



Regional Update

Fall 2004, 4th Quarter

South-Midcontinent PAG Welcomes New Chair and Members

The South Midcontinent Region's (SMR) Producers Advisory Group (PAG) met Wednesday, August 31, 2004, in Tulsa, Oklahoma. Chair Mac Alloway's decision not to serve another term as Chair opened up the leadership role, and after

much discussion as well as some gentle persuasion, Fletcher Lewis accepted

the nomination as the next Chair. The vote for Lewis was unanimous.

"I'm pleased to be chosen, and while still on the learning curve, I hope to contribute to helping things along. I am looking forward to working with people in the industry and the opportunity to pass on additional education to those individuals in the oil business."

As president of Fletcher Lewis Engineering in Oklahoma City, Lewis brings new experiences and interests to the table.



Fletcher Lewis



New SMR PAG members (left to right): Phil Johnson, Dave Spencer, Meric Grabburn, and Phil Schenewerk. [Mark Gallagher not shown.]

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South-Midcontinent PAG Welcomes New Chair and Members, *continued*

He has been a member of the PAG since its inception in 1994.

Along with the installation of a new Chair, 5 new members joined the SMR PAG, including: Mark Gallagher, Samson Resources; Merle Grabhorn, Newfield Exploration; Phillip Johnson, Cimarex Energy Co.;

Phil Schenewerk, Vintage Petroleum, Inc.; and Dave Spencer, Calumet Oil Company. This brings membership up to 21, representing both Oklahoma and Arkansas.



Outgoing PAG Chair Mac Alloway. Thank you, Mac, for your many years of service to PTTC. [Note: Although he stepped down as Chair, Mac will continue to serve on the PAG.]

PTTC SMR PAG Member Presents Workshop on Completion Techniques for Southern Arkansas

More than 30 operators from Arkansas, Louisiana, and Texas who were interested in reviewing and sharing oilfield completion techniques specific to southern Arkansas attended "Difficult



Completions—Methods of Recompleting Wells and Workovers".

This half-day workshop, which was held from 4:00pm-7:30pm, Wednesday, Sept. 29, 2004, was coordinated by the Oklahoma Geological Survey, in cooperation with the Petroleum Technology Transfer Council (PTTC).

It was presented by Robert M. Reynolds (above) with Shuler Drilling Company, Inc., El Dorado, AR, at the Arkansas Museum of Natural Resources in Smackover, AR. Reynolds is also a member of the PTTC South Midcontinent Region's Producers Advisory Group (SMR PAG).

... I intend to learn more than anybody in this room.

The Southern Midcontinent area contains tight formations, depleted formations, formations needing stimulation but close to saltwater, and formations damaged by freshwater drilling fluids.

Successful completions or subsequent recompletions in these formations require special consideration of techniques and tools. This combination of geological variables makes oil production in southern Arkansas challenging and sometimes quite costly.

Reynolds used data such as electric logs, core analyses, and reports of actual well completions in South Arkansas, both successful and not-so-successful, in order to facilitate dialogue among the participants — he encouraged participants to "jump in" and share their experiences in similar situations.

He began the workshop by holding up a blank pad of paper and saying that he ***expected to learn as much as anyone else in attendance here — I want to hear what works and what doesn't work from everyone in here. I intend to learn more than anybody in this room.*** Reynolds then proceeded to have participants introduce themselves and tell about their background and experience.

As one man introduced himself and talked about his oil production operations, another from across the room asked a question. Interested exchanges of questions and answers continued throughout the introductions, touching on innovative production techniques,



Participant Ken Estes (standing) introduces himself as fellow operators Lamar Lee (left) and Bill Foster (right) listen.

problems, etc. Participation during the workshop continued to be open and energetic, with individuals even volunteering operation costs and amounts made.

Reynolds shared several success and failure stories, promoting discussion of new and old ideas and the results of experimental attempts in the field. As he candidly admitted in relation to a not-at-first-successful drilling venture,

“sometimes the problem isn’t so much geological, economics, nor engineering, but psychological – I just didn’t want to give up on that well!”

Reynolds went on to discuss the particular case. *[We’ve provided it here in Robert’s own words for those of you who weren’t able to attend – a taste of the stories you missed!]*

We were in Cotton Valley in east Union County. We had test drilled 100 feet down—our goal was the sand 50 feet from the top. I sent the core off to the lab, and as is my practice, I never showed the analyst the electric log until he handed me the core analysis. After looking at the electric log, the analyst then told me that he thought he saw something in the lower part of



the sample—it was very silver, and he thought I’d hit a good hole.

We also ran the standard round of other tests, including gamma ray and cement bond log (that was in the days before they plopped an oscilloscope on the end of a camera), so all we learned was “yes” or “no”. “here’s the top of the cement.”

Now you may ask me, why run a tracer log on a good-looking well like that? Because we perforated the sucker and made all water – no oil! We were really in a blue funk then. We’d already bought and put in stock tanks, so in the middle of a productive oil field, there I was working in the shadow of those newly-installed storage tanks, pumping out water and no oil!

Then we brought in some folks from Monroe who had good tools and techniques. They pumped in radioactive Iodine I-31—we thought we’d pump it in the well and see where it goes—all it did was go out the perforations. But, I refused to give up quite yet — I decided this well deserved a second chance. Maybe this well needed to be squeezed. The operator assistant took a call from the job’s geologist inquiring about the status, who reluctantly consented for me to squeeze it again – about 50 sacks of additive, so I knew it was getting a really good squeeze job.

Well, nothing came in alright—we succeeded in shutting all the water off, but now nothing else came in either. Then came a phone call from the boss – “plug it.” But seeing as how I’d already ordered the supplies, he let me acidize it, and it came back flowing 8 barrelsof oil a day.”

Reynolds chuckled as he admitted that he still doesn’t know where the water came from.

“I don’t have a magic wand, but I knew that well just needed another chance!”

Completion Techniques for Southern Arkansas, *continued*

Reynolds went on to relate a story on persistence that didn't work quite as well in his favor [*also in his own words*].

If you'd like to learn from others' mistakes, learn from ours! We were drilling another lower Cotton Valley test in Union County. The field was not yet developed to its full geologic potential, and there were a number of flank sands, called 50/100 sand. Another layer was called 50/300 sand.

By all appearances, this electric log was good. I really like to see the resistivity in the bottom part of the sand higher than the resistivity in the top part of the sand – I only see that about 1% of the time. We just knew that was going to make a good well.

Testing also showed porosity in the high 20's, so we decided it needed some help. We stimulated it "reasonably" with about 40,000 lbs. of sand. We then perforated it and acidized it and were making about 30 barrels of oil per day – not too bad, right?

Well, the offset operator had a very similar well to ours, and his was making 80 barrels a day! So, we performed a modest frac job just like the offset operator had done on his well, and ours no longer made 30 – it made a whopping 3 a day and about 300 barrels of water!

We ran a tracer survey, but discovered little. We ended up squeezing that well around 4 times, and it still produced 3–5 barrels of oil a day and 300 barrels of water.

I called up Halliburton for yet another squeeze job, and reached the manager. After explaining the situation to him, he said, "*Why, if I'd known you were squeezing behind a frac job, I'd have told you it wouldn't work! We'll bring that cement if you want, but it's not going to work this time either—all you're doing is extending the fractures.*"

\$300,000 later, I learned that you can't squeeze off behind a frac job! The manager recommended we go drill a new well at least 200 feet over from the old one. We did, and drilled a successful well!

At least seven operators in the room that day have been in the oil business for 50 years or more. As one of the younger producers said,

"I'm just trying to pick up some of the crumbs these old timers have left!"



Participants received dinner and a copy of the presentation. Feedback from participants regarding this new format and time for a workshop was most favorable.

SMR PTTC Well-Represented at Oklahoma Annual Oil & Gas Trade Expo

The South Midcontinent region (SMR) of PTTC was well-represented at the annual Oklahoma Oil & Gas Trade Expo on October 26th. Oklahoma Geological Survey staff members Michelle Summers, Jane Weber, and Sue Crites worked at the SMR PTTC booth, which was shared with the Oklahoma Geological Survey.

SMR PTTC also donated \$1,000 to be a Silver Sponsor of this event, which was hosted by the Oklahoma Marginal Well Commission and Energy Advocates. New PAG Chair Fletcher Lewis and PTTC representative Lance Cole were also at the trade expo.

The expo provided information on equipment, technology, and services used by the industry.

Numerous prizes also were distributed to attendees through a drawing. More than 1,000 people were in attendance at the expo, which was held at the Oklahoma State Fair Grounds Travel & Transportation Building.

Over 170 exhibitor booths were at the trade expo, and organizers for the 2005 expo promise that next year's event will be even bigger, with a goal of recruiting at least 200 vendors.



Energy Advocates President/ Executive Director Mark Stansberry talks with a participant at the Energy Advocates booth.



Looking for Data . . . ?

☑ Water Resistivity (Rw)

A catalog of thousands of subsurface water resistivity records — searchable by county — can be obtained on CD-ROM from the Oklahoma City Section of the Society of Petroleum Engineers for the price of \$20 plus shipping and handling. Check their website at <http://www.speokc.org> for ordering details. Updated to 1988, the database includes information on lease name, operator, section-township-range location, formation, depth, water resistivity, and temperature.

☑ Core Analyses

The Oklahoma Geological Survey has a catalog of 8,364 core analyses from 7,662 wells. The listing provides information on API number, date, operator, lease, location (township, range, section and quarter section), county, formation, and depth range. Measured data, such as permeability, porosity, oil saturation, and water saturation values, are stored on microfiche reports, available for inspection at the Survey office. Direct inquiries to Jane Weber at jlweber@ou.edu or 405/325-3031 or 800/330-3996.

Note: Both catalogs contain data "presented as received" from industry sources.

Kudos

**SMR PAG Member
Hannegan Wins
Prestigious Award**
SMR PAG
Member Don
Hannegan of
Weatherford
was honored
by World Oil
magazine this
October with
the Innovative
Thinkers Award.
This award was
for Hannegan's
efforts
championing
managed-
pressure drilling.
Congratulations,
Don!

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).

Workshop Announcement: Morrow and Springer Strata in the Southern Midcontinent

When: May 10-11, 2005

Where: Meridian Convention Center, Oklahoma City, Oklahoma

Description: This workshop is designed to examine contemporary and new concepts relevant to exploration and development of sandstone and carbonate reservoirs specific to Morrow- and Springer-age deposits in the Southern Midcontinent.

This is the Eighteenth Annual Southern Midcontinent Workshop, designed to transfer information that will aid in the search for, and 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, 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.



The workshop will consist of about 20 papers presented orally, informal poster presentation, and several commercial exhibits. Proceedings (including extended abstracts for the posters) will be published by the Oklahoma Geological Survey (OGS). OGS staff geologist Richard Andrews is the organizer; he may be reached at 405/325-3031 or 800/330-3996.



Calendar of Upcoming Events

January

TBA Lunch-N-Learn; Ft. Smith, AR; Arkansas Oil & Gas Commission (AOGC), Society of Petroleum Engineers (SPE), Petroleum Technology Transfer Council (PTTC)

February

TBA Basics of a Rod String — How and What to Do When Selecting, Running, Pulling, Fishing, Spacing and Identifying Corrosion; the Oklahoma Commission on Marginally Producing Oil and Gas Wells (MWC), PTTC

8-9 Oklahoma Aggregates Association 4th Annual Meeting; Oklahoma City, OK; Oklahoma Geological Survey (OGS), PTTC

March

TBA Lunch-N-Learn; Ft. Smith, AR; AOGC, SPE, PTTC

April

TBA Polymer-Gel Workshop; Norman, OK; OGS, PTTC

TBA Chart Type Gas Meters and How to Calculate Gas Production; MWC, PTTC

May

10-11 Morrow & Springer in the Southern Mid-Continent, Oklahoma City, OK; OGS, PTTC

June

TBA Natural Gas Balancing; MWC, PTTC

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