

Day: Friday 28 April
Time: 2:05pm

Session: 10

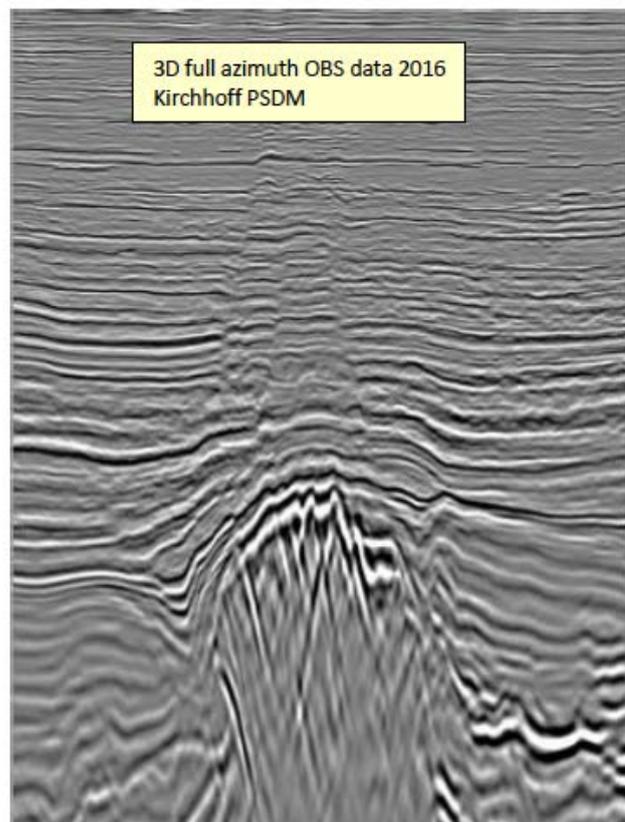
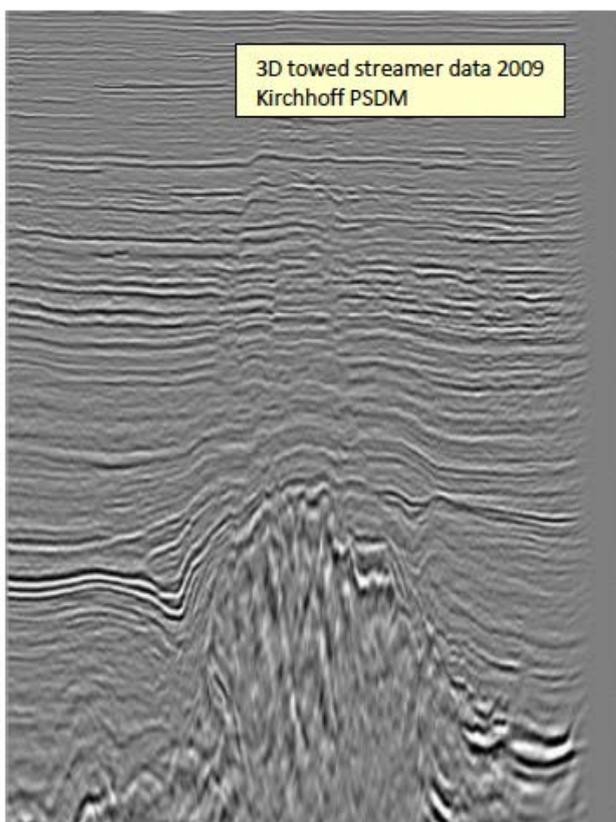
Detecting Basement Reservoir Fractures on Vietnam's First Ocean Bottom Seismic Survey in the Cuu Long Basin

James Keggin^{*1}, Joe Zhou^{2*} & Nguyen Lam Anh³
¹Seabed Solutions, ²CGG, ³

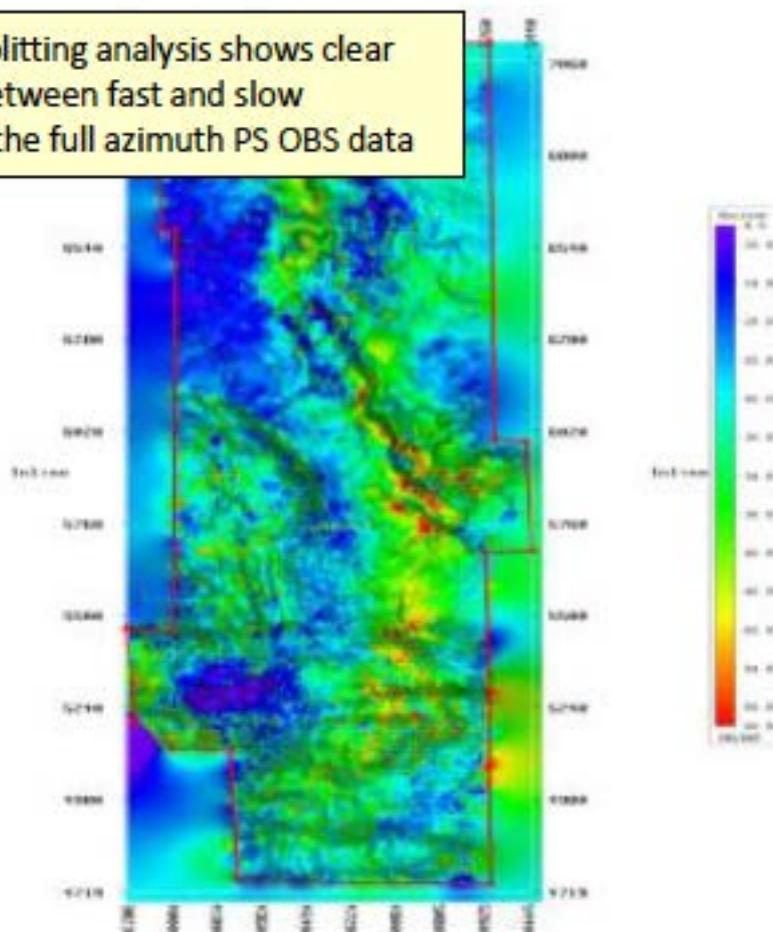
Since the majority of oil production in the Cuu Long Basin comes from fractured basement reservoirs, predicting fracture density and fracture orientation is key to exploration success and well productivity. We will discuss and show how high-fold, full-azimuth Ocean Bottom Seismic 3D4C data can be used to describe these fractures and show how information on fracture density and orientation can be derived from several sources:

Improved data quality (resolution, low frequencies, illumination, imaging and signal to noise) results in improved imaging of fractures and faults which can be directly mapped. Comparisons will be shown between 2016 OBS and existing towed streamer 3D data

Examination of the full azimuth OBS data reveals azimuthal anisotropy on both PP and PS data where effects can be seen in azimuthally varying velocity fields, shear wave splitting and azimuthally varying amplitudes.



Shear wave splitting analysis shows clear time delays between fast and slow directions on the full azimuth PS OBS data



Speaker Biographies

James (Jim) Keggin spent two years with Seismograph Service Ltd then 31 years with BP before joining Seabed Geosolutions in 2016. He has worked in a variety of different seismic acquisition and processing roles in a variety of different countries. Most recently he was Seismic Deliver Manager for BP Asia Pacific in Jakarta and then Seismic Acquisition R&D programme manager based in the UK. Jim is now area geophysicist for SBGS Asia Pacific based in Kuala Lumpur.

Joe Zhou has 15 years industry experience with most of his technical work focused on Depth imaging, Broadband processing and OBC processing technologies. He started his career with Veritas DGC Houston office in 2001 then relocated to Singapore office in 2007. Most recently he was the processing manager for CGG Singapore Scope including Singapore and surrounding satellite centers like Beijing and Jakarta. Joe is now the regional technical manager and the imaging manager for CGG Perth.