Distinguished Alumni Awards *for 2009*

MARK D. KURZ

For distinguished contributions and leadership in isotope geochemistry, particularly the evolution of earth's mantle and discovery of cosmogenic helium in terrestrial lavas

Mark D. Kurz

Mark D. Kurz (B.S. 1976 Chemistry) has excelled in the field of isotope geochemistry where he has done pioneering research on heterogeneity of the earth's mantle and surface exposure dating. Mark grew up in Waukesha, Wisconsin, acquiring interests in both the outdoors and laboratory experiments. At UW-Madison Mark completed a B.S. in Chemistry with Honors working in Professor John Wright's laser spectroscopy group. But, Mark's career path into the geosciences was forged as he took Bob Gates' Mineralogy and Petrology courses, and Lowell Laudon's field course at Tagish Lake.

Mark received his Ph.D. in geochemistry in 1982 from the MIT/Woods Hole Oceanographic Institution Joint Program for research on helium in oceanic lavas. Following a NATO post-doc in Paris with Claude Allègre, Mark returned to Woods Hole where he is currently a Senior Scientist. Mark not only built the mass spectrometer used for his dissertation, he immediately put the instrument to use, revealing in a series of papers beginning in 1981 that $^{3}He/^{4}He$ ratios are highly variable along mid-ocean ridges and even more so at plume-related ocean islands. Coupling the $^{3}He/^{4}He$ ratios with other radiogenic isotope tracers led to inferences about where and how crust has been recycled into the mantle and the idea that parts of the lower mantle have not been degassed during earth history, thereby retaining a primordial composition.

Confronted by unusually high $^{3}He/^{4}He$ ratios found in basaltic lavas on Haleakala Volcano during one of these studies, Mark discovered through novel laboratory techniques that most of the ^{3}He was not derived from a primordial mantle, but rather had accumulated in olivine due to spallation reactions triggered by incoming cosmic rays during the hundreds of thousands of years since the lavas had erupted. The nascent field of surface exposure dating had gained a powerful new tool in cosmogenic ^{3}He. For these early achievements, Mark was awarded the F.W. Clark Medal of the Geochemical Society in 1986.

Mark has published over 90 papers on mantle heterogeneity—from samples recovered during a dozen ocean-going cruises, and surface exposure dating of glacial deposits—mainly in Antarctica, where he has led five expeditions. He is known throughout the earth science community as an incredibly energetic explorer and leader; this was reflected in his election to Fellowship in the American Geophysical Union in 1997. Mark also has served as Chair of the Department of Marine Chemistry and Geochemistry at WHOI from 1999-2003, and mentored three doctoral students and six post-doctoral researchers. Mark's positive impact on the earth sciences continues to grow, thus we recognize him as a truly "distinguished alumnus."

—Bradley S. Singer, Citationist

RICK SARG

In recognition of your distinguished leadership in both thescientific advancement and industry application of carbonate sedimentology and sequence stratigraphy

Rick Sarg

Rick Sarg (Ph.D. 1976) is known internationally as a scientific leader among petroleum industry geoscientists. His Ph.D. work under Prof. Emeritus Lloyd Pray provided the first detailed field documentation of carbonate-evaporite facies transitions adjacent to the Capitan Permian reef, and Rick has been an ardent champion of carbonate sedimentology and stratigraphy ever since.

Following graduation from UW, he worked briefly for Mobil before joining Exxon Production Research Company. There he became a member of the team that formulated the sequence stratigraphic concepts applied to carbonate rocks. Sequence stratigraphy has become the foundation of virtually all subsurface interpretation in the industry. In 1990 he struck out on his own as an independent Permian Basin consultant, then in 1992 he took a position in Mobil's research lab in Dallas. His career turned full circle in 2000 when Exxon and Mobil merged. Rick became lead stratigrapher for all ExxonMobil upstream companies, responsible for overseeing the technical quality of stratigraphic work across a global energy empire. Following retirement from ExxonMobil, Rick served as Senior Advisor and Instructor at William Cobb and Associates in Dallas, and since 2006 has been a Research Professor at Colorado School of Mines.

A consistent theme throughout Rick's career has been his dedication to the training and career development of other professional geoscientists. At EPR Co. he helped develop carbonate sedimentology and sequence stratigraphy training courses that have since been taken by thousands of geoscientists from around the world. He continued in this role during his consulting career and at Mobil, and stewarded the career plans of the ~170 stratigraphers at ExxonMobil (perhaps the largest such group in the world). He also became a familiar face in Madison as a campus recruiter for both Mobil and ExxonMobil, and continues to advise students at Colorado School of Mines. Rick also been a member of our Board of Visitors.

Rick has received many professional honors, including two best paper awards, service as an AAPG Distinguished Lecturer, and President of the Society for Sedimentary Geology (SEPM).

—Alan R. Carroll, Citationist