

# MGS Luncheon Meeting

**Tuesday, February 23<sup>rd</sup>**

**11:45 am – Billings Petroleum Club**

**Please join us for lunch (\$14) and the talk (no charge)**

RSVP – [montanageologicalsociety@gmail.com](mailto:montanageologicalsociety@gmail.com), or 406-259-8790

An email reminder will be sent 3 days prior to the talk

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## **E.P. PRESTON KERR IV**

Geologist II

SM Energy Company

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### ***Unlayering the Shannon Formation***

***Powder River Basin, WY***

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The Shannon formation is an emerging resource play in the Powder River Basin, and has been a targeted interval in the basin since the late 1800's. Historical development includes several prolific conventional fields, such as Teapot Dome and Hartzog Draw. In many cases, the term “resource play” is associated with formations that are inherently rich in TOC or are vertically proximal to a known source rock. The contemporary evolution of horizontal drilling and stimulation practices, however, has re-opened historic basins in areas that contain conventional-like carrier beds that were once deemed too tight to be developed with vertical wells. The Shannon formation in the Powder River Basin is not juxtaposed against an obvious source rock, nor is it inherently rich in TOC; but it does exhibit ubiquitous oil saturation and has proven to yield economic returns through unconventional development. Lithologically, the formation is comprised of thin to thick bedded shallow marine sandstones that are often heavily bioturbated, and encased above and below by marine mudstones and siltstones.. Further, log correlations and historic Shannon production trends indicate that higher flow regime clastics were predominantly deposited in a series of NW-SE orientated sand bodies, which act as stratigraphic sweet spots. This talk will be structured to cover three methodologies that allow for a better description of the Shannon reservoir and associated petroleum system: 1) Described “core facies,” and their implications to depositional environment. 2) The establishment of electric “log facies” and the tie to their respective “core facies.” 3) Stratigraphic implications of associated “log facies” mapping.

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## **Biography**

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Preston Kerr is a geologist at SM Energy Company in Billings, Montana. He received a bachelor's degree in geology from the University of Colorado, and a master's degree in geology from the University of Oklahoma. He is currently pursuing his master's degree in business administration through the University of Montana.

Upon completion of his undergraduate degree, Preston worked as a Geologist and Operations Coordinator for Richardson Operating Company in Denver, Colorado for 1 year before returning to graduate school. After receiving his master's degree, he joined SM Energy's Southern Rockies Asset Team and has been working late Cretaceous siliciclastic reservoirs in the Powder River Basin of Wyoming for the past 2.5 years. Most recently, his focus has been on the reservoir modeling and development planning of the Shannon and Sussex formations.

