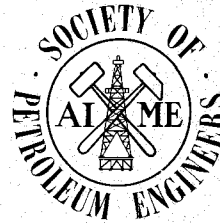
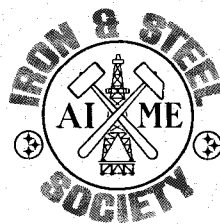
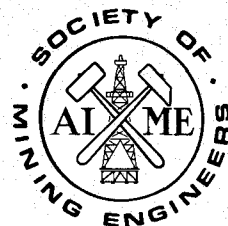
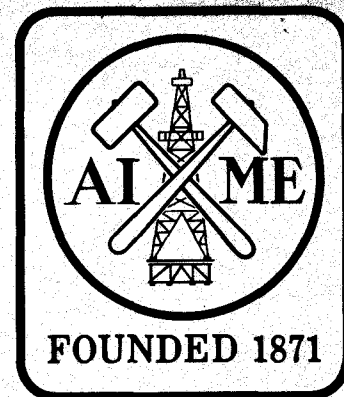


AIME Official Annual Report/1986



AIME
OFFICIAL ANNUAL REPORT
1986

TABLE OF CONTENTS

	<u>PAGE</u>
PRESIDENT.....	1
AIME BOARD OF TRUSTEES.....	3
AIME PAST PRESIDENTS AND HONORARY MEMBERS.....	7
HONORS AND AWARDS.....	9
115th AIME ANNUAL MEETING.....	12
STATEMENT OF AUDITORS.....	Insert 1
BALANCE SHEET, NOVEMBER 30, 1986 & 1985.....	Insert 2
REVENUE, EXPENSE, SURPLUS, 1986 & 1985.....	Insert 3
CHANGES IN ENDOWMENT AND QUASI-ENDOWMENT FUNDS, 1986 & 1985.....	Insert 4
NOTES TO FINANCIAL STATEMENTS.....	Insert 5
WOMAN'S AUXILIARY TO AIME.....	13

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

Report of the AIME President

It is my pleasure to report to the Member Societies and their members on the activities of AIME during 1986. The year can be characterized as the beginning of a new era in the history of the Institute, and it was my very good fortune to have been allowed to serve as the AIME President during such a pivotal time.

As reported last year by 1985 AIME President Norman T. Mills, all necessary actions for the Member Societies to become separately incorporated were completed effective December 1, 1985. Hence, 1986 was the first year in which the Institute operated in its new organizational structure. In my judgment, the autonomy now enjoyed by the Societies places them in the best position to respond effectively to the needs of their members. Simultaneously, significant progress was made during the year in defining a future role for the separate AIME Corporation. The underlying thrust of these efforts was to enhance the value of AIME as a resource to be used by the Societies to help carry out their respective missions.

An AIME ad hoc Long Range Plan Committee was formed and met for the first time in early 1986. Its charge was to develop a ten-year plan which basically addresses activities of an outreach nature which the Member Societies choose for AIME to perform. The Committee developed a Plan consisting of a mission statement, and goals, objectives and strategies in the areas of AIME tradition, intra-institute affairs, international role, education, inter-society affairs, public relations, and governmental affairs.

The AIME Board of Trustees approved the Long Range Plan in principle at its meeting on July 31, 1986, but directed the Committee to consider comments made on the Plan, recommend revisions if desired, and resubmit the Plan for final approval at the Board of Trustees Meeting on February 23, 1987. I anticipate that the Board will act favorably on the Plan at that time, after which implementation plans, with budget proposals as required, will be developed and submitted to the Board for approval recommending that specific activities be undertaken in furtherance of the Plan's provisions.

AIME continued to actively participate or maintain liaison with external organizations during 1986. Periodic meetings with the leadership of the other Founder Societies provided excellent opportunities for the exchange of ideas on matters of mutual interest and, as desired, to develop common positions on actions related to organizations controlled solely or predominately by the Founder Societies.

As it has been for some time, the Institute was active in the governance and other activities of the American Association of Engineering Societies, the Accreditation Board for Engineering and Technology, the United Engineering Trustees, the Engineering Societies Library and the Engineering Foundation. Among other outreach activities, the AIME leadership also participated in an excellent convocation of Professional Engineering Societies hosted by the National Academy of Engineering, and in the National Congress on Engineering Education.

On the international scene, AIME continued to participate in the Distinguished Lecturer Exchange Program with the Australasian Institute of Mining and Metallurgy (AusIMM). It was my honor to serve as the AIME lecturer for 1986, and to visit Australia in November for this purpose. In furtherance of the AIME/AusIMM relationship, AIME has been approached to participate in an AusIMM meeting in 1988 as part of Australia's Bicentennial celebration.

Elsewhere in this Annual Report you will find the audited financial statement for the AIME Corporation for Fiscal Year 1986 (ending November 30). The statement reflects that the past year was a very successful one from a financial standpoint. At year end, AIME assets totalled \$7,652,366, an increase of nearly \$400,000 since the end of FY 1985. The AIME Headquarters operated well within budget with revenue exceeding expenses by approximately \$11,000. For the most part, the increase in total assets is accounted for by an increase in the value of the AIME Endowment Funds. It remains our goal to achieve growth in the Endowment Funds to sustain current operations, including on-going award, scholarship, and publication programs, and to generate assets sufficient to undertake additional worthwhile activities related to implementation of the Long Range Plan.

I should like to express my sincere appreciation to the AIME Board of Trustees, the Society Boards of Directors, the AIME and Society staffs, committee members, and others for the dedicated support I received during my term as President. I should also like to congratulate and pledge my full support to 1987 AIME President Alan Lawley.

Respectfully submitted,



Arlen L. Edgar
1986 AIME President

1/27/87

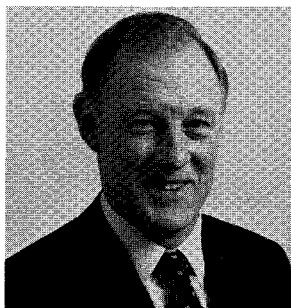
AIME



OFFICERS AND TRUSTEES 1987

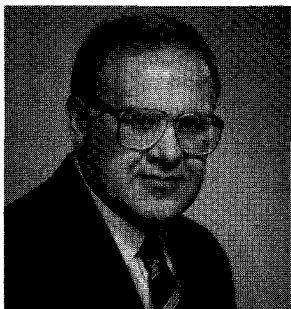
OFFICERS

PRESIDENT AND TRUSTEE



ALAN LAWLEY is Professor, Dept. of Materials Engineering, Drexel University, Philadelphia. He received his B.Sc. and Ph.D. in Metallurgy from the University of Birmingham, England. Dr. Lawley has been a post doctoral fellow at the University of Pennsylvania and Manager of the Solid State Sciences Laboratory of the Franklin Institute. From 1969 to 1979, he was Head of the Dept. of Materials Engineering at Drexel University. He has published extensively, lectured world-wide, and is a consultant to industry and government in the areas of physical and mechanical metallurgy, powder metallurgy, and composite materials. Dr. Lawley is a Fellow of ASM, a member of the National Materials Advisory Board and Editor-in-Chief of the International Journal of Powder Metallurgy. He served as a Krumb Lecturer (AIME) in 1985 and is a Past President of The Metallurgical Society.

PRESIDENT-ELECT AND TRUSTEE



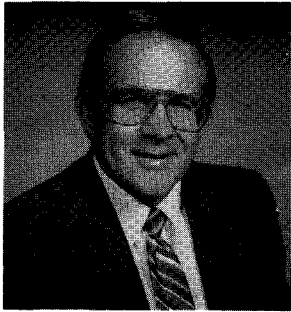
THOMAS V. FALKIE is President of Berwind Natural Resources Company in Philadelphia, Pennsylvania. He received his B.S., M.S. and Ph.D. in Mining Engineering from The Pennsylvania State University. From 1961-69 he held various technical and managerial positions with International Minerals and Chemical Corp. in Illinois and Florida. From 1969-74 he was Professor and Head, Dept. of Mineral Engineering, Penn State University. Dr. Falkie also chaired Penn State's interdisciplinary program in Mineral Engineering Management. From 1974-77 he was Director of the Bureau of Mines, U.S. Dept. of the Interior. A Distinguished Member of the Society of Mining Engineers, he was the 1985 President of the Society. He has served on the Board of Directors of both SME and AIME, and was an AIME Vice President in 1977-78. Dr. Falkie was a Henry Krumb Lecturer in 1977-78, and has presented numerous publications and speeches on mining, mineral and energy topics.

PAST PRESIDENT AND TRUSTEE



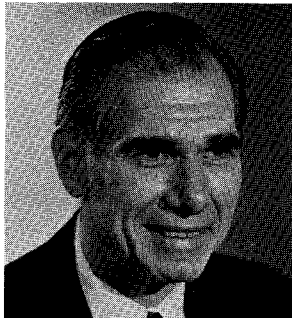
ARLEN L. EDGAR is an independent oil and gas investor and consultant in Midland, Texas. After graduating from the University of Texas in 1957, he joined Pan American Petroleum Corp. (now Amoco). In 1961, he became associated with Leibrock, Landreth, Campbell and Callaway, rising to Manager of the Consulting Division before joining Tipperary Land Corp. as an officer and director. He was General Manager of Western States Producing Co. from 1971 to 1973. Mr. Edgar has been Chairman of the Permian Basin Section and Chairman of the SPE Reprints, Investments, and Reserve Standards Committees. He previously served on the AIME Board from 1980-1982, and as Vice President in 1982. A 1984 recipient of the SPE Distinguished Service Award, Mr. Edgar served as President of SPE in 1981. He is an SPE Distinguished Member and a Trustee of the SPE Foundation. Mr. Edgar was selected as a Distinguished Engineering Graduate of the University of Texas College of Engineering in 1981 and as a Distinguished Alumnus of Tarleton State University in 1986.

PRESIDENT-ELECT DESIGNATE AND TRUSTEE

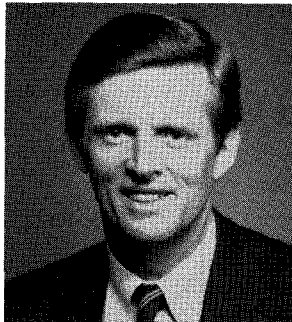


HOWARD N. HUBBARD, JR., is Vice President of Marketing and Sales of General Refractories Co. in Pittsburgh. After graduating from Carnegie Mellon University with a B.S. in Mechanical Engineering, Mr. Hubbard began his career with United States Steel Corp. at Gary Works in 1956. He progressed through various supervisory positions before becoming Division Superintendent of Steel Producing in 1973. He then became associated with J & L Steel Corp.—Youngstown Sheet and Tube as General Superintendent Primary Operations. Mr. Hubbard is a Past Chairman of the Steelmaking Division of ISS and was a member of the Division's Executive Committee from 1972-1978. A former member of the AIME Board, he served on the Board of Directors of ISS from 1979-81 and was President of ISS in 1983.

TRUSTEES



GEORGE S. ANSELL was appointed President of the Colorado School of Mines in 1984. He received his B.S., M.S. and Ph.D. in Metallurgical Engineering from Rensselaer Polytechnic Institute. Prior to assuming the Presidency of CSM, he was a member of the faculty at RPI and served as Dean of the School of Engineering from 1974-1984. Dr. Ansell has published extensively and is a consultant to industry. Among the numerous awards he has received are the TMS Hardy Gold Medal, the Young Teacher Award of the American Society for Metals, and the McGraw Research Award of the American Society for Engineering. He holds many honorary society memberships and memorial lectureships. He served as President of The Metallurgical Society in 1986.



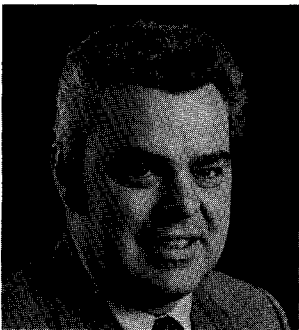
R. LYN ARSCOTT is the Director-Health, Environment and Safety for Chevron Corporation. He received a B.Sc. in 1962 and a Ph.D. in 1968 from the University of Nottingham, both in Mining Engineering. During 1962-64, he was a British Commonwealth scholar studying Exploration Geophysics in India. Dr. Arscott joined Gulf Research Company in 1968 in the Production Department in Pittsburgh, PA. In 1976, he commenced a series of Production management assignments which included Area Manager - New Orleans, Area Manager-Lafayette, and General Manager-Houston. Prior to his current assignment he was Assistant Regional Production Manager in San Ramon, CA. He has served SPE as Chairman of the Pittsburgh Chapter in 1973 and Treasurer of SPE in 1984-86. He will be President of SPE in 1988.



BRUCE A. KENNEDY is Senior Vice President-Minerals of Asamera Inc. in Calgary, Alberta, Canada. He received his B.Sc. in Mining Engineering in 1965 from the Royal School of Mines, Imperial College of Science and Technology, University of London. Mr. Kennedy began his professional career with the Anaconda Company involved with their mines in the U.S., Canada, Mexico and Chile. In 1972 he joined Golder Associates, later becoming a Vice President, Principal and Director of that firm. In late 1981, he became President of Thyssen Mining Construction, Inc., the U.S. subsidiary of Thyssen Schachtbau GmbH of West Germany. He assumed his current position in June of 1985. Mr. Kennedy is a past Chairman of the Mining and Exploration Division of SME. He was a Director of SME from 1975-1982, Treasurer of SME from 1980-1982, a Director of AIME from 1979-1983, and a Vice President of AIME in 1981 and 1983. Mr. Kennedy is a Distinguished Member of SME and is 1987 President of the Society.



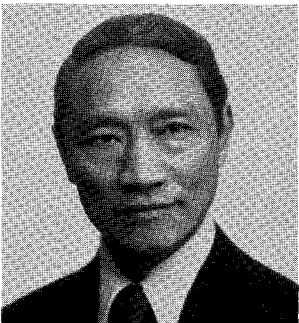
NOEL D. RIETMAN is Group Vice President, Continental U.S., Diamond Shamrock Exploration Company. A graduate of Texas Technical University with a B.S. in Petroleum Engineering and a B.A. in Geology, he also holds an M.S. in Mathematics from West Texas State University. He joined Diamond Shamrock in 1957 and has served there as Chief Petroleum Engineer, as Manager of Drilling and Production, and Vice President and General Manager, Northern Division. Mr. Rietman has served SPE as Amarillo Petroleum Section Chairman, Program Chairman and General Chairman of the Deep Drilling and Production Symposium and on various committees. He has also served on the AIME Board from 1982-1984 and as Region III Director for SPE. Mr. Rietman is currently SPE President.



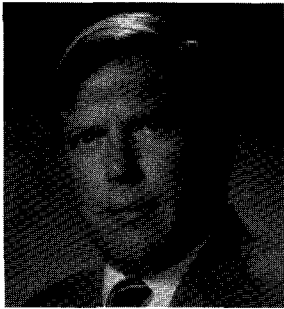
GERALD J. ROE was named Program Manager, Product Applications, Steel Group, Bethlehem Steel Corporation in 1984. He earned his B.S., M.S. and Ph.D. in Metallurgical Engineering from the University of Missouri at Rolla in 1965, 1966 and 1969, respectively. In 1969, Dr. Roe joined Bethlehem's Homer Research Laboratories as a Research Engineer, Plate Products; and became Supervisor of Pilot Production, Light Flat Rolled Products, Research Department, in 1980. He was named Metallurgical Engineer-Plates, Product Quality and Assurance, Steel Group, in 1981. Dr. Roe served on the ISS Board of Directors in 1981 and 1982 and was the Chairman of the Mechanical Working and Steel Processing Division in 1982. He is 1987 President of ISS.



G. HUGH WALKER is Manager of Coke and Iron Production at Dofasco, Inc., Hamilton, Ontario. He was graduated from Queens University, Kingston, Ontario, with a B.Sc. in Civil Engineering, and received an M.B.A. from the University of Western Ontario. Joining Dofasco in 1959, Mr. Walker worked in the Engineering Department and in Mechanical Maintenance prior to moving to the Coke and Iron Production Division. Mr. Walker served as the Chairman of the AISI Technical Committee on Blast Furnace Practice in 1980-1981, and presently serves on the Board of Directors of Eastern States-Blast Furnace and Coke Oven Association. A member of the Iron and Steel Society Board in 1981-1983, Mr. Walker served as the Chairman of the ISS Ironmaking Division in 1981-1982. He was the 1986 President of ISS.



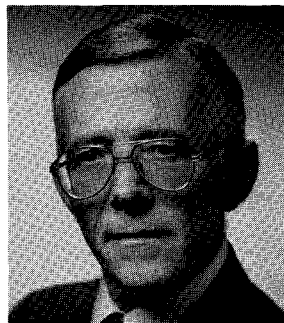
A. TOBEY YU is co-founder and Chairman of ORBA Corporation, a Division of AMCA International. He received his M.S. at MIT, Ph.D. at Lehigh, and M.B.A. at Columbia. In his 30-year career, Dr. Yu has played an active role as an educator, engineer, and manager in mining, processing, transportation and materials handling. With over 150 publications here and abroad, he also taught at N.Y.U. School of Engineering and Cooper Union. He was Technical Director of Cia. Minera Santa Fe in Chile; Vice President, Operations of Hewitt-Robins, A Division of Litton Industries. Dr. Yu's recent awards include the ASCE Outstanding Engineering Achievement of 1977 and the NSPE Outstanding Engineering Achievements in 1976, 1978 and 1980. He served as an AIME Director in 1984 and is the Past President of SME.



ALAN D. ZUNKEL is a principal in the extractive metallurgy consulting firm of Jan H. Reimers and Associates USA Inc. He received his B.S. in Metallurgical Engineering from the Missouri School of Mines in 1964 and his M.S. and D.Sc., also in Metallurgical Engineering, in 1966 and 1967 from the Colorado School of Mines. After serving two years as an officer in the U.S. Army, Dr. Zunkel worked for St. Joe Minerals Corporation from 1969 to 1978 in positions of increasing responsibility culminating in being named General Superintendent of the Monaca zinc smelter. From 1978 to 1986, he served in numerous technical and managerial positions, the last being Manager of Technical Services, for Exxon Minerals Company. He has served TMS on the Board of Directors and as chairman of the Long Range Planning, Programming, Publications, and Education and Professional Affairs Committees and the *Metallurgical Transactions* Joint Commission. He is 1987 TMS President.



JOHN K. HAMMES, AIME VICE PRESIDENT-FINANCE, is Vice President, Metals and Mining Dept., Citibank, N.A., New York. He joined Citibank in 1968 as a Mining Engineer and was named a Vice President in 1972. From 1965 to 1968, he was employed by the Metal Mining Division of Kennecott Copper Corp. Prior to that, he worked for the U.S. Bureau of Mines under a fellowship program supporting research on the Lake Superior iron pellet industry. Mr. Hammes received his Bachelor's degree from the University of Missouri and his M.S. and Ph.D. in Mining Engineering from the University of Minnesota. He is a Past Chairman of the New York Section of AIME and has served as AIME Vice President-Finance since 1977.



ROBERT H. MARCRUM, AIME EXECUTIVE DIRECTOR AND SECRETARY, came to AIME in November, 1983, after a career of over 29 years as a U.S. Army officer. In addition to various command and staff assignments with artillery units, he served on the staff and faculty of the United States Military Academy (USMA) at West Point, in the Office of the Joint Chiefs of Staff at the Pentagon, as the Chief of Staff of the Army's Communications-Electronics Command and as the Post Commander for Fort Monmouth, N.J. He served two tours of duty in Korea and one each in Germany and Vietnam. He holds a B.S. in Engineering from USMA, an M.S. in Industrial Relations from Purdue University, and is a graduate of the Army's Command and Staff College.

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Member Societies

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Telephone 303/973-9550

Claude L. Crowley, Executive Director

The Metallurgical Society
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Warrendale, PA 15086
Telephone: 412/776-9000

Alexander R. Scott, Executive Director

Iron and Steel Society
410 Commonwealth Drive
Warrendale, PA 15086
Telephone: 412/776-1535

Lawrence G. Kuhn, Executive Director

Society of Petroleum Engineers
P.O. Box 833836
Richardson, TX 75083-3836
Telephone: 214/669-3377

Dan K. Adamson, Executive Director

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

AIME PAST PRESIDENTS

Active List

Clyde Williams	1947	Wayne E. Glenn	1974
Carl E. Reistle, Jr.	1956	Julius J. Harwood	1976
Augustus B. Kinzel	1958	H. Arthur Nedom	1977
Ronald R. McNaughton	1961	Wayne L. Dowdey	1978
Lloyd E. Elkins	1962	William H. Wise	1979
Karl L. Feters	1964	M. Scott Kraemer	1980
Thomas C. Frick	1965	Robert H. Merrill	1981
Walter R. Hibbard, Jr.	1967	Harold W. Paxton	1982
John R. McMillan	1968	Edward E. Runyan	1983
James Boyd	1969	Nelson Severinghaus, Jr.	1984
John C. Kinnear, Jr.	1970	Norman T. Mills	1985
John S. Bell	1971	Arlen L. Edgar	1986
James B. Austin	1973		

AIME HONORARY MEMBERS

HONORARY MEMBERSHIP is awarded in appreciation of outstanding service to the Institute or in recognition of distinguished scientific or engineering achievement in fields embracing, broadly speaking, the activities of AIME and its Member Societies.

<u>Year of Election</u>	<u>Year of Election</u>		
Nathaniel Arbiter	1975	Wayne E. Glenn	1979
James B. Austin	1977	William A. Griffith	1986
Edmund C. Babson	1985	Michel T. Halbouty	1972
Charles S. Barrett	1979	Julius J. Harwood	1980
John S. Bell	1976	John F. Havard	1980
James Boyd	1973	Claude R. Hocott	1974
Charles M. Brinckerhoff	1971	M. King Hubbert	1977
John C. Calhoun, Jr.	1975	Richard N. Hunt	1965
Ben H. Caudle	1986	Donald L. Katz	1985
Morris Cohen	1980	Augustus B. Kinzel	1968
Jesse F. Core	1980	M. Scott Kraemer	1983
Lawrence B. Curtis	1986	H. Mark Krause, Jr.	1982
Donald A. Dahlstrom	1985	Carleton C. Long	1971
Henri G. Doll	1986	George H. Love	1972
Wayne L. Dowdey	1983	Plato Malozemoff	1985
Robert C. Earlougher	1984	Dean A. McGee	1977
Lincoln F. Elkins	1977	Robert H. McLemore	1976
Lloyd E. Elkins	1969	Sir Ian McLennan	1971
John F. Elliot	1982	John R. McMillan	1984
Karl L. Feters	1975	Frank W. McQuiston, Jr.	1977
Thomas C. Frick	1970	Robert H. Merrill	1984
Robert B. Gilmore	1985	Stanley D. Michaelson	1977
		Charles V. Millikan	1965

AIME Honorary Members (Continued)

Henry T. Mudd	1981	Carl E. Reistle, Jr.	1960
Morris Muskat	1971	Donald G. Russell	1986
H. Arthur Nedom	1981	Harrison H. Schmitt	1972
Melvin E. Nickel	1978	Cyril Stanley Smith	1973
Earl R. Parker	1982	Simon D. Strauss	1980
William O. Philbrook	1985	Michael Tenenbaum	1979
Albert J. Phillips	1972	Alfred Weiss	1986
Fred H. Poettmann	1984	Clyde Williams	1970
William N. Poundstone	1982	William H. Wise	1984
Nathan E. Promisel	1974	A.F. Van Everdingen	1985
Henry J. Ramey, Jr.	1984		

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

RECORD OF HONORS AND AWARDS PRESENTED BY AIME IN 1986

The following Honors and Awards were presented by AIME in 1986:

HONORARY MEMBERSHIP was conferred upon

Edmund C. Babson, "For exceptional foresight as one of the architects of an international petroleum engineering organization; for active participation over five decades in SPE and AIME programs; and for technical contributions to oil and gas reserve evaluations, especially for secondary and tertiary recovery projects."

Donald A. Dahlstrom, "For his work in processing operations such as filtration, liquid-solid separation, and cyclones; for his role in environmental activities; and for his many contributions to the Society of Mining Engineers of AIME and its Mineral Processing Division."

Robert B. Gilmore, "For long and distinguished service to the engineering and geological profession through service on governmental, academic, and civic agencies; for leadership in water resources standards and oil and gas reserve definitions and standards; and in recognition of his management of a major international consulting organization."

Donald L. Katz, "In recognition of distinguished contributions to petroleum and natural gas engineering; his research in the field of hydrocarbon phase behavior and petroleum and natural gas reservoir performances; and his ability to translate research findings into practical, operational achievements."

Plato Malozemoff, "In recognition of his long and innovative management of a major mining company in a changing environment and for his leadership in the mining community."

William O. Philbrook, "In recognition of his contributions in the physical chemistry of iron and steelmaking and his role as an educator."

A. F. van Everdingen, "For significant contributions that have advanced the technology of petroleum engineering through improved understanding of the nature of oil recovery processes from reservoir rock."

The **JAMES DOUGLAS GOLD MEDAL** to **Ernest Peters**, "For his pioneering research in hydrometallurgy, which includes his early recognition of the electrochemical nature of hydrometallurgy and his contributions to pressure hydrometallurgy technology."

The **BENJAMIN F. FAIRLESS AWARD** to **Frank H. Sherman**, "In recognition of his major contribution toward the application of the basic oxygen process and the direct

rolling of ingots, as well as his lifelong commitment to the practice of enlightened personnel policies and dedicated community service."

The HAL WILLIAMS HARDINGE AWARD to **Frederic L. Kadey, Jr.**, "For outstanding contributions in exploration, research, and development of industrial minerals, particularly diatomite and perlite, and long service to SME and the Industrial Minerals Division."

The ANTHONY F. LUCAS GOLD MEDAL to **Henry J. Welge**, "For more than 40 years of distinguished work in all aspects of modern petroleum engineering; and for pioneering contributions in the field of immiscible displacement in porous media."

The ROBERT EARLL McCONNELL AWARD to **William A. Krivsky**, "For pioneering work in the development of the Argon-Oxygen-Decarburization (AOD) Process resulting in higher quality stainless steels and in the conservation of minerals."

The ERSKINE RAMSAY MEDAL to **Louis Kuchinic, Jr.**, "For his outstanding coal industry operating and executive abilities, his professional leadership as President of SME of AIME, and his continued dedication to responsible industry goals."

The CHARLES F. RAND MEMORIAL GOLD MEDAL to **Wayne H. Burt**, "For his outstanding leadership in mining construction and administration and management development."

The ROBERT H. RICHARDS AWARD to **Iwao Iwasaki**, "For his dedicated teaching, his creative research into many facets of mineral processing, and his concern for industrial problems, which make him a worthy exemplar of the Richards' tradition."

The WILLIAM LAWRENCE SAUNDERS GOLD MEDAL to **Richard L. Brittain**, "For his contribution to development of modern underground mining methods and for establishing consulting services to assist the mining industry in dealing with government agencies."

The ENVIRONMENTAL CONSERVATION DISTINGUISHED SERVICE AWARD to **Edward R. Bingham**, "For his outstanding leadership ability in contributing to the nation's understanding of environmental laws and affairs in their application to the mining industry."

The MINERAL INDUSTRY EDUCATION AWARD to **Laurence R. Lattman**, "In recognition of the outstanding teaching, scholarly contributions, administrative leadership, and government and industrial liaison he has provided in the earth sciences and mineral engineering."

The MINERAL ECONOMICS AWARD to **Richard T. Newcomb**, "In recognition of distinguished contributions through studies of the steel, coal, and copper industries, through mineral economic education and through advisory studies for the government."

The ROSSITER W. RAYMOND MEMORIAL AWARD to **David R. Hanson**, for his paper "Rock Stability Analysis by Acoustic Spectroscopy."

LEGION OF HONORS FIFTY-YEAR MEMBERS:**Society of Mining Engineers:**

John N. Andregg, James S. Baker, W.E. Bearce, George W. Boulter, Samuel I. Bowditch, Philip R. Bradley, Malcolm C. Brown, Wallace P. Butler, Gordon H. Chambers, Leonard C. Clark, Thomas Clements, John F. Culman, Jesse F. Core, Edward C. Dapples, Jr., Allen H. Engelhardt, A.J. Farretta, Fred W. Farwell, Paul Gemmill, George S. Gluck, Ernest R. Gordon, John M. Hague, Jane R. Hearne, Arthur W. Heuck, William P. Hewitt, James A. Hoagland, A.H. Hunsberger, G.W. Irvin, Donald R. Irving, Neil O. Johnson, John W. Judy, Walter D. Keller, Douglas E. Kerr-Lawson, Robert U. King, Mitchell H. Kline, Clarence N. Kravig, Robert A. Laurence, Robert W. Lawson, Grant Leeson, Wing L. Lew, Solomon S. Lieb, Henry R. Martin, William F. Masterton, Ted C. Mathews, William W. Mein, J.P. Michaelson, Stuart Miller, Howard W. Miller, John G. Miller, Robert B. Miller, Thomas G. Moore, Francis M. Morris, James V. Neuman, Jr., J.V.S. Norton, Patrick H. O'Neill, Amand Parent, John Payne, Jr., Frank C. Pickard, James P. Pollock, Lewis S. Prater, John D. Ridge, Alfredo I. Rodriguez, Joseph T. Roy, Earl L. H. Sackett, Ray D. Satterly, Vernon E. Scheid, Arthur E. Schnauffer, Edward P. Shea, Alfred T. Snedden, Milton Steinheimer, S.A. Stone, L.A. J. Terrones, Conrad W. Thomas, William J. Thomas, Donald H. Townsend, Richard W. Unger, John W. Vanderwilt, Ruben J. Valasco, Robert G. Vervaeke, S. Luis Villasenor, Adrian A. Von Maltitz, H.A. Waite, Arnold E. Waters, Jr., George F. Weaton, Elton A. Youngberg

The Metallurgical Society

Norman R. Alston, Agnus Y. Bethune, Morris Cohen, George W. Coleman, Bernard J. Esarey, J.L. Everhart, Frederick J. Fay, J.A. Fellows, Maxwell Gensamer, Albert M. Hall, Arthur E. Inman, Charles H. Junge, M. Merlub-Sobel, Oscar O. Miller, Hans H. Neubert, Hans Osborg, F.C. Rees, John A. Richter, George H. Sistare, Jr., George V. Smith, John A. Swift, Robert K. Waring, Oswald J. Wick, Merritt A. Williamson, Roland S. Young

Iron and Steel Society

Guvenc Argon, Archie J. Cochrane, Frederick J. Fay, Charles T. Greenidge, Hugo Neu, Melvin E. Nickel, Bruce S. Old

Society of Petroleum Engineers

Robert P. Alger, W.C. Bednar, Robert Boykin, Jr., James T. Carriel, Paul J. Charrin, Ray H. Coe, J.S. Fuller, George C. Grow, Jr., William N. Hiatt, R. H. Johnson, Raymond F. Kavis, J.H. Marshall II, Robert E. McMillen, Thomas B. Morrow, W. Neilson, Jr., Harold T. Olsen, James C. Posgate, Albert S. Trube, Jr., J.W. Winfrey, W.E. Winn.

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

REPORT ON THE
115th AIME ANNUAL MEETING

The 115th AIME Annual Meeting was held in New Orleans, Louisiana, March 2-6, 1986. The New Orleans Hilton served as the headquarters hotel for the Society of Mining Engineers. The Sheraton New Orleans was the headquarters for AIME, the Society of Petroleum Engineers, the Iron and Steel Society and WAAIME. The Metallurgical Society was headquartered at the Sheraton and the Marriott.

Over 3,500 members, non-members and students attended the technical sessions sponsored by the AIME Member Societies during the five-day meeting. Three sessions sponsored by the AIME All-Institute Annual Meeting Program Committee were held at the Sheraton. Two sessions on energy addressed development in oil and gas exploration and production. The third session covered the goals and objectives of Generic Mineral Technology Research Centers.

One of the highlights of the Annual Meeting was the AIME Annual Luncheon, held on March 3 at the Hilton. Mr. Arlen L. Edgar was installed as 1986 AIME President, assuming the position from 1985 President Norman T. Mills. Members of the 1985 AIME Board of Trustees were recognized for their service to the Institute. Concluding the Luncheon program, Ian MacGregor, Chairman of the National Coal Board (Great Britain), addressed the group on the topic of "Issues in International Competitiveness."

The 115th AIME Annual Banquet and Awards Ceremony was held Tuesday evening, March 4, at the Sheraton. 1985 President Mills served as the Master of Ceremonies for the Awards Ceremony during which several major Institute awards, including Honorary Membership, were presented, followed by a short address by Incoming President Edgar.

To the Board of Trustees of the
American Institute of Mining, Metallurgical,
and Petroleum Engineers, Inc.:

We have examined the balance sheets of the AMERICAN INSTITUTE of MINING, METALLURGICAL, and PETROLEUM ENGINEERS, INC. (Note 1a) as of November 30, 1986 and 1985, and the related statements of revenue and expenses and surplus and changes in endowment and quasi-endowment funds for the years then ended. Our examinations were made in accordance with generally accepted auditing standards and, accordingly, included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the financial statements referred to above present fairly the financial position of the American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. (Note 1a) at November 30, 1986 and 1985, and the results of its operations and the changes in its endowment and quasi-endowment fund balances for the years then ended, in conformity with generally accepted accounting principles applied on a consistent basis.

Coopers & Lybrand

New York, New York
January 8, 1987.

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

BALANCE SHEETS, NOVEMBER 30, 1986 and 1985 (Note 1a)

	<u>1986</u>	<u>1985</u>	<u>1986</u>	<u>1985</u>
ASSETS:				
LIABILITIES and FUND BALANCES:				
Operating fund:				
Cash and temporary cash investments	\$ 76,502	\$ 120,926	\$ 31,585	\$ 65,327
Accounts receivable, primarily due from Member Societies	21,276	7,135		
Equipment, furniture and fixtures, less accumulated depreciation of \$22,153 in 1986 and \$15,810 in 1985 (Note 1c)	<u>13,470</u>	<u>19,737</u>	<u>96,697</u>	<u>86,121</u>
Prepaid expenses	<u>17,034</u>	<u>3,650</u>	<u>128,282</u>	<u>151,448</u>
	<u>128,282</u>	<u>151,448</u>		
Surplus - unrestricted				
Endowment and quasi-endowment funds:				
Investments, at cost plus accrued interest (at market quotations plus accrued interest: \$7,436,315 in 1986 and \$6,381,119 in 1985) (Notes 1d and 3)	5,991,817	5,472,786		
Cash and temporary cash investments	411,784	313,539		
Inventories of books (Note 1b)	250,396	340,186		
Loans receivable from Member Societies plus accrued interest (Note 2)	601,156	634,842		
Advance to SME for land and building investment (Note 2)	<u>3,931</u>	<u>100,000</u>	<u>35,193</u>	<u>70,529</u>
Prepaid expenses	<u>7,259,084</u>	<u>6,864,340</u>	<u>7,223,891</u>	<u>6,793,811</u>
Founder Society advances to United Engineering Trustees, Inc. (Note 4)	<u>265,000</u>	<u>265,000</u>	<u>265,000</u>	<u>265,000</u>
Property fund (no change during 1986 and 1985) (Note 4)	<u>\$7,652,366</u>	<u>\$7,280,788</u>	<u>\$7,652,366</u>	<u>\$7,280,788</u>

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

STATEMENTS of REVENUE and EXPENSES and SURPLUS
for the years ended November 30, 1986 and 1985 (Note 1a)

	<u>1986</u>	<u>1985</u>
Revenue:		
Contributions by Member Societies for:		
Other engineering federations	\$131,648	\$154,165
Administrative expenses	16,000	56,000
Appropriations from endowment funds	260,000	272,000
Offshore Technology Conference	13,584	43,516
Meetings	23,058	37,555
Interest (Note 1f)	21,628	22,199
Miscellaneous	<u>22,600</u>	<u>18,070</u>
	<u>488,518</u>	<u>603,505</u>
Expenses:		
Federation support	139,648	162,165
Meetings	21,000	31,273
Other program and administrative expenses (Note 5)	<u>317,294</u>	<u>334,776</u>
	<u>477,942</u>	<u>528,214</u>
Excess of revenue over expenses	10,576	75,291
Surplus - unrestricted:		
Balance, beginning of year	<u>86,121</u>	<u>10,830</u>
Balance, end of year	<u>\$ 96,697</u>	<u>\$ 86,121</u>

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

STATEMENTS of CHANGES in ENDOWMENT and QUASI-ENDOWMENT FUNDS
for the years ended November 30, 1986 and 1985 (Note 1a)

	<u>1986</u>	<u>1985</u>
Balance of fund accounts, beginning of year	\$6,793,811	\$6,594,318
Revenue:		
Net gain on sales of investments (Note 1e)	538,410	125,525
Interest and dividends, net of investment advisor and custodian fees of \$47,300 in 1986 and \$38,992 in 1985 (Note 1f)	342,871	423,835
Sales of books, volumes, etc.	134,429	75,365
Royalties from oil and gas deeds	<u>33,104</u>	<u>35,571</u>
	<u>1,048,814</u>	<u>660,296</u>
Expenses and appropriations:		
Publication expenses	149,323	90,844
Awards	41,428	31,803
Sundry expenses	54,638	66,156
Appropriations to operating funds	260,000	272,000
Transfer from Rocky Mountain Fund to SME (Note 2)	<u>113,345</u>	<u> </u>
	<u>618,734</u>	<u>460,803</u>
Balance of fund accounts, end of year	<u>\$7,223,891</u>	<u>\$6,793,811</u>

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

NOTES to FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies:

a. General:

The financial statements comprise the accounts of the American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc. (AIME). They do not include the accounts of the Society of Mining Engineers (SME), the Society of Petroleum Engineers (SPE), The Metallurgical Society (TMS), and the Iron & Steel Society (ISS), the four Member Societies of AIME.

In order to prepare AIME and the Member Societies to meet future challenges and opportunities, and to better serve their members, the Board of Directors of each Society adopted Bylaws and Articles of Incorporation which permit separate incorporation of each Society as provided by existing AIME Bylaws. The proposed Bylaws and Articles of Incorporation were approved by the respective Societies' members in November 1984, and each Society became incorporated under the name of the respective Society, Inc.

Quasi-endowment funds of \$5,841,197 and \$5,420,474 at November 30, 1986 and 1985, respectively, represent amounts which have been restricted by AIME's Board of Trustees. The Board of Trustees has also determined that such funds be retained and invested.

AIME's Board of Trustees periodically makes appropriations from interest and dividend income of endowment funds to the operating fund and the individual Member Societies based on their respective operating requirements.

b. Inventories:

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

c. Equipment, Furniture and Fixtures:

Equipment, furniture and fixtures are recorded at cost and are depreciated on the straight-line method over their estimated useful lives. Depreciation expense for 1986 and 1985 was \$6,343 and \$6,730, respectively.

d. Investments:

Investments purchased are carried at cost or, if acquired by gift, at market value on date of gift plus accrued interest, where applicable. Purchases and sales of securities are reflected on a trade-date basis.

Continued

NOTES to FINANCIAL STATEMENTS, Continued

e. Gains or Losses on Sale of Investments:

Gains or losses on sale of investments are determined on the basis of average cost. Such gains or losses relating to investments which are part of the endowment commingled pool of investments are allocated to the individual funds based on their relative book values at the end of each quarter.

f. Interest and Dividend Income:

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

g. Pensions:

AIME and its four Member Societies have a defined benefit pension plan which covers substantially all full-time employees and is noncontributory with regard to the first \$10,000 of salary. Contributions are required from eligible employees who elect to participate in the contributory aspect of the plan and whose salaries exceed \$10,000. At December 1, 1985, the most recent actuarial valuation date, the plan's net assets available for benefits (\$2,179,300) exceeded the actuarial present value of accumulated vested and nonvested benefits (\$1,246,600). AIME's portion of this actuarial data is not separately determinable. While contributions were not required in 1986 and 1985 under the minimum funding requirements of ERISA, AIME accrued and charged (credited) to expense its portion of the normal cost which amounted to (\$1,167) and \$2,000 in 1986 and 1985, respectively.

2. Financing of TMS/ISS and SME Headquarters Facilities:

TMS/ISS Headquarters:

During 1978, TMS/ISS obtained a \$300,055 loan from the endowment fund, payable over twenty years at a floating interest rate based on the endowment fund's prior year's net earnings after management fees. At November 30, 1986 and 1985, the balance of the loan plus accrued interest at 5.6% (1986) and 7.3% (1985) per annum was \$224,067 and \$237,430, respectively.

SME Headquarters:

On February 28, 1978, AIME's Board of Trustees approved an investment of \$100,000 from the endowment fund (Rocky Mountain Fund) for the SME Headquarters building. In connection with the separate incorporation of the Member Societies described in Note 1a, the AIME Board of Trustees approved the transfer of one-half of the Rocky Mountain Fund to SME. Such transfer will amount to

Continued

NOTES to FINANCIAL STATEMENTS, Continued

approximately \$130,000 and was and will be accomplished by forgiving AIME's \$100,000 advance to SME in fiscal year 1986 and by cash payments, over a period of time, of approximately \$30,000. As of November 30, 1986, \$13,345 of the \$30,000 have been paid to SME. The amounts transferred and to be transferred to SME are and will be comprised only of accumulated earnings on the fund; the principal of the fund will be maintained by AIME.

During 1979, SME obtained a \$467,000 loan from the endowment fund, payable over twenty years at a floating interest rate based on the endowment fund's prior year's net earnings after management fees. At November 30, 1986 and 1985, the balance of the loan plus accrued interest at 5.6% (1986) and 7.3% (1985) was \$377,089 and \$397,412, respectively.

3. Changes in Investments:

Endowment and quasi-endowment funds:

	<u>1986</u>	<u>1985</u>
Investments at cost plus accrued interest, beginning of year	\$ 5,472,786	\$5,235,811
Purchases of securities	<u>4,555,763</u>	<u>3,249,609</u>
	10,028,549	8,485,420
Sales of securities	<u>4,565,416</u>	<u>3,129,114</u>
	5,463,133	5,356,306
Net realized gain on sales of securities	538,410	125,525
Net change in accrued interest	<u>(9,726)</u>	<u>(9,045)</u>
Investments at cost plus accrued interest, end of year	<u>\$ 5,991,817</u>	<u>\$5,472,786</u>

4. Advances to United Engineering Trustees, Inc.:

In accordance with an agreement between AIME and the United Engineering Trustees, Inc. (UET), AIME has agreed to maintain permanently its principal offices in the United Engineering Center Building and to pay a pro rata portion of the operating costs of

Continued

NOTES to FINANCIAL STATEMENTS, Continued

the building. AIME's share of these costs during 1986 and 1985 was \$44,663 and \$46,956, respectively. The advance to UET, made in connection with the erection of the United Engineering Center Building, is repayable only out of available reserve funds on dissolution of UET and earns interest at an annual rate of 4%.

5. Other Program and Administrative Expenses:

Other program and administrative expenses consist of the following:

	<u>1986</u>	<u>1985</u>
Payroll and employee benefits	\$168,331	\$162,198
Audit and legal services	23,997	47,180
Rent	44,663	46,956
AIME Board activities	10,690	17,444
Supplies, postage and maintenance and repairs	19,373	15,199
Insurance	11,224	9,161
Depreciation	6,343	6,730
Publications and printing	2,861	6,360
Other	29,812	23,548
	<u>\$317,294</u>	<u>\$334,776</u>

6. Tax Status:

AIME is a not-for-profit organization exempt from federal income taxes under Section 501(c)(3) of the Internal Revenue Code.

**The Woman's Auxiliary
to the
American Institute of Mining, Metallurgical, and Petroleum Engineers, Inc.**

REPORT OF THE WAAIME

WAAIME has been actively pursuing all of its programs during the year 10/1/85 to 10/1/86. We are pleased to report that 32 Sections with a total membership of 2,093 represents a net gain of 66 members. We have also chartered a new Alabama-Tuscaloosa Section. Some of our Sections are struggling to remain active due to mine closures, takeovers, or economic stress.

Our Investment Portfolio remains with Brown Brothers Harriman & Co; our auditors are Coopers & Lybrand, and our CPA is Paul Goodman. The portfolio for Endowment Funds shows continued, excellent growth. We have some funds in commercial paper yielding the highest possible rate, however, with falling interest rates it becomes more difficult.

Scholarship Loan Fund (SLF) continues its strong financial support to students in Earth Science and related fields. Students apply for assistance to a Section which sponsors and approves the application before it is submitted to the National Board for final approval. During the year 10/1/85 to 10/1/86, \$110,152.00 was advanced to students. In May 1986, 53 new loans were approved, totaling \$118,590.00. 14 Sections sponsored 37 men and 16 women, of which 37 were undergraduates, and 16 were graduate students, in the following fields:

Mining Engineering	14	Metallurgy	4
Petroleum	9	Mining Electrical Engineering	1
Geology	9	Geophysics	1
Geological Engineering	9	Hydrogeology	1
Material Science & Engineering	5		

Loan repayments totaled \$36,263.77 with 36 recipients attaining paid-up status. Income from Endowment Funds continues to be adequate. The total funds available for a year are the sum of interest income from SLF Endowment Funds (the capital is never used); 75% of contributions from Sections (the other 25% is added to the Section Endowment Fund), and 100% of repayments.

The Engineers for Tomorrow (EFT) continues to provide elementary and high school students with information on the Earth Science fields. Sections participated by sponsoring field trips; providing films and educational materials to schools; donating prizes to area science fairs; assisting in career programming; sponsoring teachers for Summer Field Course; donating funds to National EFT Committee; or contributing to high schools for purchase of earth science materials. Some Sections contact area schools to assess their current needs. We work closely with the Mineral Information Institute and are providing Section Chairmen with the 4th Edition, Mineral and Energy Information Sources. We have audio-visual material and films available upon request, and we are providing a valuable service.

The Chest Assistance (CAS) in keeping with the purposes of WAAIME offers emergency cash assistance to students as well philanthropic projects of national interest. Twenty-two of our thirty-two Sections have participated financially, or with service. Nine students were given cash assistance for summer field work. Some Sections gave community aid as hostesses to local programs and one helped in the gift shop of a mining museum.

The Library program aids in the establishment and/or developing of libraries and provides technical books, tapes, magazines, and journals. Nine Sections have active, on-going programs, providing books or materials to high schools, middle schools, colleges, universities, or local libraries as the need arises in their sphere of influence. Some Sections provide money or service, according to need. One enterprising Section helped move books from one established library to a new library in a neighboring area. These services are greatly appreciated by students, teachers, and the community.

Newsletter was published four times. This provides a lifeline of communication with every WAAIME member, and it is prepared and published in a very professional manner. It gives information regarding National Board Meetings, news of convention and Annual Meeting plans or agendas, post-convention reports, Section activities, photographs and special interest items, all designed to keep us well informed, and spark interest in WAAIME.

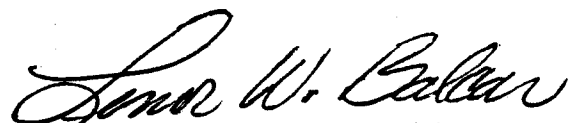
The Liaison program keeps us in close touch with AIME and other WAAIME Sections through projects of mutual interest and shared activities. For example:

- Joint regular meeting with AIME & WAAIME Sections.
- Fund Raiser cooperation between AIME and WAAIME.
- Providing Board and Membership lists.
- Support of regional AIME or industry related Technical Society meetings.
- Cooperation with AIME Section or individuals in Service/Education.
- Joint meeting with AIME Section for dances, cruises, picnics or parties.
- Joint meeting with other WAAIME Sections or Sub-sections.

Good Liaison really works wonders. This is another lifeline of communication which we nurture in every way to maintain better understanding and support for one another.

Publicity sends information on WAAIME to the four technical societies and to other technical publications. We have received excellent support from SME and TMS in the articles they have printed concerning WAAIME, and the application forms to encourage WAAIME membership.

We appreciate the cooperation we have had from the staff of AIME and the four societies. We thank you for your attention and concern. It is an honor to be your auxiliary, and to contribute to the future of our organizations through our dedication to the Scholarship Loan program, and to education and service.



Mrs. Frank A. Balcar
President, WAAIME