

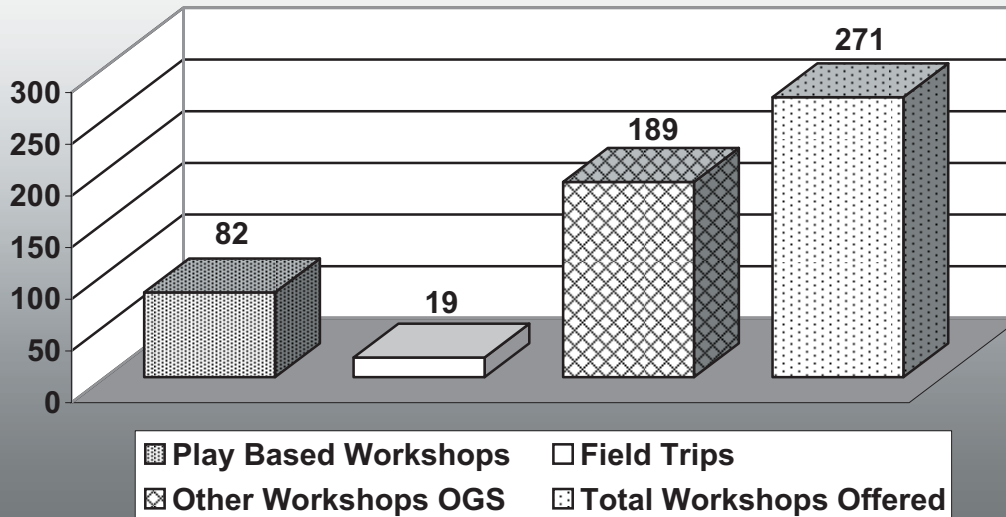


Regional Update

Second Publication, 2005

What Have We Done For You Lately? *SMR PTTC's Track Record*

PTTC SMR/OGS Workshops, Field Trips and Meetings, 1995 - May 2005



12,171+
attendees
1995 -
May 2005

For the past decade, the Oklahoma Geological Survey, in conjunction with the Petroleum Technology Transfer Council, as well as various other entities, has

strived to provide value-added information to independent operators and producers in the South Midcontinent Region. As of May, 2005, the Survey has produced 82 play-based

workshops, 19 field trips, 189 other workshops (including OGS, MWC, GIS, and AOGC), to total 271 workshops, field trips and meetings, with over 12,171 attendees! The activities of OGS

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What Have We Done for You Lately, *continued from page 1*

and SMR PTTC have been a major contributor to the continued success and productivity of the energy industry in Oklahoma and Arkansas. Bottom-line oriented workshops deliver regionally focused technology insights in a time- and cost-effective manner. Several key technical aspects of a technology, followed whenever possible by actual field case

studies to illustrate application of the technology, along with opportunity of interactive dialogue among participants and presenters.

PTTC also has sponsored numerous outreach program efforts designed to promote earth science and energy education to students of all ages, and has provided teaching tools for their teachers. [See the "Bird Seed Mining" article on pages 10-11 .]

SMR PTTC also depends upon the advice and assistance of industry professionals who volunteer their time — the Producer Advisory Group (PAG). Our PAG met on July 13th in Oklahoma City to discuss recent accomplishments of the SMR PTTC, current issues affecting our operators and producers, and to suggest future workshops that might best benefit them.



OGS staff member Jane Weber and PAG member Mac Alloway show off their matching blue seersucker suits at July's PAG meeting — truly a wonderful sight to behold!

Members of the SMR PTTC PAG are as follows:

Mr. Fletcher Lewis, Chair
Fletcher Lewis Engineering
Oklahoma City, OK

Mr. Mac Alloway
Tony Oil Company
Tulsa, OK

Mr. Scott Bruner
Arkansas Oil and Gas Commission
Fort Smith, AR

Mr. Frank Cole
Cole Engineering
Dallas, TX

Mr. Daryl Duvall
ONEOK Energy Resources
Tulsa, OK

Mr. Mark Gallagher
Samson Resources
Tulsa, OK

Mr. John Gatchell
Bays Exploration, Inc.
Oklahoma City, OK

Mr. Merle Grabhorn
Newfield Exploration
Owasso, OK

Mr. Bill Hanna
Hanna Oil & Gas Co.
Fort Smith, AR

Mr. Don Hannegan
Drilling and Intervention Services
Weatherford International
Fort Smith, AR

Mr. Philip Johnson
Cimarex Energy Co.
Tulsa, OK

Mr. J. David Reynolds III
J. David Reynolds Company
Camden, AR

Mr. Robert M. Reynolds
Shuler Drilling Company, Inc.
El Dorado, AR

Mr. Scott B. Robinowitz
Grand Resources, Inc
Tulsa, OK

Mr. Phil Schenewerk
Vintage Petroleum, Inc.
Tulsa, OK

Mr. Dave Spencer
Calumet Oil Company
Tulsa, OK

Mr. Foy Streetman
ABPS Energy
Chickasha, OK

Mr. John A. Taylor
Hiawatha Exploration Company
Oklahoma City, OK

Mr. Martin A. Vaughn
Midwest Energy Corporation
Tulsa, OK

Mr. Ralph C. Weiser
Weiser-Brown Oil Company
Magnolia, AR

Dr. Charles J. Mankin
SMR PTTC Program Manager
Director, Oklahoma Geological
Survey and University of
Oklahoma Sarkeys Energy Center
Norman, OK

Mr. Lance Cole, ex officio
PTTC
Sand Springs, OK



Energy Policy Becomes Reality

Courtesy of Interstate Oil and Gas Compact Commission

WASHINGTON — The U.S. Congress passed the **Energy Policy Act of 2005, the first bipartisan, comprehensive national energy policy in more than a decade**, on July 29th. The long overdue policy includes a tax package that provides incentives for conservation, efficiency and domestic oil production. The Interstate Oil and Gas Compact Commission's member states currently produce 99 percent of the domestic onshore oil and natural gas.

The IOGCC has served as the leading champion for a reality-based, comprehensive energy policy with included measures to enhance the conservation and efficient recovery of America's oil and natural gas resources. While not all provisions in the final bill are endorsed by IOGCC, the organization is hopeful that the legislation signals a renewed focus on homegrown energy, and will continue to work towards reducing the nation's dependence on unstable sources of energy.

"A reality-based policy will recognize that the largest natural gas and oil supplier to the United States is the United States," said Alaska Gov. Frank Murkowski, IOGCC chairman.

Included in the bill are measures to streamline oil and gas development on existing federal lease sites to bring the fuels to consumers sooner. Murkowski noted that a reality-based policy will also take to heart the national need for access to federal lands for the development of natural gas and oil resources using technologies proven to be environmentally compatible.

Following the debate in conference, Congress also passed a provision excluding fluids used for hydraulic fracturing from the definition of underground injection, with the exception of diesel fuel. The IOGCC has taken a lead on the issue in recent years, conducting surveys and passing resolutions favoring a simple legislative solution.

Murkowski recently urged Congress to accept hydraulic fracturing language, noting that under the supervision of state regulators hydraulic fracturing has proven to be an extremely safe and environmentally friendly technology.

"With strict, top-of-the-line state policies already in place, IOGCC member states stand ready to deliver these much-needed resources to

consumers, with the utmost respect for our environment," said Christine Hansen, IOGCC executive director.

The bill also includes a number of consumer provisions, including tax breaks on energy-efficient appliances, cars and homes. If a household uses 50 percent less energy than the typical home of relative size, the homeowner can receive up to \$2,000 in tax deductions. Similarly, consumers can receive a tax credit on the amount they spend to upgrade thermostats, caulk leaks and other energy conserving activities. In addition, a household is expected to save 1 percent of its energy bill as daylight-savings time has been extended.

"This is a good bill for America," declared Rep. Joe Barton, a key author of the legislation.

The IOGCC is a multi-state government agency that champions the conservation and efficient recovery of domestic oil and natural gas resources while protecting health, safety and the environment. Established by the charter member states' governors in 1935, it is the oldest, largest and most effective interstate compact in the nation. 

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).

FIRST ANNOUNCEMENT AND CALL FOR PAPERS: “Coalbed Methane and Gas Shales in the Southern Midcontinent” Conference — March 21, 2006

Coalbed methane (CBM) has been an important unconventional gas play in Oklahoma since 1988 with as many as 600 completions a year. The most successful CBM wells are where specialized completion techniques were applied with a knowledge of coal as a reservoir. The success of the Barnett Shale as a gas shale in the Fort Worth Basin in Texas has generated an interest in other potential gas shales (e.g., Woodford Shale, Caney Shale, and Fayetteville Shale) in the Southern Midcontinent.

and current activity related to coalbed methane and gas shales. Area studies will be confined to the Southern Midcontinent (Oklahoma and parts of surrounding states).



This conference will consist of 12 papers presented orally, 5 informal poster presentations, and 8 commercial exhibits; it will be attended by 150-200 participants. It is being organized by Brian J. Cardott of the Oklahoma Geological Survey.

Please submit a tentative title for your presentation or poster by September 1, 2005, to:

Brian J. Cardott
 Oklahoma Geological Survey
 100 East Boyd St., Room N-131
 Norman, Oklahoma 73019

Phone, 405/325 3031 or 800/330-3996; fax, 405/325-7069 or e-mail: bcardott@ou.edu.

Presentation Text and Illustrations (needed by February 1, 2006) should be camera-ready for a conference manual that will be printed for the meeting.



Suggested topics include geology, source-rock characterization, reservoir architecture, exploration concepts appropriate to the region, methodologies and techniques for improved recovery, case studies,

To aid us in planning, please return the bottom part of this form as soon as possible (by **September 1, 2005**, if possible), so we can organize the program and final registration form.

✂ ----- ✂

Name _____ Phone (____) _____
 Affiliation _____ Fax (____) _____
 Address _____ E-mail _____

The tentative title of my talk or poster is (note which): _____

Co-author's name, address, phone: _____

Morrow and Springer in the Southern Midcontinent

More than 237 operators, petroleum engineers, geologists and other oil industry professionals attended the “Morrow and Springer Strata in the Southern Midcontinent” conference held in Oklahoma City on May 10-11, 2005.

This two-day symposium was the 18th in an annual series focused on the search for and production of oil and gas resources in the southern midcontinent. The high attendance numbers indicate the equally high level of interest in the Morrow and Springer!

The 21 talks and 4 poster presentations covered a wide range of information concerning the Morrow and Springer. While most dealt with sandstone reservoirs, there were 2 papers on carbonate deposits as well. Topics included:

- ❑ Field studies of secondary (Rice Field water flood) and tertiary (Postle Field CO₂ flood) recovery methods in Morrow sands
- ❑ Hydraulic fracture growth in deep Springer reservoirs
- ❑ Production of iodine from brines in the Morrow
- ❑ Deployment of logging tools in complex or problem holes
- ❑ BTU heat value and non-hydrocarbon content of Morrowan gases in Kansas

- ❑ Modeling with web-based freeware to find overlooked pay
- ❑ Use of improved 3D seismic imaging; i.e., frequency signals on the order of 160 Hz, to achieve resolution of 20-ft. sands
- ❑ Trapping mechanisms, using lessons learned from studying the Cromwell.



Additional papers provided insights on aspects of integrating detailed facies studies with sequence stratigraphy to characterize the type and quality of a

reservoir. The role and importance of particle grain size, coatings, cements, compaction and/or dissolution events in the development of porosity within reservoir rocks was discussed by other speakers.



The overall message of the meeting was one of optimism, that opportunities for exploration and development still exist in Morrow and Springer sediments. ***The key to success, even if one is***

simply going deeper, or doing infill drilling, is to gain a better understanding of the immediate depositional environment by looking at all the data, integrating that data with modeling if possible, and relating results to performance history.

We would like to thank all the exhibitors and sponsors who helped to support this very worthwhile conference.



Looking for Data. . .?

By Jane Weber, OGS Staff

✓ Gas Shales Database

A new database of wells being drilled to tap into (potential) gas shales in Oklahoma is now accessible on the OGS website at <http://www.ogs.ou.edu>. The list, available for viewing or downloading in Excel spreadsheet format, contains 55 entries as of July 1, 2005.

Detailed data include: API number, operator, well name, completion date, location information, shale member, perforated depth range(s), initial gas potential and water production, pressure information, comments, and latitude/longitude values in decimal degrees. The Comments field provides information such as whether the well is a workover, recompletion or plugback; additional perforation intervals; or has been drilled horizontally. Latitude/longitude coordinates are calculated from township-range and quarter-quarter-quarter section data, based on Topographic Mapping's grid and using the NAD 83 datum.

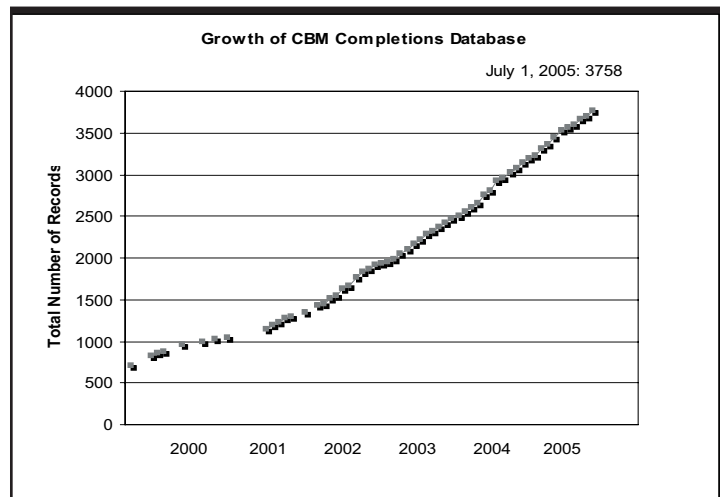
As with the CBM completions database (see article elsewhere in this newsletter), Brian Cardott, OGS geologist, routinely updates this database by compiling information from PI/Dwights Plus Drilling Wire™ daily newsletter, 1002A Completion Reports in NRIS (Natural Resources Information System), and personal contact with operators. Direct inquiries to Cardott at bcardott@ou.edu or 405/325-3031 or 800/330-3996.

✓ Oklahoma CBM Completions Table

The Oklahoma coalbed methane (CBM) completions table is currently the most popular dataset maintained by OGS, the one for which we receive the most requests. In 1998 when Brian Cardott, OGS coal geologist, first began compiling information on CBM activity for inclusion in the Oklahoma coal database, he could not have known how quickly the dataset would grow or the amount of interest it would generate. Wells had been completed for CBM as early as 1988, but only a few hundred were reported during those first few years. Cardott's initial list contained 400 wells. In recent years, the list has experienced phenomenal growth (see figure). In calendar year 2004, over 700 well records were added to the table.

The addition of a well record to the CBM database does not correspond to the original completion date for that well. Sometimes years pass before the well is completed and reported as a CBM well. Cardott gleans most of his information from PI/Dwights Plus Drilling Wire™ daily newsletter. His other sources of information are the 1002A Completion Reports in NRIS (Natural Resources Information System) and personal communication from operators.

With the amount of attention focused nowadays on CBM as a hydrocarbon resource, it is not surprising that many people want access to this digital data file. We have received dozens of such requests each year. The data have always been available, free of charge, in a searchable format, on our website; but it was not in a computer-friendly tabular or downloadable format. That is why we provided (for \$17) an "up-to-the-minute" version as an Excel spreadsheet (or other format if necessary) to those who asked. We now have put an Excel version of the database on our website for you to view and/or download for free. If the "Last Updated" date is not recent enough for your purposes, you can still request an email attachment of an "up-to-the-minute" file for the same \$17 processing fee. Contact Jane Weber at jlweber@ou.edu or 405-325-3031 or 800-330-3996 for this service.



Practical Applications for Polymer Gel Discussed

By Sue Britton Crites, OGS Staff

Over 40 attendees, including operators, petroleum engineers, and geologists interested in getting the most up-to-date information on polymer gel methodologies and their effective uses in the oilfield, attended the “Principles of Polymer Gel for Water Reduction with Illustrative Field Applications,” workshop in Norman, Oklahoma, on April 13, 2005.

The workshop, sponsored by the Oklahoma Geological Survey, in cooperation with the South Midcontinent Region Petroleum Technology Transfer Council (PTTC), was divided into two parts. The morning agenda, presented by Robert Sydansk, Sydansk Consulting Services (*pictured to the right*), provided Oklahoma oilfield operators and professionals with information and methodologies that are required to successfully apply polymer-gel water shutoff (WSO) treatments, as well as how, when, and where polymer-gel WSO treatments can be successfully and effectively applied.

Randy Prater, Polymer Services LLC, coordinated the afternoon agenda, which included information related to the practical aspects of gel-polymer treatments in Oklahoma. Included in the presentation were methods commonly used to identify potential candidate wells, selecting specific wells to optimize success rates, cleanup and preparation of the wells for treatment, treatment design criteria, and post-treatment monitoring. Historical case studies from gel-polymer treatments performed on a variety of Oklahoma reservoirs were also provided.

Sydansk’s presentation started off with the question, **“Are we oil-producing or water-producing companies,”** and cited that **“the United States produces, on the average, 7:1 bbl water per bbl oil”** [Argonne National Laboratories White Paper, July, 2004]. He went on to say that the best option for

reservoir water, if feasible and cost effective, is to keep it in the reservoir (especially if the water production is directly competing with oil production). The benefits of polymer gel water-shutoff treatments to the U.S. oil industry have been phenomenal, according to Sydansk. He quoted Jerry Casteel, U.S. Department of Energy, who said **“these water shut off projects have saved the U.S. oil industry ([namely and just] BP and Chevron) approximately \$142,000,000 since 1995.”**

Sydansk continued his discussion of water shutoff treatments, namely the polymer gel water shutoff treatments, indicating that when they were properly applied in a cost and operationally-effective manner, and when applied to an appropriate excessive water production problem, they could have the following effects:

- ❑ Reduce substantially the amount of unnecessary, detrimental, costly, deleterious, and competing water that is being co-produced
- ❑ Reduce substantially OPEX (i.e., water lifting, handling, treating, and disposal costs)
- ❑ Generate substantial volumes of incremental oil production profitably
- ❑ Reduce certain environmental liabilities.

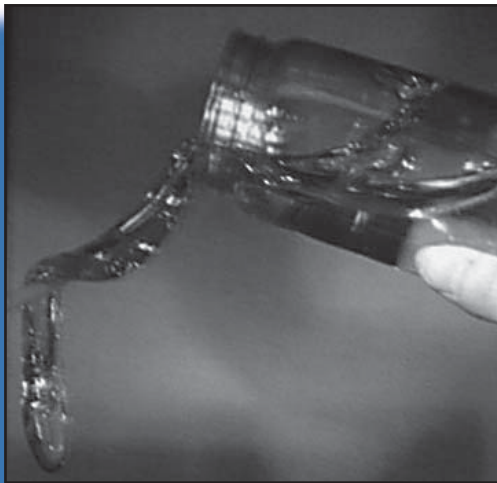
Polymer gel water shutoff treatments operate by reducing fluid flow capacity, reducing permeability, and serving as blocking/plugging agents. They also are highly reservoir-, well-, and problem-specific.



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Practical Applications for Polymer Gel Discussed, *continued from page 7*

What is Polymer Gel? The original process was developed in the late 1960's by Phillips Petroleum Company as a way to reduce water production in the Bemis-Shutts field of Kansas (chrome/redox system). Today's gels are created when polymer is mixed in water and cross-linked with a trivalent chromium ion. The polymer and crosslinker are mixed on the surface as opposed to previous systems that mixed in the reservoir. The gel strength is a function of the polymer's concentration. Polymer gels have a viscosity slightly greater than fresh water to rubber, and can be created in virtually any water, at temperatures up to 270° F, in high TDS, H₂S and CO₂ environments. The gels are used to shut off unwanted water in producing oil and gas wells, and to improve conformance at water/CO₂ injection wells, and are considered to be permanent after placement.



According to Prater, recent advances in gel chemistry are largely responsible for the current high success rate in the Kansas Arbuckle. ***“The key to current successes is the use of chromium III gel systems as opposed to older crosslinking technologies.”*** Two crosslinking systems (both chromium III) have contributed to the current successful treatments in Kansas. Prater indicated that the current gel systems used in Kansas are the MARCIT® system developed by Marathon Oil Company and the PROD® system developed by Chevron/Phillips Chemical Company. [F.Y.I., presenter Robert Sydansk was a key member of Marathon's initial polymer gel development team.] The PROD® system utilizes chromium

propionate as the primary cross-linking agent, while the earlier Marthon process involves chromium acetate. Prater said that the Chevron product is better suited to use in the Kansas Arbuckle because its chemistry was originally developed for stable gels in deeper, hotter wells than those normally found in Kansas. It also was intended for “hostile” environments, which include much higher salinities, high H₂S counts, high TDS brines, etc. A benefit to this chemistry is greater final gel strength, few problems with polymer production when the well is turned back on, and greater long-term gel stability in Kansas’ “relatively tame” wells.

In terms of which wells are better candidates for polymer gel technology, Prater listed the following well candidate selection criteria:

- Significant remaining mobile hydrocarbons in place (cumulative production history is usually a good indication)
- Wells producing at or near their economic limit due to costs associated with excessive water production
- High water disposal and/or lifting costs
- Producers in natural waterdrive reservoirs
- Producers in water floods are treatable, but [Prater] recommends treating injectors
- Better chance of increasing oil production when treating wells that have high producing fluid levels
- High permeability contrast between oil and water saturated rock
- Vuggy and/or fractured reservoir.

Prater summarized that much has been learned about proper candidate selection, preparation of the well for treatment, and optimizing treatment designs, based on a wide cross-section of treatments and responses in the field. This knowledge has led to much greater success rates and incremental oil recoveries from polymer gel applications in a wide variety of reservoirs.



Coal Geologists Meet in Kansas

By Brian Cardott, OGS Coal Geologist

Coal geologists and guests from state geological surveys of Arkansas, Kansas, Missouri, and Oklahoma have been meeting together every year since 1977. The 29th Forum of Coal Geologists of the Western Interior Coal Region met in Pittsburg, Kansas, on May 24-25, 2005. The group usually meets in one of the four states, but has also met in Iowa and Nebraska.

The morning of the first day has traditionally been reserved for discussions of coal production and uses in the states. ***A total of 2.4 million short tons of bituminous rank coal was mined in the four states in 2004, while 92.6 million short tons of low-sulfur subbituminous rank coal was imported from Wyoming for use in coal-fired power plants in 2003 (year with most recent data).*** Discussions

on coal mapping and stratigraphy, coal petrology (chemistry and petrography), and, more recently, coalbed methane and gas shale occur in the afternoon of the first day. Guests from the U.S. Geological Survey relate projects of interest to the group, especially the National Coal Resources Data System (U.S. Coal Resource Database and U.S. Coal Quality Database).

A field trip on the second day visits nearby coal mines, outcrops and, recently, coalbed-methane operations. In addition to an overview of efficient

mining operations, coal and overlying strata are examined for thickness, stratigraphy, structure, coal quality (e.g., mineral content and occurrence, and banding), and cleat (fracture) orientation and spacing.

Sharing of information and data over the years has resulted in a better understanding of regional stratigraphy and coal occurrence, quality, and utilization. The Oklahoma Geological Survey will host the next meeting in Spring 2006.



Earth Week Outreach Activities Go to the Birds. . .

By Stan Krukowski, OGS Industrial Minerals Geologist

The Oklahoma Geological Survey (OGS) participated in Earth Week activities at the Oklahoma City Zoo (OCZ) in Oklahoma City, and Reeves Park in Norman on April 21 and April 24, respectively. OGS was Station No. 13 at the Oklahoma City Zoo where Oklahoma school children learned about the recovery and restoration of earth resources through

a hands-on exercise called Bird Seed Mining. Geologists Stan Krukowski and Galen Miller conducted the exercise with the assistance of Sue Crites, OGS Public Relations Coordinator. Also in assistance were several students in Sigma

Honor Society), Gamma Chapter, from the School of Geology and Geophysics at the University of Oklahoma.

ScienceFest is an annual Earth Week event at OCZ and is a day of interactive science and environmental activities focusing on the conservation of natural resources and the use of alternative

energies. **Nearly 4,600 4th and 5th grade students were in attendance at ScienceFest 2005, representing 171 classes from across the State of Oklahoma.**

Students participated in 27 different activity stations that explored many topics in science including such diverse subjects as geology, biodiversity, environmental, soil science, water chemistry, and physics.



Sponsors of ScienceFest 2005 were OG&E Energy Corp., Oklahoma Department of Environmental Quality, Oklahoma Department of Commerce, and Oklahoma Office of the Secretary of the Environment. Activity stations were manned by scientists, engineers, and technicians from 20 agencies and organizations. They hosted groups of students at their respective booths and presented instruction and information on specific scientific topics. Students

were able to view alternative fuel vehicles, increase their knowledge of the sciences, and stimulate their interest in science, which may lead to pursuing science and engineering as a career.

OGS conducted Birdseed Mining at its activity station, teaching students the importance of using Earth resources in a responsible manner. OGS estimated that up to 600 students participated in the **Birdseed Mining** exercise.



Schools Registered to Attend ScienceFest 2005

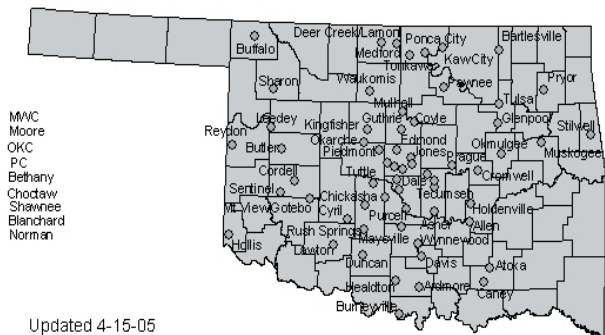


Figure courtesy of ScienceFest 2005
(<http://www.sciencefestok.com/schools.htm>)

. . .Bird Seed Mining, That Is!

The principles of sustainable development in resource development and mining operations were emphasized, demonstrating the roles of all stakeholders, including miners, nearest neighbors, the environment, government regulators, non-government organizations, and consumers. The OGS station included poster displays of mining and reclamation activities, and consumers' demands for Earth resources. Many hundreds more students, teachers, and chaperones visited the poster display and

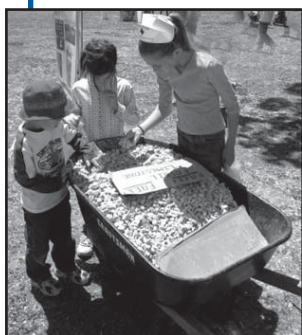


exhibit. Students visiting the OGS activity station and exhibit also collected samples of crushed fossiliferous limestone (approximately 700 lbs) that was donated by Dolese Bros Co. of Oklahoma City.

Teachers received packets of teaching aids and classroom exercise materials from the various sponsors, agencies, and organizations. OGS distributed information on industrial minerals and energy resources of Oklahoma, including several OGS classroom activities and exercises, and the video, *Common Ground*, and new CD, *Adventures in Earth Science Education*, both from Caterpillar, Inc. The latter provides a series of classroom activities in minerals education for grades K-12 that focuses on mining, minerals, and coal.

On April 24 from Noon to 6 pm, OGS also had an activity station at Reeves Park in Norman, where it participated in **The Little River Zoo's Kids for Kindness Earth Day Festival**. The event was celebrated in conjunction with Earth Week and Arbor Day activities. The same cast manned the OGS booth with the addition of Michelle Summers, OGS Technical Project Coordinator. Kids for Kindness is a program designed to encourage children to



actively protect and care for animals and the environment. More than 30 community booths taught children the principles of humane education with the purpose of connecting children with the natural world. Activities included worm composting, creating backyard habitat, recycling, and many others. The day was planned for children from pre-school to middle school, so OGS activities were adjusted appropriately. Both parents and children participated in Birdseed Mining at the OGS booth during Kids for Kindness day.



Birdseed Mining is an activity that was modified from the *Adventures in Earth Science Education CD*, and used at the OGS booth for the Earth Week activities. Appropriate mineral wealth, in this case costume jewels, was placed in a small pile of birdseed along with candy treats (M&Ms or Skittles work well) and a "googly" eye. Students were given the task of mining for jewels and candy (mineral resources) without spilling birdseed from a 4-inch plate. Spilling birdseed meant that they went outside

the mine permit area and so they consequently were shut down by the mine inspector - finding a "googly" eye (a mine accident) had the same result. Students in either of the latter categories were given candy consolation prizes. At the end of the mining period (30 seconds) students could eat their excavated candy (consume the mineral resource) before reclamation,

which consisted of restoring the birdseed to its original stockpile cone on the 4-inch plate. A question-and-answer period followed stressing the principle of sustainable development and the environment.



OGS and SMR PTTC Reach Out in Calgary!

By Jane Weber, OGS Staff

The Oklahoma Geological Survey and South Midcontinent Region PTTC exhibited at the 2005 AAPG (American Association of Petroleum Geologists) Annual Convention in Calgary, Alberta, Canada, on June 19-22. Dr. Charles Mankin and some of his staff represented both organizations through a shared exhibit booth. In addition to the expected booth visitors from other states and countries, booth traffic included a

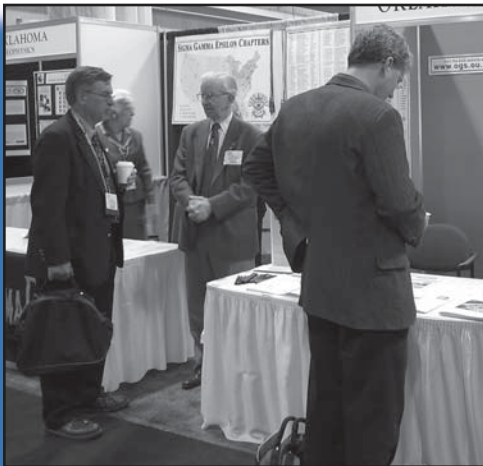
sizeable number of petroleum industry professionals based in Oklahoma.

The Calgary meeting, AAPG's 90th Annual Convention, offered exhibits and a technical program to explore energy systems around the globe. Unofficial attendance was listed as 7799, the highest turnout since 1986.

Of particular interest to OGS staff was the two-day Core Conference, held immediately following but in conjunction with the AAPG Convention, at the Alberta Energy and Utilities Board (AEUB) Core Research Centre. The AEUB Core Research Centre, whose mission is "to promote the use of material, not simply to store it," is known as the largest and most functional core facility in the world.

OGS staff, currently

involved in developing the OPIC core facility in Norman, Oklahoma, requested a tour of the Alberta operation to learn "why" and "how" it has attained world-class status. They also were able to visit the Core and Sample Repository of the Geological Survey of Canada-Calgary located next door to AEUB. They came back with many ideas, much worthwhile information, and a list of "experts" to contact in the future.



First Annual E Cubed Conference Held in Tulsa

By Mark Gallagher, SMR PTTC Producer Advisory Group Member

On June 3, the Tulsa Geological Society hosted, the first annual E Cubed Conference. E Cubed is an abbreviation for Energy, Education, and Environment. The purpose of this conference is to highlight entrepreneurs and technology companies showing their capabilities in the energy and environmental industries. Geologists, geophysicists, engineers, educators and students were invited to learn more about the latest developments in geology, geophysics and the environmental sciences. The Conference was held at the Tulsa Downtown Doubletree Hotel and attracted over 30 vendors and universities. Around 120 professionals and educators attended the conference.

There were also four featured speakers: Debbie Jacobs of DrillingInfo.com; Pat Lasswell of OMNI Laboratories, who discussed Tight Gas Sand advances - Electrical Properties m & n, Capillary Pressure Methodologies and Vapor Desorption; Randall Cade, Chief Reservoir Engineer of Weatherford, discussed Screening and prediction for underbalanced reservoir candidates; and John DeLaughter, PhD of Earthscope DeLaughter was the featured speaker at the dinner held after the conference.

The Tulsa Geological Society is looking forward to hosting the conference again next year and plans to expand the format.



Workshop Announcement: Log Interpretation Workshop

The Oklahoma Geological Survey (OGS) and the Petroleum Technology Transfer Council (PTTC) South Midcontinent Region are pleased to announce that our next workshop will be a "Log Interpretation Workshop," to be held on *Wednesday, September 21, 2005*, at the Moore Norman Technology Center in Norman. The workshop begins at 9:00 a.m. and ends by 4:00 p.m.

This one-day workshop will provide a review of the common wireline log types, including resistivity, spontaneous potential, gamma-ray, sonic, density, neutron, and photoelectric factor measurements. Log-analysis techniques for estimation of porosity and water saturation, as well as prediction of fluid recovery will be presented and demonstrated, using standard Excel software. Logging data can be entered either from blue-line logs or digital log files. Log examples from Midwestern reservoirs will be used throughout the course. In addition to the workshop manual, participants will be provided with a CD of a freeware spreadsheet, a log-analysis workbook, and an example of digital LAS files used in the course.

Registration will be on an as-received basis; workshop fee is \$50.00, which includes coffee break, lunch, and a copy of the presentations.

Please put this date on your calendar and plan to attend. We look forward to seeing you at the workshop.

Log Interpretation Workshop Registration Form

Name: _____	If Operator, please include your Operator Number _____
Affiliation: _____	Phone: (____) _____
Address: _____	Fax: (____) _____
City: _____ State: _____ Zip: _____	E-mail: _____

Please register me for this Workshop. _____ *Wednesday, September 21, 2005*

Workshop Registration Fee (including lunch): \$50.00 \$ _____

Make **\$50.00** check payable to "OGS Conferences," check must accompany registration form. Use a separate form for each registrant. **Please register by September 15.** *Sorry, we are unable to accept credit cards.*

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

Please complete form and return to:

Michelle Summers
Oklahoma Geological Survey
100 E. Boyd St., Room N-131
Norman, Oklahoma 73019
Phone: (405) 325-3031 or 800/330-3996—*if calling long distance*
FAX: (405) 325-7069

Questions regarding workshop? E-mail: ogs@ou.edu



Oklahoma Geological Survey's Well Data Library Has the Information You're Looking for

The petroleum industry is a major component of Oklahoma's economy. In fact, petroleum is the primary reason that Oklahoma became a state rather than an Indian territory. In 1896, oil was discovered in what is now eastern Oklahoma. That discovery set off an exploration and development boom that contributed to Oklahoma becoming a state in 1907, and, at that time was the largest petroleum-producing entity in the world. Scout ticket data from some of those early exploratory efforts are contained in the data files of the Oklahoma Geological Survey.

Because of the importance of the petroleum industry to Oklahoma's economy, the Survey has established an extensive petroleum-data system to aid in the future efforts of operators to find and develop Oklahoma's remaining oil and gas resources. This facility, named the **Oklahoma Petroleum Information Center** (OPIC), contains paper records, electronic files, and cores and samples from prior exploratory efforts. While most of the data and materials housed in our facility are from Oklahoma, some cores, samples, and data files are from other areas throughout the U.S., making OPIC a regional repository. Data from over 34 states, as well as Canada and the Gulf of Mexico are archived in this world-class facility.



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The OGS **Well Data Library** contains but a part of OPIC's vast geologic resources. Among its collections are:

- Official state repository of 5" paper logs (to the hundredth scale)
- Corporation Commission Completion Reports (1002-A) from inception to present (the official state repository for these)
- Scout tickets from the "turn of the century" through the 1950's
- Completion cards and microfiche from Oklahoma, as well as other states
- Logs on micro fische, some of which are not in the hard copy collection
- Logs from over 350,000 individual wells
- Oklahoma Production Reports
- Mud log collection
- Strip logs from @1913 through 1940's
- Access to one-of-a-kind Frank Melton Oklahoma aerial photo collection, organized by County -Township-Range.



Calendar of Upcoming Events

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;
website: www.ocgs.org

21 LOG INTERPRETATION WORKSHOP

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

OCTOBER

20 2005 OKLAHOMA OIL AND GAS TRADE EXPO

State Fair Grounds
Oklahoma City, Oklahoma
Sponsored by Marginal Well Comm.

UPCOMING EVENTS CONTACT INFORMATION:

Oklahoma Geological Survey, Michelle Summers,
405/325-3031; 800/330-3996; e-mail: ogs@ou.edu;
<http://www.ogs.ou.edu>

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



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

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

Oklahoma Petroleum Information Center
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2020 Industrial Blvd.
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