paid and redeemed from, among other sources, the proceeds of additional Warrants; and

WHEREAS, the Board proposes to procure the funds to complete the Project and to liquidate the 1977 Warrants by issuing revenue anticipation warrants payable from the sources hereinafter specified, but without liability or obligation otherwise; and the Board hereby authorizes its President, Secretary, and Treasurer to execute, on behalf of the Board, Revenue Anticipation Warrants in an aggregate principal amount of $4,525,000, in the form and manner hereinafter particularly set forth.

NOW, THEREFORE, BE IT RESOLVED BY THE BOARD OF TRUSTEES OF COLORADO SCHOOL OF MINES, IN LAWFUL MEETING ASSEMBLED:

1. That for the purpose of completing the Project and liquidating the 1977 Warrants, the proceeds of which were used for paying part of the cost of constructing and equipping the Project on the campus of the School at Golden, Jefferson County, Colorado, for funding certain interest on said warrants, and for costs and expenses incidental to the issuance thereof, the Board shall exercise its power under the Constitution and laws of the State of Colorado to issue its Anticipation Warrants each to be designated "Colorado School of Mines Dormitory and Student Center Revenue Anticipation Warrant" in the principal amount of $4,525,000, bearing interest at the rate of 5.75% per annum, payable January 1, 1980 and semiannually thereafter on January 1 and July 1 each year, until maturity, evidenced by bearer coupons attached to said warrants. The net effective interest rate on this issue of Warrants is 6.25%.

2. Said warrants shall be dated as of July 1, 1979; shall consist of 905 warrants in the denomination of $5,000 each, numbered 1 to 905, inclusive; and shall mature on July 1, 1981. The principal of and interest on said Warrants
shall be payable in lawful money of the United States of America, at the United Bank of Denver, National Association, in Denver, Colorado.

The Warrants shall not be callable for redemption prior to their maturities.

3. That each Warrant shall be executed in the name of and in behalf of the Board by the facsimile signature of its President; a facsimile of the seal of the Board shall be thereunto affixed, attested by the manual signature of the Secretary of the Board; and the coupons shall be executed with the facsimile signature of the Secretary of the Board. The Warrants shall be the valid and binding obligations of the Board when executed by persons in office at the time of execution even though such persons are not in office at the time of the actual issuance of the Warrants.

When said Warrants have been properly executed, they shall be delivered to the purchaser thereof upon payment of the agreed purchase price. The proceeds of the Warrants authorized herein shall be used solely for the purpose hereinbefore specified, but neither the purchaser of said Warrants nor any subsequent holder or owner of any of them shall be obliged to see to the proper use or application of the proceeds of said Warrants.

4. That said Revenue Anticipation Warrants and the coupons to be attached thereto shall be in substantially the following form:
(Form of Warrant)

UNITED STATES OF AMERICA
STATE OF COLORADO

COLORADO SCHOOL OF MINES
DORMITORY AND STUDENT CENTER REVENUE ANTICIPATION WARRANT

No. _________ $5,000

The Board of Trustees of Colorado School of Mines, having control and supervision of Colorado School of Mines at Golden, Colorado (the "Board"), for value received hereby promises to pay to bearer on the 1st day of July, 1981, but solely from the sources hereinafter specified, the principal sum of

FIVE THOUSAND DOLLARS

and to pay interest thereon from the date hereof at the rate of five and three-quarters percentum (5-3/4%) per annum, payable January 1, 1980 and semiannually thereafter on January 1 and July 1 each year until maturity, as evidenced by interest coupons hereto attached. Both the principal of and the interest on this Warrant shall be payable in lawful money of the United States of America, at the United Bank of Denver, National Association, in Denver, Colorado, upon presentation and surrender of said coupons and this Warrant as they severally become due.

This Warrant shall not be callable for redemption prior to its maturity.

This Warrant is one of a series of Warrants of like tenor and effect, totalling Four Million Five Hundred Twenty-Five Thousand Dollars ($4,525,000), consisting of 905 Warrants in the denomination of $5,000 each, numbered 1 to 905, inclusive, issued for the purpose of liquidating outstanding Colorado
School of Mines Dormitory and Student Center Revenue Anticipa-
tion Warrants, dated September 1, 1977, which outstanding
Warrants were issued to secure a partial advance of funds for
constructing and equipping a student dormitory to house
approximately 245 students and purchasing land therefor, and
constructing and equipping additional student center facilities
(the "Project"), on the campus of Colorado School of Mines, at
Golden, Colorado; for completing the Project; for funding certain
interest on this Warrant; and for paying necessary incidental
expenses, said Warrant being issued under the Constitution
and laws of the State of Colorado, and particularly Title 23,
Articles 5 and 41, Colorado Revised Statutes 1973, as amended,
and secured by and payable from the net revenues of the Project,
from the proceeds of revenue bonds or warrants, from government
subsidy grants or loans, from private funding sources, cash
or any combination of these sources, to be issued or available
prior to July 1, 1981.

This Warrant and the interest hereon constitute a special
obligation of the Board, and is payable solely from the above-
described sources and does not constitute an indebtedness of
the State of Colorado. The holder hereof shall never have the
right to demand payment of this Warrant or the interest hereon
out of any funds raised or to be raised by taxation, and said
Warrants shall never evidence or become a charge or claim
against the State of Colorado, the Warrant holders' sole right
and remedy for payment being confined to the sources herein
specified.

This Warrant shall be a negotiable instrument in accordance
with the laws of the State of Colorado, and shall be transferable
by delivery.

It is hereby declared and represented that this Warrant
was duly authorized by the Board at a regular meeting held on
July 14, 1979, and that in issuing this Warrant, and while such
Warrant is outstanding and unpaid, the Board has covenanted
and agreed that it will pay this Warrant and the interest hereon from the source or sources specified herein.

It is hereby certified and recited that all acts, conditions and things required to be done precedent to and in the issuance of this Warrant have been properly done, have happened and have been performed in regular and due time, form and manner as required by the Constitution and the laws of the State of Colorado, and that this Warrant does not exceed any constitutional or statutory limitation, and that provision has been made for the payment of principal of and interest on this Warrant by an irrevocable pledge of the funds specified herein.

IN WITNESS WHEREOF, the Board of Trustees of Colorado School of Mines has caused this Warrant to be signed with the facsimile signature of the President of said Board, sealed with a facsimile of the seal of said Board, attested by the manual signature of the Secretary thereof, and the coupons to be signed with the facsimile signature of the Secretary of the Board, and this Warrant to be dated as of July 1, 1979.

COLORADO SCHOOL OF MINES

(FACSIMILE SEAL) By (Facsimile Signature)

President

ATTEST:

(Do Not Sign)

Secretary
(Form of Coupon)

No. ___________                         $____________

July, 19___

On the 1st day of January, 19___, the Board of
Trustees of Colorado School of Mines will pay to the bearer
out of the sources designated in the Warrant to which this
coupon is attached, but without liability or obligation
otherwise, the amount shown hereon, in lawful money of the
United States of America, at the United Bank of Denver,
National Association, in Denver, Colorado, being interest
then due on its Colorado School of Mines Dormitory and Student
Center Revenue Anticipation Warrant dated July 1, 1979,
bearing

No. ___________                        (Facsimile Signature)

                   Secretary
5. That in case any Warrant issued hereunder, with the coupons thereunto appertaining, shall become mutilated, destroyed or lost, the Board in its discretion may issue and deliver, upon cancellation of the mutilated Warrant and coupons, or in lieu of or in substitution for a lost or destroyed Warrant and coupons, a new Warrant and coupons of like tenor and date, bearing the same number and the same denomination. In case of loss or destruction, the applicant for a substituted Warrant and coupons shall furnish to the Board evidence to its satisfaction of the loss or destruction and shall also furnish such security or indemnity as may be required by the Board.

6. For the purpose of assuring payment of the Warrants authorized herein, and for the equal and ratable benefit of the holders of such Warrants and coupons, without any preference or priority of any Warrant over another on account of actual time of execution or negotiation, or otherwise, and to secure the performance of and compliance with the terms and conditions of said Warrants and of this Resolution, the Board hereby contracts, covenants and agrees with each holder of said Warrants and coupons so long as any of said Warrants are outstanding, as follows:

(a) To devote the entire proceeds realized from the sale of the Warrants to the purpose hereinbefore specified, and, upon the construction and equipping of the Project, to maintain said Project in good condition and repair.

(b) To pay all necessary operating expenses, current maintenance charges, insurance premiums, the Paying Agent's fees and all other expenses incident to the operation of said Project when completed.

(c) To pay these Warrants and the interest thereon from the net revenues of the Project, from the proceeds of revenue bonds or warrants, from government grants or loans, from private funding sources, from available cash or from any
combination of these sources prior to July 1, 1981.

(3) To provide adequate liability and such other forms of insurance as would customarily be carried by a prudently managed institution owning a similar property having a like value in the same vicinity. Such insurance shall be in such amounts and in such responsible insurance companies as may be satisfactory to the purchaser of said Warrants, its successors or assigns, and shall be payable in the event of loss to the Treasurer of the Board, for the purposes hereof. In case any loss should occur under any or all such policies of insurance, the Treasurer shall collect the insurance money payable thereon and hold the same in a separate fund, and upon receipt of a proper voucher from the Board showing that a sum or sums at least equal to the amount of the insurance money requested to be paid over has been expended in replacing or repairing the property lost or damaged, or in building, acquiring or erecting property of similar capacity and use as a substitute therefor, or if the Board shall show to the Treasurer that it has incurred an indebtedness in repairing the property lost or damaged, or in replacing a property of similar capacity and use as a substitute therefor, then the Treasurer, out of said insurance money, and only to the extent thereof, will reimburse the Board or pay such indebtedness on behalf of the Board, as the case may be.

(e) To protect and defend the validity of this Resolution and of the trusts created thereby, and of the Warrants issued hereunder, against all attacks from whatsoever source, and in the event litigation should be commenced on account thereof, promptly to notify the Warrant holders and allow such holders to participate in the defense of any such litigation; provided, however, that any such participation by the Warrant holders shall be at their own expense.

(f) That it will make no use of the proceeds of
said Warrants which might cause such obligations to be arbitrage bonds within the meaning of Section 103(c) of the Internal Revenue Code of 1954, as amended, and the Regulations proposed and in effect thereunder.

7. That no owner or holder of any of the Warrants authorized herein shall ever have the right to demand payment of any of said Warrants or interest thereon out of any funds raised or to be raised by taxation, and said Warrants shall never evidence or become a charge or claim against the State of Colorado, the Warrant holders' sole right and remedy for payment being confined to the sources herein specified.

8. The provisions of this Resolution are severable, and if it should ever be determined by a court of competent jurisdiction that any part hereof is invalid or unenforceable, such determination shall not affect or impair the remaining provisions hereof.

9. That after said Warrants or any of them shall have been issued, this Resolution shall not be changed, amended or revoked until said Warrants and the interest thereon shall be fully paid, satisfied and discharged in the manner herein provided, except on the written consent of the owners of 75% of the Warrants then outstanding.

10. That the Secretary of the Board be authorized to deliver to the purchaser of the Warrants certified copies of this Resolution and of the minutes showing its adoption, together with such other certificates or documents as may be required, and to take such steps as may be necessary or advisable fully to carry out the purpose and intent of this Resolution.

ADOPTED AND APPROVED as of this 14th day of July, 1979.

(S E A L)

VICE President

ATTEST:

Secretary
STATE OF COLORADO  
) ss.
COUNTY OF SUMMIT  
)

I, James C. Wilson, the duly qualified and acting Secretary of the Board of Trustees of Colorado School of Mines, do hereby certify that the attached copy of the minutes of a regular meeting of said Board, held on the 14th day of July, 1979, is a true and correct copy of the original minutes of said meeting on file and of record, and I do further certify that the copy of the Resolution appearing in such minutes is a true and correct copy of the original Resolution adopted at said meeting, which minutes and Resolution are on file and of record in my office.

WITNESS my hand and the seal of the Board of Trustees of Colorado School of Mines, this 14th day of July, 1979.

(S E A L)

Secretary
STATE OF COLORADO)

COUNTY OF JEFFERSON)

GENEBAL INCUMBENCY CERTIFICATE

I, the undersigned Secretary of the Board of Trustees of Colorado School of Mines, do hereby certify:

1. That this Certificate is for the benefit of the holders of Anticipation Warrants designated "Colorado School of Mines Dormitory and Student Center Revenue Anticipation Warrants" dated July 1, 1979, in the denomination of $5,000 each, numbered 1 to 905, inclusive, in the aggregate amount of $4,525,000, issued by said Board.

2. That the following persons constituted the Board of Trustees on the 14th day of July, 1979, the date upon which the Resolution authorizing the issuance of said Revenue Anticipation Warrants was adopted, viz:

<table>
<thead>
<tr>
<th>Name</th>
<th>Term Ending</th>
</tr>
</thead>
<tbody>
<tr>
<td>W. K. Coors</td>
<td>March 23, 1985</td>
</tr>
<tr>
<td>Fred R. Schwartzberg</td>
<td>March 23, 1983</td>
</tr>
<tr>
<td>James C. Wilson</td>
<td>March 23, 1983</td>
</tr>
<tr>
<td>Monte Pascoe</td>
<td>March 23, 1985</td>
</tr>
<tr>
<td>Ted P. Stockmar</td>
<td>March 23, 1981</td>
</tr>
<tr>
<td>Jack J. Grynberg</td>
<td>March 23, 1981</td>
</tr>
<tr>
<td>Charles F. Fogarty</td>
<td>March 23, 1983</td>
</tr>
</tbody>
</table>

Student Representative:

Douglas Aab__________________________________________June 30, 1980

That the following is a list of the present officers of the Board:

President: W. K. Coors
Vice President: Fred R. Schwartzberg
Secretary: James C. Wilson
Assistant Secretary: Monte Pascoe
Assistant Treasurer: Ted P. Stockmar

EXECUTED this 14th day of July, 1979.

(SEAL)

Secretary
STATE OF COLORADO  
) ss.
COUNTY OF JEFFERSON 

SIGNATURE IDENTIFICATION AND 
NON-LITIGATION CERTIFICATE 

WE HEREBY CERTIFY that we did officially sign, 
either by facsimile or manual signature, the Colorado School 
of Mines Dormitory and Student Center Revenue Anticipation 
Warrants dated July 1, 1979, in the principal amount of 
$4,525,000, maturing on July 1, 1981, bearing interest at 
the rate of 5.75% per annum evidenced by coupons attached 
thereto, said Warrants being numbered 1 to 905, inclusive, of 
the denomination of $5,000 each. 

WE DO FURTHER CERTIFY that: 
1. At the time we signed said Warrants, either 
manually or by facsimile signature, and at the time of 
executing this Certificate, we were the duly chosen, qualified 
and acting officers indicated therein and authorized to 
execute the same. 

2. No litigation of any nature is now pending or 
threatened restraining or enjoining the issuance and delivery 
of said Warrants, or in any manner questioning the proceedings 
or authority by which same is made, or affecting said Warrants. 

3. Neither the corporate existence of the Board 
of Trustees of Colorado School of Mines nor the title of 
present officers to their respective offices is being contested 
and that no authority or proceedings for the issuance of 
said Warrants have been repealed, revoked or rescinded. 

4. We are acquainted with the official seal of 
said Board, and that the facsimile of said official seal is 
affixed to each of said Warrants, and that a correct impression 
of the same also appears upon this Certificate. 

5. The facsimile signature of the President and 
the manual signature of the Secretary appearing on said
Warrants, and the facsimile signature of the Secretary of said Board appearing upon the coupons attached to said Warrants are hereby adopted by each such officer respectively as his own signature.

EXECUTED and delivered this 17th day of July, 1979.

Signature

Official Title

President, Board of Trustees.
Colorado School of Mines

Secretary, Board of Trustees
Colorado School of Mines

(S E A L)

Signatures above and upon each of the above-described Warrants guaranteed as those of the officers respectively designated above.

By

United Bank of Denver, M.A.
Denver, Colorado

(BANK SEAL)
STATE OF COLORADO  
)  
COUNTY OF JEFFERSON  
)

TREASURER'S RECEIPT

I, the undersigned, DO HEREBY CERTIFY that I am the duly qualified and acting Treasurer of the Colorado School of Mines, acting for and on behalf of the Board of Trustees of Colorado School of Mines, in Golden, Colorado; that as such officer I further certify that $4,525,000 of Colorado School of Mines Dormitory and Student Center Revenue Anticipation Warrants dated July 1, 1979, being Warrants numbered 1 to 905, inclusive, in the denomination of $5,000 each, have been delivered to the purchaser, and that said Warrants have been paid for in full by said purchaser, in accordance with the terms of sale, as follows:

Purchase price of Warrants---------$4,525,000.00
Accrued Interest from
July 1, 1979-------------------------$ 11,563.91
Less Discount-------------------------$ 60,000.00

Net Amount Received----$ 4,476,563.91

I DO FURTHER CERTIFY that the interest coupons maturing January 1, 1980, and all subsequent coupons, were attached to said Warrants at the time of delivery.

IN WITNESS WHEREOF, I have hereunto set my official hand and the seal of the Board, this 17 day of July, 1979.

(S E A L)

Treasurer
expressed for best land use since the School does rely quite heavily on the fraternity system for housing students. Concern was expressed as to Board responsibility to maintain the area as protection for other fraternities and to secure assurances of financial responsibility.

Mr. Beers was told by the Chairman that the matter would be discussed and that an answer will be forthcoming.

EMI Building for "Dirty Research." Dr. Golden stated that in view of the problems being encountered in attempting to have an outside contractor build a structure for lease back to CSM for "dirty research" consideration is being given to the use of Chauvenet Hall. This building will be vacated by the Basic Engineering and Mining Engineering Departments upon the completion of Brown Hall. The School has told state officials that the building will be "decommissioned" and will thereafter be of nominal expense to the State. If the decision is made to use it, an effort must be made to regain state approval for use of building.

Dr. Golden estimates initial cost of preparing Chauvenet Hall for such use to be $90,000 to $132,000, depending upon whether a new roof is installed. He stated thereafter the annual costs will be met from rental paid by the entities using the building: Minerals Research Center, Colorado Energy Research Institute, and Earth Mechanics Institute.

The motion was made, seconded, and passed that the proposal to assign Chauvenet Hall for the purpose outlined be accepted subject to state approval. The Board also approved in principle the use for initial renovation of up to $132,000 from restricted funds generated from "indirect" cost recoveries.

Dormitories. Mr. Grynberg stated he had requested this item on the agenda because of his concern over student housing. Mr. Scott in response had prepared a memorandum on present occupancy and estimated future needs. He said occupancy is at 100% and there appears to be a need for more housing, perhaps even of a size similar to the new dormitory, but with the present facilities consuming all projected revenues we have nothing to pledge toward debt service on new facilities.

In view of all circumstances the Board made clear that the School has made no decisions at all about future building or commitment to acquire any additional properties.

Mr. Schwartzberg asked for report on the solar installation at the new dormitories, using precise measurements even if extra instrumentation is required. Mr. Scott stated that such a report is in progress.

Library Hours. Mr. Hartley Phinney, Librarian, reviewed the hours in effect for library use.

The matter was referred to the administration.

The meeting recessed for an executive session after which it reconvened and the following actions were taken.

November 9, 1979
ATO. The Board accepted in principle the proposal of the ATO Home Association that the new fraternity house proposed to be built on Fraternity Row be constructed initially to house only 24 persons and that it not include housemother quarters, but the Board instructed the administration to inform ATO that all other restrictions remain in effect, including providing complete kitchen facilities. Specific architectural plans, including provision for expansion to house 36 persons total, are required to be approved by the Board prior to the sale of the lot.

December Commencement. Mr. Coors agreed to accept the class at the December 21 Commencement.

The meeting adjourned at 12:15 p.m.

[Signature]
Secretary

November 9, 1979
The Board of Trustees met in regular session at 9:00 a.m. in the Board Room following a presentation by Dr. Ardel Boes, Head of the Department of Mathematics.

Present: Messrs. Aab, Coors, Fogarty, Grynberg, Pascoe, and Schwartzberg.


Mr. Pascoe presided.

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

Previous Minutes. The minutes of the meeting held on November 9, 1979 were approved as distributed.

New Faculty Appointments. Dr. Mueller reviewed the new appointments and a change in status as follows:

Larry J. Buchanan  
Assistant Professor of Geology  
(spring semester)  
$8,750

Jonathan H. Worstell  
Part-time Instructor in Chemistry and Geochemistry (spring semester)  
3,500

Douglas W. Waples  
From full-time to Adjunct Associate Professor of Chemistry and Geochemistry (spring semester)  
1,800

Monthly Financial Reports. Mr. Scott made available the regular monthly reports as follows: CSM Investment Summary as of December 11, 1979; Consolidated Board Report, five months ended November 30, 1979; CSM Budget Report as of November 30, 1979; and CERI Budget Report as of November 30, 1979.

In addition Mr. Scott distributed copies of a pro forma budget projected to June 30, 1980 showing some problem areas in line items of Resident Instruction, Professional Staff and Instructional Support, Utilities. It was suggested that these matters should be discussed with the members of the JBC, not only as problems in themselves but also to the point of making them more fully aware of the fact these matters are considered and discussed seriously by the Board. Discussion was held on how to handle the relation between underspending due to unfilled faculty positions and the expected shortfall in the utilities appropriation. The consensus seemed to be that
our credibility was better served by our using the money for utilities, which in the end may well benefit our faculty more than spending the money for faculty salaries now.

The Board accepted the pro forma report as a reasonable forecast of what our revised budget will look like at the end of the fiscal year. Mr. Scott said it will be updated from time to time.

Mr. Scott stated that it is his belief that subject to proper resolution of the problems discussed we are operating within the accepted financial plan for the 1979 fiscal year.

Resources Communication Center. Dr. Golden distributed several memos showing progress with the state videotapes. He stated the work is progressing, that a meeting had been held with several legislative representatives, and that agreement has been reached on funds and terms of agreement. As requested at the last meeting, a chart was distributed with expected progress and completion dates.

Admissions. Dean Nyikos and Mr. Young spoke to this item, stating that we are ahead of last year in applications, especially applications from Colorado residents.

Candidates for Degrees. Distribution was made of lists of candidates for degrees as recommended by the graduate and regular faculties at the meetings held on November 7 and November 14, respectively.

Upon motion made, seconded, and unanimously passed, the following were approved to receive the indicated degrees on December 21, 1979, subject to the completion of all academic requirements and continued compliance with school requirements and regulations:

**BACHELOR OF SCIENCE (MINING ENGINEERING)**

| Aldo Guido Bosio             | John Charles McConnell       |
| Lawrence Lee Burns           | John Bradley McGahan         |
| Daniel DeNarvaez             | Stephen Robert Powell        |
| John Cameron Elkin           | David Leonard Rendini        |
| Joseph James Feller          | Milford Lee Renegar, Jr.     |
| Robert Michael Glen          | William Bryan Schafer, III   |
| Joe Scott Grenawalt          | Kenneth M. Shaul             |
| James K. B. Hesketh         | Michael Phillip Patrick Sheridan |
| Rory Scott Howell            | Robert Paul Shiba           |
| Daniel James Kotecki         | Donald Andrew Smith          |
| William Rand Kroskob        | Daniel Jordan Thompson       |
| George Timothy Lightwood     | Andrew Kevin Todd            |
| Paul Frederick Martin        | Rafael Unzueta-Hernando      |
|                             | William Michael Zisch        |

**BACHELOR OF SCIENCE (METALLURGICAL ENGINEERING)**

| Lark Elizabeth Adamson       | Michael Earl McDonald        |
| John Michael Burnside        | Carlos Erminio de Moraes     |
| Aleja Silvana Cusati         | Michael Ray Nees             |
| Athahualpa Alonso Franco     | Shawna Gailene Scrivner      |
| John Frederick Gnazzo        | Jeffrey Allan Smith          |
| Brantley James Halstead      | Michael Alan Walker          |
|                             | Randall Lee Wilbanks         |

December 14, 1979
BACHELOR OF SCIENCE (GEOLOGICAL ENGINEERING)
Kenneth John Balleweg
Juan Carlos Barillas
Bruce William Beach
Stephen Redmond Bergin
James Patrick Chonka
Joseph L. Cornellisson
John R. Craig
Robert Norman Davids, Jr.
Roger B. Eustance
Edward Dean Ford
Richard Earl Fraley
Gary Arthur Gesick
Marc Alan Gunther
Alana Howell
David Matthew Jurich
Joseph Charles Marr
Warren Alden Mautz
William Edgar Metzger, III
Ronald Kirkpatrick Powell, Jr.
Raymond Dean Priestley
Laura Goodwin Reeve
Michael Edward Shade
William Frank Stewart
Christine Zukas Wheeler
Genevieve Beth Catherine Young

GEOLOGICAL ENGINEER
Raymond Dean Priestley

BACHELOR OF SCIENCE (PETROLEUM ENGINEERING)
James Edward Bloise, Jr.
William Randolph Blosser
Joseph Lee Dumolt
Abdelkader Farlow
David Wayne Kapple
Elizabeth E. Rastie
Nimettschik
Gustavy Edward Niemetschik
Craig Stephen Onodera
Andrew Stauffer Peterson
John Gates Petroust
Sharlene Marie Piper
Michael Philip Rathmann
Ricky Wayne Sledge
Gary Paul Botack
Mahiedine Touami
Michael Anthony Vais
Gordon Douglas Voorhees

BACHELOR OF SCIENCE (CHEMICAL AND PETROLEUM-REFINING ENGINEERING)
Stephen C. Allegar
Timothy Alan Barbari
Jeffrey Allen Baumer
Robert Dunn Bennett
Thomas Joseph Boersig
Michael Timothy Brezina
William Watson Brown
David James Cesario
Douglas Alan Chinn
Steven Charles Gebhard
John Steven Graves
Michael Merle Gray
Russell Dean Hampton
Stephen Lee Hillis
Gene Dennis Krist
Francis Gordon Kuenn, Jr.
Alan Jay Mencin
Gary David Mohr
Raquel Omaira Diaz Oviedo
Richard W. Pattee
Allan Ray Phillips
Denny Rafael Rincon-M
Richard Jay Rinehart
Linda L. Smith
Arquimedes Rafael Brito Valerio
Dana Goddard VanDersarl

BACHELOR OF SCIENCE (GEOPHYSICAL ENGINEERING)
David Allen Bird
Mark William Blohm
Brenda Cheryl Gallagher
Michael Chedsey Hanks
Steven Arthur Jensen
John Edward Ellis Kingman
Robert Arthur Kneppe
Pablo Segundo Oviedo
Alan Dean Pinkerton
Robert Preston Strode
Douglas Evan Thomas

BACHELOR OF SCIENCE (MINERAL ENGINEERING CHEMISTRY)
Michelle Ann Jensen
Paul R. Weber

December 14, 1979
BACHELOR OF SCIENCE (MINERAL ENGINEERING MATHEMATICS)

Preston James Wallace, Jr.

BACHELOR OF SCIENCE (MINERAL ENGINEERING PHYSICS)

Scot Karl Anderson
William Frederick Meine
William Earl Moyer

BACHELOR OF SCIENCE (MINERAL ENGINEERING)

Steve Blanchard
Mary Patricia Cover
Brian Jay Glade
Joseph Thomas Kottenstette
Heidi Ann Pattee
John Louis Rovero
Veronica Freida Rovero

MASTER OF SCIENCE (MINING ENGINEERING)

Robert Joseph Coker
Kadri Dagdellen
Robert Larry Davis, Jr.
Michael Gauna
Oscar Romero Moreno Martinez

MASTER OF SCIENCE (METALLURGICAL ENGINEERING)

Gregory Wayne Alexander
Thomas P. Clement II
James Vincent Happ
Glenn S. Huppi
Ronald T. Ivey
Charles J. Perko III
Michael Clayton Rupert
Thomas L. Schiller
Omar Serfano Valarezo

MASTER OF SCIENCE (METALLURGY)

Teiichi Ando
John Douglas Bruno
Carl Edward Cross
Theodore Reinhart

MASTER OF SCIENCE (GEOLOGICAL ENGINEER)

David R. Boden
Rodney Stephen Smith

MASTER OF SCIENCE (GEOLOGY)

Peter A. Drobeck
Jean A. Dupree
Linda Jane Heiple
Paul W. Heiple
Loren R. Lasky
Cheryl A. Lindberg
Kakosso-y-Ramazani
Michael B. Sawyer
Grisalida J. Tarache
Jerome A. Waegli
Terrell M. York

MASTER OF ENGINEERING (GEOLOGICAL ENGINEER)

Mike E. Brazie

MASTER OF ENGINEERING (PETROLEUM ENGINEER)

Hasan Salman Al-Hashim
Rafa Mohamed Labedi
Victor German Rivera
Morteza Rassul Shirazi

December 14, 1979
MASTER OF SCIENCE (PETROLEUM ENGINEERING)
Joao Candido Baptista de Campos
Harald Schmidt

MASTER OF SCIENCE (CHEMICAL AND PETROLEUM-REFINING ENGINEERING)
Taher Ahmed Mousa Al-Sahaf Cesar R. Malave S.
Marilyn M. Halla Khaled A. Massoud Chasem
Norman Hinman Paula Douglass Menten
Sandra L. Holliman Oswaldo E. Molina Campos
Hok-Shing Anthony Wu

MASTER OF ENGINEERING (GEOPHYSICAL ENGINEER)
Carter H. Miller

MASTER OF SCIENCE (GEOPHYSICAL ENGINEERING)
Luke Ikehchukwu Mamah

MASTER OF SCIENCE (GEOPHYSICS)
Daniel Robert Burns Daniel James O'Donnell
Randall James Carroll Michel Andre Pelissier
Neal E. Faussett Richard L. Rosen
John Ernest Graves Francis Garrou Sherrill
Jose Jaime Gutierrez Nunez Pierre Valla
Ruben Darin Martinez Macias Clark Clement Vandell
Eugenio Asencio Montalvo James Jackson Reeves

MASTER OF SCIENCE (CHEMISTRY)
Mark W. Furlong

MASTER OF SCIENCE (GEOCHEMISTRY)
George Brite
David Warren Rutherford
Eric Weiland

MASTER OF SCIENCE (MATHEMATICS)
Paul Lenhart Anderson
Robert Christopher Mengis

MASTER OF SCIENCE (PHYSICS)
Thomas W. Guettinger
Lok Keah Len
John Martins

MASTER OF SCIENCE (MINERAL ECONOMICS)
Alberto Becerra Cabrales James L. Nelson-Moore
David Lawrence DeGiacomo Alfredo Parra
Kathy Ann Farr Gary Peterson
Mark Stephen Fitzgerald Jeriprolu A. C. Prabhakar
Fred Galton, Jr. Lowell Alan Shonk
Jeffrey A. Holligan Clara Linda Slater
Mark Robert Towne

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DOCTOR OF PHILOSOPHY (METALLURGICAL ENGINEERING)

Wendel Glen Brown
Bruce Donald Craig
Richard Jack Erfurdt

Jerald Edward Jones
Luis Fernando V. Ramos
Mohammad Nawi bin Salleh

DOCTOR OF PHILOSOPHY (GEOLOGICAL ENGINEERING)

Mohammed Vali Yousefpour

DOCTOR OF PHILOSOPHY (GEOLOGY)

L. J. Buchanan
Richard M. Chamberlin
Leland Durwin Cress

Wilson Herrod
Gary C. Huber
Richard Mead

DOCTOR OF PHILOSOPHY (PETROLEUM ENGINEERING)

Farouk Mahmoud Mohamed Allam
Mahmoud Ahmed Shagroni

DOCTOR OF PHILOSOPHY (CHEMICAL AND PETROLEUM-REFINING ENGINEERING)

Chuck Griswold
Hamid Reza Kavianian
Charles L. Murphy

Shie-Way Wang
Carlos Omar Zerpa

DOCTOR OF PHILOSOPHY (GEOCHEMISTRY)

John Dunkase
David B. Smith
Linda F. Smith

DOCTOR OF PHILOSOPHY (GEOPHYSICAL ENGINEERING)

Javaid Alamgir Durrani
Chisengu L. Mdala
Wen-Jea Whan

DOCTOR OF PHILOSOPHY (GEOPHYSICS)

Jose Manuel Souto Gonzalez
Doo Sung Lee

Robert William Wiley
Terence Kent Young

DOCTOR OF PHILOSOPHY (MINERAL ECONOMICS)

Victor M. Beras C.
Sandra L. Blackstone

John Byrden
Joseph DeVita
Ahmed Hussain

DOCTOR OF PHILOSOPHY (MATHEMATICS-GEOPHYSICS)

Richard C. Walker

ATQ Request for Renewal of Option. Mr. John Beers, representing the ATQ Home Association, addressed the Board with a request that the option to purchase a specific lot on West Campus Road be extended until the civil suit has been

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settled, which he said may be three years. He said that in the meantime the organization is working with an architect and will present plans, first to the administration and then to the Board.

It was moved, seconded, and passed that the option to ATO to purchase Lot 2, Fraternity Row, West Campus Road, for the price of $6,500 be extended another six months.

Attrition. In response to request made by the Board, Dean Nyikos stated that a report had been prepared by Dr. Cheuvront, Registrar. A study of a sample population of 782 students entering from 1969-1975 showed that 442 graduated, making the retention rate 56.5 percent. Nationwide the retention at engineering schools is at the 50 percent level.

A similar sampling among minority students for a three-year class period, 1975-1977, shows that of 83 total students, 57 graduated or are still in school and 26 students left school for a retention rate of 68.7 percent.

Finally, for female students sampled for the period 1970-76, 319 new women students entered and 178 graduated or are still in school for a retention rate of 55.8 percent.

Dr. Cheuvront also reported that he had studied 586 students who had been enrolled during 1968 to 1973 and determined that 27.6 percent received undergraduate degrees after eight semesters and that an additional 14.1 percent of them received their degrees in nine semesters. The overall average residence time of the group was reported to be 8.8 semesters.

Faculty Productivity Reports. President McBride reported on progress of this CCHE study, saying that in accordance with Footnote 38a of SB 525 (1979) this report is to be prepared in conjunction with governing boards. He also stated that there is obvious confusion in the minds of legislators and the public between faculty productivity and faculty activity. The November 15 Draft 2 of the report, which had been distributed to the Board, concludes that the faculty formula guidelines developed by the presidents of state colleges and universities is a valid plan, but perhaps on the conservative side.

President McBride recommended to the Board that the November 15 Draft 2 be supported in principle with the following caveats: Faculty formula guidelines as currently used should be reviewed and updated as necessary and extended to include all educational programs in the state, e.g. nursing, etc. and any procedure for assessment of productivity must respect and emphasize the autonomy of institutional governing boards.

President McBride was instructed to report to the CCHE that this Board has received and reviewed the November 15 draft of the productivity study and supports that draft with the reservations discussed.

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Request to CSMF for Electrical Distribution System. President McBride stated that due to timing of meetings and the urgent need for electrical power distribution panel in new Brown Hall, request had been made to the CSM Foundation Board, out of synchronism, for funds to purchase the panel, which must be purchased in January to allow fabrication and installation in the laboratories at appropriate stage of construction. The lateness of the request is caused by the expectation, which has not materialized, that gift funds would be received. The cost of the panel is $80,000.

Upon motion made, seconded, and passed, the Board approved this request to the CSM Foundation.

Sale of Selected Books from CSM Library. Librarian Hartley Phinney appeared to request the Board approval required by Colorado statute to dispose of surplus and duplicate library holdings.

Upon motion made, seconded, and passed, the sale of excess holdings was approved.

The meeting adjourned at 10:40 a.m. for executive session.

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