hotel, Detroit
 12. November 29-December 3 First Annual Conference and Exposition on Operating Metallurgy, sponsored by The Metallurgical Society, Penn-Sheraton Hotel and Pittsburgh Civic Arena and Exhibit Hall, Pittsburgh, Pa.

First Operating Metallurgy Conference and Exposition

The Operating Metallurgy Conference will be a major activity of The Metallurgical Society in 1965. It will include the 23rd Electric Furnace Conference, the 24th Ironmaking Conference, the 8th Mechanical Working and Steel Processing Conference, and the "Symposium on Pyrometallurgical Processes in Non-ferrous Metallurgy." Other sessions are being planned on physical chemistry of steelmaking, shaping and forming, and on engineering management. Jack H. Scaff, President of The Metallurgical Society, has stated:

"For the first time, operating metallurgy as it relates to the production of iron and steel, and

nonferrous metals as well, will be brought together during one solid week of technical programing. At this meeting, men who are responsible for production of such metals as copper, lead, zinc, nickel, aluminum, columbium, and uranium will have the opportunity of meeting at the same time as their associates in the pig iron, steel, and ferroalloy industry. It is anticipated that opportunities for cross-fertilization of ideas will be numerous."

The Exposition, to be held in the Pittsburgh Civic Arena and Exhibit Hall, gives promise of success. At year's end, nearly 40 per cent of the available space has been committed or requested by interested companies.

Membership

Membership in The Metallurgical Society continued its steady gain.

Membership statistics for 1964 in comparison with 1963 are shown in the following tabulation:

	<u>Totals as of December 31</u>	
	<u>1964</u>	<u>1963</u>
Iron and Steel Division	3,197	3,055
Extractive Metallurgy Division	1,239	1,192
Institute of Metals Division	3,805	3,471
Council of Education	23	25
Council of Economics	60	52
Unclassified and Non-Society	<u>1,335</u>	<u>1,276</u>
Total Corporate:	9,659	9,071
Student Members	<u>1,441</u>	<u>1,350</u>
Grand Total:	<u>11,100</u>	<u>10,421</u>

During 1965 increased efforts will be placed on membership development through a coordinated program of staff, membership committees, and section follow-up.

Awards

The following awards were made by The Metallurgical Society or its units during 1964:

1. Robert W. Hunt Award

Given for the best original paper or papers on iron and steel contributed to AIME during the period under review. Presented to J. C. McKay and John A. Peart for their paper, "Blast Furnace Practice With Very Low Slag Volume."

2. J. E. Johnson, Jr., Award

Given to encourage young men in creative work in the metallurgy or manufacture of pig iron. The recipient must be under 40 when he completes the work that merits recognition. Presented to Ralph T. Hanna: "For his contribution in achieving record production and coke rates on blast furnaces through the use of increased instrumentation, operating controls, and hot blast temperatures in excess of 1900°F."

3. Mathewson Gold Medal

Bestowed on an author or authors of a paper, or a series of closely related papers, with at least one common author, and considered the most notable contribution to metallurgical science during the period under review. Presented to Pol Duwez and Ronald H. Willens for their paper, "Rapid Quenching of Alloys."

4. Robert Lansing Hardy Gold Medal

Recognizes exceptional promise, rather than accomplishment. To be given to a metallurgist who has not reached his 30th birthday before the end of the calendar year during which the selection of the recipient is made. Presented to Peter Roland Swann.

5. Extractive Metallurgy Division Award

Given for the best paper in the field of extractive metallurgy within a two-year period. Presented to Leonard Klein for his paper "Gaseous Reduction of Oxygen-Containing Copper."

6. Frank B. McKune Award

Given for the best paper on open hearth or basic oxygen steelmaking written by authors under 40 years of age. Presented to J. C. Seastone for his paper, "The Effect of Mold Wall Preparation on Seams in Semi-Killed Slabs."

7. Open Hearth Conference Award

"Runner-up" paper to the McKune Award. Presented to G. C. Smith and D. A. Dukelow for their paper, "Hot Model Studies of the Basic Oxygen Processes."

8. Charles H. Herty, Jr., Award

Given for the best paper at the 1963 Open Hearth Conference. Presented to G. R. Curtis for his paper, "Statistical Analysis of Operating Data From Number 2 Open Hearth Shop, Middletown Works, Armco Steel Corporation."

9. Acid Converter and Basic Oxygen Steel Award

In recognition for his outstanding contributions to the knowledge and art of oxygen steelmaking, this award was presented to Bo M. S. Kalling.

10. Ironmaking Conference Award

Given for the best paper at the 1963 Conference. Presented to Ralph T. Hanna for his paper, "Blast Furnace Operations at High-Blast Temperatures."

11. Joseph Becker Award

For distinguished achievements in coal carbonization, this award was presented to Philip S. Savage.

12. Electric Furnace Conference Award

Given for the best paper at the 1963 Conference. Presented to D. N. Rosenblatt for his paper, "Melting Practice, Heat Treatment, and Properties of Low-Alloy Wear-Resistant Steels."

Fellows

Fifteen outstanding men were inducted as Fellows of The Metallurgical Society of AIME at the 1964 AIME Annual Meeting in New York. Ten of these were Charter Fellows, thereby completing the quota of 20 Charter Fellows:

Edgar C. Bain	Champion H. Mathewson
Francis C. Frary	Leo F. Reinartz
Zay Jeffries	Earle E. Schumacher
Thomas L. Joseph	Robert B. Sosman
Charles R. Kuzell	Clyde Williams

In addition, these five Fellows were inducted:

Charles S. Barrett	Ronald R. McNaughton
Karl L. Fetters	Albert J. Phillips
Carl Wagner	

The original 10 Charter Fellows selected in 1963 are listed below:

James B. Austin	Augustus B. Kinzel
John Chipman	Robert F. Mehl
Morris Cohen	F. Denys Richardson
Lawrence S. Darken	Reinhardt Schuhmann, Jr.
Walter R. Hibbard, Jr.	Cyril Stanley Smith

Cooperation With American Society for Metals

A number of informal conversations were held during 1964 between representatives of The Metallurgical Society and the American Society for Metals on areas warranting increased cooperation.

The quotation below is taken from a letter to members signed jointly by Jack H. Scaff, President of The Metallurgical Society, and John A. Fellows, President of the American Society for Metals:

"The result of these discussions, which began in July, 1963, was the conviction that certain advantages should indeed arise from some form of union and that the proposition should receive further active study and exploration. The advantages foreseen include: (1) enhancement of integrated activities in the fields of metals, materials, and minerals technologies, which

should improve service to our members and provide further benefits for industry; (2) the elimination of those overlapping functions and operations that result in duplications of effort on the part of staff and members of our respective organizations; (3) the broadening and strengthening of the cooperative planning and organization of national and regional technical programs that have been so beneficial in the past; and (4) the genesis of a single metallurgical entity that should be much more effective in working with engineering federations and government agencies.

"We emphasize to each member of ASM and of AIME that no commitments have been made and that any recommendation for a closer relationship will be made to our members only if a plan can be devised that will clearly strengthen both organizations and that is recognized to be of obvious benefit to the members of both Societies."

Staff Changes

In recent years the solicitation of advertising for JOURNAL OF METALS has been handled by the Dolan-Kent Company, advertising representatives. It was decided that advertising space sales could be better handled by staff employees. It was also recognized that sale of advertising space in our Journal is closely allied to sale of booth space for the Exposition. Leslie S. Wilcoxson, Assistant Secretary, agreed to accept this challenge, and became Exposition and Advertising Sales Manager, effective October 1, 1964. He is assisted by Mrs. Joan Barclay. Mrs. Barclay began her employment on October 5, 1964. Mr. Wilcoxson has relinquished the title of Assistant Secretary and the duties of Secretary of the Iron and Steel Division.

These latter duties were assumed by Donald A. Parks, Assistant Secretary, in addition to continuing to serve as Secretary of the Institute of Metals Division. However, he, in turn, relinquished certain all-Society functions, including membership development, in order to obtain the time necessary to handle his two major assignments more effectively.

The duties of membership development were taken over on a three-day per week basis by Mrs. Jeanne LaPlace, a new employee, on November 4.

Edward B. Bauer was appointed Associate Editor of

JOURNAL OF METALS on October 16, succeeding Marlowe G. Teig, who resigned to accept a position with Harcourt, Brace and World, Inc. Mr. Bauer was formerly with Ford Instrument Company, Division of Sperry Rand Corporation.

In order to handle the volume of work associated with publishing papers from the iron and steel conferences in JOURNAL OF METALS, a new post of Assistant Editor was established. Mr. William Leggitt will handle this assignment in 1965. His successor as News Editor is Richard L. Lehman, who will start his employment on January 15, 1965. Mr. Lehman has been Assistant Science Editor of AMERICAN DRUGGIST.

Miss Normajean Rockett, who had served capably for five years as secretary to the Secretary of the Institute of Metals Division, resigned in July to accept a position with Matsushita Electrical Corporation.

Because the volume of pages published by TRANSACTIONS OF THE METALLURGICAL SOCIETY has doubled since 1958, the Editor, Gerhard Derge, has been in need of assistance. In November, Paul Shewmon, Associate Professor of Metallurgical Engineering at Carnegie Institute of Technology, assumed the newly created position of Associate Editor.

Acknowledgments

Appreciation goes to many. The success of a professional engineering society can only come through the devoted efforts of elected officers, appointed committee members, and volunteer editors. To them go our thanks for guidance and willing acceptance of many assignments.

Acknowledgment is gratefully made to the hard-working and dedicated staff of The Metallurgical Society.

Respectfully submitted,



R. W. Shearman, Secretary
The Metallurgical Society of AIME

RWS:as
Attach.

February 5, 1965

The Metallurgical Society of AIME
Income and Expense Statement

(APPENDIX A)

	<u>1964 Actual</u>	<u>1963 Actual</u>
<u>Metallurgical Society Income</u>		
<u>Membership</u>		
Current Dues	\$156,120	\$150,192
New Members Dues	9,169	9,131
Entrance Fees	7,765	9,002
Subtotal:	<u>\$173,054</u>	<u>\$168,325</u>
<u>Publications</u>		
JOURNAL OF METALS - Ad.	\$ 72,143	\$ 79,298
JOURNAL OF METALS - Sales	21,278	21,221
Directory Advertising	-	1,131
Reprint Sales (J of M)	5,214	3,261
Subtotal:	<u>\$ 98,635</u>	<u>\$104,911</u>
<u>Other Income</u>		
From ISD Conf. Funds	\$ 18,409	\$ 12,176
From IMD Conf. Funds	6,000	4,333
For TRANSACTIONS Services	1,220	500
AIME Interest and Dividends	2,255	2,560
Annual Meeting Credit	732	2,560
Subtotal:	<u>\$ 28,616</u>	<u>\$ 21,829</u>
Total Income:	<u>\$300,305</u>	<u>\$295,065</u>
<u>Expenses:</u>		
<u>AIME Headquarters</u>		
General Secretary's Office, N. Y.	\$ 14,051	\$ 12,712
General Secretary's Office Salt Lake City	2,717	2,791
Business Office	26,456	27,152
Institute Activities	13,868	13,506
Pensions and Related Expenses	6,014	11,797
Provision for Depreciation	2,134	2,688
Engineering Society Library	3,680	3,478
EJC and ECPD Assessment	4,592	3,712
Miscellaneous Expenses	4,822	4,386
Public Relations	3,099	3,657
Subtotal:	<u>\$ 81,433</u>	<u>\$ 85,879</u>
<u>Society Direct Expense</u>		
Local Sections and Student Chapters	\$ 11,298	\$ 11,168
Membership Development	3,388	2,001
Society HQ, Offices	74,205	62,327
Pensions and Related Expense	5,992	-
Provision for Depreciation	643	-
Public Relations	1,500	-
Subtotal:	<u>\$ 97,026</u>	<u>\$ 75,496</u>
<u>Publications</u>		
JOURNAL OF METALS - Ad.	\$ 35,381	\$ 38,550
Production and Editorial (J of M)	104,404	101,023
Directory	(43)	4,418
Reprint Income (J of M)	3,513	1,770
Subtotal:	<u>\$143,255</u>	<u>\$145,761</u>
Total Expenses:	<u>\$321,714</u>	<u>\$307,136</u>
Less Received from Funds:	<u>\$ 16,349</u>	<u>\$ 3,791</u>
(See Footnote next page)		
Total Net Expenses:	<u>\$305,365</u>	<u>\$303,345</u>
Income Over Expenses:	<u>\$ (5,060)</u>	<u>\$ (8,280)</u>

TRANSACTIONS1965 Budget

12 Months
1964

1963
Actual

Transactions Income:

Bi-Monthly Trans.	\$45,336	\$44,089
Trans. Volumes	18,161	22,150
Trans. Reprints	19,681	17,183
From Metals Res. Pub. Fund	15,771	8,396
Total Income:	<u>\$98,949</u>	<u>\$91,818</u>

Transactions Expenses:

Bi-Monthly Trans.	\$82,267	\$72,277
Trans. Volumes	9,258	9,777
Trans. Reprints	7,424	9,764
Total Expenses:	<u>\$98,949</u>	<u>\$91,818</u>

Net Income Over Expenses:

	<u>\$ -</u>	<u>\$ -</u>
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Note from preceding page:

From Institute Surplus Account	\$ 1,732
From Metallurgical Society Royalty Fund	10,000
From Metallurgical Society Projects Fund	4,617
Total:	<u>\$16,349</u>

February 5, 1965

Metals Research Publications FundStatus as of December 31, 1964INCOME:a. Contributions Received:

During 1954	\$42,225.00	
During 1955	17,500.00	
During 1956	51,600.00	
During 1957	33,350.00	
During 1958	16,200.00	
During 1959	11,850.00	
During 1960	37,325.00	
During 1961	8,150.00	
During 1962	<u>13,650.00</u>	
Total Contributions		\$231,850.00

b. Transferred from Metallurgical Society
Operating Fund (1957 and 1958)

1,806.36

c. Gain on Sale of Securities:

To 12/31/63 (Cumulative)	\$ 3,468.95	
To 12/31/64	<u>4,107.72</u>	
		7,576.67

d. Interest:

To 12/31/63 (Cumulative)	\$21,435.03	
To 12/31/64	<u>4,535.10</u>	
		25,970.13

e. Net Royalties as of 12/31/63:

27,623.12

f. Johnson Reprint Corp. Income in 1964:

174.51

Total Income:

\$295,000.79

-Continued-

METALS RESEARCH PUBLICATIONS FUND - Page 2

EXPENSES:a. Support of Transactions:

1954 - 140 pages (2 Supplements)	\$ 7,149.98	
1955 - 512 pages (5 Supplements)	23,184.00	
1956 - 656 pages (4 Supplements)	39,786.98	
1957 - 576 pages (4 Supplements)	36,576.00	
1958 - 896 pages (6 issues)	15,000.00	
1959 - 1064 pages (6 issues)	11,445.48	
1960 - 1152 pages (6 issues)	1,994.92	
1961 - 1274 pages (6 issues)	0.00	
1962 - 1300 pages (6 issues)	3,318.97	
1963 - 1478 pages (6 issues)	8,395.56	
1964 - 1738 pages (6 issues)	<u>15,771.21</u>	
Total Charges:		\$162,623.10

b. Transfer of Funds:

Transferred to Metallurgical Society
 Projects Fund (per item 3, Met. Soc.
 Board Minutes, 2/21/62): \$ 5,437.10

Transferred to establish Metallurgical
 Society Royalties Funds (per item
 3, Met. Soc. Board Minutes, 2/19/64): 11,489.38

16,926.48Total Expenses: \$179,549.58Balance 12/31/64:\$115,451.21

February 4, 1965

Summary of Publications of The Metallurgical SocietyComparison of Pages Published, 1964 and 1963

	<u>Pages, 1964</u>	<u>Pages, 1963</u>
A. <u>Periodicals:</u>		
JOURNAL OF METALS	1,032	960
TRANSACTIONS OF THE METALLURGICAL SOCIETY OF AIME	<u>1,772</u>	<u>1,508</u>
Total:	2,804	2,468
B. <u>ISD Proceedings:</u>		
Open Hearth	624	678
Electric Furnace	-	552
Total:	624	1,230
C. <u>IMD Special Report Series:</u>		
Nuclear Metallurgy, Vol. 10	804	-
Nuclear Metallurgy, Vol. 9	-	292
Total:	804	292
D. <u>Gordon and Breach Books</u>		
New Types of Metal Powders (Vol. 23)	178	-
Metallurgy at High Pressures and High Temperatures (Vol. 22)	422	-
Mechanical Working of Steel I (Vol. 21)	426	-
Ironmaking (22nd Proceedings Volume)	688	-
Total:	1,714	-
E. <u>Interscience Books</u>		
Electric Furnace Steelmaking (Vol. II)	-	472
Electronic Structure and Alloy Chemistry	-	252
Iron and Its Dilute Solid Solutions	-	340
Recovery and Recrystallization of Metals	-	400
Blast Furnace Proceedings	-	568
Extractive Metallurgy of Aluminum (Vol. I)	-	368
Extractive Metallurgy of Aluminum (Vol. II)	-	588
Fracture of Solids (Vol. 20)	-	718
Metallurgy of Advanced Electronic Materials (Vol. 19)	-	366
High Temperature Materials II (Vol. 18)	-	858
Refractory Metals and Alloys II (Vol. 17)	-	480
Total:	-	5,410
Total Pages Published During Year	<u>5,946</u>	<u>9,400</u>

Technical Conferences and National Meetings ofThe Metallurgical Society, 1964

			<u>Attendance</u>	<u>Number Technical Sessions</u>	<u>Number Papers Scheduled</u>
1.	January 30-31 Pittsburgh	6th Mechanical Working Conference	337	7	27
2.	February 16-20 New York	93rd AIME Annual Meeting (Met Soc)	1,692	62	417
3.	April 13-15 Pittsburgh	47th National Open Hearth and Basic Oxygen Steel Conference	1,542	9	42
4.	April 13-15 Pittsburgh	23rd Ironmaking Conference	645	6	27
5.	May 4-7 Toronto	1st World Conference on Electron and Ion Beam Science and Technology	125	8	46
6.	May 14-15 Schenectady	18th New England Regional Conference	133	9	11
7.	August 3-5 Boulder, Colorado	Conference on Intermetallic Compounds of Potential Interest in Nuclear Reactor Technology	137	5	32
8.	August 30- September 2 Boston	Technical Conference on Solid- Solid Interfaces, Electronic Properties, Preparation, and Applications	335	5	32
9.	October 15-17 Philadelphia	2nd International Conference on Beryllium Technology	186	6	50
10.	October 18-22 Philadelphia	Fall Meeting of The Metallurgical Society	1,172	40	231
11.	December 4-6 Chicago	22nd Electric Furnace Conference	1,143	9	35
Total:			<u>7,447</u>	<u>166</u>	<u>950</u>

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

The American Institute of Mining, Metallurgical, and Petroleum Engineers is dedicated to advancing the knowledge of engineering in the fields of minerals, metals, materials and manufacturing and energy resources, and to undertaking programs addressing significant needs including education.
