



# PBS-SEPM NEWSLETTER

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## KEY DATES For August, September, October 2019

### AUGUST 2019

- **20: PBS-SEPM Luncheon**, Midland Country Club, 11:30am– 1pm, Randi Martinsen
- **27: SPWLA Social**, The Blue Door, 5:30pm-7:30pm

### SEPTEMBER 2019

- **10: WTGS Luncheon**, Midland Country Club, 11:30am-1pm, Randy Utech, Optimization of Stacked Play Development in Delaware Basin
- **17: PBS-SEPM Luncheon**, Midland Country Club, 11:30am-1pm, Cyrille Defeu
- **18: SIPES Luncheon**, Midland Country Club, 11:15am-1pm, TBD

- **24: SPWLA Luncheon**, Carrasco Rm, Midland College, 11:30am-1pm, TBD
- **24-26: WTGS Fall Symposium** (Midland Horseshoe)

### OCTOBER 2019

- **8: WTGS Luncheon**, Midland Country Club, 11:30am-1pm, Pedro Romero Rojas, Determining Water Saturation in Permian Basin Intercalculated Reservoirs using NMR Log Data
- **18: SIPES Luncheon**, Midland Country Club, 11:15am-1pm, TBD
- **29: PBS-SEPM Luncheon**, Midland Country Club, 11:30am-1pm, TBD
- **29: SPWLA Luncheon**, Carrasco Rm, 11:30am-1pm, TBD



## President's Column

Greetings my fellow members, on behalf of the board and myself I would like to thank you for electing us and entrusting us to ensure the PBS-SEPM traditions are maintained. We have a very hard working group, and we all want to let you know we will strive to preserve the luncheon talks and other functions, such as the core workshop, field trips, and student scholarships as they had been in the past. Currently, we are in a "rebuilding" stage here at PBS-SEPM. I would like to update everyone on the upcoming changes to our website, contact information, membership protocol, as well as inform you on what the newly elected board has started since June 1st.

As most of you know, the PBS-SEPM website has been under periodic cyber-attacks for the last several years. While hackers have not obtained any sensitive information from the website, they have caused a lot of downtime and other operational headaches – compelling us to look for a more reliable and secure host. In addition, the expenses incurred from using the current website are cost prohibitive at this time. Our webmaster, Frank Fulbright, did a great job researching new website options, and has achieved in finding a new host that provides a straightforward website at a cost savings. Not only will we be able to keep the same web address, [www.pbs-sepm.org](http://www.pbs-sepm.org), once the switch is made, but the look will be modern and user-friendly. The new features will include tabs for events, publications, sponsorship, and an online shop. PayPal will remain as our online payment system for all luncheon events, workshops,

fieldtrips, publications, and other products. Frank will be completing the new website in August and we will send out emails to "officially" announce the date that the website will be ready to use.

Since we have an office that the PBS-SEPM organization pays for each year, located at the Midland Energy Library (MEL), we will no longer have the P.O. Box address. All correspondence should be sent to the following address: PBS-SEPM, 2900 W Front St, Midland, TX, 79701. Our email address and phone number will remain the same, (as shown at the end of this article). Send an email or give us a call through the Google Voicemail and someone on the board will respond in a timely manner.

The board members have voted to officially set the membership renewal date to June 1st each year in order to streamline the bookkeeping for the exiting and incoming board members, as well as establish a set date for all our members to renew their membership by. Since the change was done in the middle of the year, all members who paid their dues since January 1, 2019 will be grandfathered in, so the next renewal date will be June 1, 2020. In order to keep up with the rising costs of various events we provide each year, the price of membership for the PBS-SEPM has been increased to \$25 per year. New and returning members will be able to register and pay their membership dues on the new website under the membership tab as well as through filling out a membership form, attaching a check, and sending it to the PBS-SEPM office.

The board has been working diligently to schedule

luncheon speakers for the 2019-2020 season. We are actively seeking a chairperson and committee members to help Dan Scott with recruiting lecturers with trending topics to speak at our luncheon lectures.

The field trips and core workshops have been a staple of the PBS-SEPM organization. For the last 10 years, we have run the Young Professionals Field Trip (YPFT). We have a great chairman in Robert Campbell, and other volunteer instructors, Dr. Robert Trentham, Dr. Cory Hoffman, John Hagar, Ash Stoker, Chris Fling, and Teri Mcguigan have all contributed their personal time and individual expertise to mentor the oil industries incoming professionals. The cost of running this field trip has increased enormously over the last few years, and with that in mind, the board voted to increase the price for the 2020 YPFT field trip. For many years, it has been set at \$950.00 and will be increased to \$1200.00 for each student. This will help offset the hotel and van rentals, which is our biggest expense. This year we are planning on having a core workshop in the spring. Midland College Geology Chair, Tony Giles, offered to request that we have access to the Midland College's building facilities to hold our workshop at their campus. The board is discussing having a Delaware Basin core workshop, or a ROZ core workshop, among other ideas. It will depend on the obtainability of core and an instructor's availability. In addition, we plan on coupling the core workshop with a field trip from Midland. The field trip will be through the Marathon and Marfa basins, which will provide a general overview of the Permian

Basin tectonic and depositional settings that helped create the phenomenal oil field we all work in today. The overprint of the Tertiary volcanic will also be discussed as we travel down through the Trans-Pecos region. It will be a nice refresher for seasoned Permian professionals, and a good overview introduction for the newer members of our industry to the Permian Basin and Western Texas. The dates and price of both the core workshop and two-day field trip are yet to be set.

As most of you are aware, our society membership fluctuates with the highs and lows of the Permian oil fields. We on the board will work hard to encourage the new faces in the Permian, and those who used to frequent our society, to join us through re-invigorating our luncheons, academic events, and scholarships. If you would like to volunteer for any committee or to serve as a chairperson on a committee, please contact one of the board members. Our contact information is in the newsletter and will be on the website. Any help or suggestions will be welcomed and greatly appreciated!

We look forward to seeing you all at the next luncheon, Tuesday, September 17th, at the Midland Country Club.

*Sandra Elliott*

**PBS-SEPM President 2019-2020**

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[sepm.org](http://www.pbs-sepm.org)

E-Mail: [info@pbs-sepm.org](mailto:info@pbs-sepm.org)

Phone: (432) 279-1360

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2900 Front St,  
Midland, TX

79701





## PBS-SEPM Luncheon Talk – August 20, 2019

### Randi S. Martinsen

#### *“Depositional Remnants: Common Components of the Stratigraphic Record with Important Implications for Hydrocarbon Exploration & Production”*

Principal, Hydrocarbon InSight, LLC

Tuesday, August 20, 2019 - Midland Country Club, 11:30 a.m.

### Abstract

The preservation of sediments below erosion surfaces can be highly variable laterally and often only small remnants of originally more extensive deposits remain. The concept of remnants is not new, but their abundance, and the fact that they commonly develop below low relief erosion surfaces as well as below those that incise deeply, may be under appreciated. Lateral variations in accommodation due to paleo-topography, synsedimentary and penecontemporaneous tectonics and differential compaction occur on a variety of scales in all depositional settings. In low accommodation and shallow shelf settings lateral variations in accommodation often result in the formation of remnants varying in size from small to basin-scale. Remnants of porous and permeable facies encased in low permeability facies are an important and relatively common type of stratigraphic trap. The recognition of these deposits, herein referred to as “depositional remnants”, is often critical to depositional systems analysis because stratigraphic terminations due to erosional truncation must be interpreted differently from those due to lithofacies change. In addition, the preserved geometry of remnants can be quite different from their depositional geometry and because geometry is heavily relied upon in interpretations of ancient depositional systems interpreting a preserved geometry as a depositional geometry can result in significant misunderstandings. Depositional remnants should be common in the stratigraphic record of many basins and represent an important stratigraphic concept to open up new hydrocarbon plays in mature basins.

### Biography

Ms. Martinsen is a certified petroleum geologist with 45 years experience (domestic and international) working in industry, consulting and teaching. She holds a B.S. in Earth and Space Science from Stony Brook University, N.Y. and an M.S. in Geology from Northern Arizona University, Flagstaff. She started her career with Cities Service Company, Denver, CO., and subsequently, became a consultant. As a consultant she develops prospects for oil and gas drilling, provides basin analysis and reservoir characterization studies, expert witness testimony, and professional training. She is also an Emeritus Lecturer in Geology and Geophysics at the University of Wyoming where she taught, conducted research and advised graduate students for 34 years. Courses she taught include petroleum geology, subsurface methods, clastic depositional systems, sequence stratigraphy, reservoir characterization and physical geology. Her research focuses on developing and improving geologic models useful for exploration and production from stratigraphic traps and she has numerous publications in this area. She was a member of the National Research Council Panel on the Review of the Oil Recovery Demonstration Program of the Department of Energy, served on the Board of the Petroleum Technology Transfer Council, and served the American Association of Petroleum Geologists (AAPG) as Associate Editor, Treasurer and President. She is a recipient of the Wyoming Geological Association's highest ward: The Frank Morgan Award.



**THANK YOU ALL WHO  
CAME OUT!**

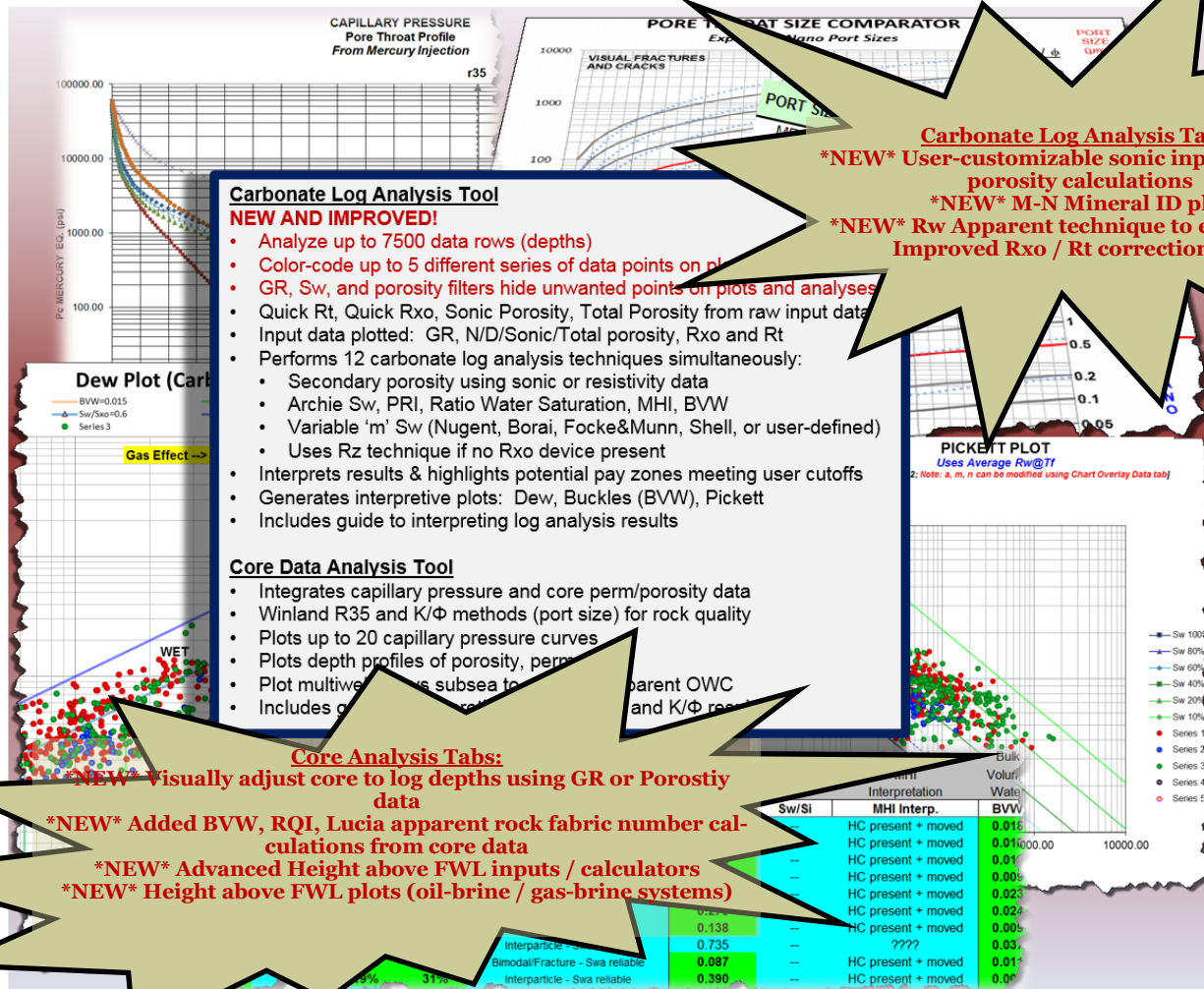




**PBS-SEPM Publication**  
**Carbonate Log Analysis Spreadsheet v. 5.0**  
**COMING SOON**

**By: Cory L. Hoffman**

*Designed for Microsoft Office Excel 2013*



**INTRODUCTORY PRICE: \$50** (all proceeds go directly to PBS-SEPM)

- Get 2 tools for 1 low price — spreadsheet includes carbonate log analysis AND core data analysis tools
- Flash drive contains current version (Excel 2013; v. 4.0) and previous version (Excel 2010; v. 3.2) of spreadsheet
- Price includes free upgrades within version class (v. 3, v.4, etc.) for each registered user

**Quantity:** \_\_\_\_\_ **Total: \$**\_\_\_\_\_ (plus 8.25% sales tax; add \$5 for shipping/handling if not picked up)

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For additional information contact: **PBS-SEPM office** (432) 279-1360 or [info@pbs-sepm.org](mailto:info@pbs-sepm.org).

## PBS-SEPM Luncheon Talk – September 17th, 2019

### Cyrille Defeu

#### *“Depletion Effects of Parent Well Production Over Time and Impact on Well Spacing in the Wolfcamp, Delaware Basin”*

**Region Technology Domain Manager, OneStim-Schlumberger**

Tuesday, September 17th, 2019 - Midland Country Club, 11:30 a.m.

### Abstract

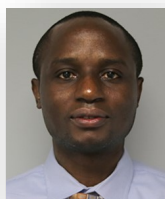
Parent-child relationship is becoming a topic of high interest in the Permian Basin as more infill wells are being drilled at various times after the parent well has been produced. As the parent well is being produced, constant well spacing based on virgin condition becomes problematic because pressure depletion around the well leads to change in stress magnitude and orientations. This continuous change in reservoir conditions, is critical for planning infill well. Negative effects of parent well depletion include:

- Asymmetric fracture propagation from the child well into the depleted area around the parent well
- Potential detrimental fracturing hits to the parent well

These effects would potentially impair the production performance of both parent and infill wells, further reducing the overall pad efficiency of the pad completions.

This study uses an advanced modelling workflow to determine the impact of parent depletion on infill well spacing at various periods of the parent well production. Parent well behavior is simulated using an unconventional fracture model (UFM), and the model is calibrated with available treating data. The resulting hydraulic fracture uses an advanced unstructured gridding algorithm that accounts for a fine complex fracture network along the lateral. A high-resolution, numerical reservoir simulator that combines the unstructured grid, rock physics, and reservoir fluid data is then used to match historical production data. The reservoir pressure depletion profile at various time steps (6, 12, 24, and 36 months) is used as an input to calculate the resulting stress field state via a finite element model. The resulting updated geomechanical properties are used to simulate the infill well hydraulic fracture geometries at various spacing; subsequent unstructured grids are created and used to forecast production. Results are then compared to quantify effects of depletion and help optimize infill well spacing to mitigate parent depletion impact.

### Biography

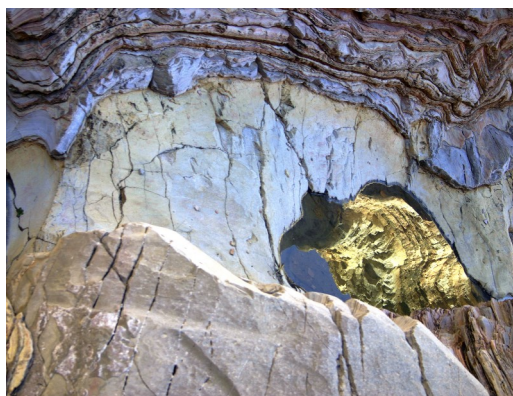


Cyrille Defeu is OneStim Technology Domain Manager for the Permian basin at Schlumberger. Cyrille currently works with the Technology Integration Group in OneStim where he helps optimize production in various basins by leveraging technology, software and data integration. His focus includes maximizing pad production and infill wells optimization in depleted environment. His oil and gas career started in 2011 in North Dakota as field engineer, where he supported operations and field implementation of new stimulation technologies in Williston Basin before joining the Technology Integration Group in 2013 as a Production and Stimulation Engineer. Cyrille earned his B.S. degree in Chemistry from University of Buea, B.S. and M.S. degrees in Petroleum Engineering from Texas Tech University.

“The  
successful warrior is the average man, with laser-like  
focus.”

–Bruce Lee  
(1940-1973)

Martial artist, philosopher, actor, director,





# WTGS

## FALL SYMPOSIUM

September 24 - 26, 2019

### THE PERMIAN "Leading the Pack"

Midland  
Horseshoe  
Arena

2514 Arena Trail  
Midland, Texas



**WTGS 2019 Fall Symposium**

Online Registration is now available at [www.wtgs.org](http://www.wtgs.org)

**September 24-26, 2019**

## PBS-SEPM Publications



### *PBS-SEPM Symposia And Core Workshops on 3 DVDs*



This is your opportunity to have the entire PBS-SEPM publication library (1955 – 2007) at your finger tips. There is a fully searchable Table of Contents—find a topic or author just by typing in the word(s). All publications are in Adobe PDF with all major articles being bookmarked, and all the figures are linked in the text for quick reference. Those areas that are off limits to geologists like the Glass Mountains or Sierra Diablos have been written up in these publications. Numerous out-of-print publications and figures and/or plates not published in the original guidebooks are now available in this library.

This includes all publications, even the special publications and coveted core workshops. Can you imagine the hidden treasures you might find? Here is your chance to uncover them in this special three (3) DVD set. *Buy one or all.*

#### DVD I - Symposiums & Guidebooks (1955-1989)

Member- **\$125.00** plus 8.25% tax and \$5.00 shipping and handling  
Non-Member- **\$150.00** plus 8.25% tax and \$5.00 shipping and handling

#### DVD II - Symposiums & Guidebooks (1990-2007)

Member- **\$125.00** plus 8.25% tax and \$5.00 shipping and handling  
Non-Member- **\$150.00** plus 8.25% tax and \$5.00 shipping and handling

#### DVD III - Core Workshops (82, 83, 85, 98) & Special Publications (A, 88-28, 96-39, 84)

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Non-Member- **\$150.00** plus 8.25% tax and \$5.00 shipping and handling

#### *Entire Set of three DVDs*

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For additional information **contact: PBS-SEPM office** (432) 279-1360 or [info@pbs-sepm.org](mailto:info@pbs-sepm.org).

## PBS-SEPM Executive Board (2019-2020)

<b>President:</b>	Sandra Elliott	Sandra.Elliott@apachecorp.com
<b>President-Elect:</b>	Mike Raines	raines.ma@gmail.com
<b>First Vice President:</b>	Justin Mauck	JMauck@slb.com
<b>Second Vice President:</b>	Daniel Scott	dscott@sm-energy.com
<b>Treasurer:</b>	Cindy Bowden	cbowden@concho.com
<b>Secretary:</b>	Alexis Iwasiw	Alexis.Iwasiw@Cordax.com
<b>Previous President:</b>	Mohamed Zobia	zobaa_m@utpb.edu
<b>YPFT Chairman</b>	Robert Campbell	nebularc@yahoo.com
<b>Luncheon Chairman</b>	OPEN POSITION	
<b>Webmaster</b>	Frank Fullbright	frank.fullbright@pofg.com

*Do you have an idea for an interesting luncheon talk? Have a core workshop you'd like to present? Have some suggestions on how PBS-SEPM can better serve the geologic community? Send us an e-mail to share your idea, your PBS-SEPM Executive Board wants to hear from you!*

## PBS-SEPM Exiting Executive Board (2018-2019) - Thank you for your hard work to keep our organization moving forward.

<b>President:</b>	Mohamed Zobia	zobaa_m@utpb.edu
<b>President-Elect:</b>	Sandra Elliott	Sandra.Elliott@apachecorp.com
<b>First Vice President:</b>	Antony Giles	agiles@midland.edu
<b>Second Vice President:</b>	Brady Giles	Bkolb@sm-energy.com
<b>Treasurer:</b>	Ryan Thompson	Ryan.Thompson@apachecorp.com
<b>Secretary:</b>	Chantel Lines Bryce Swinford	clines@sm-energy.com bswinford@gmail.com
<b>YPFT Chairman</b>	Robert Campbell	nebularc@yahoo.com
<b>Luncheon Chairman</b>	Jason Mintz	Jason.Mintz@apachecorp.com
<b>Webmaster</b>	Frank Fullbright	frank.fullbright@pofg.com



***“The value of a man resides in what he gives and not in what he is capable of receiving.”***

**-Albert Einstein  
(1879-1955)  
Inventor**

## Corporate Sponsorships (2019-2020) - PBS-SEPM is grateful for the generosity of these fine corporate sponsors !



If you are interested in a sponsorship opportunity, please call PBS-SEPM for more details at (432) 279-1360 or e-mail [info@pbs-sepm.org](mailto:info@pbs-sepm.org).



## Sponsorship Information (2019-2020)

This year we plan on zealously pursuing sponsors to offset the cost of the luncheons, workshops, and field trips. We have revamped our sponsorship contribution into three categories and will run the same as the membership year, June 1st to May 31st each year.

**Gold:** \$1500.00: company logo on all PBS-SEPM events, newsletters, the website and new publications

**Silver:** \$1000.00: company logo on all PBS-SEPM events, newsletters, and the website

**Bronze:** \$500.00: company logo on all PBS-SEPM luncheons, newsletters, and the website

We are compiling a list of industry companies, vendors, and local businesses to send out our sponsorship request. We believe encompassing the Midland businesses, such as grocery stores, restaurants, hardware stores, etc, that all play a role in keeping the Permian Basin area up and running should also be considered as potential sponsors for our events.

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## Individual Sponsors of PBS-SEPM (2019-2020)

Individual sponsors are advertised on the PBS-SEPM website and each newsletter. Cost is \$85/year. If you are interested in a sponsorship opportunity, please call PBS-SEPM for more details at (432) 279-1360 or email [info@pbs-sepm.org](mailto:info@pbs-sepm.org).

### ***Your Business Card Could be here!***

Your card will be in every newsletter for one year from August to May, on the PBS-SEPM Website, and on the PowerPoint shown prior to every luncheon.

*"Giving frees us from the familiar territory of our own needs by opening our mind to the unexplained worlds occupied by the needs of others ."*

-Barbara Bush  
(1925-2018)  
First Lady of the United States



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support  
lifts your  
corporate  
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If you are interested in a sponsorship opportunity, please call PBS-SEPM for more details at (432) 279-1360 or e-mail [info@pbs-sepm.org](mailto:info@pbs-sepm.org).

***“The proper aim of giving is to put the recipients in a state where they no longer need our gifts.”***

**-C.S. Lewis  
(1898-1963)  
Novelist, scholar,  
broadcaster**

**PBS-SEPM is the Permian Basin Section of SEPM—the Society for Sedimentary Geology. However, you do not need to be a SEPM member or a geologist to join PBS-SEPM.**

**Our non-profit society relies entirely upon the efforts of dedicated volunteers to serve the geological community—primarily through educational events. These events include monthly luncheon talks, core workshops, annual field trips, and special geological publications. Additionally, we are involved on the college campuses—reaching out to future earth scientists through scholarships, discounted memberships, and offering full-time geology students the ability to participate in professional-grade field trips at little to no cost.**

**If you would like to join PBS-SEPM, you may visit our website ([www.pbs-sepm.org](http://www.pbs-sepm.org)) to learn more about us, download a membership form, and learn how to get involved.**

## **Scholarship and Distinguished Speaker Events (2019-2020)**

Cory Hoffman, the PBS-SEPM's unofficial historian and keeper of the keys, has provided documentation concerning the rules and regulations of the Wendell J. Stewart Scholarship Fund and the Robert Read Distinguished Lecturer events. We want to give Cory a BIG THANK YOU for helping the new board get its footing with all the documentation and protocols.

**Wendell J. Stewart Fund:** so named for the famous sequence stratigrapher, was initially funded by the family, and then later through PBS-SEPM members who have contributed over the years. In the past, the scholarship was established to award high school students intending to pursue a college education in the geoscience field (declared major), and had evolved to include college students actively pursuing a geology degree when there were no other qualified candidates. Funding for this scholarship has waxed and waned over the years with the changes of the petroleum industry and because this scholarship is set up in such a manner that only the interest can be used to distribute funds, most scholarships in the last 30 years have been awarded through the PBS-SEPM main budget and not the scholarship fund.

**Robert Read Distinguished Lecturer Fund:** was founded to honor a bright, young geologist who had been an active member of both PBS-SEPM and WTGS and was tragically killed by a drunk driver. Donations from various members of both societies contributed to a membership donation fund that both encourages our continuing education efforts by helping offset the cost of bringing in a distinguished lecturer, usually in geosciences, but not required. However, since its creation, PBS-SEPM has never used the funds to bring in a lecturer. This year we plan on bringing a speaker in for an event in late fall or early spring. We have approached Lee Krystinik, past president and distinguished lecturer of the AAPG, to ask if he would be interested in being our distinguished lecturer for this season. He was receptive to the idea and we will discuss logistics with Mr. Krystinik to determine when we will be able to bring him to Midland for the presentation.