

Development of a field with complex geometry in thrust belt through horizontal well drilling: El Portón and Chihuido de La Salina fields (Neuquén, Argentina)

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By performing horizontal wells, fields located in thrust belt areas have been allowed to optimise its development.

The design and development of a horizontal well in this environment brings about a high risk, therefore it is necessary to make a total integration of all the existing data; seismic, well register, etc.

By making a number of detailed structural cross sections in the area of interest and with the aid of a Geologic modelling Software in 3D, a tri-dimensional model of the area to be drilled is obtained.

From this , slices in plant of the geologic structure at well navigation height can be obtained, and then the best path to reach the desired target can be designed.

As many times the information used in making the model in 3D belongs to wells located too far away from the area of interest, it is necessary to keep track of the drilling to allow, in case it was necessary, to make adjustments to the structural model and modify the path of the well in real timing, in order to avoid performing a second well.

This work methodology is being used to complete the development, among others , of the El Portón and Chihuido de La Salina Fields (Neuquén, Argentina) which is located in an environment of thrust belt.
