Golden, Colorado
January 13, 1978

The Board of Trustees met in regular session on January 13, 1978 at 9:00 a.m. in the Board Room.

New student member, Steve Ruhle, took the oath of office.

Present in addition to Mr. Ruhle were Messrs. Coors, Fogarty, Grynberg, Maytag, Schwartsberg, Stockmar, and Wilson.

Also present were President McBride, Vice Presidents Scott and Welles, other staff members, and a representative of the press.

Mr. Wilson presided.

Previous Minutes. The minutes of the meeting held on December 9, 1977 were approved as corrected.

New Faculty Appointments. In the absence of Dr. Gary, Dean Copeland reported on new appointments to the faculty:

Robert O. Knecht
Part-time Instructor in CPR
(spring semester)

$3,886

It was noted that Dr. Henry A. Babcock has relinquished administrative duties as department head on account of personal circumstances. Professor James W. Martin has been named Acting Head of Basic Engineering. Professor Martin has indicated that he does not wish to be considered for permanent head, and a search for a permanent head has begun. It is expected that applications will be received both from current staff and from persons not now employed at Mines.


In speaking of this report, Mr. Scott said he believed we have accomplished the goals we had set for ourselves for this period of time. He said that state auditors are beginning the yearly audit and, in his opinion, we are better prepared for them than we have ever been. President McBride recognized the assistance of Colorado State University personnel, who seem to be satisfying the State Auditor's office in what they do in their organization.

In answer to a direct question as to whether we shall be able to avoid the criticisms received in past years, Mr. Scott said again that in his opinion we have better staff and a better set of books than before, that we have used external standards for evaluating our internal controls, and that he believes our audit review will be less critical.

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Laubach Case. Mr. Scott reported on the affirmation by the Colorado supreme court of a Colorado district court decision, favorable to the School, in the case of Winton Laubach who retired on disability in 1973 and who then claimed he had been wrongfully dismissed. It is understood that the Attorney General will in turn move for dismissal of the remnants from the federal district court docket.

Hansen Case. Mr. Scott further reported on the case of Viggo Hansen, a former faculty member whose contract was not renewed, and who sued, asking to be reinstated. This case was dismissed last week in county district court; attorney for Hansen may appeal.

ATO House. Mr. Scott gave a progress report on the situation with the ATO house purchase. It is understood that the ATO's are still attempting to arrange for the structure to be moved, and they have talked to the School about a site on fraternity row for permanent location of the house. There are at present two sites available on fraternity row. The sorority on campus has asked to be considered for one of the sites. No action is considered necessary at this time.

Admissions Report. Dean Culver reviewed the admissions report and said we are running slightly ahead of last year on applications and acceptances. He reminded the Board that, based on high school enrollment figures, we shall in all probability not have to cap admissions again in the foreseeable future.

In regard to our admissions, Mr. Schwartzberg reported on having attended the CCHE meeting on the master plan during the course of which one of the commissioners was critical of our minority enrollment of three percent with a projected increased enrollment of minority students of four percent in about 10 years. Dr. Dale Foreman, who was attending the meeting to make a report as Affirmative Action Officer of the School, spoke to this subject, saying that few of the minority prospects are interested in engineering, thus the pool from which we draw is limited. Dr. Foreman said also that we do not have money to compete for scholarship students; the only funds we have are private funds donated for this particular purpose. In answer to a question, Dr. Foreman and Mr. Scott both indicated they did not know if other schools had other than private money for assistance to minority students.

American Indian Recruitment Program. Dean Culver reported on preliminary arrangements to work with and through the University of New Mexico, which has developed a three-year pre-engineering program utilizing remedial courses to equip a student to enter engineering school. He said that a student will then be able to enter a school such as Mines as a junior with few deficiencies.

Dr. Culver further reported that he is now interviewing for a director of our Indian recruitment program, even though at this time we do not have funding at hand. He said it is his hope that we can employ a director who will spend the summer (1978) at the University of New Mexico working with the
students enrolled under their program to gain experience and to recruit students for Mines.

Affirmative Action Report, 1976-77. President McBride noted that as required by law we have an Affirmative Action policy in effect with regard to personnel and employment practices. Dr. Foreman, our Affirmative Action Officer, said we are required to compile an annual report and have it on file. He stated to the Board that the report for 1976-77, in hand, demonstrates substantial compliance with the policy. He also said we are required to set hiring goals every two years. Dr. Foreman said, in his opinion, we have exceeded the goals set in early 1976. Board members cautioned that we should not be attempting to exceed proportionate numbers in the work force.

President McBride said he will inform the Board of new goals as they are established and that he will keep the Board informed of our progress in meeting the goals.

CCHE Master Plan. President McBride reported that the master plan as revised January 6, 1978 had been the subject of a lengthy review meeting held by CCHE and that the only item which might have any effect on us is the special "polytechnic" designation recommended for the University of Southern Colorado. It was very clearly stated during the review meeting that this is to entail engineering technology and not engineering even though the connotation of the word polytechnic is otherwise.

It was further noted that the master plan recognized for the first time Mines headcount goal of 3,000 students (3300 FTE).

Dormitory Bids. Mr. Scott distributed copies of a memorandum he had just written to the President reviewing the first results of the bids opened the day before for construction of the new dormitory. There had been only four bids and the lowest was $557,661 over the budget. The memo written by Mr. Scott, in addition to listing the three lowest bids, itemized alternatives and alternate costs.

President McBride said he and the administrative staff have not had an opportunity to study the bids and he was, therefore, not ready to make a recommendation but was asking at this time for the viewpoints of Board members, based on this limited information. A general discussion ensued, the general thrust appearing to favor doing all possible to secure a construction contract based on present designs and bids rather than undertaking a new, and perhaps less costly, design.

Since we have thirty days to accept or reject bids, the meeting date for February was by approved motion moved to February 3 to permit Board action at that time.

Development Program. Mr. White gave a progress report on development work, saying that at the end of the 1977 calendar year fund raising had reached a satisfactory

January 13, 1978
level, being over 12 million. He said they are currently working with over 30 entities with a gift giving potential of over 26 million.

HEW Audit. President McBride reported that we have been notified that on February 27 representatives of HEW will be on campus to audit our procedures in relation to student activities.

Mining Hall of Fame. Mr. Stockmar reported that he and Mr. Wilson met earlier in the week with representatives of the proposed Mining Hall of Fame. Mr. Stockmar said he had felt we had not been definite enough at the earlier meeting and that at the recent meeting concrete proposals had been made. Mr. Stockmar and Mr. Wilson were able to view one set of preliminary architectural drawings prepared by students at the architectural school at CU. Other sets of drawings are being prepared for consideration but were not available for viewing.

The people spearheading the project wish to lease at one dollar a year the entire tract of land spoken of at the earlier meeting. Mr. Stockmar said the group proposes to raise an initial $150,000, at which time they would be granted an option to lease. That option would require, as a condition of actual leasehold, that they raise $5 million dollars on a predetermined schedule for a 40,000 sq. ft. building, complete with exhibits, and the funding of operating expenses. Mr. Stockmar repeated his earlier remarks that it is important that we be guaranteed the project is solvent and has a very good chance for success before we get involved.

It was requested that copies of the letter be made available to the other Board members so that action might be taken at the February meeting, if desired, and the administration was instructed to review the plans and proposals of the Hall of Fame group.

It was suggested that multiple use of the building and the intangible values to the School of its presence and programs might be far more important than the dollar rental.

April Meeting. President McBride reported that CCHE has been meeting with boards of control throughout the state and has in train asked for a joint meeting with the CSM Board on April 7. The meeting will not take the place of the regular meeting but will furnish an opportunity to exchange views and become acquainted.

Upon motion made, seconded, and passed, the meeting time and date for April was changed to 8:00 a.m., April 7. The arrangements for the joint and separate meetings of the Board and Commission and the agenda for the joint meeting are to be reviewed by the Board prior to finalization.

Legislative Interim Committee on Higher Education. Mr. Welles reported that the Legislative Interim Committee will be on campus next Friday, January 20, at 11:00 a.m., President's Room, Student Center. President McBride noted

January 13, 1978
the importance of this meeting with legislators and asked that as many Board members be present for this meeting as can reasonably arrange to do so.

The meeting adjourned at 12:15 p.m.
In substitution of the regular meeting, the Board of Trustees met on February 3, 1978 at 9:00 a.m. in the Board Room, the session having been preceded at 8:00 a.m. by an informational report on the Mineral Economics Department by Professor J. F. Mather.

Present were Messrs. Coors, Fogarty, Grynberg, Maytag, Ruehle, Schwartzberg, Stockmar, and Wilson.

Mr. Coors presided.

Also present were President McBride, Vice Presidents Scott and Welles, various staff members and a representative of the press.

Previous Minutes. The minutes of the meeting held on January 13, 1978 were approved as distributed.

Faculty Appointments. In the absence of Dr. Gary, Dean Copeland reviewed faculty appointments as follows:

Rodney W. Benoist $6,000
Visiting Instructor in Physics Department (spring semester)

Jay D. Burch 6,000
Visiting Instructor in Physics Department (spring semester)

David C. Gulbenkian 6,800
Visiting Instructor in Humanities and Social Sciences (spring semester)

Several persons were appointed for the academic year but salaries had been established for fall only. The following salaries are for the spring semester:

Wayne C. Hazen $3,000
Jerald E. Jones 2,000
Roger D. Strahl 4,000
David G. Wirth 1,800

Monthly Financial Reports. Mr. Scott made available the regular monthly reports: Investment Report, Budget Report, and the Financial Management Plan Progress Report. He also distributed a Construction Report and an analysis prepared by our Budget Officer of the state executive budget recommendations for CSM. Mr. Scott said we do require supplemental appropriations in the total amount of $395,700 to complete the fiscal year as planned and that the requests are now in the hands of the Joint Budget Committee.
In answer to a question as to the necessity of adhering to the line items in the budget, President McBride said that it has never been entirely clear how binding the line items were in the JBC approved budgets. In view of this uncertainty and the obvious need for flexibility, he has recommended each year that the Board approve his deviating from the line items as necessary to keep the School operating; we have not, however, deviated from the FTE numbers. As yet we have not been challenged in our annual variance reports to the legislature.

Admissions Report. Mr. Young, Admissions Director, reported that as of now we are 13 percent over previous years in applications but expect in the end only a slight increase over last year. He said this is in line with applications to other engineering schools.

New Dormitory Facilities. Mr. Scott distributed copies of an analysis of the present cost picture on the new dormitory and student center facilities (the "project") as prepared by the architect, Mr. John D. Anderson, on the basis of bids on hand and available to be accepted; he also distributed an analysis which he had prepared on the revenue potential and alternate project costs.

On the premise that the Student Center as designed and bid meets major program needs and should therefore be awarded without significant changes, Mr. Scott's analysis showed with respect to the total project the alternates available by adjusting dormitory only cost in several ways:

1. Capital funds available from revenue bonds supported from income - $3,038,000

2. Alternate A - project capital cost with dormitory as bid with solar heating and cooling - 4,517,000
   Equity funds required - 1,479,000

3. Alternate B - project capital cost with dormitory as bid less solar heating and cooling and less all other bid alternates not inherent in the basic design - 4,180,640
   Equity funds required - 1,142,640

4. Alternate C - estimated project capital cost with a redesigned conventional dormitory - 3,780,640
   Equity funds required - 742,640

Extended discussion followed, Mr. Anderson being present to discuss costs and design features and Mr. Fawcett, Director of Student Housing, being present to discuss program needs and income projections. The additional alternative of
building no dormitory at this time was raised and reviewed. Major points of discussion were: (1) demand for dormitory space and validity of income projections, (2) expectations of summer use, particularly in connection with extension and management courses, (3) student desires with regard to type of accommodations, (4) donor contacts and expectations, (5) precedents for future dormitory construction, and (6) comparison of rates and amenities among competing Colorado institutions.

Upon motion made, seconded, and unanimously passed, the Board directed that the bids be accepted for the dormitory and student center alterations as designed, including solar heating and cooling, to be financed in part by an equity contribution of $1.479 million, allowing the administration to deduct alternates not to exceed $50,000 and authorizing the use of unrestricted school funds now on hand or to be received in the maximum amount of $1.479 million if the entire $1.479 million cannot be raised from other sources.

Profile of the Future Graduate. Mr. Welles gave a progress report on the work being done by the Task Force working on the profile of the future graduate of CSM. A literature search is being conducted, and a conference on this subject underwritten by the U. S. Department of Energy is being planned for mid-April. President McBride said the Task Force will report progress to the Board and that the subject will be one of two main items on the agenda for the summer planning conference of the Board.

Legislative Report. Mr. Welles reported that the CCHE has completed work on the Master Plan as directed by the legislature.

Mr. Welles reported briefly on several bills which might be of interest to us: (1) S.62 introduced by Senator Hugh Fowler reorganizing the structure of higher education in Colorado; and (2) S.28 limiting the use of student fees. He also reported that the JBC is reviving its interest in foreign student tuition.

Medals for 1978. Mr. Stockmar reviewed the previous procedure for selecting medalists and said one criticism of the former procedure was that adequate information had not been available to those members of the Board not on the Board subcommittee for review of candidates. He asked that information on each candidate be sent to all members of the Board so that at the March meeting the full membership may have proper opportunity to rate all candidates. It is expected that the Board will at that time sit as a committee of the whole to select the medalists for 1978.

The meeting adjourned at 12:00 noon and the members of the Board were joined by the CSMRI Board members for lunch.

February 3, 1978
Golden, Colorado
March 10, 1978

The Board of Trustees met in regular session at 9:00 a.m., March 10, 1978, in the Board Room.


Dr. Fogarty presided.

Also present were President McBride, Vice Presidents Gary, Scott, and Welles, various staff members and a representative of the press.

Previous Minutes. The minutes of the meeting held on February 3, 1978 were approved as corrected.

Faculty Appointments. Dr. Gary reviewed the spring semester appointments as follows:

Larry Buchanan
Part-time Instructor in Geology

Joseph C. Cain
Adjunct Associate Professor of Geophysics

Jeffrey J. Daniels
Adjunct Assistant Professor of Geophysics

Samuel S. Goldich
Adjunct Professor of Geology

Franklin E. Grange II
Adjunct Assistant Professor of Mineral Economics

Alan L. Libby
Adjunct Assistant Professor of Metallurgical Engineering

Diane Mosier
Part-time Instructor in Basic Engineering

Von Sagrillo
Computer Consultant

O. B. Sholders
Visiting Associate Professor of Basic Engineering

Thomas K. Tulk
Adjunct Assistant Professor of Mineral Economics

James W. Martin is having $1,000 added to his salary for the spring semester with the assumption of duties as Acting Head of Basic Engineering

March 10, 1978
For the period March 1, to October 1, 1978:

Walter J. Wanner  
Research Associate, Earth Mechanics Institute  
no compensation

Monthly Financial Reports. Mr. Scott made available copies of the CSM Investment Summary, the Consolidated Board Report, and the regular monthly Budget Report. He said we are within the planned operation for the year.

Mr. Scott distributed copies of a status recapitulation of our supplemental appropriations requests and gave a brief explanation of each. He also distributed copies of a new, occasional document "Restrictions Report on CSM Invested Funds, as of 2/28/78". It was noted from the latter that as of the date of the report a total of $211,420 was available for use at the discretion of the Board. Included in this total is a receivable in the amount of $50,000 in connection with Brown Hall land acquisition for which reimbursement by the Foundation is in order. Cash available is therefore $161,420.

Admissions Report. Dr. Gary reported that although there is now a later admissions report than that mailed to the members with the agenda, the figures have not changed substantially; applications are running about 4 percent above last year. We are hoping to, and feel reasonably confident of, enrolling 495 freshmen and 120 transfer students, the same numerical goals as for Fall 1977.

Academic Leaves. Dr. Gary reported that it is customary for faculty members who take academic leaves to prepare both oral and written reports to the Board on purposes and accomplishments. He noted that the written reports from the three faculty members who have taken leaves in the past several years are in the binder of meeting materials and that all three were in attendance at the meeting to present oral reports.

Professor Harold Bloom reported on a leave taken fall semester, 1976, to enable him to visit centers of geochemical exploration, to visit with others in the field, to study literature, and to update his background in uranium exploration, all intended to make him more effective in his work in industry and in the classroom.

Dr. Richard H. de Voto reported on leave he took for the academic year 1975-76 to develop an intensive short course for professional geologists in uranium geology and exploration, to do research, and to build his background in uranium geology and geochemistry.

Dr. John Kline took two one-semester academic leaves, fall semester of 1974-75 academic year and the fall semester of the 1975-76 academic year. He worked at Los Alamos Scientific Laboratory in the analytical spectroscopy laboratory, noting by coincidence that the samples of immediate interest had resulted from a massive uranium exploration program. Dr. Kline referred to the construction of the spectroscope, which employs 200 detection cells to yield an analysis rate of one sample per minute.
Emeritus Status for Retiring Faculty. President McBride reported that four persons will be retiring at the end of the school year: Professor George T. Bator, Professor Victor W. Bauman, Professor Harold Bloom, and Colonel William E. Leckie. Of these, two qualify for emeritus status under the criteria established by the Board several years ago, Professor Bator and Professor Bauman. Dr. Gary and President McBride recommended these two for emeritus status.

Upon motion made, seconded, and passed Professor Bator was appointed Emeritus Professor of Mining Engineering and Professor Bauman was appointed Emeritus Associate Professor of Mathematics.

Tuition Rates, 1978 First Summer Field Session. Mr. Scott made available copies of memo to President McBride summarizing the situation with regard to academic summer session and field session tuition rates. He said it appeared to be the general practice in Colorado to charge per credit hour one-fifteenth of the full-time rate for such programs and that beginning with the 1978 summer academic session we shall follow that practice. Since the first summer field session will open before the new rate goes into effect, Mr. Scott is recommending that the change be made effective with the first 1978 summer field session to bring it into compliance with later summer sessions. President McBride concurred in this recommendation.

Upon motion made, seconded, and passed the Board approved the tuition per credit hour for the first summer field session to be one-fifteenth of the full-time rate, effective May 15, 1978.

Right-of-Way. Mr. Scott presented a request for authorization for President of the Board, Mr. Stockmar, to execute an agreement to grant a new right-of-way to Public Service for the relocation of the gas line to accommodate the student center addition.

Upon motion made, seconded, and passed, authorization was given.

Summer Board Conference. Mr. Welles distributed copies of a tentative agenda for the annual Trustee conference, to be held this year at Keystone, July 8-9. It was agreed that the "more relaxed" agenda was more desirable than that of prior years. Further discussion centered upon the question of devoting three one-half day periods to discussion of the future graduate profile, and it was suggested that instead of extended discussion of the profile some time be allotted to a discussion, with members of other boards of control present, of continual bureaucratic encroachment and decreasing institutional autonomy. It was decided that both objectives might well be achieved by inviting selected representatives of other boards of control to hear the profile discussion and thus to be available for informal contacts regarding a major inter-institutional autonomy conference, perhaps to be held in 1978-79.

March 10, 1978
In connection with the major campus effort in redefining or reaffirming the profile of the Future CSM Graduate, the matter of principle was raised as to whether funding requests to CSMF should be approved in advance by the CSM Board. President McBride indicated that the $18,000 funding back-up requested of the CSMF Board at the February 21 meeting for the future graduate study had not, because of a disjunction of the board meeting dates, been presented to the Mines Board and indicated that he hoped the Board would continue to authorize such emergency requests in relatively small amounts when the occasion demanded.

CSM-CCHIE Joint Meeting, April 7. Mr. Welles distributed copies of a tentative schedule for the day of April 7. After discussion, it was agreed that the time of the joint meeting be 9:30 a.m. and the time of the CSM Board meeting be immediately after lunch. A request was made that the items listed on the tentative agenda for the joint meeting be reconsidered as to priority since the agenda appeared too long for completion. Mr. Cynberg, who was scheduled to preside at the April meeting, suggested that President McBride preside at that meeting so that the more generous time interval expected for the meeting in May will be available for the major agenda he plans. The suggestion was approved by consensus.

The Board meeting recessed for an executive session at which the matters of honors and awards and of property acquisition and prospective donor matters in connection with the current building programs were discussed.

Following the executive session the Board reconvened in open session and took the following action with appropriate explanatory prefaces.

Cash Flow for Building Projects. The infirmary fund in the amount of $156,549 was mentioned as a possible source. The fund was accumulated during a period when the School was serving as a self-insurer for student health insurance and at the time was intended as a protection against an untoward happening with the student population, and also as a start toward building our own infirmary. The idea of our own infirmary has been discarded as not a practical undertaking.

It was moved, seconded, and passed that the infirmary fund in the amount of $156,549 be transferred to the unrestricted funds of the School and thus made available under the resolution adopted by the Board at the meeting held on February 3, 1978.

ATO House. It was moved, seconded, and passed that negotiations to acquire the site of the ATO house as necessary for the site of the Brown Hall continue in accordance with custom and good business practice and that the ATO offer to purchase Site No. 2, Fraternity Row, on West Campus Road, Golden, at a price of $6,500 be accepted in principle.

Kipfer Estate. It was agreed in principle that funds expected to be received from the Kipfer estate in the amount of approximately $200,000 be declared unrestricted and thus available for use under the Board resolution of February 3, 1978.

March 10, 1978
Use of Unrestricted Funds. It was further moved, seconded, and passed that the School's unrestricted money on hand or to be received should be expended as needed to meet cash flow requirements rather than be diverted exclusively to dormitory construction projects.

The meeting adjourned at 12:30 p.m.

[Signature]
Secretary

March 10, 1978
In substitution of the April 1978 regular meeting, the Board of Trustees met at 1:00 p.m., on April 7, 1978 in the Board Room.


President McBride presided.

Also attending the meeting were Vice Presidents Gary, Scott, and Welles, and various staff members.

Previous Minutes. The minutes of the meeting held on March 10, 1978 were approved as distributed.

Faculty Appointments. Dr. Gary reviewed the new appointments to the faculty as follows:

Marcy M. Barge $2,000
Part-time Instructor in Mathematics
(spring semester)

Albert E. Burke 17,500
Visiting Professor of Geology
(February 1, 1978 through June 30, 1978)

Donald Langmuir 30,600
Professor of Geochemistry
(1978-79 academic year)

Meng-Cherng Sun 400
(Visiting Assistant Professor of Mining
(spring semester)

The Board took particular note of the appointment of Dr. Albert E. Burke, who will be both assisting in the teaching of geology courses and developing proposals for video tape short courses and educational extension programs within the Continuing Education Department. President McBride stated he is well aware that anything ultimately produced pursuant to the proposals will be taken as the School's official position and intends to proceed carefully. Mr. Coors indicated prior, very favorable knowledge of Dr. Burke's earlier work, and the Board expressed interest in participating in the evaluation of the program proposals.

Monthly Financial Reports. Mr. Scott made available copies of the CSM Investment Summary, the Consolidated Board Report, and the regular monthly Budget Report, noting that we are operating within the planned budget.

President McBride noted for the record and by way of congratulating Vice President Scott and his staff for significant progress in the accounting and business management areas.
that we have just received a pre-release copy of the audit report for fiscal 1976-77 which gives an audit opinion qualified only with respect to plant funds. Mr. Scott stated that work is currently underway to establish firm values for certain of the more difficult portions of the plant fund and that all elements of the fund should be documented and auditable by the end of fiscal 1979.

Admissions Report. Dr. Gary, summarizing the report, stated that we are above both admission request and actual admission totals for this same time last year by 3 1/2 percent and that we anticipate no problem in meeting our expected enrollment goal.

Candidates for Degrees. Distribution was made of lists of candidates for degrees as recommended by the regular and graduate faculties at the meetings held on March 22, 1978 and March 22, 1978, respectively.

Upon motion made, seconded, and unanimously passed the following were approved for degrees on the dates specified, subject to faculty approval of added names, the completion of all academic requirements, and continued compliance with school requirements and regulations.

May 12, 1978

BACHELOR OF SCIENCE (MINING ENGINEERING)

Michael LaVern Aden
Timothy Gerard Ashe
Mark Lyn Bricker
Blair Burwell
Brett Arnold Epling
Michael L. Gamblin
Philip Edward Harms
Thomas Gene Hunsaker
Clayton Jeffrey Jennings
Larry R. Jensen
William Herbert Johnston, III
Michael Philip Lipstate

Frazer Robert Lockhart
Randall Hilden Makinen
Daniel Jerome Morehouse
George Elliott Newman
Walter Joseph Pachucki
Douglas A. Patterson
Bruno Angelo Redolfi
David Arthur Saegart
Alan Ewing Siemer
James Herbert Simpson
Patricia Marie Smith
Michael Robert Tolliver

ENGINEER OF MINES

John Stephen Voris

BACHELOR OF SCIENCE (METALLURGICAL ENGINEERING)

Monty Luis Aviles
Simon Antonio Aviles Montano
Gary Wayne Baughman
Deborah Ann Peacock Bell
Michael Warren Calahan
Carlos Alberto Carles
James Kirk Carnahan
Lincoln Grant Charles
Benjamin Victor Clingan
Robert Jean Clukey
Robert Wayne Cramer

Daniel Leo Driscoll
Salvador Gonzales
Frank Joseph Grady
John Philip Griffith, Jr.
John Jeffrey Groth
Robin Anthony Guthrie
James Patrick Hayson
Allen Reed Hill
Mark Allen Jackson
Leonard Hubert Lamb, Jr.
David John Larson

April 7, 1978
Richard Milo Lemert  
Stephen R. Love  
Bradford F. Malin  
Stephen Michael McKenna  
David Joel Mesard  
Harold Horsley Miller  
Paul Robert Millet  
James John Moore  
Milo Nance

Kent Dean Peaslee  
John Charles Ruebush  
Mohsen Shahnam  
James Allan Smith  
Dennis Wayne Tekavec  
Robert Stephen Thurston  
Ronald Edward VanHoose  
Stephen George Veteto  
Bruce Daryl Wilkinson

BACHELOR OF SCIENCE (GEOLOGICAL ENGINEERING)

Mark William Berkstresser  
James Edward Bond  
Charles Arthur Braun  
Jeffrey Arthur Brehm  
Christopher John Howland Clark  
Mark Franklin Coolbaugh  
Thomas Monroe Couts  
John Albert Crawford  
Todd Austin Denman  
Peter Anthony Giangrande  
Murph Norbert Hannon  
William Hering  
William Patrick McDonald  
Karl L. Mudge  
Kenneth Earl Porter  
Phillip Charles Saletta  
Veronica Bernadette Sidi

Frank Joseph Hagar  
Keith Eric Livo

BACHELOR OF SCIENCE (PETROLEUM ENGINEERING)

John Harry Benton  
John Andrew Bettridge  
Richard Gaylord Dillon  
Robert Clark Gindrat  
Dan William Hall  
Stephen Lynn Ice  
Richard Dean Lambert  
James Bradley Logan  
Dennie Dale Longhorn  
Brady Joseph McConaty  
Peter Maximilian Mueller  
Donn William Murphy  
Stuart William Sannan  
James Placid Schumacher  
Timothy Lyle Stouffer  
Andrew Porter Swiger  
Monte Allen Townsend  
Michael Ernest Vienot  
Ricky Deane Watts  
Robert Jay Wittman  
Douglas Harold Woodul

BACHELOR OF SCIENCE (CHEMICAL AND PETROLEUM-REFINING ENGINEERING)

Judy Lynn Anderson  
Fulvio Serafino Andreani  
James Richard Aylor  
Cholam Reza Baghai-Vaji  
Eileen Eleanor Bennett  
David Edward Bunnell  
Gary Wayne Davis  
Vincent Michael DeBonis  
Thomas Wilson Dover  
James N. Eakins  
Edward Lee Freedman  
Karin Yvonne Gallagher  
Gregory Philip Golike  
John Malcolm Goodrich  
Felix Grossberg

Michael Joseph Hegarty  
Mary Charlotte Hiza  
Gary Paul Hoffman  
Vernon Rodney Homolka  
James Michael Jackson  
Brenda Kay Johnson  
Joseph Kuchinski  
Linda Marie Long  
John Lec Mahoney  
Debra L. Manevitz  
Clarence Dean Meis  
Robert Bruce Nicol  
Deborah Ann Ramsey  
Roger Martin Ruff  
Richard Allan Ruggiero

April 7, 1978
Jeffry Paul Sattler
David Robert Schoen
John Raymond Southwell
Warner Martin Straley, III

Gregory John Stuart
Richard William Szepe
Bruce Elliot Weiler
Michael Richard Will
Timothy Allen Young

PETROLEUM REFINING ENGINEER

Jeffry Paul Sattler

BACHELOR OF SCIENCE (GEOPHYSICAL ENGINEERING)

Miles William Barrett
Lawrence Philip Behn
Kenneth Howard Bond
Brandon Ronald Brygider
John Joseph Button
Charles Vincent Carvill
Donald Chislow
Robert Edward Crowder
Kathryn Ruth Dick
Jean-Jacques Djija
Craig Noel Dreear
Eric Daniel Freeman
Brian Russell Frost
Susan Diane Gately
Michael David Greenspoon
Eric Jon Harmon

Mark Howard Hilliard
Martin Karl Hongoermeier
Regina Dawn Johnson
Matthew Martin Kauffman
Yo Katahira
William Arnold Miller
David Michael Rak
Stephen Merritt Rasey
Jose Requeiro
Paul Brian Reid
Erwin Gerald Ruhland
Robert Scott Rutherford
Allan Wayne Sauter
Brian William Sherwood
Frank Joseph Skocypec
Kevin Andrew Small
Dwight Vancil Smith

BACHELOR OF SCIENCE (MINERAL ENGINEERING CHEMISTRY)

Mark Gene Bracco
William Jay DeGoyer
Steven L. Hoeffner

Ted Jay Huston
Richard Milo Lemert
Christopher Raymond Roberts
Mark David Wood

BACHELOR OF SCIENCE (MINERAL ENGINEERING MATHEMATICS)

Anthony John Cipriani
Stephen William Hall

Douglas Alan Johnson
Dennis Walter Leschber

BACHELOR OF SCIENCE (MINERAL ENGINEERING PHYSICS)

William Ellison Branch
Thomas David Burleigh
Bruce Montgomery Clemens
Richard Mark Dickson

Donald Noble Haines
Jeffery L. Hurd
Art James Nelson
Michael Sterling Ryan
Frederick N. Williams

BACHELOR OF SCIENCE (MINERAL ENGINEERING)

Gary Merrill Lacy
Kenneth James Little
Mark Wesley Ljungvall
Stephen Michael McKenna
Charles Victor Monninger

Matthew Norman Price
Michael John Schumacher
Gary Lee Wehrs
Lee Ann Welsh
Robert Dwan Witt

April 7, 1978
June 24, 1978

BACHELOR OF SCIENCE (MINING ENGINEERING)
Jerry Michael Nettleton
Matthew Norman Price

BACHELOR OF SCIENCE (GEOLOGICAL ENGINEERING)
Michael Patrick Burke
Daniel Edward Lowe
Robert Bruce Scott

BACHELOR OF SCIENCE (PETROLEUM ENGINEERING)
Emmanuel Alobwede Apane

BACHELOR OF SCIENCE (GEOPHYSICAL ENGINEERING)
Manouchehr Bahavar
Mark Grimmel Casady
James Kevin Swain

BACHELOR OF SCIENCE (MINERAL ENGINEERING)
Thomas Eugene Atkinson
Frank Hall Hutto
Kenneth Lemoine Schwendemann

August 19, 1978

BACHELOR OF SCIENCE (MINING ENGINEERING)
Kurt Holfelder, Jr.
Jill Cameron Ivey

BACHELOR OF SCIENCE (METALLURGICAL ENGINEERING)
Doris Ann Cash

BACHELOR OF SCIENCE (GEOLOGICAL ENGINEERING)
Andrew Morrison Ashby
Wendy Anne Klein

BACHELOR OF SCIENCE (PETROLEUM ENGINEERING)
Paul Douglas Roberts
John Charles Schmid

BACHELOR OF SCIENCE (CHEMICAL AND PETROLEUM-REFINING ENGINEERING)
Earuch F. Broacha
Howard Bradley Finley
William Scott Graeme

April 7, 1978
RECORD OF PROCEEDINGS

BACHELOR OF SCIENCE (MINERAL ENGINEERING MATHEMATICS)
Thomas Edmund Flaherty
Steve Hall

BACHELOR OF SCIENCE (MINERAL ENGINEERING PHYSICS)
John Roy Hasstedt
Kenneth Clare Haynie

BACHELOR OF SCIENCE (MINERAL ENGINEERING)
Robert Scott Elkington

May 12, 1978

MASTER OF SCIENCE (MINING ENGINEERING)
Felipe Calizaya Ajhuacho
Dirk A. Benham
Manfred Inkmann
Michael Stewart King
Hamid Maleki

MASTER OF SCIENCE (METALLURGY)
Shew M. Wong

MASTER OF SCIENCE (METALLURGICAL ENGINEERING)
Luis Orlando Aguirre Rodriguez
Stan G. Pitman
Thomas Michael Wolke

MASTER OF SCIENCE (GEOLOGY)
Arthur Emmet Berman
Betty Ann Ruth Clark
Rebecca Lee Dodge
Michael D. Druecker
Steven G. Fryberger
Gary L. Kratochvil
David James Langston
Linda Lee Lewis
Marcia Mergner
Daniel Poleschook Jr.
Stanley Livingstone Obernyer
Daniel Poleschook, Jr.
James E. Robinson
Webster Edward Shipley III
Michael D. Van Horn

MASTER OF SCIENCE (GEOLOGICAL ENGINEERING)
Parviz Molaghati Montazer
Mark Stephen Pelizza

MASTER OF ENGINEERING (PETROLEUM ENGINEERING)
Dalibor Rogosic

MASTER OF SCIENCE (PETROLEUM ENGINEERING)
Vanessa R. Binggeli
Khaled Chekiri
Michael Patrick Cleary
Hugh E. Harvey, Jr.
Kehinde Ade Kuyinu
James Stephen Lebsack
Joseph John Melvan

April 7, 1978
RECORD OF PROCEEDINGS

MASTER OF SCIENCE (CHEMICAL AND PETROLEUM-REFINING ENGINEERING)
James Robert Andrew
Paanthiyage Bennett Dharmawardhana
Bruce Wayne Elder
Pausides A. Martinez

Enayatollah Pedram
Mustafa Serçe
Paul Theodore Treece
Joseph Luigi Zuech

MASTER OF SCIENCE (GEOPHYSICS)
Ramanan Koray Akbulut
Henrik Toft Andersen
Jeffrey Holton Copley
Richard M. Engelkemeir
George E. Handley

Kenneth J. Nelson
Bruce W. Presgrave
Juan Carlos Rodriguez-Ovejero
Elliston Robert Welsh
Timothy Dean Zeisloft

MASTER OF SCIENCE (GEOPHYSICAL ENGINEERING)
William Jacobus Botha
Freddy J. Fernandez Alonzo

Killian Chinwuba Ikwuakor
Steven Casey Simms

MASTER OF SCIENCE (GEOCHEMISTRY)
Francine Deidre Schlaks
Bruce Zuccaro

MASTER OF SCIENCE (MATHEMATICS)
Georgeson Chou

MASTER OF SCIENCE (PHYSICS)
Mark Alan Albers
Mohamed Salem Ellid
Richard Lon Mitchell

MASTER OF SCIENCE (MINERAL ECONOMICS)
Mark Alan Borer
Pablo Jose Briceno Ramirez
Lynn Marshall Dayton
Mervyn Austin De Pour
David Lawrence De Giacomo
Trevor Richard Ellis
Shahram Ghaffari-Neyzari

Kenneth A. Golding
James R. Henderson
Edel Jimenez Belmonte
Rowena RoseAnn Johnson
Barry W. Nash
Louise H. Nasr
Gary Lee Nydegger
Mark Robert Towne

DOCTOR OF PHILOSOPHY (METALLURGICAL ENGINEERING)
Alfredo Davila Marquez
Patrick Roger Taylor

DOCTOR OF PHILOSOPHY (GEOLOGY)
Leland Durwin Cress
James M. Cronoble

Robert David Hamilton
Robert Joseph Sperandio

DOCTOR OF PHILOSOPHY (PETROLEUM ENGINEERING)
Sami M. Jamil Jamjoom
Ezatollah Pakbaz

April 7, 1978
DOCTOR OF PHILOSOPHY (CHEMICAL AND PETROLEUM-REFINING ENGINEERING)

John Elwyn Anderson
E. Russell Lambert, III

DOCTOR OF PHILOSOPHY (GEOPHYSICS)

Lawrence John Barrows

DOCTOR OF PHILOSOPHY (GEOPHYSICAL ENGINEERING)

Steven Douglas Peterson
Guy Harris Towle

DOCTOR OF PHILOSOPHY (MINERAL ECONOMICS)

Sandra L. Blackstone
John P. Byrden
Hamonangan Hutabarat
Ruth Allene Lamb Maurer

Medals to be Awarded at Commencement. President McBride reported that, as recommended by the Board acting as a committee of the whole, each member of a specific group of candidates has been contacted and has without exception indicated intent to accept the invitation to come to Commencement on May 12 and received medals as follows:

van Diest Gold Medal

Daniel E. Karig
Geol. E. 1959
M.S. 1964

Distinguished Achievement Medals

Harry M. Conger
E.M. 1955

Donald O. Rausch
E.M. 1954
D.Sc. 1959

Ben F. Rummerfield
Geol.E. 1940

Robert H. Sayre, Jr.
E.M. 1934

Jasper N. Warren
P.E. 1950

Upon motion made and seconded, the Board acted unanimously to award the medals listed above.

Ghaith R. Pharaon. Mr. and Mrs. Pharaon entered the meeting at this time escorted by Mr. Leo N. Bradley, Emeritus Trustee. Mr. Pharaon attended Mines in 1959-1962 and was back visiting the campus at the invitation of Dean William V. Burger, with whom he had established a warm

April 7, 1978
friendship during his stay here. Mr. Pharaon spoke briefly about his college experiences in the United States and the educational developments in his native Saudi Arabia.

Mr. and Mrs. Pharaon left the meeting.

Mr. Harry Ells and Mr. Daniel Thayer Dawson entered the meeting.

Old Buildings, Preservation and Use. Mr. Bradley introduced Mr. Ells and Mr. Dawson who, as a follow-up of work done on Chauvenet Hall and reported at the November meeting, have completed work on the utilization of Stratton and Engineering Halls, as well as on the possibility of creating an historic district to include our five oldest buildings. Mr. Ells stated that these five: Chauvenet, Stratton, Engineering, Berthoud, and Guggenheim comprise, particularly as a sequence, fine examples of period architecture.

Messrs. Ells and Dawson, who are interested in preservation work generally are, together with Mr. Bradley, especially concerned about the preservation and utilization of Stratton (renovation cost estimated to be $600,000) and Engineering Hall (renovation cost, estimated to be $300,000), along with Chauvenet. They are of the opinion these buildings can be put to efficient use when and as needed for expansion. President McBride stated that once Brown Hall is occupied, Chauvenet and Stratton must be decommissioned in compliance with state regulations.

Mr. Bradley caused to be distributed a preliminary draft of the nomination form for the designation of the historic district addressed to the National Park Service of the U.S. Department of the Interior.

In view of the fact we need to know more about the obligations and benefits of having a part of the campus designated an historic district, Mr. Bradley was asked to furnish further information on these points, and it was further suggested that our representative in the Attorney General’s office be contacted for additional information.

Alpha Gamma Delta Site Request. President McBride reported on a request by the AGD sorority to purchase a site on Fraternity Row at a price of $6,500.

It was moved, seconded, and passed that the AGD sorority be allowed to purchase Lot 6, West Campus Road, at a cost to them of $6,500, such sale not to be consummated until they demonstrate ability to finance and intention to build, thus acting in principle to make available to the AGD a lot on the same basis and with the same restrictions as extended the ATO.

Some concern was expressed about the future possible resale of the lots to third parties at the then market price, perhaps thus giving present purchasers inordinate profits. It was agreed that the sale documents for both AGD and ATO should include reasonable restrictive covenants bearing on this point.

April 7, 1978
Summer Mineral Management Program. The proposal for a summer mineral management course developed at Board direction (October 1977) had been mailed to the Board members along with the agenda. President McBride now distributed a summary thereof with administration recommendations and asked the Board members to take the time to read it. The memo listed relevant considerations, particularly the fact it is very important that the course, if initiated, be an outstanding one. Among factors affecting the success of such course are the time demands on administrators and the enthusiasm of the personnel directly involved. In view of the present and near future severe demands upon staff time and inasmuch as the present department head and staff are believed not to be enthusiastic about the program, President McBride and Dr. Gary recommended that the entire matter not be given top priority at this time but, if seen by the Board as deserving priority attention, be deferred until a new department head can be hired a year in advance of his scheduled 1980 seating, not for the purpose of replacing Professor Mather ahead of time but for the purpose of spending the advance year developing the course for a first offering.

Motion was made and seconded that, subject to funds being available as mentioned at the September 9, 1977 Board meeting, the Board accept the recommendation of the administration to hire from those funds, to be repaid from proceeds, a new head of the Department of Mineral Economics one year prior to the scheduled retirement of Professor Mather, for the express purpose of bringing into being the summer of 1980 a mineral management program, it being understood that the entire development process will be subject to review and evaluation as it progresses. Implementation of the development process is remanded to Dr. McBride.


Nays: Maytag and Schwartzberg.

The motion carried.

Mr. Wilson excused himself from the meeting at this time.

ROTC. Lt. Col. Robert D. Howe, Professor of Military Science at Mines, entered the meeting to provide back-up information as necessary for the ROTC discussion.

Utilizing as a basis a memo prepared by Dr. Gary and distributed to the Board, President McBride reported on two recent developments bearing on the teaching of freshman ROTC at Mines: (1) As a part of an overall economy drive, the Army plans to reduce the officer detachment here to a number below that able to teach the freshman ROTC course to all male students as is now required, such reduction to take place effective with the 1979-80 academic year. (2) The Department of Health, Education, and Welfare indicates that it has received a complaint of sex discrimination against the School for maintaining the freshman ROTC course obligatory for men.

April 7, 1978
and not for women and has stated that it expects to demand that this course be made either obligatory for all or optional for all, beginning with the 1978-79 academic year. Notice of official action has not been received.

President McBride stated that, since these matters had surfaced only during the last few days, he did not wish to recommend action to the Board at this time but expected, after reviewing various alternatives and costs, to be able to recommend action to the Board at the May meeting. Alternative courses of action mentioned during the ensuing discussion include (1) making the freshman ROTC course optional and providing a parallel civilian course to teach the engineering components of the ROTC program, or (2) providing at Mines' expense sufficient qualified military personnel to continue a program made mandatory for all. It was understood that the Army could teach only during 1978-79 a program mandatory for all.

CERTI/CSM Relationship. Mr. Stockmar reviewed the fact that the enabling legislation for CERTI created at the Colorado School of Mines the Colorado Energy Research Institute and designated the president of CSM as the principal administrative officer of the Institute. Recent events, including a suit against CERTI by a disaffected former fellowship holder and the felt need, now that CERTI has moved toward more emphasis on policy matters than on technical matters and has created for itself acceptance by the other research institutions of the state, to provide to CERTI the umbrella of a specific educational institution, namely CSM.

Mr. Stockmar reported further that the Attorney General is known to be in the process of formulating an opinion that CERTI must, even though not provided in the statute, be responsible to a duly constituted Board and that the Mines Board is the logical one. Such an opinion, if issued, will enable proper handling of the current lawsuit and will provide CERTI with the desired umbrella.

Mr. Stockmar indicated that he hoped the opinion would also indicate a proper limitation of the personal liability of each member of the Mines Board with respect to CERTI operations. Finally, Mr. Stockmar indicated that while no specific action is necessary at this time he did think it appropriate for the Board to record a consensus in favor of receiving the aforementioned opinion with grace and enthusiasm. The Board indicated its intention to do so.

Mr. Grynberg and Mr. Maytag left the meeting at this time.

Long Bill. Mr. Scott reported briefly on the long bill as it now exists in the legislature. Mines' appropriation is now listed at $9,859,459, which represents a 15.1 percent increase over last year.

The meeting adjourned at 3:30 p.m.

Assistant Secretary

April 7, 1978
In substitution of the regular May meeting, the Board of Trustees met in the Coronet Room of the Brown Palace Hotel in Denver at 1:30 p.m. on May 11, 1978.


Mr. Grynberg presided.

Also attending the meeting were President McBride, Vice Presidents Gary, Scott, and Welles, various staff members, a representative of the press, and guests.

Previous Minutes. The minutes of the meeting held on April 7, 1978 were approved as distributed.

New Faculty Appointments. Dr. Gary reviewed the new appointments to the faculty as follows:

John A. Cordes
Associate Professor of Mineral Economics
(1978-79 academic year)

Gregory S. Holden
Assistant Professor of Geology
(1978-79 academic year)

Michael C. Jones
Associate Professor of Chemical and Petroleum-Refining Engineering
(1978-79 academic year)

Ruth A. Maurer
Assistant Professor of Mineral Economics
(1978-79 academic year)

Fred G. Stair
Librarian (February 20 to August 31, 1978)

John B. Stoessinger
Ian MacGregor Presidential Professor
(August 28, 1978 to July 15, 1979)

Dr. Gary stated that Dr. Ardel J. Boes is being recommended as Head of the Department of Mathematics at a salary of $25,650 for the 1978-79 academic year. Dr. Gary and President McBride asked the Board for concurrence in this department head appointment, which, although for an indefinite period, is subject to a specific review time of the initial two years.

Upon motion made and seconded, the Board concurred in the appointment of Dr. Ardel J. Boes as Head of the Department of Mathematics, subject to an initial two-year review, with the understanding that, if performance is satisfactory, it be extended without the matter being returned to the Board.

May 11, 1978
Monthly Financial Reports. Mr. Scott made available the regular monthly Budget Report as of April 30, 1978, stating that we are operating within accepted financial plan for the year. He also made available the Consolidated Report and the CSM Investment Report.

With regard to the Investment Summary, Mr. Stockmar, speaking for the Investment Committee of the CSM Foundation to whom the responsibility for the School portfolio has been delegated, reported that for the past year and a half investments have been moved from equity positions to cash positions to the point that now the portfolio is in excess of 80 percent cash.

Admissions Report. Mr. Bill Young spoke briefly on admissions status, saying that it appears we shall enroll the budgeted number of students this fall. He said there will be 4 or 5 percent minorities and 16 or 17 percent women in the entering freshman class.

ROTC. President McBride reminded the Board that two causes for change have impinged upon us in connection with the hitherto mandatory-for-males freshman ROTC program: (1) We expect a complaint of sex discrimination from HEW, and (2) As of 1979-80 Army budget constraints are predicted to decrease the number of officers assigned here below that required adequately to instruct all male freshmen. A memorandum from Dr. Gary dated May 2 containing the administration's recommendation on handling the situation for next fall and thereafter was made available. The administration recommends that the freshman ROTC program be made optional; however, all entering students will be required to take either freshman ROTC or alternative courses in Basic Engineering each semester. The Basic Engineering courses will cover the engineering material normally taught in freshman ROTC courses.

The 1978-79 academic year seems the logical time to make the transition, allowing the present military staff to teach the alternate courses under Basic Engineering numbers. The Basic Engineering and ROTC courses will each be one-credit-hour per semester. If this program is continued as expected, beginning with the 1979-80 academic year additional BE staff will have to be added to teach the additional students.

It was moved, seconded, and unanimously passed that the ROTC program be made optional, that all entering students be required to take either the ROTC freshman course or alternative courses each semester in Basic Engineering which will cover the engineering material normally given in the freshman ROTC courses. A faculty evaluation will be made during the 1978-79 academic year.

President McBride said there has been received a letter from the Army saying the School has been removed from the evaluation status on which we had been placed due to the recent decline in advanced ROTC enrollment, now apparently improved.

CERI. Mr. Stockmar reported on having received an opinion from the Attorney General's office regarding the status of CERI in relation to CSM. The Assistant Attorney General, Ms. Jo Ann Stoker, wrote that it does in fact appear that CERI

May 11, 1978
is considered a part of the School of Mines, even though it is somewhat unusual in that general policies of CERI are formulated by the CERI Advisory Council, not the Board of Trustees. With regard to individual liability of Mines Board members, Ms. Stoker wrote that the basis on which liability may be imposed is not changed.

Mr. Meytag stated that if the Board has the ultimate responsibility perhaps the Board should be better informed of the activities. It was suggested that the director of CERI, Mr. Martin Robbins, be invited to make a presentation to the Board at intervals, not on monthly basis. President McBride agreed to cause adequate and timely reports to be presented at such intervals and in such depth as to be fully satisfactory to the Board.

The Board took cognizance of the letter dated April 6, 1978 from the Attorney General’s staff and again, as during the meeting of April 7 last, indicated acquiescence in the relationship of CERI to CSM, stipulating that the Board focus should be on policy rather than on administrative detail.

1978-79 Budget. Mr. Scott made available copies of the proposed 1978-79 budget. President McBride called attention to changes made in our recommended budget from the line item “Long Bill and Special Appropriations” allocations, stating that we have had to do this in order to run the School properly. Funds have been moved from the physical plant budget to provide for administrative costs. We are able to do this because in the 1978-79 budget the physical plant amount was increased considerably.

It was moved, seconded, and passed unanimously that the proposed budget in the amount of $14,296,917 as shown on the document dated May 11, 1978 be approved, including specific authority for the administration to make transfers of funds between line items as required for the proper operation of the School.

There followed a general discussion of the budget requests as submitted to the State agencies. In answer to a question, President McBride stated that we request what we consider a standard engineering budget and do not inflate the numbers in anticipation of legislative cuts. Mr. Stockmar said the School has thereby acquired a reputation for credibility and that we must guard it carefully.

Tuition, Fees, Housing Charges. Mr. Scott made available copies of the schedule of such charges recommended for 1978-79.

Upon motion made, seconded, and unanimously passed, the following schedule was approved:

May 11, 1978
## TUITION AND FEES

<table>
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<tr>
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<td>Sem. Hrs.</td>
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<td>344</td>
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<td>9.5 - 18.0</td>
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<td>8.5 - 9.0</td>
<td>318</td>
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<td>7.5 - 8.0</td>
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<td>6.5 - 7.0</td>
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<td>.5 - 1.0</td>
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</table>

### Fees

- Health and Accident: $47.00
- Associated Students: 13.25
- Athletic: 15.00
- Student Center: 30.00

**Total**: $105.25/Sem.

- Orientation, New Stu: $3.50

**Summer Session Field Courses**

- Tuition, 6 weeks: $132

**Summer Session Academic Courses**

- **Elth & Acc. Fee, on-campus**: $4.50
- **Stu Ctr, on-campus**: 11.50

**Mandatory Accident Ins.**

- Mining 318, semester: $5.00

**Intensive English Course**

<table>
<thead>
<tr>
<th>EN 01</th>
<th>$712</th>
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</thead>
<tbody>
<tr>
<td>EN 02</td>
<td>356</td>
</tr>
</tbody>
</table>

**Tuition, 11 weeks**

- **Health & Acc. Fee**: $10.00
- **Student Center Fee**: 15.00
- **Summer Activity Fee**: 60.00

May 11, 1978
Graduate Sessions (Regular Academic, Summer Academic, and Summer Field)

Tuition and fees are the same as for undergraduate students, with the following exceptions:

**Thesis Research - Summer**

<table>
<thead>
<tr>
<th>Description</th>
<th>Fee</th>
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<tbody>
<tr>
<td>Tuition, min. 3 sem/hrs</td>
<td>$10.50</td>
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<tr>
<td>(Tuition is same as for 14 or 8 weeks)</td>
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<tr>
<td><strong>Health &amp; Acc. Fee</strong></td>
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<tr>
<td>14 weeks</td>
<td>$10.50</td>
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<tr>
<td>8 weeks</td>
<td>6.00</td>
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<tr>
<td>Stu Center Fee, if on campus</td>
<td>15.00</td>
</tr>
</tbody>
</table>

**Thesis Fees**

- Master's Degree: $24.00
- Ph.D. Degree: 54.00

**Graduation Fees**

- Bachelors: $20.00
- Professional Engineers: 45.00
- Masters: 45.00
- Doctors: 45.00

* The insurance portion of this fee ($35) may be waived under certain conditions. See subsection entitled "Student Health Program" in the General Catalog.

** Infirmary services only. Insurance available only on an entire summer basis, cost $23.75.
## Room and Board Charges

### Academic Year

<table>
<thead>
<tr>
<th>Residence Halls*</th>
<th>Present Rate per Student</th>
<th>Proposed Rate per Student</th>
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<tbody>
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<td>Caldwell, Bradford, Randall, Morgan, and Thomas*</td>
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</tr>
<tr>
<td>Double Room</td>
<td>$500</td>
<td>$600</td>
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<td>Single Room</td>
<td>600</td>
<td>700</td>
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<tr>
<td>Triple Room</td>
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<tr>
<td>New Dormitory*</td>
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<tr>
<td>Double Room</td>
<td>400/sem.</td>
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<tr>
<td>Single Room</td>
<td>450/sem.</td>
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<th>Meal Plans, Academic Year</th>
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<td>15-meal Plan</td>
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<tr>
<td>10-meal Plan</td>
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<td>620</td>
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<tr>
<td>Residency Hall Activity Fee</td>
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<th>Field Session</th>
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<td>95</td>
<td>115</td>
</tr>
<tr>
<td>Single Room</td>
<td>115</td>
<td>135</td>
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<table>
<thead>
<tr>
<th>Summer Session</th>
<th></th>
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</thead>
<tbody>
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<td>Caldwell, Bradford, Randall, Morgan, and Thomas*</td>
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</tr>
<tr>
<td>Double Room</td>
<td>125</td>
<td>150</td>
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<td>Single Room</td>
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<td>175</td>
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<tr>
<td>New Dormitory*</td>
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<tr>
<td>Double Room</td>
<td>200</td>
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<tr>
<td>Single Room</td>
<td>225</td>
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<table>
<thead>
<tr>
<th>Meal Plans, Summer Session</th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>18-meal Plan</td>
<td>185</td>
<td>195</td>
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<tr>
<td>15-meal Plan</td>
<td>175</td>
<td>185</td>
</tr>
<tr>
<td>10-meal Plan</td>
<td>150</td>
<td>155</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Prospector Village</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic Year</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 students per apt</td>
<td>550</td>
<td>650</td>
</tr>
<tr>
<td>Field Session</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 students per apt</td>
<td>105</td>
<td>125</td>
</tr>
<tr>
<td>Summer Session</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 students per apt</td>
<td>140</td>
<td>165</td>
</tr>
<tr>
<td>Married Student Apts (monthly rate)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-bedroom</td>
<td>120</td>
<td>130</td>
</tr>
<tr>
<td>2-bedroom</td>
<td>135</td>
<td>145</td>
</tr>
<tr>
<td>3-bedroom</td>
<td>155</td>
<td>160</td>
</tr>
<tr>
<td>2-bedroom, furnished</td>
<td>165</td>
<td>175</td>
</tr>
</tbody>
</table>

* Dorm residents must choose either the 5-day 15-meal plan or the 6-day 18-meal plan.

May 11, 1978
Prospector Park (monthly rate)

<table>
<thead>
<tr>
<th></th>
<th>Present Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-bedroom apt</td>
<td>70</td>
<td>No change in rates</td>
</tr>
<tr>
<td>2-bedroom apt</td>
<td>85</td>
<td></td>
</tr>
</tbody>
</table>

Mines Park (monthly rate)

<table>
<thead>
<tr>
<th></th>
<th>Present Rate</th>
<th>Proposed Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buffet apartment</td>
<td></td>
<td>No change incl.</td>
</tr>
<tr>
<td>1-bedroom apt</td>
<td>120 util. incl.</td>
<td>$165 util. incl.</td>
</tr>
<tr>
<td>2-bedroom apt</td>
<td>160 &quot;</td>
<td>200 &quot;</td>
</tr>
<tr>
<td>2-bedroom hse (37, 38, 39)</td>
<td>180 &quot;</td>
<td></td>
</tr>
<tr>
<td>2-bedroom hse (25, 26, 27, 28)</td>
<td>205 &quot;</td>
<td>215 &quot; exc. wate</td>
</tr>
<tr>
<td>2-bedroom hse (30, 31, 34, 35)</td>
<td>225 &quot;</td>
<td>255 &quot; exc. wate</td>
</tr>
<tr>
<td>3-bedroom hse</td>
<td>175 + all utilities</td>
<td>205 + all utiliti</td>
</tr>
<tr>
<td></td>
<td>195 + all utilities</td>
<td>220 + all utiliti</td>
</tr>
</tbody>
</table>

Residents are not responsible for irrigation of yards.

May 11, 1978
1979-80 Budget Parameters. President McBride stated that the parameters for the 1979-80 budget as prepared by Mr. Scott’s staff under date of May 8, 1978 were consistent with actions taken the past several years and asked approval of these parameters.

Upon motion made, and seconded, the parameters were unanimously approved.

Designation of Restricted Funds. Mr. Scott has informed President McBride that there are a number of relatively small funds within the CSM Restricted Fund, the origins and purposes of which are no longer ascertainable and in which there has been no activity for at least four years. He asked that the accounts be closed and the balances transferred to the National Society of Professional Engineers Scholarship Account to be used for the support of scholarships bearing that designation.

It was moved that the following named funds, along with any addition to principal or income, be closed and the remaining balance be transferred to the National Society of Professional Engineers Scholarship Account. The income and principal of such account is to be used to support the NSPE Scholarships until fully expended. No deficits are to be incurred in behalf of the NSPE Account without Board of Trustees approval. The motion was seconded and unanimously passed.

<table>
<thead>
<tr>
<th>Fund</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Combined grants</td>
<td>$8,959.00</td>
</tr>
<tr>
<td>Miscellaneous general</td>
<td>1,772.74</td>
</tr>
<tr>
<td>CPR</td>
<td>384.61</td>
</tr>
<tr>
<td>Geology</td>
<td>(332.01)</td>
</tr>
<tr>
<td>Metallurgy</td>
<td>(246.99)</td>
</tr>
<tr>
<td>Mining</td>
<td>159.34</td>
</tr>
<tr>
<td>PE</td>
<td>248.12</td>
</tr>
<tr>
<td>Bureau Mines Research</td>
<td>(19.56)</td>
</tr>
<tr>
<td>Alcoa-Met</td>
<td>8.98</td>
</tr>
<tr>
<td>Fd. Creole</td>
<td>412.53</td>
</tr>
<tr>
<td>Iraq</td>
<td>2,424.34</td>
</tr>
<tr>
<td>Miscellaneous Bus. Office</td>
<td>894.74</td>
</tr>
<tr>
<td>Misc. general</td>
<td>17.00</td>
</tr>
<tr>
<td>Colo. Work Study</td>
<td>404.84</td>
</tr>
<tr>
<td>Total, Feb. 28, 1978</td>
<td>$13,087.68</td>
</tr>
</tbody>
</table>

Construction Funds. In view of previous action taken by the Board to make available funds of the School for use in connection with the Arthur Lakes Library, the new dormitory facilities, and the Brown Hall land acquisition, it was moved that the following named funds, along with any additions to principal or income, be designated as resources of the School, available as needed for the purpose of supporting the action of this Board taken in its regular meetings of February 3, 1978 and March 10, 1978 and reflected in the minutes of those meetings; and that President McBride be authorized to expend these funds as required to meet obligations incurred in behalf of the Arthur Lakes Library project, new dorm project, or Brown Hall land acquisition. The motion was seconded, and passed unanimously.

May 11, 1978
Cash available as of March 31, 1978

Health and Accident $154,863.96
Rental properties 65,000.00

Endowment:
- Harris $18,531
- Hand 75,626
- Guggenheim 25,626
- Wild Horse 770
- West 22,309
- Brinker 6,037

$148,899

Restricted:
- Harris 4,732.00

$373,494.96

Construction Schedule for Brown Hall. Mr. Scott said in view of the need for planning by present occupants and property owners, it would be helpful to have Board approval of a construction schedule for Brown Hall. He distributed a suggested schedule prepared by the architect, Mr. Lamar Kelsey.

Mr. Kelsey, after investigating the "fast track" concept as opposed to the conventional bid process, recommends the latter with a schedule which will allow occupancy in the summer of 1980. There was some discussion of the two different methods of contracting, the one bidding each phase in progression and the other bidding the total building. There was a possibility of a saving in time and dollars by going the "fast track" method as opposed to the advantage inherent in the conventional method of retaining control over the lump sum of the Brown gift until the building is accepted.

It was moved, seconded, and passed that the conventional method of contracting for Brown Hall be used as outlined in Mr. Scott's memo dated May 1, 1978 with attachment from the architect.

Feasibility of Expanding Enrollment to 5,000. Mr. Gryenberg in addressing this agenda item said he believes the demand for Mines graduates is going to be far in excess of what we can presently turn out even at goal of 3,000, to be reached within a few years. Mr. Gryenberg expressed the opinion that the goal should be reassessed and thought given to raising the number of students, and he asked that the subject be opened for discussion.

It was suggested an important factor in such a consideration is the approval which we shall need from the State of Colorado. Another important factor is the pool of candidates from which our additional students will come. President McBride called attention to the fact that we are at capacity on laboratory facilities for freshmen. Mr. Stockmar pointed out that our graduates have been competing with those who have not had the advantage of our specialized training and that some of this competition has done very well. Therefore we must appraise what
the competition is going to be doing before we expand to such
a large extent. He said another question which must be faced
is whether the State of Colorado will fund a school of such
size, which would be seen even more than now to be largely
national and international in scope. Expansion to 5,000 will
require major capital for added buildings, even if there is
space for such an expansion.

It was the consensus that the matter needs careful
study, even at the cost of burdening the administration with
more duties. It was agreed that the administration will under-
take a preliminary study of the factors discussed and will
report, probably within the next academic year, as fully as
possible.

New Position of Executive Vice President. Mr. Grynberg
stated that inasmuch as passage of the new energy bill seems
imminent and since it is obvious that the federal government will
get more involved in future energy matters, he is of the opinion
that there should be added to the administrative staff a person
to, among other duties, act as a Washington contact to obtain
more funds from the federal government. Mr. Schwartzberg ex-
pressed the opinion that research people could better get
necessary funds, rather than an executive vice president type
person.

Mr. Wilson said he would be more comfortable with the
suggestion of such an added position if the request came from
the administration, rather than the Board.

Dr. Fogarty suggested that Mr. Grynberg prepare a
"white paper" on the subject.

The subject was closed for the time being.

(McBride mentioned here that two major block grant
programs, Coal Research and Mineral Research, both with Depart-
ment of Energy, have been authorized but not funded.)

Development Fund Progress Report. Mr. Coors, in
addressing this agenda item, reported on progress to date and
said that it is slowing down somewhat at this time due mainly
to the depressed metals market and the fact that many potential
donors have long histories of not supporting public institutions.
Mr. Coors also pointed out that the realltionship with the alumni
is of critical importance. Mr. Coors said he is satisfied with
progress to date and is sure the goal of $63.5 million can be
reached.

Emeritus Status. It was stated that, in reviewing
the qualifications established by the Board in 1974 for
achieving emeritus status, perhaps the required length of ser-
vice was not a reasonable thing in our mobile society. President
McBride reviewed the qualifications for various ranks as set
forth in the Faculty Handbook and their impact on service time.
Mr. Grynberg asked if the "30 years service in any rank" was
not high. Dr. Gary said that in view of the stability of our
faculty most retiring faculty would qualify for emeritus status
if the length of service were lowered to 20, thus the emeritus
appointment would become routine.

May 11, 1978
President McBride was asked to review policies at other colleges and universities. No action was taken at this time.

Governing Boards. Mr. Stockmar reported on a meeting held at CU on May 9 of representatives of governing boards of state institutions. He reported that it is being suggested that an organization of all governing boards be created. Mr. Stockmar said that speaking on behalf of Mines' Board he had told them that there are many matters of mutual interest where cooperation can be achieved but that we are by no means prepared to surrender our autonomy to any such organization.

The meeting adjourned at 5:15 p.m.

[Signature]

Secretary

May 11, 1978
Golden, Colorado
June 9, 1978

The Board of Trustees met in regular session at 9:00 a.m., June 9, 1978, in the Board Room.


Absent: Dr. Fogarty.

Mr. Maytag presided.

Also attending the meeting were President McBride, Vice Presidents Gary, Scott, and Welles, various staff members, a representative of the press, and guests.

Previous Minutes. The minutes of the meeting held on May 11, 1978 were approved as distributed.

Faculty Appointments. Dr. Gary reviewed the new appointments to the faculty as follows:

Robert S. Fisk
Assistant Professor of Mathematics $18,000

Robert D. Hamilton
Visiting Assistant Professor of Geological Engineering 14,000

Robert Underwood
Assistant Professor of Mathematics 16,700

Reappointments have been made as follows:

Richard J. Krantz
Visiting Instructor in Physics 13,000

Jerome G. Morse
Adjunct Associate Professor of Physics no compensation

Dr. Gary reported that Mr. Robert H. Trent has asked that his status be changed from Associate Professor to Instructor so that he may attend classes to work toward his doctoral degree. No change in salary is involved.

Monthly Financial Reports. Mr. Scott made available the regular Monthly Budget Report as of May 31, 1978, the Investment Summary as of June 6, 1978, and the Consolidated Board Report as of May 31, 1978. Mr. Scott stated we are operating within the accepted financial plan.

Admissions Report. Dr. Gary reviewed the admissions status as of the present time, saying we expect to reach our enrollment goal for the fall semester without undue difficulty.

June 9, 1978
Land Purchases, Transfers, and Easements. Mr. Scott reported that we have acquired the Flaugh house at 1400 Maple, utilizing funds appropriated by the 1977 legislature. The house will be operated as state rental property until the land is needed for other purposes.

Mr. Scott reported further that the City of Golden has requested the School to grant a right of way over the small portion of Elm Street between 18th and 19th now owned by the School to compensate partially for prior vacation of a section of Maple Street and an alley needed for dormitory construction. This matter will be presented to the Board for official action at the proper time.

Mr. Scott also reported that the City, in conjunction with the County and State, will be asking for an easement for a hiking trail to connect the downtown area with the existing hiking trail to Beaver Brook. Mr. Scott indicated that he thought this could be arranged along the edge of our property and that the agreement will require the relocation of the trail if necessary upon notice. Mr. Stockmar reminded Mr. Scott of the necessity of, relocation agreement aside, blocking the trail once a year, with documentation of such, lest the trail revert to public domain after a number of years.

Faculty and Administrative Salary Schedules. President McBride presented both 9-month and 12-month salary schedules and reviewed the method of arriving at the salary increases for 1978-79, saying the total sum involved corresponded to the mandated compensation increase of 7.5 percent. The salaries as presented showed overall average increases in contract salaries of approximately 9.5 percent.

Upon motion made and seconded, the following schedules for the 9-month and 12-month faculty and staff were approved.

John F. Abel
Professor of Mining Engineering
$25,950

Charles S. Aldrich
Instructor in Petroleum Engineering
13,800

Julia A. Alexander
Assistant Professor of Humanities and Social Sciences
17,450

R. Bruce Allison
Professor of Physical Education and Head of Department of Physical Education and Athletics (A.D.)
30,300

William R. Astle
Associate Professor of Mathematics
21,730

William A. Averill
Assistant Professor of Metallurgical Engineering
18,600

Henry A. Babcock
Professor of Basic Engineering
31,200

June 9, 1978
<table>
<thead>
<tr>
<th>Name</th>
<th>Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Charles R. Baer</td>
<td>17,500</td>
</tr>
<tr>
<td>Assistant Professor of Math.</td>
<td></td>
</tr>
<tr>
<td>Robert W. Baldwin</td>
<td>17,800</td>
</tr>
<tr>
<td>Assistant Professor of Chem.</td>
<td></td>
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<tr>
<td>Petroleum-Refining Eng.</td>
<td></td>
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<tr>
<td>Daniel M. Basset</td>
<td>32,600</td>
</tr>
<tr>
<td>Professor of Petroleum Eng.</td>
<td></td>
</tr>
<tr>
<td>Head of Dep.</td>
<td></td>
</tr>
<tr>
<td>Ramon E. Bisque</td>
<td>15,200</td>
</tr>
<tr>
<td>Adjunct Professor of Chem.</td>
<td></td>
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<tr>
<td>Geochemistry</td>
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</tr>
<tr>
<td>Ardel J. Boes</td>
<td>25,650</td>
</tr>
<tr>
<td>Associate Professor of Math.</td>
<td></td>
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<tr>
<td>Head of Dep.</td>
<td></td>
</tr>
<tr>
<td>Emmy Booy</td>
<td>19,440</td>
</tr>
<tr>
<td>Assistant Professor of Geol.</td>
<td></td>
</tr>
<tr>
<td>Joan N. Brooks</td>
<td>17,770</td>
</tr>
<tr>
<td>Assistant Professor of Civil</td>
<td></td>
</tr>
<tr>
<td>Eng.</td>
<td></td>
</tr>
<tr>
<td>Austin R. Brown, Jr.</td>
<td>33,000</td>
</tr>
<tr>
<td>Director of Computing C.</td>
<td></td>
</tr>
<tr>
<td>Prof. of Math.</td>
<td></td>
</tr>
<tr>
<td>James T. Brown</td>
<td>22,420</td>
</tr>
<tr>
<td>Professor of Phys.</td>
<td></td>
</tr>
<tr>
<td>W. R. Bull</td>
<td>25,970</td>
</tr>
<tr>
<td>Associate Professor of Metall.</td>
<td></td>
</tr>
<tr>
<td>Eng.</td>
<td></td>
</tr>
<tr>
<td>Thomas R. Bultman</td>
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<tr>
<td>Instructor in Geol.</td>
<td></td>
</tr>
<tr>
<td>Paul Burgardt</td>
<td>15,540</td>
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<tr>
<td>Assistant Professor of Phys.</td>
<td></td>
</tr>
<tr>
<td>Jerrold J. Burnett</td>
<td>23,510</td>
</tr>
<tr>
<td>Professor of Phys.</td>
<td></td>
</tr>
<tr>
<td>David L. Butler</td>
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<tr>
<td>Associate Professor of Geo.</td>
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<tr>
<td>Nicholas P. Callas</td>
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<td>Assistant Professor of Math.</td>
<td></td>
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<tr>
<td>Debra Carnell</td>
<td>15,100</td>
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<td>Robert H. Carpenter</td>
<td>26,750</td>
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<tr>
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<tr>
<td>Edward F. Cecil</td>
<td>16,260</td>
</tr>
<tr>
<td>Assistant Professor of Phys.</td>
<td></td>
</tr>
</tbody>
</table>

June 9, 1978