AAPG Annual Convention Salt Lake City, Utah May 11-14, 2003

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Early 3-D Evaluation Using Parallel Volume Interpretation Techniques on the Eastern Venezuelan Basin

Upstream exploration relies on interpretation methods carried out in sequential order, one discipline depending on the other. Traditional workflows go from the determination of the structural and stratigraphic framework to the application of seismic attributes to identify leads and prospects. This often introduces work inefficiencies due to one portion of the team waiting for the finished product of another. To reduce the 3-D interpretation cycle time an alternative workflow using state of the art visualization technologies, integrated with traditional interpretation methods are used. We call the workflow, "Parallel Interpretation", because it involves performing multiple exploration activities simultaneously.

Parallel Interpretation needs to be performed in a visionarium work environment allowing an effective integration of the exploration team to quickly identify direct hydrocarbon indicators (bright spots, flat spots, sags, etc), stratigraphic opportunities, and to map any other complex traps, such as deep imbricate overthrust blocks, while building the structural and stratigraphic framework simultaneously. This workflow has permitted a quick and full evaluation of several large 3-D surveys, increased cross communication and teamwork. It has significantly reduced the interpretation cycle time, and has led to a successful process for efficient and thorough future exploration efforts.