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## **THE USE OF THREE DIMENSIONAL GEOLOGIC MODELING FOR COLLABORATIVE FIELD DEVELOPMENT AND SURVEILLANCE**

Over the last ten years, three dimensional (3D) geologic models have shown great value in many aspects of our business. For the most part they have been useful in the construction of models for simulation, and to facilitate a better understanding of geologic complexities. Over the last couple of years much has been done to improve the integration of seismic and geologic data in these models. The result has improved our successes in drilling operations of complex fields and exploration plays. Most recently geologic models have been used in day to day exploitation decisions such as infill drilling, workover opportunities, and EOR projects.

Unfortunately, most asset teams are not using 3D geologic models for day to day operations. Decisions regarding new drilling opportunities, workovers, and general surveillance are made based on 2D cross sections and maps.

A brief review of the history of 3D modeling, along with a look at some basic principals of geologic reservoir characterization will provide some revealing information. This information can be a useful tool in determining how to get started in developing 3D characterizations that will increase the collaborative functionality of your asset team.