



ORAL PRESENTATION

Insights from New Geophysical Data in the Northern South China Sea

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For several years TOTAL has had a significant exploration footprint in the South China Sea, as operator of several exploration blocks in Malaysia: DW-2E in Sarawak and SB-N in Sabah; in Brunei: CA-1; and more recently deep-water offshore China with the Taiyang Block on the northern margin of the South China Sea.

Taiyang PSC is a very large offshore block, almost 25,000km², between Mainland China and Taiwan, operated by TOTAL with its partners CNOOC and CPC. It is a frontier domain with limited seismic data coverage. In the first years of the PSC, TOTAL and partners acquired around 4,400 km of new 2D data and reprocessed some of the existing data.

These new data allow us to better understand the regional context, especially the different crustal domains, as well as possible sub-basin distribution and structural deformation and timing. From west to east, the geological context of the block is radically different: from a classical passive margin with normal faulting affecting a thick continental crust to a hyper-extended continental crust, which is then laterally subducted below the Pliocene to Recent Taiwan-Luzon arc. Consequences are the development of different fault families: ENE-WSW trending north to south dipping normal faulting, then reversing northward in the hyper-extended domain; and N-S trending inverse faults when entering the present-day Taiwan tectonic prism.

Further Tertiary basins are better imaged and can be mapped in a series of different E-W trending grabens in the outboard part of the thinned continental margin.

From these new elements, potential for new exploration plays in this part of the South China Sea will be discussed.

SPEAKER BIOGRAPHY

Patrick has a PhD in Geophysics on the Oman Obduction from Montpellier University in France. He has worked for TOTAL for 20 years with significant experience in SE Asia Exploration, based in Jakarta, Kuala Lumpur and, since 2015, in Singapore. His various roles include: NV & Interpretation manager, Australia / Indonesia Exploration Manager and, since January 2018, Exploration Manager for Malaysia & China.