

## **Landing with a New EM Technology**

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### **Abstract**

Well placement in carbonates presents new challenges to the industry. Firstly, the carbonate environment usually includes unexpected variations in formation structure and heterogeneities along the wellbore. Secondly, the standard technique of well placement with respect to resistivity is not always applicable, since oil-bearing and tight layers may present close responses, for instance. For this reason, measurements that provide other petrophysical information are used extensively to optimize steering within the reservoir pay. A new deep electromagnetic logging while drilling (LWD) tool that provides a mapping of the reservoir in excess of 30m away from the borehole has been successfully run in carbonates reservoir in offshore Brazil.

Results from two applications clearly show the benefits of using this new technology combined with the shallower petrophysical information from the standard LWD technologies and supported by reliable seismic interpretation and understanding of the reservoir to geosteering the well and evaluate the reservoir in real-time.

With access to the reservoir structure in real-time, a more proactive well placement is possible that offers a new way to efficiently geosteer and evaluate carbonates.