

SENATE FINANCE COMMITTEE  
MINUTES OF MEETING  
MARCH 17, 1977

The meeting was called to order at 4:30 p.m.

Senator James I. Gibson was in the chair.

PRESENT: Senator James I. Gibson, Vice-Chairman  
Senator Eugene V. Echols  
Senator Norman Ty Hilbrecht  
Senator Thomas R. C. Wilson  
Senator C. Clifton Young

EXCUSED ABSENCE: Senator Floyd R. Lamb, Chairman  
Senator Norman D. Glaser

OTHERS: Ronald W. Sparks, Chief Deputy, Fiscal Analyst  
Joel Pinkerton, Budget Division  
Cy Ryan, UPI  
Jim Bright, Chairman, Advisory Committee to the  
Mackay School of Mines  
Robert Shoemaker, Member  
Howard Winn, Member  
Mark Nesbitt, Member  
Dean Art Baker, Ex Officio Member  
Neil Humphrey, Chancellor, UNR  
Max Milam, President, UNR  
Ed Pine, Engineer

SENATOR GIBSON said that the purpose in meeting was to consider the situation of the Mackay School of Mines and what special effort the Legislature should make to help things out if possible.

NEIL HUMPHREY, CHANCELLOR, UNIVERSITY OF NEVADA, RENO said that he would like to make a brief introductory statement to start with. He said they were pleased to respond to the Committee's invitation to appear; they wished to share certain information with the Committee ahead of the time that it is actually going to the Board of Regents. Some of this information will be presented to the Board of Regents at their meeting on April 1st. They realized that the Legislature was on the home stretch, as far as hearings were concerned, and therefore, called for this information which they were pleased to respond to. Some of the material is in-house data which will be given to the Board at their meeting. He introduced the members of the Advisory Committee to the Mackay School of Mines and he asked Dr. Milam to speak.

MAX MILAM, PRESIDENT, UNIVERSITY OF NEVADA, RENO gave a little background on the members of the Committee. He said the accreditation of the Mackay School of Mines, which was the cause of concern at the present meeting, was a subject that involved many of their professional programs. He said that beyond the regional accreditation for the University as a whole, the University tries wherever possible, to seek professional accreditation for its programs; those that are geared toward the education of the professional schools. This is a very important stamp of approval. This is a special level of accreditation that the University seeks for its professional programs in order to assure the graduates the best possible chance to secure the best jobs and have the best possible careers that they can.

He introduced DEAN ART BAKER, who spoke from prepared notes (copy attached.) He said that at the present time the only information that the school had was the oral report on basic reactions which the Committee gave them as an exit interview at the time of their visit in November. On April 1st, the Dean or the President of the University should receive a report on each program. The University then has an opportunity to present rebuttal to ECPD and report on how things have been changed since the visitation. In June, the reports and rebuttals are sent to the main ECPD Committee, which decides on accreditation for each program: no accreditation, 2 year accreditation, 4 year accreditation, or 6 year accreditation.

The major criticisms were:

1. Faculty needs in Met., Geol. and Engr. At least one each.
2. Support staff need throughout, both clerical and technicians.
3. Age and condition of equipment.
4. Age and condition of building in general.
5. Minor comments about curriculum.

The points that the University now has for rebuttal are:

1. \$15,000 allocated by Regents for building study and plans.
2. \$18,000 requested of Regents to match \$18,000 from NSF for microscopes--Geological engineering.
3. Two faculty, one classified, recommended to Legislature by Regents.
4. Part of University one-shot equipment allocation.
5. Special one-shot request for MSM equipment funding.

Dr. Baker gave each Senator a copy of a comparison of accreditation requirements vs. program situation. This summarized the basic points that are looked at by the ECPD and the condition of the MSM Program at this point.

Dr. Baker said they had made up a list of equipment needs that the Departments feel are important. This list has not yet been submitted to the Board of Regents. The total cost for this equipment is \$379,810. He said acquiring this equipment could make a substantial rebuttal point. Senator Gibson asked if they had a place for this equipment and Dr. Baker said they did. A general discussion on the causes for the present situation; what means can be taken to remedy them; and how to avoid a situation as serious as this in the future.

MR. SHOEMAKER, who formerly served on the accreditation committee, was asked to give his comments on how he would rate the Mackay School of Mines if he were having to make a recommendation at this time. He specified that he was not a resident of Nevada. He said he compared the University facilities here, particularly the Mackay School of Mines, with other Universities that he sees. He said he saw a number in the course of his work, speaking engagements and just generally associating with people who teach and operate the Universities.

Mr. Shoemaker said it takes three things to turn out a good graduate, one is the building, the facilities you have; the equipment in the building and the third is personnel, both the quality and quantity. He said when he compared the facilities at the Mackay School of Mines with a number of the other accredited schools of mining, he saw that the facilities, equipment and the number of people are lacking. The building, not only being depressing, is almost like a dungeon down in the basement. The equipment is old and there is not nearly as much of it as there should be and the number of teachers is not adequate. He said if he had to vote for accreditation, he would have serious doubts about it.

SENATOR YOUNG said he understood that they needed to upgrade the school in three areas: building, equipment and personnel. For equipment you need \$379,000; in the building there is a lack of space. He understood that they were asking for a study, but he wondered if there was anyone who could indicate with any degree of accuracy how much more space would be necessary or how much it would cost to add more space or build a new building. He asked Mr. Pine if they were talking about \$500,000, \$1 million or \$2 million.

MR. PINE said he believed the school needed approximately 70,000 square feet of teaching facility and approximately 25% or 30% in addition to that for the circulation area. That means about 90,000 square feet of facility; and, it's going to cost at current prices about \$60 per square foot. So, they are talking about \$5.4 million. Mr. Pine said he felt they should first satisfy the

SENATE FINANCE COMMITTEE  
MINUTES OF MEETING  
MARCH 17, 1977  
PAGE THREE

requirements of staff, of equipment and then let the study be completed to see about the building.

SENATOR YOUNG asked what the total was that would be required to obtain the personnel indicated? Dean Baker said the faculty members would cost \$32,000 per year plus 12 1/2% fringe; the classified personnel about \$20,000 plus fringe. This is about \$60,000 per year, assuming that the enrollment does not grow.

SENATOR YOUNG asked when the \$379 thousand for equipment would be needed? Dean Baker said he would assume that ECPD would be satisfied if the money were in hand and the equipment on order. Senator Young asked if there was any way the University could squeeze part of this out of the contingency fund? He wondered if any of the graduate programs could be phased out. Dr. Milam said he did not see where this could be done as there is not enough to give the relief that they needed.

More discussion followed on how a determination could be made on priorities in the UNR budget. Who was going to make the final judgment; could they expect it from the Board of Regents or was the Legislature going to superimpose their judgment over the University recommendations?

SENATOR GIBSON said he recognized that the University had problems in many areas, but he felt that those schools which were constitutionally mandated should have a priority. He said that some are determined to try to work things out to protect the Mackay School of Mines. He asked what was the minimum that the Legislature needed to do to preserve the accreditation? Is all the equipment necessary? What else can be done?

MR. WINN said he felt the atmosphere represented the biggest problem that the Advisory Committee was facing. He felt this was the responsibility of the Board of Regents according to the constitution. But because of the shortness of time, they felt they had to present the problem to the Legislature, at least so they would be aware of it, before they took the problem to the Regents. He felt that even an expression of support to the Mackay School of Mines, in some way, from the Legislature would be something that at least could be offered to the accreditation group as an argument to retain the accreditation. This school was on the priority list about 6 years ago, somehow they have worked themselves off the list and really the reason isn't the important thing now, but how are they going to get out of it without damaging the School of Mines. Mining is still an important industry in Nevada and there is every reason to continue the school and get some money to put into the building. He said they have a problem and they are looking for help.

SENATOR GIBSON asked what the time schedule was on the study to be made of the building. Mr. Pine said they were meeting with the University architect now to try to draw up names to present to the Board of Regents for them to approve. They will discuss this with the State Public Works Board so they can move along toward a final conclusion that will meet with everyone's approval. Mr. Pine felt there was much that should be preserved in the building, in his opinion.

DR. MILAM said they have a ten-year CIP program and improving this building was in the program. But there are a lot of priorities at the University and people are one of them. Those projects that have many people come first on the list. He said there were no general fund dollars in the capital improvement budget this year. This is money generated by student fees, with some slot machine money.

SENATE FINANCE COMMITTEE  
MINUTES OF MEETING  
MARCH 17, 1977  
PAGE FOUR

MR. WINN said it might be something to think about to wonder if a constitutionally required college should be funded from student fees on a capital investment program.

SENATOR GIBSON asked if there was anything that the Committee would like to say in addition to what had already been said that would help the Legislature in coming to a decision. Mr. Bright said he did not think they had an answer right then.

SENATOR GIBSON said he felt the Accreditation Board would take notice if the Legislature reacted to the request, particularly in the area of the faculty and equipment. Certainly, that would indicate that the Legislature is in support of the school. He said he felt this would be stronger than a resolution saying that the Legislature support it.

MR. BRIGHT said they would hope that this would be the first step and it would help.

MR. SHOEMAKER made a strong plea for Nevada to keep its School of Mines. He cited the Universities that had given up their schools. He said he felt in the very near future, people are going to realize that if the country does not have mining, the whole country will suffer.

SENATOR GIBSON said the Committee already had received one presentation from the University, but he asked if they could define this any more specifically as it would help them to come to a decision in the next week or so.

MR. HUMPHREY asked if they could wait until April 1st, until they had the authority of the Board of Regents. Senator Gibson agreed.

The meeting adjourned at 5:45 p.m.

RESPECTFULLY SUBMITTED:

*Muriel P. Mooney*

MURIEL P. MOONEY, SECRETARY

APPROVED:

*Floyd R. Lamb*  
FLOYD R. LAMB, CHAIRMAN

Original document is of poor quality

## Senate Finance Committee

Engineers' Council for Professional Development: ECPD

Only accrediting agency for engineering programs: 100 Universities, 350 programs, Aeronautical through alphabet.

Mining Engineering: 16. Metallurgical Engineering: 33, only about 8 in Extractive  
Geological Engineering: 13. Electrical Engineering: about 200. *Civil Engr. 200*

## Procedure:

Spring, 1976, request accreditation visitation

Summer: Prepare background material: 1" volume on Univ. and School, finances, administration, admission, etc. 1/2" volume on each program.

Fall, 1976: Visitation committee appointed: Chairman and 1 Visitor for each program. 7 in all, since College of Engineering visited simultaneously

November, 1976: Visitation. Arrive Sunday, spend Monday and Tuesday morning interviewing -- each Visitor to his Department, plus calls on supporting areas such as Physics, Library, etc. *Chemistry*

Committee lunches privately Tuesday, then has exit interview with President, Vice President, Deans. Oral report on basic reactions, top of head sort of thing.

Spring, 1977: Visitors write reports, assembled and reviewed by Chairman, passed to New York headquarters ECPD, reviewed again.

April 1: Report on each program sent to President or Dean. University has opportunity to present rebuttal to ECPD: report on how things have been changed since Visitation.

June, 1977: Reports and rebuttals to main ECPD Committee, which decides on accreditation for each program: no accreditation; 2 year accreditation; 4 year; or 6 years.

July, 1977: Notification to University of program accreditation status. Instructions: only public notice is that are accredited or not, no details including no mention of how long.

Thus: three stages of feedback on accreditation. 1st: oral, top-of-head exit interview, which is what we have at present; 2nd: written, reasoned report by Visitor, which is due late next week; 3rd: decision by ECPD Committee.

Handouts summarize basic points considered by ECPD, and status of each of our programs as indicated by exit interview comments. Major criticisms:

- 1) Faculty needs in Met, Geol. Engr: at least one each
- 2) Support staff needs throughout, both clerical and technicians.
- 3) Age and condition of equipment
- 4) Age and condition of building in general.
- 5) Minor comments about curriculum

Points for rebuttal: \$15,000 allocated by Regents for building study and plans  
 \$18,000 requested of Regents to match \$15,000 from NSF for  
 microscopes -- Geological Engineering  
 Two faculty, one classified recommended to Legislature by Regents  
 Part of University one-shot equipment allocation  
 Special one-shot request for non equipment funding

MACKAY SCHOOL OF MINES  
GEOLOGICAL ENGINEERING PROGRAM

Comparison of accreditation requirements vs. program situation

(Requirements from ECPD guidelines for Geological Engineering, Mineral Processing, and Mining Engineering published February, 1975)

ECPD Minimum Requirement

MSM Program Situation

- |   |   |
|---|---|
| 1. <u>Faculty.</u> 2 minimum with strong supporting staff and service courses.  | Geology-Geography Department: 13.56 FTE (Full Time Equivalent) Geologists and geographers (18 individuals) including 1.00 FTE non-appropriated. No geological engineer degreed faculty but one by background. |
| 2. <u>Student-Staff Ratio.</u> No definite rule- "low enough to ensure effective instruction."  | Geol.-Geog. Dept: 12.9 : 1 major : FTE faculty, 12.6 : 1 FTE student : FTE faculty.   |
| 3. <u>Research and Professional Work.</u> Most should be done research or consulting. Active in professional societies  | About two-thirds active in research and consulting, several active in professional societies.   |
| 4. <u>Teaching Loads.</u> If only teaching plus student counselling and committees, 10 course credits; if other activities, minimum of 3 credits.   | 8.2 course credits average  |
| 5. <u>Inbreeding.</u> Majority hold degrees from other institutions.  | All hold degrees from other institutions.   |
| 6. <u>Industrial Experience.</u> Implied: some industrial experience in some.   | Three with extensive industrial experience, remainder with some to none.  |
| 7. <u>Stability.</u> Should not be too frequent turn-over.  | ECPD exit interview: "staff imbalanced, too many old-timers."   |
| 8. <u>Administration.</u> Sometimes independent department, more often in Dept. of Geology or of Civil, Mining, or Petroleum Engineering. Must be adequately financed and with control over curriculum. | In Geology-Geography Dept. ECPD exit interview: "must have aggressive geological engineer at head of program to provide focus and leadership."  |
| 9. <u>Staff Support.</u> "Adequate support."  | 1.25 FTE support persons. ECPD exit interview: "equipment might be adequate if there were a technician to keep it going. Need secretaries."   |
| 10. <u>Lab Facilities.</u> Adequate offices, classrooms, lab space, equipment to suit.  | ECPD exit interview: "Facilities inadequate and depressing. Equipment old, marginal or non-existent."   |
| 11. <u>Curriculum.</u> 2½ years math, basic sciences, engineering science and the integration of these. ½ to 1 year humanities and social sciences.   | ECPD exit interview: "Light on math, design course (integration) marginally sufficient. Some students short on humanities."   |

MACKAY SCHOOL OF MINES  
METALLURGICAL ENGINEERING PROGRAM

Comparison of accreditation requirements vs program situation

(Requirements from ECPD guidelines published June, 1976)

ECPD Minimum Requirement

MSM Program Situation

- |  |   |
|--|---|
| 1. <u>Faculty.</u> 4 FTE (Full Time Equivalent) plus 1 related engineering faculty.  | 2.4 FTE metallurgical engr., 2.70 chemical engr. (7 individuals) including 1.00 FTE non-appropriated. Plus some free aid from USBM Reno Metallurgy Research Center. |
| 2. <u>Student: Staff Ratio.</u> No definite ratio. "low enough to ensure effective instruction"  | 14.1 : 1 majors : FTE faculty or<br>7.1 : 1 FTE students : FTE faculty  |
| 3. <u>Research &amp; Professional Work.</u> Most should do research, should also do consulting.  | Most do research, some do a lot. Not much consulting.   |
| 4. <u>Teaching Loads.</u> 6 course credits is a full classroom load.   | 7.1 course credits average.   |
| 5. <u>Inbreeding.</u> Most faculty received highest degree from another institution.   | All recieved highest degree elsewhere.  |
| 6. <u>Industrial Experience.</u> Substantial portion should have had significant industrial experience.  | 3 individuals with major experience,<br>4 with some to little.  |
| 7. <u>Stability.</u> Should not have frequent turn-over of faculty.  | Staff stable for past 5 years.  |
| 8. <u>Administration.</u> Department should be independent with own chairman responsible for own curriculum and budget administration; competitive salaries.   | Departmental organization suitable.<br>Salaries somewhat low but not bad.   |
| 9. <u>Staff Support.</u> Recommend one support person for every two faculty persons.   | 0.75 FTE support person. ECPD exit interview: "support completely inadequate".  |
| 10. <u>Lab Facilities.</u> Very unspecific. "Well equipped lab program and facilities for individual projects and research work by students and faculty", supported by shop and technicians.                             | ECPD exit interview: "Need gas chromatograph, many other items."<br>"Support completely inadequate".  |
| 11. <u>Curricula.</u> ½ year basic sciences; ½ year math beyond trigonometry; 1 year engineering sciences; ½ year humanities-social scienc; ½ year engr. design. Specifics as to some courses--math, basic science, etc. | ECPD exit interview: "weak in design; new courses will fix."  |

## MACKAY SCHOOL OF MINES

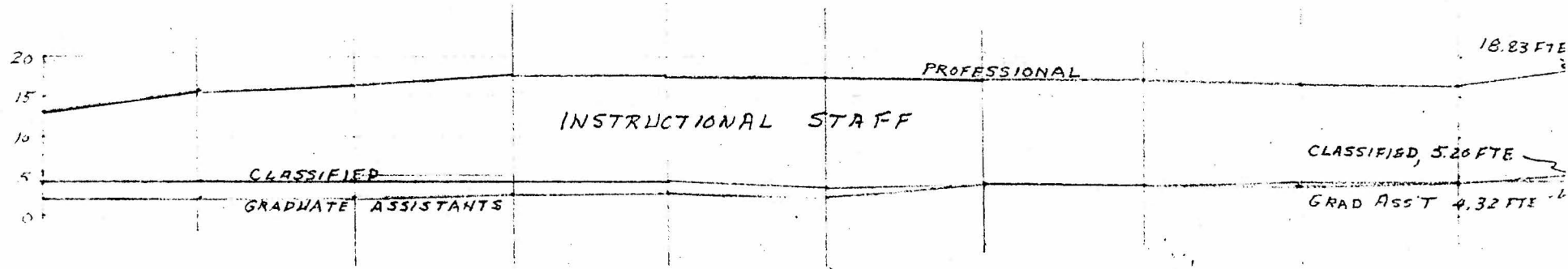
## MINING ENGINEERING PROGRAM

Comparison of accreditation requirements vs. program situation

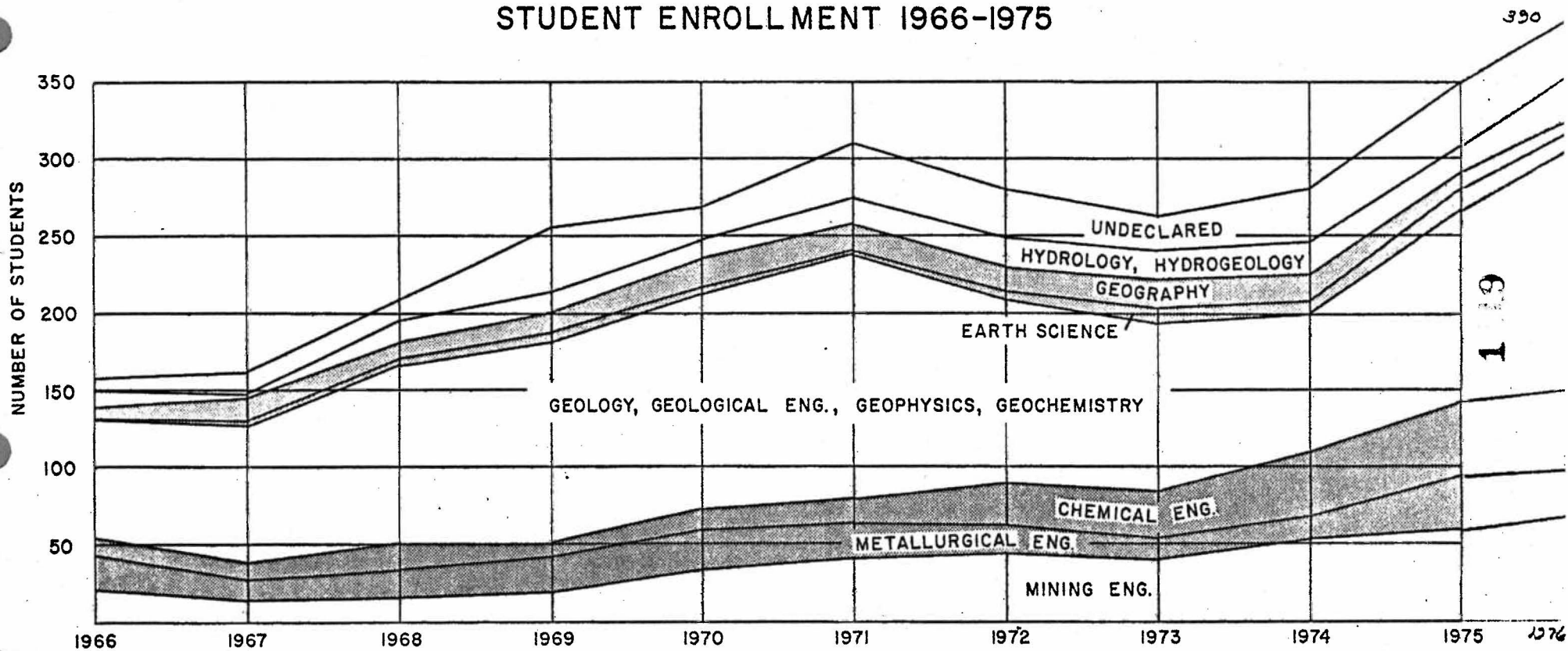
(Requirements from ECPD guidelines for Geological Engineering, Mineral Processing, and Mining Engineering published February, 1975)

<u>ECPD Minimum Requirement</u>	<u>MSM Program Situation</u>
<u>1. Faculty.</u> 2 minimum with strong supporting staff and service courses.	2.76 FTE (Full Time Equivalent), (5 individuals), including .20 FTE non-appropriated.
<u>2. Student-Staff Ratio.</u> No mention.	24.6 : 1 majors : FTE faculty or 10.1 FTE students : FTE faculty
<u>3. Research and Professional Work.</u> Most should be doing research or consulting. Active in professional societies.	One with research, two consulting. Two very active in societies and continuing education.
<u>4. Teaching Loads.</u> If only teaching plus student counselling and committees, 10 course credits; if other activities, minimum of 3 course credits.	10.9 course credits overall
<u>5. Inbreeding.</u> Majority hold degrees from other institutions.	All hold degrees from other institutions.
<u>6. Industrial Experience.</u> Implied: some industrial experience required in some.	Two faculty with extensive industrial experience; others with some to little.
<u>7. Stability.</u> Should not be too frequent turn-over.	Considerable turn-over in past several years--retirement.
<u>8. Administration.</u> No comment.	Departmental organization provides internal freedom of curriculum, administration, etc.
<u>9. Staff Support.</u> "Adequate support."	0.5 FTE support person.
<u>10. Lab Facilities.</u> Adequate office, classrooms, lab space, equipment to suit. Very effective: an instructional mine nearby.	ECPD exit interview: "Equipment facilities, and service requirement poor. Equipment minimal."
<u>11. Curriculum:</u> 2½ years math, basic sciences, engineering sciences and the integration of these. ½ to 1 year humanities and social sciences.	ECPD exit interview: "physical thermodynamics needed, humanities minimal."





MACKAY SCHOOL OF MINES  
 UNIVERSITY OF NEVADA, RENO  
 STUDENT ENROLLMENT 1966-1975



3/17/77

(Please Print)

Names	Organization	Address	Phone
Don LaPlante	Univ. Nev. Sagebrush	Marshall Hall, UNR	784-4033
PAT O'DRISCOLL	Reno Newspapers		
BILL BECKER	SAGEBRUSH	N/A	N/A
Bob WARREN	NEV. LEAGUE of CITIES	CARSON	
DOUGLAS A MATTHEWSON	UNS	RENO	784-4901
EDWARD L. PINE	U.N.R.	RENO	784-6516
MAX M. Linn	U.N.R.	RENO	784.4805
Theild Humphrey	UNS	"	784-4901