2-5-1981

Washington University Record, February 5, 1981
Earth Scientists Study Possibilities Of Prospecting Ores from Space

Prospecting from space using remote-sensing satellites is one possibility being examined in a new study of the Ozark Plateau and Missouri lead belt. The year-long study began in January when the National Aeronautics and Space Administration awarded two grants totaling $76,000 to the WU Department of Earth and Planetary Sciences for a comprehensive look at the steep, wooded southeast portion of the state.

Missouri has been the nation's top lead producer since nearly the turn of the century. When lead prices zoomed up 87 percent at the end of 1979, exploratory drilling increased rapidly. Yet even for the biggest mining companies, locating new ore deposits depends much on luck and educated guesswork.

WU scientists are trying to take the guess out of that work. They know that fracture patterns in the earth's crust seem to control the formation of lead and iron ores. By studying space pictures of the fractures in combination with ground information, they hope to understand better what causes this phenomenon to occur.

"Prospecting is the immediate goal," said Raymond E. Arvidson, WU associate professor of earth and planetary sciences and principal investigator for the project. "But ultimately, we want to learn more about the whole structure of the region and how it changes with depth."

According to Arvidson, many fractures in the Ozarks occur in ring-like patterns. "Imagine an upside-down ice-cream cone with the point at the earth's surface," he suggested. "We think that billions of years ago, molten rock flowed through such cone-shaped cracks and later cooled. As the crust eroded, ring-like cross sections were exposed."

Other fractures stem linearly, like the legs of a caterpillar, from a 40-mile-wide strip of ancient volcanic rock stretching from Kansas to Lake Superior. Known as the mid-continental gravity high, it may be a lava-filled scar where the continent once tried to split apart.

"The relationship of these volcanic rocks to ore bodies is still unclear," said Klaus J. Schulz. "Using data from space should give us a whole new perspective."

Schulz, Jill D. Pasteris and Geoffrey F. Davies, WU assistant professors of earth and planetary sciences, and researchers Edward Guinness and Betty Weiss are working with Arvidson as an investigative team.

Compiling a basement map of the Ozark Plateau is one of the team's goals. Basement, or Precambrium, rock is the begin-

Students Slated for Overseas Jobs In Business Student Exchange

The First National Bank of Zurich may become a WU business student's employer because of an international job exchange organization with a chapter at WU. The Association Internationale des Etudiantes en Sciences Economique et Commercial (AIESEC) offers business students an opportunity to live and work abroad by locating temporary internship positions in the U.S., Europe, South America and the Far East.

The student-managed organization has chapters in 58 countries and on 67 U.S. college campuses. Each chapter must find local employers willing to establish traineeships for international business students before its own members can take part in an exchange. Matching prospective interns with interested employers is done by computer during the annual International Congress of AIESEC held at the end of February.

The organization was founded in 1948 by students from seven European nations who saw the need to rebuild their war-torn countries and improve international relations. Worldwide expansion followed, and the first WU chapter was started in 1963. Interest in AIESEC-WU declined, and the group was reorganized last year. Since then, the revitalized chapter has made great progress in placing international students with St. Louis businesses.

Werner Dulnig of Zurich, Switzerland, is proof of the WU chapter's hard work. Dulnig, a 27-year-old graduate of the Advanced School for General Economics and Public Administration, was placed in a management traineeship at Moog Automotive Inc.

"We've found five more internships in various St. Louis corporations, including United Van Lines, Schnucks, and Russell and Axon," said Paul A. Ullman, past president of AIESEC-WU. "An additional five companies have expressed
Kathy Arkwell will use her flying skill to maintain orthodontic offices in Peoria, Ill., and the Virgin Islands.

**Student’s Dual Skills to Create Exotic, Airborne Dental Practice**

To go from being a receptionist in Peoria, Ill., to being a part-time flight instructor and practicing orthodontist with an office in the Virgin Islands is a giant career leap, but for Kathy Arkwell, it was carefully planned to combine the best of business and pleasure.

Arkwell, 26, will graduate this spring from the WU School of Dental Medicine with a master’s degree in orthodontics. By then, she also will have logged more than 1,200 hours of flying time. A pilot of seven years with commercial, instrument, sea-plane, multi-engine and flight instructor licenses, she gave flying lessons on evenings and weekends to help pay for her dental school tuition. Her abilities as a pilot will play an important role when she teams up with several orthodontists in Illinois who are beginning a satellite practice in the Virgin Islands.

“I always thought I’d own a plane before I owned a house,” said Arkwell, who originally planned to be a commercial airline pilot until she began teaching a dentist to fly. The airlines were not hiring pilots at the time, and she decided that dentistry would be a more lucrative way to combine her love of flying and her interest in medicine.

She acquired much of her flight time by running errands for the Byerly Aviation Co. at the Peoria Airport and by teaching flying at Walston Aviation in Bethalto, Ill., often packing textbooks to study between trips. “I got a lot of free flying time that way—I had the desire and I just stayed out at the airport a lot,” she said. During this period, Arkwell graduated from Bradley University in Peoria and earned her DMD from Southern Illinois University.

Now in her second and final year at WU, she looks forward to beginning a base practice in Peoria. She also anticipates periodic stints in the Virgin Islands where she will pursue two of her favorite hobbies—scuba diving and sailing.

Frequent traveling will be nothing new to Arkwell whose father was in the Air Force. Although he was not a pilot, she grew up with the idea of flying. “I’ve never thought it was unusual,” she said, noting that the Ninety-Niners’ Club, a national women pilots’ association, has several thousand members. “I’ve always thought it would be fun to have a satellite practice in an exotic place and be a flying dentist.”

**Lecture Series Begins Friday**

**On Romance, Symbolism of the West**

With designer blue jeans and cowboy boots *de rigueur* on the cocktail circuit, it is clear that the West is “in” and becoming more so, as California’s Reagan settles into the Oval Office.

Zeroing in on this theme, the Missouri Historical Society has asked Wayne D. Fields, WU associate professor of English, to deliver three lectures on “The West That Never Was.”

Fields will examine the romance of the West as reflected in politics, literature and cultural mythology in his series of addresses beginning Friday, Feb. 6. The topic of his first lecture will be “Lincoln and Douglas and the Political West.” He will focus on “Mark Twain and the Literary West” on Friday, March 6, and on “America and the Symbolic West” on Friday, April 3. The public is invited to these free lectures at 8 p.m. at the Jefferson Memorial in Forest Park.

Fields recently returned to campus after having spent last semester at the University of Copenhagen as a Fulbright-Hays lecturer in literature. While abroad, he lectured at various universities in Iceland, Denmark and Germany on the role of the frontier in American politics.

His interest in this area can be traced to his graduate student days when he wrote his dissertation on a rhetorical analysis of the Lincoln-Douglas debates. “Lincoln and Douglas disagreed on the meaning of the West in terms of American life,” Fields explained.

Fields will explore Mark Twain’s obsession “with creating a kind of literary West” at his second lecture. He will compare Twain’s Roughing It, with Parkman’s Oregon Trail.

In his final address in this series, Fields will discuss the difference between American writers before the Civil War, who thought of this country “as an endless source of new beginnings”, and those of the 1920s, who viewed the U.S. “as a land of lost possibilities.”

Fields is the editor of James Fenimore Cooper: A Collection of Critical Essays. He is working on a book entitled *A Redeeming Work: Storytelling in America*.

**Exchange**—continued from p. 1

sincere interest, and we’ll know next month whether or not they’ll accept interns.” Ullman noted that of all the new American chapters, AIESEC-WU was ranked number one by the national AIESEC board on the basis of the number of internships and money raised, chapter projects and newsletter.

AIESEC-WU members are now waiting anxiously for this month’s International Congress to see how many interns the WU chapter will be entitled to send overseas. At present, 10 WU students have been nominated for positions. There are no bilingual requirements, but speaking a foreign language will increase a student’s chances of selection.

In addition to raising internships, the WU group sponsors seminars with international themes and meets with international trainees in the St. Louis area. Its first regional training seminar will be held in St. Louis March 27-29. Approximately 100 students from 10 midwestern universities will attend the workshops on chapter organization and marketing techniques. Speakers familiar with international business, including Robert L. Virgil, dean of the WU School of Business and Public Administration, will address the conference.
Jones Honored by Globe-Democrat

At 76, Alice Hanson Jones, WU professor emeritus of economics, may have been the oldest of the 10 “Women of Achievement” honored by the St. Louis Globe-Democrat on Wednesday, Jan. 21. She was, almost certainly, the only one among them who had jogged a mile before accepting the award at a luncheon at the Chase-Park Plaza Hotel.

Weighted down with an orchid of awesome proportions, the elfin Jones was happy, nonetheless, as she received an engraved silver tray and an ovation from the crowd of 1,200 on hand for the ceremonies.

Cited for her scholarly accomplishments, Jones observed: “I was surprised and very pleased to be named a Woman of Achievement. In the academic world, recognition has come to me, but to be recognized by the Globe-Democrat, to be included in this group of women, is especially nice.”

The author of a monumental three-volume study, American Colonial Wealth—Documents and Methods, and more recently, of Wealth of a Nation To Be, a one-volume compendium of the larger work, Jones is a pioneer in the use of probate documents as a scholarly resource.

She has also been widely heralded for having earned her doctorate in economics at age 63 and for successfully overcoming bouts of heart trouble and cancer.

Refusing to succumb to either disease, Jones continues to work regularly in her McMillan Hall office on a variety of projects, including serving as a consultant on the St. Genevieve probate inventory study organized by the University of Missouri at Columbia. She is also helping Klaus Roth, a folk culturalist at the University of Münster’s Volkskundliches Seminar, to compile an international bibliography of works pertaining to probate inventories.

Continuing Education Dean Resigns

Richard J. Batt resigned as dean of the School of Continuing Education effective Feb. 1, 1981. James W. Davis, vice chancellor and associate provost, has been appointed administrator.

Edward T. Foote, special advisor to the chancellor and the Board of Trustees, has been asked to focus his efforts on the School of Continuing Education.

A visiting committee will be convened in February to consider the school.

Faculty Notes

Charles L. Leven, professor of economics, recently returned from a five-month sabbatical in England, Poland, and Israel. During that period, he lectured at several British institutions, including Cambridge University, and addressed the Conservative Committee of the British House of Commons. In Israel, he spoke at the University of Haifa and Technion University, and in Poland, at the Institute of Geography of the Polish Academy of Science.

Ervin Y. Rodin, professor of applied mathematics and systems science, has been elected president of the Society of Engineering Science. Rodin also was elected recently to chair the Joint Committee on Employment Opportunities, which represents the American Mathematical Society, the Mathematical Association of America and the Society of Industrial and Applied Mathematics.

Peter G. Tuteur, associate professor of medicine, has been named a Robert Wood Johnson Health Policy Fellow. The fellowship program allows professionals in academic settings to learn about major health policy issues. Tuteur will spend one year in Washington, D.C., where he will work with government officials on health policy.

Nelson Wu, Edward Mallinckrodt Distinguished University Professor of Art and Chinese Culture, recently gave his annual holiday lecture, “The T’ao-t’ieh, the Makara and the Chi’ih-wei: A Christmas Carol,” at Harvard University. His audience included former WU Chancellor Thomas H. Eliot and his wife.

Faculty in the News

Members of the WU faculty have been speaking out in media around the country on issues ranging from interferon research to the Iranian hostage crisis. In addition to St. Louisans, residents of cities around the country have read or heard about the research and reflections of WU faculty through local or national media. Since September, the following faculty members have been quoted or interviewed:

Robert J. Benson, associate vice chancellor, Chicago Tribune Services; Gary Sparks, manager of special projects, Chronicle of Higher Education; Michel M. Ter-Pogossian, professor of radiation sciences in radiology, CBS-TV; Robert L. Virgil, dean, School of Business and Public Administration, Kansas City Star.

John W. Olney, associate professor of psychiatry; William J. Catalona, associate professor of surgery; Jerome R. Cox Jr., professor of computer science; and Howard Nemerov, Edward Mallinckrodt Distinguished University Professor of English, Associated Press.

Memory P. Elvin-Lewis, associate professor of microbiology in dentistry, and Catalona, United Press International; Elvin-Lewis, CBS Radio; Leonard Green, assistant professor of psychology, Fortune; Merton C. Bernstein, Walter D. Coles Professor of Law, U.S. News and World Report; Philip W. Majerus, professor of medicine, Readers’ Digest.

Ronald L. Carlson, professor of law; Edward L. MacCordy, associate vice chancellor for research; and Cox, Business Week. William C. Jones, professor of law; Lester F. Eastwood Jr., associate professor of technology and human affairs, National Public Radio.

John F. Heuser, professor of physiology and biophysics, Encyclopaedia Britannica Film Services; F. Hodge O’Neal, dean, School of Law, Milwaukee Journal; Nemerov, New York Times; Clifford Hardin, scholar-in-residence, Nation’s Business; Lois Beck, assistant professor of anthropology, KDKA Radio, Pittsburgh.

Charles L. Leven, professor of economics; Cox and Eastwood, Christian Science Monitor.

Murray L. Weidenbaum, Edward Mallinckrodt Distinguished University Professor and a recent presidential designee, and Barry Commoner, director of the Center for the Biology of Natural Systems and a presidential candidate last year, both received extensive news coverage.

Kaffestunde Resumes

The Department of Germanic Languages and Literatures has resumed its weekly kaffestunde gatherings from 2:30 to 4 p.m. Wednesday afternoons in 222 S. Ridgley Hall. All faculty and students are invited to attend.

Alice H. Jones accepts a tray and a handshake from newspaper publisher G. Duncan Bauman. (Photo courtesy of the St. Louis Globe-Democrat.)
The New Globe Theatre will present three classic stage works February 6, 7 and 8 at Edison Theatre. Above are Carol Stevenson and Laura and John Fitzgerald as the gentleman caller in Tennessee Williams’ The Glass Menagerie. See Performing Arts listings for ticket information.


Performing Arts

Friday, Feb. 6

8 p.m. Edison Theatre Presentation, As You Like It, by Shakespeare, performed by the New Globe Theatre. Edison Theatre. Admission $6; $4.50 for WU faculty, staff and area students; $2.75 for WU students. Tickets available at Edison Theatre Box Office, 889-6543.

Saturday, Feb. 7

8 p.m. Edison Theatre Presentation, Candida, by Shaw, performed by the New Globe Theatre. Edison Theatre. Admission $6; $4.50 for WU faculty, staff and area students; $2.75 for WU students. Tickets available at Edison Theatre Box Office, 889-6543.

Sunday, Feb. 8

8 p.m. Edison Theatre Presentation, The Glass Menagerie, by Tennessee Williams, performed by the New Globe Theatre. Edison Theatre. Admission $6; $4.50 for WU faculty, staff and area students; $2.75 for WU students. Tickets available at Edison Theatre Box Office, 889-6543.

Exhibitions

“17th- and 18th-Century European Art,” Upper gallery, WU Gallery of Art, Steinberg Hall. 10 a.m.-5 p.m., weekdays, 1-5 p.m., weekends. Through March 1.

“Third Annual WU School of Fine Arts Alumni High School Art Competition Exhibition,” Bixby Gallery, second floor, Bixby Hall. 10 a.m.-12 noon and 1-4 p.m., weekdays; 1-5 p.m., weekends. Through Feb. 14.

American Art,” an exhibit of 19th- and 20th-century paintings. Lower gallery, WU Gallery of Art, Steinberg Hall. 10 a.m.-5 p.m., weekdays; 1-5 p.m., weekends. Exhibit displayed indefinitely.

“The Fine Art of Bookbinding,” a survey of the historical and decorative aspects of the craft. Includes representative items from the 15th century to the present. Fifth level, Olin Library. 8:30-5 p.m., weekdays. Through March 27.

“18th-Century Medical Historians,” an exhibition depicting the rise of medical biography as a distinct discipline, mounted from the WU Medical School rare book collection. WU School of Medicine Medical Library Annex. 615 S. Taylor. 8:30 a.m.-5 p.m., weekdays. Through March 1.

“Selections from the WU Permanent Collection of Art, Upper Gallery, WU Gallery of Art, Steinberg Hall. 10 a.m.-5 p.m., weekdays; 1-5 p.m., weekends. Through March 1.

Music

Sat., Feb. 7

8 p.m. Department of Music Graduate Recital, Gary Zink, cornetto soloist, Holmes Lounge.

Thursday, Feb. 12

8 p.m. Department of Music Concert, with the Collegium Musicum, an early music ensemble, directed by Nicholas McGegan, WU artist-in-residence. Graham Chapel.

Sports

Tuesday, Feb. 10

7:30 p.m. Women’s Basketball, WU vs. Maryville College. Francis Field House.

Films

Friday, Feb. 6

8 p.m. Classic American Film Series, “When Tomorrow Comes” and “Intermezzo: A Love Story.” Restock Auditorium. Admission $2.

8:30 p.m. WU Filmboard Series, “The Deerhunter,” Brown Hall Theatre. Admission $1.75. (Also Sat., Feb. 7, same time, Brown.)


Saturday, Feb. 7


Monday, Feb. 9

7:30 and 9:45 p.m. WU Filmboard Series, “Dersu Uzala.” Brown Hall Theatre. Admission $1.75. (Also Thurs., Feb. 12, same times, Brown.)

Wednesday, Feb. 11

7:30 and 9:45 p.m. WU Filmboard Series, “Born to Dance” and “Follow the Fleet.” Brown Hall Theatre. Admission $1. (Also Sun., Feb. 15, same times, Brown.)

Prospecting—continued from p. 1

ning of the earth’s true crust—a relatively thin layer of crystallized rock which rides on the thicker, semi-solid mantle. Formed nearly 2 billion years ago, this highly irregular rock can be found on the earth’s surface or buried deep beneath sediment.

The idea of a basement map is not new. But the WU team hopes their unified approach will prove more successful than sketchy past attempts.

“Think of ore bodies as brines or heated fluids which have precipitated,” said Schulz. “The location of these bodies could correspond to differences in gravity and magnetic fields, the presence of ground water, above average ground heat or unusual drilling slurries. We’ll be looking at all these factors together.”

That task will not be easy, Arvidson said. As director of the NASA Regional Planetary Image Facility on campus, he will supervise the conversion of data from NASA satellite pictures to a common base for computer analysis.

“The space program has successfully integrated isolated data in order to study the planets,” Arvidson said. “Now we want to use it to study the earth.”