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## **GATHERING AND USING AVAILABLE GEOLOGICAL, ENGINEERING AND SEISMIC DATA TO IMAGE AND VERIFY THE TOP AND EDGE OF SALT DOME GEOBODIES**

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### **Abstract**

The general locations of salt domes can be found in public literature. Sources may include aerial photos, historical geological, 2d seismic, magnetic and/or gravity maps, and more recent 3D seismic maps. Historical maps have clearly been found inadequate to define the top and edge of salt deposits. Simply combining the historical maps has also been found inadequate. Geological and engineering data from sub-surface wells need to be assembled and vetted using different methods. There are many sources for gathering such data for historical wells. Some sources contain incomplete information, while others can yield conflicting information that must be resolved before interpretation can begin. Seismic data including 2d, 3D and VSPs must be acquired, properly processed and interpreted. All data must then be fully integrated into one workstation platform (if possible) in order to properly define the top and edge of salt deposits.

This paper will describe a meticulous work flow which can be used to ensure that all available data has been gathered, vetted, properly loaded into the workstation, fully integrated, and interpreted to deliver the best-available mapping of the salt geobody.

How to recognize and overcome pitfalls of data gathering, vetting and loading will be discussed. Examples from salt domes in the US Gulf Coast will be covered.

**Key words:** Salt Dome, US Gulf Coast, Mapping Salt Geobody, Seismic Data, Well Data, Well Control

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