Wednesday, September 25, 2019

Petroleum Club of Houston • 1201 Louisiana (Total Building)

Social Hour 11:15 a.m.

Luncheon 11:45 a.m.

Cost: $35 Preregistered members; $40 non-members/walk-ups

To guarantee a seat, pre-register on the HGS website & pre-pay by credit card.
Pre-registration without payment will not be accepted.
Walk-ups may pay at the door if extra seats are available.

If you are an Active or Associate Member who is unemployed and would like to attend this meeting, please call the HGS office for a discounted registration cost. We are also seeking members to volunteer at the registration desk for this and other events.

HGS General Luncheon Meeting

Deborah K. Sacrey
Auburn Energy
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The Application of Multi-Seismic Attribute Classification to Find Hydrocarbons and Estimate Potential Reserves in the Onshore Gulf Coast Basin

Multi-Seismic attribute analysis is an unsupervised learning process in which clusters of data points are identified by similar properties. This form of Machine Learning not only uses numerous seismic attributes, but in doing so, often reveals details in the data not previously identified by the interpreter. Rather than classifying data based on wavelet information, more discrete lithologic patterns can be defined using sample statistics from the attributes. The result of this sample-based statistical analysis is that one can interpret thin-bed resolution well below conventional wavelet tuning. This, in turn, helps with very accurate reservoir prediction when tying into existing production or in the estimation of new reserve potential in exploration plays.

This presentation will show several case histories taken from interpretive work along the onshore Gulf Coast Basin and the results of the neural analysis of multiple seismic attributes to help find hydrocarbons and determine reservoir extents. The key to using multiple seismic attributes and statistically analyzing them using data points from each sample is that one can now "interpret" depositional information on a much finer scale than ever before and even correlate details in the classified volume to log curves. This is something that interpreters have been trying to do for decades. ∎

Biographical Sketch

Deborah Sacrey is a geologist/geophysicist with 43 years of oil and gas exploration experience in the Texas and Louisiana Gulf Coast and Mid-Continent areas of the US. She received her degree in Geology from the University of Oklahoma in 1976 and immediately started working for Gulf Oil in their Oklahoma City offices.

She started her own company, Auburn Energy, in 1990 and built her first geophysical workstation using Kingdom software in 1996. She helped SMT/IHS for 18 years in developing and testing the Kingdom Software. She specializes in 2D and 3D interpretation for clients in the US and internationally. For the past nine years she has been part of a team to study and bring the power of multi-attribute neural analysis of seismic data to the geoscience public, guided by Dr. Tom Smith, founder of SMT. She has become an expert in the use of Paradise software and has over five discoveries for clients using multi-attribute neural analysis.
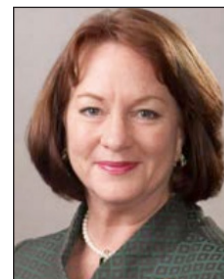
Deborah has been very active in the geological community. She is past national President of SIPES (Society of Independent Professional Earth Scientists), past President of the Division of Professional Affairs of AAPG (American Association of Petroleum Geologists), Past Treasurer of AAPG and Past President of the Houston Geological Society. She is currently the President of the Gulf Coast Association of Geological Societies (GCAGS) and is one of the GCAGS representatives on the AAPG Advisory Council. Deborah is also a DPA Certified Petroleum Geologist #4014 and DPA Certified Petroleum Geophysicist #2. She belongs to AAPG, SIPES, Houston Geological Society, South Texas Geological Society and the Oklahoma City Geological Society (OCGS).