Tuesday, March 18, 2008

Petroleum Club • 800 Bell (downtown)
Social 11:30 a.m., Lunch 11:45 a.m.

Cost: $30 with advance reservations, $35 for walk-ins, space available ($15 for Emeritus and Honorary).

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail reservations@hgs.org, or call the office at 713-463-9476 (include your name, e-mail address, meeting you are attending, phone number and membership ID#).

Wednesday, March 19, 2008

Omni Palace • 12121 WEstheimer, Suite 120, Houston 77077
Social 11:15 a.m., Lunch 11:45 a.m.

Cost: $30 with advance reservations, $35 for walk-ins, space available ($15 for Emeritus and Honorary).

The HGS prefers that you make your reservations on-line through the HGS website at www.hgs.org. If you have no Internet access, you can e-mail reservations@hgs.org, or call the office at 713-463-9476 (include your name, e-mail address, meeting you are attending, phone number and membership ID#).

HGS and GSH Joint Luncheon Meeting

by ***Walt Lynn (speaker)***
and ***Heloise Lynn***
Lynn Inc.

Using Seismic Attributes to Characterize Reservoir Potential, Plumbing and Risk

Over the past few years, we have seen a growing number of seismic attributes applied to reservoir characterization. Although sometimes useful by themselves, attributes used in judicious combinations can greatly enhance the understanding of a hydrocarbon reservoir. In this presentation, we will focus on the combined use of three categories of rock and structural properties and their related seismic attributes that characterize the potential, risks and plumbing of reservoirs. The categories are rock strength, paleo-strain and differential horizontal stress.

whether a flexure is under compression or extension … plays an important role

- We estimate rock strength using elastic inversion products derived from p-impedance and s-impedance.
- Paleo-strain represents the geologic forces that have shaped the basin and is manifested in the structure that we observe today. Aside from the migrated image, various curvature volumes (e.g., most positive or negative curvature) are extremely helpful in identifying major and subtle structural details that can often be easily overlooked.
- Unequal horizontal stresses are widespread in sedimentary layers and can play a major role in the development and production of reservoirs. Differential stresses can be observed only if seismic data are acquired to provide azimuthal dependent quantities such as interval velocity and AVO.

We will illustrate how the combination of azimuthal velocity and seismic curvature can be used to determine whether a flexure is under compression or extension and how that plays an important role in fractured reservoirs. Next, we will illustrate a methodology to high-grade the scores of potential attributes that may be available and then to combine them to predict production-related quantities. ■

Biographical Sketch

Walt Lynn received a bachelor's degree (with high honors) in geology and geophysics from Princeton University in 1973, completed his master's degree in geophysics while studying at the Oceanography Department at Oregon State University in 1975 and obtained his PhD degree in geophysics from Stanford University in 1979. Subsequent to finishing his degrees, Dr. Lynn has spent his career in the seismic service sector of the oil and gas industry—11 years with Western Geophysical and 11 years with Petroleum Geo-services (PGS). He has held geophysical positions within R&D groups, has managed R&D divisions and has run operations for worldwide data processing. He is currently Chief Operating Officer for Lynn Inc., specializing in multi-azimuth, multi-component 3-D seismic acquisition, processing and interpretation. Dr. Lynn is a Past-President of the Society of Exploration Geophysicists and is also a member of GSH, NSG, EAGE, ASEG, Sigma Xi and Phi Kappa Phi.