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### **Fault Uncertainty Assessment: Its Impact on a Development Well Planning**

A new well has been planned on a mature reservoir of the foothills of the Pyrenees. The reservoir consists in a simple monocline limited to the north by a normal fault. The quality of the seismic data in this area is poor leading to large structural uncertainties. The main uncertainty to be considered is the position of the fault: it impacts both the well path planning (the well should hit the reservoir on the upper panel) and the reserves. From the geological model with its associated uncertainties a set of realization have been generated. Synthetic seismic data have been computed on each realization and compared to the real data in order to select solely the set of possible models. Finally, the well path has been optimized on this set of realizations of the model.