

## *President's Letter*

**G**reetings to all. As I write this, the Super Bowl has just ended, a sure sign that 2012 and the holidays are well behind us and an indication of full speed ahead into 2013. By the time you read this, another important annual milestone will have wrapped up, the Chinese New Year. As the SPEE President for 2013, I wish you all the best of health and fortune throughout the year.

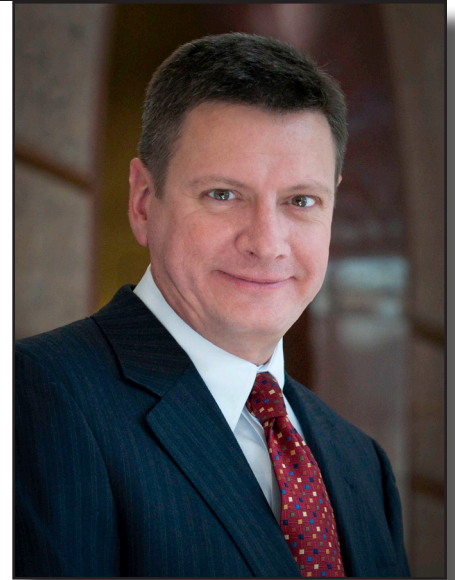
I would like to thank our Past President, **Marshall Watson**, for his insight, energy, and devotion to SPEE during his year as President of our fine organization. Though I am counting on the wisdom of Marshall Watson through this coming year, there will be much competition for his time since the administration at Texas Tech University recently appointed Dr. Watson Chair of the Petroleum Engineering Department.

As Vice-President this year, **Samantha Meador Holroyd** is already busy with one of the most intense tasks that a member of the Executive Committee is asked to handle during their tenure, the planning and execution of the 2013 Annual Meeting, to be held this year in Coeur d'Alene, Idaho. Samantha is very passionate about SPEE and has many ideas for continuing the growth of the organization, not just in size but also in the strength of its membership and the positive impact of its activities on our industry as a whole. This passion is shared by your entire Executive Committee, including Past President Marshall Watson, myself as President, Samantha as Vice-President, and our new Executive Committee Member, Secretary-Treasurer **Gary Gonzenbach**.

Gary Gonzenbach has been a Director of SPEE for the past three years. Gary's insight into technology has been beneficial to SPEE from the moment he became a board member, and this insight proved very beneficial to the Society when he took over as Internet Chair. While technology is ever-changing and there will always be opportunities for further refinements, the amount of work that has been accomplished on both the visible front end and the unseen back end of the SPEE website in just one year is very significant.

Every January, SPEE holds formal meetings of the Executive Committee and the Board of Directors. Locations for these meetings have historically been chosen based on proximity to local chapters, including London, Calgary, Houston, Denver, and this year, San Antonio. If your chapter happens to be located in one of these cities, then hopefully you were able to attend one of the local chapter meetings that coincided with our visit. This year, our meetings in San Antonio allowed us to join the Central Texas Chapter for an informative technical meeting. At our Board Meeting in San Antonio, we welcomed three new Directors, **Letha Lencioni** (Denver), **Brent Hale** (Dallas), and **Floyd Siegle** (Calgary). It is already evident that all three new directors have enthusiasm and vision that will serve SPEE well during their next three years on the board. At the same time, I wish to thank outgoing Directors **Paul McDonald** (Dallas) and **Ken Sigl** (Oklahoma City) for the time and effort that they gave to the organization as Directors. The alumni group of past SPEE directors keeps getting stronger with each passing year, providing a deep pool of talent to continue the society's mission.

Speaking of SPEE's mission, one of the Executive Committee's key goals this year is to make sure that we have a well-defined master plan that is fully in line with the organization's interest in maintaining the close-knit professional network that we have all come to appreciate, while continuing to nurture the growing spirit of cooperation in the development of important industry technical





publications and industry-wide training based on those publications, while continuing to grow SPEE's international presence. In this regard, I have asked outgoing Past President **Barry Ashton** to head a Long Range Planning Committee. In this position, Barry will liaise with both the Council of Past Presidents (COPP) and the Board of Directors. SPEE does, in fact, have a Long Range Plan (LRP), and has for many years. Initially created by the COPP in 1993 then reviewed and monitored on a number of subsequent occasions, the framework is robust and insightful, albeit somewhat generic. My goal this year is to fill in the details of this generic LRP, allowing it to serve as a guide for where the organization can best channel its strong, yet limited, human resources in the coming years.

Under the organizational guidance of long-time member **John Seidle**, a distinguished committee of seven SPEE members are busy preparing the text of a companion volume to SPEE's Monograph 3, related to resource plays. Whereas Monograph 3 addressed the assessment of undeveloped reserves, the new Monograph 4 will explore and address the assessment of developed reserves in resource plays. We look forward to completion of this important work.

Through the diligent efforts of SPEE members **Tim Smith** and **John Ritter**, our organization will continue to play an important role in the development of the United Nations Framework Classification for Fossil Energy and Mineral Reserves and Resources (UNFC), a key goal of which is to insure compatibility with the Petroleum Resources Management System (PRMS).

**Mike White** has accepted the position of Internet Chair and already has a number of ideas to continue improving and enhancing the SPEE website. I am sure that Mike would welcome any comments from our membership in this regard. **Letha Lencioni** has accepted the position of Membership Chairman. Letha will be working with B.K. Buongiorno and Mike White to assure a smoother dues process in the future while also promoting use of SPEE's on-line membership directory. We would also like to print an updated hard copy membership directory this year, but have been awaiting submission of updated pictures from as many members as possible. If you think your picture may be out of date, please email it to B.K. as soon as possible.

It has now been three years since the European Chapter was formed and we continue to discuss the potential for other new chapters, both within North America and on other continents. We have considered the need for chapters in the northeast United States as well as in the Pacific Rim and/or Australia. In order to form a new chapter, it is critical to have a few dedicated individuals on the ground in the new

location, in order to relate the purpose and mission of SPEE to other prospective new members. This is precisely how we built interest in and fostered the formation of the European Chapter, and it is a model that we plan to follow for the formation of additional SPEE chapters. We will be looking for individuals who wish to take on such an important role in the near future.

Those who have attended any of SPEE's annual meetings appreciate what an outstanding experience it can be, both educationally and socially. This is likely why each year, for the past several years, we have set attendance records at the annual event. Mark your calendars now for SPEE's 2013 Annual Meeting to be held June 7-11. This year, the meeting will be held in Northern Idaho, lakeside at the Coeur d'Alene Resort. For those of you who are regular attendees at our annual meetings, I ask you to spread the word regarding your impressions of and experiences at past annual meetings, and I ask that you recruit others to join us in the camaraderie. For those of you who have never attended one of our annual meetings, consider that you may be missing out on one of the best parts of SPEE membership, and further consider joining us at the annual meeting this year.

*Rick Krenek  
President*



### **SPEE Annual Meetings**

**June 8-11, 2013 Coeur d'Alene, Idaho  
Coeur d'Alene Golf & Spa Resort**

**June 7 - 9, 2014 Stowe, Vermont  
Stowe Mountain Lodge**

**June 5 - 9, 2015 Halifax, Nova Scotia  
The Westin Nova Scotian**

**Contact Barry Ashton to provide suggestions  
on locations and venues for future meetings.**

# Chapter News

## Calgary

Meetings - 3rd Tuesday of each month except June, July and August. Membership - 47

## California

The California Chapter is making plans to participate in a panel discussion at the SPE/AAPG Western Regional Meeting in Monterey, California on April 23rd. The Chapter is working on the program details but the main topic of discussion is Engineering/Geologic Ethics. The Chapter is currently seeking a few more volunteers to serve on the panel.

A Chapter meeting was held on February 14th in Oxnard, California, during the annual California Assessor Association Petroleum Standards Advisory Committee joint conference with the Western States Petroleum Association and the California Independent Petroleum Association. In attendance were guest Michael Horne from SPEE's Houston Chapter and James McCarthy, Senior Petroleum & Mining Petroleum Appraisal Engineer with the California State Board of Equalization.

Membership - 27

## Central Texas

On Monday, January 14, the Central Texas Chapter hosted a luncheon meeting at the Hill County Hyatt Resort in San Antonio for the annual meeting of the SPEE's Board of Directors. The luncheon meeting was open to all Section members and invitations were also extended (on a space-available basis) to area SPE and SIPES members.

At the meeting, Michael Stell, Senior V-P of the Ryder Scott Company, made a presentation on Reservoir Evaluations in the Eagle Ford Shale. The meeting was well attended, to the point that we had to turn away some last-minute reservation attempts due to lack of room.

Membership - 31

## Dallas

Meetings - Bimonthly September through May on 3rd Thursday of the month unless otherwise stated. Membership - 55

## Denver

On July 11, 2012, the Denver Chapter held its third quarter meeting of 2012 with 66 in attendance including 23 members and 43 guests. The guest speaker was Ward Polzin, with a presentation entitled *Bakken and Permian - Valuation Metrics in the Two Hottest Plays*. Mr. Polzin serves as a Managing Director in Investment Banking at Tudor, Pickering, Holt & Co, and spearheads the firm's E&P asset acquisition and divestiture practice. He has been directly involved with more than 40 shale transactions since 2008, and so was in a position to share parameters of those transactions.

On October 10, 2012, the Denver Chapter held its fourth quarter meeting of 2012 with 26 in attendance including 15 members and 11 guests. Andrew Logan was the speaker, who spoke on the topic *Insight into Today's Energy Market*. The presentation covered a broad range of subjects including the current U.S. energy mix, its influence on the U.S. economy, climate change, the future of natural gas supply and demand, various natural gas resource play development costs, and energy investment returns. Mr. Logan, a managing partner in a royalty buying fund, runs the Energy Finance Discussion Group as a sideline. This is a group of nearly 600 oil and gas financial professionals who meet once a month for breakfast to hear speakers present on various macroeconomic trends impacting the oil and gas industry.

On December 12, 2012, as a service to chapter members, the chapter held a scenario discussion on ethics. The discussion was led by chapter officers John Benton and Fred Legrand and member Dr. John Wright. The presentation was designed to meet the requirements of various state licensing boards as well as the SPEE annual renewal requirement for one hour of ethics study. Total attendance was 38, of which 29 were members and 9 were guests.

Meetings - 2nd Wednesday of first month of each quarter - Denver Athletic Club - The New Petroleum Club. Membership - 65

## Europe

The fourth Annual General Meeting ("AGM") of the Europe Chapter was held December 3, 2012 with a total of 16 members and guests in attendance.

As of December 2012 the Europe Chapter has 21 members giving a net increase of five over the year. Several applications are in the pipeline.

Four meetings were held in 2012 and a similar number of meetings are planned for 2013. It is hoped that at least

one of these meetings will be held outside of London. The meetings are generally lunchtime or early evening sessions, for which an eminent expert is invited to make a brief, discussion-provoking presentation. The final meeting in 2012, the AGM, included a presentation and extended discussion on Ethics. In general the meetings attract between 15 and 25 people.

During 2012, the main presentations in our meetings were:

- Feb: PRMS as an International Resources Reporting Standard - Status and Potential Next Steps, J. Etherington
- May: The PRMS Application Guidelines Document, S.Purewal
- Sept: Recent Developments in the Disclosure Requirements for Oil and Gas Companies, K.Campbell
- Dec: (AGM) : Ethics, G.Simpson

The election of the 2013 SPEE Europe Chapter officers was held during the AGM in December. The new committee for 2013 will be as follows:

Chairman	Jes Christensen
Vice Chairman	Martin Hubbig
Secretary-Treasurer	Shane Hattingh
Membership Chairman	Bob Harrison

The meeting thanked the retiring Chairman, Simon McDonald, and Membership Chairman, Doug Connell, for their work during their tenure on the committee.

Meetings - Four per year. Membership - 21

## Houston

On November 7th, Bill Haskett, Senior Principal for Energy Strategy at Decision Strategies Inc., presented *Reigning in the Data Junkies – Having the Guts Not to Appraise*. He presented a discussion on determining the value of information. Using a deepwater appraisal example, he discussed how VOI analysis



Jennifer Fitzgerald (Houston Chapter Chairman - 2013), B.K. and Rod Sidle

should be used to assess the contribution of various appraisal well options to the development decision. At this meeting Jennifer Fitzgerald, Anna Hardesty and Lucy King were placed in nomination by the current officers for Chairman, Vice Chairman and Secretary-Treasurer, respectively. A request was made for nominations from the floor but none were received. The announcement was made that the voting on the officers would occur at December's meeting. There were 48 members, guests, and visitors in attendance for the meeting.

On December 4th, Craig Owen, Senior VP & CFO at Southwestern Energy Company presented *Southwestern Energy: Navigating the Gas Price Headwinds*. He gave an update on recent developments at Southwestern Energy, specifically on operational improvements in the Fayetteville and Marcellus shales, their new ventures efforts, and midstream business and finished with his outlook on how Southwestern will continue its success in this difficult gas price environment. The following officers were elected by unanimous vote: Chairman - Jennifer Fitzgerald, Vice Chairman – Anna Hardesty and Secretary-Treasurer - Lucy King. Afterwards Jennifer appointed Stephen Davis for our Program Chairman. There were 36 members, guests, and visitors in attendance for the meeting.

On January 16th, the Houston chapter hosted our annual joint meeting with SIPES. Michael Heinz from Kayne Anderson Capital Advisors presented *The Role of Private Equity in Upstream E&P*. He presented a discussion on the impact of improved drilling and completion technology on production activity. He also discussed how strategic sellers continue to divest non-core assets to fund development of capital intensive resource plays. There were 50 members, guests, and visitors in attendance from SPEE for the meeting.

On February 6th, Christopher Tucker from Netherland, Sewell & Associates, Inc. presented *Evaluating Shale Gas Wells Using Flowing Rate and Pressure Data*. Chris presented the genesis and utility of a method he developed to estimate recoverable gas and contacted gas-in-place for shale wells.



Houston - Fred Goldsberry, Ed Butler and Marcus Winkler

With examples in the Haynesville, he discussed how the method is easy to use, requiring only daily production and flowing pressure data to forecast future gas production with relatively limited production history. Examples illustrated that the method is especially helpful where the rate is controlled or choked back. There were 75 members, guests, and visitors in attendance for the meeting.

#### Upcoming Meetings:

- Wednesday, March 6th: Don Warlick, Warlick Energy – *The Utica Shale: Does it have what it takes to become a leading unconventional play?*
- Wednesday, April 3rd: To be announced
- Wednesday, May 1st: To be announced

Meetings – 1st Wednesday of each month except June, July and August – Houston Petroleum Club. Membership – 186

### Midland

In January, SPEE Midland hosted a luncheon meeting at the Petroleum Club that was well attended. The speaker was Weldon Pierson with Pioneer Natural Resources. Mr. Pierson's presentation was titled *Wolfcamp Horizontals...the rules have changed. Facilitating horizontal wellbores in a vertically developed field*. Mr. Pierson is a key player in Pioneer's request for RRC rule changes in the Wolfcamp play of the Permian Basin.

The Midland Chapter Board is currently planning a two-day short course scheduled for April 8-9. This course will be designed to target local young professionals regarding oil and gas evaluations and economics.

We will continue our lunch-and-learn meetings in 2013 at the Petroleum Club.

Meetings – 1st Tuesday odd months – Midland Petroleum Club. Membership - 28

### Oklahoma City Chapter

Meetings – Every odd numbered month. Membership - 25

### Tulsa

Dr. Tim Coburn presented to the Tulsa SPEE chapter on November 7th. He is the Professor of Energy and Operations Management in the Collins College of Business at The University of Tulsa and also serves as the director of graduate programs in energy business, specifically, the Master of Energy Business (MEB). He described basic statistical concepts and how they can be misused when aggregating reserves. It was well received with several questions asked followed by discussion; six SPEE members and 18 nonmembers attended.

Richard Spears with Spears & Associates presented to the Tulsa SPEE chapter on January 31st. He is one of

the managing directors of Spears & Associates, an oilfield market research firm founded in 1965. He discussed his firm's outlook on drilling and completion-related services in 2013 which included detailed information on total dollars spent for various parts of the service industry over the last several years (wellheads, land based rigs, frac jobs, etc). He noted a few opportunities that have occurred in the past including a very limited number of proppant supply companies – which has increased dramatically in the past couple of years. He also discussed increased drilling efficiencies for horizontal wells which has increased the number of wells drilled and frac jobs pumped per year, but kept rig counts relatively steady. We had a very good turn out with 8 members attending and 31 non-members attending.

At the Chapter Annual Business meeting February 14th, all business for 2012 was approved as presented and all activity was conducted without loss of chapter funds. Seven members attended.

The officers for 2013 are as follows:

- Chairman: Daryl Duvall – WPX Energy
- Vice-Chair(Programs): Marc Schutt – QEP
- Secretary-Treasurer: Laura Stauffer – Newfield
- Membership Chairman: Phil Schenewerk – Apache

Steve Antry with Eagle Energy is scheduled to talk March 13th about the sale of his company's Mississippian assets to Midstates Petroleum for 650MM\$.

Tuesday of each month – Petroleum Club. Membership – 27



# SPEE

SOCIETY OF PETROLEUM EVALUATION ENGINEERS

# 50<sup>th</sup> Annual Meeting

## June 7-11, 2013



Enjoy this **premier destination & exceptional golf course** which includes the **world's only moveable floating green!** Attendee Golf Tournament is **Sunday morning!!**



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mention SPEE for reservations

- ▶ Discounted early registration rates before **May 7<sup>st</sup>**
- ▶ Two Short Courses: **Sunday & Tuesday afternoons**
- ▶ Don't miss the Monday evening **Champagne Cruise, Dinner & Dancing!**

Further details at

[www.spee.org](http://www.spee.org)

(registration begins March 15)

## THE ETHICS COLUMN

This column is introductory in nature and is the first in a series of four to be written by the members of the SPEE Ethics Committee, located in Midland, Texas. Subsequent columns will deal with specific ethical principles and applications of a practical nature for SPEE members.

In recent times, ethical behavior or misbehavior has been a prominent subject in the news media. Numerous stories report ethical lapses on the part of elected officials, corporate management, and professionals - such as attorneys, accountants, medical personnel and –yes- even engineers.

A logical question arises – “is this a new phenomenon – a sign of our fast-paced modern times?” The answer is that ethical misbehavior is as old as mankind itself. Longstanding religions address ethical (moral) behavior. The ancient Greek philosophers studied and wrote extensively about the subject some 2500 years ago.

In a simple way, ethics deals with how we ought to live. Beyond that, ethics may be difficult to define. Likely, ethics can be recognized even though the definition may not be easy to derive.

Addressing ethical behavior is a fundamental effort of professional organizations such as medicine, law, accounting and, certainly, engineering. Such effort is essential to guiding proper practice and for maintaining credibility in the eyes of the public. In the case of professional engineers, the first duty is defined as placing the safety, health and welfare of the public above all else. In order to realize this duty, most, (if not all) state boards of registration require annual ethics training in addition to other continuing education in order to maintain membership. The same is true of certain professional/technical societies.

For years, SPEE has addressed ethical behavior of its members. The By-Laws contain references to ethical behavior, a code of ethics of engineers and principles of acceptable engineering practice. A concise SPEE Ethics Summary was included in the February, 2012 SPEE newsletter. It would behoove all SPEE members to periodically review this useful summary.

In recent years, SPEE has fostered extensive programming relative to the subject of ethics. This has taken the form of presentations at annual meetings, chapter meetings, newsletter columns and references to available ethics training at various locations via meetings, internet offerings and published courses. These efforts are appropriate in order to protect the reputation of the Society and its members and to facilitate maintaining professional registration.

There is likely to be a continuing need (and demand) for training in ethics. Certainly, SPEE has a role to play. There are numerous publications dealing with ethics. For those interested in a detailed treatise of the subject, reference is made to a book *Ethics* – edited by Peter Singer and published by Oxford Readers. Following is an excerpt from the back page:

*“What is ethics? Where does it come from? Can we really hope to find any rational way of deciding how we ought to live? If we can, what would we like, and how are we going to know when we have found it?”*

Reading of it is recommended.

The forgoing discussion deals with regulations and guiding principles concerning ethics. However, it may be said that an overarching concept of ethical behavior is doing what is right simply because it is the proper thing to do.



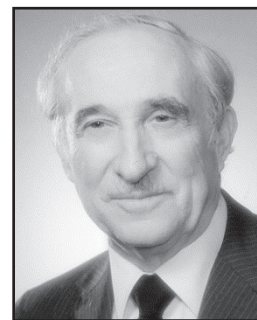
Arlen Edgar



## IN MEMORIAM

We regret to note  
the passing of:

**H. J. Gruy**  
(1915 – 2012)



Legendary petroleum engineer and geologist Hank Gruy rode off into the sunset for the last time on December 19, 2012. Henry Jones Gruy was born June 10, 1915, in Victoria, Texas. Hank graduated from Central High School (now R. L. Paschal) in Fort Worth in 1932. After high school, he went to work on his uncle Joe Gruy's ranch in Hebronville, Texas, an experience that he recalled with fondness because it gave him his lifelong love of horses and riding. He was a regular on the Houston Rodeo trail drives during the late 1970s and early '80s. When his uncle asked him why he wasn't going to college, Hank replied that he had been accepted at Rice but couldn't afford it. Joe said he'd pay if Hank would agree to go to Texas A&M. Hank started there in 1933 and graduated in 1937 with a bachelor's degree in Petroleum Engineering.

He worked for Standard Oil of Texas and then Shell before joining the consulting firm DeGolyer and MacNaughton. He was there from 1945 – 1950, when he set out on his own with H. J. Gruy and Associates. He was active with Gruy and Associates until he was 95 years old. His company was a pioneer in the transition of engineering calculations from mechanical calculators to computers. He loved to tell stories, could recite entire verses of poetry pretty much on demand, and had a quip or a toast for any occasion. He was proudest of his induction into the National Academy of Engineering in 1988. He was a member of the Society of Petroleum Evaluation Engineers (SPEE) from its inception in 1962 and served as its president in 1964, and a lifelong member of the Society of Petroleum Engineers (SPE). In 1983 he received SPE's highest honor, The DeGolyer Distinguished Service Medal. He also received Lifetime Achievement Awards from both the National Oil and Natural Gas Producers Association and the Independent Petroleum Association of America. He was named a Distinguished Alumnus of Texas A&M University. Hank loved A&M, which educated multiple generations of Gruys, and in 2007 he and his wife dedicated the Rae T. and H. J. Gruy '37 Fountain on the College Station campus.

He is predeceased by his wife Rae T. Gruy, who died in May 2012, and wives Evelyn Hudson Gruy (mother of his three children) and Emma Bell Jopling Gruy. He is survived by two sons, Robert and William, and daughter, Janet, three stepchildren, nine grandchildren and three great grandchildren.

## Membership Applicants

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.

### Adamson, Gordon

Head of Reserves and Asset Eval. Services Senergy (GB) Ltd. 15 Bon Accord Crescent Aberdeen, AB11 6DE, UK	Doug Connell Andrew Evans Bob Harrison
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### Devashish, Manoj Kumar

Managing Director Indus Investors Service 2332 Wordsworth Street Houston, TX 77030	Patrick Thibeaux Bill Vail Kent Williamson
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### Ford, Nicole Marie

Senior Petroleum Engineer Enduring Resources 511 6th Street, Suite 700 Denver, CO 80202	Jim Lillo Terry Sherban Barth Whitham
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### APPLICANT

#### Freeman, Craig Denman

Director Engineering  
Wells Fargo Bank  
1000 Louisiana St., 9th Floor  
Houston, TX 77002

#### Wurster, Bryan John

Vice President  
McDaniel & Associates Consultants Ltd.  
Suite 2200, Bow Valley Square 3  
255 – 5th Avenue SW  
Calgary, Alberta T2P 3G6  
Canada

### SPONSOR

Terry Lundberg  
James Patterson  
Joe Tigler

Bryan Emslie  
Floyd Siegle  
Phil Welch

# Welcome New Members

**Barker, John Wilson – Member No. 802**

Gaffney, Cline & Associates  
Principal – Reservoir Engineering  
Bentley Hall, Blacknest  
Alton, GU34 4PU  
United Kingdom  
john.barker@gaffney-cline.com

**Cooper, Sara Frances (Associate member) Member No. 803**

Penn West Exploration  
Reserves Engineer  
#200, 207 – 9 Avenue S.W.  
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**Eubanks, Michael Alan (Associate member)  
Member No. 804**

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**Famurewa, Samson Oluwatosin - Member No. 805**

Ryder Scott Company  
Vice President  
1100 Louisiana, Suite 3800  
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**Freeborn, William Randall (Randy) – Member No. 806**

Energy Navigator Inc.  
Chief Research Engineer  
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**Gardner, Stephen Edward – Member No. 807**

Ryder Scott Company  
Vice President – Project Coordinator  
621 17<sup>th</sup> Street, Suite 1550  
Denver, CO 80293  
steve.gardner@ryderscott.com

**Howard, Jr. Edgar Neal – Member No. 808**

OXY, Inc.  
Senior Reservoir Engineering Advisor  
5 Greenway Plaza, Suite 110  
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neal\_howard@oxy.com

**McKenzie, Gary L. – Member No. 809**

DeGolyer and MacNaughton  
Senior Vice President  
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**Patton, Lindsay M. (Associate member) – Member No. 810**

BreitBurn Energy Company  
Advanced Reservoir Engineer  
600 Travis Street, Suite 4800  
Houston, TX 77002  
lindsay.patton@breitburn.com

**Ramirez, Guadalupe (Guale) – Member No. 811**

Ryder Scott Company  
Managing Sr. Vice President – International  
1100 Louisiana, Suite 3800  
Houston, TX 77002  
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**Richter, Thomas Hardin – Member No. 812**

PGH Engineers – Consultants  
Senior Petroleum Engineer  
7500 Rialto Blvd., Suite 150  
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buddy.richter@pghengineers.com