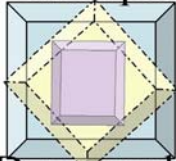


## Lynn Incorporated



N-D co-rendered

## Lynn Incorporated Overview

Lynn Incorporated is a geophysical consulting company specializing in seismic anisotropy and multi-component techniques for detection and characterization of fractured reservoirs. Gas-filled fractures and/or unequal horizontal stresses cause seismic anisotropy (azimuthal anisotropy). The interpretation of properly acquired and processed seismic reflection data, and their support data, for mapping the azimuthal-anisotropic effects is the speciality of Lynn Incorporated. Dr. Heloise Bloxsom Lynn and Dr. Walter Lynn founded the company in 1984 in Houston, Texas.

Lynn Incorporated's clients have included many major and most large independent E&P companies, as well as applied R&D projects performed for the U.S. Dept. of Energy during the mid 1990's. The DOE work were the field-demonstrations of the proportional relationship between the magnitude of shear wave splitting, as measured in S1-S1 and S2-S2 reflection seismic data, and the magnitude of the azimuthal variation in the P-wave AVO signature. Heloise Lynn started work in seismic anisotropy in 1980 inside Amoco, and worked with Dr. Leon Thomsen and Rusty Alford from 1981-1984 on applications of shear wave anisotropy and P-wave anisotropy. Since Heloise Lynn and Walter Lynn both started working in seismic reflection in 1975, we have careers that span 29 years in the industry. Our doctorates were completed at Stanford University, under Prof. Jon Claerbout (WSL, HBL) and Prof. George Thompson (HBL). Walter Lynn served as President of PGS-Tensor (mid to late 1990s) and as President of SEG (Sept. 2001 to Oct. 2002).

### **Consulting Advice on the Acquisition Design for geologic objective of the client, Processing QC/QA, Interpretation, Modeling, and Integration of VSP, borehole, image logs, and Geomechanical modeling through various industry companies**

Lynn Incorporated works to obtain for the client the properly designed 3D full-azimuth full-offset survey, with sufficient fold in at least 2 azimuth sectors to have full imaging power. We QC the processing, and will train in-house staff to interpret azimuthal seismic, or provide the interpretation for the client. The integration of support data (VSP, borehole images, logs, and in-situ stress data) comprise part of our interpretation product. The world wide stress map is accessed and the local map for the client is downloaded and combined with the full-services. Geomechanical modeling to show the high-stress regimes associated with seismically mapped deformation also comprises part of our services, by partnering with an appropriate geomechanical vendor. Industry surveillance of products and services applicable for our purposes is an on-going client benefit.

### **The Co-rendering of many seismic attributes: azimuthal interval velocities and azimuthal AVOaz.**

Lynn Incorporated has developed mapping techniques to combine anisotropic attributes in map form and display co-rendered attributes necessary for anisotropic interpretations. The accompanying powerpoint presents an overview of the co-rendering techniques that are needed for the interpretation of azimuthal PP data.

### **Recent Publications:**

*Where you sit governs what you see*, and subsequent 2 articles. Canadian SEG's The Recorder (available online), July 2003.

Lynn, H.B., Overlap! OTC 2000 and the 9<sup>th</sup> International Workshop on Seismic Anisotropy, The Leading Edge, August 2000, pp 874-876.

April, 2004

Resume of Heloise Lynn and Walter Lynn: attached.