Report of Baylor University Geology Department, Faculty and Student Research Accomplishments, 2006 calendar year

Faculty Publications (underline = Baylor Geology Faculty) (* = peer-reviewed)

(1) **Alvarez, J., Skipwith, W. and Allen, P.M.,** 2006. River effects at highway crossings due to watershed changes: Paper and Abstract: Texas Section ASCE.


(3) **Atchley, S.C.,** 2006, Jurassic Rock Creek and Lower Cretaceous “Ellerslie” gas development potential across the Carrot Creek region of southern Alberta: (Sponsored by Auriga Energy, Inc.)

(4) **Atchley, S.C.,** and Cleveland, D.M., 2006, Reservoir characterization and development potential of a retrograde gas reservoir: the Devonian Swan Hills Formation at the Kaybob South BHL Gas Unit #1: (Sponsored by Auriga Energy, Inc.)


(21) **Skipwith, W.,** Alvarez, J., and **Allen, P.M.**, 2006, Bentle Branch storm water and stream bank stability study: *Paper and Abstract*, Texas Section ASCE.


* = peer-reviewed journal, ** = proprietary reports or proceedings (not peer-reviewed), *** = text or lab book

**Faculty and Student Presentations (underline = Baylor Geology Faculty)**


(4) Alvarez, J., Skipwith, W., and Allen, P.M., 2006, River effects at highway crossings due to watershed changes: Paper and Abstract, Texas Section ASCE.


(18) **Dunbar, J.A.** and **Allen, P.M.**, 2006, Sediment yield from the Blackland Prairie from sedimentation and large water supply reservoirs and SCS flood control structures: (abstract) Texas Blackland Prairie, (abstract) Texas River and Reservoir Management Society Annual Meeting, Austin, Texas April, 2006.


(20) **Feng, Z.-D.,** 2006, Holocene Climatic variations in the Mongolian Plateau: (an international RACHAD Conference held in Lanzhou of China, July 26-29, 2006)


(22) **Feng, Z.-D.,** 2006, Natural rhythms of Holocene desertification in the Chinese Loess Plateaus: (2nd International Conference on Earth Systems and Environments held in Beijing, October 22-26, 2006).


(27) Li, Z.-H., **Driese, S.G.,** and Mora, C.I., 2006, Paleoclimate variability revealed by speleothem δ18O and δ13C records from the Raccoon Mountain Cave, east Tennessee, USA: Southeastern section Geological Society of America meeting in Knoxville, TN.


(34) Nordt, L.C., 2006, “Late Quaternary vegetation and temperature change in the central Great Plains based on the isotopic composition of buried soils”: University of Kansas, Kansas Geological Lecture Series (March).


(37) Seidman, L., and Cronin, V.S., 2006, Analysis of seismo-lineaments, DEMs and fieldwork leads to different ideas about active deformation in the Santa Monica Mountains, southern California: Geological Society of America, Annual Meeting, Philadelphia, PA, Abstracts with Programs, v. 38, no. 7.


(41) Suchecki, R.J., Jr., Yelderman, J.C., Jr., Scheffe, B.L., and Pertuit, R.K., 2006, Enhancing biological nutrient reduction in advanced individual onsite wastewater treatment systems (abstract): Colorado Professionals in Onsite Wastewater, CPOW Annual Educational Conference, Western Slope, March 10, Grand Junction, CO.


(45) White, J.C., Ren, M., Parker, D.F., and Anthony, E.Y., 2006, Aenigmatite-ilmenite-clinopyroxene equilibria and applications to geothermometry and oxygen barometry in pantelleritic melts: examples
from Pantelleria (Italy) and Eburru (Kenya): Geological Society of America, presented at Southeastern Section Meeting of Geological Society of America in Knoxville, TN, Abstracts with Programs, v. 38, no. 3.


Grants and Contracts AWARDED and in force (underline = Baylor Geology Faculty)


(2) Allen, P.M., and Dunbar, J.A., 2006, US EPA Grant (in progress) on West Texas Reservoir Sedimentation/chemistry with John Dunbar. (28,000?)


(4) Atchley, S.M., 2006, Student and Faculty support on Kaybob South APS project, Summer 2006, $6,500, Auriga Energy Inc.


(9) Feng, Z.-D., 2006, (Lead PI): Collaborative research (with Dr. K.-B Liu at LSU): Bioclimatic reconstruction of the past 50,000 years from eolian sequences in the westerlies-dominated Central Asia: Award No: NSF-BCS-0623478; (07/01/2006-06/30/09) Award Amount: total $290,000 (Feng’s portion = $150,000).

(10) Yelderman, J.C., Jr., 2006, Awarded extension of the nutrient reduction study for OSSF aerobic systems,
Murphy Cormier, Inc., awarded March 2006 through August 2006, $6,000

(11) **Yelderman, J.C., Jr.**, 2006, Awarded extension of Phase II of the nutrient reduction study for OSSF aerobic systems, Murphy Cormier, Inc., awarded July 2006 through June 2007, $45,000

(12) **Yelderman, J.C., Jr.**, 2006, Awarded an extension of the wetland study grant for $10,000.

**Grants, Contracts and Software Patents SUBMITTED** (underline = Baylor Geology Faculty)

(1) **Driese, S.G.**, 2006, Evaluating evidence for high-frequency climate forcing of sedimentation and pedogenesis based upon Upper Mississippian paleosols in the U.S. Appalachian Basin and modern analog soils in Timor, Indonesia ($80,000 requested for two years, commencing January 1, 2007). NOT FUNDED


(3) **Driese, S.G.** and **Parker, D.F.**, 2006, Acquisition of a wavelength-dispersive XRF instrument for Department of Geology, Baylor University: submitted to NSF Instrumentation and Facilities program ($123,619 requested for one year, commencing January 1, 2007). NOT FUNDED


(6) **Nordt, L.C.**, 2006, Late Pleistocene adaptations and behavioral transformations in the South African Highveld Grassland. Collaborator with Co-Principal Investigators Dr. Britt Bousman and Dr. David Brink (submitted). (details?)