SPEE
SOCIETY OF PETROLEUM EVALUATION ENGINEERS

Newsletter
November 2008

President's Letter

It is a beautiful late fall day in Calgary as I write this final installment as 2008 President. The clear but brisk mountain air at this time of year is conducive for reflection on what has transpired during 2008 and some of the initiatives that the SPEE is undertaking. It has been a year of *change*, to say the least. Here are some examples:

- After nine years of almost no growth, U.S. gas production skyrocketed in 2008, up eight percent to nearly 60 BCF/day. That is a distinct *change* since it wasn't long ago that U.S. producers were struggling to find new natural gas supplies. Of course as professional evaluators, we all know that resource plays, notably shale gas, is the major source of this significant new supply of gas.

- In June, the U.S. Securities and Exchange Commission released for comment new proposed oil and gas reporting requirements. This is the first major *change* proposed to reporting requirements in over three decades, despite significant advancements in many aspects of our industry. You may view our response and 70 others at www.sec.gov/rules/proposed.shtml.

- The 52 main global equity markets suffered an apparent overnight *change* in direction this year. The global meltdown in these markets in 2008 erased $16.2 trillion in market value through October. Crude oil has fallen (seemingly overnight) from a peak in July of nearly $150, to a low in early November approaching $60. Consequently, on a global basis, access to capital (the lifeblood of our industry) has *changed*. It is extremely hard to raise capital of any kind, no matter how attractive the company. All industries, including oil and gas, appear to be in for difficult times in the near term.

The SPEE is also undergoing *change*. Last year under the direction of Tim Smith, we adopted a modernized, updated color logo. We are working on a total re-vamp of our web site which is on target for unveiling before year-end. Vice President David Gold instituted a new and innovative structure for our 2008 annual meeting that received rave reviews. Our London "Chapter in Formation" is fast approaching full Chapter status. We are continuing our work on JCORET, COGEH, REPs, and the United Nation's Ad Hoc Group of Experts (see previous newsletters for details).

Changes surrounding the application of reserve/resource definitions to the evaluation of resource plays, such as shale gas, were a topic of a lively panel discussion at our annual meeting in June. Mr. Russell K. Hall has volunteered to chair a committee with a view to developing guidance for the evaluation of resource plays. Volunteers for this committee are still needed. Please contact Russell (russell@russellkhall.com) to participate in a high profile, educational, and worthwhile project.

Several years ago, the SPEE sponsored the very successful Economic Software Symposium that resulted in positive *changes* to certain software programs. Mr. Kerry Pollard is leading our efforts to organize our second symposium scheduled for next April. Please contact Kerry (kpollard@austin.rr.com) for volunteer opportunities.

Dues invoices for 2009 are included in this newsletter. You will note a couple of *changes* on the return form reflecting recent amendments to our

Continued on page 3

2008 Officers and Directors

Committee Chairmen and Individual Appointments

Officers

President ..... Frank Molyneaux (Calgary)
Vice President ..... David K. Gold (Bakersfield)
Secretary/Treasurer ..... Stuart L. Filler (Houston)
Past President ..... S. Tim Smith (Austin)

Directors

Barry R. Ashton (Calgary)
Richard F. Krenek II (Dallas)
James G. Patterson (Houston)
Bruce Randall (Tulsa)
Scott H. Stinson (Denver)
Brian Walter (Dallas)
Marshall Watson (Midland)
Jim L. Wilson (Tulsa)

Committee Chairmen

Evaluation Parameter Survey ..... Tom Collier
Fair Market Value ..... D. Russell Long
Ethics and Grievance ..... L. D. (Buddy) Sipes
Internet ..... J. Brian Walter
Membership ..... James G. Patterson
Nominating ..... S. Tim Smith
Newsletter Coordinator ..... Richard J. Miller
Past President's Council ..... Daniel R. Olds
Qualifications ..... Jim Wilson

Individual Appointments

Annual Meeting Advance Planning ..... Barry Ashton
Communications Director ..... Bruce L. Randall
Production Tax Summary ..... Marshall Watson
Liaison Representative on SPE
Oil & Gas Reserves Committee ..... D. Ronald Harrell
Professional Registration ..... Marcus Snyder
REPS ..... Daniel R. Olds
JCORET ..... Stuart Filler, Dan Olds, E. Bernard Brauer

SPEE
SOCIETY OF PETROLEUM EVALUATION ENGINEERS

1001 McKinney Street, Suite 801
Houston, Texas 77002
713-651-1639
fax 713-951-9659
www.spee.org
password: speeweb

Administrative Secretary
B.K. Buongiorno
Bkspee@aol.com

Newsletter Editor
Diane Pollard
(512)263-8022
dpollard@austin.rr.com

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

Chapter Officers - 2008

Calgary
Chairman — Floyd Siegel
Vice Chairman — Attila Szabo
Secretary/Treasurer — Curt Labelle
Membership Coordinator — Terry Nazarko
(3rd Tuesday 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 — Dean Eiland
Vice Chairman — Paul McDonald
Secretary/Treasurer — Philip Crouse
Membership Chairman — Rick Krenek
(Bimonthly-September through May - Dallas Petroleum Club)

Denver
Chairman — Jerry Hertzler
Vice Chairman -Program — Kevin Weller
Secretary/Treasurer — Pat Galuska
Membership — Mike White
(2nd Wednesday of first month of each quarter Hershner Room - One Norwest Center)

Houston
Chairman — Ed Gibbon
Vice Chairman — Ronald Rhodes
Secretary/Treasurer — Samantha Meador
Program Chairman — Mitchell Reece
(1st Wednesday of each month except June/July/August - Petroleum Club)

Midland
Chairman — Charles Gleeson
Vice Chairman (Program) — Tom Collier
Treasurer — Russ Hall
Membership — Joe Neal
At Large Member ExCom — Bob Dimit
At Large Member ExCom — Arlen Edgar
(1st Tuesday 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)

Continued from page 1

By-Laws. The first *change* relates to Article III which allows for membership in our Society for evaluators who are not licensed or registered provided they are in compliance with the terms described in the By-Laws. Members must now indicate their professional status on the dues return form. The second *change* requires that all members confirm, as required under Article VI of the By-Laws, that they have obtained the minimum one hour of formal or informal ***Ethics*** training over the last year.

Last year our newsletter Chairman, Richard Miller, implemented *changes* to the format of our newsletter. Not only is it in color, but it has expanded in scope containing technical and business articles of interest to our membership. In addition, Richard is leading the effort for a joint project with the SPE to publish a new SPE/SPEE Reprint Series containing previously published papers relating to oil and gas evaluation.

Forty years ago the SPEE published Volume 1 of the Journal of the Society of Petroleum Evaluation Engineers. This 37-page document listed all 96 members and contained four articles, two of which addressed banking and the petroleum industry. (My favorite is, *"What Makes Those Bank Engineers So Conservative?"*) Vice President David Gold has agreed to be editor of a resurrected Journal. David anticipates publishing Volume 2 in December 2008. Please contact David (dkgold@areaenergy.com) if you wish to assist, have an article worthy of inclusion in this or upcoming editions, or simply have ideas to pass along. You can also contact David if you would like to obtain an electronic copy of Volume 1. It makes for interesting reading.

It indeed has been a year of *change* for the SPEE. For the first time in our history we have had a Canuck as President. For the first time in our history we are going to have our winter meeting of board of directors in Canada. It is scheduled for January 2009 in Calgary. Board members are reminded to bring their touques.

In closing, I would like to take this opportunity to thank the three outgoing board members for their dedicated service over the last few years. Thank you to Barry Ashton, Jim Wilson, and Tim Smith. I would also like to welcome our three incoming board members, Tom Collier, Ed Gibbon, and Samantha Meador. Also, a special thanks to B.K. I would not have gotten through my year as President without her assistance.

Frank Molyneaux

From the Editor:

This will be our last Newsletter for 2008. We came up with a half page of extra space - that is, half a page that was not already filled by SPEE news, Chapter doings, and articles from our members. Now, here at the Newsletter we do not like blank space; after all, there must be something useful to impart to readers and it costs just as much to mail blank space as filled space so - why not fill it? It was suggested by our Publisher, Diane Pollard, that I might like to add something that the readers would find useful or interesting or possibly, but not likely, both. Cartoons are always a good space filler but all the ones that I found stemmed in some way to politics and I think we all need a breather from all that tomfoolery. I thought about throwing in my Cousin Jean's recipe for Hush-Puppies but I did not think that all our readers would care for Hush-Puppies so that was out. Besides, after much begging on my part, dear Cousin Jean finally admitted that she uses a Zaterain's mix. Another legend of the South gone. As were pictures of the dog - since we do not have one.

So, on a more, but not too, serious note, I thought it might be a good time to review and chat about a few things that are going on in SPEE and with your Newsletter. As you might have noted, the Big Idea for 2008 was Change! And so long as you did not enquire about the kind of change being considered or how change was going to be implemented it was all great fun. We will see how long the laughs last. However, not to be left behind we, as in SPEE and the Newsletter, are moving along, as they say. Going forward the Newsletter will have an Ethics column written by Mr. Arlen Edgar and friends which will try to keep the Ethics issue in front of SPEE members through discussion of various ethical questions. Part of the plan for this column is to pose certain questions in each issue and ask members to respond with answers. Not a test exactly but more an open forum on the pages of the Newsletter and possibly, later, on the website. We also plan to continue asking Members to submit articles for publication such as the excellent report by Mr. Scott Hickman on expert witness Ethics included herein. The emphasis of Newsletter articles will shift, not change, from technical to more general interest content as the new SPEE Journal, which will concentrate on the more technical aspects of our profession, gets up and running. We will try to keep things interesting.

Speaking of extraordinary doings, this has been quite a year. Who would have thought, back in January, that the price of crude oil would fall almost $100 bucks a barrel or that gasoline would be less than $2.00 per gallon at the corner station, even here in California, otherwise known as regulatory nirvana? Or, that with oil price at said bargain-basement price, many capital budgeting plans would be shelved as non-economic? Whether we like it or not we are going to have the opportunity to live in interesting times.

Richard Miller

Chapter News

Calgary

The Calgary Chapter held three meetings since reconvening for the Fall, one business meeting in September and two technical meetings in October and November. Attendance ranged from 14 to 20 members and guests. Our speaker for the October 21st meeting was Larry Boyd, P.Geol., Senior Geological Specialist with AJM Petroleum Consultants. Larry's topic was "CBM in Canada from the Success of the Horseshoe Canyon Coals to the Challenges of the Mannville Coals." At our meeting on November 18th, David Elliott, Ph.D, P.Geol., Chief Petroleum Advisor from the Alberta Securities Commission, gave an informal presentation and a Q&A session on disclosure of resources plus an update of year-end reserve disclosure issues in Canada. Our next meeting will be our Christmas lunch on December 16 at the Calgary Petroleum Club. Upcoming topics in the New Year will be IFRS and the Canadian oilsands.

Members of the executive of the Calgary Chapter serve two-year terms. December 31, 2008 marks the end of the terms of the current executive so nominations are currently open. The three executive positions are:

Chairman: Attila Szabo, current Vice-Chairman is willing to step into this position

Vice-Chairman: nominations open

Secretary/Treasurer: Curt LaBelle has volunteered to carry on in this position

All the positions above can be contested if anyone wishes to be nominated for a particular position. Members of the Calgary Chapter who are interested in serving on the executive are encouraged to contact Attila Szabo at aszabo@demac.com as soon as possible.

California

The California Chapter will meet on December 11th, in Valencia, CA. The business portion of the meeting will include reports from officers and election of new officers or 2009. Two papers will be presented that were given at the Annual Meeting at the Homestead. They are: "The Value of Reserves Information" by Richard Miller and "American Energy Independence-Is it Possible?"

Central Texas

The Central Texas Chapter meets when the group identifies areas of specific interest. The group did not meet this quarter but plans to during the next quarter.

Denver

The Denver Chapter co-sponsored a two-day seminar on the Petroleum Reserve Management System (PRMS) with the Denver Section of the SPE on October 8th and 9th. The course was taught by Mr. John Etherington, Managing Director of PRA International, who also taught the two half-day courses at the SPEE National Meeting in June. Enrollment of 30 participants was at the maximum capacity for the meeting venue with sweeping views of the Colorado Front Range made available courtesy of Forest Oil by SPE Denver Continuing Ed Chairman Mr. Darien O'Brien. The seminar was a much more in-depth version of the half-day seminars presented at the Homestead and included a more comprehensive treatment of integrating probabilistic and deterministic methods. Several real-life examples were presented.

In conjunction with the seminar, the Chapter held a brief business meeting in which the Chapter Officers were elected. The 2009 Officers will be:

Mr. Kevin Weller	Chairman
Mr. Pat Galuska	Program Chairman
Mr. Mike White	Secretary/Treasurer
Ms. Letha Lencioni	Membership

Denver Chapter Program Chairman Kevin Weller, John R. Etherington and Darien O'Brien

Houston

The Houston Chapter's first meeting after our annual June – August break was on September 3rd, and featured Mike Cousins as the luncheon speaker. Mike, ExxonMobil's Production Geoscience Operations Manager for Africa, Middle East and Asia/Pacific, spoke on "Energy Security – What Does Real Energy Security Mean For the U.S?" The meeting was attended by 38 SPEE members and 15 non-members and guests.

Speaker Dan Tearpock, Houston Chapter President Ed Gibbon, and Ron Harrell

Speaking at the October 1st meeting on the topic of Ethics was Dan Tearpock, Chairman/CEO of Subsurface Consultants & Associates, L.L.C. (SCA). Dan discussed "*The Practical Application of Ethics* – Professionalism as it Applies to Petroleum Geoscience and Engineering." Attendance at the October meeting totaled 52, 36 members and 16 guests and non-members.

Jerry Blevins and Speaker Stuart Filler

Our luncheon meeting on November 5th was attended by 28 members and 26 non-members and guests. Stuart Filler, Commercial Evaluation Supervisor of Devon Energy Corporation, spoke on "PRMS: Changes in Reserve Classification and Categorization, and Implementation Challenges." The 2008 Houston Chapter Officers, acting as Nominating Committee, proposed the following slate for 2009 officers: Ron Rhodes, Chairman; Samantha Meador, Vice Chairman; and Mitch Reece, Secretary/Treasurer. The election for 2009 Chapter Officers will be held at the December meeting.

The last monthly luncheon meeting for 2008 will be held at the Houston Petroleum Club on Tuesday, December 2nd and will feature Fred Richoux, Ryder Scott Company, who will speak on "Proposed New SEC Reserve Reporting Rules."

The January 7, 2009 luncheon, our annual joint meeting with SIPES, will be held at the Petroleum Club, and we are expecting a larger-than-normal crowd. The Houston Chapter of the SPEE will be the "host society" for this meeting and Dr. John Lee of Texas A&M University will speak on "New SEC Guidelines." These new reserve definitions and reporting guidelines are being developed by Dr. Lee and the SEC staff during his temporary assignment in Washington, and his insights are sure to be of great interest to the SPEE and SIPES members attending.

Oklahoma City

The Oklahoma City chapter of SPEE has hosted two meetings so far this fall. In August, we had the pleasure of presenting Stephen Hadden, Sr. Vice President E&P at Devon. Mr. Hadden's topic was "Using the McKelvey Box as a Resource Classification System." The SPE/AAPG/WPC and SPEE Petroleum Resources Management System (PRMS) promotes a petroleum resources classification system based upon a framework originally suggested by Vincent McKelvey, a former Director of the USGS. Mr. Hadden recently spearheaded an effort at Devon Energy Corp. to quantify the company's resource potential using this "McKelvey Box" classification system. Using this system facilitates clear communication regarding reserves/resources both within Devon and with shareholders and analysts outside the company.

In October, Bill Kazmann, President of LaRoche Petroleum Consultants, LTD, spoke to the chapter about the political and scientific debates surrounding global warming. With each new weather occurrence, new pronouncements are made about global climate change and man's effect on global weather and the world environment. Is this concern scientifically supported, and is there anything that man can do to control the earth's weather? This discussion reviewed the science and the politics behind the most prominent environmental issue of this decade. Included was an analysis of the scientific "consensus" on man-caused global warming as well as a review of the science behind the man-caused global warming movement. Finally, the religious overtones of the environmental movement were discussed along with the consequences on the resulting science. These issues were addressed using methods of scientific analysis developed from the author's 40 years of education, training and experience and from his practice of professional engineering in the field of natural sciences.

The Ethical Considerations Involved in Expert Witnessing

T. Scott Hickman

Discussion & Comment

The *Code of Ethics of Engineers* and the *Principles of Acceptable Evaluation Engineering Practice* found in Appendices A and B, respectively, of the SPEE's By-Laws set a reasonable and comprehensive standard of conduct for engineers engaging in the various aspects of reserve evaluation. Are any other standards needed for an engineer serving as an expert witness in civil litigation? In theory, no, but in practice, yes. Both the logic and procedures involved in civil legal proceedings are foreign enough to the inexperienced engineer as to create numerous pitfalls even for the most conscientious person. Not only can an engineer unknowingly violate codes of conduct, but could be guilty of contributing to a miscarriage of justice. The connection between an evaluation engineer's normal activities and the public's welfare may often seem tenuous, but not when it involves the justice system. What greater indictment of an engineer's professionalism can there be than impeding the administration of fair, impartial justice, which is the very foundation of a free society.

Understanding how the civil justice system works in America is also crucial to being an ethical and effective witness. In the simplest terms the justice system allows each party in the dispute to bring forth through witnesses and the introduction of evidence all the facts and expert opinions that will help make their case. Each party is also allowed to examine and question all the evidence and witnesses from the other side. After each sides' case has been presented and examined in open court, the impartial trier-of-fact (whether judge or jury), after careful deliberation, will decide which party has the "preponderance of the evidence" in their favor. Thus justice is served in an American civil court.

This adversarial approach to civil litigation creates a confrontational and at times hostile atmosphere that causes most of the pitfalls for expert witnesses. It is extremely important to understand the role of each character in the drama of a legal proceeding. The judge maintains order in the court, rules on points of law and procedure that arise and instructs the jury on what issues of fact that they are to decide. In a "bench" trial the judge also acts as the jury. Each party in the case will have one or more attorneys representing them. While attorneys are officers of the court and held to certain standards of conduct they are also hired to be advocates for their client's case. It is their job to bring forth every possible fact and opinion that could further their client's cause while questioning the validity of evidence and testimony and the credibility of witnesses presented by the other side. **Attorneys are not impartial.**

In contrast, an expert witness brings some specialized skill, knowledge, experience, education, or training into the courtroom or hearing room to assist the trier-of-fact. **The expert should be impartial,** rendering independent opinions based on the facts. The expert is also human so being completely impartial and wholly independent are somewhat idealized concepts. It takes a well-developed sense of professionalism to maintain objectivity and function as an ethical witness in the confrontational and often emotionally charged atmosphere of a trial.

Assuming the engineer has at least a general understanding of the civil legal system procedures, the ethical considerations start with the decision on whether to accept the engagement as an expert witness. Are you qualified by training and experience to evaluate and opine on the technical issues that are involved? Do you have any conflicts of interest with parties in the case such as having worked for the opposing party. As with any consulting assignments where independent opinions are given, compensation should not be based on the outcome of the lawsuit.

Do the deadlines involved and your work schedule allow sufficient time to prepare properly? Remember that few events in a lawsuit, particularly the trial date, occur as originally scheduled. Successful litigation lawyers are smart, a quick study and often workaholics. They normally have several cases pending at once and can exhibit a lack of regard for another professional's schedule. Sometimes the case has been pending for months and the deadline for naming experts is at hand. It is the expert's responsibility to be sure he understands the technical issues and the time factors involved before accepting the assignment in spite of pressure for an immediate commitment.

Are you comfortable with the reputation of the party you would be representing? An expert can be a completely ethical witness even working for someone of questionable repute. In America everyone has the right to hire the best available legal counsel and technical assistance for their "day in court." **But if you lie with dogs you're liable to get fleas.** There can be undue

pressure to slant your opinions and less than full disclosure of all the facts and data. At best it is an uncomfortable situation and can become a quagmire, particularly for the inexperienced witness.

It is the court's, not the expert's, responsibility to pass judgment on the issues involved. If you are uncomfortable with the prospective client's legal or factual position to the extent that it could impact your performance or compromise your principles then it does become an ethical decision. Similarly the job scope assigned to the expert can have ethical ramifications. Logically the client and its legal counsel will request the expert to investigate and opine in specific areas only. But if the charge is so narrowly focused that it could distort the issues, it's the expert's professional responsibility to discuss his concern with counsel and render a decision as to accepting or continuing the assignment.

On the other side of the coin, if during the course of his investigation the expert develops information or forms opinions that could be detrimental to the client's position; he has the obligation to **verbally** inform counsel. Depending on the circumstances, the decision may then be made not to use the expert's services. If so, the expert has the duty to maintain the usual client confidentiality, even though he is no longer involved in the case. Often a prospective expert witness is requested to do a preliminary review up front on the important issues to see if he thinks the facts will lead to conclusions and opinions supportive of the client's position. Once such a review has been done you are ethically obligated to maintain confidentiality even if you do not get the assignment and can not work for other parties in the lawsuit.

Are you comfortable with the reputation of the party you would be representing? ... if you lie with dogs you're liable to get fleas

The law in Texas recognizes experts either as **consulting** or **testifying** experts. This allows the client and attorney to freely consult with an expert and obtain his or her true opinion. If not favorable, they may drop the case, modify their position or change experts. The work product of a **consulting** expert is protected from disclosure. On the other hand, all of a **testifying** expert's work product and most of the written communications with the client and legal counsel are subject to discovery by other parties in the lawsuit. Often an engineering expert serves in both capacities; consequently all of his work product is discoverable. It is illegal to not disclose or to destroy information that has been requested through discovery. You may also be cross examined under oath during deposition or trial about what you have investigated and concluded in the course of your assignment. It is very important not to write reports, conclusions or opinions without specific instructions from the client's legal counsel.

Expert witnesses get into questionable ethical positions unknowingly by not clearly understanding their role in relation to the attorneys' role. Remember that attorneys are advocates for their clients. Short of knowingly putting on false testimony, attorneys are largely free to explore every alleged fact, conceivable theory or half-baked opinion that would support their client's position, while questioning the credibility of every aspect of the opposition's case. Intuitively an expert views the opposing attorney as the enemy who will question his competency and opinions through trick questions. In truth, if a qualified expert has done his homework and is not trying to withhold facts or play mind games, the opposing attorney is no threat.

The main danger an expert faces is from his client's attorney who may pressure you about your opinions or suggest revisions in your testimony to be more "responsive." You may be asked to stretch your expertise into areas where you aren't fully qualified. There is nothing necessarily illegal or unethical about attorneys doing this. They are fulfilling their advocate role, but the expert as an unbiased, independent party has the professional responsibility to decide what subjects he can opine on and to state his opinions clearly and fully. If you are not able to withstand the power of suggestion from a persuasive attorney, it would be wise not to serve as an expert witness.

While in theory an expert is an unbiased, independent party, it is human nature to invest in your own credibility and to want your side to win with you contributing to their success. After all you are part of the "team." This is particularly true in complex cases where you have spent many long hours in the presence of clients and attorneys, serving both as consulting and testifying expert. The team spirit can really thrive under these conditions, but an ethical expert cannot let this impair his professional judgment even if it strains relationships. You are not really a member of a support team in the sense that a purely consulting expert would be. While a consulting engineer is always held to a professional code of conduct, he can qualify his opinions by disclaimers, disclosures and limited usage clauses in the report. The lack of such a safe harbor, places a special burden on a testifying expert witness to evaluate information, interpret facts and render opinions in a clear and impartial manner that will help

the court understand technical issues. **The dual role of consulting and testifying expert along with aggressive advocacy by the client's lawyer create the major pitfalls for a would-be ethical witness.**

In the area of reservoir engineering and reserve evaluation, the subject matter often tends to be more gray than black and white, requiring varying degrees of subjective judgment by the practitioner. How does the expert reconcile this subjectivity with the duty to help the court understand technical issues? Opposing attorneys love to play to the jury by expressing "shock" at an expert's admission that reserve volumes are estimates rather then exact measurements. This response conveniently overlooks the fact that industry uses such estimates to conduct its' normal business. It's up to the expert to convey this to the court without over or understating the accuracy involved.

The dual role of consulting and testifying expert along with aggressive advocacy by the client's lawyer create the major pitfalls for a would-be ethical witness.

This subjectivity also requires that the expert stick to procedures generally accepted by industry as opposed to utilizing some nonstandard approach for the occasion of the litigation. The growth of the contingency fee litigation industry in the 1980's gave rise to hundreds of lawsuits claiming certain products caused harm to the plaintiffs. Often these claims were based on little more than junk science. This resulted in a number of court decisions about the acceptability of expert scientific testimony; most notable of which was the Daubert decision upheld by the U. S. Ninth Circuit court in an opinion issued January 1995. Several states have adopted the Daubert approach, which can be illustrated by the Supreme Court of Texas' reasoning for excluding an expert's testimony:

1. Was not grounded upon careful scientific methods and procedures,
2. Was not shown to be derived by scientific methods or supported by appropriate validation,
3. Was not shown to have a reliable basis in the knowledge and experience of the witness' scientific discipline,
4. Was not based on theories and techniques that had been subjected to peer review and publication.
5. Was not based on a procedure reasonably relied upon by experts in the field.

The subdiscipline of reservoir engineering requires more subjective judgment than most other engineering disciplines due to the lack of sampling from the object (reservoir) being analyzed. It is, however, based on valid scientific principles and industry accepted practices that are the subject of continuous peer review and publication. Daily, engineers successfully analyze reservoirs and evaluate reserves using training, experience and sound judgment. Expert witnesses unable to apply these attributes competently tend to demonstrate a " the exact answer isn't known so my opinion is as good as your opinion" attitude which does not help the court to understand technical issues. Certainly two competent, unbiased engineers can look at the same set of facts and derive different conclusions, but they would also understand and be able to verbalize where and why the differences occur. This gives the court a basis for making a decision rather then being faced with two intractable opinions. There are many engineers evaluating reserves that have never advanced beyond the "cookbook" approach. They may be able to function quite capably within restricted conditions, **but they do not belong in court as expert witnesses.**

Since the civil justice system is based on the opposing parties confronting each other in open court after a discovery process, the experts have the opportunity to "peer review" each others' opinions both during deposition and at trial. Weaknesses or apparent inconsistencies in the testimony can be countered by direct testimony or pursued during cross examination. On occasions both sides may not be equally represented by capable experts. Each party is responsible for being adequately represented. However it would be unethical to take advantage of the lack of "peer review" in such a situation by offering questionable or unintelligible testimony

The number and nature of ethical considerations involved in expert witnessing may be surprising to some. Yet all the issues discussed arise directly out of the responsibility that a professional engineer has toward protecting the public health, safety and welfare. For an engineer to accept an expert witnessing assignment without being fully aware of the ethical issues and responsibilities involved is itself an unprofessional and unethical act.

In summary, **it is the expert's responsibility to help the court understand technical issues.** However the expert offers his testimony in response to questions asked initially by his attorney (direct) followed by questions from the opposing attorney (cross). Expert testimony is not an opportunity for extemporaneous speaking or volunteering unsolicited opinions.

Engineering Ethics

Current Issues

During the last several years, ethics has become a hot topic. Hardly a week goes by during which the news media do not report on ethical miscues by elected officials, corporations, or individuals in many walks of life. It may be theorized that ethical problems encountered today are the result of factors such as a fast-paced society, big dollars at stake, competitive forces, lack of religious commitment, etc. But whatever explanations (valid or not) are offered, there exists a need to thoroughly address the subject of ethics, to seek to understand it and to attempt corrective actions.

History

Because of the proliferation of ethical violations in recent years, it is tempting to suggest that the study on ethics is of fairly recent origin. However, this is not the case when consideration is given to the teachings and writings of Greek philosophers such as Plato and Aristotle in the era of 300 to 400 B.C. Therefore, mankind has had access to the philosophical theory of ethics for some 25 centuries. A new topic, it is not.

Definitions

Ethics is an interesting word. For one thing it may be used either as a singular or a plural term. Second, there are numerous definitions or synonyms which apply to ethics. The most common one is morals. Other applicable synonyms or terms are:

Right behavior	Honor	Fairness
Uprightness	Goodness	Virtuousity
Excellence in Practice	Integrity	Duty
Truthfulness	Character	Conduct
Proper Intention	Obligation	Equity Conformity
to Codes	Nobility	Right vs. Wrong
Straightforwardness	Good vs. Bad	

The facts in a given ethical situation may be viewed by several persons who come up with different opinions on the issue (eye of the beholder). Some ethical situations may be clear-cut, black vs. white issues while others fall in the gray zone. These considerations lead to a need for a better understanding of ethics and application of ethical principles.

Professional Aspects Of Ethics

A keystone of any profession, be it medicine, law, accounting, engineering or other, is adherence to codes of ethics, codes of conduct or some equivalent guidelines. Such guidelines are essential to protection of the reputation of the profession, the discipline involved therein, and of individual members of that profession. The first duty of a professional engineer is to place health, safety and welfare of the public above all else.

In the case of professional engineering, most, if not all, states have established boards of registration or certification which are charged with oversight of activities of professional engineers in their respective states. To ensure maintenance of professional competence, most of these boards now require continuing education credits including ethics training in many cases.

There have been many statements concerning ethical behavior made by numerous persons (some well-known and some not so well-known). Perhaps the most direct and complete comment on the subject was made by Alan Simpson, former U.S. Senator from Wyoming. He said "If you have integrity, nothing else matters; if you don't have integrity, nothing else matters."

Society Of Petroleum Evaluation Engineers

For years, SPEE has taken a proactive stance concerning ethics. Article VI of the By-Laws addresses ethics and makes reference to By-Laws Appendix A (Code of Ethics of Engineers) and Appendix B (Principles of Acceptable Evaluation Engineering Practice). Programming at SPEE Annual Meetings and at Chapter meetings provides an effective means for members to maintain their technical competency. In recent years, such programming has included presentations and discussions involving ethics. Additionally, the Society has published manuals dealing with reserve estimates, petroleum property evaluation practices and ethics.

It is highly recommended that SPEE members (1) avail themselves of the SPEE publications (2) participate in Chapter and Annual meetings and (3) at least once a year, review the By-Laws and Appendices in their entirety.

Referring to the previously cited first duty of a professional engineer (placing public safety, health and welfare above all else) it is easy to see how this applies to design and construction of roads, bridges, buildings, etc. Application to petroleum evaluation engineering may not be so apparent. However, if "public welfare" is considered as encompassing "financial welfare" then the connection can be made to such duties as protecting investors and stockholders, facilitating project financing and preventing fraudulent misrepresentation.

Summary

Ethical behavior is a critical element in the fabric of society. Professional practitioners have an obligation to their respective profession, fellow members and the public to serve as worthy examples of proper behavior. Professional engineers and SPEE members share that obligation and should take it seriously. Future editions of this column will address situations to stimulate thought about appropriate actions and decisions.

Acknowledgements

Gratitude is expressed to many persons, (too numerous to mention in total) who contributed to the thoughts expressed herein. In particular, credit is given to those members of the SPEE Midland Chapter who comprised the Committee which developed the brochure entitled Discussion and Guidance on Ethics, dated May, 2005 and who participated in presentations to various audiences. They are: L. D. Sipes, Jr., Arlen Edgar, T. Scott Hickman, Charles Godfrey, and Marshall Watson.

Arlen Edgar

Welcome New Members

DENNIS NEAL MILLER (No. 712)
Tristone Capital
Senior Engineer
333 Clay Street, Suite 4060
Houston, Texas 77002
713-651-4244
713-651-4204 - fax
nmiller@tristonecapital.com

Membership Applicants

The following member applicants have 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
HOGARTH, ROBERT A. M. 264 Moray Street New Farm Brisbane QLD 4005 Australia	Ron Harrell Rawdon Seager Rod Sidle
MIGL, MARVIN DENTON (DENNY) Cano Petroleum, Inc. 801 Cherry Street, Suite 3200, Unit 25 Fort Worth, Texas 76102-6882	Joseph Blankenship Ed Butler Michael Zuber
O'BRIEN, DARIEN G. P.E. Forest Oil Corporation Senior Reservoir Engineer 707 Seventeenth Street, Suite 3600 Denver, Colorado 80202	A. R. Briggs Walter King Jerry Pope

New Locations

Corrections and Changes to the SPEE 2008-2009 Membership Directory since 7/23/08

Alexander, James Ace
Constellation Commodities Group
Vice President
One Allen Center
500 Dallas Street, Suite 3300
Houston, Texas 77002
713-369-3641
713-344-9751
james.a.alexander@constellation.com

Collarini, Cheryl R.
ETROA
128 Northpark Blvd.
Covington, Louisiana 70433
985-809-3808
ccollarini@etroa.com

Gring, Larry M.
Third Day Energy LLC
4531 North FM 1486
Montgomery, Texas 77356
281-296-5600
281-296-5697 fax
Larry.gring@thirddayenergy.com

Haston, Jr. Fred M.
Cane River Resources, Inc.
7951 Wynwood Road
Trussville, Alabama 35173
205-655-5078
fhaston1@aol.com

Seidle, John
MHA Petroleum Consultants
143 Union Blvd., Suite 200
Lakewood, Colorado 80228
Same telephone, fax and e-mail address

Sieler, Jeffrey Jay
Shell Oil Company
3737 Bellaire Blvd.
Houston, Texas 77025
713-245-7105
Jeffrey.sieler@gmail.com

Wilson, Daniel L.
Executive VP and COO
Saxet Petroleum, Inc.
510 Bering Drive, Suite 600
Houston, Texas 77057
713-243-8411
dwilson@saxetpetroleum.com