

## **Reducing Risk and Improving Drilling Programs Using 3D-VSP High Resolution Images, Offshore Mexico**

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### **ABSTRACT**

High resolution images and geological model enhancement were needed to navigate new lateral wells while reducing the drilling risk in a highly complex structure reservoir in offshore Mexico. Halliburton acquired a 3-D Vertical Seismic Profile (VSP), whose high-end processing techniques allowed the team to obtain an anisotropic high-resolution 3DVSP image volume in time and depth and to obtain images with a frequency content 50 percent higher than the surface seismic. The VSP depth images provided a better understanding of the geological structure, reducing the risks and making the future drilling program more cost effective.