



11 Sep 1991

The Missouri Miner, September 11, 1991

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Missouri Miner



A publication of the students of the University of Missouri-Rolla

September 11, 1991

Volume 80, Number 2

Twenty-eight pages

Computer radiation problem researched

News Services SOURCE

Computers emit radiation which interferes with radio and television transmissions causing problems for manufacturers who must meet strict emission requirements, says Dr. Todd Hubing of the University of Missouri-Rolla.

Hubing, an assistant professor of electrical engineering, and Girish Bhat, a UMR graduate student, are developing a computer model to predict how much electromagnetic interference (EMI) is emitted from computers and to design them so that they will not radiate.

Their work is concerned with radiation emitted at radio frequencies, rather than very low frequencies (VLF) radiation, which is considered by some to be a health concern. "The high-speed circuitry in personal computers, video games and program-

mable household appliances can be a significant source of radio frequency emissions," says Hubing.

"Almost every country has standards to limit emissions that interfere with licensed radio transmissions," he explains. "These include television and FM, military and amateur radio transmissions.

"In the United States, the Federal Communications Commission (FCC) places stringent limits on the radiation from computing devices," Hubing continues. "The FCC is trying to prevent interference from computing devices," Hubing continues. "The FCC is trying to prevent interference such as static on a radio or white flecks on a TV screen, from

occurring on a radio or television set operating in a room next to a computing device or a reasonable distance away."

He explains that as the operating

speeds of computers increase, they tend to radiate more emissions, thus making it difficult for manufacturers to meet FCC requirements.

"Typically, manufacturers rely on shields or filters to contain the radiation, although this is a relatively expensive method," says Hubing. "The cost of making a particular computing device meet the EMI requirements is often a significant amount of the product's manufacturing cost."

"Being able to create a model of the device before it is built and predict how it will radiate would allow the developer to produce an effective, low-cost design," says Hubing.

The FCC has two sets of requirements for computers — Class A and Class B. "Any computing device brought into a home must meet the more stringent Class B requirements," says Hubing. "Office main-frame computers and work stations must meet Class A requirements."

He adds that the computers cannot be marketed in the United States until they meet FCC standards. The project is funded by Intel Corp.

UMR's Military Science department honored by Army for ROTC work

News Services SOURCE

The following four faculty and staff members of the University of Missouri-Rolla's military science department recently were honored by the Army for their work with UMR's Reserve Officer Training Corps, Stonehenge Battalion:

—Sgt. Maj. Thomas V. Forbush, who received the Meritorious Service Medal for 10 years of service to the Army Cadet Command. Forbush is chief instructor of military science at UMR and is from Rolla.

—Capt. Robert E. Everson received the Army Achievement Medal as Operations Officer for planning and coordinating the Operation Lightning Strike 1991 field training

exercise. A total of 345 ROTC cadets from 21 colleges and universities in Missouri and Illinois took part in the exercise. Everson is an assistant professor of military science at UMR. He is from Dayton, Ohio.

—Sgt. 1st Class Richard L. Moen received the Army Achievement Medal as Noncommissioned Officer for planning and coordinating the Operation Lightning Strike 1991 field training exercises. Moen is operations noncommissioned officer in the UMR military science department. He is from Huron, S.D.

—Staff Sgt. Lynne M. Clark received the Army Achievement Medal as the project noncommissioned officer for the 1990 Veteran's Day ceremony at UMR. She is an administrative noncommissioned officer in the UMR military science department. She is from Springfield, Ill.

Researchers work to develop navigational system

News Services SOURCE

Charting a course for barges and towboats on the Mississippi River will be a more efficient process with the help of instruments and procedures being developed by researchers at the University of Missouri-Rolla.

"The U.S. Army Corps of Engineers is interested in maintaining navigation channels so that the barge and towboat traffic will not be interrupted because of low-water levels," explains Dr. Jerome Westphal, UMR professor of civil engineering. "Over time, river sediments fill up the navigation channel at critical locations making it impossible to barge traffic."

Westphal and Dr. Glendon Stevens Jr., UMR professor emeritus of civil engineering, are developing a system for the corps which will determine the river's topography and measure the volume of water that is passing a point at a given time and the speed at which the water is flowing.

"Our work is unique in that we can make these determinations on board the boat as it is being navigated," says Westphal. "We can automatically plot the information about the river almost as soon as it is collected and then send it over a phone line to engineers in the office."

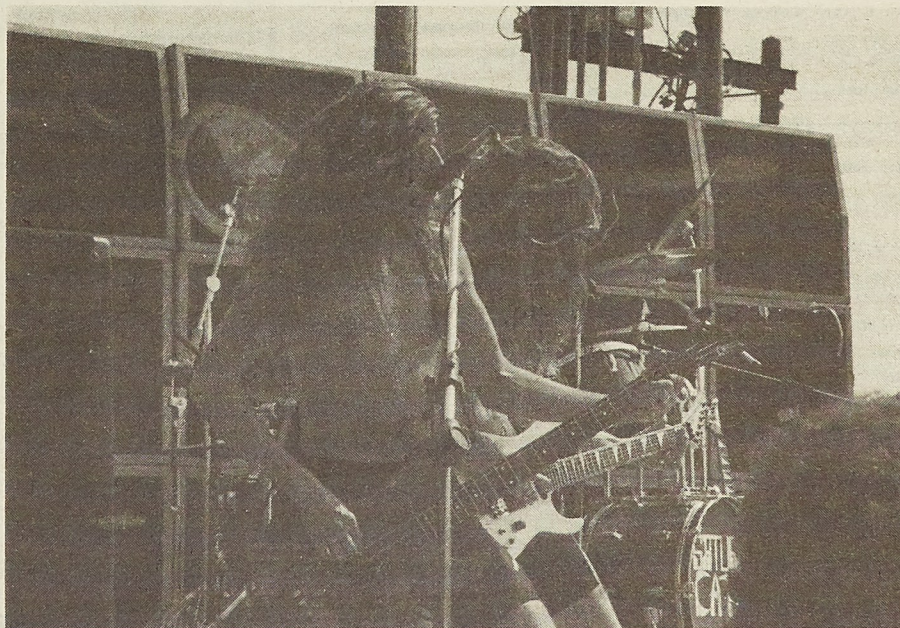
"Based on the information they receive, the engineers can make decisions about maintaining the navigation channel for barge and towboat traffic in a couple of hours," he continues. "The process takes one or two weeks using the old system."

The UMR researchers are developing electronic components that fit inside a computer and modifying the equipment for use on board a boat. Jeff Bradshaw, an electrical engineer at UMR, is building some of the instruments used to gather the information. He is continuing work begun by Ken Haas, a senior scientific programmer/analyst at UMR.

"The equipment currently in use requires an engineer to be on the boat supervising the work and communicating with the office to make deci-

See Research, page 3

Another successful Septemberfest passes



Brett Goodman

The Saturn Cats entertain the crowd at the annual Septemberfest at Lion's Club Park.

Calendar of Events

Wednesday

Juggling Club meets at 5.00 p.m. at the Hockey Puck. As always beginners are welcome.

UMR Women's Soccer, Maryville College, 6:30 p.m., UMR Soccer Complex. Free admission.

The Rolla Chapter of Sigma Xi Research Society meeting, Donald R. Askeland to speak on "Innovations in metal casting: The lost foam process", 12:30 p.m., Missouri Room, University Center East.

UMR Interim Chancellor John Park will host a "Brown Bag" luncheon, noon to 1:30 p.m., Silver and Gold room, University Center East.
(NOTE: Date changed from the 12th)

Civil Engineering Lecture, Richard A. Bell, "Case Study: In-situ Bioremediation of a Gasoline-contaminated Aquifer", 9:30 a.m., Room 118, Civil Engineering Hall.

Nuclear Engineering Seminar, Bill W. Baker, "Engineering Ethics: The interdisciplinary Discipline", 3:30 p.m., Room 227, Fulton Hall.

Mechanical and Aerospace Engineering and Engineering Mechanics Seminar, Dr. G. P. MacSithigh, "Impact of Pseudo-rigid Bodies", 3:30 p.m., Room 210, Mechanical Engineering Building.

Thursday

UMR Men's Soccer, 7:00 p.m., UMR Soccer Complex. Free Admission.

Ceramic Engineering Seminar, Dr. Delbert E. Day, "Biological Applications of Glass Microspheres as In-vivo Radiation Delivery Vehicles", 3:30 p.m., Room 204, McNutt Hall.

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Formal: Sept. 19, 4:45 - 5:45, Mark Twain Room, University Center-East.

Regular meetings are held very Thursday at 4:45 in UCE.

For more information contact Kay at 341-5987

Friday

UMR Women's Soccer, University of Missouri-St. Louis, 7:00 p.m., UMR Soccer Complex. Free Admission

The UMR Trap and Skeet Club will hold meetings every Friday at 3:30 in T2 (the white building behind the library). We will go out and shoot if the weather permits. All interested persons are welcome to attend. For more information, contact Mike Giboney at 364-6991 or Tracy Bagwill at 364-8664.

Saturday

UMR Men's Soccer, Bellarmine University (Louisville, KY), 4:00 p.m., UMR Soccer Complex. Free admission.

Next Wednesday

UMR Women's Soccer, SIU-Edwardsville, 7:00 p.m., UMR Soccer Complex. Free Admission.

Noday

The University's Recruiting Services Department will begin accepting applications for the Student Ambassador group on Sept. 1.

If you are interested, you can pick up an application form in 102 or 106 Parker Hall. Applications will be accepted from Sept. 1 to Oct. 1. All levels from Freshmen to Seniors may apply. You must have a cumulative GPA of 2.4 to apply and you must maintain that average to remain in the program.

Interviews will begin in early Oct. You will be notified by mail if you are qualify for an interview. Five new ambassadors will be selected. If you have any questions about the Ambassador program, call 341-4904 and ask for Lynn. All deadlines are final, no exceptions will be made.

Financial Aid

In 1975 the U.S Congress established the Harry S. Truman Scholarship Foundation as a memorial to Missouri's native son. The Foundation grants scholarships to college students who are committed to public service. The Foundation defines public service as "government at any level, uniformed services, public-interest organizations, nongovernmental research and/or educational organizations, and public-service oriented non-profit organizations such as those whose primary purposes are to help needy or disadvantaged persons or to protect the environment."

The scholarships are monetarily generous but limited in number. Students eligible to be nominated by their colleges and universities must be Juniors who are full time students. They must be ranked in the upper third of their class. And they have to be U.S. citizens. Ninety-two scholarships will be awarded in 1992, one from each state and from other territories, and the Foundation will also select at-large winners. Students awarded scholarships will receive up to \$3,000 for their senior year of undergraduate education and as much as \$27,000 for graduate studies.

Despite nominating some quality students over the years, the University of Missouri-Rolla student body has never won a Truman Foundation

Scholarship. Perhaps this is the year.

The campus faculty representative is Donald B. Oster, Associate professor of History. He is actively soliciting possible nominations from the faculty. In addition, prospective nominees can contact Oster directly. Oster's address is: Department of History and Political Science, H-SS Building. His phone number is 341-4817.

Since any nomination package must be in the hands of the Truman Scholarship Foundation, Princeton, New Jersey, no later than Monday, December 2, 1991, names for possible nomination must be submitted to Oster no later than October 15.

Wilhelm wins Rolla Community Award

News Services SOURCE

Mike Wilhelm, a junior in electrical engineering at the University of Missouri-Rolla, is the winner of the 1991 Rolla Community Award for excellence in Engineering Design.

The \$500 award is given annually by the City of Rolla to a UMR engineering student who designs the winning product in a competition held at UMR. The entries are judged by a committee of UMR engineering faculty.

Wilhelm designed a discrete frequency spectrum analyzer, which graphically displays sound. He was presented the award at the Monday, May 6, meeting of the Rolla City Council. Wilhelm is the son of John and Irene Wilhelm of North St. Louis.



"Private Pilot Ground School" course offered

News Services SOURCE

A short course designed to serve as a general introduction to aviation and to assist students in preparing for the Federal Aviation Administration (FAA) private pilot written exam will be offered by the University of Missouri-Rolla this fall.

Topics to be covered include: theory of flight, communication procedure, use of a flight computer/calculator, aviation weather, visual and radio navigation and federal aviation regulations.

The course, "Private Pilot Ground School," will offer 24 hours of instruction in three-hour blocks, from 6:30 - 9:30 p.m. Mondays, Sept. 16 to Nov. 4, in Room 302 of the Civil Engineering Building.

Instructor for the course is Dr. Robert Oetting, UMR professor of mechanical and aerospace engineering. Oetting is licensed by the FAA as a ground school instructor with advanced rating, and has been designated by the FAA to administer its written examination for private, instrument and commercial pilots.

Fee for the course is \$90. The course's textbook, "Private Pilot FAA Written Exam, 5th Ed.," can be purchased for \$8 on the first night of class.

Enrollment will be limited to the first 35 paid registrants. To register, or for further information contact Continuing Education at UMR, 119 Mechanical Engineering Building Annex, UMR, Rolla, MO 65401, phone 314-341-4200.

Missouri Miner

The **Missouri Miner** is the official publication of the students of the University of Missouri-Rolla. It is distributed each Wednesday afternoon at Rolla, Missouri and features activities of the students of UMR.

All articles, features, photographs, and illustrations published are the property of the **Missouri Miner** and may not be reproduced or published without written permission.

The **Missouri Miner** encourages comments from its readers, and will attempt to print all responsible letters and editorial material received. All submissions must have a name, student ID number, and phone number for verification. Names will be withheld upon request.

Submissions for publication must be in our drop box (first floor of the Norwood Hall, Room 103) by 3:30 p.m. on the Thursday before publication. The **Missouri Miner** reserves the right to edit all submissions for style, grammar, punctuation, spelling, length, and matters of good taste.

The **Missouri Miner** is operated by the students of UMR and the opinions expressed in it do not necessarily reflect those of the university, faculty, or student body.

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Faculty to help with instruction in public schools

News Services SOURCE

Economic instructors at the University of Missouri-Rolla, this fall, will begin working with public schools in the area to bring more economics instruction to the classroom.

The program, to be offered through the UMR Center for Economic Education, will give schools throughout southeast Missouri access to the expertise of UMR's economics faculty, according to David Hentzel, the UMR economics professor who directs the center.

"Economics is a subject that is not given a lot of attention in our schools, but it is something that af-

fects us the rest of our lives," says Hentzel. He says this new economic education effort is designed to help teachers who don't have a background in economics to become better teachers of the subject.

"We want to be a resource for teachers," Hentzel says. "We want to help them develop their curriculum and help them find and develop materials they can use in their classes."

Hentzel says he and other UMR economics professors will teach classes occasionally at the participating schools.

The program is sponsored by UMR and the Missouri Council on Economic Education, a private organization. Other Missouri centers for economic education are located in Columbia, Kansas City, St. Louis and

Springfield.

Funding for the program comes from private sources, the UMR economics department, the UMR College of Arts and Sciences, and the Missouri Council of Economic Education. Most of the funding comes from private sources, Hentzel says.

The UMR center will be the only one in Missouri that caters to rural schools, Hentzel says. It will serve school districts in an area that roughly covers Missouri's 8th Congressional District, which stretches from the Bootheel to Ste. Genevieve in the east, and from the Missouri-Arkansas border to Rolla in the west. Schools in the Waynesville-St. Robert and Lebanon areas also will be in the center's service area, Hentzel says.



J. JONES 09-09

Research

from page 1

sions," says Westphal. "Our goal is to have on board a technician who will turn on the computer, answer a few questions that the computer asks and relay information back to the office."

"This will reduce the number of people needed to gather data and shorten the turnaround time for providing information to the engineers," he says.

"The corps is using some of the procedures we have developed," says Westphal, "and others will be implemented within a year or two." He adds that although the system is being developed on the Mississippi River, it could be applied to all nautical streams.

VINCE ANDREWS

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Proposition B on November 5 ballot

Source
ASUM

PROPOSITION B, the education funding and reform package on the November 5, 1991 ballot, will have a profound impact on UMR and the state's future. Missourians will consider a plan that will help chart the course for the future of the state and its premier public research university and halt the slide toward mediocrity the University is facing. The value of UMR degrees is at stake.

WHAT IS PROPOSITION B?

Proposition B is a plan that will provide \$385 million for elementary and secondary education, higher education and job development programs in Missouri.

*\$190 million for higher education to be used to repair and maintain buildings, fund financial aid and scholarship programs for students, purchase up-to-date laboratory and computer equipment, replace retiring faculty and strengthen graduate pro-

grams. It also improves statewide coordination of programs.

*\$190 million for elementary and secondary education to be used to lower student-teacher ratios, fund programs to improve learning, and fund the allocation formula for the state's school districts.

*\$5 million for job development and training programs.

WHERE WILL THE MONEY COME FROM?

For a family of four with a household income below \$50,000, Proposition B would actually lower state taxes. This is because Proposition B increases the dependent deduction from \$400 to \$800. It also enacts the following tax changes:

*A 3/8-cent state sales tax increase.

*A five-cent per pack increase in the cigarette tax and a 10 percent tax on percent tax on other tobacco products.

*A 1.5 percent increase in the state corporate tax.

*A cap on income tax deductions. Proposition B would place a cap of \$7,500 on the amount of federal income tax individuals can deduct when

calculating state taxes. Joint filers would have a cap of \$15,000. This has little impact on households with income levels below \$60,000. Most of the revenue would be generated by households with income levels over \$200,000

WHAT DOES IT MEAN FOR UMR?

Proposition B would provide needed resources at UMR to:

*Fund financial aid and scholarship programs for students. (25,000 students who qualified for aid last year in Missouri were denied assistance due to lack of funds. In addition many scholarship programs received no funding from the state, resulting in no scholarships for students who qualified.)

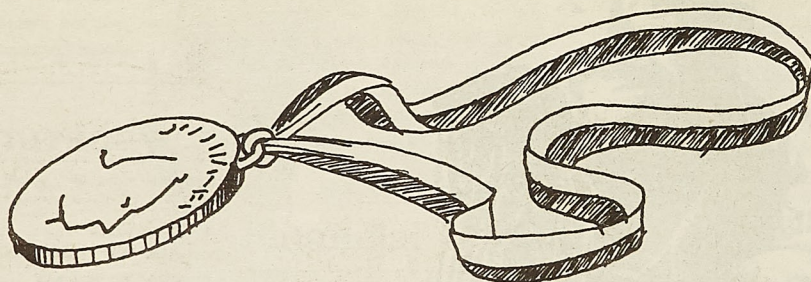
*Repair and maintain buildings.

*Retain and recruit top faculty.

*Strengthen UMR programs that meet the state's most pressing needs.

*Match federal research grants many of UMR's top faculty attract.

*Purchase up-to-date laboratory and computer equipment.



J. JONES 09-09

Drallmeier awarded by National Science Foundation

News Services
SOURCE

The National Science Foundation has named Dr. James A. Drallmeier, assistant professor of mechanical engineering at the University of Missouri-Rolla, a 1991 Presidential Young Investigator.

Drallmeier and another Missouri educator were among approximately 200 faculty nationwide recognized for their teaching and research accomplishments and their potential as academic leaders in training future scientists and engineers.

"This is an extraordinarily high honor for Professor Drallmeier and I congratulate him on being named a Presidential Young Investigator," says former UMR Chancellor Martin C. Jischke. "The award is also an honor for the University of Missouri-

Rolla because it is a testimony to the excellent faculty at the university."

This is the first such award to be given to a faculty member at UMR, according to Dr. Bassem Arnaly, professor and chairman of mechanical and aerospace engineering and engineering mechanics.

"The grant will provide the funding to expand our present facilities in engine laser diagnostics and other two phase flow diagnostics," says Arnaly. "It will strengthen our ties with industry and will stimulate class instruction and interfaculty research in these areas."

Drallmeier says that the funds from the award will be used for research to improve internal combustion engines and ultimately reduce air pollutants.

"The first phase of the research will focus on studies of fuel injection systems and how their characteristics affect engine emissions," he ex-

plains. "The second phase will consider the actual combustion process that takes place inside engines."

"Currently, a coalition exists between the auto industry and oil companies to study the different types of fuels and determine how they affect air pollution," says Drallmeier. "We know what goes into the engine and what comes out, but we haven't correlated the two."

He adds that the award will help equip a laboratory for undergraduate students studying internal combustion engines and will provide additional support for graduate student research.

The award consists of an annual base funding of \$25,000 for up to five years. Each year NSF will also provide up to \$37,500 in additional support to match on a dollar-to-dollar basis funds obtained from industry. With the matching funds, an awardee could receive up to \$100,000 annually.



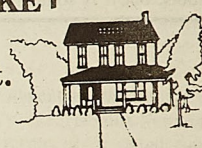
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Letters to the Editor

Mandatory finals go before the general faculty

Dear Editor,

Well, another school year has begun at the University of Missouri-Rolla. The beginning of the fall semester finds most of us scurrying to drop/add classes, squandering our summer earnings on tuition and books, and recovering from the shock of being back in Rolla. The farthest thing from any of our minds right now is final examinations. However, UMR's final examination policy is one of the hottest topics of discussion right now among the faculty, who set the final examination policy. The current debate rages over whether or not final exams should be given for all lecture and laboratory classes; what makes this case so interesting is that the struggle is not to make finals mandatory but rather to make sure that they do not become mandatory!

Let me take you back to April of last semester. At the Academic Council meeting on the 25th of that month (Academic Council is the governing

body for the UMR faculty), the final examination policy came under fire. At that time, the final exam policy, as stated in the Manual of Information, read as follows:

Examinations of two-hours duration at the end of a semester may (emphasis added) be given at the option of the instructor in all lecture and laboratory courses. No special final examinations shall be given except on written permission from the dean of the school/college in which the final is given.

(There is more, but it does not relate to the question of whether or not final exams shall be given.)

After a lengthy debate and a few changes, the following policy was adopted by the Academic Council (effective Fall 1991):

Final examinations shall (emphasis added) be given for all lecture and laboratory courses during final examination week as scheduled. Exceptions must be approved by the department chairperson in writing. Exceptions

may be in the form of standing departmental policy, in writing, approved by the departmental faculty and signed by the chairperson. Any exception must be reported to the appropriate dean. Examinations of a course-comprehensive nature can only be given during final examination week. Special final examinations or a change of scheduled time of an examination requires written permission of the appropriate dean.

The policy approved by the Academic Council is a radical change from the previous one. You may have already heard a few of your professors proclaim that, due to a "new university regulation," they must give a final in their class. Whether or not the policy is fair is presently the subject of many debates. Indeed, enough faculty members were against the policy, as stated above, to call a special meeting of the general faculty for this past Tuesday. At that meeting, the sole action item was a motion to revoke the final exam policy passed by the Academic Council in April 1991. Since this letter is being written before the

meeting, one can only guess at the outcome, but if the current (April 1991) policy is discarded, the old policy—the one UMR has had for the past twenty years—will once again be "on the books."

Although I don't want to go into the pros and cons of having mandatory final exams (simply for the sake of brevity), I would like to clarify a few things. One of the reasons the new policy is being challenged may be because comprehensive final exams for every land and lecture class may not be good. Another reason may be because some professors see the policy as an infringement on their academic freedom. Yet another reason may be because the wording of the new policy does not effectively define what a "final exam" may be. Whatever the reasons, though, many faculty members are committed to giving some sort of test (and I use that term here to mean exam, project, etc.) to evaluate student knowledge of their course at the end of the semester.

So, depending on what happened on Tuesday, we may see some more

changes in our classes. It is my hope, and that of many of those students who I have discussed this subject with, that the policy passed by the Academic Council does not get accepted by the general faculty. At this point in time, the only consolation I have that it may not get adopted is a similar situation that occurred 12 years ago. At that time, a similar final examination policy was passed by the Academic Council only to be discarded by the general faculty a few months later. If the policy does get accepted by the general faculty, then I believe that some changes should be made in the calendar; most notably, a true "dead week" in order to prepare for the onslaught of final exams. (Contrary to popular belief, UMR does not have a "dead week".) In the meantime, take good notes and read those chapters—you may need to review them come December!

Respectfully submitted,
Scott Maycock, Vice-President of
External Affairs
Student Council

Voter registration deadline Oct. 16th

Welcome back to Rolla and the wonderful world of engineering that we have grown so fond of. I am sure you all enjoyed your summer break. Now, it's time to get back into the swing of things and begin to worry about classes.

This November 5th, you as adults and citizens, will be called upon to perform a duty by your country. November 5th is election day and you will be able to directly affect your future as a student. Our age group has consistently shown a low voter turnout, a fact that I am not proud to bring forth. We are a functioning part of society and we need to express ourselves through this privilege granted to us.

I am sure that you, as students who are scholastically superior to those at other schools, are ready to change the voter turnout rate. Before you can vote, you must be registered by October 16th. This can be done by stopping at one of the voter registration tables periodically set up around campus or by visiting the Associated Students of the University of Missouri (ASUM) office located at 212 University Center West. Remember, if you don't vote, who will?

On the November 5th ballot is Proposition B, which is an education funding and reform package. If passed by you the voters, it would provide a total of \$385 million for elementary and secondary education, higher edu-

cation and job development. Understanding Proposition B is a must for every Missouri resident. To learn more about it, look for future articles in the Miner or call ASUM at 341-4970.

Remember, the deadline to register to vote is October 16th, so do your duty and get registered. You may think that your single vote doesn't really matter. Think again.

In 1645, ONE VOTE gave Oliver Cromwell control of England.

In 1839, ONE VOTE elected Marcus Morton governor of Massachusetts.

In 1845, ONE VOTE brought Texas into the Union.

In 1868, ONE VOTE saved President Andrew Jackson from impeachment.

In 1876, ONE VOTE changed France from a monarchy to a republic.

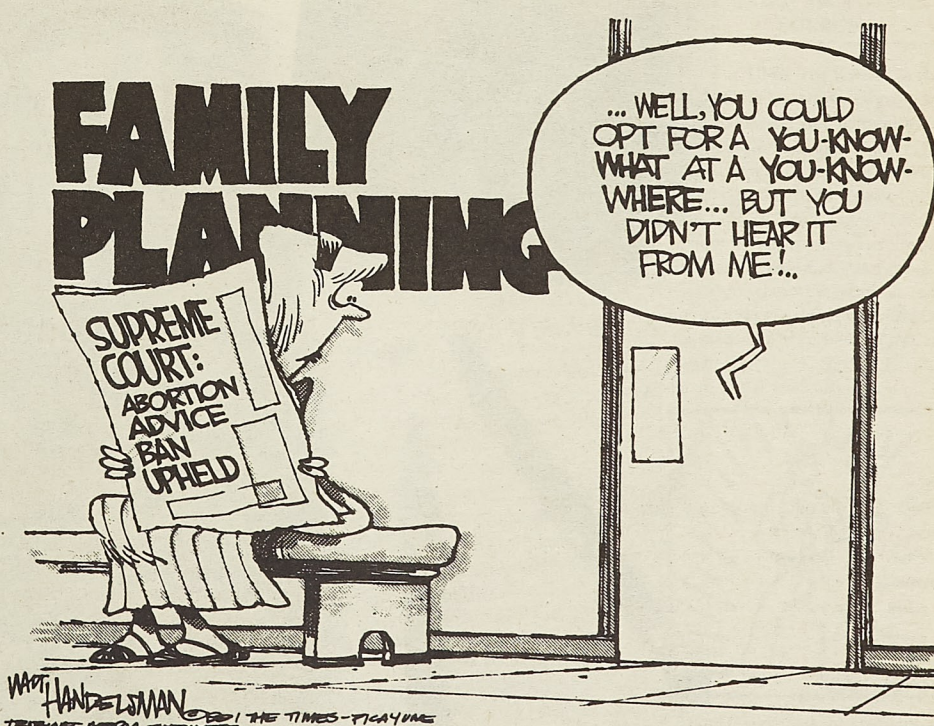
In 1923, ONE VOTE gave Adolf Hitler leadership of the Nazi Party.

In 1960, ONE VOTE change in each precinct in Illinois would have defeated John F. Kennedy.

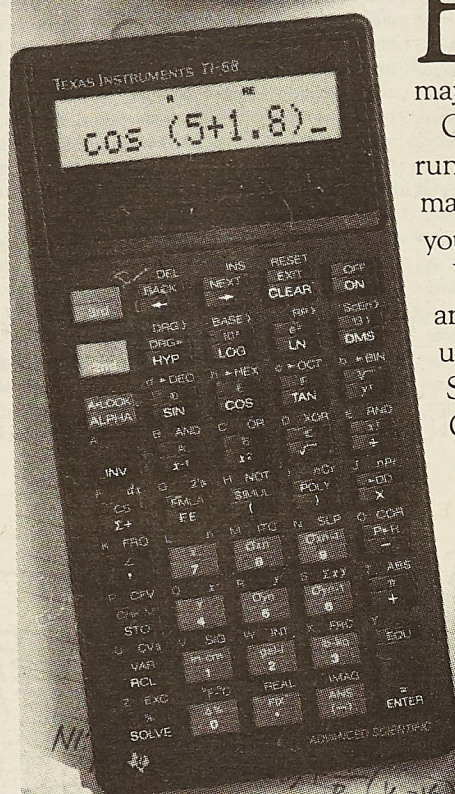
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In 1991, FOUR VOTES defeated mandatory finals!!

By Tom Brown
Rolla Director
ASUM



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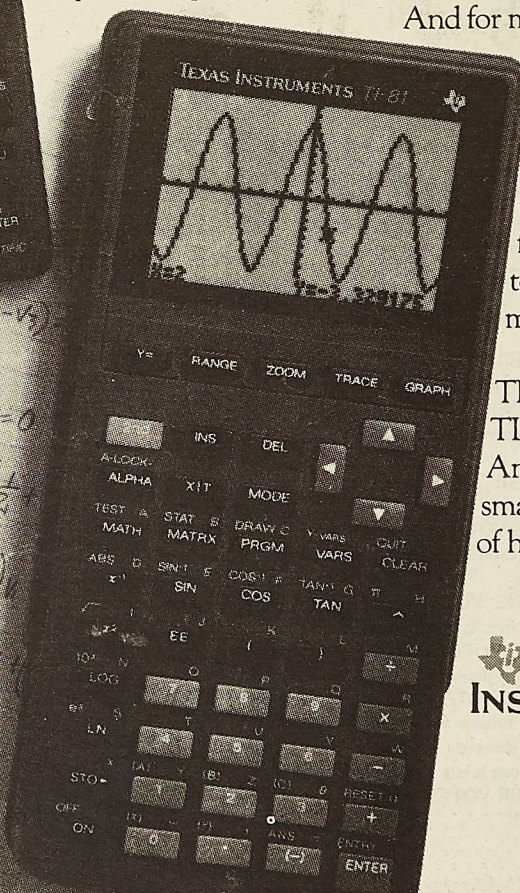
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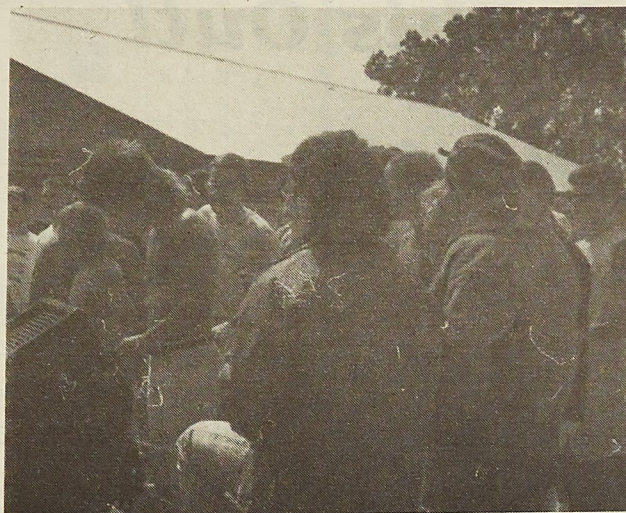
**TEXAS
INSTRUMENTS**

Features

Septemberfest proved to be entertaining for all who attended

St. Pat's Board Shawn Michael

It was Saturday, September 7th at eight in the morning; there was still a lingering haze in the air as the Board Reps. went to work to prepare the best party of the semester for the students of UMR and a host of others that came from nearly every corner of the globe (maybe, someday, one of you math majors out there could explain to me how a sphere has corners, but anyway). The details of the party, which had been in the makings since last semester were becoming a reality. Sure, there were some minor setbacks, but that's how all truly great parties start. The busses started running a little late due to a small breakdown, of communication or equipment we're still not sure, but when they did start running, the parties came in herds, or



Brett Goodman

Students enjoy Septemberfest entertainment supplied by The Saturn Cats.

is that gaggles? Saturn Cats, perhaps the best band to ever jam at Lion's Club, started up around noon and the music was hot, but that's O.K., because the beer was nice and cold.

Speaking of beer, the Board would like to thank everyone for making it a totally rockin', yet safe weekend by riding the busses and providing sober chauffeurs. We are happy to announce that, by coordinating our efforts with those of the Rolla police, the only problem to be had the whole day was that the music was too loud, or maybe they were too old. Oh well, it was only turned down from 11 to 10. So, to show your support for the Board, next time you're over at the Chancellor's house for a spot of tea and perhaps a crumpet, why don't you let him know what a fine job the Board did at Septemberfest, or maybe you should just give him a call at his office,

If you need some support to your statement, feel free to use this quote: "It takes organization and responsibility ... I don't believe that any other organization could do it as well" and "Considering the other special weekends that I'm involved in, I think that over St. Pat's there are less problems than, say, Homecoming." --B. Ken Robertson, Dean of Students, UMR 1982, Faculty Staff since 1965:

Well, friends, Romans, Greeks, countrymen, lovers of small, furry forest creatures and fellow residents of this black hole we all call home, we are now officially half way to St. Pat's '92 -- the one time that every inch of gloomy darkness is lifted from the previously mentioned stellar disturbance and Rolla is filled with the beaming light of thousands of merry Irishmen partying till dawn, or until March 23 -- whichever comes last!

SUB provides musical entertainment for students

Holiday Ranch will appear on campus

SUB SOURCE

Now here's a band to really get your juices flowing. You can be a witness on Friday, September 13 at 8:00 p.m. at the Hockey Puck. The act is called Holiday Ranch and features Karen Paurus and Erik Newman.

Karen Paurus is the thrush. Her voice has power, personality and a bit of passion. She is an exciting song interpreter, one with character in her lungs. If Paurus is clearly the star of Holiday Ranch, guitarist and songwriter Erik Newman is just as obviously the band's core. His best compositions have enviable timelessness and resonance. If Tracy Chapman were shy, white, and male.....

Holiday Ranch began in 1987 as an outlet for song writer Erik Newman. Through a mutual friend Erik was introduced to singer Paurus who had just returned from a DOD/USO European tour. The two found their musical tastes compatible and re-

leased their first record "Holiday Ranch." (Named after an old farm house Newman had lived in.) In the spring of 1990, Holiday Ranch grew



Brett Goodman

The group is Holiday Ranch and they will playing at the Hockey Puck this Friday evening.

with the addition of the bassist John Schech and drummer Dave Russ. The foursome worked quickly at establishing a live show and in a matter of a few months had enough new, original material to headline at clubs and colleges.

Most recently Holiday Ranch was nominated for three Minnesota Music Awards. It is well worth your while to check out Holiday Ranch performing at the Hockey Puck, Friday-September 13 at 8:00 p.m. (University Center East in case of rain).

Vince Andrews to play at Miner Rec

SUB SOURCE

Once again the Student Union Board has hit on a gem of a band to bring to the UMR campus. Vince Andrews is a powerhouse of talent. Saxophonist, vocalist, composer, and producer, he is able to capture an audience from the very first note played on his saxophone. The Vince Andrews band will perform on Thursday, September 12th at 8:00 p.m. in the Miner Recreation Building.

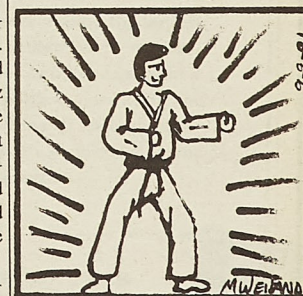
The Vince Andrews Band plays high energy, contemporary jazz featuring saxophone, vocals, flute, keyboard, synthesizer, drums and bass. Since it's inception in 1983, the band has been a dynamic force in the jazz scene of Ohio and the Midwest. The Band has a history of performance at major events which includes headlining the Wichita Jazz Festival and concert billing with Miles Davis and most recently Karyn White. The Vince Andrews Band performs innovative contemporary jazz compositions crossing over several musical styles. The group's sound reflects their personal interpretation of progressive jazz.

The Vince Andrews Band music is exciting, dynamic, and truly from the heart. It is jazz at its best. Don't miss their show at 8:00 p.m. on Thursday, September 12 in the Miner Recreation Building.

UMR Tae Kwon Do Club starts workouts

UMR Tae Kwon Do Club SOURCE

The UMR Tae Kwon Do (UMR TKD) Club has started regular workouts, and would like to invite you and all previous members to start working out again. The club also welcomes back our instructor Master Hwang Koi Yi, a 7th degree blackbelt. Master Yi has been in Tae Kwon Do for over 26 years and was a great success throughout the years at tournaments across the Mid-west. Our previous instructor was Steve Shinn, an alternate for the U.S. Tae Kwon Do Team in the 1988 Olympics.



The Club meets for workouts in the Multipurpose Building from 4:00 p.m. - 6:00 p.m. on Monday, Wednesday, Thursday, and Friday each week. If you would like to know more about the UMR TKD Club or would like to join us, feel free to stop by one of our workouts or contact our Faculty Advisor Dr. D.C. Look at M.E. 203 / 341-4619.

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Wednesday

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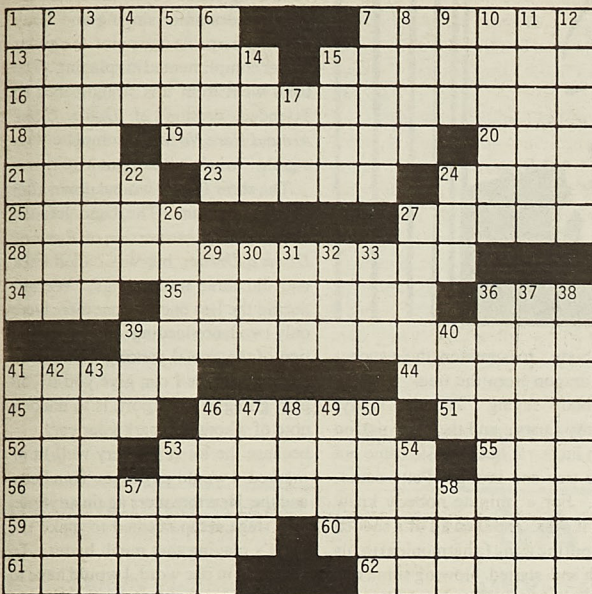
STOP BY COUNS
COMPLETE LIST

Thursday

Tuesday

Beg
Loca
Facil

collegiate crossword



© Edward Julius Collegiate CW79-10

ACROSS

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- 15 Shower activity
- 16 Tige (3 wds.)
- 18 Noshed
- 19 Trained down
- 20 Rater of m.p.g.
- 21 French movie
- 23 German steel center
- 24 Gardener, at times
- 25 Santa's reindeer, e.g.
- 27 Peter and Moses
- 28 Justifications for being (2 wds.)
- 34 Guidonian note
- 35 Julie Christie film
- 36 Neighbor of Mich.
- 39 1895 automotive invention (2 wds.)
- 41 Computer language
- 44 Puccini opera
- 45 Not an imitation (abbr.)
- 46 Trite
- 51 Goulash
- 52 Actress Mary
- 53 Jipijapa hats

- 55 Opposite of WSW
- 56 Champion (3 wds.)
- 59 Copes with
- 60 Legendary
- 61 Dealer in the stock exchange
- 62 Valuable violins, for short

DOWN

- 1 Tuna variety
- 2 Maritime
- 3 In (without being present)
- 4 American record label
- 5 "Tu," 1932 song
- 6 Actress Oberon
- 7 Elizabeth
- 8 Irish novelist
- 9 Sally or Ayn
- 10 Wife of Saturn
- 10 Evangelical society
- 11 Sealed
- 12 Actress Samantha, and family
- 14 Baseball stats
- 15 Suffix for two or three
- 17 Hotel sign (abbr.)
- 22 Some tech. graduates, for short
- 24 Tint
- 26 Subject
- 27 U.S. or Lou
- 29 Dora Copperfield
- 30 Spelbow
- 30 Baker and Beale (abbr.)
- 31 Expected
- 32 Pipe joint
- 33 Gift for a man
- 36 Flowering shrub
- 37 In high dudgeon
- 38 Ocean plants
- 39 Understand, to some
- 40 General offices: abbr.
- 41 Believed
- 42 Debt
- 43 Yellowish brown
- 46 Hank of baseball
- 47 Formicologist's specimens
- 48 Close to: Scot.
- 49 Vanderbilt and Carter
- 50 Endures
- 53 Colorless
- 54 Something to put
- 57 Mr. Byrnes
- 58 Hockey great

Solution on page 10

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STUDY SKILLS

Thursday, September 12 3:30-4:30 pm; 208 Norwood Hall

Facilitator: Dr. Gene Van Matre

TIME MANAGEMENT

Tuesday, September 17 3:30-4:30 pm; 208 Norwood Hall

Facilitator: Dr. Gene Van Matre

ASSERTIVENESS TRAINING

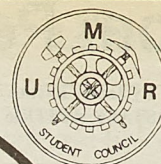
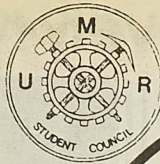
Beginning Thursday, October 24 3:00-4:30 pm;

Location to be announced, Enrollment is limited!

Facilitators: Dr. Carl Burns & Ms. Sandra Terry

Preregister between Aug. 26 & Oct. 17.

Participants must attend all 5 sessions.



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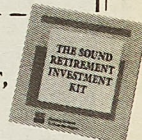
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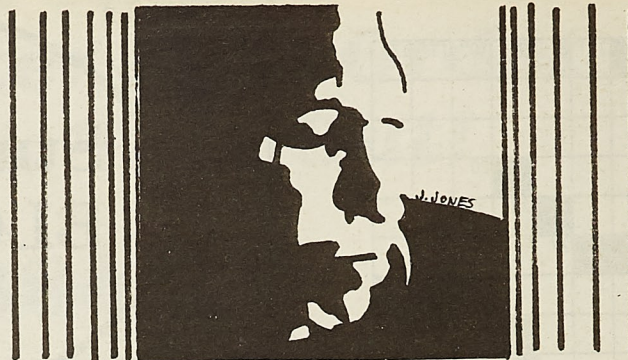
Tom Petty, popular as ever, rocks fans at Riverport

By James Barnes
STAFF WRITER

The first and most important thing I have to say about the Tom Petty and the Heartbreakers concert is that it was one of the best live shows I have ever seen. Petty really knows how to work the crowd, which seems a little bit odd considering that USA Today recently reported that he suffers from stage fright.

The concert was located at the newly built Riverport Amphitheater in St. Louis (the place where Axl Rose made a fool of himself). The seats I had were located just out from underneath the pavilion. They could have been just a little bit closer to the stage, but it turned out alright because there were two huge screens on the end of the pavilion that were showing close-ups.

When the curtain opened up, I was amazed at the stage set up the Heartbreakers were surrounded by. A huge green tree, that even had stairs and a door, stood upright in the middle of the stage. Two rows of chandeliers holding what seemed to be red burning candles came out from the stage on either side. A huge screen behind the tree changed throughout the show from clouds to various assorted psychedelic things. The band hit the stage full of energy and played *Kings Highway* from their new album, entitled *Into the Great Wide Open*. The crowd seemed to like the faster rock and roll of *All or Nothing*, and *Out in the Cold*, also off of the new album, but the somewhat eerie title track and some of the slower songs are what caught my attention. Tom Petty has a particularly good guitar player named Mike Campbell, who blew me away. On the intro solo on the song *Running Down a Dream*, Campbell stretched out and played an incredible solo.



During other parts of the show he showed off his talent by playing some incredibly good slide guitar, as well as a couple of songs with a mandolin.

The band played a variety of older music, including such songs as *Refugee*, *I won't Back Down*, and *Free Falling*; this last song being introduced as "One of our better three chord songs." One of the high points during the show was when Tom Petty told

everybody to summon the psychedelic dragon from the tree. He had everybody saying "Timothy Leary, Timothy Leary," and then this person with a huge rat-head mask came out of the tree and brought Petty something. For a minute nobody knew what it was, and then all of a sudden Petty put the thing (a harmonica) to his mouth and started blowing some real incredible blues. The band played a

1966 song called *Psychotic Reaction*, with the drummer singing and Petty blowing harp. At one point, the guitar player complimented his playing. The band went from this straight into an extended version of *Don't Come Around Here No More* complete with a great "whah-whah" guitar solo.

The show finally wound down after about two hours. The band left the stage after a great version of *Running Down a Dream*, but was called back and did three more songs. We left during the last one because there were only two lanes leading out of our section of the gravel parking lot. One piece of advice I can give you if you plan going to Riverport, is to make a note of where you park your car, because the lot is not very well lit or marked. I would pay to see Tom Petty and the Heartbreakers again anytime. The stage setup seemed to make the band's playing that much better. To sum it up in one word, I would have to say it was a psychedelic event.

Fun & Games

Miscellaneous

MAKE YOUR VOICE COUNT! Register to VOTE. Look for voter registration tables on campus or stop by the ASUM office at 212 University Center-West, or call 341-4970.

The UMR Astronomy club will sponsor a Visitor's Night at the UMR Observatory on Friday 20, September, 1991 starting at 8:00 p.m. The observatory is open to the public at that time and the Moon and Saturn can be viewed, subject to weather, with the 16-inch telescope.

Celebrate **STAR Trek's 25th ANNIVERSARY** by doing yourself a favor and attending the first official meeting of Rolla's chapter of **STARFLEET**, the International Star Trek Fan Association. Be in the Meramec Room of University Center-East at 8:00 p.m. on Thursday, September 12th. We'll discuss all the latest news on the fifth season of *Star Trek: The Next Generation* and *Star Trek 6*, plan activities for the semester, have an informative and technical discussion on the transporter device, and give away a door prize of a *Star Trek* novel!! Call Matt Turley at 364-7244 for more information.

If we had one vote for every person who said "voting doesn't do any good" or "one person/vote can't make a difference" we could vote all of the ineffective, indifferent and/or corrupt politicians out of office. Voting is as much a privilege as a right. If you don't exercise that right one could very possibly lose it.

ASME will be giving away free pizza to those who attend its first meeting on September 11, 1991. The time will be at 6:30 p.m. in the Mechanical Engineering Building, room 104. The guest speaker will be the Director of the Career Placement and Training Center, Mariano V. Trujillo. Everyone is encouraged to attend. For more information contact 341-84551.

Jenny P.,

Congratulations! Proud to be your sister!

Love in AOT,
Julie

Andrea L.,

Congrats! You know we love to have you in our sisterhood!

Love in AOT,
Julie

Dave (Boner),

Way to expose yourself on the float trip.

Zlam,
Julie, Angie, Dee, and Jen

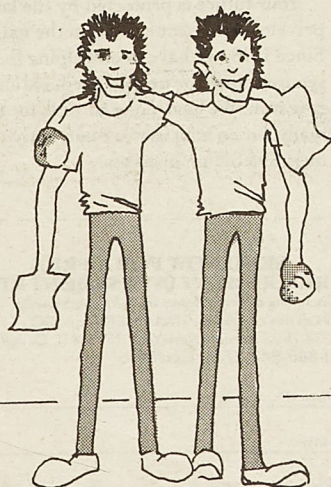
C.T.,

Make up your mind!

Solution from page 9

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Personals

Julie O. is the coolest!!! Thanks so much for taking me home... twice!!!

Zlam,
Gina

Tracy G.,

Congratulations! You are a "too cool" New I!

Love in AOT,
Julie

Gina,

You're way cool and we all love you so show us that beautiful smile!

Zlam,
Lisa



Brett Goodman

A contestant in the Septemberfest Boat Race gives it his all.

KUMR series looks at affirmative action programs in the U.S.

By Michael Tessaro
KUMR

National Public Radio will air a series of far-reaching reports on the successes, controversies, backlashes, and dilemmas that have accompanied the implementation of affirmative-action programs in the United States during the past few decades. Titled "The Great Divide: Affirmative Action in America," the series airs the week of September 15 - 22 on NPR's acclaimed news magazines ALL THINGS CONSIDERED, MORNING EDITION, and WEEKEND EDITION.

This effort marks the third in a series of NPR Specials Projects. The

first two projects, focusing on issues affecting youth, aired in September 1990 ("Class of 2000: The Prejudice Puzzle") and in April 1991 ("Family Stories").

"Affirmative action, like few other issues, is a hot spot on American social policy agenda," according to NPR's Deborah George, editor of the series. Because of this, NPR plans to put together a thoughtful series that combines an historical overview with good reporting on the subject. Adds George, "This is important because even though affirmative-action plans are widespread, many people have vague notions of how they actually work."

George says several of NPR's stories will focus on the tensions and

anxieties that may underline the terms "diversity," "equity" and "affirmative action." Other issues that NPR plans to explore include:

Workplace Dynamics: Assuming Incompetence; Expecting Hostility. NPR plans to examine the effectiveness of affirmative-action programs among co-workers, when programs are effective, whom they help, and in what ways companies may be circumventing them.

The History of Affirmative Actions as a Political Idea and a Social Ideal. NPR traces the development of affirmative action from the Johnson through the Bush administrations. Reports examine affirmative-actions' impact on economic and social

change.

Diversity Consulting. As the U.S. workforce grows more culturally diverse, workplace problems inevitably arise. NPR examines businesses that are now turning to "diversity consulting." This booming new industry helps companies and employees learn to deal with the confusion and conflict that may accompany cultural diversification.

On the national level, NPR is working closely with outreach partners, such as the National Mental Health Association and the National Conference on Christians and Jews.

"The Great Divide" is funded in part by a grant from the Corporation for Public Broadcasting. Series edi-

tors are NPR's John Dinges and Deborah George; producer is Sora Newman.

"The Great Divide: Affirmative Action in America" series will be aired as part of NPR's MORNING EDITION, ALL THINGS CONSIDERED, and the WEEKEND EDITION on

KUMR-FM. MORNING EDITION airs between 5:00 and 8:00 a.m. Monday through Friday, ALL THINGS CONSIDERED airs be-

tween 4:30 and 6:30 p.m. Monday through Friday, and WEEKEND EDITION airs between 9:00 and 11:00 a.m. on Sundays and 7:00 and 10:00 a.m. on Saturdays on KUMR-FM.

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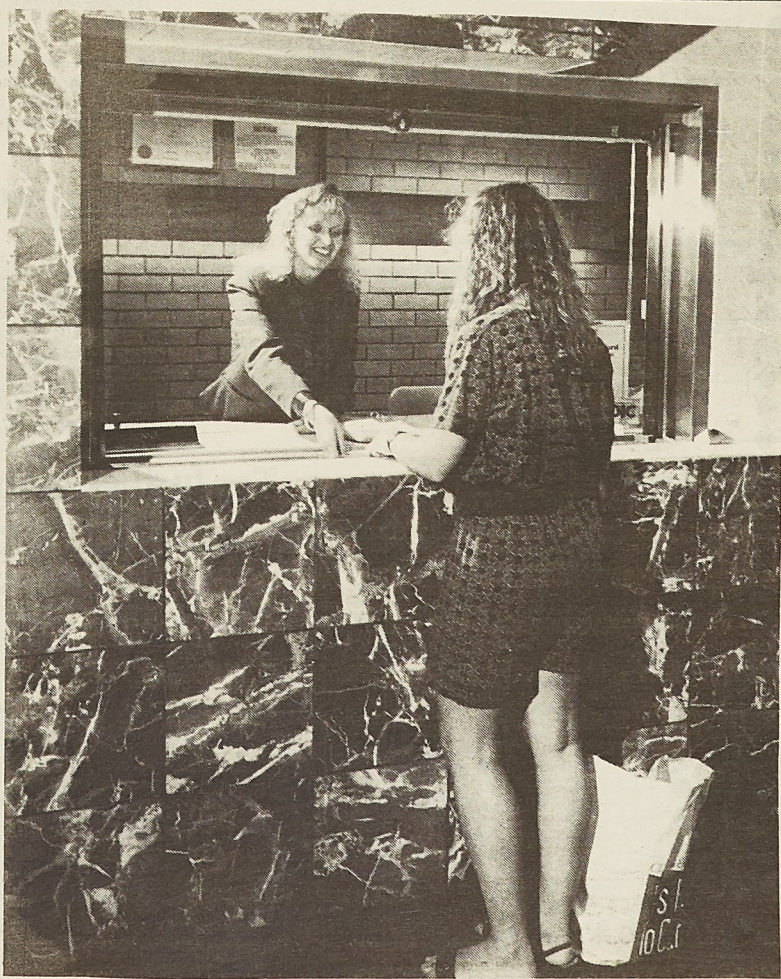
REGULAR CHECKING ACCOUNT

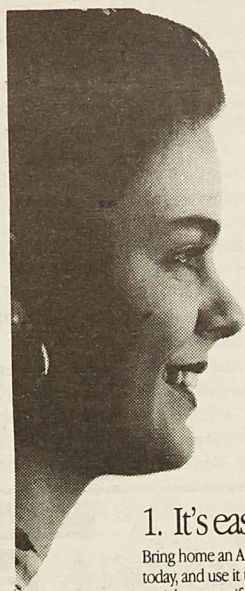
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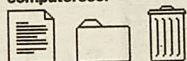
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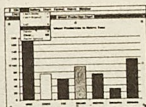
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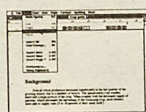
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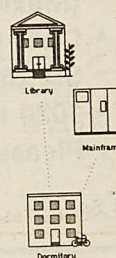
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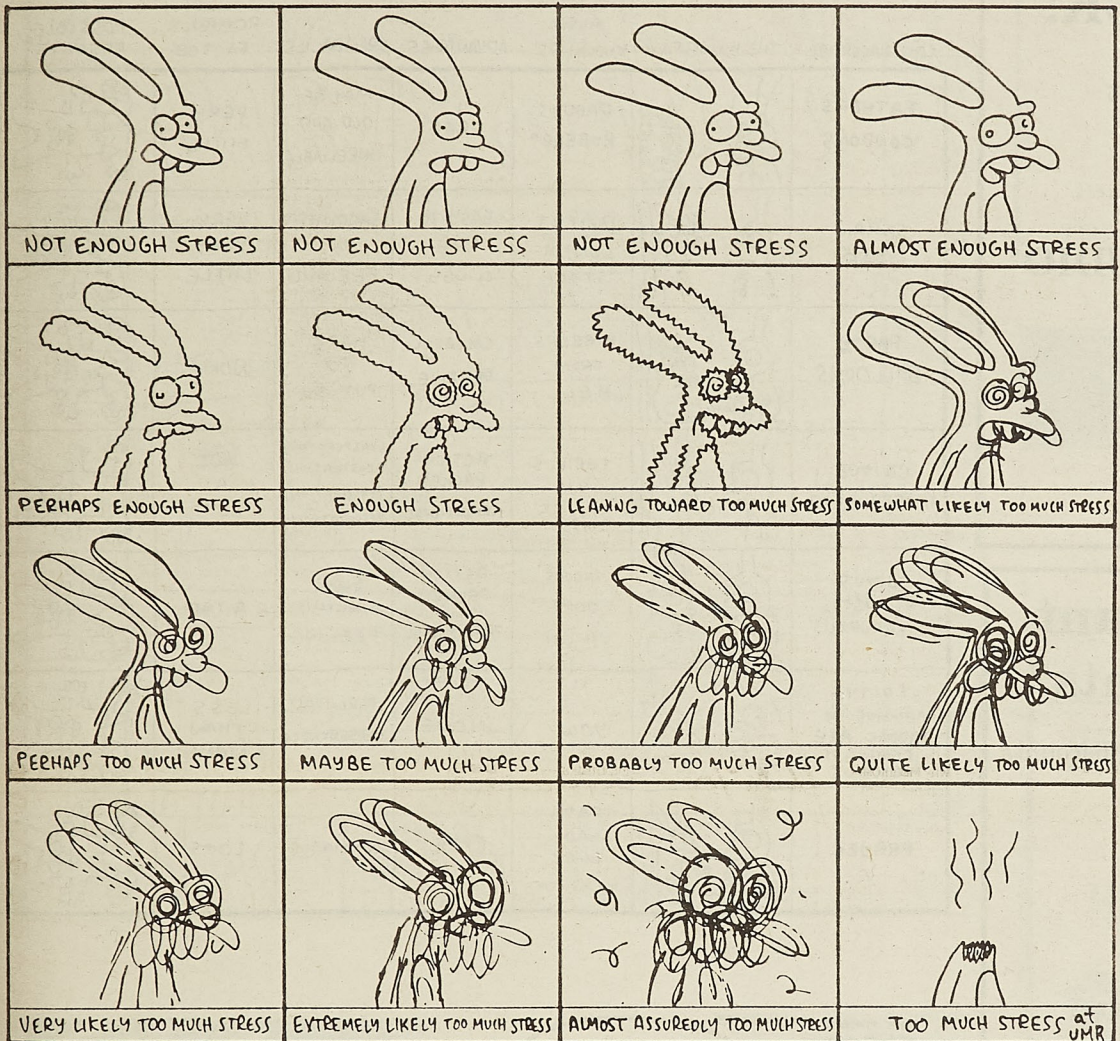


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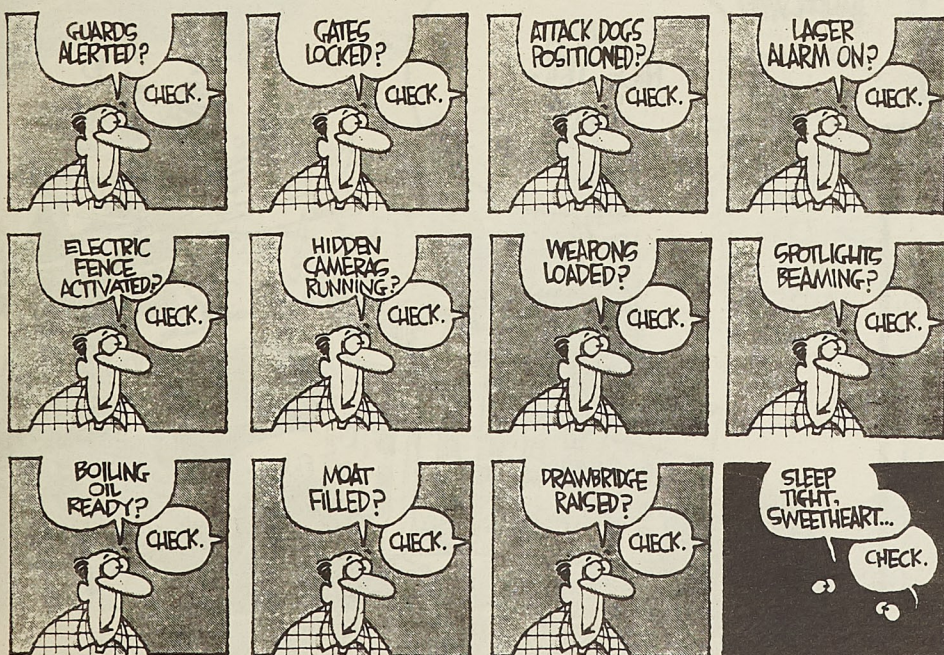
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—Jack Powell
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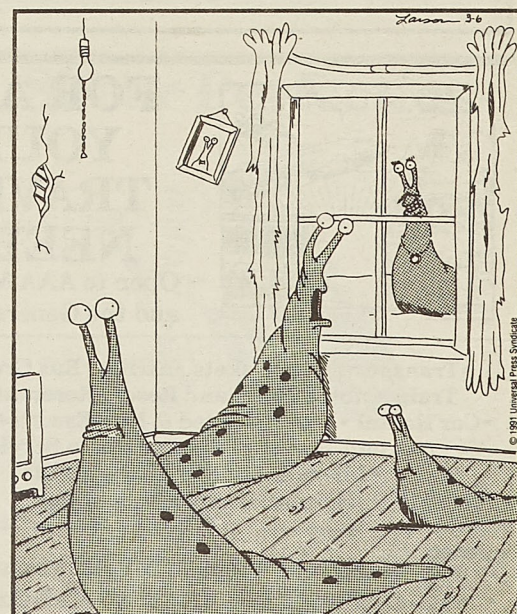
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THE FAR SIDE

By GARY LARSON



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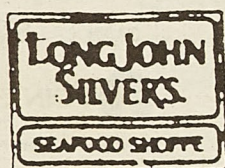
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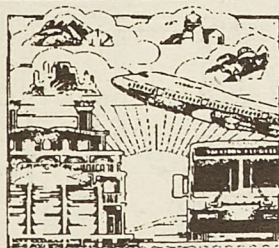
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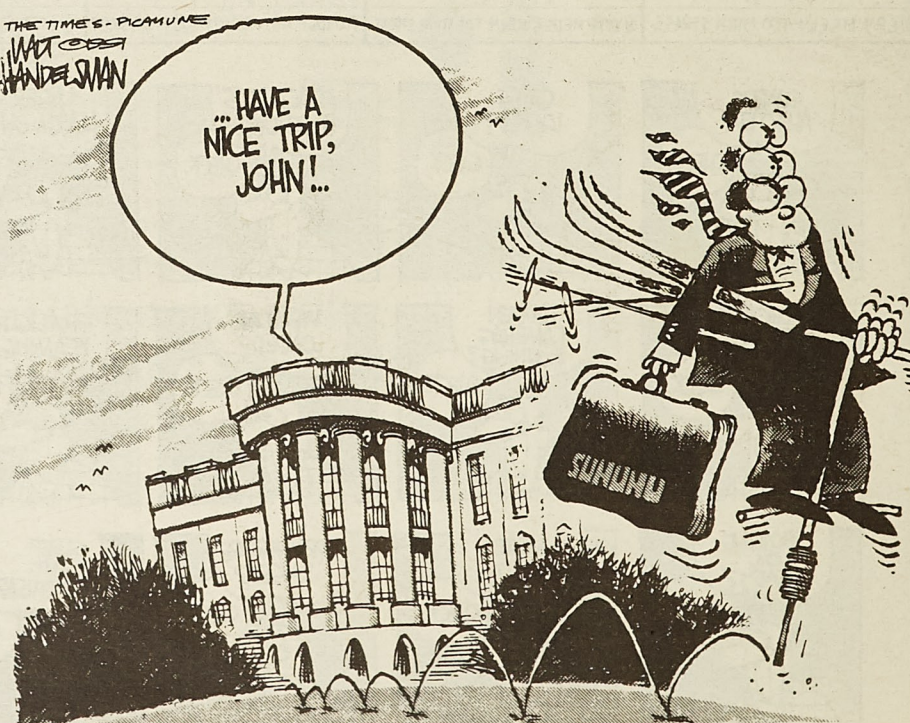
LIFE IN
HELL

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YOUNG FOLKS' GUIDE TO LAST-MINUTE BIRTH CONTROL

CONTRACEPTIVE	THE YOUNG FOLK	ALSO KNOWN AS	ADVANTAGES	DRAWBACKS	ROMANCE FACTOR	POSSIBLE RESULTS
FATHER'S CONDOMS		DADDY'S RUBBERS	FREE	MAY BE OLD AND UNRELIABLE	VERY LITTLE	
SARAN WRAP		DOIN IT LUNCH-STYLE	EASY TO USE, "CLINGY"	SANDWICHED-IN FEELING	VERY VERY LITTLE	
PARTY BALLOONS		RUBBERS FROM HELL	COLORFUL, FESTIVE	HARD TO PUT ON	NONE	
COITUS INTERRUPTUS		THRILLS 'N' SPILLS	ACTION-PACKED, TRADITIONAL	EXASPERATION, FRUSTRATION, PERSPIRATION, DESPERATION	NOT A LOT	
COITUS ALMOSTUS INTERRUPTUS		WHOOOPS, OOPS, UH OH	ACTION-PACKED, TRADITIONAL	SLOW SINKING FEELING	A TAD	
COITUS MOMMUS & DADDUS ARE COMINGUS HOMEUS		YOW!	NONE	PARENTAL BERSERKNESS	LESS THAN NONE	
PRAYER		FATE, LADY LUCK, HOODOO	FREE	UNRELIABLE	LOTS	

THE TIMES-PICAYUNE
WIT
HANSelman



LIFE IN HELL

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PARTY GAMES

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THE GLASSY-EYED LISTENER

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THE QUOTER

AS BAR-DON CHIEF SAID:

THE PATIENT

MATHEMATICS WAS I AM TO HAVE TO DO WITH IT.

THE RESENTFUL SPOUSE

HEY, I'VE BEEN HEARING THE STRANGEST DREAMS LATELY...

THE CONFESSOR

I'VE BEEN HEARING THE STRANGEST DREAMS LATELY...

THE BITTER PILL

I HATE PARTIES.

THE LOUD LAUGHER

HAR HAR HAR

THE PROWLER

WHY DON'T YOU OVER THAT UP AND TAKE UP WITH A REAL MAN?

THE CONSPIRACY THEORIST

I TELL YOU THE CIA CONTROLS THE WEATHER.

THE WIT

YOU HEAR THE ONE ABOUT THE EVENING ETHIOPIAN WITH AIDS?

THE PARALYZED HOSTESS

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THE PUNER

HEY, I'VE BEEN HEARING THE STRANGEST DREAMS LATELY...

THE PUNSTER

HIS BART IS WORSE THAN HIS WIFE.

THE BABBLER

I WANT TO BE REPARATED AS A TEA COTER.

THE MUTUAL WHINERS

IF YOU ASK ME IT'S THE EMBROIDERS NEW CLOTHES ALL OVER AGAIN.

THE PASSED OUT

YOU SAID A MOUTHFUL AND TALK ABOUT OVERATED.

THE ZOMBIE

BEFORE I GOT HERE I HEARD THE STRANGEST DREAMS LATELY...

THE OBSERVER

ANYONE EVER TELL YOU YOU'RE LEFT-FOOTED?

THE AMBIVALENT SECUTRESS

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What did you do today?

Thursday, January 25, 1990

“ Me and my sisters went down to the center to play with the disabled kids. You know, to just be with them. ”

Beth Kerby

Troy, MI

Saturday, December 16, 1989

“ I went house to house, getting any food or clothes they would give me. Then I handed it all out to any needy people in the neighborhood. ”

Jack Powell

Salisbury, MD

Tuesday, January 23, 1990

“ All of us in the class called the old people in our neighborhood to see if they were okay and if they needed anything. ”

Amy Hoffman

Polk, NE



POINTS OF LIGHT
FOUNDATION

Sports

Dominating Forces in the National Football League

By A.T. Goon
STAFF WRITER

The time has finally arrived. Every year, as we all become bored with the monotonous end of baseball's season, expand the rosters so the kids can play attitude, we only grow more anxious for the NFL to begin its season. Well, that time of year is now here and everyone gets to have their fun predicting who will win the Super Bowl. But, before you go making your predictions, you should make sure you have read up on the subject. So, just for you, there's the 1991 football forecast.

AFC EAST

Buffalo looks like a lock for the AFC East title this year. Their dangerous defense, coupled with last season's highest scoring offense, makes the Bills one of the premier teams in the NFL. The Dolphins and Colts will finish second and third, respectively, and both will challenge for wild card spots. These two teams are very

similar in that both have dangerous offenses. However, on the other side of the ball, both leave a lot to be desired. The fourth place Jets will show flashes this year, but this young team is still a few years and a few draft picks away. As for the Patriots, they should get a great draft pick next year.

AFC CENTRAL

Houston's year has finally come. Their offense cannot be described justifiably in words. After leading the NFL in nearly every category last year, they will only get better as they refine their run-n-shoot system. Pittsburgh's second place finish will be attributed to defense. With Rod Woodson on the field, big plays just seem to happen. As for the offense, it's hard to predict anything about a man named Bubby. Cincinnati is in an odd year. Through the 1980's, this indicated dismal seasons. If coach Sam Wyche spent as much time on his game plan as he did in figuring out ways to make a fool of himself, things could be different. The only reason they will finish third is

because Cleveland is in this division.

AFC WEST

Throughout the organization's history, the LA Raiders when picked to dominate, have generally failed to do so. Their best years have come at times when no one knew what to think of them. 1990 was like this, and 1991 will be no exception. It is for this reason that the Raiders will finish second and the Kansas City Chiefs will pound their way into first place. The young Chargers are not ready for prime time yet, but they are good enough to finish third and be in the wild card hunt. Seattle, always picked to flounder, yet always right there in December, will have a typical year. Bringing up the rear will be smilin' John Elway and his skillett-handed, aging receiving corps.

NFC EAST

The Super Bowl champion NY Giants will again be tough. They will continue to win without a quarterback and a senior citizen defensive unit. However, this year that won't be enough. That's because this is the year

that the Washington Redskins will tower over the NFC. Their line on both sides of the ball, after being destroyed by age, has been rebuilt by Joe Gibbs. The Cowboys will return to greatness after last year's draft, but not this soon. The Phoenix Cardinals have a pair of sensational sophomore running backs in Johnny Johnson and Anthony Thompson. They might win 8 this year.

Last place... Philadelphia Eagles. The reason? Three words. Arthroscopic knee surgery.

NFC CENTRAL

The Bears will win this division. Why? Because they are the Bears and that's what the Bears do. Of course, the fact that this is the saddest conference in football doesn't hurt any. The talent the Minnesota Vikings have stockpiled over the past five years, and there is a lot of it, is now either old or injured. Tampa Bay will finish third and not make the playoffs because they are Tampa Bay and that's what Tampa Bay does. Green Bay and their overrated Majik (Magic) man will

need some magic to keep from finishing last.

NFC WEST

The new look 49ers will have their problems this year but nothing so serious that it will keep them from winning their division. Early on, they will find out how important Ronnie Lott and Joe Montana were to this team as their defense looks for a leader and Steve Young stumbles. The saints and their rock solid linebacking corps will win second place and a wild card spot. The up and down Rams, will remain consistent in only one thing—finishing third. Finally, the Raider imitating Falcons and their explosive vocal chords will again lead the league in yards penalized, touchdown celebrations, and points allowed.

Now that you know everything that's going to happen this season, enjoy watching the events unfold.... All they way to to Super Bowl, where by the way, the Washington Redskins will defeat the Houston Oilers to win the NFL crown.

Squiggy's Ten Again

By Squiggy
STAFF WRITER

This week saw most every team in the national college football scene play their first or second game. Last week we saw Georgia Tech, may no. 8 pick loose to my no. 6 pick, Penn State. That was the only team in my top ten to lose. Consequently, the top ten for this week will remain the same. This week's Top Ten is:

SQUIGGY'S TOP TEN:

1. Michigan
2. Florida State
3. Miami
4. Notre Dame
5. Houston
6. Penn State
7. Washington
8. Colorado
9. Oklahoma
10. Florida

In games this past weekend the big scores were posted by Penn State and Houston. Penn State rolled up 81 points against Cincinnati. Houston exploded with 73 points when Heisman hopeful. David Klingler, passed for 510 yards and nine touchdowns. Michigan after a slow start against Boston college turned it on in the second half and won 35 to 13. Florida State upped its record to two and 0 by pounding Tulane. Last weekend, Miami blew away the Arkansas Razorbacks. Notre Dame got a career game from Rick Mirer as he led then to a 49

to 27 victory against Indiana. Washington seemed to solve the quarterback question when Billy Joe Hobert led then to a 42 to 7 win over Stanford. Colorado opened by beating Wyoming 30 to 13. Florida, my new addition, blew away San Jose State 59 to 21 to earn the no. 10 ranking. Teams to watch are: Clemson, Iowa, Tennessee, California, and Auburn who were all winners last week.

This weekend starts early when Houston plays Miami. This will be a stern test for the Cougars to establish themselves among the elite in college football.

Notre Dame plays at No. 1 Michigan. If either team hopes to win the national title it could very well lie with the outcome of this game. Both teams were big winners over their first opponent.

Penn State plays at USC. This is a must win for the Nittany Lions if they hope to have any chance at the national title. USC needs to regroup after the surprising loss to Memphis State.

Washington plays at Big 8 power house Nebraska. This is a big game for Nebraska to establish themselves against quality opponents.

Colorado will try to establish a better offense when they play against Baylor.

Oklahoma opens this weekend with North Texas. This should be an easy contest for the Sooners.

See Football, page 18

Miners stopped by Controversial Call

By Christopher Goo
STAFF WRITER

The Iowa Wesleyan Tigers got by our Miners with a 21-17 victory Saturday night in Mt. Pleasant, Iowa. The game was well played by both teams, but unfortunately the Miners came up a bit short.

I myself was unable to make it to the game, due to the beverage I consumed Saturday at Septemberfest. I did get the play by play scoresheet, without the first names of any of the opposing players so...I decided to fill in the first names of the people who I knew it wasn't. Please remember how much you paid for this paper; anyway.

The Miners jumped on the scoreboard first, with an impressive 67 yard drive. Fullback Rick Henry broke through the line for a 30-yard touchdown run. Eivind Listerud added the extra point, and the Miners had a 7-0 lead with 3:27 left in the first quarter.

The Tigers came back quickly with a 65 yard drive of their own. "Not Mercury" Morris opened the 2nd quarter with a 9 yard touchdown run. The conversion was good, and the game was tied 7-7.

The defense of the Miners stood strong on two consecutive series; and a 30 yard completion

from Miner quarterback Mike Wise to Carlos Cain put Listerud in field position to kick a 21 yard field goal.

The lead did not last long though, as 5 plays later a 17rd pass from DeWald to "Not Jimmy" Carter put the Tigers back on top. Then, after a Wise interception, the Tigers drove the ball down to the Miner 8 with time running out in the first half, went for the field goal, but Don Huff blocked the kick and the Miners went into the half trailing 14-10.

The second half opened with a couple of change-of-possession before Morris scored his second touchdown of the evening; to put Wesleyan up 21-10. Then just like the first game; the Miners fought back. A 68 yard drive culminating with a 2 yard touchdown run by Jason "cruiser" Illum brought the Miners back to within 4. The defense stopped the Tigers in 3 plays and the offense drove the ball to the Iowa Wesleyan-30. A long pass was picked off in the end-zone by "Not Bob" Bowers and the Miner comeback was halted.

The defense made 2 more great holdups and the Miners got the ball back on their own 47. A 42 yard reception by Chris Alverson off a scoop pass and reversal to Wise brought the ball down to the Wesleyan 7 with 4:08 left. One play later, Alverson caught an-

other pass and he looked like he crossed the goaline but was stripped by a Wesleyan defender and the play was ruled a fumble. Maybe Don Denkinger nade the trip to Mt. Pleasant. The Tigers got the call, and the Miners consolation was a long bus ride home with an "uneasy" feeling. Hopefully, there's a petroleum jelly plant near Mt. Pleasant.

UMR did get the ball back with :47 left in the game but a fumble by Wise on fourth down ended the Miners chances.

The Miners next game is September 21, here, against Northwest Missouri State.

Score by Quarters	1	2	3	4
Missouri-Rolla	7	3	7	0
Iowa Wesleyan	0	14	7	0

1st
Umr-Henry 30 yd run (Listerud Kick) 3:27

2nd
IWC- Morris 9 yd run (Leonard kick) 14:56

UMR- Listerud 21 yd Field Goal 4:50

IWC- Carter 17 yd-pass from DeWald 3:18

3rd

IWC- Morris 1 yd run (Leonard Kick) 4:58

4th

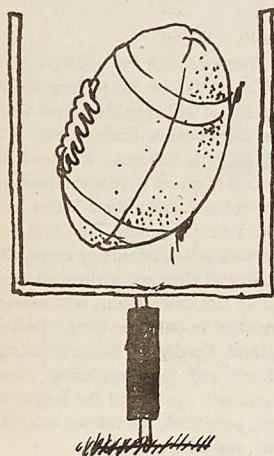
UMR- Illum 2 yd run (Shore Kick) 14:56

Records UMR 1-1 IWC 1-1

Football from page 17

Florida has an important game against SEC powerhouse, Alabama and must win in order to remain in the hunt for no. 1.

Florida State has an easy one this week, but they must not look ahead to Michigan as they play Western Michigan.



Rugby SOURCE

The UMR Rugby Club would like to welcome all the students and teachers back and invite them to all the matches this semester. Our first big home tournament is SMIIRT on September 28 and 29. Anyone interested in playing rugby can contact Pat Winkelman at 364-0792 or meet at the UMR Rugby field on Fraternity Row at 5:00 p.m. on September 5. The rules and how to play will be explained at this first practice.

Rugby consists of 15 players, 8 forwards who win possession of the ball, and 7 backs who out maneuver their opponents by passing, kicking, or running the ball. The object of game is to touch the ball down in the try zone or kick it through the uprights. The 8 forwards make up a scrum. A scrum forms when a penalty occurs or play is stalled. The two opposing scrums come together in a huddle and the ball is placed between them. The players then heel the ball to the back of their pack so it can be thrown out to the backs. It is up to the backs to score. For more information about Rugby, come out to any practice at the Rugby fields or come talk to us at the UMR Showcase.

Sports NEWS SERVICES

Bob Boucher, the head soccer coach at the University of Missouri-Rolla, has announced his resignation to accept ahead coaching position at Allentown college of St. Francis DeSales in Center Valley, PA.

The resignation will be effective August 31, 1991. Boucher, who has coached the men's and women's teams at UMR since 1988, will be in charge of the men's soccer program at Allentown. Allentown, a NCAA Division III school located near Boucher's hometown of Reading, PA., currently does not sponsor women's soccer. "The fact that it is close to home was a consideration, but it was not the main one," Boucher said. "It is a family decision more than anything else."

In his three years at UMR, Boucher led the Miners to an overall record of 28-24-4, including a mark of 8-10-1 in an injury-filled 1990 season. The Miners went 10-8-1 in his first year at UMR and 10-6-2 in 1989, and have had four players which have been named to the All-Midwest team during his tenure. Boucher has also been in charge of the women's soccer team at UMR for the past three seasons, and the team's record in that period was 9-

38-4.

"I really appreciate the effort Bob has put into men's and women's soccer at UMR," said UMR interim athletic director Neil Smith. "We are going to miss him. I know that it was difficult situation having to coach both teams, but he did an admirable job under those circumstances. He is going back to his home area, and we wish him the best." Boucher also coached the baseball team at UMR during the 1990 season on an interim basis.

Last month, Boucher was placed in charge of the South Central district soccer competition for the 1991 Show-Me Games, to be held in Rolla June 14 and 15, and he plans to fulfill those duties. "I really enjoyed the time I spent here," Boucher said. "It was a pleasure to work with the people here, the facilities are among the best around, and the faculty have been very helpful."

The search has begun for Boucher's replacement.



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Week of September 23-27, 1991

REGISTRATION: All materials are available in the reception area, Room 304 Norwood Hall. Registration must be completed prior to submitting resumes for prescreening and also prior to signing for interviews.

SIGNUPS AND RESUME PRESCREENING: 301 Norwood Hall
SIGNUP HOURS: 7:45 to 11:15 a.m.
1:00 to 4:15 p.m.

PRESCREENED INTERVIEWS

For prescreening companies, qualified students desiring consideration must submit their resumes in Room 301 Norwood Hall prior to the deadline outlined in the weekly detail list in The Miner. Resumes will be mailed to participating companies three weeks prior to their interview date, and they will select the students they wish to interview. Selectee's names will be posted on the Bulletin Boards in the signup area and in the appropriate departments. Posting of names will be done approximately two weeks before the interview date with a four-day deadline for signing.

NON-PRESCREENED INTERVIEWS

Signups for those companies not participating in prescreening will be held approximately two weeks prior to the interview date. Look for these dates in the Weekly Detail Lists and The Miner. Signups will be put out for one day (or until schedule fills). Signups will be on a first-come, first-served basis; no priorities. Morning signups will be for morning interviews; afternoon signups for afternoon interviews. Back-up lists will be available for those students unable to obtain an interview.

NOTICE: One schedule = approximately 12 interview openings: 6 in the a.m.; 6 in the p.m., depending upon starting & ending times per each individual company's request.

CHEVRON USA INCORPORATED
11111 South Wilcrest
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NUMBER OF SCHEDULES: 1/2 day only for permanent
MAJORS: BS/MS/PhD PE
POSITION: Professional Engineers
LOCATION: Nationwide
INTERVIEWING: recent, December 1991,
May, July 1992 grads
MINIMUM G.P.A.: N/A
CITIZENSHIP: U.S. Citizen and Permanent
Visa Holders

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 25, 1991

WILLIAMS TELECOMMUNICATIONS
P.O. Box 21348
Tulsa, OK 74121
attn: Mr. Mike Williams

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS EE
POSITION: Engineers
LOCATION: Tulsa, OK
INTERVIEWING: December 1991 grads
MINIMUM G.P.A.: 3.0
CITIZENSHIP: U.S. Citizen or Permanent
Resident Visa required

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

LEVER BROTHERS
1400 N. Pennsylvania Ave.
St. Louis, MO 63133
attn: Mr. Kirk Young

NUMBER OF SCHEDULES: 1
MAJORS: BS/ChE, EE, ME
POSITION: Information is not available
LOCATION: St. Louis
INTERVIEWING: December 1991 grads
MINIMUM G.P.A.: 2.8

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

INGERSOLL RAND
Construction Equipment Group
1495 Valley Center Parkway
Bethlehem, Pennsylvania 18017
attn: Mr. Jim Dye

NUMBER OF SCHEDULES: 1
MAJORS: BS/Mining or Civil Engineering
POSITION: Sales Engineer (Selling direct
to customers or through distributors)
LOCATION: Nationwide
INTERVIEWING: May 1992 grads
MINIMUM G.P.A.: 2.7
CITIZENSHIP: U.S. citizens and persons with
permanent residency status

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 25, 1991

UNOCAL CORPORATION

P.O. Box 7600
Los Angeles, CA 90051
attn: Mr. Bob Endecavageh

NUMBER OF SCHEDULES: (1/2 day only for permanent)
MAJORS: BS/PE
POSITION: 18-month training program
leading to position as staff engineers in
reservoir, drilling and production with potential
in supervisory and management areas.
LOCATION: Domestic U.S. - West Coast,
Gulf & Mid-Continent
INTERVIEWING: Dec. 1991, May, July 1992 grads
MINIMUM G.P.A.: prefer 2.8 or higher
CITIZENSHIP: Authorization to work in the
U.S. required

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 25, 1991

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New Shipment Posters
ADD LIFE TO YOUR POSTERS
Drymounting



Apple Tree

Hwy 63S Rolla

M-S 9:30-8:00 SUN 12:30-5:00

CAUTION:
NOT Voting May Will Be
Hazardous To Your Education.

But To Vote, You Must
First Register.

If you plan to vote November
5th, you must register by
October 16th.

Look for voter registration tables on campus.

Friday 13th	Tuesday 17th	OR STOP
9am-NOON	9:30a-1:30p	BY ASUM
Breezeway	Breezeway	Office 212 UCW



The Associated Students of the University of Missouri
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should always pack your *AT&T Calling Card*. ☐ It's all you need to make a call from almost anywhere to anywhere.

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services designed to save students time and money. ☐ The *AT&T Calling Card*. It's the best route to wherever you're going.

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FRITO LAY, INC.
P.O. Box 660634
Dallas, TX 75266
attn: Ms. Pam Hammons

NUMBER OF SCHEDULES: 2
MAJORS: BS/ChE, ME, Eng. Mgt.
POSITION(S): Associate Engineer-Mfg.
First Line Supv.-Mfg.
(PLEASE INDICATE WHICH POSITION YOU ARE INTERESTED
IN, IN TOP RIGHT-HAND CORNER OF YOUR RESUME.)

LOCATION: Nationwide
INTERVIEWING: December 1991 grads
MINIMUM G.P.A.: 2.8
CITIZENSHIP: Must have authorization to
work in the U.S. on a full-time basis.

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 24, 1991

NOTE: Interview date scheduled for Stockham Valves
& Fittings has been cancelled. Interviews are now
scheduled for Feb. 11, 12, 1992.

FACTORY MUTUAL
3300 Rider Trail Rd., Suite 600
Earth City, MO 63045
attn: Mr. Charles Prewitt

NUMBER OF SCHEDULES: 1
MAJORS: BS/AE, ChE, MetE, CE, EE, ME,
NE
POSITION: Loss Prevention Consultant
(to make loss prevention inspections at industrial
plants)
LOCATION: St. Louis District Office
INTERVIEWING: recent or December 1991 grads
MINIMUM G.P.A.: None
CITIZENSHIP: No

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 24, 1991

PRESCREENED INTERVIEWS

NORTHERN ILLINOIS GAS
P.O. Box 190
Aurora, IL 60507-0190
attn: Mr. Kevin Kirby

NUMBER OF SCHEDULES: 1
MAJORS: BS/PE (Priority), BS/CE, BS/ME
POSITION: During their first year with
Northern Illinois Gas, engineers typically rotate
through three areas: station design, system design
and system planning - for an in-depth look at how
(we) design, build and maintain our distribution
and storage system. After this initial year, en-
gineers assume more responsibilities as they move
into division operating areas, etc.
LOCATION: Naperville & various IL
INTERVIEWING: December 1991, May 1992 grads
CITIZENSHIP: MUST HAVE LEGAL RIGHT TO WORK
MINIMUM G.P.A.: None

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 23, 1991

BURNS & McDONNELL
4600 E. 63rd St. Trafficway
P.O. Box 419173
Kansas City, MO 64141-6173
attn: Ms. Kimberely, Stone

NUMBER OF SCHEDULES: 1 ea day: Sept. 23, 24, 25
MAJORS: BS/ChE; BS/MS CE; BS/ME, EE;
BS/MS Geology; BS/MS/GeolEng.;
BS/MS Geophysics or Geotech.
POSITION: Representative opportunities
will be listed at time of
interview signups.
LOCATION: Kansas City, MO
INTERVIEWING: December 1991, May 1992 grads
CITIZENSHIP: Permanent Visa Required
MINIMUM G.P.A.: 2.9

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATES: September 23-25, 1991

ALLIED SIGNAL (Engineered Materials Sector)
P.O. Box 430
Metropolis, IL 62960
attn: Mr. Dan Huffman

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS/ChE
POSITION: Process Engineer (entry-level)
LOCATION: Metropolis, IL
INTERVIEWING: December 1991 grads
MINIMUM G.P.A.: 2.7

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 24, 1991

BLACK & VEATCH
P.O. Box 8405
Kansas City, MO 64114
attn: Mr. Glenn Watkins

NUMBER OF SCHEDULES: 4
(1-CE; 1-ME; 1-EE; 1-ChE)
MAJORS: BS/MS CE, ME, EE, ChE
POSITION: Descriptions will be
available at time of interview signups.
LOCATION: Kansas City, MO; Overland
Park, KS; possible regional
locations
INTERVIEWING: Dec. 1991, May, July 1992 grads
MINIMUM G.P.A.: 2.75
CITIZENSHIP: Permanent resident or intending
citizen

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 24, 1991

PRESCREENED INTERVIEWS

Week of September 16-20, 1991

BURLINGTON NORTHERN RAILWAY
176 E. 5th St., P.O. Box 64962
St. Paul, MN 55164
attn: Ms. Jean Nix, Sr. Staff Dev. Specialist

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS Computer Science
POSITION: Corporate Management Trainee
(after 9 months to permanent programmer analyst)
LOCATION: St. Paul, MN or Ft. Worth, TX
INTERVIEWING: recent grads, December 1991 or
May 1992 grads

DEADLINE FOR TURNING IN RESUMES: 11:00 A.M.
Wednesday, September 4, 1991
INTERVIEW DATE: September 18, 1991

WESTINGHOUSE ELECTRIC CORPORATION
Gateway Center
Pittsburgh, PA 15222
attn: Ms. Erle Johnson

NUMBER OF SCHEDULES: 1 ea day for the following
divisions:

Schedule #1 - ENGINEERING
Product Design, Development, Research, Application,
Project Engineering
MAJORS: BS/EE, ME, Comp Sci
POSITION: Descriptions will be available at time
of interview signups.
LOCATION: Nationwide
INTERVIEWING: December 1991 or May 1992 grads
MINIMUM G.P.A.: Prefer 3.0 or better

DEADLINE FOR TURNING IN RESUMES: 11:00 a.m.
September 4, 1991
INTERVIEW DATES: September 19, 20, 1991



American
Taekwondo
Association



ATA TAEKWONDO
CENTER

Mark Prosser
3rd Degree Certified
Black Belt Instructor
1007 Pine St.
341-KICK



- Burn Stress while training for your black belt in Taekwondo
- Now offering a 30% discount for UMR Students
- Starting new students everyday & classes that meet three times a week
- Stop by now for a free week of training

Student Union Board

presents:

Holiday Ranch

An acoustic guitar band
Reminiscent of Simon & Garfunkel

Sept. 13, 1991

Hockey Puck

8:00 pm

(UCE Cafeteria if it rains)

PAID VOLUNTEERS ARE NEEDED

For Current Medical Research Studies Under the Direction of
Drs. Wes Stricker, Mark Vandewalker and Eamil Stricker

ASTHMA

- *TESTING A NEW AEROSOL BRONCHODILATOR, FLUTICASONE
- *PARTICIPANTS MUST BE 12 YEARS OF AGE OR OLDER
- *PARTICIPANTS MUST HAVE MILD TO MODERATE ASTHMA OR SUSPECTED ASTHMA (OFF AND ON COUGHING, SNEEZING, OR SHORTNESS OF BREATH)

ALLERGIC CONJUNCTIVITIS

- *TESTING A NEW FORMULATION OF VISINE AC
- *PARTICIPANTS MUST BE 18 YEARS OF AGE OR OLDER
- *PARTICIPANTS MUST HAVE RED, ITCHY EYES DURING THIS TIME OF YEAR DUE TO FALL POLLEN AND MOLD ALLERGENS
- *ALL MEDICATIONS ARE APPROVED AND MAINTAINED FOR TESTING BY THE FEDERAL DRUG ADMINISTRATION
- *ALL MEDICATIONS AND PROJECTS ARE MONITORED BY A LOCAL MEDICAL REVIEW COMMITTEE
- *ALL MEDICAL EXAMINATIONS, MEDICATIONS, TESTS AND OFFICE VISITS ARE AT NO CHARGE TO PARTICIPANTS

PARTICIPANTS WILL RECEIVE A MONETARY STIPEND FOR THEIR PARTICIPATION

CLINICAL RESEARCH OF THE OZARKS, INC.
509 E. 10th Street
ROLLA, MISSOURI 65401
364-7777 ASK FOR VICKI OR ROBIN

REACT
2708 Welsh Indu
St. Louis, MO
attn: Ms. Cl

NUMBER OF SCHED
MAJORS:
Geological, a
or Geophysics
POSITION(s):
Engineers, Pr
Eers, Geohydr
Technicians
LOCATION:
INTERVIEWING:
MINIMUM G.P.A.:
CITIZENSHIP:

DEADLINE FOR TU
INTERVIEW DATE:

WILLIAMS NATURA
P.O. Box 3288
Tulsa, OK 7410
attn: Ms. Re

NUMBER OF SCHED
MAJORS:
POSITION:
LOCATION:

INTERVIEWING:
MINIMUM G.P.A.:
CITIZENSHIP:

DEADLINE FOR TU
INTERVIEW DATE:

BRING CURRENT T

MCCLURE ENGINEER
P.O. Box 808
East Moline, IL
attn: Ms. Lo

NUMBER OF SCHED
MAJORS:
POSITION:
LOCATION:
INTERVIEWING:
MINIMUM G.P.A.:

DEADLINE FOR TU
INTERVIEW DATE:

A.E. STALEY COME
2200 E. Eldorado
Decatur, IL 625
attn: Ms. Lau

NUMBER OF SCHED
MAJORS:
POSITION:
LOCATION:
INTERVIEWING:

DEADLINE FOR TU
INTERVIEW DATE:

LIT STEEL
P.O. Box 6778
Cleveland, OH 4
attn: Mr. Bl

NUMBER OF SCHED
MAJORS:
POSITION:

LOCATION:
INTERVIEWING:

MINIMUM G.P.A.:
CITIZENSHIP:
that they are

DEADLINE FOR TU
INTERVIEW DATE:

GRAIN PROCESSI
P.O. Box 349
Muscatine, IA
attn: Mr. J

NUMBER OF SCHED
MAJORS:
POSITION:

LOCATION:
INTERVIEWING:
MINIMUM G.P.A.

CITIZENSHIP:
INTERVIEW SIGN
INTERVIEW DATE

REACT
2208 Welsh Industrial Ct.
St. Louis, MO 63146-4222
attn: Ms. Cindy Hauser

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS Chemical, Civil,
Geological, and Mechanical Engineering, Geology,
or Geophysics
POSITION(s): Professional Environmental
Engineers, Project Managers, Geotechnical Engi-
neers, Geohydrological Engineers or Environmental
Technicians
LOCATION: St. Louis, MO
INTERVIEWING: recent or December 1991 grads
MINIMUM G.P.A.: 2.5
CITIZENSHIP: N/A

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

WILLIAMS NATURAL GAS
P.O. Box 3288
Tulsa, OK 74101
attn: Ms. Reatha Oliver

NUMBER OF SCHEDULES: 1
MAJORS: BS/CE, ME, EE
POSITION: Engineer I
LOCATION: Tulsa, OK; Enid, OK;
Shawnee Mission, KS
INTERVIEWING: Dec. 1991 or May 1992 grads
MINIMUM G.P.A.: 2.8
CITIZENSHIP: Work Authorization required

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

BRING CURRENT TRANSCRIPT TO INTERVIEW.

McCIURE ENGINEERING, INC.
P.O. Box 808
East Moline, IL 61244
attn: Ms. Lois Method

NUMBER OF SCHEDULES: 1
MAJORS: BS/CE
POSITION: Project Engineers
LOCATION: East Moline, Macomb, Peoria,
Ottawa, Rockford & Waukegan - all in Illinois
INTERVIEWING: December 1991 or May 1992 grads
MINIMUM G.P.A.: 2.5

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

A.E. STALEY COMPANY
2200 E. Eldorado
Decatur, IL 62525
attn: Ms. Laura Cornille

NUMBER OF SCHEDULES: 1
MAJORS: BS/ChE
POSITION: Process Engineer
LOCATION: Illinois, Louisiana, Tennessee
INTERVIEWING: December 1991 or May, July
1992 grads

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

LTV STEEL
P.O. Box 6778
Cleveland, OH 44101
attn: Mr. Bill Bush

NUMBER OF SCHEDULES: 1
MAJORS: BS/Metallurgical Engineering
POSITION: Quality Control Management
Trainee
LOCATION: OH, PA, IL, IN
INTERVIEWING: December 1991 or May 1992
grads
MINIMUM G.P.A.: 2.7
CITIZENSHIP: All new employees must verify
that they are authorized to work in the U.S.

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

NON-PRESCREENED INTERVIEWS

GRAIN PROCESSING
P.O. Box 349
Muscatine, IA 52761
attn: Mr. Jerry Flakne

NUMBER OF SCHEDULES: 2
MAJORS: BS/ChE, ME
POSITION: Division Engineer
LOCATION: Muscatine, IA
INTERVIEWING: December 1991, May 1992 grads
MINIMUM G.P.A.: 2.5
CITIZENSHIP: N/A

INTERVIEW SIGNUP DATE: Friday, September 13, 1991
INTERVIEW DATE: September 27, 1991

TEXAS EASTMAN
P.O. Box 7444
Longview, TX 75607
attn: Mr. Nick Nabours

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS ChE or Comp Sci
POSITION: Chemical Eng. or Systems Analyst
LOCATION: Longview, TX
INTERVIEWING: recent grads, Dec. 1991 or
May, July 1992 grads
MINIMUM G.P.A.: 3.0
CITIZENSHIP: Must have authorization to
work in the U.S. on a full-time basis

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

MOBIL CORPORATION - BEAUMONT REFINERY
3225 Galloway Road
Fairfax, VA 22037-0001
attn: Ms. Tammy Fullerton

NUMBER OF SCHEDULES: 1
MAJORS: BS/ChE, MetE, CE, EE, ME
POSITION(s): Process Eng.; Corrosion/
Metallurgical Eng.; Project Eng. - details will
be posted at time of interview signups.
LOCATION: One of Mobil's refineries
located in Beaumont, TX; Joliet, CA; Chalmette,
LA; Paulsboro, NJ
INTERVIEWING: Dec. 1991 or May, July 1992
grads
MINIMUM G.P.A.: 2.6
CITIZENSHIP: Students must be authorized
to work in the U.S. on a full-time basis.

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

STAR ENTERPRISE
P.O. Box 712
Port Arthur, TX 77641-0712
attn: Mr. Jay Moser

NUMBER OF SCHEDULES: 2
MAJORS: BS/ME, CE, ChE, EE; MS in
Environmental with BS in
Engineering
POSITION(s): Detailed job descriptions
will be available at
time of interview signups.
LOCATION: Port Arthur, TX and
Convent, LA
INTERVIEWING: recent grads, December 1991,
May 1992 grads
MINIMUM G.P.A.: 2.5
CITIZENSHIP: N/A

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

MOBIL CORPORATION-U.S. MARKETING & REFINING
3225 Galloway Road
Fairfax, VA 22037-0001
attn: Mr. Claudio Cardenas

NUMBER OF SCHEDULES: 1
MAJORS: BS/ChE, ME
POSITION: Commercial Sales Engineering
LOCATION: Nationwide
INTERVIEWING: Dec. 1991, May, July 1992 grads
MINIMUM G.P.A.: 2.6
CITIZENSHIP: Students must be authorized
to work in the U.S. on a
full-time basis

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

CENTRAL INTELLIGENCE AGENCY
Rt. 5, P.O. Box 283B
Mexico, MO 65265
attn: Mr. Robert Bell

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS EE, Comp Sci, Economics
POSITION: Engineers & Computer Scien-
tists. (Detailed job descriptions will be avail-
able at time of interview signups.)
LOCATION: Washington, D.C./Northern VA
INTERVIEWING: December 1991, May 1992 grads
MINIMUM G.P.A.: 3.0
CITIZENSHIP: U.S. Citizenship required

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

MINNESOTA MINING & MANUFACTURING CO.
3M Center, Building 224-1W-02
St. Paul, MN 55144-100
attn: Ms. Barbara Kronholm

NUMBER OF SCHEDULES: 1
MAJORS: BS/ChE, EE, ME
POSITION: R&D, Proc.Eng., Mfg.;
Project Eng.; Design; Process Instrumentation
and Control Systems
LOCATION: St. Paul, MN; Austin, TX;
and manufacturing plant sites
throughout the U.S.
INTERVIEWING: Dec. 1991, May, July 1992
grads
MINIMUM G.P.A.: 3.0
CITIZENSHIP: U.S. or others authorized to
work in the U.S. beyond practical training

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATES: October 1, 2, 1991

ARCO OIL & GAS - continued from page 1
LOCATION: candidates interested in an initial assignment in
the Continental U.S., however, **candidates interview-
ing on this schedule will also be considered for
placement in Alaska.**
INTERVIEWING: Dec. 1991, May 1992 grads
CITIZENSHIP: Authorized to work in the U.S.
on a full-time basis

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATES: October 1, 2, 3, 1991

ARCO OIL & GAS EXPLORATION & PRODUCTION ALASKA
P.O. Box 2819
Dallas, TX 75221
attn: Ms. Peggy Kirkpatrick

NUMBER OF SCHEDULES: 2 ea day, Oct. 1, 2, 3
MAJORS: BS/MS ChE, ME, PE
POSITION: Engineer
LOCATION: Interviews on this schedule
will be conducted by personnel working in Alaska and
primarily seeking candidates interested in initial
assignment in Alaska, **however candidates
interviewing on this schedule will also be con-
sidered for placement in the Continental U.S.**
INTERVIEWING: Dec. 1991, May 1992 grads
CITIZENSHIP: Authorized to work in the U.S.
on a full-time basis

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATES: October 1, 2, 3, 1991

NOTE: STUDENTS SHOULD NOT SIGN UP FOR BOTH
ARCO OIL & GAS & ARCO ALASKA

**PLEASE BRING COMPLETE, UNOFFICIAL TRANSCRIPT
TO ARCO INTERVIEW.**

SQUARE D
3700 6th St. S.W.
Cedar Rapids, IA 52406
attn: Ms. Kathy Ness

NUMBER OF SCHEDULES: 2
MAJORS: BS/EngMgt, ME, EE
POSITION: Manufacturing, Mechanical or
Electrical Engineer - details will be posted.
LOCATION: Cedar Rapids, IA
INTERVIEWING: DEC. 1991 grads
CITIZENSHIP: Prefer not to interview non-
citizens with Student Visas

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATE: October 1, 1991

ARMCO RESEARCH & TECHNOLOGY
703 Curtis Street
Middletown, OH 45043
attn: Mr. David Britton

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS MetEng
POSITION: Research Engineer:
Conduct steel process and product research in
corporate research center
LOCATION: Middletown, OH
INTERVIEWING: Dec. 1991 or May,
July 1992 grads
CITIZENSHIP: U.S. or Permanent Resident
Visa required

INTERVIEW SIGNUP DATE: Friday, September 13, 1991
INTERVIEW DATE: September 27, 1991

CONOCO SUPPLY & TRANSPORTATION-ENGINEERING

600 N. Dairy Ashford
Room MA 1105
Houston, TX 77079
attn: Ms. Gail Ambres

NUMBER OF SCHEDULES: 1 ea day, Oct. 1, 2
MAJORS: BS/MS ChE, CE, EngMgt,
PE's or MBA's with undergrad
engineering degree
POSITION: Associate Engineer
LOCATION: various
CITIZENSHIP: Authorized to work on a
regular, full-time basis in
the U.S.

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATES: October 1, 2, 1991

UNION ELECTRIC

P.O. Box 149
St. Louis, MO 63166
attn: Mr. Robert Moeller

NUMBER OF SCHEDULES: 2
MAJORS: BS/MS EE, ME
POSITION: Engineer
LOCATION: St. Louis & Mid-Missouri
INTERVIEWING: December 1991 grads
MINIMUM G.P.A.: 2.5
CITIZENSHIP: Must be legally eligible
for employment in the U.S.

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATE: October 1, 1991

ANDERSEN CONSULTING

1010 Market Street
St. Louis, MO 63101
attn: Ms. Ruth Brock

NUMBER OF SCHEDULES: 5
MAJORS: BS/MS Comp Sci, EE, ME,
EngMgt, Mathematics
POSITION: Staff Consultants
INTERVIEWING: Dec. 1991, May 1992 grads
MINIMUM G.P.A.: 2.8
CITIZENSHIP: U.S. Citizen

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATE: October 3, 1991

ALCOA-WARRICK

P.O. Box 3567
Davenport, IA 52808
attn: Ms. Judy Shook

NUMBER OF SCHEDULES: 1-ChE; 1-MetE (BS/MS)
POSITION (ChE): Chemical/Process Engineers
at Alcoa work primarily in the refining and smelt-
ing operations. More complete details will be
posted at time of interview signups.
LOCATION: Any of 10 refining/smeltering
operations (nationwide)
POSITION (MetE): Metallurgical Engineers begin
at a fabricating plant involved in either process
control of ingot casting, rolling, forging, or
extruding operations
LOCATION: Any of nine fabricating
operations (nationwide)

INTERVIEWING: Dec. 1991 or May 1992 grads
MINIMUM G.P.A.: U.S. Citizen or Permanent
CITIZENSHIP: Resident Visa

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATE: October 3, 1991

IT IS REQUESTED THAT STUDENTS BRING A COPY OF THEIR
TRANSCRIPT, OFFICIAL, OR UNOFFICIAL, TO THEIR
INTERVIEW.

UNION PACIFIC RAILROAD

1416 Dodge St.
Omaha, NE 68179
attn: Mr. Roger Dillion

NUMBER OF SCHEDULES: 1
MAJORS: BS/CE, EE, ME, EngMgt
POSITION: Management Trainee
LOCATION: Omaha, NE
INTERVIEWING: December 1991, May, July 1992
grads

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

BHP MINERALS

550 California St.
San Francisco, CA 94104
attn: Ms. Elizabeth Dulay

NUMBER OF SCHEDULES: 1
MAJORS: BS/Mining Engineering
POSITION: Entry level engineering
position responsible for the completion of
various special engineering projects. Respon-
sible for planning, organizing, and controlling
each project assigned.
LOCATION: New Mexico
INTERVIEWING: Dec. 1991 or May 1992 grads

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

STANLEY CONSULTANTS, INC.

Stanley Building
Muscatine, IA 52761
attn: Mr. Tom Walgren

NUMBER OF SCHEDULES: 1
MAJORS: BS/ME, EE, ChE; MS/CE
(Environmental)
POSITION: Entry level ChE, EE, Environ.
and ME
LOCATION: Muscatine, Iowa
INTERVIEWING: December 1991 grads

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 27, 1991

UNIVERSITY OF MISSOURI-ROLLA

CAREER PLACEMENT
301 Norwood Hall

WEEKLY DETAIL LIST #1 - Fall 1991
Week of September 16-20, 1991

The Career Placement and Cooperative Training staff
wish to welcome you to our facilities, located on the
3rd floor, Norwood Hall.

REGISTRATION: All materials are available in the
reception area, Room 304 Norwood Hall. Registration
must be completed prior to submitting resumes for
prescreening and also prior to signing for inter-
views.

SIGNUPS AND RESUME PRESCREENING: 301 Norwood Hall
SIGNUP HOURS: 7:45 to 11:15 a.m.
1:00 to 4:15 p.m.

PRESCREENED INTERVIEWS

For prescreening companies, qualified students desir-
ing consideration must submit their resumes in Room
301 Norwood Hall prior to the deadline outlined in
the weekly detail list in The Miner. Resumes will be
mailed to participating companies three weeks prior
to their interview date, and they will select the
students they wish to interview. Selectee's names
will be posted on the Bulletin Boards in the signup
area and in the appropriate departments. Posting of
names will be done approximately two weeks before the
interview date with a four-day deadline for signing.

NON-PRESCREENED INTERVIEWS

Signups for those companies not participating in
prescreening will be held approximately two weeks
prior to the interview date. Look for these dates
in the Weekly Detail Lists and The Miner. Signups
will be put out for one day (or until schedule
fills). Signups will be on a first-come, first-
served basis; no priorities. Morning signups will
be for morning interviews; afternoon signups for
afternoon interviews. Back-up lists will be avail-
able for those students unable to obtain an inter-
view.

NOTICE: One schedule = approximately 12 interview
openings: 6 in the a.m.; 6 in the p.m., depending
upon starting & ending times per each individual
company's request.

MARTIN MARIETTA ENERGY SYSTEMS

78A Mitchell Road
Oak Ridge, TN 37831
attn: Ms. Griselda Williams

NUMBER OF SCHEDULES: 2
MAJORS: BS/MS ME, EE, EngMgt, Envir.E,
Chemistry, NE, CerE
POSITION: Various engineering &
scientific positions available
LOCATION: Oak Ridge, TN; Paducah, KY;
Portsmouth, OH
INTERVIEWING: recent grads, Dec. 91, May,
July 1992 grads
CITIZENSHIP: U.S. Citizenship required for
security clearance
MINIMUM G.P.A.: 2.75 or higher

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATE: October 1, 1991

BRING COLLEGE TRANSCRIPT & MARTIN MARIETTA APPLICA-
TION TO INTERVIEW. (Applications will be available
at time of interview signups.)

EXXON INC.

P.O. Box 2180
Houston, TX 77252-2180
attn: Ms. Shirley Bates

NUMBER OF SCHEDULES: 2 ea day
MAJORS: BS/MS ChE, ME, PE, GeolEng,
MiningE
POSITION: Engineering assignments in
production, marketing, refining, chemical oper-
ations, manufacturing, systems and research and
development
LOCATION: Nationwide
INTERVIEWING: Dec. 1991, May, July 1992
grads
CITIZENSHIP: U.S. Citizens or aliens who
have the right to permanently work in the U.S.
MINIMUM G.P.A.: PREFER "B" OR ABOVE

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATES: October 2, 3, 1991

STUDENTS SHOULD BRING COMPLETED EXXON APPLICATION
AND COPY OF TRANSCRIPT TO INTERVIEW.
(Exxon application will be available at time of
interview signups.)

PRESCREENED INTERVIEWS**HALLMARK, INC.**

P.O. Box 419580
Kansas City, MO 64141-6580
attn: Ms. Cathy Wagner

NUMBER OF SCHEDULES: 1
MAJORS: BS ONLY in General Business
Management, Liberal Arts & EngMgt.
POSITION: Section Manager or Production
Engineer
LOCATION: Kansas City, MO; various KS
INTERVIEWING: Dec. 1991 or May 1992 grads
MINIMUM G.P.A.: 2.8
CITIZENSHIP: U.S. Citizens and aliens
lawfully authorized to work in the U.S.

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATE: September 30, 1991

ARCO OIL & GAS COMPANY

P.O. Box 2819
Dallas, TX 75221
attn: Ms. Peggy Kirkpatrick

NUMBER OF SCHEDULES: 1 ea day, Oct. 1, 2, 3, 1991
MAJORS: BS/MS ChE, ME, PE
POSITION: Engineer
Twelve-month Engineering Development Program for
regular full-time employment leading to an assign-
ment in one or more of a variety of engineering
positions involved in developing and producing
crude oil and natural gas.
LOCATION: Interviews on this schedule
will be conducted by personnel currently working
in the Continental U.S. and primarily seeking
ARCO OIL & GAS - continued on page 2

CURA, INC.
6031 S. Loop East
Houston, TX 77033
attn: Ms. Judy Talkington

NUMBER OF SCHEDULES: 3
MAJORS: BS/MS Environmental
Engineering & Geology
Geologists I & II
POSITION(S): Engineer I & II: BS/MS ChE, ME, CE, or
Environmental Engineering, or other recognized
engineering degree (Details will be posted with
interview signups.)
LOCATION: Dallas, TX; Houston, TX;
Midland, TX
INTERVIEWING: recent grads, Dec. 1991 grads

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATES: October 3, 4, 1991 (Oct. 4 -
call-back interviews)

WOLF CREEK NUCLEAR OPERATING CORP.
P.O. Box 411
Burlington, KS 66839
attn: Mr. David O. Reynolds

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS CE, NE, EE, ME
POSITION: Engineer I (entry-level)
LOCATION: Burlington, KS; Wichita, KS
INTERVIEWING: July 1991 or Dec. 1991 grads
MINIMUM G.P.A.: 2.5
CITIZENSHIP: Authorized for permanent
employment in the U.S. for other than practical
training status.

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATE: October 4, 1991

NORTH STAR STEEL
P.O. Box 9300
Minneapolis, MN 55440
attn: Mr. Dave Knupp

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS ChE, EE, MetE, ME,
Materials & Ceramic Eng.,
also EE, ME tech degree (4
yr.)
POSITION: Management Trainee
LOCATION: St. Paul, MN; Wilton, IA;

North Star Steel - continued

Milton, PA; Monroe, MI; Beaumont, TX;
Calvert City, KY; Youngstown, OH; Toledo, OH;
Houston, TX
INTERVIEWING: Dec. 1991, May 1992 grads
CITIZENSHIP: U.S. Citizen or Aliens with
legal right to work in the
U.S.

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATE: October 4, 1991

ETHYL CORPORATION
451 Florida Blvd.
Baton Rouge, LA 70801
attn: Mr. Gary Hinz

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS ME, EE, CE
POSITION(S): Project Engineering,
Mechanical Design, Mechanical Development, Instru-
ment Design, Electrical Design or Civil Design
INTERVIEWING: Dec. 1991 or May 1992 grads
MINIMUM G.P.A.: 3.0
CITIZENSHIP: U.S. Citizen or Permanent Visa

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATE: October 4, 1991

NON-PRESCREENED INTERVIEWS

ILLINOIS DEPT. OF TRANSPORTATION
2300 Dirksen Parkway
Springfield, IL 62764
attn: Ms. Sue Seppi

NUMBER OF SCHEDULES: 1
MAJORS: BS/CE
POSITION: Civil Engineer Trainees
LOCATION: Illinois-statewide
INTERVIEWING: December 1991 grads
CITIZENSHIP: U.S. Citizens and Appli-
cants must be authorized to work permanently
in the U.S.

INTERVIEW SIGNUP DATE: September 18, 1991
INTERVIEW DATE: October 3, 1991

COMPLETED IDOT APPLICATION AND STUDENT TRANSCRIPT
MUST BE PRESENTED AT TIME OF INTERVIEW. IDOT
APPLICATION WILL BE AVAILABLE AT TIME OF INTERVIEW
SIGNUPS.

EXXON INC.
P.O. Box 2180
Houston, TX 77252-2180
attn: Ms. Shirley Bates

NUMBER OF SCHEDULES: 2
MAJORS: BS/MS ChE, ME, PE, GeolEng,
MiningEng
POSITION: Production, marketing, refin-
ing, chemical operations, manufacturing systems and
research and development
LOCATION: Nationwide
INTERVIEWING: Dec. 1991, May, July 1992
grads
MINIMUM G.P.A.: Prefer G.P.A. of "B"
CITIZENSHIP: (refer to prescreened signups)

INTERVIEW SIGNUP DATE: September 18, 1991
INTERVIEW DATES: October 2, 3, 1991

STUDENTS SHOULD BRING COMPLETED EXXON APPLICATION
AND TRANSCRIPTS TO INTERVIEW.

The following companies will be interviewing
during the week of Sept. 30-Oct. 4, 1991. Infor-
mation is not available at this time:

FORD MOTOR COMPANY - Interview date: October 4

CANCELLATIONS: Burlington Northern: Sept. 18
Halliburton: October 10

CONOCO INFORMATION SYSTEMS
600 N. Dairy Ashford
Room MA 1105
Houston, TX 77079
attn: Ms. Gail Ambres

NUMBER OF SCHEDULES: 1
MAJORS: BS/MS Computer Science or Math
POSITION: Scientific Applications
Analyst/System Programmer (details will be posted
with interview signups)
LOCATION: Ponca City, OK; Houston, TX
INTERVIEWING: Dec. 1991, May 1992 grads
MINIMUM G.P.A.: 2.75
CITIZENSHIP: Authorized to work in the U.S.
on a full-time basis

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATE: October 1, 1991

CONOCO RESEARCH & ENGINEERING/REFINING N. AMERICA
600 N. Dairy Ashford
Room MA 1105
Houston, TX 77079
attn: Ms. Gail Ambres

NUMBER OF SCHEDULES: 2 ea day, Oct. 1 & Oct. 2
MAJORS: BS/MS ME, EE, CE, ChE
POSITION: Mechanical, Chemical & Civil
Chemical Engineers (entry-
level)
LOCATION: Ponca City, OK
INTERVIEWING: Dec. 91; May, July 1992 grads
MINIMUM G.P.A.:
CITIZENSHIP: Authorized to work on a
regular, full-time basis in the U.S.

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATES: October 1, 2, 1991

COMPANY RECRUITING INFORMATION MEETINGS

SEPTEMBER, 1991

9/5	MARATHON OIL COMPANY	MARK TWAIN ROOM, UCE	7:00 PM
9/9	PLACEMENT SEMINAR	ME AUDITORIUM RM 104	6:00 PM
9/19	CONOCO, INC.	CENTENNIAL HALL WEST, UCE	6:30 PM
9/24	UNOCAL	COMMONS AREA, MCNUTT HALL	6:30 PM
9/26	INDUSTRY DAY	MULTI-PURPOSE BLDG	9:30 AM 3:30 PM
9/26	A. E. STALEY	MISSOURI ROOM, UCE	7:00 PM
9/26	BHP MINERALS	MERAMEC ROOM, UCE	6:00 PM
9/30	CONOCO, INC.	MCNUTT HALL, RM 204, 206 AND 210	6:30 PM
9/30	ARCO, INC.	THIRD FLOOR NORWOOD HALL	7:30 PM

Summer Employment

UNIVERSITY OF MISSOURI-ROLLA
Office of Career Placement
301 Norwood Hall

SUMMER EMPLOYMENT

Fall Semester 1991 - List #1
Weeks of Sept. 16-20, 1991
Sept. 23-27, 1991

Registration forms for summer employment are located in 304 Norwood Hall. Information relating to summer employment is also available in Room 304 Norwood Hall.

Students interviewing for summer employment need to make multiple copies of their resume. You will use these copies to turn in for each company with which you want to prescreen. You will also need to turn in a copy each time you sign up for a non-prescreened interview. (Please refer to section on Prescreened Interviews & Non-Prescreened Interviews in Placement Information sheet.)

PRESCREENED INTERVIEWS

UNOCAL CORPORATION
P.O. Box 7600
Los Angeles, CA 90051
attn: Mr. Bob Endecavagheh

NUMBER OF SCHEDULES: 1/2 day schedule
MAJORS: Juniors/Seniors in Petroleum Engineering with one summer left before graduation.
POSITION: Engineer Assistant Positions
LOCATION: Domestic U.S. - West Coast, Gulf and Mid-Continent
MINIMUM G.P.A.: 2.8 or higher
CITIZENSHIP: Authorization to work in the U.S. required

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 25, 1991

CONOCO EXPLORATION PRODUCTION ENGINEERING
600 N. Dairy Ashford
Room MA 1105
Houston, TX 77079
attn: Ms. Gail Ambres

NUMBER OF SCHEDULES: 1
MAJORS: Sophomore, Junior, & Senior (with one summer remaining) in PE, ME
POSITION: Summer Student Engineer
LOCATION: Continental U.S.

INTERVIEW SIGNUP DATE: September 18, 1991
INTERVIEW DATE: October 2, 1991

EXXON INC.
P.O. Box 2180
Houston, TX 77252-2180
attn: Ms. Shirley Bates

Exxon will review resumes for summer employment. Considering, ChE, PE, ME, GeolEng, MiningEng - Juniors or above. Positions exist in production, refining, or marketing. Details will be posted with interview signups. The company recruiter will contact you for a possible interview.
LOCATIONS: California, Louisiana, Texas
CITIZENSHIP: Must be U.S. Citizens or aliens who have the right to permanently work in the U.S.
MINIMUM G.P.A.: Prefer "B" average

IF YOU ARE CONTACTED FOR AN INTERVIEW, PLEASE BRING COMPLETED EXXON APPLICATION & TRANSCRIPT TO THE INTERVIEW.

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATES: October 2, 3, 1991

CHEVRON USA INCORPORATED
11111 South Wilcrest
Houston, TX 77236
attn: Mr. Clyde Trickey

NUMBER OF SCHEDULES: 1/2 day schedule
MAJORS: Petroleum Engineering
Roustabout - Entry-level engineering work, depending upon school year/experience
LOCATION: Nationwide

CITIZENSHIP: Must be U.S. Citizen and Permanent Visa Holders

DEADLINE FOR TURNING IN RESUMES: September 9, 1991
INTERVIEW DATE: September 25, 1991

PROCESS ENGINEERING INTERN

POSITION WITH PROTEIN TECHNOLOGIES INTERNATIONAL
Checkerboard Square
St. Louis, Missouri 63164
attn: Ms. Deana Juergens

Protein Technologies, International has requested resumes from students who have completed at least one year of college, working towards a degree. The position will be available from January through Summer 1992. Essential skills include the following:

Programming, computer/PC, strong math background, statistics/previous work.

Please submit resume to Jane Allen, Room 301 Norwood Hall, prior to September 9, 1991. Your resume will be mailed to the company; the company will contact you if they are interested in arranging an interview.

WESTINGHOUSE ELECTRIC CORPORATION

Westinghouse Building, Gateway Center
Pittsburgh, PA 15222
attn: Mr. Erle Johnson, Manager University Programs

Juniors, Seniors pursuing their degrees in EE, ME, EngMgt, NE, ChE, EvironEng, may submit their resumes to Jane, 301 Norwood Hall no later than September 9, 1991.

PRESCREENED INTERVIEWS

ARCO OIL & GAS COMPANY
P.O. Box 2819
Dallas, TX 75221
attn: Ms. Peggy Kirkpatrick

NUMBER OF SCHEDULES: 3 ea day, Oct.1-3
MAJORS: ChE, ME, PE
POSITION: Summer Engineer
LOCATION: Arco Oil & Gas Co. or Arco Alaska -

to information Re: Arco, Permanent Employment
Detail List #3

INTERVIEWING: Fall 1992 or Spring/Summer 1994 grads

CITIZENSHIP: Must be authorized to work in the U.S. on a full-time basis

DEADLINE FOR TURNING IN RESUMES: Sept. 12, 1991
INTERVIEW DATES: October 1-3, 1991

PLEASE BRING COPY OF UNOFFICIAL TRANSCRIPT TO THE INTERVIEW.

MINNESOTA MINING & MFG. CO.

3M Center, Building 224-IW-02
St. Paul, MN 55144-1000
attn: Ms. Barbara Kronholm

3M DOES NOT INTERVIEW FOR SUMMER, BUT WILL ACCEPT RESUMES FROM JUNIORS WHO HAVE COMPLETED THEIR JUNIOR LEVEL WITH A B AVERAGE IN CHEMISTRY, PHYSICS, ChE, ME, EE, MetE or CerE. Other opportunities also exist. Please turn your resume in to Jane, 301 Norwood Hall, by Sept. 12, 1991. The company will contact you if they are interested.

UNIVERSITY OF MISSOURI-ROLLA
CAREER PLACEMENT & COOPERATIVE TRAINING
301 Norwood Hall

TENTATIVE PLACEMENT SCHEDULE
FALL 1991 SEMESTER

SEPTEMBER 6
PLACEMENT SEMINAR
TIME: 6:00 p.m.
LOCATION: ME Auditorium

SEPTEMBER 16-17
U.S. Marines - located on the hockey puck, UMR

SEPTEMBER 18
Burlington Northern
Saturn Corporation

SEPTEMBER 19
Texas Utilities
Westinghouse

SEPTEMBER 20
Westinghouse

SEPTEMBER 23
Allied Signal
Burns & McDonnell
Northern Illinois Gas

SEPTEMBER 24
Black & Veatch
Burns & McDonnell
Factory Mutual
Frito Lay
Stockham Valves & Fittings

SEPTEMBER 25
Burns & McDonnell
Chevron (PE schedules)
Ingersoll Rand
Unocal

SEPTEMBER 26
Industry Day - Gale Bullman Multi-Purpose Building
9:30 a.m. to 3:30 p.m.

SEPTEMBER 27
Armco Research
BHP Minerals
Central Intelligence Agency
Grain Processing
Lever Brothers
LTV Steel
Mobil - Beaumont Refinery
React
Staley Company
Stanley Consultants
State Farm
Texaco, Inc.
Texas Eastman
Union Pacific Railroad
Williams Natural Gas
Williams Telecommunications

SEPTEMBER 30
Hallmark

OCTOBER 1
Arco
Conoco
Martin Marietta Energy Systems
3M
Union Electric

OCTOBER 2
Arco
Conoco
Exxon
3M

OCTOBER 3
Alcoa-Warrick
Anderson Consulting
Arco
Cura Co.
Ethyl Corporation
Exxon
Illinois Dept. of Transportation

OCTOBER 4
Arco
Cura Co.
Ethyl Corporation
North Star Steel
Wolf Creek Nuclear Operating Corporation

OCTOBER 7
Boeing
Dow Chemical
Missouri State Highway
Pepsi Cola
Shell Oil Co.
Southwestern Bell
Western Geophysical

OCTOBER 8
Alcoa - Davenport
Arkansas Best
Chevron
Contech
International Paper
Marathon Oil (Pipeline)
Missouri State Highway
Oklahoma Gas & Electric
Shell Oil

OCTOBER 9
Arkansas Eastman
Chevron
Marathon Oil (Pipeline)
Motorola, Inc.
Procter & Gamble (Cape Girardeau)

OCTOBER 10
BASF
California State Dept. of Transportation
Consol
Deere & Company
Ethyl R&D
Halliburton Services
John F. Kennedy Space Center (NASA)
Kimberly Clark
Koch Industries
Marathon Oil (Pipeline)
North Supply Co.
Procter & Gamble (Cape Girardeau)
United McGill

OCTOBER 11
STUDENT COUNCIL FREE DAY - NO CLASSES

OCTOBER 14
Cargill
Hughes Aircraft

OCTOBER 15
Cargill
Delhi Gas Pipeline
General Motors
Missouri Division Natural Resources
Phillips Petroleum Co.
Professional Services
Vista Chemical

OCTOBER 16
Commonwealth Edison
Delhi Gas Pipeline
General Motors
Phillips Petroleum Co.
Professional Services
R.W. Murray
Vista Chemical Co.

OCTOBER 17
General Motors
State Farm Insurance
Texas Instruments

OCTOBER 18
Baxter Health Care
Dynetics
Etech Systems Corp.
Iowa Electric Light & Power
Texas Instruments

OCTOBER 21
Amoco-Wood River

OCTOBER 22
Amoco-Whiting
Amoco-Production
Amoco-Chemicals
Amoco-Information Services
Amoco-R&D
Amoco-Geophysics
Dow Corning
General Electric

OCTOBER 23
Amoco-Whiting
Amoco-Production
Amoco-Chemicals
Amoco-Information Services
Dow Corning
General Electric

OCTOBER 24
Amoco Chemical
Dow Corning

OCTOBER 25
Anheuser Busch
AT&T
Dow Corning
Hutchinson Technologies
Illinois Power

OCTOBER 29
Amsted Industries
B&V Waste, Inc.
Department of Energy-Washington, D.C.
Federal Highway Administration
First Brands
Laclede Gas
Monsanto Chemical Co.
National Starch & Chemical Co.
Olin
Schlumberger Well Services

OCTOBER 30
Central Illinois Public Service
Dowell Schlumberger
First Brands
Monstanco
Schlumberger Well Services
Olin

OCTOBER 31
Dowell Schlumberger
Maytag
Turner Corporation
U.S. Corps of Engineers-KC
U.S. Marine Corps (Hockey Puck)
Xerox Corporation

NOVEMBER 1
General Mills
U.S. Marine Corps (Hockey Puck)

NOVEMBER 4
Bibb & Associate

NOVEMBER 5
Marathon Oil Co.

NOVEMBER 6
Law Environmental
Marathon Oil Co.
Union Carbide Chemicals & Plastics

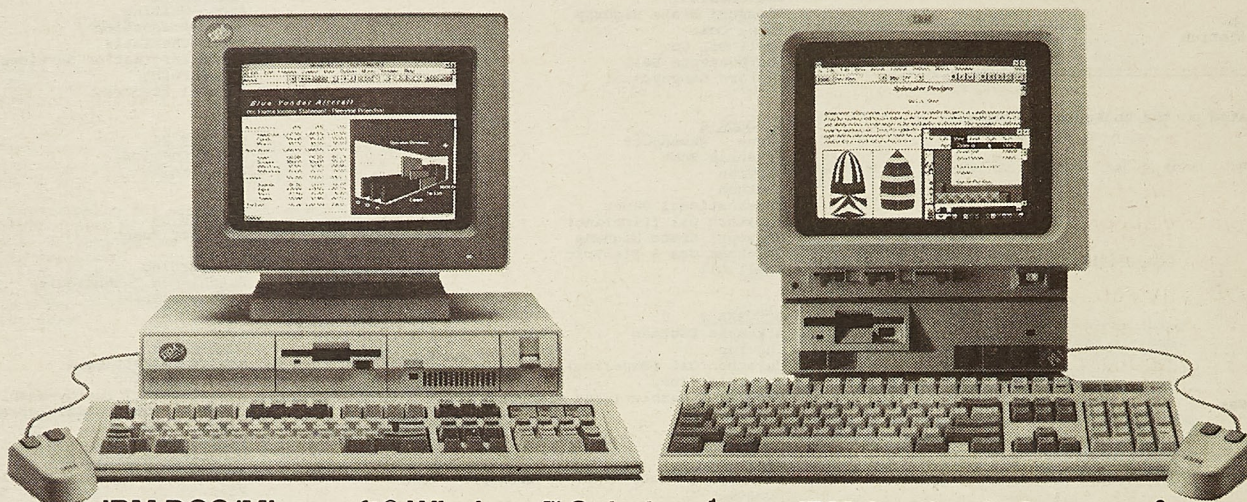
NOVEMBER 7
Colonial Pipeline
Harris Corporation
Union Carbide Chemicals & Plastics

NOVEMBER 12
Brown & Root
Atlas Wireline

NOVEMBER 18-19
IBM-Information Day: Nov. 18, Centennial Hall
IBM-Interviews: Nov. 19, Centennial Hall

NOVEMBER 25
U.S. Marine Corps (Hockey Puck)

First choose your major. Then choose your weapon.



MODEL	PS/1 2011-135	PS/2 8555-181	PS/2 8557-3T1	PS/2 8570-181	PS/2 LAPTOP 8543-3T1	PS/1 2011-U35	PS/2 8530-U42	PS/2 8555-U41	PS/2¹ 8555-W81	PS/2¹ 8557-3W1	PS/2¹ 8550-W81
MEMORY	2.5MB	4MB	4MB	4MB	2MB	2.5MB	2MB	4MB	4MB	4MB	4MB
PROCESSOR SPEED	10 MHz	16 MHz	20 MHz	25 MHz	20 MHz	10 MHz	10 MHz	16 MHz	16 MHz	20 MHz	25 MHz
FIXED DISK DRIVE	30MB	80MB	80MB	80MB	60MB	30MB	45MB	40MB	80MB	80MB	80MB
DISPLAY	VGA Mono	8515 Color	8515 Color	8515 Color	LCD	VGA Color	8513 Color	8513 Color	8515 Color	8515 Color	8515 Color
PRICE*	\$1,099	\$2,549	\$3,299	\$4,199	\$3,599	\$1,249	\$1,699	\$1,999	\$2,599	\$3,349	\$5,499

*All models include an IBM mouse and are preloaded with DOS 5.0, Microsoft Windows 3.0, Microsoft Entertainment Pack for Windows and ToolBook™ (runtime version). Laptop Model 3T1 includes an IBM Trackpoint instead of an IBM mouse.

†These models also include Microsoft Word for Windows,† METZ™ File F/X, Reference Software Grammatik,† hDC MicroApps™ and Formula Editor.

††These models also include Microsoft Excel® 3.0.

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student prices and affordable loan payments** Buy now, and you'll get a special Bonus Pack† worth over \$1,000 in savings on air travel, phone calls, software and more. Visit your campus outlet to find out how to *make an IBM Personal System click for you.*

For More Information Contact:

David Fannin
114 Math/Comp Sci
341-4841

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