

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 Anticipation 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

(Form of Coupon)

No. _____

\$ _____

July,
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.

(d) 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.

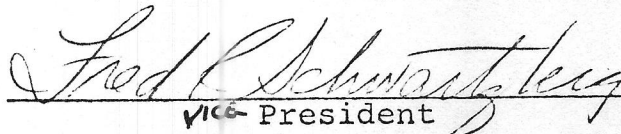
9. That after said Warrants or any of them shall
have been issued, this Resolution shall not be changed,
amended or revoked until said Warrants and the interest thereon
shall be fully paid, satisfied and discharged in the manner
herein provided, except on the written consent of the owners
of 75% of the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

ATTEST:


VICE-President

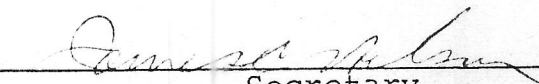

Secretary

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)
) ss.
COUNTY OF JEFFERSON)

GENERAL 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:

| <u>Name</u> | <u>Term Ending</u> |
|----------------------|--------------------|
| W. K. Coors | March 23, 1985 |
| Fred R. Schwartzberg | March 23, 1983 |
| James C. Wilson | March 23, 1983 |
| Monte Pascoe | March 23, 1985 |
| Ted P. Stockmar | March 23, 1981 |
| Jack J. Grynberg | March 23, 1981 |
| Charles F. Fogarty | March 23, 1983 |

Student Representative:

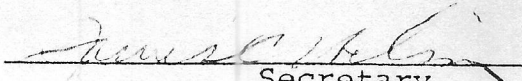
Douglas Aab June 30, 1980

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.

(S E A L)


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

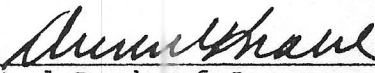
Warrants, and the facsimile signature of the Secretary of said Board appearing upon the coupons attached to said Warrants are hereby adopted by each such officer respectively as his own signature.

EXECUTED and delivered this ^{17th}~~16th~~ day of July, 1979.

| <u>Signature</u> | <u>Official Title</u> |
|---|---|
|  | 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  of
~~United Bank of Denver, N.A.~~ *Boettcher & Co.*
Denver, Colorado

~~(BANK SEAL)~~

STATE OF COLORADO)
) ss.
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.



Treasurer

(S E A L)

RECORD OF PROCEEDINGS

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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.

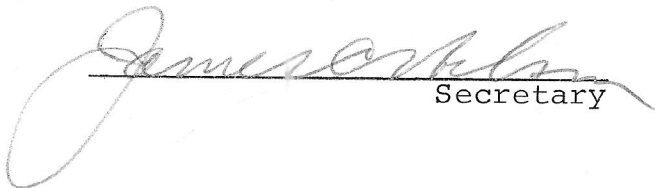
RECORD OF PROCEEDINGS

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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.


Secretary

RECORD OF PROCEEDINGS

Golden, Colorado
December 14, 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.

Absent: Messrs. Stockmar and Wilson.

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

RECORD OF PROCEEDINGS

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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 Feiler | 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 Ermirio 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

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BACHELOR OF SCIENCE (GEOLOGICAL ENGINEERING)

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

GEOLOGICAL ENGINEER

Raymond Dean Priestley

BACHELOR OF SCIENCE (PETROLEUM ENGINEERING)

| | |
|---------------------------|--------------------------|
| James Edward Bloise, Jr. | Andrew Stauffer Peterson |
| William Randolph Blosser | John Gates Petroustson |
| Joseph Lee Dumolt | Sharlene Marie Piper |
| Abdelkader Farlou | Michael Philip Rathmann |
| David Wayne Kapple | Ricky Wayne Sledge |
| Elizabeth E. Rastle | Gary Paul Sotack |
| Niemtschik | Mahieddine Touami |
| Gustavy Edward Niemtschik | Michael Anthony Vais |
| Craig Stephen Onodera | Gordon Douglas Voorhees |

BACHELOR OF SCIENCE (CHEMICAL AND PETROLEUM-REFINING ENGINEERING)

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

BACHELOR OF SCIENCE (GEOPHYSICAL ENGINEERING)

| | |
|-------------------------|---------------------------|
| David Allen Bird | John Edward Ellis Kingman |
| Mark William Blohm | Robert Arthur Knepp |
| Brenda Cheryl Gallagher | Pablo Segundo Oviedo |
| Michael Chedsey Hankins | Alan Dean Pinkerton |
| Steven Arthur Jensen | Robert Preston Strode |
| | Douglas Evan Thomas |

BACHELOR OF SCIENCE (MINERAL ENGINEERING CHEMISTRY)

Michelle Ann Jensen
Paul R. Weber

December 14, 1979

RECORD OF PROCEEDINGS

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

MASTER OF SCIENCE (MINING ENGINEERING)

| | |
|---------------------|------------------------------|
| Robert Joseph Coker | Robert Larry Davis, Jr. |
| Kadri Dagdellen | Michael Gauna |
| | Oscar Homero Moreno Martinez |

MASTER OF SCIENCE (METALLURGICAL ENGINEERING)

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

MASTER OF SCIENCE (METALLURGY)

| | |
|--------------------|-------------------|
| Teiichi Ando | Carl Edward Cross |
| John Douglas Bruno | Theodore Reinhart |

MASTER OF SCIENCE (GEOLOGICAL ENGINEER)

David R. Boden
Rodney Stephen Smith

MASTER OF SCIENCE (GEOLOGY)

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

MASTER OF ENGINEERING (GEOLOGICAL ENGINEER)

Mike E. Brazie

MASTER OF ENGINEERING (PETROLEUM ENGINEER)

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

RECORD OF PROCEEDINGS

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MASTER OF SCIENCE (PETROLEUM ENGINEERING)

Joao Candido Baptista de Campos
Harald Schmidt

MASTER OF SCIENCE (CHEMICAL AND PETROLEUM-REFINING ENGINEERING)

| | |
|-----------------------------|--------------------------|
| Taher Ahmed Mousa Al-Sahhaf | Cesar R. Malave S. |
| Marilyn M. Halla | Khaled A. Massoud Ghasem |
| 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 Ikechukwu Mamah

MASTER OF SCIENCE (GEOPHYSICS)

| | |
|-----------------------------|-------------------------|
| Daniel Robert Burns | Daniel James O'Donnell |
| Randall James Carroll | Michel Andre Pelissier |
| Neal E. Fausset | 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
Lek 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 Gatton, Jr. | Lowell Alan Shonk |
| Jeffrey A. Holligan | Clara Linda Slater |
| | Mark Robert Towne |

RECORD OF PROCEEDINGS

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DOCTOR OF PHILOSOPHY (METALLURGICAL ENGINEERING)

| | |
|----------------------|--------------------------|
| Wendel Glen Brown | Jerald Edward Jones |
| Bruce Donald Craig | Luis Fernando V. Ramos |
| Richard Jack Erfurdt | Mohammad Nawi bin Salleh |

DOCTOR OF PHILOSOPHY (GEOLOGICAL ENGINEERING)

Mohammed Vali Yousefpour

DOCTOR OF PHILOSOPHY (GEOLOGY)

| | |
|-----------------------|---------------|
| L. J. Buchanan | Wilson Herrod |
| Richard M. Chamberlin | Gary C. Huber |
| Leland Durwin Cress | Richard Mead |

DOCTOR OF PHILOSOPHY (PETROLEUM ENGINEERING)

Farouk Mahmoud Mohamed Allam
Mahmoud Ahmed Shagrani

DOCTOR OF PHILOSOPHY (CHEMICAL AND PETROLEUM-REFINING ENGINEERING)

| | |
|----------------------|-------------------|
| Chuck Griswold | Shie-Way Wang |
| Hamid Reza Kavianian | Carlos Omar Zerpa |
| Charles L. Murphy | |

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 | Robert William Wiley |
| Doo Sung Lee | Terence Kent Young |

DOCTOR OF PHILOSOPHY (MINERAL ECONOMICS)

| | |
|----------------------|---------------|
| Victor M. Beras C. | John Byrden |
| Sandra L. Blackstone | Joseph DeVita |
| | Ahmed Hussain |

DOCTOR OF PHILOSOPHY (MATHEMATICS-GEOPHYSICS)

Richard C. Walker

ATO Request for Renewal of Option. Mr. John Beers, representing the ATO 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. Chevront, 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. Chevront 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.



Assistant Secretary