



THE ANOMALY

Volume 2, Issue 2

Fall 2000

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"Seeing the

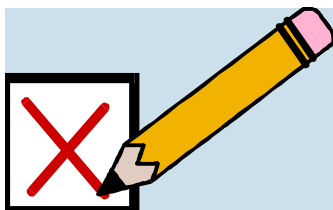
Unseen" CD

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Are You Prepared For Your Future?

In this issue of *The Anomaly*, we'd like to stay on topic with this past month's *Leading Edge* theme of Education and Careers. In addition to our regular graduate school feature, we've added a column called "The Links." Here you'll find a fairly comprehensive list of websites that are dedicated to job searches for college graduates, as well as some

helpful tips for job hunting. In addition, we've put together a simple careers survey on our own website, that I hope each and every one of you will take a moment to fill out. Information you provide here can help us determine what services would be most helpful to provide to students in the future. The results will be tabulated and reported in the next issue.



Help us help you!

Fill out our new Student Career Survey on the web. Results will be tabulated in the next issue of *The Anomaly*.



students.seg.org/survey.html

THE LINKS



JobDirect.com Specifically designed to help college students and recent graduates find internships, part-time jobs and “real jobs”

campus.monster.com Career guidelines for new grads, as well as resume and interview tips.

CareerMag.com Online magazine that provides access to a wide range of job search resources.

CollegeHire.com Online recruiting service for high-tech college students.

JobTrak.com A job search database specifically for students and alumni at a host of US colleges and universities.

CollegeRecruiter.com Jobs for college students, graduates and recent grads. Features searchable database, continuing educations, loans, scholarships, and a learning center.

CollegeGrad.com Largest open access career website for entry level job search for college students and recent grads. Info on resumes, networking, jobs, employers, interviewing.

Graduating this year?

Don't forget to update your membership information with the SEG! Change in address data can be sent to:

Trish Wacker
twacker@seg.org

Need to upgrade to Associate status?

Download the application from the SEG website:

seg.org/services/membership

SEG Student Newsletter

Want to see your school highlighted?

Have an issue you'd like to raise?

Want to know about employment opportunities?

This is YOUR newsletter, tell us what you'd like to see!

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Student Section Spotlight: The University of Oklahoma

The University of Oklahoma student SEG section is a student organization dedicated to involving graduate and undergraduate geophysics and geology students in practical experiences in the field of exploration geophysics beyond what is taught in the classroom. They also promote the geophysical profession to interested high school and undergraduate students.

The section periodically organizes and sponsors field trips to sites of geophysical interest and visits to important conferences, such as the Annual SEG Convention and the SEG/AAPG Student Expo. The student section enjoys a close association with the Geophysical Society of Oklahoma City. As invited guests of the GSOC at their monthly meetings, we learn from practicing professionals in a friendly atmosphere. The GSOC also sponsors most of the eight SEG Foundation Scholarships that were issued to local students.

The students that belong to SEG focus on a broad range of areas within the geophysical profession, from gravity and magnetics, ground penetrating radar, electro-magnetics and seismic data processing, to seismic interpretation, DHI techniques and time lapse

seismic reservoir monitoring. This research is conducted in various labs that are operated by our faculty, including SCIF (the Shell Crustal Imaging Facility), the Seismic Interpretation, the Seismic Stratigraphy and the Reservoir Characterization labs. Student SEG members have produced many and varied publications over the years including eight papers that were presented at the Calgary SEG meeting this past August.

Our students are also involved in activities to help broaden the knowledge of the geophysical profession, such as the “Ask a Geophysicist” initiative conducted by the SEG headquarters to establish contact between people involved in geophysics with students in the high school and lower college levels. Also, for this coming year, our chapter is planning to attract prospective students by visiting high schools and participating in career fairs.

Hansel J. Gonzalez
President



**Interested in
starting an
SEG Student
Section
at YOUR school?**

You just need 10 members to become an official SEG Student Section! Log on to the student webpage at:

<http://students.seg.org>

Here you'll find everything you need, from guidelines and requirements to an example Student Section Constitution.

Don't miss out on the many benefits the SEG offers Student Sections... create yours to-day!

GEOPHYSICAL ENGINEERING at MONTANA TECH

(submitted by Dr. Curtis Link)

Montana Tech

Montana Tech is located in the city of Butte in southwest Montana. Formerly the Montana School of Mines, 'Tech' as it is affectionately called, is now officially *Montana Tech of the University of Montana*. Tech is celebrating its centennial this year recognizing the important roles that its historical programs have played in earth resources industries.

Surroundings

Montana Tech and Butte are in an ideal location in southwest Montana. Summer and warm weather activities center around 'getting out in the hills'. Hiking, mountain biking, running, fishing, and rafting are all popular activities that can be done close by in a variety of places. Winter generally focuses on skiing: alpine, cross-country, telemarking, or skate-skiing. Groomed ski areas are a short drive and there are many nearby locations that are simply awesome for back-country skiing. Butte also is home to the High-Altitude Sports Center, which has a speed-skating track open to the public and hosts world speed-skating competitions. Butte's elevation is about 5800 ft (depending on which part of town you're in) and is just west of the Continental Divide. Six mountain ranges can be seen from the top of 'Big Butte'; the hill with the 'M' on it.

Geophysical Engineering at Tech

The geophysical engineering program is one of only two ABET accredited geophysical engineering (GE) programs in the nation. In addition to a sound basis in engineering principles and design, the undergraduate program at Tech emphasizes geophysical exploration for earth resources such as minerals and hydrocarbons. Many of our undergraduates find employment in the petroleum industry either working for oil companies on exploration teams to identify oil or gas prospects, or with service contracting companies providing seismic surveys and related services. Mining companies also employ Tech's GE graduates, and, more recently, opportunities in the environmental sciences are increasing. These jobs might entail applications of geophysical techniques to locate and identify buried unexploded ordnance (UXO), delineate zones of contamination in groundwater or soil, or other applications of detecting buried objects.

Recent trends for oil companies are the requirement of a Master of Science (MS) degree for entry positions. The GE department at Montana Tech offers two options to obtain

an MS degree. The traditional route of entering the MS program after receiving a BS, or Tech's 5-yr MS program where students begin working on their graduate requirements in their senior year. A graduate in our master's program receives an MS degree in Geoscience with an option in Geophysical Engineering.

A strength of our program is its modest size and its very favorable student to faculty ratio. Students have almost unlimited access to faculty, a high level of personalized instruction, and many opportunities for hands-on experiences in field, laboratory, and computer projects. Faculty areas of expertise cover the areas of seismic exploration, electrical and electromagnetic techniques, potential field methods (gravity and magnetics), ground-penetrating radar, remote sensing, image analysis, and neural networks. All of the faculty are presently or have recently worked on funded research projects in their respective areas.

Research

Recent research activities have expanded recently with projects in reservoir characterization (DOE/EPSCoR), rockburst characterization (DOD/EPSCoR), and remote sensing/remotely piloted aircraft (NASA). As a result, there are increased opportunities in research with about 11 projects completed in the past few years. Research is presently ongoing in the Mine Waste Technology Program (MWTP) which is focused on developing models of the Berkeley Pit, the huge void left by open-pit copper mining. Neural networks are being used in many of the research areas as an innovative modeling/inversion technique. The department owns a remotely piloted aircraft constructed to fly a variety of instrument packages including a spectrometer, video camera, still camera, and a global positioning system (GPS).

The faculty maintains close ties with industry which is critical to identify relevant projects for students to work on as well as for obtaining intern and permanent employment positions. The GE department maintains up-to-date versions of software in widespread use by oil and service companies so students have the opportunity to work with and get hands on experience with software packages that they would use after graduation.

Research Facilities

The geophysical engineering department houses the most advanced computer facilities on Montana Tech's campus. Seven Silicon Graphics (SGI) workstations are available for student use along with SUN workstations and LINUX configured PCs. Configurations range to dual monitors, multiple processors, and up to 2 GB of ram. Undergraduate and



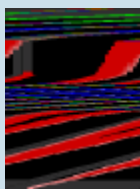
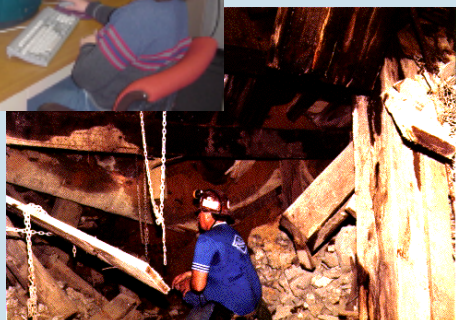
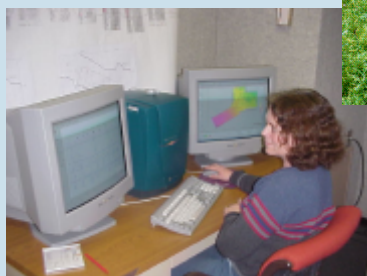
graduate students also have access to a full array of field equipment including modern field vehicles and instruments for making seismic, magnetic, gravity, electrical, electromagnetic, borehole, and ground-penetrating radar measurements.

Employment

Geophysics graduates typically enjoy 100% job placement. Starting salaries are excellent and are typically around \$50,000. In addition to good salaries, many of job opportunities offer opportunities for world travel and/or working in 'exotic' locations. Employment trends are always difficult to predict in the extractive industries, however, recent price trends for petroleum and the fact that the age peak of employees is shifting ever higher indicate the potential for increased job opportunities.

Financial Information

Typical expenses for graduate students at Tech are \$300 for rent, \$350 for fees, \$400 for medical insurance if required. Departmental funding is generally available as in-state fee waivers, out-of-state fee waivers, graduate teaching assistantships, and research assistantships.



Check it out:

<http://markov.mtech.edu>

Enrollment and Degrees

Number in geophysics in 1999:

Undergraduate 20

Graduate 6

Number of geophysics freshman in 1999:

Undergraduate 9

Number of male students:

Undergraduate Male 14

Graduate Male 4

Number of female students:

Undergraduate Female 6

Graduate Female 2

Degrees offered: B.S., Geophysical Engineering

Degrees offered: M.S. Geoscience, Geophysics Option

Faculty



Link, Curtis A., Department Head, Associate Professor

(406) 496-4165, clink@mtech.edu

Ph.D., 1993, University of Houston

Reservoir characterization, crosswell/surface seismic methods, neural networks, data mining.

Moon, Thomas S., Professor

(406) 496-4350, tmoon@mtech.edu

Ph.D., 1985, University of Washington

Remote sensing, image processing, wavelet processing, paleomagnetic methods.

Sill, William, R., Professor

(406) 496-4216, wsill@mtech.edu

Ph.D., 1967, Massachusetts Institute of Technology

Potential field methods, inversion theory, gravity, magnetic, electrical techniques.

Speece, Marvin A., Associate Professor

(406) 496-4188, mspeece@mtech.edu

Ph.D., 1992, University of Wyoming

Shallow seismic methods, ground-penetrating radar, signal-processing.

How to Ace your On-Campus Interview

Consider the on-campus interview for a moment. You will be spending twenty to thirty minutes in a tiny room with a total stranger. This person will subsequently decide whether you will ever have a chance of working for their company. The best you can hope for is to avoid being disqualified, which only takes you one step further into the interviewing maze. One little mistake, one little error, and you could be history.

Actually, the entire process seems rather absurd, except for the fact that you will not get a job without playing the interviewing game. And on-campus interviewing is often the starting point for the interviewing process.

PREPARATION

How To Choose the Very Best Companies to Interview on Campus

Choose your interviews wisely. Year after year, students flock to the “household name” companies that come to campus (Exxon-Mobil, IBM, etc.), while some of the best employers go almost unnoticed, unable to fill their available interview slots. Why? Because they are not well-known, and few students take the time to do the research and find out about these companies. Often there are pleasant surprises when looking into many of the smaller companies, which are often more growth-oriented and offer better opportunities for career advancement.

Increasing Your Hit Rate with Invitational Interviews

The current trend at many schools is the invitational interview or “closed” interview, which involves forwarding the resumes of all interested students to the employer, who then selects those who will be interviewed.

Speak to their needs in your resume, and you will get the invitation.

The key to mastering the invitational interview game is to make each and every submitted resume specific to that employer. This is no time for a “generic resume” that speaks to everyone. Ask the Career Placement Office at the beginning of the semester which companies will

be holding closed interviews. Then ask for as much information as possible about each of these employers and the position requirements, including any minimum requirements for inclusion (such as GPA or major). Also, ask when the screened resume packet will be mailed to the employer. Prepare your resume to emphasize those aspects of your background that meet or exceed the requirements. Then submit your personalized resume to the Career Placement Office for inclusion in the employer’s resume packet. While it may be “standard” for the Career Placement Office to send out the on-file generic resumes, requests to use a customized resume will usually be honored.

Timing is Everything

Always request the last or second-to-last interview slot of the day. In addition to being easier to work into your schedule, these time slots carry the significant weight of being the most memorable time slots for the interviewer. If you want to be remembered, make it as late in the day as possible.

Do Your Research!

Take the time to load up with information at your Career Placement Office. Usually, they’ll be able to provide you with company financial reports, as well as marketing brochures that will give you a good overview of the company. Use the Internet to your advantage as well; most companies will have fairly detailed websites that might even delve into the type of work you’d be looking for. The more you know about a company, the better.

THE DAY OF

Dressing for Interview Success

Campus fashions and work fashions are two different worlds.

While the college campus may be the perfect forum in which to exhibit your flair for the latest in fashion style, the interview is not the place to do so. Even though many companies have relaxed the internal com-

pany dress code, interviews still follow the conservative standard. Don’t buck the trend.

For men, the following is recommended:

- Necktie should be silk with a conservative pattern
- Dark shoes and socks
- Get a haircut; short hair always fares best in interviews
- No beards
- No rings other than wedding ring or college ring
- No earrings (if you normally wear one, take it out)

For women:

- Always wear a suit with a jacket; no dresses
- No high heels
- No purses, small or large; carry a briefcase instead
- If you wear nail polish, choose a clear or conservative color
- No more than one ring on each hand
- One set of earrings only

For both men and women, make sure to use minimal or no cologne or perfume. Empty your pockets of all coins and keys, and carry a light briefcase or portfolio case. Finally, no gum or candy, and certainly no cigarettes. Remember, you want the interviewer to remember you for your qualifications, not by what you were wearing.

What to Bring to your On-Campus Interview

Yourself, your 9" x 12" portfolio/folder, two copies of your resume, copies of your top three letters of recommendation, any company information you have gathered, and any show and tell information you may want to use. Nothing more, nothing less. Do not take notes unless you are specifically asked to take an action which you need to record for memory, remember who is interviewing whom.

How to Immediately Impress an On-Campus Recruiter

Be punctual. Nothing sets the tone worse than to keep an interviewer waiting. Shake hands firmly and stand until offered a chair. Upon introductions, don't use the interviewer's first name unless they've expressly asked you to do so.

A smiling face can work wonders with a weary interviewer.

If you have done your job well in researching the company, carry the information with you to the interview – not packed away in your folder, but out where it can be seen. It shows you have done your homework. Make sure you know the information inside and out. This is

not just a prop for show, since you will be expected to know more about the company if you have it. Good preparation will always impress an on-campus recruiter, whose day often consists of explaining, over and over, what their company does. Finally, someone who understands in advance! You have made a connection.

Know Your Competition

Welcome to the competitive world. Welcome to reality.

They are sitting there in class with you. They will also be sitting there in the interview waiting room or shaking hands with the interviewer in the time slot just before (and after) yours. All those students you have been competing with for

grades are now your direct competition for jobs – at least for the jobs that come calling to your campus. They are the same ones who blew the top end of the curve on the last test. But keep in mind that this is not the chemistry final. It is not how much you know, but how well you communicate. The 4.0 student who cannot interact with anything other than a pencil will have as much (or more) difficulty finding a job than others. Know your competition and what they have to offer; know yourself and what you have to offer. Be ready to differentiate and sell yourself based upon your unique skills.

Don't Commit One of the Worst Interview Sins

One of the worst "sins" an interviewee can commit is to speak in generalities rather than specifics. If you are prone to using generalities, a sharp interviewer will usually follow with the behavioral question "Can you give me a specific example?" So beware! In fact, a favorite dual inter-

Don't force the recruiter to continually prompt you for full answers. They'll soon grow weary of the process and give up.

view question is: "Do you consider yourself to be goal-oriented?" (which to date has been answered 100% of the time with "Yes",) followed by: "Can you give me a specific example?" It's amazing how many people could not answer the second question, or (worse yet) attempted to snow their way past it.

An important aspect of being specific is to use the quantitative approach. Don't just say, "I increased productivity." Instead use, "I increased productivity in _____ by 25% in one year using _____."

Securing the Company-Site Interview

Just going through the motions of the on-campus interview is not enough to secure the company-site second interview. The first and most important step is to establish continuity at the end of the first interview. They typical, "Do you have any questions?" should leave you open for two select questions about the company (remember to do your research in advance so that these questions are appropriate and specific to the employer.) Then on to your final closing question: "From everything I have heard today, combined with my research about your company, I'm very interested in a possible opportunity with _____. What is our next step?" This will also let you feel out the recruiter's response to the interview, and often they will give you a timeline in which you can expect a call.

On-Campus Final Impression Technique

Want to leave an excellent final impression? Write out your "Thank You" note immediately after the interview. Sit down in the waiting room and scribe your response on the stationary that you brought with you. Then give the card to the receptionist and ask them to please pass on the card to the interviewer. If you are unable to get your thank you card to the interviewer that day, call the office and ask for their voicemail. When messages are checked that evening, your personal thank you will make a lasting impression.

By taking these simple steps, you will definitely stand out from the crowd.

GOOD LUCK!

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www.collegegrad.com

The Anomaly

Now Available!

The "Seeing the Unseen" CD is SEG's first career CD designed to be distributed to high school students to share with them the exciting field of exploration geophysics!

For more information, contact:

Trish Wacker
twacker@seg.org

