

President's Letter

The SPEE is known in the industry for an esteemed membership that, while possessing an admirable breadth of evaluation knowledge and expertise, never ceases the pursuit for professionalism and integrity. I am humbled to have the privilege of serving as your President. I owe a debt of gratitude to Past-President Bernie Brauer and other Past Presidents who have both counseled me and skillfully steered the SPEE through numerous difficult situations over the years. The shoes left behind by these talented and devoted people will be difficult to fill. So, trepidation set in as I approached the task of preparing my first Newsletter comments as President. What could I say that would be presidential? My thoughts turned to the State of the Union Address, which seemed particularly apt because: Members, the state of our Society is strong!



These are exciting times for SPEE. From common perspectives, we formed tighter bonds with distinguished professional organizations such as the Society of Petroleum Engineers (SPE), American Association of Petroleum Geologists (AAPG) and the World Petroleum Council (WPC). These were natural alliances since all of us belong to one or more of these organizations. And these relationships are spawning benefits for SPEE and its Membership. Our early explorations into formal certification with partner AAPG resulted in the development of joint-society training courses for reserves evaluators and evaluation engineers, which the SPEE/AAPG/WPC debuted last summer in Huntington Beach. That effort resulted in the formation of the Joint Committee on Reserves Evaluator Training (JCORET), a collaboration between SPEE, AAPG, SPE and WPC for the purpose of developing and presenting world class training programs -- at reasonable cost -- to evaluators here and abroad. The SPEE is co-sponsoring the new Petroleum Resources Management System (RMS) under the leadership of the SPE Oil and Gas Reserves Committee (OGRC), which includes some of our SPEE members. Sponsorship has provided us a unique position to monitor and influence the development

of this important document, which merges reserves/resources definitions and global evaluation perspectives into a single guidance. If you see OGRC Chairman John Ritter, or OGRC member Stuart Filler, be sure to thank them for their enormous contribution and accomplishment in creating the RMS. My hat is off to these SPEE members. And you may look forward to JCORET courses to address the RMS, and to expound on it with case studies and useful examples.

As the summer draws near, SPEE will move into even higher gear. Our Annual Meeting will be held in Vail, Colorado June 9th - 12th. SPEE Vice President and Meeting Planner Frank Molyneaux has assembled an interesting and informative technical program, which will include a presentation of the new RMS and a panel discussion on same (see more in this issue). Vail is truly a scenic and pleasant environment in which to broaden your professional perspectives and experience, and our meeting will allow you to capture most, if not all, of your annual continuing education credits. From June 24th - 26th, the SPEE will jointly sponsor the AAPG/SPE Multidisciplinary Reserves Conference in Washington DC. This will afford an opportunity to provide influential leaders in corporate management, accounting, banking, investing and government a better understanding of the nature, use, and reliability of petroleum reserves and resources data.

The summer will also bring an important vote on proposed changes to the SPEE By-Laws (see insert). Changes are proposed, among other reasons, to facilitate the application process for qualified evaluators in remote or international regions. You are encouraged to be a part of this process -- to familiarize yourself with all of the proposed changes, and to provide suggestions and/or comments concerning the proposed changes either to me, or the Director of your choice. The summer will end with the

2007 Officers and Directors

Committee Chairmen and Individual Appointments

Officers

President S. Tim Smith (Austin)
 Vice President Frank Molyneaux (Calgary)
 Secretary/Treasurer David Gold (Bakersfield)
 Past President E. Bernard Brauer (Corpus Christi)

Directors

Barry R. Ashton (Calgary)	Nanette Schulz (Denver)
Robert Dimit (Midland)	Brian Walter (Dallas)
Stuart Filler (Houston)	Marshall Watson (Midland)
Fred Goldsberry (Houston)	Jim L. Wilson (Enid)
Bruce Randall (Tulsa)	

Committee Chairmen

Continuing Education Stuart Filler
 Evaluation Parameter Survey Tom Collier
 Fair Market Value D. Russell Long
 Ethics and Grievance L. D. (Buddy) Sipes
 Internet Richard Krenek
 Membership Brian Walter
 Newsletter Coordinator Richard J. Miller
 Past President's Council Charles Gleeson
 Qualifications Jim Wilson

Individual Appointments

Annual Meeting Advance Planning Barry Ashton
 Communications Director Jim Wilson
 Production Tax Summary Marshall Watson
 Liaison Representative on SPE
 Oil & Gas Reserves Committee D. Ronald Harrell
 Professional Registration Marcus Snyder

Chapter Officers - 2007

Calgary

Chairman	Floyd Siegel
Vice Chairman	Atilla Szabo
Secretary/Treasurer	Curt Labelle
Membership Coordinator	Phil Kandel

(3rd Tuesday of each month except June/July/August)

California

Chairman	Russell Bertholf
Vice Chairman	Tom Walker
Secretary/Treasurer	Barry Evans

Central Texas

Chairman	Cary McGregor
Membership	Open

(Quarterly - Austin Country Club)

Dallas

Chairman	Rick Krenek
Vice Chairman	Dean Eiland
Secretary/Treasurer	Paul McDonald
Membership Chairman	Dee Patterson

(Bimonthly-September through May - Dallas Petroleum Club)

Denver

Chairman	Scott Wilson
Vice Chairman -Program	Jerry Hertzler
Secretary/Treasurer	Kevin Weller
Membership	Pat Galuska

(2nd Wednesday of first month of each quarter
 Hershner Room - One Norwest Center)

Houston

Chairman	Stuart Filler
Vice Chairman	Ed Gibbon
Secretary/Treasurer	Ron Rhodes
Program Chairman	Samantha Meador

(1st Wednesday of each month except June/July/August - Petroleum Club)

Midland

Chairman	Arlen Edgar
Vice Chairman (Program)	Charles Gleeson
Treasurer	Bob Dimit
Membership	Joe Neal

(1st Tuesday of odd months-Petroleum Club)

Oklahoma City

Chairman	Jim Wilson
Vice President-Program	Ken Sigl
Vice President -Membership	Bruce Heath
Secretary/Treasurer	Fletcher Lewis

(Every odd-numbered month)

Tulsa

Chairman	Ken Richison
Vice Chairman	Chris Jacobsen
Secretary/Treasurer	Bob Harmon

(1st Tuesday of each month - Petroleum Club)

SPEE

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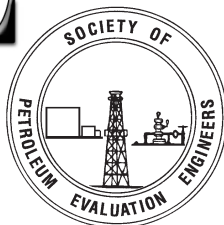
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The SPEE Newsletter is a quarterly publication of the Society of Professional Evaluation Engineers. News items, correspondence, address changes and advertising inquiries should be directed to SPEE headquarters in Houston, Texas.

Continued from page 1

publication of the first new SPEE Directory in three years. A members-only, password-protected, website version is also under development. If your contact information has changed, please advise B.K. Buongiorno. Also, about a fifth of you are holding out on providing a picture. Pictures enhance the SPEE directory (hard copy or web-based) and help us to remember one another between meetings and professional functions. Besides, any picture you provide will be much better than the one that I otherwise must draw of you.

As a final comment on the State of the Society, I am pleased to advise that SPEE's financial condition is also strong. And the prospects for future financial strength and balanced budgets have been restored thanks, in large measure, to the recent passage of a dues increase – the first in seven years. Almost no one fussed about that, and your Board is eternally grateful for your insight and understanding.

Now, with all of SPEE's vibrancy, you may be wondering how to become more involved. Give me a call; we can always find a spot for enthusiastic volunteers. Under the guidance of Richard Miller, we are looking for guest columnists who can contribute to the Newsletter with evaluation insights, observations, and critiques. (Many

thanks to Russ Long for his recent pieces.) We are looking for a new Chairman to organize and run another Software Symposium. Past Chairman Gene Wiggins is standing by to answer your questions and John Wright has volunteered to devise the problems and analyze the responses. New Survey Committee Chairman Tom Collier is looking for volunteers to be a part of the Survey Committee. If you don't currently have time to serve, at a minimum please complete and return the Survey Questionnaire that will soon be heading your way. And please inform Tom about qualified non-member evaluators who should be added to the select invitation list of non-member participants. The SPEE Survey of Economic Parameters used in Property Evaluation is a one-of-a-kind publication and its usefulness has been recognized by respected international and domestic petroleum advisories. Look for enhancements to the SPEE website this year, and call Webmaster Rick Krenek if you have an idea for improving its appearance, function, or use.

Finally, do not hesitate to contact me at (512) 476-1245 or tim@drgainc.com if you have ideas for improving SPEE, or enhancing the services that we provide to our Members. Until then, I look forward to seeing you at the base of Vail Mountain.

Tim Smith



2007 Officers:

- David Gold, Secretary/Treasurer
- Frank Molyneaux, Vice President
- Tim Smith, President
- E. Bernard Brauer, Past President

2007 Board of Directors:

Back row: David Gold, Bruce Randall, B.K. Buongiorno, Stuart Filler, Nanette Schulz, Fred Goldsberry

Front row: Frank Molyneaux, Bernie Brauer, Tim Smith, Brian Walter, Jim Wilson, and Marshall Watson

Not pictured: Bob Dimit and Barry Ashton



Chapter News

Calgary

The Calgary Chapter is continuing to grow with 58 members as of December 31, 2006 and several prospective members in various stages of the application process.

The Calgary Chapter held four meetings from September through December 2006. Bernadette Morgan, Senior Manager with Provident Energy, was the guest speaker for our September luncheon. Ms. Morgan spoke on the impacts to the reserves evaluation process of the Sarbanes Oxley Act (SOX) and recent proposed amendments in Canada that have changed the "C-Sox" rules for Canadian issuers. The guest speaker for our November luncheon was David Anderson, P.Eng, Technical Advisor with Fekete Associates Inc. This talk was the second in a series that was devoted to Modern Production Decline Analysis and its value to petroleum evaluation engineers. A business meeting was held in October and our December meeting was a Christmas social event. Attendance at these meetings ranged from 20 to 35 members and guests.

The COGEH Standing Committee is drafting revisions to Volume 1 of the Canadian Oil and Gas Evaluation Handbook. Most of these revisions will be minor revisions to ensure consistency with Volume 2 which was released three years after Volume 1. The sections on Resources will be the subject of more extensive revisions. The draft revisions will be released to the Calgary Chapter for comment in the near future. Sub-Committees are also drafting guidelines for evaluation of CBM Reserves; International Reserves; and Bitumen Reserves and Resources. The draft guidelines will also be released to the Calgary Chapter for comment in the near future.

On a related topic that is not specifically Chapter business, the Canadian Securities Administrators (CSA) have published for comment proposed amendments to National Instrument 51-101 Standards of Disclosure for Oil and Gas Activities (NI 51-101), its related forms (the Forms) and companion policy (51-101CP) (collectively, the Instrument). These can be found on websites of CSA members, including the Alberta Securities Commission at www.albertasecurities.com.

California

The California Chapter elected a new slate of officers for 2007. The newly elected officers are:

Russell Bertholf - Chairman
Tom Walker - Vice Chairman
Barry Evans - Treasurer

Plans are being discussed to hold a chapter meeting in Bakersfield this Spring. Members are currently being polled on topics of interest for future meeting presentations.

Central Texas

The Central Texas Chapter meets when there are special topics of interest to the group. There is not a set monthly or quarterly meeting. Currently the group has expressed an interest in the area of oil and gas futures hedging, collars and the various types of pricing "insurance" practices used in the industry.

Denver

For the fourth quarter meeting of 2006, the Denver Chapter welcomed Pete Stark of IHS Energy. Pete gave an informative talk titled "Challenges and Opportunities in North American Unconventional Natural Gas." The talk included an overview of US and Canadian supply trends as well as performance reviews from key CBM, tight sand, and shale gas plays.

The Denver Section also elected the following new officers for 2007-2008:

Scott Wilson - Chairman
Jerry Hertzler - Program
Kevin Weller - Secretary/Treasurer
Pat Galuska - Membership

The Denver Chapter's first meeting of 2007 was well attended, with 50 members and guests hearing John Ritter, Chairperson of SPE's Oil and Gas Reserves Committee and Senior Director for Occidental. He presented an overview of the **2007 Petroleum Reserves and Resources Classification, Definitions and Guidelines** where John described the long work effort that is nearly complete. The authors were seeking feedback and comments at the time of the meeting, in anticipation of it becoming a final draft in early 2007. Questions from the floor included the potential of adoption of the standards by regulatory agencies and if there was movement toward reserves recognition within the various accounting boards. The next meeting is scheduled for April 11.

Houston

Meetings began the 2nd half of the year on September 6th with Richard Lane of Southwestern Energy Co. Discussing "Unlocking the Potential of the Fayetteville Shale." Attendance was 54 members and guests. On October 4, the speaker was Scott Lamoreaux of DZ Bank discussing "Trends in the Upstream Capital Marketplace." Attendance was 35 members and guests. Wayne Wisniewski, SPEE member, gave a talk entitled "You Make the Call –Applied Ethics" on November 1. Attendance was 53 members and guests. The final meeting of the year was held on December 7 and opened with a moment of silence honoring the 60th anniversary of Pearl Harbor. The speaker was Tom Harris of Kerogen Resources Inc. His talk was "Shale Gas - Real Deal or Flavor of the Month." Attendance was 68 members and guests. The last half of the year saw an average attendance of 53 compared to the first half of the year which averaged 30. Credit can be given to our Program Chairman, Ed Gibbon, for the outstanding speakers provided. Our finances showed a gain of approximately \$1,600 over last year. New officers were elected for 2007 in December. They are:

Stuart Filler, Chairman
Ed Gibbon, Vice Chairman
Ron Rhodes, Secretary-Treasurer
Samantha Meador, Program Chairman

Midland

In November, the Midland Chapter was involved in two meetings. The first one was jointly sponsored by SPEE, FEPA (Forum for Exploration, Production and Acquisitions) and the Midland Business Development Leadership Group. The speaker was Mr. Maynard M. Holt with Goldman Sachs, whose topic was "Current Trends in the Oil & Gas Environment." Arrangements were made by SPEE member (and Society Director) Bob Dimit. Attendance was approximately 50. The speaker covered energy and power activities in North America and internationally.

The second November meeting included a presentation by SPEE's own Marshall Watson (newly elected Society Director). The title was "Correlating Petrophysical and Flood Performance in the Levelland-Slaughter Field." Reservoir and petrophysical characteristics of various portions of this San Andres producing complex were related to secondary and tertiary recovery performance. Most of the information presented was developed from Marshall's PhD thesis at Texas Tech. There was much interest in the talk as evidenced by the lively question and answer period. Attendance was approximately 28, including several prospective members.

During the meeting, Chapter officers for 2007 were elected. They are:

Chairman - Arlen Edgar
Vice Chairman (Programs) - Charles Gleeson
Secretary/Treasurer - Bob Dimit
Membership - Joe Neal

The meeting schedule has changed to the first Tuesday in odd-numbered months.

Oklahoma City

The Oklahoma City Chapter grew by one member in the second half of 2006, welcoming Ken Sigl of Devon Energy to the group. There are currently applications out to about a dozen prospective members and the chapter hopes to have a successful 2007, adding several new members.

Chuck Yates, Senior Managing Director of Kayne Anderson Capital Advisors, addressed the group in November. Titled "If You've Got the Money, Honey, I've Got the Time," his presentation detailed the considerable changes in the private equity market since 2003. As more and more money chases fewer high impact asset deals, the rules of engagement have changed, often in favor of the producer. According to Chuck, organic growth through the drill bit is no longer a forbidden concept to institutional investors that once craved PDP reserves.



IN MEMORIAM

We regret to note
the passing of
the following:

R.C. 'CHUCK' EARLOUGHER
Tulsa, Oklahoma
January 17, 2007

HARRY T. PRINGLE, JR.
Houston, Texas
February 24, 2007

Tulsa Chapter SPEE Meeting

Although the Tulsa Chapter has suffered a significant loss of key personnel due to recent transfers out of state, they are currently making an effort to re-group. New officers have been elected, they are: Ken Richison (Chairman), Chris Jacobsen (Vice Chairman), and Bob Harmon (Secretary/Treasurer). Luncheon Meetings and Joint Meetings with SPE, SPWLA, and TGS are currently being planned. All members in the Tulsa area are encouraged to contact Ken Richison, 918-583-8300, krichison@kwboil.com to express your interest in seeing the Tulsa Chapter of the SPEE continue to provide quality speakers on topics of interest.

As the first activity of the revived Tulsa Chapter, I am pleased to announce a Luncheon Meeting of the Tulsa Chapter SPEE Members on Tuesday April 17, 2007 at 11:30 AM in the Cowboy Room of the Tulsa Petroleum Club. Lunch will be provided at a cost of \$25.00 per person. Since our speakers are Geologists, we are also inviting members of the Tulsa Geological Society (TGS) to join us.

Speakers: Bob Harmon & Robert W. Von Rhee

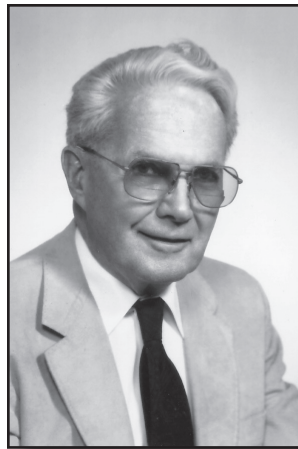
Topic: ENTREPRENEURIAL GEOLOGY – A MODEL FOR A NEW COLLEGE COURSE (ACQUISITION OF OIL AND GAS PROPERTIES)

By Robert Harmon, Robert W. Von Rhee, Tom Alexander and Bryan Tapp

To fill a need for students to learn the basics of acquisitions of oil and gas properties where little, if any, academic training exists, a semester-long Senior/Graduate level course was proposed to the Geosciences Department at the University of Tulsa. Three practicing geologists, all active members on the Board of Geosciences at the University of Tulsa, volunteered to create and teach the course in Fall of 2006, with the objective of “filling in the acquisitions gap” in the university curriculum.

Everyone is welcome to bring a guest but please let us know if you will be attending so we can make the appropriate arrangements. I look forward to seeing everyone at the meeting.

Ken Richison
Tulsa Chapter SPEE Chairman
918-583-8300 Ext. 207
918-599-7889 Fax
918 810-4031 Cell



Robert Charles “Chuck” Earlougher, a petroleum engineer who was a pioneer in the recovery of oil by water injection, elected an honorary life member of SPEE in 1993, died January 17, 2007. He was 92.

Earlougher was born May 6, 1914, in Ulysses, Kansas, to Annetta and Harry Earlougher. He attended schools in Arkansas City, Kansas, before receiving a petroleum engineering degree from the Colorado School of Mines in 1936.

Upon graduation, Earlougher worked for the Sloan & Zook Co. in Bradford, Pennsylvania, at the time the third-largest water-flood operator in the country. After working as a roustabout, he was placed in charge of the company’s core and water analysis laboratory.

In 1938, he moved to Tulsa where he and a partner bought the Geologic Standards Co. In 1945, Earlougher bought out his partner and changed the company’s name to Earlougher Engineering - Petroleum Consultants & Core Analyses. He became recognized internationally for his work in evaluation and operation of oil reservoirs for secondary recovery and pressure maintenance by water injection. He worked as a consultant to the city of Long Beach, California for 35 years, helping to stop the sinking of parts of the city caused by local oil extraction.

Stiles-Godsey Engineering Inc. of Tulsa bought Earlougher Engineering in 1970, retaining the company as a subsidiary with Earlougher remaining president. In 1973, Earlougher Engineering became Godsey-Earlougher Inc., and Earlougher was made chairman and senior consultant. Williams Brothers Engineering Co. bought Godsey-Earlougher Engineering in 1976, and Earlougher became chairman of its Petroleum Consulting Division.

He retired from Williams Brothers in 1988, his 50th year in oil and gas consulting. He then reactivated Earlougher Engineering Inc. and worked for several years before he retired for good.

Earlougher was honored with the Colorado School of Mines’ Distinguished Achievement Medal - the equivalent to an honorary doctorate - in 1960, the same year he was named to the executive committee of the International Oil and Gas Educational Center’s advisory board.

In 1966, he was elected to serve as a director for the American Institute of Mining, Metallurgical and Petroleum Engineers. He also was a director of the group’s Society of Petroleum Engineers and was a past Mid-Continent District chairman of the American Petroleum Institute’s Production Division. He received a Distinguished Service Award from the Society of Petroleum Engineers in 1973.

SPE Board Approves PRMS

The Petroleum Resource Monitoring System was approved by the Board of Directors of SPE at the meeting in Cairo, Egypt, on March 25, 2007. The PRMS is the culmination of a year-long effort by SPE, SPEE, AAPG and WPC to consolidate and coordinate reserves definitions. The final approved form of the PRMS will be posted on the SPEE website as soon as available and will be the subject of extended discussion at the Annual Meeting.

Annual Meeting June 9–12, 2007

Modeled after traditional Bavarian villages, Vail's quaint village includes hand-painted floral exteriors, pedestrian streets and Belgian horse-drawn carriages. The surrounding Rocky Mountains offer some of the most spectacular vistas in the world. Invigorate yourself this spring by attending our annual meeting. Partake in the many available outdoor activities. Participate in a comprehensive and enlightening professional program.

The meeting will be at the beautiful Marriott Vail Mountain Resort & Spa (<http://marriott.com/hotels/travel/whrco-vail-marriott-mountain-resort-and-spa>). The resort is a breathtaking two-hour drive from Denver International Airport. Rent a car or make use of the regularly scheduled airport shuttle service. Airfares to Colorado are reasonable in June, but booking early is always your best bet.

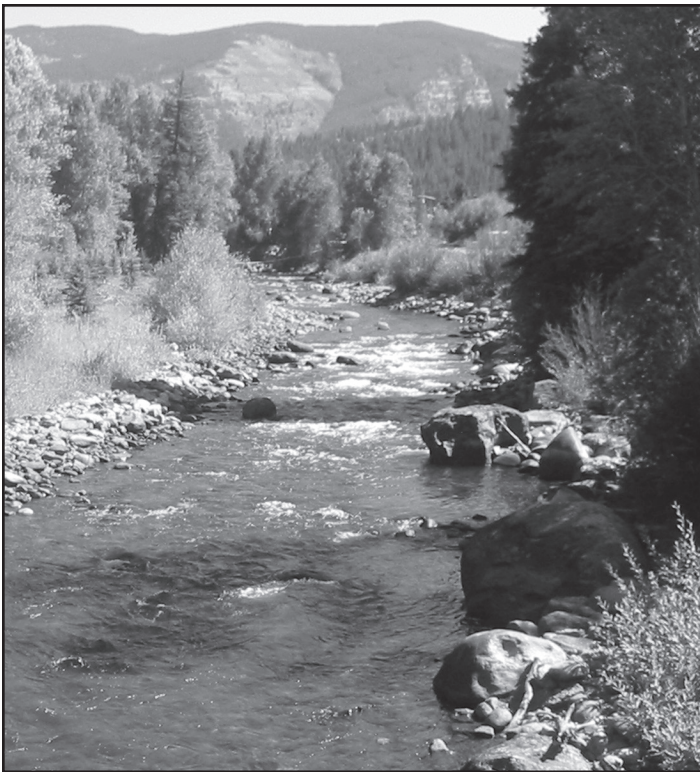
Once again both Saturday and Sunday short courses will be offered providing the opportunity to accumulate serious Personal Development Hours. The technical sessions will include a presentation and panel discussion on the new SPE et al reserves definitions and Petroleum Resource Management System. We will hear about current M&A market trends, natural gas prices, European Reserves Evaluation approaches, and the relationship between global climatic conditions such as El Nino and catastrophic weather events that affect our industry.

The world's highest botanic garden is located in Vail, Colorado amid the Rocky Mountains at an altitude of 8,200 feet. For those not attending the technical session on Monday morning, we have chartered a luxury coach to whisk you away to these peaceful gardens where you will enjoy a variety of flowering alpine plants as well as a variety of birds. The rock garden has a stunning 120-foot waterfall.

On Monday afternoon, experience the magnificent Rocky Mountains. We have arranged for knowledgeable guides to take you to elevation heights of 12,500 feet in open air Jeeps. Enjoy views of high alpine meadows, wild flowers, Colorado's famous 14,000-foot peaks and there is always a chance to see local wildlife. For the golfers, the obligatory outing will be at the nearby Beaver Creek Golf Club. Your drives are guaranteed to go 25% farther at 10,000 feet, but not necessarily straighter.

Watch for the meeting package in your mailbox soon. Don't forget the annual meeting is open to all. SPEE has received a lot of worldwide attention lately, and if you know of a colleague who would be interested in our event, please let them know.

Frank Molyneux
2007 Annual Meeting Chairman



SPONSORSHIPS ARE AVAILABLE FOR OUR ANNUAL MEETING TO BE HELD JUNE 9 – 12 IN VAIL. SPONSORS WILL RECEIVE ADVERTISEMENTS IN THE MEETING PROCEEDINGS AND ON-SCREEN AND POSTER PUBLICITY DURING THE TECHNICAL SESSIONS.

**INDIVIDUAL MEMBERS: \$250, BUSINESSES AND NON-MEMBERS: \$500
CONTACT FRANK MOLYNEAUX (403)221-6566**

Probabilistic P90 and Reasonable Certainty

Alternate Definitions of Proved or the Same?

Probabilistic reserve definitions typically use what is in short form called a “P90” quantity for the proved reserve classification. In such circumstances, that quantity is defined such that there should be at least a 90% probability that the quantities actually recovered will equal or exceed the estimate. In its work on the proposed new definitions last year, the SPE, in cooperation with the AAPG, WPC, and SPEE, drafted a document that included a new Petroleum Resources Classification Framework inclusive of a modified definition of proved reserves. Since the draft was publicly released last fall, the SPEE persuaded the drafting committee to make several changes.

Discussion & Comment

One of those changes was the removal of the direct quantitative link between deterministically estimated proved reserves under the “reasonable certainty” criteria and the P90 probabilistic classification. Why was that important? I will get to that in the last paragraph – go ahead, peek if you must, but I think the perspective provided by the intervening discussion will benefit many.

According to our own past SPEE President and Honorary Lifetime Member Chap Cronquist (also author of the book *Estimation & Classification of Reserves of Crude Oil, Natural Gas, & Condensate* available from the SPE Book Store) the term reasonable certainty has been used in reserve definitions at least since 1946, has been historically interpreted to be a best estimate and from a statistical point of view, implies a mean value. This usage (reasonable certainty reflects a best estimate) is also consistent with the SPEE publication *Perspectives on The Fair Market Value of Oil and Gas Interests* that was published in 2002 by a committee I chaired. It is common for engineers trained to estimate reserves deterministically to have pride in their abilities and to have confidence in the estimated quantities of proved reserves. The quality of one’s work is often judged by one’s historical reputation. That reputation is most often influenced by how one’s work is judged in the aggregate and over time. Individual estimates will often be off significantly. If the estimator has been objective, has done quality work, and the number of estimates is sufficiently high, the historical track record for revisions will, in total and over time, be expected to trend slightly upward. These circumstances and event sequences reflect the historical use of the term reasonable certainty.

In the following discussion I present two examples of data distributions that are familiar to most SPEE members either through their work or recreation. I use the recreational data distribution first – the roll of two six-sided dice with the customary sides marked with spots ranging from 1 to 6. Figure 1 presents a frequency distribution for a single roll inclusive of a cumulative distribution. The most likely outcome and the mean of the distribution is 7. Roll the dice enough times and the average will be very close to 7. I think the similarities to a best estimate are clear. From the cumulative plot the P90 value is seen to be 4.2. If Figure 1 were truly representative of the reserve distribution in the mind of a conscientious deterministic reserve estimator, I suspect the estimate quantity might be a number of spots on the order of 6 or slightly more.

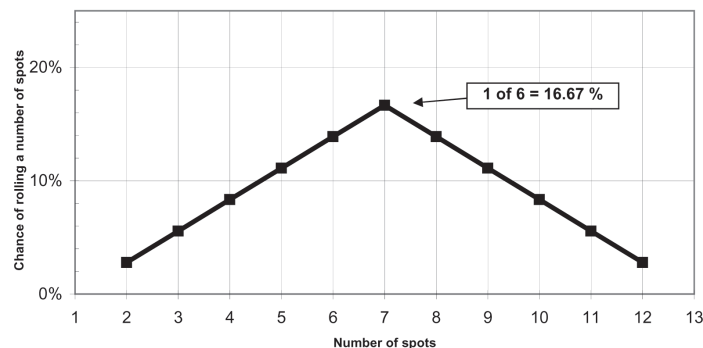
Given the Figure 1 data distribution of spots, the probabilistic proved (P90) reserve for a single roll is 4.2 spots. If a player is given

100 rolls and the proved number of spots is aggregated arithmetically, the proved number of spots for the player is 420. At the end of 100 rolls the player can expect his accumulated number of spots to be close to 700 and to beat the probabilistic proved total by 167 percent. If you were required to bet on the outcome of the number of spots and were not knowledgeable about the nature of the distribution (did not know we were talking about a pair of dice), what utility would you find in the aggregate probabilistic proved quantity of 420? It is a number that will with absolute certainty be exceeded, and exceeded significantly. It is of not much use by itself. The aggregate of the 6 spot estimates that I suggest might represent a best estimate (totaling 600) is also conservative but much more meaningful.

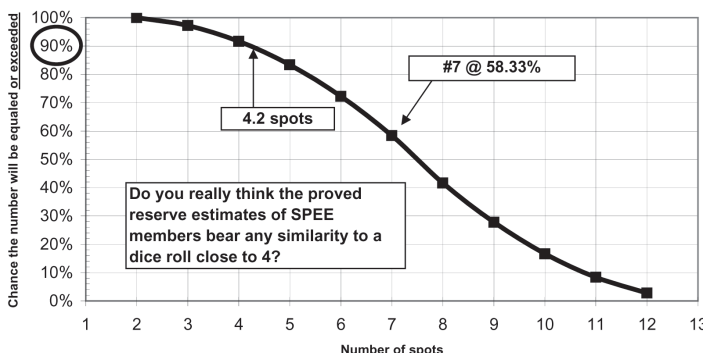
Figure 2 (Fig. 1 in the original document) is an industry example of a data distribution of oil recovery factors from a set of water drive reservoirs. The figure (the black and white portions) was taken from a 1967 publication labeled “A Statistical Study of Recovery Efficiency.” It was



Probability distribution - two dice roll



Probability distribution - two dice roll

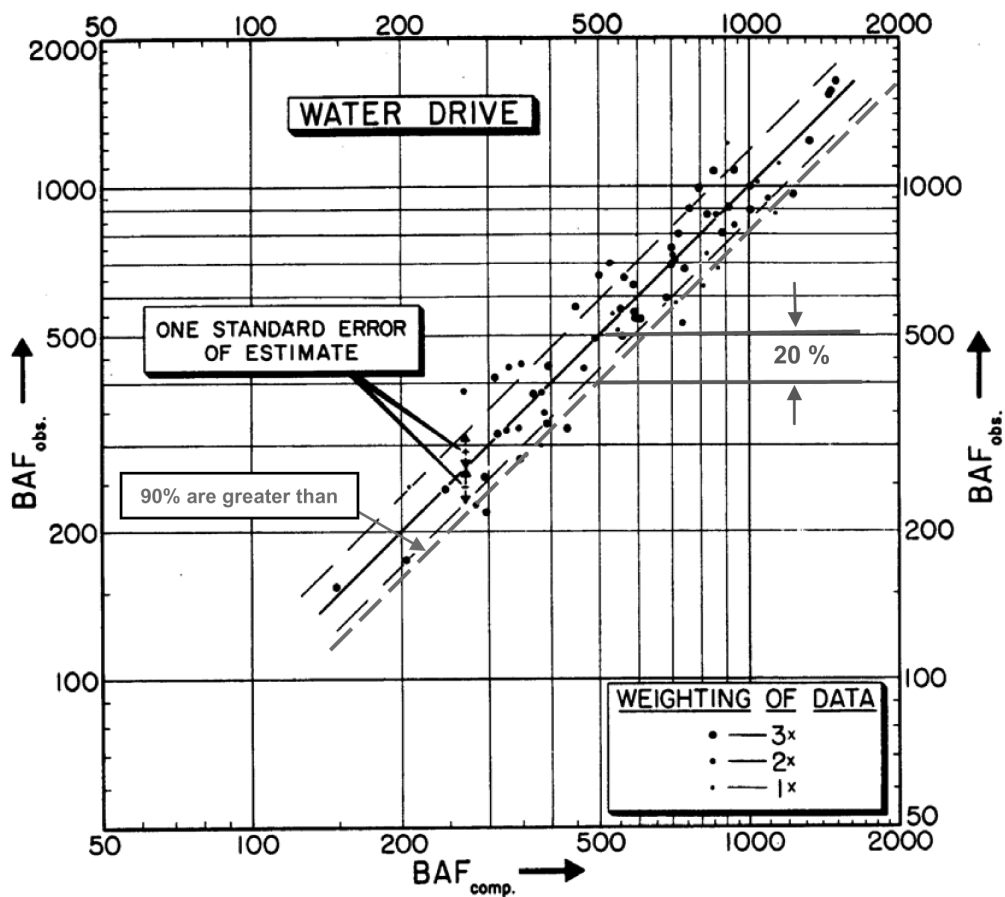


issued by the American Petroleum Institute under the subcommittee chairman Jan J. Arps (a deceased SPEE member). I think most SPEE members are familiar with the document and the base figure so I will not go into great detail about its nature. Figure 2 presents, although in somewhat unusual form, an example of a publicly available industry data distribution.

The scatter of data on Figure 2 represents how the observed data points deviated from the “best equation” (see the equation below the graph) represented on Figure 2 by the solid black line. The equation represents what the committee described as the most probable outcome. The committee added the dashed lines showing the range representing one standard deviation (labeled “one standard error of estimate”) from the best equation. Approximately 68 percent of the data (actually the weighted data but for that much detail you need to study the paper) falls within one standard deviation.

I believe most practicing petroleum engineers making deterministic estimates that have used either the referenced works or similar references, have used the result given by the equivalent of the “best equation” for the purpose of their estimates. What if one was to be bound by the P90 criteria? Given that one standard deviation encompasses about 68 percent of the data, 32 percent of the data lies outside one standard deviation. Under the circumstances, one might expect the 32 percent of the data outside of one standard deviation to be roughly half above and half below one standard deviation. If true, 16 percent of the data is below the one standard deviation range. For a P90 quantity, the expectation that the estimated quantity will be less than the estimate must be less than 10 percent. Thus the low range of one standard deviation can be expected to yield a recovery factor that is too optimistic to be considered a P90.

I have superimposed a red line (shows as light gray) on the original figure that is parallel to the original lines and positioned it such that 90 percent of the (weighted) data points are above that red line. In my view, to deterministically estimate a P90 quantity you would need to base your recovery factor on the red line. I have never done that and I don't know anyone who has. For this particular data distribution (water drive reservoirs) the difference between a most probable quantity and a P90 quantity represents a 20 percent difference in ultimate recovery (see the blue annotations on Figure 2). The same paper from which Figure 2 was taken also presents results in a similar fashion for solution gas drive reservoirs.



$$\ln \text{BAF}_{\text{comp}} = \ln 4259 + 1.0422 \ln \frac{\phi(1-S_w)}{B_{oi}} + .0770 \ln \frac{k_{fw}}{\mu_{oi}} - .1903 \ln S_w - .2159 \ln \frac{p_i}{p_a}$$

Fig. 1 — Comparison of Observed and Computed Values of Recovery Factors in Barrels per Acre Foot from 70 Water Drive Reservoirs
 Coefficient of Multiple Correlation, $r = 0.958$
 Standard Error of Estimate $S_y = 0.162$ or 17.6 percent

The solution gas drive data appears to be more widely scattered than the water drive data so I would expect the difference between the most probable (deterministic proved) and P90 quantities for that data set to be greater.

I think the step from most probable to best estimate is easy to make and best estimate is equated to reasonable certainty. Reasonable certainty is the criteria used in the SEC definition. Early drafts of the recent work by the committee headed by the SPE, linked the P90 quantity closely with the term reasonable certainty. It would have been quite untenable to me for several world leading petroleum industry organizations to publish a definition that defined reasonable certainty in a way that is not consistent with its historic use. It would be fodder for the lawyers. The probabilistic definition used in Canada avoids the use of the term reasonable certainty. A solution I proposed was to remove, in step with the Canadian definition, the term reasonable certainty from the SPE et al proposed new definition. Instead, it seems, the language has been changed such that, in the words of SPEE President Tim Smith, “...removal of the direct quantitative link...” has been accomplished. Thankfully.

Russ Long

Changing Seasons

Along with the coming of Spring and Daylight Saving Time, with this issue of your SPEE Newsletter there is a changing of the guard, a passing of the baton, if you will. For several years now Mr. Fred Goldsberry has been the Editor in Chief of the SPEE Newsletter and has done a great job of keeping SPEE members informed of events and other things that we need to know about our organization. The normal rotation for SPEE committee chairpersons is three years so it is time for someone new to take over the duties of Editor. For some reason the Board thought this would be a good job for me and, after a short bout of modesty, I said "Sure, why not!" So here I am for the next three years or until I get fired, whichever comes first.

Editing a newsletter for a professional organization such as SPEE is both a responsibility and an opportunity. I intend to take both aspects seriously. Over the next three years we (I plan to corral some helpers) will try to bring you an expanded newsletter that will provide all the information you have come to expect; such as the President's Letter, New and Prospective Members, Chapter Activities, and Announcements of Future Events. In addition, we will start a Discussion & Comment section which will highlight issues of interest to members and encourage responsive comment. In this inaugural issue, I am pleased to have an article from Mr. Russ Long, a Past President of SPEE, providing some insight into the recent work done by SPEE regarding the soon-to-be-released SPEE/SPE/AAPG/WPC Petroleum Resources Monitoring System, otherwise known as Reserves Definitions. I will try to include Discussion articles in each issue along with responses from members and others. In the absence of contributed articles I, as the Editor, may select a subject of interest. I may also solicit third-party articles for inclusion as Discussion fodder or as separate subjects and we will augment the Discussion content with Reviews of books and papers published by SPEE members and other authors.

Another area for exploration is a section for News of Members - keeping track of those who have changed jobs, relocated, or decided to hang up their hats and take up golf and/or fly fishing.

We will try to make your newsletter interesting, something to look forward to, possibly to share with friends and family, and read to your grandchildren at night. We also hope to establish a regular schedule for publication, subject to content requirements.

Needless to say, this effort cannot be done alone and SPEE is very fortunate to have the help of Mrs. B.K. Buongiorno and Mrs. Diane Pollard, without whom you would not be reading this long-winded message. So, get another cup of coffee, set a spell, and catch up on the news - then let us know that you think.

Richard Miller

Future Annual Meeting Sites

Many members and their spouses look forward to the SPEE Annual Meeting in order to gather with friends, visit new places, and enjoy a mini-vacation. Then, of course, there are the educational opportunities offered by the technical program and short courses. The Annual Meeting for 2007 is upcoming (June 9–12 in Vail, Colorado, a grand location, and Vice President Frank Molyneux promises an interesting meeting that all will remember.

The Advance Planning Committee has considered several sites for future meetings and, from those sites, the Board has approved locations and facilities for 2008 and 2009.

The Annual Meeting for 2008 will be at The Homestead in Hot Springs, Virginia from June 7–10, 2008. The Homestead is an exceptional resort located in a rural setting in the Allegheny Mountains of western Virginia, just up the hill from the beautiful and historic Shenandoah Valley.

The 2009 Annual Meeting will be at the La Fonda Hotel in Santa Fe, New Mexico, from June 13–16, 2009. While Santa Fe and the La Fonda may be a familiar location to many, there is a quality and attractiveness in the city and the region that draws people back. For those who have not been to northern New Mexico in late spring, this meeting will be a real treat.

Alas, seasons also change in the Advance Planning Committee. For the past ten years Carol and I have enjoyed serving SPEE in finding, exploring, and planning locations and facilities for the SPEE Annual Meetings. Our first was Williamsburg in 1997 and since then we have traveled to the California coast (three times), the mountains of Utah, the wilds of Oregon, the low county of South Carolina, and the magnificence of Quebec. We even endured an expedition to the frozen north of Michigan but that's another story. This has been a rewarding experience but we have decided that it is time for a change. Accordingly, Barry and Sharon Ashton will be taking over as the APC with planning for 2010 and beyond. We are pleased to leave the work of the committee in good hands.

Richard Miller

It is with both excitement and fear that Sharon and I have taken over the responsibilities of the Advance Planning Committee from Richard and Carol. We look forward to receiving their counsel at the upcoming Annual Meeting and will then proceed in earnest to tackle our new task, searching for that unique location for the 2010 Annual Meeting. Both Sharon and I love to travel and are ardent outdoor enthusiasts, especially with regard to golf. My score, however, has yet to match my enthusiasm! If you are attending the annual meeting, talk to us about your ideas or send us an email at bashton@ajma.net. You can expect to hear from us in the near future.

Barry Ashton

Membership Applicants

The following member applicant has been processed by the Qualifications Committee. The bylaws require that names be presented to the membership for at least 30 days as a pre-membership requirement. Any member with an objection should address the objection to the Executive Committee (see bylaws regarding other important details) since the applications have already passed through the Qualifications Committee.

APPLICANT	SPONSOR
HENDRICKSON, STEVEN GREGG Montierra Minerals & Production, LP Vice President - Engineering 24 Greenway Plaza Houston, Texas 77046	Steve Davis Danny Simmons Larry Tharp Elliott Wiesendanger

Historic Agreement on Need for Petroleum Reserves Evaluator Training

Four widely recognized industry organizations, the Society of Petroleum Engineers (SPE), American Association of Petroleum Geologists (AAPG), Society of Petroleum Evaluation Engineers (SPEE) and World Petroleum Council (WPC) have joined together to create a training program available to petroleum evaluators worldwide. This agreement resulted in the creation of a nine-person committee in July 2006. The "Joint Committee on Reserves Evaluator Training" (JCORET) is composed of two representatives of each sponsoring organization plus one "at large" member – a total of nine persons. JCORET will approve course materials and instructors to ensure that all training materials represent industry-recommended practices.

JCORET plans to formally launch its approved training program for petroleum reserves evaluators in the spring of 2007 following the anticipated adoption of the 2007 Resource and Reserves Definitions by the Society of Petroleum Engineers and its co-sponsors.

Representing the AAPG on the JCORET are Daniel Tearpock and Bill Kazmann. SPE is represented by Elliott Young and Rod Sidle. SPEE is represented by Dan Olds and Stuart Filler. The WPC is represented by Anibal Martinez and Pierce Riemer. Ron Harrell is the at-large member chairman and will vote only to resolve tie votes.

A four-person Curriculum Committee continues to meet to develop a modules-based training curriculum. This curriculum is expected to be comprised of existing training materials plus custom-developed courses designed to complete the spectrum of training needs. The program is expected to be "evergreen" in order to maintain evaluator competence along with continuously evolving technology.

JCORET has a goal of making these training courses available internationally at a minimum cost to participants. In the United States and globally, reserves evaluators do not have to meet formal standards or licensing requirements. Although voluntary, the JCORET program aims to bridge the knowledge gap through a formal, industry-sanctioned training curriculum.

Welcome New Members

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The First Edition of the *Canadian Oil and Gas Evaluation Handbook* (COGEH) currently consists of two volumes that provide a set of standards and guidelines for the preparation of oil and gas reservoirs evaluation in Canada. The Handbooks have been co-authored by the Society of Petroleum Evaluation Engineers (Calgary Chapter) and the Petroleum Society of CIM.

Volume 1 (published in June 2002) includes discussion of evaluator qualifications, business procedures, definitions of resources and reserves with general guidelines, evaluation procedures, time values of money and profitability indicators, uncertainty, contents of evaluation reports, auditing oil and gas reserves information, and financial analysis and benchmarking practices.

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