Rovig Receives McGlashan Fellowship

by Michael Mayne

Mr. Allen D. Rovig, a graduate student in Chemistry, has been elected to the recipient of the honor. Rovig received his B.S. in 1956 from the Heath Steele Mines, Ltd. as a chemistry major. His course of study will be in the field of mineralogy, and his work will be under the direction of Professor John McCaslin, associate professor of physics. Rovig stated that he considers this an opportunity to use his talents to the fullest extent.

The selection of the recipient for this prized award and the specific nature of the research conducted by this candidate were left entirely to the discretion of the School of Mines. However, the Foundation suggested that the scholarship be granted to a graduate student in the Mineral-Dressing Engineering Department. In the recipient’s selection, the Foundation concentrated on the individual’s ability to handle laboratory work, and thereby enhance his skills in the laboratory. The recipient of the honor, Rovig is an excellent example of a student who has the potential to become a leader in the field of mineralogy.

Computer Center

A Dream Becomes a Reality

by Mae Brennan

University of the West Indies, Mona

Computer Center Held

Published by the Associated Students of the Montana School of Mines

Vol. IX, No. 9

BUTTE, MONTANA

Tuesday, April 19, 1964

Professor John McCaslin, associate professor of physics, and Professor Joseph Murray, assistant professor of chemistry, saw a dream become a reality when they sighted the new IBM, 1620 Digital Computer, Montana Power Company. Members of the alumni spent many hours at meetings, trying to get a computer program started in the school. They also contributed much financial support before they realized their reward, a computer as the recent letter received from the Montana Power Company stated that the company will be associated in the research aspects of the program.

The second session will run until all students have completed their work, and the course will conclude by setting up a computer program, enabling the students to use the computer for their own research.

Professor Murray and McCaslin admire their dream.

VERSATILE MECHANISM

Although small in size, and as compared to other computers, this IBM 1620 is a very fast, high-capacity, versatile machine. It utilizes the stored-program concept, which means that the instructions which guide the performance of the instrument are stored internally in the machine’s memory. This memory is a 2-unit computer, each unit weighing 1400 pounds, each of which is the size of an ordinary desk.

Snores 20,000 DIGITS

The immediate-access, magnetic-core memory unit has a storage capacity of 20,000 digits of information. The magnetic-core memory permits the machine to select any one of these 20,000 digits within a machine cycle time of 20 microseconds (.000020 seconds). This ready availability of stored numbers permits the extremely rapid, computational facility of the computer. For example, the machine will add 2, ten-digit numbers together in about 800 microseconds, which is 0.008 seconds.

Machine Programming

Programs for the machine may be coded in machine language, or in a symbolic language known as Fortran. Machine language consists of a set of numbers which the machine interprets as instructions to perform its operations. The symbolic language is a mnemonic code, which the machine reads, and translates into a set of machine-language instructions. Fortran language is also a symbolic system very closely resembling the ordinary language of mathematics. In this system the machine reads a mathematical formula and translates it into a set of machine-language instructions. Fortran language is also a symbolic system very closely resembling the ordinary language of mathematics. In this system the machine reads a mathematical formula and translates it into a set of machine-language instructions. Fortran language is also a symbolic system very closely resembling the ordinary language of mathematics. In this system the machine reads a mathematical formula and translates it into a set of machine-language instructions.

MACHINE CAPABILITIES

High-speed digital computers, such as the IBM 1620, are particularly suited to two types of problems: solutions. The first type is a calculation, which is repetitive in nature. In this case,
COMPUTER

We had Professor John Mccaslin, the alumni, and the other interested people who have brought a digital computer to Montana School of Mines. These men recognized the obvious: research and study are stymied without the proper tools. The IBM 1620 computer, of which we are now the proud possessors, is a highly sophisticated, and very useful, digital computer of somewhat more than a 1940 era. It is therefore possible to create some relatively simple principles. This machine creates new opportunities in graduate research, and it is hoped that we will be able to perform some relatively complex calculation and omission can be used for further and greater-reaching projects. Once it is known how to work owing on a computer, the results obtained here, much in the form of the most general error, may be used to the advantage of the most efficient in the teaching of higher education. It is true that you have left us, and we are not aware of an additional one.

If you like the "bowski" dog, and you're chopping on your head, Oh, do not let your light be hid. Lay but say on the line again--to a "searching" voice.

Racquet Stringer

Alumni News

AIME Meeting

Montana School of Mines Alumni activities this past month included a luncheon at the AIME annual meeting. Dr. Adams, the petroleum engineer, spoke on the progress of the work, which was well attended. Joe Wendel (41) opened the meeting by introducing Roger Pierce, manager of the Point of Rocks mine.

Paper presented by the Society at a meeting in Baltimore, received this information at a meeting of the AIME in New York, February 17, during a welcoming luncheon in the Statler-Hilton Hotel. His paper, entitled "An In-Depth Study of a Montana Uranium Field," was given to 250 students and to several changes of scene on campus.

A list of those attending this meeting and the names of the members of the AIME are listed below, as it is received.

Graduate Receives Honor

In the department of Science and Engineering of the Montana School of Mines, now called the School of Technology, Dr. W. V. L. E. Rose, a graduate of Montana, was recently noted as winner of the Perry Award. A paper presented by the Society at a meeting in Baltimore, received this information at a meeting of the AIME in New York, February 17, during a welcoming luncheon in the Statler-Hilton Hotel. His paper, entitled "An In-Depth Study of a Montana Uranium Field," was given to 250 students and to several changes of scene on campus.

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M. B. Oates, Robert Corbett, Public Relations Director for Alumni

MBMG Acquires Mercury 'Sniffer'

By Lollie Mough

The Montana Bureau of Mines and Geology has recently acquired a device known as a "sniffer," to be used in geologic exploration in Montana. It is a Lemaire Mer-cury detector, a device to detect mercury in rocks and minerals. The gadget tells where the ore is—just like the old miner's "sniffer". To operate, one takes a small sample of the soil, rock, or mineral, and puts it on the sniffer, which can detect the presence of mercury. In this way, the instrument, and which causes the device to react, is used to find a reaction on a dial. Plotting these reactions on a graph, the location of mercury can be determined. The "sniffer" can tell you if the ore is mercury, and is supposed to have a high degree of accuracy. It is lighter than air, and can be used in hard-to-reach places. The equipment is small, lightweight, and can be operated by someone with no knowledge of geology, geology, or geology. The "sniffer" is designed to be used in conjunction with the "sniffer" for the detection of silver and other metals. It is a useful tool for mineral exploration, and is now being used in the detection of metallic ore bodies in the west. The "sniffer" is now being sold at a price of $25,000, and is manufactured by the "sniffer" company, based in Butte, Montana.

From the Desk of The Student Body President

By John Evans

Saturday, April 5, 1954

The Student Council held a meeting this week to discuss the proposed Student Government reforms. Most organizations on campus were represented; however, the majority of the students present were in favor of the reforms. The Student Council has the responsibility of seeing that the reforms are implemented on campus. The Student Council will go on a trial basis, starting the school year with a new constitution. The Student Council will be a part of the Student Government, as a part of the Student Government.
Dr. Hall to Participate in International Field Institute

Under a grant from the National Science Foundation, Dr. William Chebull, associate professor of Geology, MSM, has been selected to attend the Institute, sponsored by the American Geological Institute. The Institute is to be held in Italy from June 15 to August 15, 1964.

Schedule and Participants

"As in the previous three projects held in Great Britain, Switzerland, and Scandinavia, the 1964 institute will provide an opportunity for American college teachers to spend three weeks in a classic field area under the guidance of the participating universities. Italian universities are authorities on the local geology," stated Dr. Chebull. The faculty for the Institute will be Professors Giovanni Raimondi, University of Messina; Raimondo Selli, Livio Trevi, University of Rome; and Professor Hyman S. J. Maxwell (USA). Several other eminent Italian geologists will assist with the leadership of the excursion.

It is tentatively planned that 20 participants, including Hall, will leave New York for Rome on June 7 and return to the United States on August 15. The program has been developed under the guidance of the AGI Education Committee.

Geological Studies

According to the AGI information booklet, "Depths" to attempt to reach the bottom of the Mediterranean Sea. Francesco Scarbuck, a noted petrologist, will be one of the speakers. Other names may be added to the program.

The noted composer, Johann Sebastian Bach, also will be among the participants. The co-directors of the Institute will be Professors H. H. Winkler and W. J. Maxwell.

Other names may be added to the list of participants, including members of the Northwest Accrediting Association.

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GROSS GIVES SEMINAR

Mr. Peter J. Gross, a graduate petroleum student, gave a seminar April 11, with a topic, "Limit Tests on Gas Wells." Beginning his speech, he explained that during a reservoir limit test, the rate of production is held constant, and the bottom-hole flowing pressure is measured. The interpretation of full data is made with the aid of the curve of the curves from the two points of recorded pressure increased per unit rate of production.

He further stated that it is possible with the aid of graphs and certain equations to determine the surface pressure, the effects of auto-pumping, and the efficiency of water-gas separation.

Dr. Habashi Talks To Club

by Lee Ann Peterson

On Monday, April 20, Mr. Bill Kieser, a petroleum student, gave a seminar on "Hydrothermal Solutions," which was held in the Student Union Building. Mr. Kieser's talk was so captivating that the audience was so interested that the evening was spent entirely with the subject. Dr. Frank D. McCallin, chairman of the petroleum department, and Mrs. William Todd, secretary of the Petroleum Engineering Department, were present for the evening.

Dr. Habashi concluded his talk by telling a story of a young man who had been sent to the United States to study hydrothermal solutions and to study oil seepage in the oil fields of Alaska. The young man had been sent to Alaska because of his knowledge of hydrothermal solutions and his ability to work with seismographs. Dr. Habashi then went on to explain how the seismographs are used to determine the depth of the oil fields and how the data is used to predict the location of oil seepage.

Seismic Waves

The seismographs are used to determine the depth of the oil fields and the location of oil seepage. The data is then used to predict the location of oil seepage, which helps to locate the oil fields and to determine the depth of the oil fields.

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The course includes the theory and practice of the techniques of mine surveying. Problems of trans- flying the instrument underdome, muffler, and special mining problems are considered in the classroom and practiced in an operating mine. The mine surveyor must be able to solve problems of three dimensions, two of which are parallel to the surface of the earth.

Two students, who participated in the field work are: Alec Lind- quist, Ralf Zacec, Jaime Lina, Kent Tyler, Harold Yee, and Lawrence Eaton. After their calculations are completed, these students will make a report in June, a map of the portion of the mine surveyed.

PETE GROSS

Gillette Delivers Seminar

by Natalio Pinto

The second in the series of geology seminars was given on March 18, by C. B. Gillette on "The Origin of Hydrothermal Solutions." Gillette stated that the subject is pertinent, because "over 20% of the economic metallic ores are deposited and associated with igneous activity." Several methods of transport for ore minerals have been proposed; however, the working hypothesis of hydrothermal solutions has a greater acceptance among economic geologists. Hydrothermal solutions are considered as rising, hot, aqueous fluids, which are permeated by the rocks and which are involved in the processes of mineralization.

Gillette also discribed the methods of transport for ore minerals, and added that the subject is pertinent, because "over 20% of the economic metallic ores are deposited and associated with igneous activity." Several methods of transport for ore minerals have been proposed; however, the working hypothesis of hydrothermal solutions has a greater acceptance among economic geologists. Hydrothermal solutions are considered as rising, hot, aqueous fluids, which are permeated by the rocks and which are involved in the processes of mineralization.

Earthquake Jams

Seismographs

The earthquake that rocked Alaska, Friday, March 27, jammed the seismograph at the University of Colorado. According to Dr. Stephen Nielson, who is a seismologist at the University of Colorado, the earthquake was a magnitude 7.0 earthquake, and the seismograph was damaged.

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KENT TAYLOR

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307 W Park Street

BUTTE, MONTANA

S Eliott, W. Van Matre, surveyed the thirteen-hundred level of the Keller mine as part of their research. This field work was performed during the week of March 22-27.

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CENTENNIAL CELEBRATION
Train Enroute East
by Kathrynn Verona

On April 3, Montana rolled its Centennial Train east, with stops at Omaha, Kansas City, St. Louis, Louisville, Cincinnati, Charlotte, Washington, Baltimore, Philadelphia, New York, Pittsburgh, Cleveland, Chicago, Milwaukee, Moline, and Minneapolis. The train will spend two days in each of nine cities en route to New York. It is not due back in Montana until May 5.

April 24 marks Montana Day at the New York World's Fair. Dedication of the Montana Exhibit, a 38-by-62 foot building, will be staged in July at the National Flag-casing ceremony, talent show, and speech by Montana officials—will all feature the celebration of the day.

The Centennial Queen Contest took place in Helena on March 22. Miss Bonnie Jo Robbins (MSU) was chosen as Miss Centennial Queen, and Miss Anne Quietly (MSU) was named Miss Big Sky Queen. Two ladies traveled east with the Centennial Queen Contest, which there were approximately 295 passengers.

Miss Carol Dunstan, a former MSM student, is presently employed as secretary of the Montana Centennial Committee.

LITTLE MAN ON CAMPUSS

1963-65 CATALOGUE AT PRESS

The new 1963-65 MSM Catalogue is presently at press, according to Professor Frank Kelly, chairman of the Catalogue Committee. The two-year catalogue embues changes in the engineering curricula. The method of presenting courses in instruction is also different from previous years.

Before the catalogue is complete, the problems of arrangement, scheduling, and designing a cover must be taken care of.

The book is scheduled to be the first 150 copies of the catalogue printed, a total of 18 copies.

Honor Bard

DAR ES SALAAM, Tanganyika (AP)-In this Shakespeare's 409th anniversary year, his plays Julius Caesar and Hamlet, the first Swahili-language stage productions, will be staged in Dar es Salaam, the capital city of Tanganyika. President Julius Nyerere will be staged in the production. The Shakespeare festival will be held by a high school company.

INTERNATIONAL CLUB HOLDS DANCE

For days before the Easter vacation, the halls of the dorm and the halls of the Student Union were full of unidentified sounds. These sounds originated from the dishes being prepared by the members of the International Club. The feast was held in the Student Union's dining hall, and was featured by a variety of decorations, including the rhumba and the cha-cha.

The usal fun and joviality of MSM dances was greatly accentuated this particular night.

FRATERNITY NEWS

Theta Tau

A closed meeting of Theta Tau was held on April 3 at the main business of what was to become the Theta Tau chapter. The meeting was held on April 3 at the main business of what was to become the Theta Tau chapter. The meeting was attended by about 20 members, including new pledges, Bill Robinson and Mike Lacey.

Sigma Rho

Sigma Rho recently pledged five new members—Cari MacFarlane, Rod Williams, Bill Clarkson, and Al Chilumsi.

The fraternity also held a swimming party at Gregson Hot Springs on Friday, March 14. About twenty hardy individuals attended the party, and the group went back to the hotel home, where everyone danced, and the swimming pool served for a ball. Plans to chart Sigma Rho as a corporation are now under consideration.

EUROPEAN DIPLOMACY TEST

Up to the End of Khrushchev

Sample Questions (the sneaky type)
1. Give the dates of at least two of the following:
   a. The Duke of Windsor
   b. What is a HohenzoUern?
   c. Army
   d. Who was killed?
   e. The Reichswehr
   f. The Schutzbund
   g. House of Represen-

TET Test Final

The editors of the Aipha, hope that the EIT questions and answers have given students a good review of the material covered in the spring semester. The results have been announced.

THE MONTANA SCHOOL OF MINES AMPLIFIER Page Five

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Four MSM Students Capture Weight-Lifting Honors
by Tom Downey

In a tournament held at the Butte Y.M.C.A., Saturday, March 28, four weightlifters enrolled at the Mines won an array of awards.

Pat Dooley, 112-pound engineering student, totaled 515 pounds, in three lifts, to win his weight division. He also was crowned the "Outstanding lifter" of the tournament on the basis of total weight lifted divided by body weight.

Tom Downey captured the 141-pound division, totaling 555 pounds in three lifts. Downey was the tournament director.

Jerry Johnson, sophomore general student, was runner-up in the 151-pound division, with an accumulated total of 480 pounds, only five pounds less than the winner's total of 485.

Mike DeNorse, freshman general student, became the 181-pound winner for the last three years by competently Donegan, Doran, Fredrickson, Len-...