

## Newsletter

August 2016

## Gresident's Letter

reetings from the President's office! It was great seeing many of you at the Annual Conference in North Lake Tahoe (Truckee) and for those who were not able to attend you missed an outstanding meeting. We had great speakers and short courses and the networking and social events put the annual meeting over the top. Thanks again to Vice President Floyd Siegle for organizing the event. Pictures and presentations will be posted to the SPEE website. I really enjoyed my time in North Lake Tahoe; the weather was outstanding and the hotel was top notch. Many of us enjoyed s'mores in the afternoon with house-made marshmallows. I want to thank Barry Ashton for finding and recommending this site to hold our Annual Meeting. Tim Smith has taken over for Barry as Chairman of the Advance Planning Committee and we will be looking forward to his recommendations for 2019 and beyond.

The theme for this year's conference was *Innovation and Collaboration to Meet Industry Challenges*. I want to thank our presenters John Hodgin with the Securities Exchange Commission, Craig Burns with the Alberta Securities Commission, Gibson Scott with RS Energy Group, **Manoj Devashish**, with Citigroup, **Chad Kronkosky** with CEK Engineering, **Creties Jenkins** with Rose and Associates, Tyler Schlosser with GLJ Petroleum Consultants, **Brent Hale** with Cobb and Associates, **Tom Collier** with Concho and Andrea Levin Kim with Diamond McCarthy for their informative and insightful presentations. We are especially honored to have



John Hodgin and Craig Burns to provide updates and insights from two of our regulators. They were very valuable contributors to the conference.

The Short Courses were outstanding as well. Randy Freeborn with Energy Navigator taught us about state-of-the-art Type Well Technology



and we held the inaugural Monograph 4 two-day training course. We were fortunate to have John Seidle, Creties Jenkins, Scott Wilson, John Lee, Dilhan Ilk, Jim Erdle and Brent Hale present their chapters from the book. There were several SPEE Members who were able to get the authors to autograph their monographs. It will be a collector's item, I'm sure. Our Chairman of the Training Committee, Jennifer Fitzgerald, is planning Monograph 4 training courses for the near future. Please be on the lookout for information.

As with any volunteer professional organization, contribution from the membership is crucial. I want to thank this year's Board of Directors for the time and dedication they have provided to SPEE. We did manage to capture a picture of the board members who were able to attend the Annual Meeting. They are: (back row L to R) Robert Green, Charles Boyette, Mark Ireland, Debbie Suter (the glue that holds us together), Floyd Siegle, Gary Gonzenbach, Simon McDonald, (front row L to R) Don Jacks, Rhonda Gathers, Jennifer Fitzgerald and Dee Patterson. Unfortunately, two of our Board Members were not able to attend the annual meeting due to other commitments. They are Rawdon Seager and Brad DeWitt. Their tireless contributions have made the job of President much easier.

We are also proud to announce that Monograph 4 is available for sale. The first printing run is stacked up in Debbie's office and she said it was like an obstacle course to find her desk among all the boxes of books. Those who participated in last year's and this

## 2016 Officers and Directors

#### **Executive Committee**

President	Dee Patterson (Dallas)
Vice President	Floyd Siegle (Calgary)
Secretary-Treasurer	Simon McDonald (Europe)
Past-President	Gary Gonzenbach (Central Texas)

#### **Directors**

Charles Boyette (Dallas) Brad DeWitt (California) Jennifer Fitzgerald (Houston) Rhonda Gathers (Denver) Robert Green (Midland) Mark Ireland (Calgary) Don Jacks (Oklahoma City) Rawdon Seager (Houston)

#### **Bylaws Committees**

Chair of Past Presidents' Council	Rick Krenek
Qualifications	Tim Gilblom
Committee: Steve Blair, Neal Howard, and Mark Reeves	
Nominating	Gary Gonzenbach
Grievance Dav	id Gold and Dan Olds
Reserves Definitions	Rod Sidle
Committee: Russ Long, Tim Smith, John Etherington, Joh	ın Ritter, Dave Elliott, John
Seidle, Rawdon Seager and Martin Hubbig	

#### **Individual Appointments**

Ethics	
Evaluation Parameters SurveyBrent Hale	
Fair Market Value D. Russell Long and Dee Patterson	
Committee: Anna Hardesty and Ray Garcia	
Internet Mike White and Rhonda Gathers	
Membership	
Newsletter CoordinatorRichard J. Miller	
CommunicationsGeorge Schaefer	
Production Tax Summary and University Interface Marshall Watson	
Recommended Evaluation Practices	
Annual Meeting Advance Planning S. Tim Smith	
Professional Registration Marcus Snyder	
Monograph 3 - Evaluation of Resource PlaysRussell K. Hall	
Monograph 4 - Unconventional Developed Reserves	
and Scott Wilson	
Technical Training Jennifer Fitzgerald	
SPE OGRC Oil and Gas Reserves Committee ObserverRon Harrell	
COGEH (Canadian Oil and Gas Evaluation Handbook) Floyd Williams	
UNECE Expert Group on Resource ClassificationJohn Ritter	



20333 State Highway 249, Suite 200 Houston, Texas 77070

Office: 832.972.7733
Toll Free: 800.651.1639
www.spee.org

Admin Asst Web Admin Financial Newsletter Editor
Debbie Suter Kyle Fitzgerald Lisa Poletti Diane Pollard
debbie@spee.org Kyle.fitzgerald@fitzgeraldhome.net lisa@spee.org 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 - 2016**

#### Calgary

Chairman – Keith Braaten Vice Chairman – Secretary – Floyd Williams Treasurer – Gary Metcalfe Membership – Mark Ireland

#### California

Chairman - Brad DeWitt Vice Chairman – Rick Finken Secretary-Treasurer - Barry Evans Membership - John Davis

#### **Central Texas**

Chairman – Joe Harris Vice Chairman – Secretary – Charles Price Treasurer – Gary Gonzenbach Membership –

#### **Dallas**

Chairman - Joe Young Vice Chairman – Russell Romoser Treasurer - Gary Nilson Secretary - Jacob Walker Membership –

#### **Denver**

Chairman – Andrew Forcina Vice Chairman - John Wright Secretary-Treasurer – Steve Gardner Membership - Mike Flanigan

#### Europe

Chairman – Bob Harrison Vice Chairman – Paul Taylor Secretary-Treasurer – Richard Smith Membership – Danilo Bandiziol

#### Houston

Chairman – Steve Davis Vice Chairman – David Nordt Secretary-Treasurer – Tosin Famurewa Program Chairman – Ed Butler

#### Midland

Chairman – Robert Green Vice Chairman – Secretary-Treasurer – Gail Hankinson Membership – Russell Hall

#### **Northern Rockies**

Chairman – Tom Fitzsimmons Vice Chairman – Rick Vine Secretary/Treasurer – Tom Hohn Membership – Joe Sinner

#### Oklahoma City

Chairman – David Yard Vice Chairman - Beth Richards Secretary - Bruce Heath Treasurer - Steve Blair Membership - Don Jacks

#### Tulsa

Chairman - Phil Schenewerk Vice Chairman -Secretary-Treasurer - Laura Stauffer Membership Chairman -

#### Continued from page 1

year's Monograph 4 training course should have received your copy. If you have not, please contact Debbie. Monograph 4 is available for sale on the website.

The 2017 Annual Meeting will be in London. This is a major step in the "Internationalization" of SPEE by making the annual meeting accessible to those in Europe in our profession. Simon McDonald and a team of members from the European Chapter have been working hard to insure the meeting will be a success. Simon has developed a brochure to promote the annual meeting that provides preliminary plans and ideas for sightseeing trips one can take around the time of the annual meeting. If you have not seen the brochure, you can download a copy from the front page of our website. If you are planning to attend, please let Simon know, as SPEE will need to commit to rooms early. See the brochure on the website and the article on page 12 for details. I am looking forward to the London meeting and plan on adding a week of holiday at the end of the meeting. I hope you will too.

As discussed in my Business Meeting Presentation and as you will learn from a report from our Secretary/Treasurer Simon McDonald, the SPEE finances are healthy because of budget surpluses from previous years. Monograph 3 and training courses have supplied significant revenue to SPEE. Our membership has remained steady at around 550 members, while our costs to run the society have increased. Our Member dues contribute about 12% of SPEE's annual budget and cover approximately 33% of our fixed costs of running the organization. We are budgeting a loss of approximately \$58,000 for 2016. We have expectations that revenues from Monograph 4 sales and training will contribute significantly to our budget over the next few years; however, we will need to find additional revenue to maintain the financial health of SPEE. The Board will be looking into this issue and will develop recommendations to the Executive Committee to consider in the near future.

If you will have some patience with me, I would like to jump on "My Soapbox" afforded me as President. Many of you probably saw the report in the last few weeks that had the headline "US Oil Reserves Surpass Those of Saudi Arabia and Russia" by Rystad Energy. The article says that the US has 264 billion barrels of reserves as compared to Saudi Arabia's 212 billion barrels and Russia's 256 billion barrels. But what it also says is that the US estimates are recoverable oil in the US from existing fields, discoveries and yet undiscovered areas. We as SPEE members know this is not correct, and Rystad should know this is not correct, but obviously the media and average person on the street would not know the distinction between "Reserves" and "Resources." In my Business Meeting Presentation, the opening slide was on the Core Tenets of SPEE: What our mission is and how we are to achieve it. As SPEE members we want to educate our members and the public in the area of Reserve and Resource Definitions, Reserve and Resource Evaluations, and Fair Market Value. This article shows we have a long way to go before the education is universal.

One of SPEE's greatest strengths is in the networking opportunities that occur because of our membership. The sharing of ideas with peers at this level is what allows publications, like the

monographs, and recommended practices to become possible. Over the last 50 years SPEE has provided invaluable industry guidance and is viewed as an industry leader because of it. All of this ties back to our mission of: 1) Advancement of the Profession of Petroleum Engineering, 2) Promoting High Ethical Standards and 3) Personal Professional Growth.

That is all for now. I close with thanks for the tremendous efforts and contributions from the individuals named above, as well as for all the Chapter Officers and Committee Members that make SPEE the success it is. Thank you to **Richard Miller**, Diane Pollard, and the editorial staff for putting together the newsletter and to Debbie Suter for making all of this such a pleasure.

#### *ಹಾಹುಹುಹುಹುಹುಹು*

Another topic of the Business Session of the Annual Meeting was potential changes to the SPEE By-Laws governing professional ethics and an update of the process of handling grievances brought by Members against other Members. The SPEE By-Laws are a stable document that requires a large effort to change. An important question to answer about changing the SPEE Bylaws is why we need to go through the effort. Individual and professional ethics are at the heart of SPEE; Members are expected to abide by our stated Code of Ethics. There are two reasons for the proposed changes.

First, the current process by which a Member can bring a charge of unethical behavior against another Member is vague in defining the actual roles and responsibilities of the various parties (the accuser, the accused, the Grievance Committee, the President, the Executive Committee, and the Board of Directors) in the event a grievance were to be filed. More significantly, the current process provides minimal legal protections to the organization or members in the event the accused would threaten to bring legal action.

Second, outside of the US, and particularly among regulatory authorities in Canada, Australia and the UK, registration of securities requires that a reserves report be a "Competent Person's Report," with defined requirements for the report's content, independence, level of detail, and qualifications of the report's preparer. A competent person, in this context, must be a member of a self-governing/self-regulating organization that among other qualifications requires compliance with the professional standards of competence and ethics established by the organization and has disciplinary powers, including the power to suspend or expel a member. SPEE has been recognized as such an organization but the Board of Directors, the Grievance Committee, and the Council of Past Presidents have been aware of the need to improve and strengthen the disciplinary process.

The proposed new Grievance Process is the result of several years' work with expert legal guidance. The proposed changes to the Grievance Process will ensure that SPEE will be a self-governing organization without exposing SPEE Members to any financial liability. It will be recommended that the By-Laws be amended to incorporate the new process. Please read the article on page 16 of this newsletter for further details.

Dee Patterson SPEE President



#### **Calgary**

The Calgary Chapter continues to progress on its overall mandate of updating all of the COGEH Handbook manuals. The membership committee is pleased to report that as of April 2016 we have 56 members registered as part of the Calgary Chapter. We have continued to grow with new membership outpacing attrition of the last few years.

On May 17th, the Calgary Chapter had its Annual General Meeting. Doug Wright stepped down as Chairman, having completed his two-year term and Keith Braaten took over the role of Chairman. We are still looking for a suitable volunteer to take on the role of Vice Chairman.

Meetings - 3rd Tuesday of each month except June, July and August. Membership - 56

#### **California**

Membership - 22

#### **Central Texas**

Membership - 33

#### **Dallas**

The Dallas Chapter elected new officers at our May meeting:

- Joe Young Chairman
- Russell Romoser Vice Chairman
- Gary Nilson Treasurer
- Jacob Walker Secretary

Meetings – Bimonthly from September through May at the Brookhaven College Geotechnology Institute. Membership – 58

#### **Denver**

In May, continuing the Feeling The Pain 2016 theme, the Denver chapter hosted a Spring Soirée where approximately 40 members attended a reception of light food and drink on a late afternoon/evening at the Denver Athletic Club. The funds used for the Feeling the Pain events came through revenues generated from a 2009 school on PRMS and a 2012 school on SPEE Monograph 3. The purpose of these actions is for the Denver chapter to give back to the members, enhance professional development, and build up the membership.

On July 13, Tim Wigley with Western Energy Alliance will be our speaker.

Meetings – 2nd Wednesday of first month of each quarter – Denver Athletic Club – The New Petroleum Club. Membership – 64

#### **Europe**

The first Chapter meeting of 2016 saw Richard Smith (Gaffney Cline, European Chapter Secretary/Treasurer) give a presentation on the *U.S. Securities and Exchange Commission*, 16th May 2013 Update in an interactive forum. Such was the level of interest in the SEC Q&A and how these related to rules in the Petroleum Resources Management System (PRMS) that a lively debate ensued for two hours.

For the first time, the European Chapter is collaborating with SPE London Section to provide cross-platform education on *Reserves & Resources Reporting*. This ground-breaking event, on 13th June 2016, will be held at the Geological Society in London. The seminar aims to raise the level of awareness amongst the regional membership of the applicability of PRMS for resource reporting, and will cover:

- What's new in PRMS for 2016 and where it is headed
- Comparison with other resource classification systems
- Views of bankers and investors on resource reporting
- Application of PRMS via multiple case studies

Planning for the SPEE 2017 Annual Meeting in London gathers pace. Simon McDonald (ERC-Equipoise, SPEE Board) updated the planning committee on progress regarding venue, prices, potential headline speakers, possible short courses, and unveiled the draft brochure, which looked rather impressive.

Meetings - Four per year. Membership - 36

#### **Houston**

On May 4th, Dr. Neil Frank, former National Hurricane Center Director (1974-1987) and Chief Meteorologist for Houston's CBS television affiliate (1987-2008) discussed Global Warming: Fact or Fiction. Dr. Frank's presentation was a fact-filled defense of the fossil fuel industry that showed how political agenda, poor data collection and interpretation, and financial motives have colored the discussion. There were 65 members, guests, and visitors in attendance for the meeting.

The Houston SPEE Chapter does not meet in June, July or August.

The September meeting is scheduled for the 7th, with Mr. Chuck Fox, CEO of Windy Cove Energy, as the speaker for the Houston Chapter's annual Ethics Hour.

Mr. He Zhang, Ryder Scott Company, will present his work entitled A New Empirical Analysis Technique for Shale Reservoirs on October 5th.

Dr. Nathan Meehan, Baker Hughes and 2016 SPE President, will present *The History of the World: Through the Eyes of a Reservoir Engineer* on November 2nd.

Mr. Brent Hale, Cobb and Associates, will present Survey of Parameters Used in Property Evaluation on December 6th.

Meetings – 1st Wednesday of each month except June, July and August – Houston Petroleum Club. Membership – 180

#### Midland

The SPE/SPEE-sponsored Ethics Training was held Thursday, May 19th. Mr. Doug Walser from Haliburton was the featured speaker presenting Vendors and Operators – Avoiding the Slippery Slope on Both Sides when the Rules are not Clear.

The Midland Chapter meetings are scheduled bimonthly starting in January on the 2nd Wednesday of the month. They are held at the Petroleum Club of Midland at 11:30 AM and feature a sit-down plate served luncheon. The meetings are open to non-members to reach out to the technical community and attract new members.

Meetings – 2nd Wednesday odd months – Midland Petroleum Club. Membership - 22

#### **Northern Rockies**

Membership - 10

#### **Oklahoma City**

On April 28th, John Spears of Spears and Associates presented his *Outlook for the Upstream Petroleum Industry* 2016 including his outlook for oil and gas demand, supply and prices and the implications for capital spending and drilling activity. There were 57 in attendance.

The chapter generally takes a break during the summer months and should be meeting again in September.

Our OKC Chapter officers for 2016 are:

Chairman: David F. Yard

• Vice Chairman/Programming: Beth Richards

• Membership Chairman: Don Jacks

• Secretary: Bruce Heath

• Treasurer: Steve Blair

Steve Blair was just elected officially on April 28th by special election of the membership, which was necessary due to the passing of Fletcher Lewis in March.

Meetings - Every odd-numbered month. Membership - 19

#### Tulsa

 $Meetings-Four\ times\ yearly\ -Summit\ Club.\ Membership\ -22$ 

## SPEE Monograph 4: Estimating Ultimate Recovery of Developed Wells in Low-Permeability Reservoirs

The recent growth in unconventional oil and gas production in North America has been followed by the realization estimation methods for conventional reserves are often inadequate for these reservoirs. The industry has responded by developing several methods for unconventional reserves evaluation. Focusing on shales, tight sands and carbonates, and coals, this publication assesses current methods to forecast performance of wells in unconventional reservoirs (UCR's) given different reservoir types, different completions and different well maturities.

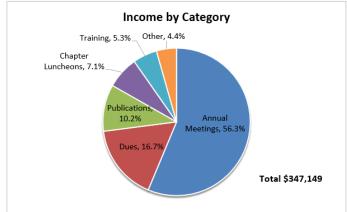
#### **Table of Contents:**

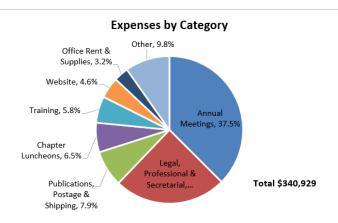
- 1. Introduction
- 2. Understanding tight reservoirs
- 3. Reservoir characterization aspects of estimating developed reserves in UCR's
- 4. Drilling, completion and operational aspects of estimating developed reserves in UCR's
- 5. Conventional decline curve analysis for unconventional wells
- 6. Fluid flow and alternative decline models
- 7. Model-based well performance analysis and forecasting
- 8. Application of numerical models
- 9. Quantifying uncertainty in the estimation of developed reserves
- 10. Examples

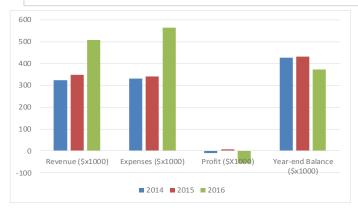
Monograph 4 is available from the SPEE online store for US \$145.00 plus shipping and Texas sales tax (if applicable). Contact Debbie@SPEE.org for further information.

#### **Financial Report**

I am pleased to provide a financial summary for SPEE National. The Society continues to remain financially healthy. Revenue of SPEE National in 2015 was \$347,149 and the Expenses were \$340,929, giving a Profit of \$6,220. Cash assets held by SPEE National at end-2015 in checking and money market accounts plus CDs total \$426,848. Local Chapters held a further \$169,103 cash in their accounts, giving total cash assets of the Society of \$595,951.







The chart to the left shows the financial performance of SPEE National for 2014 and 2015 and the budget for 2016.

The Society broke even in aggregate over 2014/2015, although recognition of 2014 revenue in the 2015 accounts disguises the loss that occurred in 2015 (and the profit for 2014). The 2016 budget foresees increases in revenue and costs with the launch of Monograph 4. A loss of \$58k is budgeted for 2016. SPEE National's cash balance is projected to stand at ~\$370k at end-2016.

The chart on the right shows net contributions (revenue less direct costs; excludes G&A costs) for the four principal sources of revenue for the Society.

Dues have declined from approximately \$65k in recent years to approximately \$55k, with membership largely static at ~560.

The budget for the Annual Meeting in 2016 includes \$35k advance payments for the 2017 and 2018 venues. Higher budgeted 2016 Training and Publications contributions are envisaged on the back of the launch of Monograph 4.



The G&A costs of the Society have increased recently and are projected to amount to approximately \$150k for 2016. Office Rental and Secretarial/Bookkeeping Fees have risen by some \$40k in the past two years as the Society now has dedicated office facilities and has invested in its administrative and financial framework. Other costs have remained reasonably stable in recent years.

Whilst the financial reserves of the Society are healthy, it is not sustainable to continue to run at a loss and your Board is considering ways of increasing the Society's revenue.

Options under consideration include increasing membership dues, which have not been increased for several years, and increasing the fee for the Annual Meeting.

The Society will continue our investment in the Monograph programme. An update of Monograph 2 is in preparation and a new Monograph 5 is under consideration. A vibrant and current Monograph portfolio should allow us to continue to develop and increase our Training activities.

If you have any questions or need additional information, please feel free to contact me or President Dee Patterson directly.

Simon McDonald, Secretary / Treasurer - speetreasurer@spee.org

## Recap of 2016 Annual Conference, Lake Tahoe

The 2016 Annual conference at the Ritz-Carlton, Lake Tahoe, was attended by 91 members, 25 non-members and 56 spouses and guests.

The broad theme for this year's conference was *Innovation* and *Collaboration to Meet Industry Challenges*. During the past year industry has been challenged to collaborate and to be innovative to survive the plunging price of oil and low gas prices.



John Hodgin, SEC

This year we had an exciting line-up of presentations for the Technical Sessions. SPEE President Dee Patterson opened the technical sessions with an update of SPEE business. We were fortunate that John Hodgin attended the conference again this year to give an update from the Securities and Exchange Commission. John spoke on facts and circumstances to consider in a lower-for-longer price envi-

ronment. Craig Burns, Manager Petroleum, Alberta Securities Commission, provided an update regarding disclosure standards and specific annual disclosure requirements for issuers that report under NI 51-101. Gibson Scott, RS Energy Group, addressed the impact of changes to various aspects of horizontal well completions on well performance. **Manoj Devashish**, Citigroup, presented an investigation of the role of debt in the current financial crisis af-

flicting the E&P industry. Manoj proposed a new approach for a financially leveraged E&P company to measure, manage, and reduce the impact of commodity cycles on its equity value.

The SPEE 2016 Survey of Parameters Used in Property Evaluation was presented by Brent Hale, Survey Parameters Committee Chair. Brent also announced the standings for the annual soothsayer contest. Charles Grimm was declared the winner with all three



Craig Burns, ASC

predictions of average prices for WTI, Brent and Henry Hub from June 1, 2015 to May 31, 2016 between the minimum and maximum. Chad Kronkosky, President CEK Engineering, presented on the utilization of data analytics as a screening method and tool for determining appropriate secondary recovery to primary recovery ratios. Creties Jenkins, Partner, Rose & Associates, spoke on Mitigating the Impacts of Cognitive Bias in E&P Decision Making. Creties provided some recommendations for doing a better job of identifying risks, quantifying uncertainties, and creating realistic expectations for our projects. Tyler Schlosser, GLJ Petroleum Consultants, presented Risky Business: Managing Uncertainty in Upstream Decision-Making. Tyler's presentation included a probabilistic

analysis workflow and an example of assessing risk in a particular area. The Technical Sessions concluded with our annual ethics presentation by **Tom Collier**, SPEE Ethics Committee Chair, and Andrea Levin Kim, Partner, Diamond McCarthy LLP.

A Sunday afternoon short course on *Type Well Technology: The State of the Art* was instructed by **Randy Freeborn**, Chief Research Engineer, Energy Navigator, and SPE Distinguished Lecturer. The course examined different ways that have been proposed to create and use type wells, focusing on the pitfalls and advantages of each method. The conference concluded with a two-day course on the recently released Monograph 4 *Estimating Ultimate Recovery of Developed Wells in Low-Permeability Reservoirs*. The course

was instructed by seven of the Monograph 4 authors.

Various activities including a paddle wheel charter on Lake Tahoe, tours of the area, whitewater rafting, fly fishing, golf and olive oil & vinegar tasting/tea blending provided time for relaxation and networking. A "Rat Pack" themed gala with a tribute to Sammy Davis Jr. by David Hayes and awards banquet was held Monday evening. The following recognition and service



Andrea Kim, Diamond McCarthy

awards were announced: **Gary Gonzenbach** was recognized for his outstanding contribution as the 2015 President of SPEE; Barry Ashton was awarded a service award for Annual Meeting Advance Planning; **Rod Sidle** received a service award for his service on the Reserves Definitions Committee; and **Jennifer Fitzgerald** received a service award for her work on the Training Committee and the 2015 Software Symposium.

Thank you to all who contributed to and participated in the 2016 conference to make it a success. We would also like to thank our sponsors this year:

#### Emerald Bay (\$2,000+)

DeGolyer and MacNaughton, Aclaro Softworks

#### Crystal Bay (\$1,500)

Netherland Sewell Associates, Inc.

#### Agate Bay (\$1,000)

Edmonds Energy Corp.; Energy Navigator; Entero; Moyes & Co; Sproule

#### Carnelian Bay (\$500)

CEK Engineering LLC; CG Petroleum Consulting; LaRoche Petroleum Consultants, Ltd.; Lonquist & Co. LLC; McDaniel & Associates Consultants Ltd.; Ralph E. Davis Associates, Inc.; Ryder Scott; Scotiabank; TRC Consultants, LC

#### Rubicon Bay (\$250)

Collarini Associates; Prosperity Bank; Roma Oil & Gas, Inc.; Trimble Engineering Associates Ltd.

Floyd Siegle 2016 Conference Chairman



Page 8 ... SPEE Newsletter, August 2016





Page 10 ... SPEE Newsletter, August 2016



SPEE Newsletter, August 2016 ... Page 11

## 2017 Annual Meeting – London Save the Date – 10 to 13 June 2017

The Europe Chapter of the SPEE is looking forward to welcoming you to the next SPEE Annual Meeting, to be held in London, one of the most vibrant and exciting capital cities in the world. The conference will be held over four days from Saturday 10th June to Tuesday 13th June at The Geological Society in Piccadilly in the heart of London.

The focus of the conference will be on the use of petroleum classification systems and how these are interpreted by the oil and gas companies, regulators and ancillary accountancy, legal, and banking professions. London is one of the great centres for the international oil and gas sector as well as the leading city for international oil and gas financing. Your Programme Committee is hard at work developing an exciting agenda of papers and presentations from industry leaders, sharing their international technical, financial and legal expertise, together with two additional topical half-day courses.

We already have commitments from all our session co-ordinators and several speakers. We are in discussions with regulators from all the relevant Stock Exchanges about their participation. The

indicative programme, which is subject to change, is set out on the following page.



We will start the conference with an evening drinks reception at The Geological Society (www.geolsoc.org) on Saturday 10th June. We will also be holding a reception at the Royal Institution (www.rigb.org) on the evening of 11th June, and a Gala Dinner at the Institute of Engineering and Technology (www.theiet.org) on the evening of 12th June.

The registration fee for Members will be \$600, the same as for all recent annual meetings. This will cover the conference and all the social activities except the Gala Dinner, which will be charged in addition. Registration for Non-Members will be \$750.

We have reserved rooms for attendees at the contemporary Victoria Plaza hotel (www.parkplaza.com/victorialondon), a 4-star hotel, conveniently located in the very centre of London. The Victoria Plaza has a Spa and a swimming pool; there are excellent rail, bus and underground transport links and is a stone's throw from Buckingham Palace, the Houses of Parliament and the River Thames. London's unrivalled shopping areas are close by.

We have reserved a block of rooms at a specially discounted conference rate of £263 per night for Bed and Breakfast for two, including taxes and service charge. At the current exchange rate of \$1.33 / £1, this amounts to \$350 per night. Pre-payment will be required 90 days before the conference in order to secure your room, i.e. by the beginning of March 2017. It would be helpful for our planning if you could please register your interest in booking a room, on a no-commitment basis, as soon as possible with our conference organiser Kate McMillan at katespe@aol.com.

For further information, including an outline of optional cultural tours and visits to cater for all interests before, during and after the conference, please download the brochure at https://secure.spee.org/sites/spee.org/files/54th\_Annual\_SPEE\_Conference\_2017\_100dpi.pdf.

If you have any questions, please contact either Kate or me directly. We look forward to welcoming you in June 2017.

Simon McDonald speetreasurer@spee.org

#### Saturday, June 10th:

Committee Meetings and Board of Directors Meeting Registration Sightseeing Tours and Events Welcome drinks reception at the Geological Society

#### Sunday, June 11th:

Morning short course: John Etherington... "Managing Your Business Using PRMS"

Afternoon short course: To Be Advised

Evening Reception at the RI

#### Monday, June 12th:

#### Morning Session

#### President's Report and Address

Keynote "curtain raiser" talk: Dr Robert Arnott, Chairman, IOT AS, Oxford Institute for Energy Studies "The importance to E&P companies of unambiguous communication of Resource Evaluations"

Talks/Panel Discussion

#### Afternoon Session

Theme 1: "Resource Classification Systems", theme leader Dr James Ross, Ross Petroleum, ex SPE Oil and Gas Reserves Committee, author of Chapter 2, PRMS and lead contributor to UNFC

Talks/Panel Discussion: Bernard Seiller, Total, Chairman of the SPE OGRC... Recent changes to PRMS

David MacDonald, BP, Chairman of the UNECE EGRC... Evolution and Applications of the UNFC

Gala dinner & awards at IET: Savoy Place

#### Tuesday, June 13th:

#### Morning Session

Theme 2: "Regulatory, Financial and Commercial Issues" (theme leader Michael Lynch-Bell, Kaz Minerals plc and ex officio Chair, United Nations Expert Group on Resource Classification)

Talks/Panel Discussion: Dr David Elliott, ex Chief Petroleum Advisor, Alberta Securities Commission, and others

#### Afternoon Session

Theme 3: "Legal, Dispute Resolution, Reputational and Ethical Issues" (theme leader Michael Burns, Partner, Ashurst LLP)

Talks/Panel Discussion: Graham Vinter (Former GC of BG Group and author of the seminal book "Project Finance")

on "Key reputational issues that boards are concerned about in the sector".

Kathryn Campbell, Sullivan & Cromwell LLP, on Ethics, and others.

## 35th Annual Survey of Parameters Used in Property Evaluation

The 2016 Survey of Parameters Used in Property Evaluation, presented at the Annual Meeting at Lake Tahoe, includes information from 230 respondents. The four committee members (Brent Hale, Mike White, Steve Hendrickson, and David Parry) made changes in the survey format and the survey tool which helped increase the response rate. As a result of questions regarding the use of Reserve Adjustment Factors ("RAFs") at the Lake Tahoe meeting, the survey was updated to include a new Appendix B which better defines the use of RAFs. The survey respondents provided a single RAF and then indicated how they were used with some indicating multiple uses.

Appendix B (which will be made available to those who received preliminary copies at the convention) contains RAF tables for each of nine specific uses identified by the respondents including: 1) exploration decisions with 38 responses 2) field development decisions with 30 responses, 3) corporate valuations with 42 responses, 4) acquisitions with 70 responses, 5) sales with 48 responses, 6) loans with 27 responses, 7) impairment tests with 14 responses, 8) fair market value determinations with 63 responses, and 9) public disclosures with 6 responses.

An area, highlighted by the survey respondents and which needs further review is: "Does the survey information help those in the industry improve their analysis?" The survey currently documents the parameters in use at the time of the survey but does not focus on how the survey is used by evaluators. This is an area of interest to the committee members.

The committee is also working to refine the survey so that it will be more relevant to petroleum evaluation professionals outside of North America. Your feedback on that or other topics is welcome. Please forward any comments or suggestions to the committee via Debbie@SPEE.org

Brent Hale SPEE Parameters Committee Chairman

To order a copy of the Survey of parameters go to www.spee.org; select the Store menu option at the top of the Home Page; select whether the order is to be shipped within the U.S. or outside the U.S., then choose your publication(s). The cost for the Survey of Parameters is \$135.00 each plus shipping and tax (if applicable).

## News You Can Use from Your Internet Committee

In this article series, the Internet Committee (IC) covers useful aspects of your SPEE website. The IC consists of Mike White, Rhonda Gathers and Jennifer Fitzgerald. The address of the SPEE website is www.spee.org. If anyone has any suggestions, comments or questions, please feel free to email us at our group inbox, info@spee.org.

Welcome back from Lake Tahoe and Annual Meeting! A general meeting recap containing a select few photographs can be accessed from the main website page. Also on this page are links to a much more inclusive gallery of photos for review and download plus an additional link to the Past Presentations page where technical session proceedings reside. The inclusive gallery of photographs is hosted on a third-party site and you will need a password for access. The password for the photogallery is spee2016. Annual Meeting recaps are always found under main menu item **News** and Past Presentations are found under main menu item **Resources**.

Monograph 4 is now available for purchase online! All publications for sale are found under main menu item **Store**. Monograph 4 is significantly larger and heavier than any of our other publications so it has required the Internet Committee to overhaul the way shipping costs are calculated. As a result, you may note changes to the online publication order form. Many thanks go to Kyle Fitzgerald and Debbie Suter

in this effort. One of the biggest changes you may note is that inside-the U.S.-customers and outside-the-U. S. customers will be directed to separate order forms. This is in an attempt to keep shipping costs as low and accurate as possible. Even with this logic in place, should you need to order more than five total items or need to order multiple Monograph 4's in a single order, please call or email Debbie Suter at the SPEE office for a correct estimate of shipping costs. She will complete your order manually. Her contact info is Debbie@SPEE.org.

Please keep your membership information up to date by logging into your profile via the "Member Login" link located at the bottom of the main SPEE page. Once you log into your profile, you can scroll to the bottom of that page for the "Edit Name/Address" button.

Rhonda Gathers IC Committee



# SPEE Recommended Evaluation Practice #9 Reporting Multiple Rates of Return

Editor's Note: Recommended Evaluation Practices (REPs) represent the society of Petroleum Evaluation Engineers' (SPEE) suggested treatment of hypothetical reserve evaluation topics. SPEE recognizes that, due to the varied nature of actual reserve evaluation situations likely to be encountered, these REPs are presented merely as suggested approaches. The REPs are not standards or guidelines. The use of or adherence to this SPEE REP is not required in any situation. The REPs should not be considered a substitute for the evaluator's professional judgment. This REP is subject to future revision(s) by the SPEE.

#### Issue:

Multiple rates of return (internal rate of return or IRR) occur when there is more than one discount rate where the NPV is equal to zero. In a case study included at the SPEE symposium comparing economic software<sup>1</sup>, multiple rates of return were not reported by any program as summary data. Some programs report the lower rate of return and some report the larger rate of return. One program reported "N/A" for the rate of return.

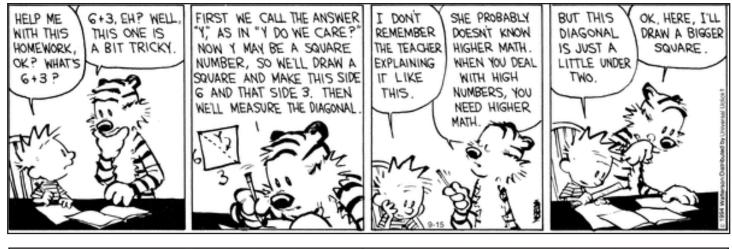
Some companies rely on the IRR for comparing investment alternatives. The current practice of reporting only one of the rates of return would be misleading in these cases.

#### **SPEE Recommended Evaluation Practice:**

In cases where multiple rates of return exist, the reported economic summary should alert the user of the report that multiple rates of return exist (in lieu of printing a single rate of return). In these cases the summary output should also refer the reader to the present value profile data. A suggested presentation for such an alert on the summary output might be as follows:

IRR: Multiple rates of return may exist, see present value profile plot

<sup>1</sup>SPEE Petroleum Economics Software Symposium 2000, March 2, 2000, Houston, TX









## Potential Changes to By-Laws Regarding Ethical Conduct Grievance Procedure

Part 1 of two parts. Part 2 will be published in the November Newsletter

Questions and Comments should be addressed to the Grievance Committee via Debbie@SPEE.com

One of the topics of discussion during the Business Session of the recent Annual Meeting was the proposed changes to the grievance procedure for hearing complaints of ethical-professional misconduct. The grievance procedure has been a subject of concern for several years. A couple of years ago, the Executive Committee of SPEE directed the Council of Past Presidents and the Grievance Committee (the "Task Force") to review the grievance procedure, as currently defined in the SPEE By-Laws, and to recommend any necessary changes. The following article is partially excerpted from the report of the Task Force to the Board of Directors dated May 24, 2016.

#### **Ethics and Professional Conduct**

Adherence to a code of ethics is an essential quality that any professional engineer must possess. Ethics is one of the cornerstones upon which SPEE was conceived and founded, and is of profound importance to Members of SPEE. The importance of personal and professional ethics to SPEE, over and above that required by mere state registration, is shown by Article VI. Ethics of the By-Laws which reference the Code of Ethics of Engineers and, separately, the Principles of Acceptable Evaluation Engineering Practice. SPEE requires an annual certification of ethics training and affirmation of a knowledge of the ethics requirements in Article VI. A logical corollary to the high value placed on ethical conduct by SPEE and SPEE Members is a viable process whereby a Member who fails to uphold the professional/ethical standards of SPEE can be tried and, if found in violation, expelled. While instances of professional/ethical misconduct are and should be rare, a procedure to uphold standards is necessary. Further, the existence of a functioning grievance process that protects the privileges and reputation of SPEE and its Members, and which does not rely on referral to a third-party such as a state agency, allows SPEE to be considered a self-disciplining professional organization.

Securities regulators in some jurisdictions require that persons who engage in the estimation of petroleum resource and/or reserves volumes for regulated public disclosure be a member of a self-disciplining professional organization. The words "Qualified Reserves Evaluators" ("QRE") or "Competent Persons" ("CP"), as related to petroleum reserves evaluations, are terms used in Canada and other jurisdictions beyond North America – notably the UK, Hong Kong, Australia, and Singapore. It is our organization's professional standing and, importantly, its grievance process that has made membership in SPEE a qualifying component to acceptance as a QRE or CP by regulators in several jurisdictions.

#### Why Revise the Current Grievance Process?

All SPEE Members have met the Society's stringent requirements for both technical competence and ethical conduct to become members. Further, Members are expected to adhere to the requirements of the Code of Ethics and the Principles of Acceptable Evaluation Engineering Practice as a condition of continued membership. In the event that a Member is thought to have engaged in unprofessional or unethical practices there is a procedure in place to allow a complaint regarding that behavior to be heard and acted upon. However, while the grievance process outlined in Articles XII and XIII was designed and implemented with the best of intentions, a process that was adequate over 50 years ago does not afford the Society with an effective tool in a more complex and litigious environment today. The existing procedure is spread over four Sections of two By-Laws Articles, is not clear as to the responsibility of all parties involved, and is rather cumbersome. The actual implementation of the process, as defined in the By-Laws, is not only difficult but could result in the Grievance Committee Members, the Officers and Directors of SPEE, and the organization being exposed to potential litigation.

With these shortcomings in mind, the Task Force spent considerable time searching for alternatives that could improve or replace the current process. We believe we have created a procedure that addresses, to the fullest extent possible, the concerns related to the current system.

#### **Proposed New Procedure - Summary**

The proposed process begins with a grievance complaint made by a Member ("Complainant") about another Member ("Respondent"). The complaint is screened by the Executive Committee and, if found to be creditable, is passed to the Grievance Committee. If the Grievance Committee finds the complaint to be creditable, then the grievance will be heard by an Independent Arbitrator, who will be charged with the sole task of deciding whether a violation of the professional ethical standards of SPEE has occurred. The new procedure was designed with the following goals in mind:

- 1. The process must be equitable and transparent to the participants.
- 2. The process must be clearly stated and readily understandable by Members.
- 3. The process needs to specifically define the roles of the Grievance Committee, the Executive Committee, the Complainant, the Respondent and the Independent Arbitrator.
- 4. The process must achieve a resolution that is timely, independent, and unbiased.

- 5. The process should remain confidential and have a clear and final outcome.
- The process must provide adequate protection to SPEE and those Members involved in the process on behalf of the SPEE.
- 7. The procedure should leave no doubt that SPEE is a self-governing organization with a functioning grievance process to ensure all active Members continue to remain in full compliance with all aspects of professional competence and ethics.
- 8. The process must distinguish definable failures of professional ethics from differences of opinion.

In summary, in the event that a grievance complaint is deemed credible by the Executive Committee and the Grievance Committee, an independent arbitrator, mutually chosen or agreed upon by both the Executive Committee and Respondent, would be brought in to adjudicate the complaint. All SPEE Members, as a condition of Membership, agree to submit to binding independent arbitration as the sole remedy to an ethical grievance complaint. If the grievance complaint is referred to arbitration, the Complainant must be prepared to appear as a "witness on behalf of the Society" and be prepared to present sufficient evidence that would lead to a finding by the independent arbitrator that the Respondent has, or has not, violated the SPEE By-Law provisions regarding technical competence and ethical conduct.

#### **Proposed New Procedure - Discussion**

Written Complaint - A charge of an ethics violation by a Member who believes he or she has become aware of unethical/unprofessional conduct by another Member be presented that complaint in writing to the-then-current SPEE President. The written complaint must include (a) a thorough description of the alleged violation; and (b) documentation that supports the charge of misconduct, including, as necessary, sworn statements or affidavits from supporting parties. In the event that the charges are brought by an SPEE committee, the committee must appoint a single spokesperson to act as the Complainant throughout the proceeding. Non-SPEE members wishing to bring a complaint against an SPEE member will be referred to the appropriate state licensing board.

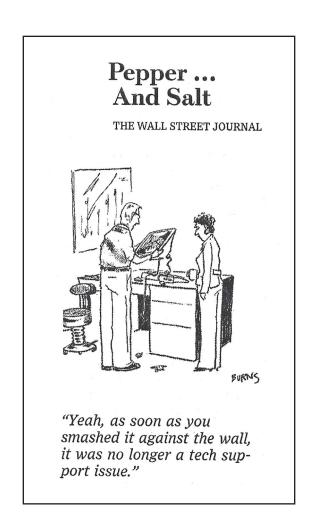
Confidentiality - Throughout the process, it is intended that confidentiality will be maintained and knowledge of the process will be limited to only those directly involved in the arbitration process.

Referral to Executive Committee - The President and Executive Committee shall investigate the charges of misconduct, through an initial screening, to determine if there is sufficient evidence presented to refer the issue to the Grievance Committee. If the Executive Committee believes that there is sufficient evidence to warrant a review by the Grievance Committee, the

complaint will be formally passed to the Grievance Committee for a thorough review of the complaint.

Action by the Grievance Committee - Issues to be validated by the Grievance Committee review will include not only the nature of the complaint, but also the willingness of the Complainant to proceed with the grievance process. The Grievance Committee will issue a finding that either (A) there is not sufficient verifiable information to proceed with a formal grievance, or (B) there is adequate evidence for initiating grievance arbitration. The Grievance Committee will report its finding back to the Executive Committee.

In the event that the Grievance Committee has found no basis for a grievance, the President will inform the Complainant of such and the matter will be considered closed. If the Grievance Committee has found that there is sufficient basis for grievance arbitration, and the Complainant (after being counseled by the President as to what will be expected of them), affirms his or her willingness to proceed through the process, the President will inform the Respondent of such, and the President will start the process for grievance arbitration. However, if the Complainant states that he or she is not willing to proceed with the grievance process, then the matter will be closed.



## New Ethics Monograph in the Works

Keeping ethical issues at the forefront of petroleum evaluation practice, and supporting SPEE membership in their ethics development are two key objectives of the SPEE Ethics Committee. Both are being served by the projects we are currently undertaking to write an ethics monograph and prepare a one-hour training course for use by SPEE Chapters. This is a large effort, but with your help and the work of the Ethics Committee membership I am enthusiastic about its prospects. I look forward to our target release in June, 2017.

It has now been over 10 years since the publication of *Discussion and Guidance on Ethics Prepared for the Society of Petroleum Evaluation Engineers*, by the Society of Petroleum Evaluations Engineers Ethics Committee in 2005. The intervening years have seen two U.S. Presidents, three British Prime Ministers, explosive growth in unconventional oil and gas resources, a major offshore well blowout, and a near meltdown of world financial markets. Although ethical principles themselves have not experienced this level of change, the context in which they are practiced has changed. The SPEE Ethics Committee believes that this is an opportune time to revisit and refresh the Society's ethical guidance.

In addition to the existing guidance on Principles of Acceptable Evaluation Engineering Practice and Ethical Consideration for Expert Witnesses, the new monograph will contain a new section addressing additional ethical considerations for petroleum evaluators. We will address the ethical aspects of standards of performance, competency, conflict of interest, as well as the control and use of the evaluator's professional work product. We will also supplement the material that addresses the evaluator's relationships to SPEE and to society in general. We plan to update the example cases with new scenarios and provide our analysis of the decision process for each of them. This is an ambitious project, but the Committee is dedicated to delivering a first-rate document.

Once the monograph is completed, we will develop a PowerPoint presentation with detailed speaker notes for use as an ethics seminar by our SPEE Chapters. Taken together, the presentation and monograph should meet the ethics training needs of the membership as well as satisfy regulatory requirements.

The Ethics Committee is working hard for you. Now it is your turn to help us. We need to hear from you! Please send me or anyone on the Committee the most interesting ethics issue that you have come across in your career. If there is an area of ethics that you have encountered that we have not addressed, please let us know! The more challenging the situation, the better. By taking up your issues for discussion and analysis, it not only challenges us as a committee, but it makes our work more directly relevant to you.

It is the Committee's hope that you will find these projects useful for meeting ethics training requirements, for avoiding ethical challenges, and for addressing the ethical dimension of your day-to-day practice. I look forward to hearing from you!

Tom Collier Chair, SPEE Ethics Committee tcollier@concho.com



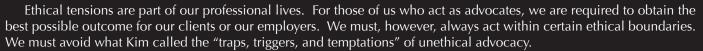
### THE ETHICS COLUMN

"I have been to federal prison..." That line from the ethics presentation at this year's SPEE Annual Meeting has stayed with me since I first heard it. The speaker finished her sentence by saying, "...but not as an inmate." I breathed a sigh of relief.

This year's Annual Meeting ethics seminar was presented by Andrea Kim, a partner in the Diamond McCarthy law firm's Houston office. She has a background in accounting as well as in litigation. Currently her practice includes leading corporate, trust, and investment portfolio investigations. She also acts as trial counsel. In the course of her investigations she has had the opportunity to speak first-hand with the people who at some point diverged from ethical behavior into criminal behavior. This gives her a unique perspective on the underlying causes of ethical failure. The following is my summary of her presentation.

Ms. Kim began by asking a simple question, "What would your grandmother do?" It sounds simple. Often, knowing the "right" thing to do is very simple. Ethical decisions

become more difficult as we must consider competing issues. The issue then becomes, "How we can chart a course that does not diverge into an area that is unethical?"



As an illustration she used a property tax case in which consultants and internal tax representatives colluded with public officials to defraud the taxpaying company out of \$14 million over a thirteen-year period. Once the scheme was discovered and prosecuted, the result was jail time and financial ruin for the schemers. This "scared straight" scenario is very real, although most of us would say, "I would never do that!" No one Kim has interviewed has started their careers with the aspiration of becoming a fraudster, but ethical compromise by ethical compromise, some have become just that. To them, the phrase, "I have been to federal prison," ends with "as an inmate."

Professional ethics rules are in place to help us navigate challenging situations. For the petroleum evaluator, the SPEE has two key documents, the Principals of Acceptable Engineering Practice and the Code of Ethics of Engineers. These codes share three common themes with other professional codes of ethics in that they seek to regulate the relationships between the members and their clients or employers, with regulatory bodies, and with the public. The Fundamental Principles found in our code of ethics calls the evaluator to be honest and impartial in serving with fidelity the public, employers and client. We are called to hold paramount the safety, health and welfare of the public and to be objective and truthful in the fulfillment of our professional responsibilities. In addition, we are to avoid exaggeration and sensationalism in our communications with the public. In our dealings with clients, we are to protect our client's or employer's interest to the fullest extent possible.

Looking at the ethics failures that Kim has investigated, a combination of culture, circumstances, and personalities have led to breakdowns in the ethical performance of organizations. The tone at the top is critical. Enron, for example, had an extensive ethics policy manual. Enron also had a culture that valued and supported achieving positive financial results even at the expense of those ethics policies. In the end, culture trumped policy leaving immense damage in its wake. The difference between achieving results and achieving results at all costs is vitally important. Tolerating a form over substance approach to ethical compliance in which requirements are watered down to match the desired course of action can lead directly to ethical failure. Difficult circumstances can lead to difficulties in continued ethical performance. When the consequences become dire, people become more desperate and more prone to ethical lapses. Rationalizing dishonest or unethical behavior by thinking "just this once – to save the company" is wrong to begin with and can lead to a series of unethical and/or illegal activities. Leadership must talk the talk and walk the walk. It must actively seek the truth and be open to hearing the good, the bad, and the ugly. Accountability both for results and for ethically achieving those results must exist at all levels of the organization, including the very top.

The consequences of ethical failures are severe. Fortunes are lost. Lives are ruined. Avoiding these failures by adopting ethical practice standards begins with intentionally communicating individual and organizational creeds and culture. We must be vigilant for the warning signs that almost always occur. Most importantly, we must decide in advance which ethical lines we simply will not cross. These actions will go a long way towards combatting the ethical pressures that we face.

Tom Collier Chair, SPEE Ethics Committee



#### **Dallas Chapter**

Sulak, Jr., Raymond Member No. 895

Senior Reservoir Engineer Hunt Oil Company 1900 North Akard St. Dallas, TX 75201 rsulak@huntoil.com

#### **Houston Chapter**

Dria, Myra Member No. 891

President & CEO
Pearl Resources LLC
952 Echo Lane, Suite 370
Houston, TX 77024
myra.dria@pearl-resources.com

Larson, Paul Member No. 894

Reservoir Engineering Manager TEMA Oil & Gas Company 16200 Park Row, Suite 300 Houston, TX 77084 larsonp@temaog.com

#### Zhang, He (Associate Member) Member No. 896

Petroleum Engineer Ryder Scott Company, L.P. 1100 Louisiana St., Suite 4600 Houston, TX 77002 he\_zhang@ryderscott.com

#### **Northern Rockies Chapter**

#### Giangiacomo, Leo A. Member No. 893

President
Extreme Petroleum Technology, Inc.
P. O. Box 490
Casper, WY 82602
leo@extremepetrotech.com

Sinclair, John Member No. 885

Petroleum Engineer Sinclair Petroleum Engineering, Inc. 46 Willow Creek Road Cody, WY 82414 john@sinclairengineering.com



The following member applicants have been processed by the Qualifications Committee. The by-laws 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 by-laws regarding other important details) since the applications have already passed through the Qualifications Committee.

#### **APPLICANT**

#### Finley, Andrew K.

Owner/Geologist Goolsby, Finley & Associates, LLC 1551 Three Crowns Dr, Suite #300 Casper, WY 82604 Tom Fitzsimmons Rick Vine Bonnie Percy

**SPONSOR**