

Geophysics Paper 2

SUB-BASALT IMAGING OFFSHORE INDIA

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The Deccan Trap consists of multiple episodes of lava flows covering large areas onshore and off the West coast of India overlying a number of potential hydro-carbon plays. Due to the high reflectivity of the top-basalt, and the high absorption of the basalt layer, the seismic signal returning from the sub-basalt events is very low amplitude resulting in poor reservoir imaging, with conventional seismic acquisition.

This paper describes a test survey acquired by WesternGeco, to use over-under seismic acquisition to improve image of the intra-basalt and sub-basalt layers. Over-Under acquisition in which sources and or streamers are towed at different depths. Post acquisition wave-field combination techniques take advantage of the change in ghost response, resulting from the different tow depth, to fill of shift the notch resulting in a higher bandwidth image.