



# Regional Update

First Publication, 2005

## Administration Proposes Cuts to DOE/PTTC Funding

*Don Duttlinger,  
PTTC Executive Director*  
Doug Patchen [*PTTC Appalachian Basin*] stated this well with his PAG in explaining the web link: <http://www.pttc.org/acknow3.htm> [also reprinted on page 2]. It is surprising how many are coming up to us as PTTC reps and asking what is going on and what they can do to help. Hopefully, this site can clarify the situation. Doug's hat and my shirt logos identified us for questioning, and I was surrounded at a coiled tubing meeting in Houston this week. I did grab the microphone in our session on mature fields to outline the funding

cuts and programs within universities and industry that would be negatively impacted.

Also, please refer to IOGCC's testimony: <http://www.iogcc.oklaosf.state.ok.us>. These are all helpful in highlighting independents domestic importance versus international importers who clearly would like federal cooperation to be eliminated. Showing the difference of the two interests is key. If independents are going to do something the majors couldn't, they are going to need all resources available. \$80MM is only a start when accurately targeted.

*Charles J. Mankin,  
SMR PTTC RLO*

While the Oklahoma Geological Survey has been providing matching funds for the SMR PTTC operations, the amount we have available would be inadequate to provide even a reduced program. Unfortunately, a certain critical mass is necessary to fund such a program.

If the OMB proposal is accepted, funding that would normally have been available to us will now be applied only to terminate the operation (facilities closed and personnel terminated). We would have to curtail other OGS operations as

well as to identify additional sources of funding in order to continue offering a program which is also reduced in size and scope to our current clients. This revised program would, for example, see us bringing in more service companies and individual service providers in the energy industry.

While we hope to still be of assistance to the industry, we will not be able to cover all of its needs.

The U.S. domestic oil and natural gas industry today supplies approximately 40% of our nation's demand for oil.

*Cont. pg. 2*

### Table of Contents

*Administration Proposes Cuts to DOE/PTTC Funding...*1-2  
*18th Annual Conference Coming in May — Morrow and Springer Strata in the Southern Midcontinent...*3  
*Deep Gas Well Stimulation Workshop with a Midcontinental Component...*4-5  
*New OGS Publication...*5  
*PTTC Webmasters Meet in Houston...*6

*Participation Doubles for Oklahoma Aggregates Association 4th Annual Meeting...*7-10  
*Oklahoma Oil, Gas Conservation Director Named...*11  
*Arkansas Oil and Gas Commission Has New Director...*11  
*White Appointed New Arkansas State Geologist...*12  
*What You May Have Missed?...*12-14  
*Student Outreach—AAPG/SEG Spring Student Expo...*15

## Administration Propose Cuts to DOE/PTTC Funding, *continued from page 1*

*Charles J. Mankin, cont.*

### **Domestic resources create high-quality jobs here in the U.S. and provide the energy that powers our standard of living.**

Few truly realize that stripper oil wells (those wells producing less than 10 barrels per day) account for about one-quarter of the lower 48 states' onshore domestic oil production and stripper gas wells (wells producing 60 Mcf per day or less) about 10% of onshore domestic gas production.

Despite perceptions to the contrary, **large quantities of oil and natural gas remain onshore in the United States, representing the most stable and secure energy available.**

These resources may exist in fields that have already been discovered and await a new technology that results in cost-effective recovery, or they may lie in reservoirs yet undiscovered due only to a lack of technology appropriate for deeper horizons or greater geologic complexity.

If the United States is to maintain its ability to produce its domestic supplies of oil and natural gas, federal expenditures on petroleum technology R&D must not be cut. There is still much promising work that you as a taxpayer of this country can support. Please let your Congressional Representatives know how you feel regarding funding of oil and gas research. Links are available at: <http://www.pttc.org/acknow3.htm>.

*Doug Patchen,  
Appalachian Basin PTTC RLO*

The Administration's FY06 Budget proposes phasing out DOE's natural gas and oil R&D program, as opposed to maintaining recent levels of around \$75 million per year. At the reduced level proposed for FY06, DOE cannot support strategic longer-term R&D (Hydrates), field demonstrations of emerging technologies (Technology Development with Independents), technologies targeting mature stripper well operations (the Stripper Well Consortium - SWC) and technology transfer (Petroleum Technology Transfer Council - PTTC) that stimulates application of underutilized or new technologies.

*[Editor's Note: The administration's proposed funding for the upcoming year only covers shutting down existing facilities and terminating current employees. Zero dollars are allocated for continued DOE R&D operations.]*

DOE is also an advocate for our industry providing valuable information to counter unnecessary regulations and study incentives that would best assure domestic supply. These national investments are now at risk.

The only way the budget will be restored is through Congress and the Appropriations process. Congress has reorganized this year and a new subcommittee now recommends funding for DOE. Many committee members are not familiar with our industry or the DOE Fossil Energy Program. Congress must be better informed

about the impact the termination of DOE's programs will have on you, your company and domestic production—both near and long term.

Now is the time to contact your Congressional representatives and leadership/members of the Appropriations House and Senate Subcommittees on Energy and Water Development, the Subcommittees who are now deliberating over this critical matter.

House Subcommittee on Energy and Water Development (e-mails available on website): [http://www.visi.com/juan/congress/cgi-bin/newcommittee.cgi?commcode=happrop\\_energy&site=ctc](http://www.visi.com/juan/congress/cgi-bin/newcommittee.cgi?commcode=happrop_energy&site=ctc).

Senate Subcommittee on Energy and Water Development (see attached page for e-mails): <http://appropriations.senate.gov/subcommittees/energy/topics.cfm?code=energy>.

The Senate Energy and Water Subcommittee is accepting public testimony, due April 30, 2005. Send testimony via e-mail to [ewd@appro.senate.gov](mailto:ewd@appro.senate.gov). Testimony should be no longer than five pages and text only.

For contacting your Congressional representatives, the Independent Petroleum Association of America has provided a service making it easy for you to email your delegation and express your opinion/concerns: <http://grassroots.ipaa.org/lookup.asp?g=ipaa>. Just enter your Zip Code and you will be able to easily email your representative.

# 18<sup>th</sup> Annual Conference Coming in May: Morrow and Springer Strata in the Southern Midcontinent

The conference, sponsored by the Oklahoma Geological Survey and U.S. Department of Energy National Energy Technology Laboratory, will be held on May 10th and 11th at the Meridian Convention Center in Oklahoma City.

In its 18th year, this conference is designed to transfer information to aid in the search for and

the maturity of this or any region is, in part, related to the maturity of ideas about hydrocarbon accumulations and their discovery and efficient recovery.

These rock formations represent the principal gas and oil reservoirs of the region and papers will be given that will assist in many aspects of exploration, reservoir characterization, subsurface mapping, and seismic techniques. Papers also will discuss the timing and effects of structure, stratigraphy, enhanced



production of our oil and gas resources. The area is a major petroleum-producing region with a rich history relating to the birth and development of the industry. While the producing areas of the region have yielded large quantities of oil and gas, new concepts lead to new discoveries. Thus,

oil recovery, well logging and stimulation in deep basins, and recognition and utilization of facies and depositional environments to help identify prospects and direct development and exploration drilling.

## PREREGISTRATION FORM—Make checks payable to "OGS Conferences."

Please fill out form, detach, and return to: Oklahoma Geological Survey, 100 E. Boyd, Room N-131, Norman, Oklahoma 73019.

NAME: (Last) \_\_\_\_\_ (First) \_\_\_\_\_ (Initial) \_\_\_\_\_

AFFILIATION: \_\_\_\_\_ (Nickname for badge) \_\_\_\_\_

MAILING ADDRESS: \_\_\_\_\_ PHONE: \_\_\_\_\_

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ ZIP: \_\_\_\_\_ FAX: \_\_\_\_\_

E-MAIL: \_\_\_\_\_

Check must accompany this form\*. Use separate form for each registrant. CEU credit, check here.  PDH credit, check here.

	Regular Registration		(or)	Student Registration			
	By May 2	After May 2		By May 2	After May 2		
Conference	\$85	\$95	\$ _____	Conference	\$20	\$30	\$ _____
	TOTAL \$ _____			TOTAL \$ _____			

If you have special disability, medical, or dietary needs, please check here.

\*Please make checks payable to "OGS Conferences" Sorry, we are unable to accept credit cards.

# Deep Gas Well Stimulation Workshop with a Midcontinental Component

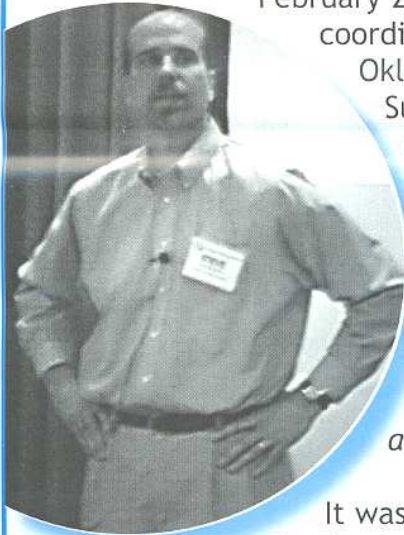
By Lance Cole,  
SMR PTTC Staff

More than 120 operators, petroleum engineers, geologists and other oil industry professionals attended "Deep Gas Well Stimulation Workshop".

This half-day workshop, which was held from 9:30am-2:30pm, Wednesday,

February 23, 2005, was coordinated by the Oklahoma Geological Survey, in cooperation with the Petroleum Technology Transfer Council (PTTC) South Midcontinent Region (SMR).

*[Presenter Steve Wolhart, Pinnacle Technologies, shown at left.]*



It was presented by the Houston office of Pinnacle Technologies, Inc., who conducted a study on hydraulic fracturing of deep gas wells for the U.S. Department of Energy (DOE). This is another way in which the PTTC SMR is able to offer technology transfer. The study consisted of an assessment of current and projected U.S. deep gas drilling activity, review of rock mechanics fracture growth in deep, high-pressure/temperature wells, and studies of a few wells in selected areas.

This workshop covered the results of this study, including case histories reviewing fracture design, execution, and evaluation. The agenda consisted of case history studies from Oklahoma represented by five wells completed in the Arbuckle, Granite Wash, and Springer formations, and similar case history studies from East Texas, South Texas, and Wyoming.

Deep gas represents a significant gas supply with U.S. resource estimates ranging from 87 to 133 Tcf. Recent activity projections are, for the next few years, that some 600 deep gas wells per year will be drilled in the U.S. Although representing only 1 to 2 percent of wells, their contribution to production is anticipated to be much larger. Effective completion and stimulation practices are central to realizing this potential.

In their DOE-supported study, Pinnacle discovered that much of the "deep" stimulation literature is 10 to 20 years old; i.e., when "deep" was >10,000 feet and hot was >200 °F. To fill this public domain data gap for deep gas well stimulation, Pinnacle and operators worked together documenting case studies that integrated fracture modeling with production data analysis and well testing and/or fracture diagnostics. Case studies were developed for the Bossier sand in East Texas, Lobo sand in South Texas, and a Wyoming deep gas reservoir. Pinnacle came up with several insights from these case studies, and presented them at




workshops at in Houston, Texas, and in Norman. A key point the case studies make is how complex the fractures can be and how much value tiltmeter monitoring can be in interpreting results. The Bossier sand case study, described in more detail in PTTC's 4th Qtr national newsletter (<http://www.pttc.org/news/4qtr2004/v10n4p1.htm#2>), dramatically illustrates this point.

Knowing where the frac goes is just one of the challenges. Getting proppant distributed where you need it is critical, then there's the matter of conductivity endurance – keeping that productivity up for the long term. More severe conditions require new generation frac fluids, which service providers are actively developing and there is more to learn about proppants too. True real-time stimulation optimization (with real-time measured BHP and T) is a key enabling technology. With the more severe conditions there are greater requirements on surface irons, pumps, and safety.

### Midcontinent Data

Recently-obtained midcontinent data from western Oklahoma wells was presented at the PTTC SMR workshop in Norman. Oklahoma data were for a Springer sand gel frac, two Granite Wash gel fracs, and multiple-stage acid fracs on two Arbuckle dolomite wells. The evaluated Springer gel frac was a fairly conservative design with low proppant concentrations to avoid screen-outs. Analysis indicated the job size may have been too small.

In one of the analyzed Granite Wash treatments, the job size was also very small (6,000 lbs 100-mesh, 15,000 lbs 20/40). Analysis gave indications that far-field multiple fractures occurred and that frac length may have been as short as 50 ft. In the second Granite Wash treatment analyzed, treatment size was much larger (170,000 to 190,000 lbs), but production results were still disappointing. Far-field multiple fractures were also evident. In both cases fracture conductivity may have been adversely affected by multiple-phase fluid effects. Modeling of the different stages of the multi-stage Arbuckle acid fracs often revealed different results for each stage, varying from proppant settling to lack of confinement. But, for the most thoroughly analyzed Arbuckle frac, production results are consistent with hydraulic fracture modeling. 

## New OGS Publication

### *Guidebook to the Geology of the Cromwell Sandstone and Equivalent Units in the Lawrence Uplift, Arkoma Basin, Ouachita Mountains, and Ozark Uplift of Eastern*

*Oklahoma* with notes on historic and modern coal mines is now available as Open-File Report 1-2005 from the Oklahoma Geological Survey. The Cromwell Sandstone is a highly productive petroleum reservoir in the Arkoma Basin and southeastern part of the Cherokee Platform.

The publication offers a detailed 231.1-mile road log covering 8 stops, with discussion of geologic provinces crossed and a history of the complicated Morrowan stratigraphic nomenclature involved. Also described are oil and gas fields, old coal-mining districts, modern (now reclaimed) coal mines, active stone quarries, and historical sidelights along the field-trip route.

The guidebook was prepared by OGS geologists Neil H. Suneson and Richard D. Andrews for a field trip they led on November 12–13, 2003. Contact OGS Publication Sales at (405) 360-2886 or [ogssales@ou.edu](mailto:ogssales@ou.edu) for further information.

# PTTC Webmasters Meet in Houston

*By Jane Weber, OGS Staff*

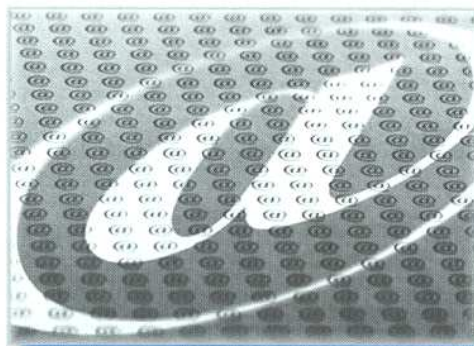
On January 25, webmasters from six of the ten PTTC regions met with headquarters staff at PTTC's main office in Houston, TX. The purpose of the meeting was to seek ways to improve PTTC's use of websites to connect independent operators with technology information.

Attending from the SMR was Jane Weber. Representatives from the four non-attending regions were able to participate in the day-long session through a conference call arranged for 1 hour during the afternoon.

Extensive discussion focused on a number of issues:

- the growing use of Firefox as a browser, replacing Internet Explorer and Netscape
- the preferred format for calendar events – a line listing or a calendar monthly view

- the need for consistent website contact statistics – use of Web Trends vs. Webalizer software and specific usage data to report
- videotaping workshops as a way to make technical material available later for those unable to attend in person, especially those requiring PDH (Professional Development Hours) or CEU (Continuing Education Units) credits.



Other topics mentioned included problems related to sending out large numbers of workshop notifications by email and difficulties encountered in setting up on-line payment options.

The webmasters first met as a group four years ago. The primary goal at that

time was to achieve a basic level of consistency among regional websites without compromising a region's character or creativity. Having accomplished that goal, the group is now working on expanding and enhancing the capabilities of PTTC's 11 websites (Headquarters plus 10 regions). This is being done by sharing collective knowledge and experience, and incorporating new features and developments. What "works best" (or doesn't) in a particular region is given careful consideration.

If you haven't done so lately, be sure to check out SMR's website at

<http://ogs.ou.edu/PTTC/>

or National's site at

<http://www.pttc.org>.

Both provide links to the other regions and a wealth of petroleum technology information. ☞

*The Petroleum Technology Transfer Council (PTTC) gratefully acknowledges that its primary funding comes through the U.S. Department of Energy's (DOE) Office of Fossil Energy through the National Petroleum Technology Laboratory (NPTL), and Strategic Center for Natural Gas (SCNG) within the National Energy Technology Lab (NETL).*

# Participation Doubles for Oklahoma Aggregates Association 4<sup>th</sup> Annual Meeting

By Stan Krukowski, OGS Staff

The Oklahoma Aggregates Association (OKAA) held its fourth annual meeting on 8-9 February at the Meridian Convention Center in Oklahoma City. Jim Rodriguez, Executive Director, announced that both Producer and Affiliate membership had more than doubled since last year. James Kemp, Chairman of the OKAA Board of Directors [shown on left], honored James



Allen, past Chairman [shown on right], "for his vision, drive, and inspiration" in the establishment and growth of the OKAA.

The 4<sup>th</sup> Annual Meeting was held in association with the Oklahoma Geological Survey. There were 201 attendees

from industry, government, and business affiliates participating this year, an increase of 52% from last year. Activities included seminars, election of officers, and the OKAA Market Place trade show and exhibit. Seminar topics covered aggregates specifications and economics, aggregate base in highway construction, the environment, and health and safety.

A host of industry and government dignitaries participated in the 4th Annual Meeting. Joy Wilson, President & CEO of the National Stone, Sand and Gravel Association (NSSGA), was the Keynote Speaker. In her address Wilson stressed society's dependence on the products of the aggregates industry saying that "aggregates make civilization possible." Aggregates are necessary for "helping to provide the basic necessities of life" such as water supplies, hydroelectric power, highways, and homes. She congratulated the OKAA for its "growth and efforts to educate the public and government officials about the aggregates industry."



Neal McCaleb, Chairman, Oklahomans for Safe Bridges and Roads, was guest luncheon speaker. The group is promoting five cents per gallon of additional taxes on the cost of unleaded gasoline to improve deteriorating bridges and roads in the State. "One fourth of our roads are in critical condition - meaning traffic



accidents are 56 percent more likely to occur on these roads," said McCaleb. "A five penny increase in the fuel tax will cost the average Oklahoman, who drives a car 12,000 miles a year, \$2.50 a month. That's \$30 a year - a

Cont. pg. 8

## Participation Doubles for Oklahoma Aggregates Association, *continued from page 7*

*small price to pay for safer roadways,”* said McCaleb. He further urged *“voters to not hear the words ‘tax increase’ and tune out. Our highways are falling apart. They are dangerous to drive on. Our bridges are old and in severe need of repair.”* McCaleb believes this initiative is the best opportunity Oklahoma will have to reform highway funding which is necessary to make Oklahoma bridges and roads safer.

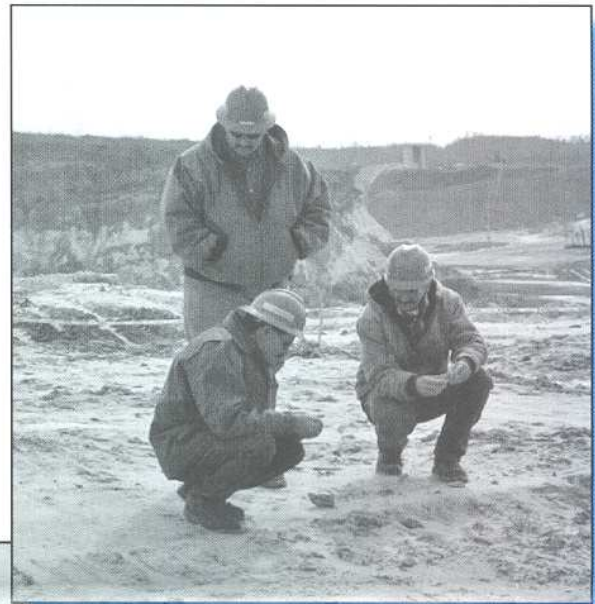
Seminar speakers included Jan Kunze, Chairman, Oklahoma Mining Commission, who spoke about the common goals shared between the Oklahoma Department of Mines and the aggregates industry. Ed Lopez, District manager, Mine Safety and Health Administration (MSHA), spoke on the future of health and safety in the mining industry in the 21st century. Paul Zachary, Deputy Director of Public Works, City of Tulsa, spoke of how aggregates are used in public works projects.

The OKAA Annual Meeting field trip was held the day before and traveled to Mill Creek in Johnston County to view the US Silica industrial sand quarry and processing plant, as well as the crushed stone operation of Texas Industries (TXI Operations, LP or simply referred to as TXI). The latter is a relatively brand new facility that started operation in 2002. The plant produces about 5,000,000 tons per year of crushed

stone and manufactured sand. The majority is shipped to northern Texas aboard company-owned unit trains that make four trips south each day.

OKAA sponsored an aggregates workshop the day after the Annual Meeting at the offices of WarrenCat. Rick Meininger from the Federal Highway Administration (FHWA), and best known for his monthly Rock Products column *“Technically Speaking,”* presented a three-and-a-half-hour classroom workshop on *“Agg-base in Highway Construction.”* Over 50 scientists and engineers attended; one traveling over 200 miles in order to participate.

*Participants examine the brilliant white sand in abundance at the US Silica industrial sand quarry. Photos by Sue Crites.*



Also on the following day, the OKAA hosted a barbecue buffet luncheon at the State Capitol Rotunda for Oklahoma State legislators. Over 350 guests dined and listened to presentations by James Kemp, Chairman, OKAA Board of Directors; Jim Rodriguez, OKAA Executive Director; and Senator Richard Lerblance (D, District 7), Chairman, Senate Committee on Energy and Environment. Six producer

members had exhibits, along with the following government and industry affiliates: Oklahoma Department of Mines, Oklahoma Department of Transportation, Oklahoma Geological Survey, Oklahoma Miner Training Institute, Oklahomans for Safe Bridges and Roads, and Mine Safety and Health Administration (MSHA).

Market Place exhibits increased over 50% from the 3rd Annual Meeting. Exhibitors included affiliate members and other companies supplying the aggregates industry with materiel, equipment, and expertise. Government agencies associated with the industry also exhibited. **An exhibit by the Future City Team from St. Philip Neri School in Midwest City was the highlight of the Market Place. The Team, winners of the Statewide Future City Competition, represented Oklahoma at the national competition in Washington, DC during National Engineering Week Future City Finals and finished in 4<sup>th</sup> place.** The students made several presentations to OKAA Annual Meeting attendees, which included Ms. Joy Wilson from NSSGA, the major 2005 Future City Competition sponsor.

*PTTC SMR RLO Charles Mankin and OGS Industrial Minerals Geologist Stan Krakowski in front of the OGS display at the Oklahoma State Capitol "Aggregate Day". Photo by OGS staff member Galen Miller.*

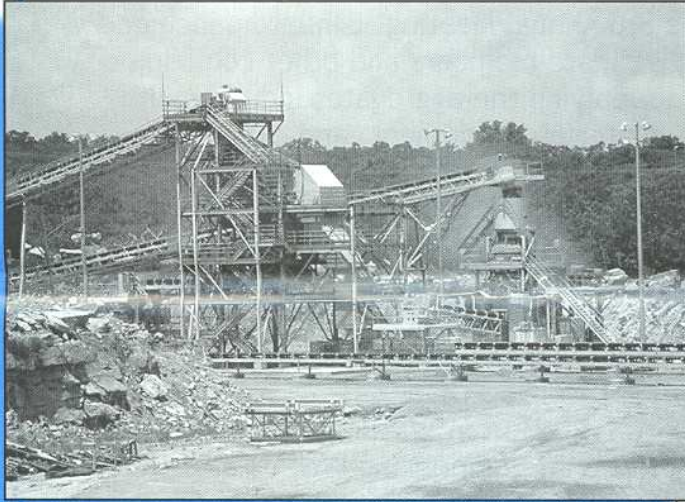


*The award-winning Future City Team from St. Philip Neri School in Midwest City, Oklahoma, are shown above presenting their exhibit to an interested audience at the OKAA Market Place. They brought home a 4th place finish in the National Engineering Week Future City Finals, a nationwide event. Shown in the photo to the right [l to r] are Thalia Nguyen, Alyssa Grossen, and Catherine Salazar. Photos by Jane Weber.*

Cont. pg. 10

## Participation Doubles for Oklahoma Aggregates Association, *continued from page 9*

OKAA was first incorporated in July 2001. The Association was founded to provide information and assistance to producers and their associates in several critical areas, including product quality, specifications and requirements, safety issues, environmental concerns, and government regulations.



*TXI Operations, LP, Mill Creek crushed stone operation in Johnston County, Oklahoma, began shipping product in July, 2002. This photograph shows a portion of the elaborate crushing and screening operation. Photo courtesy Rock Products; by Russ Carter.*

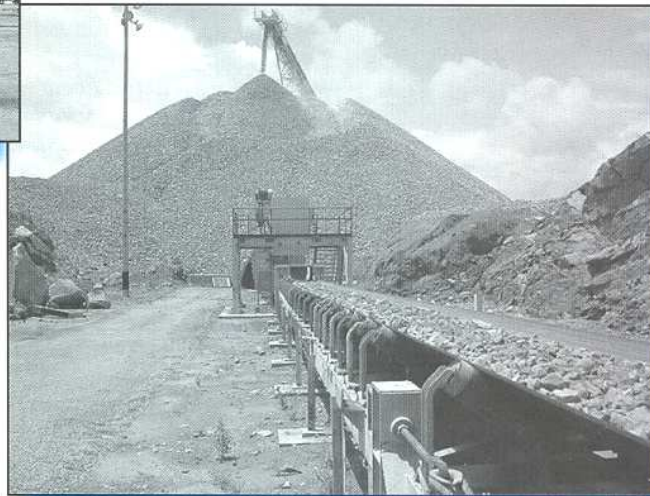
Today, OKAA has 29 producer and 37 affiliate member companies with offices in Oklahoma City at 3500 North Lincoln Boulevard. There are two types of membership: aggregate producers (29 members), and affiliate companies serving the aggregates industry (37 members). The Association continues to grow, and plans to continue its membership drive in 2005.

Oklahoma produced nearly 75 million tons of aggregates in 2002 valued at over \$289 million. To put this figure in perspective, **that's enough aggregate to construct a four-lane highway from Oklahoma City to Washington, D.C., 130,000 homes, and 3,500 schools and hospitals.**

According to the Oklahoma Geological Survey, **Oklahoma ranks second in per capita aggregates production, supplying just over**

**13 tons per person, also in 2002.** Aggregate producers directly provide 1700 jobs for Oklahomans.

Aggregates include all types of crushed stone, gravel, and sand. They provide the basic materials upon which the building blocks of civilization rely. Most people are familiar with the role aggregates serve in asphalt and portland cement concretes; so wherever you see construction in progress, such as residential, commercial, industrial, or government sites, aggregates are being used. Highways, high-rise buildings, railroad beds and airport runways, houses, hospitals, schools, and shopping centers all contain aggregates.



*Oklahoma minus-4-in. crushed stone is conveyed to the stock pile from beneath the primary crusher surge pile at the new TXI Operations, LP, Mill Creek Operation in Johnston County, Oklahoma. Photo courtesy Rock Products; by Russ Carter.*

Each one of us requires over 1.64 million lbs. of stone, sand, and gravel over our lifetimes.

The OKAA is an associate member of the National Stone, Sand & Gravel Association ([www.nssga.org](http://www.nssga.org)). Visit their web site to learn more about aggregates and our reliance on them. More information about the Oklahoma Aggregates Association can be found at [www.okaa.org](http://www.okaa.org). To learn more about the mineral resources of the State of Oklahoma visit the Oklahoma Geological Survey web site at [www.ogs.ou.edu](http://www.ogs.ou.edu).

## Oklahoma Oil, Gas Conservation Director Named

With over 20 years experience regulating the oil and gas industry in both Texas and New Mexico, Lori Wrotenbery has been named to head the Oklahoma Corporation Commission's largest division.

As Director of the Oil and Gas Conservation Division, this Harvard-educated regulator is responsible for preventing waste of the State's oil and gas resources, protecting the rights of mineral and land owners, and protecting the environment.

Commissioner Denise Bode called Wrotenbery "an outstanding individual with a proven track record:"

*"In positions in Texas, New Mexico and with regional and national groups, Ms. Wrotenbery has proven to be an outstanding leader with the ability to work with America's oil and gas producers and royalty owners to ensure the industry's survival while protecting public health, safety, and the environment."*

Commission Chair Bob Anthony said Wrotenbery brings a wealth of experience and credentials to Oklahoma: "Wrotenbery is well-known for her work not only in New Mexico, where she served as both Chairman of the Oil Conservation Commission and Director of the state Energy Department's Oil

Conservation Division, but also with such groups as the Ground Water Protection Council (GWPC). She was GWPC President, and a founding member of the State Review of Oil and Natural Gas Environmental Regulations, Inc. (STRONGER)."



Both government and industry have recognized her efforts: she received the 2002 Public Outreach Award from the American Association of Petroleum Geologists, and was recognized in 2004 by the New Mexico State Senate for her contributions to the State of New Mexico.

Before moving to New Mexico in 1998 to assume her last position, Wrotenbery worked for 14 years in various legal and management positions in the Oil and Gas Division of the Railroad Commission of Texas.

Wrotenbery is a graduate of Harvard Law School. She also holds a B.S. in Geology from the University of Texas at Austin and a B.A. in Anthropology from Wellesley College.

## Arkansas Oil and Gas Commission Has New Director

The Arkansas Oil and Gas Commission has hired Lawrence Bengal of Chatham, Ill., as the commission's director to oversee regulation of the drilling and spacing of wells for oil, gas, and bromine.

Arkansas Gov. Mike Huckabee indicated that *"Larry brings a tremendous background to this job," "I look forward to having him as part of our Cabinet."*



Bengal has supervised the Division of Oil and Gas for the Illinois Department of Natural Resources since 1989. He's a licensed professional geologist and a member of the American

Association of Petroleum Geologists. Bengal is a former vice chairman of the Interstate Oil and Gas Compact Commission.

During his career, Bengal has testified before Congress on oil and gas issues. He rewrote the Illinois oil and gas administrative code. From 1976-81, Bengal was a member of the mining engineering consulting firm William H. Smith & Associates. He was an independent petroleum geologist from 1981-89. During that time, he was engaged in studies and acquisitions in Illinois, Indiana, and Kentucky.

Bengal, 53, is a Philadelphia native. He graduated in 1973 from the University of Wisconsin at Platteville with a degree in geology.

# White Appointed New Arkansas State Geologist

Arkansas Governor Mike Huckabee has appointed Bekki White as the state geologist. White, the assistant state geologist since 2003, replaces Mac Woodward as the state geologist. Woodward requested to return to his previous position as assistant state geologist.



White is a registered professional geologist in Arkansas, Texas, and Mississippi. She's a former president of the National Association of State Boards of Geology. White received her bachelor's degree in chemistry from Henderson State University in Arkadelphia in 1980 and studied at Oxford University in Great Britain in 1982. She received a bachelor's degree in geology from Centenary College in Shreveport, La., in 1983 and a master's degree in geology from Centenary in 1993.

After working for Dow Chemical Corp., White served as a petroleum geologist from 1982-98 for Chad White & Associates and the Chad White Operating Co. In those positions, she supervised the drilling and completion of oil and gas wells. White also supervised office staff, field operations staff, and service companies. White joined the state Geological Commission in 1998 as the petroleum geologist supervisor. She served in that position until being named assistant state geologist in 2003.

The Arkansas state geologist directs the Geological Commission, which is charged with informing the public and encouraging the development of the state's mineral resources.

## What You May Have Missed?

*By Mike Smith, OCGS Shale Shaker  
(Article and selected photos reprinted courtesy of the Shale Shaker;  
additional photos by Mike Smith)*

So, what do Neil Suneson, Dennis Kerr, Roger Slatt, Ibrahim Çemen, Michael Roberts and Charles Stone have in common? They all are experts on the structural

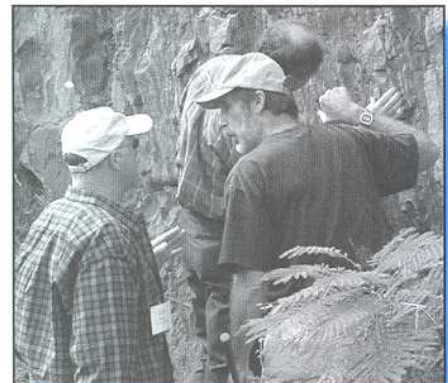
three days in October; and they caused over 70 other geologists, geophysicists and engineers to absorb and question the hidden secrets within the Arkoma Basin.

and seasoned experts such as: Kaspar Arbenz, Ibrahim Çemen, Steve Hadaway, Ata Sagnak, Justin Evans, Marline Collins, Osman Kaldirim, Kris McPhail, Gultekin Kaya, Syed Mehdi, Seleem Adthar, James Coleman, Lyle Baie, Jack Gallagher, Jamie Woolsey, Roderick Tillman, Kim Butler, Richard Andrews, Kevin Smart, Seth Busetti, Kimberly Scott, Phillip Shelby, Roger



evolution of the Ouachita Mountains and the Arkoma Basin; they all gathered at the Kerr Convention Center in Poteau, Oklahoma, for

Both Thursday and Friday morning began with plenty of coffee and several oral presentations authored by both knowledgeable students



Slatt, Gloria Romero and Walter Manger. Tosan Omatsola, Alison Garich-Faust, Charles Stone, Paul Weimer and Camilo Goyeneche joined many of these same folks to present



Friday began with much more java and several fine presentations before the geo-bus turned down the drive with many stops along the Oklahoma side of the Ouachitas. Roger Slatt (OU), Ibrahim Çemen (OSU) and Neil Suneson (OGS) directed our attention to the reservoir sands of the Jackfork along a N/S route winding around the Windingstar Fault, Rich Mountain Anticline, Ti Valley Fault, Choctaw Fault, Pine Mountain Syncline and the Heavener Anticline. Repeated sections of Jackfork Sands littered the road cuts. Dense massive (4' thick) blocky layers framed inch-thick layers of well cemented sand; while adjacent poorly cemented lenticular sands crumbled at



conquering that outcrop we drove south and had no trouble crossing Ti Valley Fault. Repeat, basinward sections of the Jackfork Sandstone surfaced, so those whom had strong picks and hammers challenged the dense turbidites. For the most part, those dense rocks remained unblemished. Traveling south took us down through the lower sections of the stratigraphic sequence where the Morrowan Johns Valley, Jackfork and Mississippian Stanley defined their geological contacts. Our last stop of the day landed us in the middle of the Hatton Quarry where the Lower part of the Stanley exposed a tuff bed, which is actively mined. This quarry is located at Cross Mountain where a unique section of the Silurian and Ordovician rocks are exposed via complex faulting and folding.



well-illustrated posters of which catalyzed some fine discussions.

Thursday afternoon found our busload of geological rubber-neckers meandering through western Arkansas as Michael Roberts (Palmer Petroleum) and Charles Stone (AGC) directed our attention to the Hartshorne, Middle Atoka, Jackfork, Johns Valley and Stanley formations. From Poteau we began our travels with a quick jump over the state line just south of Ft. Smith near Devils Backbone. In 1863, this was the site for a historical Civil War battle, but that afternoon our battle was to decipher the Hartshorne Sandstone. After

the touch. Other Jackfork sands exhibited quartz-cemented sand with highly regular fracture sets directly related to its bed thickness. At the end of our day's travels, the Heavener Runestone State Park



*Cont. pg. 14*

## What You May Have Missed? *continued from page 13*

offered us an "eagle eye" view of the Heavener and Pine Mountain Anticline as well as the Choctaw Fault. The day was topped off at the Kerr Convention Center with some cold drinks and another delicious meal.

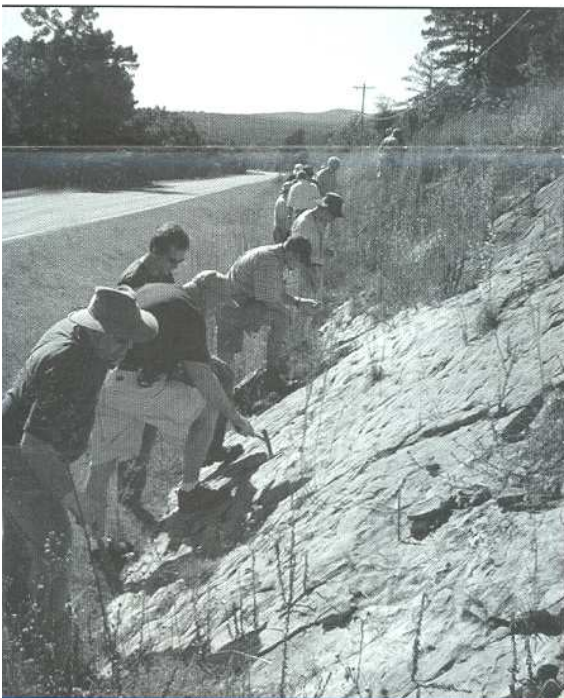
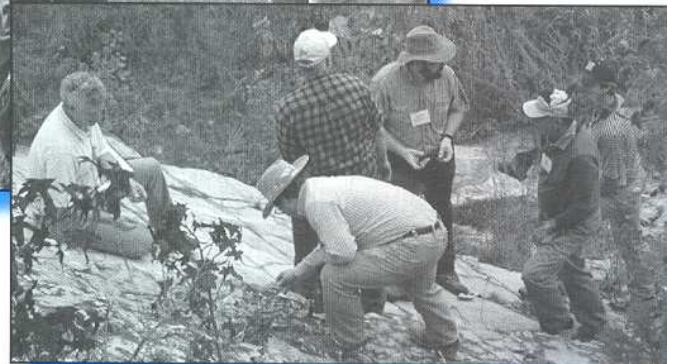
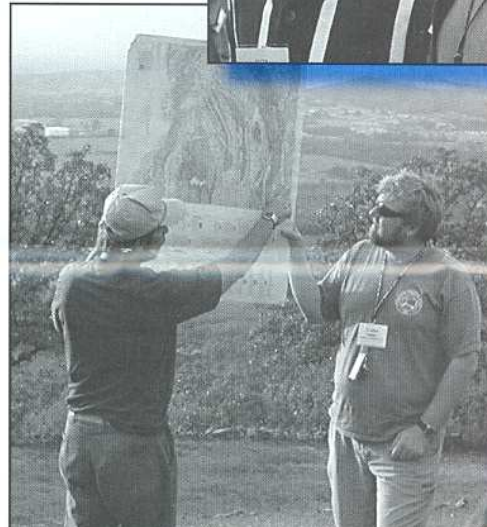
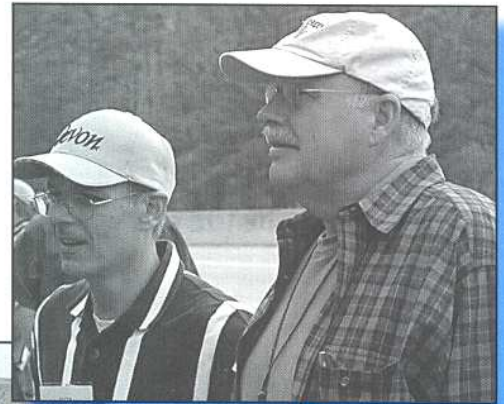
Saturday's agenda took us to the field early as our Oklahoma guides, Ibrahim Çemen (OSU), Dennis Kerr (UT) and Neil Suneson (OGS) led us in a westerly direction toward Potato Hills. We perused along the northern flanks of the Choctaw Fault through Red Oak and Wilburton. Historical coal mining operations were evident along this path. Transition zones and frontal-belt reservoir facies were identified as well as their exploration implications. Most every road stop included a myriad of thought-provoking questions and comments,

especially with overlapping personalities from several of our Oklahoma schools as well as from Arkansas. Potato Hills eluded our inspection due to a few 10-ton bridges that our 25-ton bus was unable to safely traverse. (Someone noted that we already crossed over one of those 10-ton bridges a few miles back. I guess we were lucky.) We ended our day tumbling down the rock face of the Wapanucka Lime before we retraced the Choctaw back to Poteau.

The Ouachita Mountain/

Arkoma Basin  
2004 Field Trip  
was a success!

No one was lost, everyone brought back plenty of souvenir rock samples, and we were all the wiser with our knowledge of the Atoka and Jackfork Sands. Thanks be to the leadership, the participants and to all those (i.e. Michelle Summers of the OGS, Terry Brady of OU G&G, and students) who made the three-day outing comfortable as well as memorable.

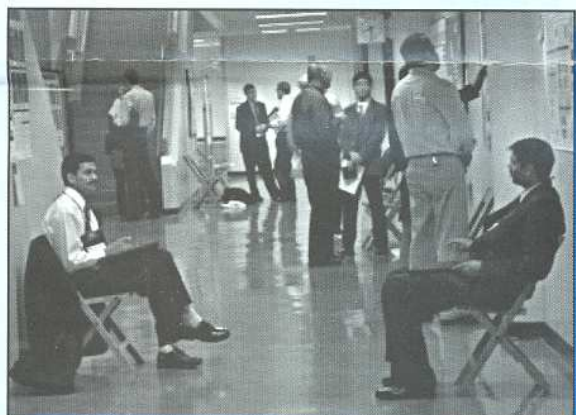


As a reminder, this entire Field Conference will be offered in publication this year sometime, so check the OGS website for that opportunity to purchase it. Sorry...no rock samples included. 🙄

# Student Outreach — 2005 AAPG/SEG Spring Student Expo Held in Norman



The fifth annual AAPG/SEG Spring Student Expo was held in Norman, Oklahoma, at the University of Oklahoma Sarkeys Energy Center on March 10-12.



SMR PTTC, in conjunction with the Oklahoma Geological Survey, was a Gold Level sponsor of this event, as well as an exhibitor. Additionally, the OGS held tours of the Oklahoma Petroleum

Information Center (OPIC), showing the students over 100 miles of core, the well data library, core services facilities, etc.

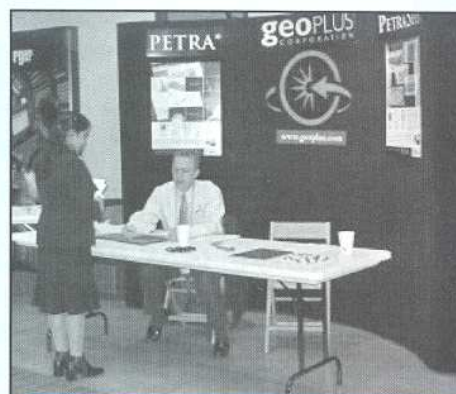


## Expo statistics this year:

### Company and organization participation:

Attending-24

Interviewing-14



### Student participants:

166 students

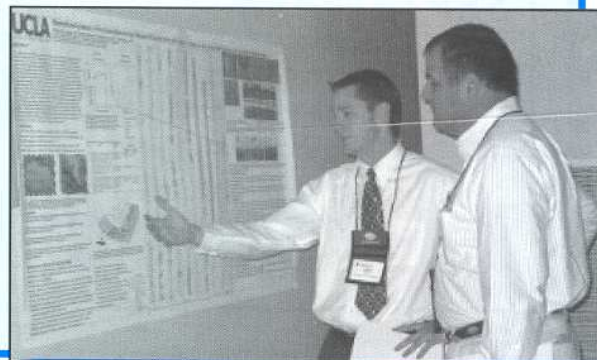
From 42 colleges and universities

Representing 22 states

### Number of scientific posters presented:

Geology-41

Geophysics-27



# Calendar of Upcoming Events

## MAY

### 10-11 MORROW AND SPRINGER STRATA IN THE SOUTHERN MIDCONTINENT

Meridian Convention Center; Oklahoma City, Oklahoma  
Sponsored by Oklahoma Geological Survey (OGS) and the U.S. Dept. of Energy, National Energy Technology Laboratory, Tulsa, Oklahoma

### 12 LUNCH-N-LEARN ANALYZING WELL DAMAGE RISKS AND OPTIMUM WELL DESIGNS FOR COMPACTING RESERVOIRS

Fort Smith, Arkansas  
Sponsored by Arkansas Oil and Gas Commission (AOGC), OGS, Society of Petroleum Engineers (SPE), and the Petroleum Technology Transfer Council

## JUNE

### 14 NATURAL GAS BALANCING

Oklahoma City, Oklahoma  
Sponsored by Marginal Well Comm. and OGS

### 15 NATURAL GAS BALANCING

Tulsa, Oklahoma  
Sponsored by Marginal Well Comm. and OGS

## JULY

### 27 HORIZONTAL DRILLING WITH CASE STUDIES IN OSAGE COUNTY

Moore Norman Technology Center; Norman, Oklahoma  
Sponsored by OGS and PTTC

## SEPTEMBER

### 10-13 AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS MID- CONTINENT SECTION MEETING

Oklahoma City, OK  
Michael Root, 405/359-0773,  
e-mail: [mroot@weatherbank.com](mailto:mroot@weatherbank.com);  
website: [www.ocgs.org](http://www.ocgs.org)

## PETROLEUM TECHNOLOGY TRANSFER COUNCIL (PTTC) South Midcontinent Region (SMR)

### Oklahoma Geological Survey Regional Lead Organization

**Dr. Charles J. Mankin**  
SMR PTTC Program Manager  
Director, OGS

**Fletcher Lewis**  
SMR PTTC PAG Chair  
Fletcher Lewis Engineering

**Scott D. Bruner**  
Arkansas Oil & Gas Commission

**Michelle J. Summers**, OGS  
Workshop Coordinator  
**Jane L. Weber**, OGS  
Publication, Database Coordinator  
**Sue Britton Crites**, OGS  
PTTC Information, Newsletter, Web

#### CONTACT INFORMATION:

Oklahoma Geological Survey  
100 E. Boyd, Rm. N-131  
Norman, OK 73019-0628  
405/325-3031; 800/330-3996  
Fax: 405/325-7069  
e-mail: [ogs@ou.edu](mailto:ogs@ou.edu)  
<<http://www.ogs.ou.edu>>

#### Oklahoma Petroleum Information Center

- Publication Sales
- Well Data Services

Phone: 405/360-2886 Fax: 405/366-2882  
2020 Industrial Blvd.  
Norman, OK 73069  
e-mail: [ogssales@ou.edu](mailto:ogssales@ou.edu)

## UPCOMING EVENTS CONTACT INFORMATION:

Arkansas Oil and Gas Commission,  
Scott Bruner, 479/646-6611; e-mail:  
[SDBruner@aogc.state.ar.us](mailto:SDBruner@aogc.state.ar.us); website:  
[www.aogc.state.ar.us](http://www.aogc.state.ar.us)

The Oklahoma Commission on  
Marginally Producing Oil and Gas Wells  
(MWC): 405/604-0460 or 800/390-0460;  
website: [www.marginalwells.com](http://www.marginalwells.com).