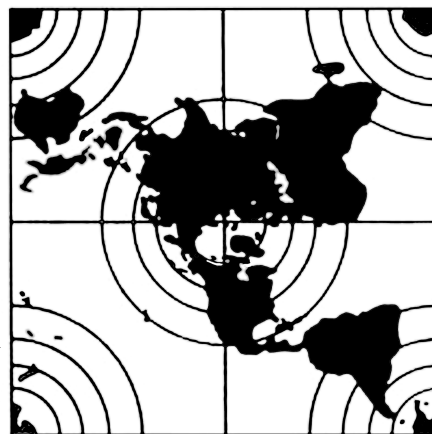


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*Benefiting the community by promoting and supporting interdisciplinary research at the interface of people, Earth, and the environment.*

Over the past five years the Institute has climbed many mountains. We have weathered the consolidation and flight of large energy corporations from the Dallas area and with it a substantial portion of our base of corporate support and a major audience for our programs. In the process, we have refocused on the original mission of the Institute, which is to support student and faculty research in the geological and archaeological sciences. That initiative has been well supported by the Green Foundation, the Abell-Hanger Foundation, The Saurus Institute, and the generosity of Board members. There can be little argument that



ISEM support of programs, especially in geological sciences, has helped to build esprit among students and faculty, supported significant research, and built the reputation of SMU among academic peers around the world. ISEM's actions help attract attention, which increases the quality of applicants to undergraduate and graduate programs. The departments are not dependent on the ISEM, but if it were not here there would be no other component of the University that would fulfill the role and consistently give its students a boost.

One major accomplishment this year was the establishment of a digital visualization laboratory completely through private funds. This laboratory provides research depth that SMU simply did not have previously. These visualization capabilities complement the Geology Department's NSF funded scanning electron microscopy laboratory, as well as its XRD capabilities and geochemistry laboratories. All of these laboratory facilities can be used by both archaeologists and geologists, and many of the publications issuing from them acknowledge ISEM support.

With regard to outreach to the energy industry, ISEM made its name with its recognition of the importance of unconventional methods. It still receives requests for the *Unconventional Methods in Petroleum Exploration* volumes published by the Institute. That series tacitly recognized that it is the role of universities to push the envelope rather than to rest comfortably. Now, in addition to a focus on traditional energy sources, it is embracing a serious examination of geothermal energy and possibly other forms of renewable and sustainable energy. The time is right for such a direction for a number of economic, social, and geopolitical reasons, and because it ties us more closely with other components of the University. It is our responsibility to push the envelope in this direction now, just as it was to do so with unconventional methods previously.

As the year draws to a close, now is a good time to remember that your support is important. The increment that the Institute adds above the University's support can make the difference between a good program and an outstanding program. You can help ISEM to pursue its mission of encouraging research by SMU students and faculty at the intersection of people, Earth, and the environment.

## **Student and Faculty Research Support for 2004 -2005: \$226,140**

The generous support of our donors allows us to fulfill our mission. Please send your fully tax-deductible contribution to:

**ISEM at SMU  
P.O. Box 750274  
Dallas, TX 75275-0274**

Please make checks payable to **ISEM Foundation**.

### **MAJOR FUNDS AND SUPPORTERS**

**Claude C. Albritton, Jr. Fund  
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Jane and Jack Hamilton Fund  
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The Saurus Institute  
Lynda and Leighton Steward Fund  
Jean and Starkey Wilson Fund**

## **ISEM Honors Recipient of the Hollis D. Hedberg Award**

The recipient of the Hedberg Award in Energy for 2005 was **Peter R. Vail**. He was honored on Wednesday, April 27, for his numerous and significant contributions to research in the energy industry, and for his longtime commitment to education and academic research. Dr. Vail had a long and distinguished career at Exxon where he directed a team that formulated and established “sequence stratigraphy” as a new paradigm for exploration. After leaving Exxon he joined the faculty at Rice University where he has mentored students and maintained a productive research career.



*Dr. James E. Brooks, Dr. Peter R. Vail (Award Recipient), Dr. Louis L. Jacobs*

Dr. Vail's research involves the documentation of the distribution of depositional sequences on a global scale in outcrop and subsurface, determining their controls, and defining the relationships of depositional systems and rock types to tectonic and eustatic variations that are reflected in depositional sequences. His approach enables improved paleogeographic reconstructions and resource evaluations. In addition, he is involved in the development of interactive computer interpretation procedures and basin fill simulations. Dr. Vail is a very deserving recipient of the Hollis D. Hedberg Award.

*“In my opinion, the most creative research at a university is done by the most energetic investigators, by which I mean graduate students. Those are who we can support best.”* Dr. Louis L. Jacobs, President

## What some of our students say...

I would like to thank ISEM for their continued support in my research studying a 28-27 million year old fossil forest flora from northwestern Ethiopia. You have provided me opportunities to conduct field work in Ethiopia and visit the herbarium at the Royal Botanic Gardens at Kew, UK to identify plant fossils. Little is known about the vegetation of Africa during the Paleogene (65.5 – 23.03 million years ago). Funds from ISEM are helping to fill in this gap.

Thank you. **Aaron Pan**



I am most grateful to ISEM and its dissertation seed grant program for supporting my research on adobe materials from the site of Chaves-Hummingbird, New Mexico. Without this generous support it would have been extremely difficult to progress as much as I have. I have been able to pay for lab materials and equipment, and dedicate my time to fieldwork, lab work and analysis of the lab results. ISEM's funding program gives many opportunities to graduate students that would otherwise remain unfunded. Thank you very much for your help! **Lia Tsesmeli**



I would like to thank the ISEM for giving me the opportunity to attend the University of Alaska Fairbank's field camp last summer. During our local studies we examined trenches near a gold mine, mapped and ran a geomagnetic survey at

a basalt mine, and did preliminary geologic mapping of a burn zone near Chena Hot Springs. The proximity of Fairbanks to the Alaska Range made our field camp group the second in decades to be allowed to map in Denali National Park. There we mapped in sediment, bimodal volcanics, on glaciers, and ran a gravity survey across a fault. During that portion of the trip, a member of our group discovered the first (and only) dinosaur footprint ever found in the Alaska Range. The Limestone Gap lies just north of the western end of the Castle Mountain Fault, and its microcosmic right-lateral strike-slip fault system offered an excellent case-study for understanding the whole of Alaskan tectonics. Without the generosity of the ISEM, I would not have been able to have such a rare and diverse field camp experience. **Robert Talamantez**



The support provided by the Institute for the Study of Earth and Man permitted me the opportunity to conduct research on Late Triassic (middle Norian) vertebrate fossils from Hound Island, Alaska. The tectonic setting of Hound Island is a structural trough associated with an advancing terrain prior to accretion onto a larger landmass and northern translation from lower latitudes to the current latitude. The depositional environment of such a setting containing vertebrate fossils has never been documented. ISEM provided the necessary financial support for transportation, field supplies, and the transport of fossils to SMU. The study of the Hound Island vertebrate faunal assemblage and its stratigraphic, taphonomic, and paleobiogeographic affinities will contribute to a better understanding of the depositional history of an advancing island arc terrane. I thank you for your financial assistance, which allowed

for the opportunity to conduct a Master's project in such a distinctive setting containing vertebrate fossils. I am greatly appreciative. **Thomas Adams**

## ISEM Remembers Former Trustee

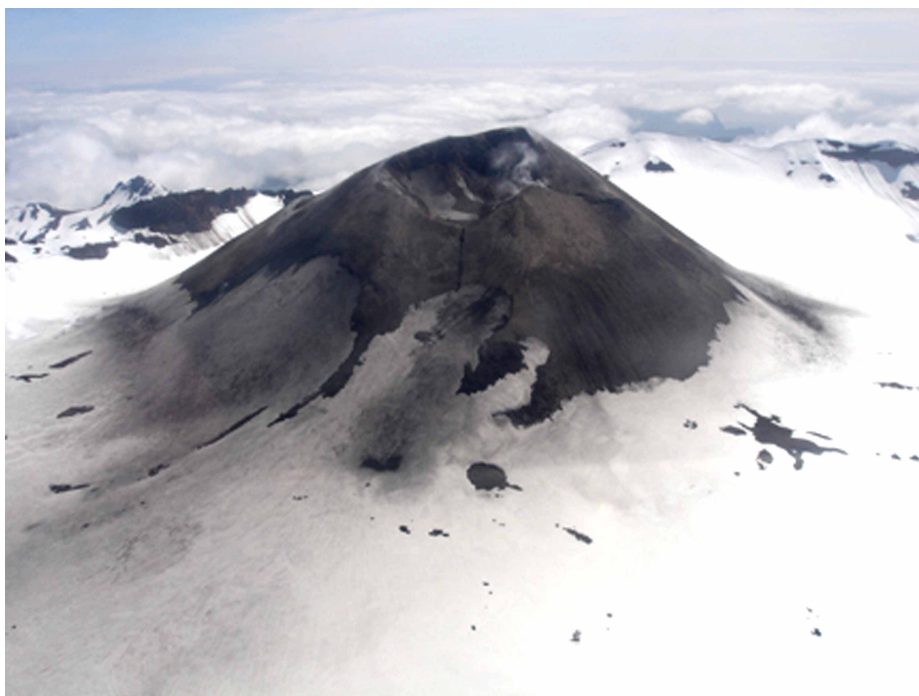


**Dennis J. O'Brien** passed away suddenly, Tuesday, September 20, 2005, while returning home from an International Association of Energy Economists conference in Denver. Dr. O'Brien was dedicated to the field of energy around the globe and he played an essential role as catalyst for the Institute's energy programs over the last twenty years. Without Dennis' s creative input these symposia, conferences and roundtables would have been significantly diminished if attainable at all. For these contributions, ISEM will be forever grateful.

## A Brief History of the Institute

The ISEM, a 501(c)(3) nonprofit research institute, was organized in 1966 by William B. Heroy, Sr., who had been Chairman and CEO of the Geotechnical Corporation. Through his efforts, his influence and his personal philanthropy, the ISEM assembled funds to construct and equip the N.L. Heroy Science Hall, which was subsequently given to Southern Methodist University. The offices of the ISEM are located in this Hall. Organized to enhance the programs in archaeology and the geological sciences at SMU, the ISEM fosters:

- 1) ***Interdisciplinary and Multidisciplinary Research*** in geology, archaeology, energy, and the environment;
- 2) ***Student and Faculty Expeditions and Laboratory Studies*** by providing funding for worthwhile projects;
- 3) ***Educational Outreach*** to teachers of all grade levels based on ISEM sponsored research;
- 4) ***Energy Industry and Community Outreach*** through symposia, industry briefings, roundtables, guest lectures, and museum consultations.



*Crater of Aleutian Volcano Akutan, taken by Trustee Jack Hamilton on 2005 ISEM excursion.*

## ISEM Supports Research Worldwide