

12-2-1966

The Amplifier - v. 12, no. 3

Associated Students of the Montana College of Mineral Science and Technology

Follow this and additional works at: <http://digitalcommons.mtech.edu/amplifier>

Recommended Citation

Associated Students of the Montana College of Mineral Science and Technology, "The Amplifier - v. 12, no. 3" (1966). *Amplifier* (1955-1977). 154.
<http://digitalcommons.mtech.edu/amplifier/154>

This Book is brought to you for free and open access by the Student Newspapers at Digital Commons @ Montana Tech. It has been accepted for inclusion in Amplifier (1955-1977) by an authorized administrator of Digital Commons @ Montana Tech. For more information, please contact sjuskiewicz@mtech.edu.



Brown, Tholstrom receive scholarships

Cameron Brown and Kendell Tholstrom, both seniors in Petroleum engineering, received scholarships in the amount of five hundred dollars each from the S.P.E.

Each year an outstanding student in petroleum engineering is given a scholarship by the "Society of Petroleum Engineers". The Scholarship is usually presented to a student from Montana.

Cameron Brown was originally awarded the scholarship in 1962 but because of an accident was forced to

leave school going into his '62-'63 senior year.

Kendell Tholstrom was president of his class in his junior year and like Cameron was active in sports.

The S.P.E. is the professional organization of Petroleum and Engineering people who are affiliated with the oil and gas business. This particular section covers the entire state of Montana and is made up of members of the faculty at Montana Tech and engineers of all major oil and service companies in Montana.

Student has paper accepted by journal

GeorgeAnn Thurston, Engineering Science department senior, has had an article accepted for publication in *Energia Nucleare*, an international Journal published in Milan, Italy on nuclear energy and its applications.

The article, which summarizes her senior thesis under the direction of Dr. Fathi Habashi, is entitled "Kinetics and Mechanism of the Dissolution of Uranium Dioxide." Dr. Habashi stresses the fact that although his name also appears on the article, the work is largely Miss Thurston's.

The subject of the article is the problem of handling uranium compounds as they occur in economic deposits. It describes experiments in which insoluble forms of uranium oxide were treated with sulfuric acid or sodium bicarbonate and sodium carbonate in varying concentrations and under varying oxygen pressures, the purpose being to produce sol-

uble forms of uranium oxide. Results suggest that the dissolution of uranium oxide is an electrochemical process similar to the corrosion of metals.

The work was carried out under Grant GE6266 of the National Science Foundation.

This is Miss Thurston's second published article.

Faculty banquet given

On November 20, the faculty wives of Montana Tech held a banquet for the faculty at the Holiday Inn. The dinner took place at 7:00 with a social hour preceding at 6:00.

Mrs. S. L. Groff and Mrs. C. L. Herndon were in charge of arrangements. Others helping were Mrs. R. A. Athearn, Mrs. R. B. Berg, Mrs. W. W. Chance, Mrs. F. N. Earll, Mrs. E. Gilmour, Mrs. E. L. Holverson, Mrs. K. S. Stout, and Mrs. F. M. Young.

Entertainment was provided by Miss Wegner, accompanied by Mrs. Kohler Stout.

Students to attend Mining Convention

The Northwest Mining Association is holding its 72nd Annual Convention on December 2 and 3 at the Davenport Hotel in Spokane. Student participation is urged by the American Institute of Mining, Metallurgical, and Petroleum Engineers as well as by the Association. Mineral industry students are expected to benefit from the meeting by learning from members the problems and goals of different companies.

Activities begin Thursday, December 1, with visits to the U. S. Bureau of Mines, the U. S. Geological Survey, and the Kaiser Aluminum Trentwood plant. A party for former and present engineering students of Montana Tech will be held that evening.

Activities announced by A.W.S.

The Associated Women Students have announced their recent activities and also their plans for more activities in the future. For the past several weeks, two A.W.S. members have been modeling for the Klothes Klotset. Those modeling are Hilma Smith and Joanne Comstock with Marilyn Berryman commentating. This program is presented every Wednesday at 3:00 p.m. on television.

The A.W.S. is planning a trip to the Montana State Training School at Boulder, Montana. This is tentatively scheduled for December 4. Since A.W.S. has adopted two girls from Boulder through the "Adopt a

Tech Library to be remodeled

Plans have been completed for an expansion of the Tech Library. These plans include the building of a balcony within the library. The main reason a balcony is being added is that there is no room to expand the building on the outside. To this date the plans have advanced to the bidding stage and it is hoped that work can begin soon.

The new balcony will have a hand railing going completely around it to insure the safety of the students who do go up to it. The entrance to the present library will be unchanged but the entrance to the balcony will be situated somewhere along the south wall of the building. At the top of the stairs will be located a number of book cases that will continue along the length of the balcony. There will be approximately twenty shelves for books and materials which eventually will hold close to 16,000 volumes of many different selections; almost anything a student would like to read. There are also going to be individual study stations on the balcony where a student may get some of his studying done in free hours. Each of these study stations will be equipped with tables and chairs which the student may use at any time.

Also in the center of the new project will be a room used to keep records and microfilms. This room may be used at any time by students from Tech who wish to use these records or microfilms.

7 Tech students attend Business Management Clinic

Seven Tech students participated in the fifth annual Business Management Clinic in Butte on November 15 and 16. The clinic, sponsored jointly by Montana Tech, Montana State University, and Montana Power Co., drew 59 engineering students and 7 faculty members from the two sponsoring schools. The students representing Montana Tech were Angus Hemp, Gary Kump, Bob Lehfeldt, Jim Loomis, Pete Norbeck, Dale Scholz, and Bob Seidel.

The two-day presentation, held in the firm's auditorium, covered the electric and gas operations of the company from an engineering standpoint. Officers and department heads, in describing their responsibilities and functions to serve electricity and natural gas to most of Montana, gave the students a deep look into the company's activities.

Superintendent of power, Don Gregg, described the origins of power pooling in the Northwest and the

Tech students tour Idaho reactors

Seven Tech students and two faculty members recently participated in the scheduled tours of the National Reactor Testing Station at Idaho Falls. Charlie Ljungberg, Jim Loomis, Doug Meseroll, Bill Robinson, Professor Herndon, and Professor Finch went on the Reactor Engineering Tour on October 27. On November 3, Al Chiamulera, Dave Koskimaki, and Carl Swanson went on the Mathematics and Nuclear Physics Tour.

Reactor Engineering Tour

The first tour began with a 40 minute film showing how the various prototype reactors are tested and evaluated. During the morning the students toured the Experimental Breeder Reactor No. 2 (EBR-2). This nuclear reactor is a complete electric generating station. The reactor is termed 'breeder' because its atomic core produces more uranium fuel than is consumed. Heat produced in the reactor core is removed by highly radioactive liquid sodium, then transferred to a second liquid sodium loop where it boils water to drive steam turbines. The electricity generated by these turbines is fed into the power company lines of the Idaho area.

That afternoon the students visited the Engineering Test Reactor (ETR). Methods used to expose different materials to the neutron bombardment of the reactor core were discussed. At this reactor the group was shown the inside of the core through a series of mirrors.

Finally, a visit to the Advanced Test Reactor gave the students a chance to view a reactor, similar to the ETR, in its final stages of construction.

Mathematics and Nuclear Physics Tour

The second tour began with a visit to the Materials Test Reactor (MTR), designed to test materials for the damage caused by different levels and types of radioactivity. Special equipment used with the MTR were a Crystal Spectrometer and a Fast Neutron Chopper and Velocity Selector. The latter device is equipped with slits and in operation is spun up to about 6000 rpm. Only nuclear particles with certain speeds will pass through the slits, so unwanted particles are eliminated.

Later, they visited the Advanced Reactivity Measurement Facilities and the Engineering Test Reactor Critical Facility. Finally, they visited the CF-646 Applied Mathematics Computer Center. The main 7040 computer is so large that series 3000 computers are used to feed it information. There are several 1620s, similar to Montana Tech's computer, which are used for data processing. Duplicating and sorting machines are also part of the installation.

Also on the base, but not visited for security reasons, is an area where Navy personnel are trained to operate the reactors used in naval vessels. A sailor must spend about six months of dry land operation before he is qualified for sea duty with a reactor.

formation of the Northwest Power Pool from which power may be drawn from the other five members if a local shortage occurs.

The electrical engineer and computer programmer, Phil Beagles, illustrated the effectiveness of electronic machines in reducing hours of work to seconds. Computers are heavily relied upon by the company to help management determine the location and size of power plants, transmission lines and substations, and to help line builders determine where to put poles.

L. S. Stadler, vice-president—gas and oil operations, and John Robertson, manager of the gas department, explained the company's activities necessary to keep pace with the growing fuel needs of the state.

Bob Labrie, assistant chief engineer—generation, explained the reasoning for building a 180,000 kilo-

watt, coal-fired generating plant in Billings in preference to an atomic plant. Atomic plants are capable of producing large quantities of power, but there are not enough people in the state to make use of it. Therefore, such an installation would be uneconomical at this stage.

The company executive assistant, W. P. Schmechel, outlined the future operation of the utility's open pit coal fields at Colstrip to supply the coal-fired generating plant being built in nearby Billings. By 1980, 33 men will be mining nearly two million two tons of coal a year.

At the completion of Tuesday's program, the participants attended a dinner in the Finlen Hotel.

Wednesday morning the students visited the company's dispatch operations at Wyoming and Broadway. The clinic was concluded that afternoon.



AWS officers at work are Cheri Thorton and Kay Lear, seated from left to right, and Evalie Byrnes, Leona Harrison, and Trudy Tomazich standing from left to right. Carol Trythol was not present.

Educational changes help engineering students adapt to growing technology

by STEVE BAUER

Poor Joe. He used to work as an operations engineer at an open pit. Recently, the management decided to install a computer to handle data rapidly and to simplify future mining evaluations. Since Joe's degree was in mining engineering, he had never had, or had ever been interested in, computer programming and was unable to adapt to the change. **Someone else could and took his place.**

This example illustrates the problem faculty and students face in this decade of explosive technological change. An engineer must be more knowledgeable about related and diversified fields than ever before. More than ever, this preparation is the joint responsibility of the faculty and the student.

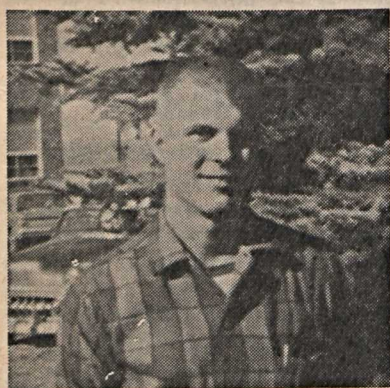
New advances in any field result in more study material. Mental ability and study time limit the new concepts that a student can handle. To make new technical courses possible, nonessential courses are eliminated and related courses are combined. When additional concepts are introduced in a subject, individual points are given less rigorous treatment.

Understandably, instructors are apprehensive about such changes. Although less rigorous, the treatment of a subject must be adequate to insure that the student understands and can work with the fundamentals involved. For a job in industry, a student must receive practical training, but he must be taught enough theory to keep up with technological advances. He must take courses in the humanities to develop social awareness and abilities. To handle the vast amount of material, education by rote is rarely employed now; a student is exposed to as much material as possible in superficial studies in the hope that he can find the information when he needs it and will be able to apply it.

Specialization in a field leads to subdivisions in which students may wish to make careers. Often, the most beneficial subject matter for work in the subdivision will differ somewhat from that for the field as a whole. If a student knows in advance what specialized area he plans to enter, he should make appropriate changes in his curriculum within the limits set by the department. For professional versatility, many students now go an extra year or two to receive additional degrees. Each year more students take graduate work for specialized training.

Advances in technology necessitate changes in curriculums. Only by constantly revitalizing her courses of study can Montana Tech continue to produce qualified engineers who won't share the fate of "poor Joe."

Frosh President stresses class pride



Bob Chew

One's freshman year is memorable because all beginnings are memorable, and this is the first of many memorable years. When we look back on this year, we want to be proud — proud of what we did and proud of what we were.

Pride doesn't just happen; it must be built. It must be built as any-

thing else is built, piece by piece. A house is the sum of its bricks, joists, and beams. The individual pride each member takes in his part in the class, not only socially but also scholastically, is a brick. Out of these bricks we can build a house called class pride. If this house is built on a rock, its foundation will never be washed away, and it will last a lifetime.

For pride is a habit which can be acquired. Once gained, it cannot be given up except voluntarily, and it pervades everything its owner does. A person who takes pride in his dreams, accomplishments, and himself will be successful in everything he tries. One who has no pride will fail, at least in part, in anything he attempts. Now, at the beginning of college, is the ideal time to begin building that pride which will anchor a life full of purpose and satisfaction.

—Bob Chew

Will computer backlash replace white backlash?

Computers can now name the probable winner of an election just after the polls close. In the future, computers may give the likely winner just after the polls open. If this

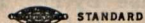
ever happens, people may wait to see who the computer predicts will win — then go out and vote the underdog in.

"It requires a very unusual mind to undertake the analysis of the obvious."—Alfred North Whitehead

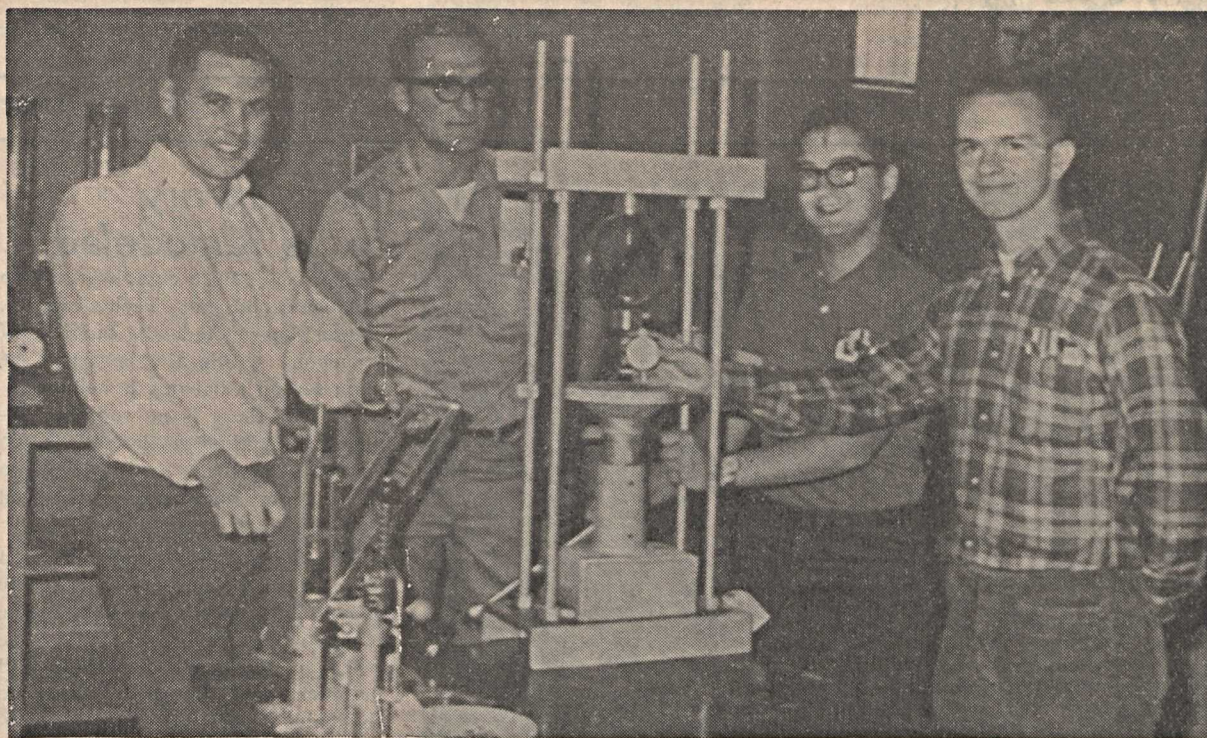
AMPLIFIER STAFF

Editor Steve Bauer
Page Editors Fran Banfield, Julie Leyden, Gayla Sprunger
Sports Ray Boksich
Columnist Ernest Bond
Staff — John Driscoll, Thomas Lovell, Lawrence Lussy, Lawrence Puccinelli, Sharon Trafford, Karen Wedin, Guy Ripley, Al Vukovich.
Special reporter Pete Knudson
Business and Advertising Bill Muretich
Publications Committee: Robert Taylor, Frank Young, Ernest Gilmour, Dr. Ralph King.

Published 11 times during the academic year by the Associated Students of the Montana College of Mineral Science and Technology, Butte, Montana 59701. Entered as Second Class matter on January, 1960, at the Post Office at Butte, Montana, under the Act of March 3, 1897, as amended.

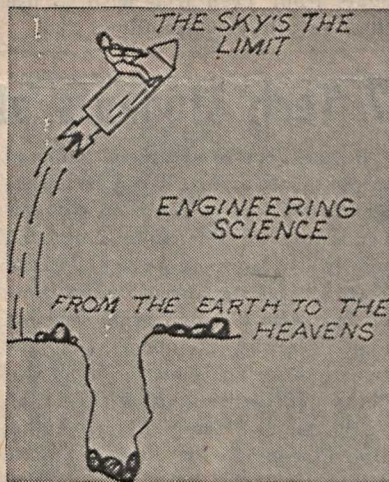


Engineering Science offers challenges



These are typical Engineering Science students shown in one of their labs. A relatively new field, Engineering Science offers broad knowledge rather than specialization. Students are, left to right, Don McLaughlin, Jim Loomis, Chuck Parrett, and Jim Furaus.

What is an engineer? The word **engineer** comes from the Latin word **ingenium**, which means a natural capacity or talent, and from the French word **engignier**, which translated means to contrive. According to these early concepts, an engineer was a person with the natural capacity to contrive. Keeping this definition in mind, we now describe an engineer as a person trained in mathematics, physical sciences, engineering sciences, and the humanities, who applies this knowledge, judgment, and experience to develop economical ways of utilizing the forces, energy, and materials of nature for the benefit of mankind.



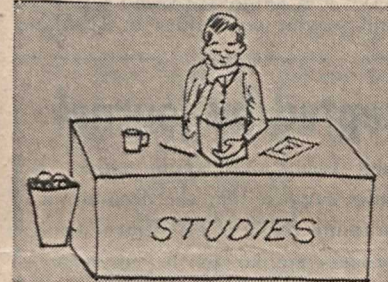
Description

Engineering Science is a relatively new concept in the engineering field. This concept was developed to fulfill a major need in the rapidly growing technology of our nation. Scientists and engineers are discovering and exploiting new and fascinating fields not only at a rapid rate but in varied directions. The traditional engineering education, although still vital in our country, does not generally give the diversity or the broad training necessary for these new activities. Therefore, necessary scientific and engineering concepts are made available in this new curriculum in order that the student may be provided with a broad understanding of principles applicable in these areas. Industries employing engineers approve of this approach to academic training because engineers who have been so trained have an increased professional flexibility.

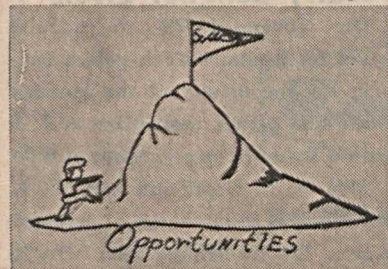
The first two years of the curriculum follow essentially those of the lower division years at Montana Tech in any curriculum. During the upper division years, emphasis is placed on solid and fluid mechanics; engineering research, development, and design; thermodynamics, electrical engineering and other applicable courses. These are considered

core courses and are found, for the most part, in any engineering curriculum. The Engineering Science department offers more advanced courses in most of the above fields, some of which are required for graduation. The department has well equipped laboratories so that the student may supplement studied theory with applicable experiments.

With the advice and consent of the department, the student may



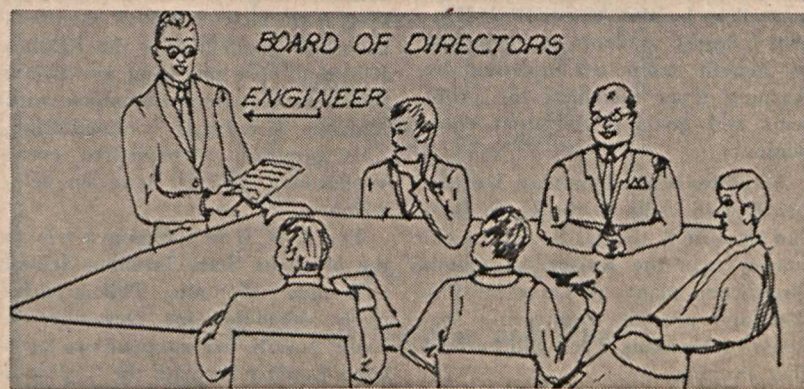
choose further studies in the fields of mathematics, advanced physics and chemistry, or in the humanities; or the student may choose any combination of these courses, depending upon his talents and special interests. Because the Engineering Science Curriculum is not as rigid as most of the curriculum in the speci-



fic fields, the student has more flexibility in his choice of courses. However, this selection is supervised by his advisers in order to prevent deficiencies in graduation requirements or an unbalanced education.

Opportunities

Although Engineering Science is a relatively new degree in engineering, and we have only two graduated classes of seniors at Montana Tech, the demand for graduates has been good. Our graduates have gone into mineral production, manufacturing, aircraft and rocket design, the atomic energy field, and research.



Practically all interviewers coming on the campus have expressed an interest in interviewing students in Engineering Science.

Why this demand and interest? Because graduates of this program can fulfill the educational requirements for a large variety of career opportunities. These include the glamorous new space age titles as well as the common engineering development, design, and research in the basic industries.

A period of adaptation to specific position requirements can be expected by the graduate through industrial training programs following graduation, or advanced studies can be undertaken to obtain more professional specialization before industrial employment. This specialization may be in any recognized field of engineering. Even without additional specialization, the broad knowledge provided by this curriculum enables the graduate to qualify for a great diversity of positions.

If you have any questions, or wish any more information, the Engineering Science department will be happy to try to answer any of your questions. Members of this department are Professor Francis M. Young, room 102, Pet-Physics building, Professor Charles L. Herndon, room 207, Engineering building, and Professor Koehler Stout, room 200, Pet-Physics building.

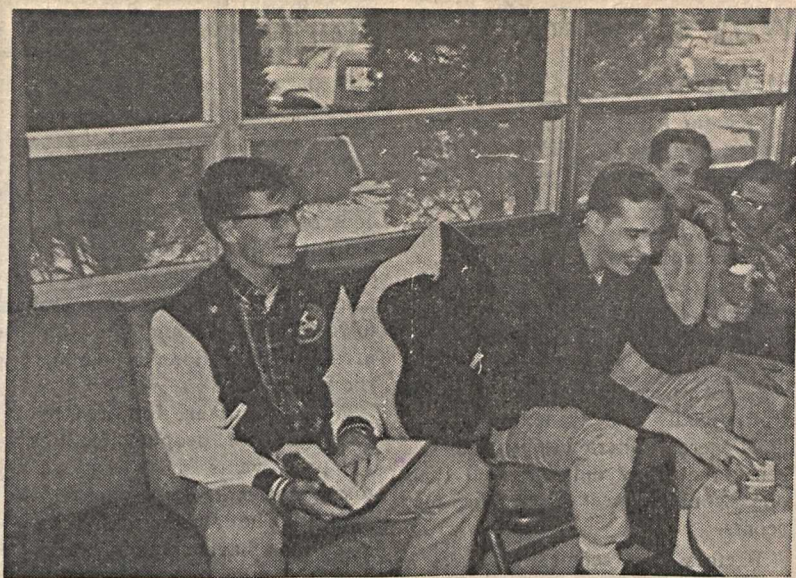
Student Comments

The following comments were made by some of the senior students in Engineering Science:

1. Jim Furaus: "Corporations of every type imaginable are interviewing Engineering Science graduates because the Engineering Science Department is so versatile."
2. Jim Loomis: "The Engineering Science Degree is probably the most versatile degree offered at Montana Tech. Students pursuing a degree in Engineering Science often are able to find summer employment ranging from roustabout in the oil field to basic research conducted by the department."



GeorgeAnn Thurston, Engineering Science senior, is busy with labs and classes. Popular Paul Melvin is shown overseeing a symposium at the SUB.



Two Tech students discuss interests

Two popular Montana Tech students are in the spotlight this issue. They are GeorgeAnn Thurston and Paul Melvin.

GeorgeAnn, who is a senior engineering student, lists her subjects as follows: economics, mining law, advanced mechanics, electricity, engineering applications of math, and physical thermodynamics. Her favorite subjects are mining law and advanced mechanics.

Gardening and sketching are among her hobbies, and reading is also one of her likes. When asked about her dislikes, GeorgeAnn said that she had none.

She is active in several clubs. GeorgeAnn is the vice-president of the Associated Students and the secretary-treasurer of the senior class. She likes Montana Tech "real well" and says she will be glad when graduation day comes. GeorgeAnn plans to combine engineering with law.

Paul is a sophomore engineering student. His list of subjects include

chemistry, quantitative analysis, engineering graphics, geology, and sophomore calculus. His favorite subject is geology and Dr. Dresser is his favorite professor.

His favorite hobby is skiing, and Paul enjoys mountain climbing. He thinks Montana Tech is a great engineering school but he dislikes apathy among the student body. Other dislikes include slips from the Dean's office and broken fingers.

Paul, too, is active in many clubs. He is president of Newman Club, vice-president of the Young Democrats, and secretary-treasurer of the Circle K Club. He is also a member of Chi-Rho and the Mountaineer Club. He is interested in starting a ski club for those interested in that sport.

Paul hopes to attend West Point next year. However, if this hope does not materialize, he plans to graduate from Montana College of Mineral Science and Technology with a degree in geology.

\$25,000 international peace essay contest to be offered in 135 countries this year

The International Association of Lions Clubs has inaugurated a novel approach for the quest for peace.

It is a \$50,000 international peace essay contest for young people aged 14 to 21, inclusive, designed to explore ways by which people can live together in peace. The contest will be held in 135 countries where 800,000 Lions members work toward the improvement of international understanding and good will among nations.

The Club's main ambition is to have private citizens, as well as diplomats and the government, search for a solution to prevent warfare and to establish a person-to-person contact across borders, surmounting language and cultural barriers.

The first prize is a \$25,000 educational or career assistance grant. There will be eight additional awards of \$1,000. The finalists will be brought to Lions International's

Magma Staff begins work on yearbook

The Magma Staff has begun work on this year's yearbook and plans to introduce a new approach to the book.

The staff met with a yearbook representative, Gene Stock from Billings, Montana, and at the conclusion of the meeting selected a cover and discussed page layouts for the book.

The book, which will not be distributed until next September, will be entered in a National Yearbook Contest, a first at Montana Tech.

Heading the staff are editor, Jim Loomis; assistant editor, Jim Leifer; business manager, Kay Lear; photography editor, Pete McFarland; and artist, Bonnie Petterson.

Newman Club is active at Tech

The Newman Club is a joint organization between Montana Tech and the Butte Business College. It is a Catholic organization which deals with spiritual and intellectual phases of life.

The following are the officers of Newman Club: President, Paul Melvin; Vice-President, James Rice; Second Vice-President, Linda Lanan; Recording Secretary, Teresa Knox; and Treasurer, Patsy Nelson. Mr. McCaslin is the faculty adviser and Father Byrnes is the chaplain.

Speeches are given by outstanding men or women of the community. Last week Dr. Staples spoke about drugs and their effects, with emphasis on narcotics and LSD.

At present, the main project of the Newman Club is a council which is to be held in Boise, Idaho. This year's theme is the Ecumenical Council, which deals with the changes in the church and its structure.

Copper Guard is active organization

The Sophomore Honorary Service Society established the Copper Guard in the spring of 1935. Under the direction of the Associated Students of Montana College of Mineral Science and Technology, the Copper Guard conducts a series of dances during the year. Its membership, consisting solely of men from the sophomore class, usher at functions, organize rallies, perpetuate traditions, and in many other ways contribute toward the improvement of student relations.

The Copper Guard promotes many functions on campus. They sponsored the Registration Dance and in the future will sponsor M Day. They will serve refreshments after the dance. It is their responsibility to see that the M is kept in good condition.

Its members this year are the following: Karl Pack, Loyal Johnson, Gary Mannic, Bob Morrison, Mike O'Keefe, Bob Wilson, Dan Sabena, Dave Bovee, and Keith Jensen. Bob Morrison is duke, Loyal Johnson is chancellor, Mike O'Keefe is scribe, and Dave Bovee is squire of the Copper Guards. Mr. McCaslin, Associate Professor of Physics, is its advisor.

Ellis Office Supply

ALSO
ENGINEERING SUPPLIES
PHONE 723-8383

129 N. Main

Butte

THE TOGGERY

MONTANA'S LEADING
CLOTHING STORE
For MEN and BOYS

117 N. Main

Phone 723-7320

DIANA HUGHES

Ladies and Children Apparel
56-58 West Park
BUTTE, MONTANA

Bond's Eye View

Charlie Ljunburg is currently trying to grow a "girl tree" — He has placed a tumble weed in a wine bottle (empty) and decorated the branches with cotton balls and cut-outs of girls from various well known men's magazines. He very carefully fertilizes and waters it — He has High Hopes!!!

Speaking of Charlie, the other night as he was groggily ending one of his experiments, he came to this brilliant conclusion — "Booze don't make you Sober!"

Ruthie said it. She had just taped down a drawing sheet for her drafting exercise. With pencil poised, she slid her T-square across the paper. Perfectly normal procedure. Then she looked up, threw her pencil at me, and exclaimed, "My T-square is out of focus!!!"

Here is a remark I overheard at the homecoming dance: "Let's sit this one out — after all, I am almost 22."

I have heard that our bearded math professor is interested in taking up sky diving — I have also heard rumors that he has had many offers from students to help pack his chute. I rather doubt that these rumors are actually true.

Last week, a very young friend of mine asked his mother, "Do they have oil refineries in Heaven?" She replied, "No dear, they have to have engineers to build oil refineries."

Here is a note to Miller, Blumer, and Pope. Brad says it's all right to make his bed for him once in a while, but too much icing (Shaving cream, toothpaste, etc.) is not good for the cake, (his bed, or his disposition).

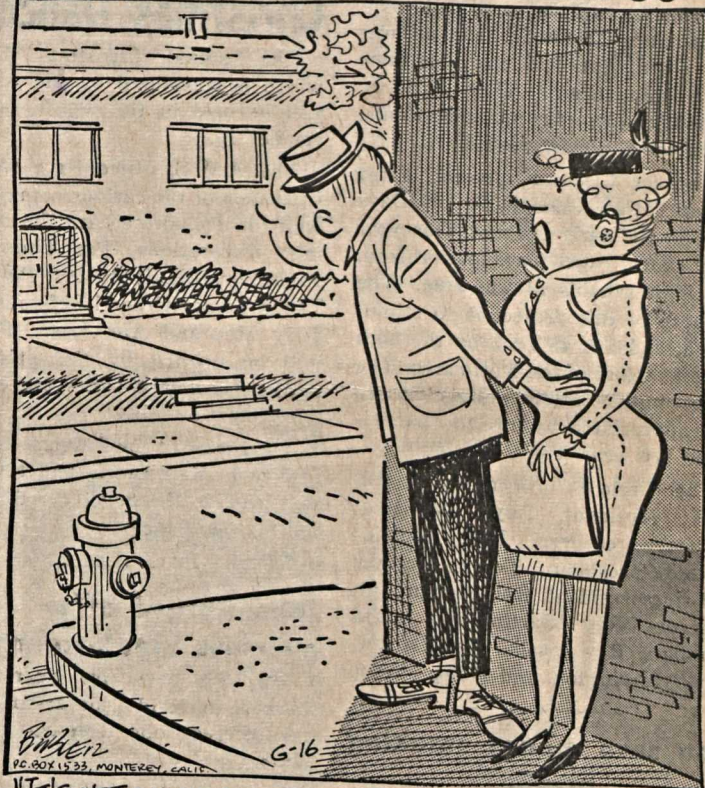
I have heard it said that our coeds get their grades in Tech's harder courses just because they are girls. A new theory has even been stated: the grade received is inversely proportional to the skirt length.

This is interesting, but not very factual. If it were true, how would you explain the large number of boys that have been tutored through their courses by more knowledgeable coeds? (Might as well face it; more knowledgeable means smarter.)

In the SUB one evening, I accidentally happened to listen to a part of a conversation among some of our coeds. They were discussing other coeds. Now I see why men can't understand women — women don't even understand women.

—Ernest Bond

LITTLE MAN ON CAMPUS



IT'S THE PEOPLE...

From a single mine in Butte, Montana, The Anaconda Company has grown into the world's largest non-ferrous mining and metal fabricating concern.

People were responsible for every step forward, as Anaconda steadily expanded its operations throughout the Western Hemisphere and built its market from copper alone to a myriad of metals and fabricated products.

Today there are more than 40,000 Anaconda employees — geologists, miners, metallurgists, chemists, accountants, engineers, salesmen, manufacturing specialists. They are members of a dynamic industry, performing an important job.

The future will rest in the hands of the same kind of good, capable people. That's why Anaconda seeks technically qualified people of talent and skill for the challenges and opportunities of a growing industry.

ANACONDA®

"A Partner in Montana's Progress"

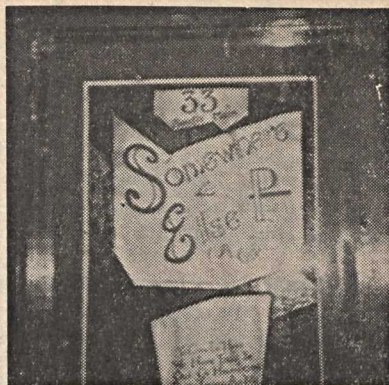
Somewhere Else—a coffee house

It's someplace to go, it's Somewhere Else. Somewhere Else is Butte's own original coffee house, located downstairs in the Metals Hotel. Stated one customer, "It's great, a place no one ever thought of before."

The Chi Rho club of Butte, composed of unmarried high school graduates, started the coffee house as a club project, and hope to make it pay for itself in a short time. All materials and work that have gone into "Somewhere Else" have been donated by Chi Rho members or other interested persons. Even the piano was donated by an outside party.

Chi Rho members will try to get entertainment for all hours they are open. This too is to be donated.

The coffee house includes a juke-box, snack bar, and tables where



The friendly door of Somewhere Else, young people's coffee-house.

Chi Rho girl waitresses serve coffee, hot chocolate or a combination of the two, or even coffee flavored with rum.

Each weekend, the coffee house is open Friday through Sunday. It is staffed by Chi Rho members who donate their time to hopping tables and pouring coffee.

Under the supervision of Father James Burns, the Chi Rho club was revived this year in Butte. The club is non-denominational and all unmarried high school graduates are welcome.

Tech's Circle K cites '66-'67 plans

by Boyd Williams

The Circle K Club, dedicated to service, is planning several new projects. In conjunction with the Silver Bow Kawinis Club of Butte, they have planned a Snow-Mobile rally for Jan. 21-22, to be held in the Elk Park area. All students are invited to attend. Concessions and a warming shelter will be provided. Approximately 200 entries from all over the Northwest will provide some close competition. There will be demonstration rides and several displays for those interested.

Another Circle K project is the annual High School Senior Days held in the early spring. This year they expect eager participation from the high schools of the area. The purpose of this project is to stimulate attendance at Tech by the high school seniors of the Butte area. The opportunity to attend college classes was appreciated by all who participated last year.

The Circle K officers are as follows: president, Boyd Williams; secretary-treasurer, Paul Melvin; 1st vice-president, Terry Angove; 2nd vice-president, Bob Melvin; sgt. at arms, Ray Martin, and board members, Ray Jussila, Ron Backer, Jerry Harrington, and Doug Storer.

You save money smoking maybe

There has been much talk lately about the high cost of cigarettes. Actually, a person could save money by smoking. Suppose that he pays \$100 a year for cigarettes. If he starts smoking at 18, finally contracts lung cancer, and dies at 56, he has only spent \$3800 for the habit. If he didn't smoke, he might live to the age of 67. Let us further suppose he is an average American who lives beyond his means. He must meet payments on his house, car, appliances, etc., and pay back loans with interest to cover previous debts. If he slips behind \$1000 each year, he will owe \$11,000 more by not smoking. Therefore, he will save himself \$7,200 if he smokes and dies sooner. Also, he won't be faced with eleven years of worry over his increasing debts.

So look on the bright side. No matter what the experts say, smoking cigarettes will save you money maybe.

Our anthropologist's eye was caught recently by an article in a Montana high school paper. It told about the custom of dressing up the freshmen in odd costumes (pantlettes for the boys) and then publically humiliating them in a gym assembly.

As Charley Brown would say, "Good grief!"

Why some fail subject of book

In a fascinating book called *The Blight on the Ivy* (Prentice-Hall, 1963), Richard and Catherine Gordon tell of the many students on any campus whose personality problems keep them from achieving success.

Intelligence, they stress, is not the answer. A group of 250 high school and college students who had comparable I.Q.'s showed varying patterns of success. Half were doing well socially and academically, but half were underachievers in the sense that they did less well than one would expect from the test scores.

Factors that seemed to make a difference were hard to determine, but a few characteristics were common to most underachievers:

1. Their parents' interests were not intellectual.
 2. Their parents did not complete high school.
 3. Their fathers had lower-middle-class or lower-class occupations.
 4. The students' own interests were not intellectual.
 5. The students had no clear long-range goals and ambitions.
 6. The students did not seek help and counsel from older, experienced people.
 7. The students' mothers did not work outside the home.
 8. The students had had illnesses in addition to the usual childhood diseases.
 9. The students had had disciplinary problems in school.
 10. The students belonged to a minority religious or ethnic group.
- Obviously many of these problems are not within the control of the students but suggest that institutions, culture, and society are far from perfect and should not be taken as granted or sacred.

Speakers Bureau explains its purpose

The Speakers Bureau, which is maintained at Montana Tech, is a bureau to handle requests for both faculty and foreign student speakers.

Certain faculty members are available to speak on subjects relating to their special fields. Other faculty members will speak at special occasions including elementary and high school commencement addresses.

Some foreign students have indicated a willingness to discuss their customs, traditions, education, political situations, or social life. The group desiring his services must arrange for his round-trip transportation.

When asking for a speaker, a weeks' notice is required. Also, you must state the speaker you desire, the topic, the time, the expected size of the group the speaker is to address, and the date.

To secure a faculty speaker, get in touch with Mr. Robert Athearn. To secure a foreign student speaker, get in touch with Professor Ralph I. Smith.

"Animals have no conscience. If they did, they would be better than people."—Dagobert Runes

OSSELLO'S

926 S. Arizona
Phone 723-6553

PHIL JUDD

SPORTING GOODS and
HARDWARE STORE

83 E. Park St. Butte, Montana

Students tell post-election feelings

In the wake of the elections held last November 8, there were cries of victory from the Republican party with the sight of a number of unexpected gains in the lawmaking body of this nation. The Democrats too felt that they had control of the situation and now with the campaigns over all eyes are looking toward possible candidates for the presidential elections to take place in the fall of 1968.

All elections are followed by the expression of people's feelings of the past events and their joys and disappointments in the party of their choice. The students of Montana Tech also have opinions about the recent election.

Carol Ann Trythall - - "Nationally the elections were very good. Locally I was very disappointed except for Mr. Holman."

Julee Leyden - - "I was disappointed in the Democratic showing, and I hope that this shows the Democratic party that they should start to reorganize."

Doug Lienemann - - "It shows that the Republican party made their

comeback before most people thought they would."

Helen Ann Loggins - - "Good for Montana, but bad for the rest of the country."

Kathy Rule - - "They were held last Tuesday."

Wally O'Connell - - "No comment."

Fran Banfield - - "The Republican party comeback is a return to the two party system, which is necessary for the democratic system."

Bill Polich - - "Anytime a John Bircher from California, an uneducated, narrow-minded man from Georgia, and in Alabama a prejudiced puppet governor who professes violence against another human being can be elected to office—then I feel there is something wrong with the people of the U.S. today."

"Human knowledge and human power meet in one; for where the cause is not known, the effect cannot be produced. Nature to be commanded must be obeyed."—Francis Bacon



ORE DIGGINGS

Mike Pentilla is a freshman with a problem. Mike is always losing his "Mountain Dew" hat. He needs



this hat for hunting. (Hunting what?) Mike doesn't forget everything; for instance he remembered too, that he intends to be some kind of an engineer, but isn't quite sure what kind.

Jody Enjoys Tech

Jody Mee, a freshman coming from Girls' Central, enjoys the college life of Tech. She thinks that the kids are great and the school is great. Jody is undecided about her future and may study pharmacy. She works at the pharmacy at Silver Bow General Hospital. Oh, yes, Jody has a hat too: a jaunty little "mod" cap she wears here and there.



"A child is a genius till he is five because all his senses are in active interrelation."—Marshall McLuhan

Ev's Glad She Came

"I'm glad I came" says Evalie Byrnes. "Ev" thinks the school and the kids are just great. The S.U.B.



to her is the most interesting place on campus, and she spends a lot of the extra time she has over there. "Ev" hails from Girls' Central, too. She is also undecided about her future, but hopes something at Tech will help her decide.

Tim Enjoys the Library

Tim Bass is a freshman who enjoys "studying and the library". Tim comes from Boys' Central. The "library" Tim enjoys gives him a chance to meet other students and discuss current ideas with them. Although



Tim does not plan to be an engineer, he wears big boots, more like those of cowboys than engineers. Perhaps Tim would like to be a professional cowboy, the rich kind.

Richards and Rochelle

DRESS RIGHT
YOU CAN'T AFFORD NOT TO
17 N. Main Butte
Chuck Richards — Remo Rochelle

LaVerne's

FASHION CENTER
113 W. PARK

Ron's Gamble's Store & Marina

MARINE SUPPLIES
1645 Harrison Ave.
Butte Montana

George Steele Co.

42 W. Broadway
RADIOS - STEREO - TV
Phone 792-4231, Butte

Gene's
FURS... FEMINE FASHIONS
80 WEST PARK STREET - BUTTE
BUTTE MONT.

TWO GOOD NAMES

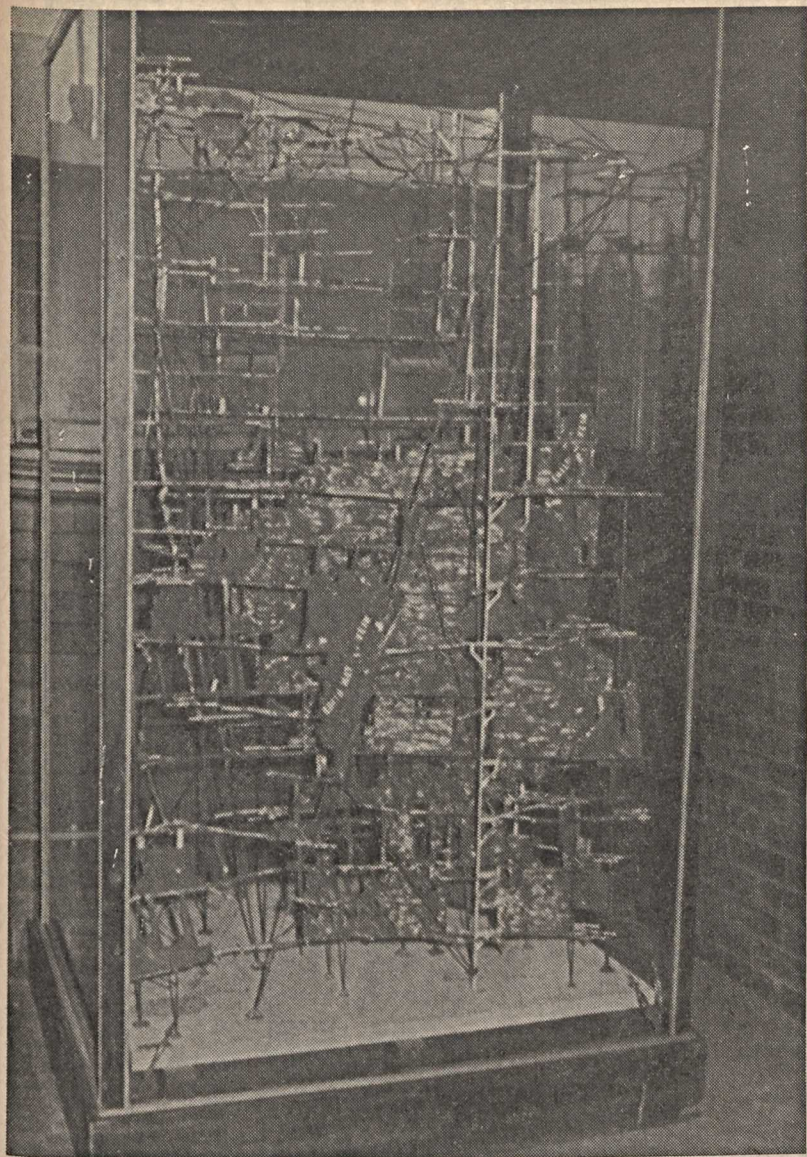
Randcraft
SHOES FOR YOUNG MEN

NEWMAN'S BOOTERY
76 E. Park



ELECTRICITY
DOES
SO MUCH
YET COSTS
SO LITTLE

THE MONTANA
POWER COMPANY



Above is the exhibit now on the second floor of Main Hall. This geological model was used in a famous mining suit.

Exhibit is reminder of apex-rights suit

The model exhibit now located on the landing between the first and second floors of Main Hall has been placed there recently from its previous position in the Library-Museum Building.

This geological model shows the various mining claims and underground mineral deposits. It was constructed by the Anaconda Copper Mining Company to prove their case in defense of a suit brought against them by the Moulton Mining Company, Clark-Montana Realty Company, Elm Orlu Mining Company and J. Ross Clark.

According to mining laws, the owner of a claim is allowed to mine beyond the boundaries of his own claim if there is proof that veins outside of his claim are a part of his established claim. In this case, the Moulton Mining Company felt that ore bodies worth \$6,000,000, that the Anaconda Company was then mining below Clark's Poser claim, were a part of the vein originating in the Poser claim and therefore should belong to them. The Anaconda Company claimed these ore bodies

Philosophy course to be offered here

HSS 238, Introduction to Philosophy, will be offered for the first time at Montana Tech next semester. Robert Athearn, instructor in the Humanities and Social Studies department, will teach the course.

According to Mr. Athearn, it will be an "introductory but not an elementary course."

Among the topics to be covered are these: freedom of will, reality and man's knowledge of it, ethics, and the problem of knowledge of God.

Philosophy, Mr. Athearn said, asks what we know and examines assumption about reality that most people take for granted. It questions the validity of many of our institutions — political, legal, linguistic, and scientific. The class will offer food for thought — many questions but few answers.

as a part of their Badger Mine. The model was used as evidence that the Poser claim was non-existent.

The case was taken to the United States District Court at Butte in 1926. Early the next year the Court decided that the Poser vein was non-existent and in favor of The Anaconda Company. Clark took the case in November of 1927 to the United States Circuit Court of Appeals in San Francisco. Again the Court rendered the decision that the Poser vein was non-existent. More than likely the case would have been taken to the United States Supreme Court, but later in 1928 the Clark interests sold out to the Anaconda Mining Company.

Marcus Daly statue came here in 1941

Marcus Daly was born in Ireland in 1841. He migrated to the United States when he was just fifteen years of age. He engaged in mining activity in California and Nevada before coming to Butte. Here he founded the Anaconda Copper Mining Company and started the great copper mining activities that were to make Butte and the present Anaconda Company famous.

The statue of Marcus Daly, which stands on the Montana College of Mineral Science and Technology campus, was done by Augustus Saint-Gaudens. Mr. Saint-Gaudens also did such famous works as the Lincoln in Lincoln Park, Chicago, the Adam in Rock Creek Cemetery, Washington, D. C., and the Shaw in Boston. For his works Gaudens received highest honors. He was made an officer of the Legion of Honor and corresponding member of the Institute of France.

The monument cost approximately \$40,000. It was unveiled in early September, 1907. The statue's original position was in front of the Federal Building in Butte. On June 25, 1941, it was moved to its present site on the campus of Montana College of Mineral Science and Technology.

Scholarship Fund established

The J. Clifford Crump Memorial scholarship fund was recently established for the assistance of active or majority members of the Order of DeMolay in Montana for completing their education.

Four \$100.00 scholarships are to be provided annually. Those DeMolay members who have completed or are in the process of completing their junior year in college and who are in need of financial assistance in order to graduate may apply.

The first of these scholarships will be awarded January 15, 1967, from the applications received no later than December 15, 1966.

All those interested should submit applications in letter form to Lyman E. Smith, Grand Secretary of the Grand Lodge, P. O. Box No. 1158, Helena, Montana, 59601. This should be accompanied by a statement from their college verifying the applicant's satisfactory completion of his junior year or of current registration for the final term of the junior year. Also a letter from the student's DeMolay Chapter Adviser verifying the applicant's standing in the Chapter and a recommendation regarding the application should be submitted.

1966 Tech graduate studying in Pittsburgh

Dolores Labranche, a 1966 graduate of Montana Tech, is now taking the Graduate Student Course at the Westinghouse Educational Center in Pittsburgh, Pennsylvania. This Graduate Student Course was created to give training to students between their college courses and the actual job itself. The students are allowed two weeks at this center to acquaint themselves with the operations of the Westinghouse Company. They are then sent to the different departments for further development of their skills.

Dolly made quite a name for herself at Montana Tech before going to Pittsburgh. She has the honor of being the first woman in sixty-two years to receive a degree from Montana Tech, as well as being the first woman in the history of this college to receive a degree in metallurgy. She was also the only girl in a class of thirty-three graduating seniors.

Dolly, who plans to put her talents to work for the Atomic Power Division, feels that more women will enter the scientific field in the future.

Cultural social political test shows Tech's Freshmen unaware, isolated

The average freshman at Tech is isolated from the world around him. He is not aware of the cultural, political, and economic developments in the tense world he lives in. Recently, Mr. Athearn, freshman composition teacher, proved this by giving his classes a test on prominent figures in these areas to familiarize himself with the backgrounds of his students. The results were shocking and showed a deficiency in the orientation of the student to the world around him.

The average score on the test was 16.1 correct answers out of a possible 50. Twenty students did not know that Dr. Koch is president of Tech, and five believed that Charles Shultz is Tech's dean of students. Thirty-three did not know Sigmund Freud, and thirty more did not know who Pavlov was. Some of the students thought that Mayor Powers of Butte was a U-2 pilot, and 24 students did not know who Ted James is.

Some of the other funnies included Graham Hill, (famous race driver) responsible for graham crackers, Frank Lloyd Wright, (famous architect) one of the Wright brothers responsible for the first plane, and Robert McNamara, (U.S. Secretary of Defense) was thought to be the Secretary of War. Amelia Earhart (lost aviatrix) was identified as Prime Minister of West Germany, and J. Robert Oppenheimer (atomic physicist) as a maker of expensive suits.

What does this mean? Mr. Athearn answered the question this way: "The sobering results of this test make clear what we all know; that graduation from high school involves knowledge of only certain limited academic areas and in no



Mr. Robert Athearn

way means that the graduate has any understanding of the culture—or the world—in which he lives.

"It is also clear that it is the responsibility of colleges and universities to broaden the perspectives of their students so that the knowledge they acquire by rote, symbolized by the grades they often receive merely by passing that travesty known as the objective test, may be usefully integrated in thought and action, with the real world. This cannot be done—in fairness to students and faculty — without increasing academic standards and levels of instruction and decreasing teaching loads to make possible, in the classroom, that integration of academic fields of knowledge with social, political, and cultural reality which constitutes real education.

"Need I remark that in a state where the administration believes, however unconsciously, that education is a necessary evil, such progress is not easy; that in a state which denies its citizens, in the name of fiscal responsibility, the quality education which is a first requisite of economic and social growth, the progressive steps listed above seem, at best, remote possibilities."



MAL DOMINY
(B.S.E.E.) of the Bethlehem Steel Loop Course knows where the action is. He's an electrical engineer at the world's most modern steel plant —our Burns Harbor Plant in northern Indiana.

Join the action. First step: pick up a copy of "Careers with Bethlehem Steel and the Loop Course" at your placement office. Then sign up for a campus interview. Our 1967 Loop Class has openings for technical and non-technical graduates (and post-grads) for careers in steel operations, research, sales, mining, accounting, and other activities.

An Equal Opportunity Employer in the Plans for Progress Program

BETHLEHEM STEEL



Miners Bank of Montana

•
USAF Loans
•

No Charge on Student Checking Accounts

Sayatovic White's Funeral Home

MEMBER
ORDER OF THE GOLDEN RULE



307 W. Park Street
PHONE 723-6531

Flynn's Park Florists

CORSAGES and
BOUTONNIERES

205 West Park Street
Butte, Montana

J. D. and Eileen Flynn

THE LEN WATERS MUSIC CENTER

YOUR BEST MUSIC and
INSTRUMENT SERVICE

119 North Main St. Butte
PHONE 792-7344

NEW MONOGRAM BARBER SHOP

For a Good Clip See
DON and RON

Across from the U & I

Skaggs Drug Center

SERVE YOURSELF and PAY LESS

27 West Park St. Butte, Mont.
PHONE 792-1244

COLONIAL CAKE SHOP

1815 HARRISON AVE.

Tech cage men go into action tonight

Montana Tech's Orediggers will open their season tonight against Mt. Royal Jr. College in the school gym. The Orediggers will go into the season with eight returning lettermen. They are Gary Carlson, Ed Nordquist, Ron Koehler, Jim Leifer,

John McEnany, Dick Rule, John Sutey, and Karl Pack.

The new members of the team are Lee Staiger, Bob Chew, Richard Gunn, Patrick O'Brien, Jack Humphrey, and Richard Kloppel.

Considering the number of returning lettermen, the Orediggers are expected to see a fine upcoming season. This could also be helped by more students coming to the games.

Montana Tech will meet the Canadians again on Saturday.

Football season closes for Tech

Tech finished her football season against Western on Saturday, November 12. Although the team won only one game, the team has vowed to do better next year. The team and Coach Lester thought that the season was a losing one because of lack of student backing. They knew that some of the students work on the weekends but there were many who were just too lazy or were not interested enough to back the team. Coach Lester said that "the team spirit this year was equalled by those who did not attend the games." All the players thought that more people could have gone to the games. All of the boys who played this year played out of desire. There are no football scholarships awarded. Because of this, more students should try to make the games. "We (the team) feel that one of our greatest assets is the ability to field a team composed of young men the city and the rest of the state can be proud of."

Let's try to have more people cheer the team on to victory during basketball season.

Basketball schedule

The forthcoming basketball season will be scheduled as follows:

DECEMBER

- 2—Mt. Royal Jr. College at Butte
- 3—Mt. Royal Jr. College at Butte
- 18-19—Dawson Jr. College Tournament at Glendive

JANUARY

- 7—Carroll at Butte
- 10—Western at Dillon
- 14—Northern at Havre
- 17—Carroll at Helena
- 20—Lewis and Clark at Lewiston, Idaho
- 21—Lewis and Clark at Lewiston, Idaho
- 23—Eastern at Butte

FEBRUARY

- 3—Eastern at Billings
- 4—Rocky Mt. at Billings



It's basketball time again as Montana Tech's hopefuls take on Canadian Mount Royal Jr. College tonight and tomorrow. Players are counting on student support at both games. Playing time is 8:00 both evenings.

Dirty Dozens emerge victorious

In the final play-off of the 1966 intramural football season, the Dirty Dozens emerged victorious. They played an exceptionally ferocious game, especially for intramural ball. All in all, the Dirty Dozens played a very fine game.

Their season consisted of a 3-0-1 record compared to the V.I.P.'s 3-1-0. The Rocks came out with 1-2-0, the Theta Tau's had a disappointing 0-2-1, and fate was against the Knoanins, as they had 0-2-2.

The Dirty Dozens consists of Joe McManus, Pat O'Hara, Mike O'Keefe, Jerry Trythall, Mike Hanson, Bill Stewart, Dan Shea, Don McIntyre, Bob Petritz, Mike Zora, Mike Tropy, Bob Blair, and Joe Smith.

MAGGIE-ANN'S

A SPECIAL PLACE
FOR
SPECIAL PEOPLE
39-41 E. Park Plaza

Wein's Clothing Store

LEVI CASUALS
Arrow and Van Heusen Shirts
Jantzen Sweaters

35 E. Park Phone 723-3504

THOMAS'

SMART STYLES
FOR
CAMPUS WEAR

68 W. Park Phone 723-8408

GAMER'S SHOES

Shoes For All the Family
54 West Park
BUTTE

The New Moxom

YOUR UPTOWN CAFE
Open 24-hours — Air Conditioned
Phone 723-4800
34 W. Broadway Butte



Some of Tech's musclemen are shown here in the weightlifting class. They are as follows: front row, Stan Cox, Mark Foresman; middle, Tony Buralli, John Powell, Chris Croff; standing, Kirk Handov, Harry Sowers, Leonard Maki. Al Vukovich, Jr., is the instructor.

Weightlifting class begins exercises

The Montana Tech weightlifting class is in progress again this year, starting another season of body building. The class is held second period, during the P.E. class, on Monday, Wednesday, and Friday. Approximately 15 students participate in each session. This year's instructor is Al Vukovich, Jr., replacing Tom Downey.

A dozen exercises are completed in the 50 minute period. These exercises are mainly for strengthening the whole body with emphasis on the arms, chest, legs, and stomach. After three months of these exercises, the amount of weights will be increased as will be the number of exercises. The weightlifting class now works at such exercises as the push-up, sit up, bench press, arm curl, leg curl, back press, press behind the neck, leg squat, and arm press. At the end of the day's ex-

"There is no adequate defense, except stupidity, against the impact of a new idea."—Percy Bridgman

ercises, students run 5 laps in the gym.

It is hoped that the weightlifting class will be scheduled for different times during the day next semester for more students to participate.

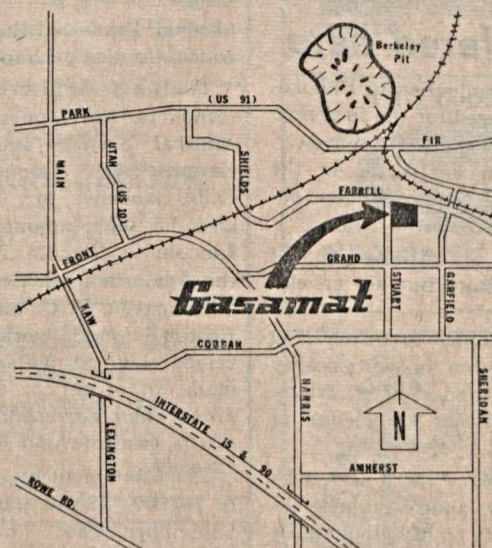
Friend? Enemy? Definitions change

Men have always tried to define friend and enemy, but the definition is never complete. Changing times and social patterns are responsible for new definitions. At times in the past a friend was someone who was willing to go to extremes, even to the point of harming you, to prevent you from hurting or wronging yourself. At other times an enemy was any person who would interfere with your right to free thought and expression.

Perhaps the following definition applies for today's standards. An enemy is someone who contrives to do you harm. A friend is someone who stands by and lets you weave your own undoing.



STOP IN
See How Much You Can
SAVE
on HIGHEST QUALITY
GASOLINE



BUTTE

Continental Highway and Stuart