

The Role and Implementation of Play Analysis in Pemex Exploration and Production (PEP) Systematic Business Process (CERPlay)

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Beginning in 2001, PEP totally augmented its risk analysis process, adopting a consistent methodology including portfolio optimization and performance tracking. This effort was originally directed at prospect risk analysis but has since gone far beyond that application.

PEP has recently initiated a systematic assessment of all known geologic plays in Mexico. Two assessments are being conducted for each play: 1) overall chance profile and undiscovered, in-place volumetric potential, and 2) volume that could be captured, and efficiency to explore and produce hydrocarbons in the near-term, 5 year window. This process called Cédula for Evaluation and Registry of Exploration Play Opportunity or CERPlay, was briefly introduced last year at the AAPG in Barcelona, Spain.

Results of the study of overall potential are verified against the generative capacity of known and inferred source rocks in each basin. This is a reality check performed using a stochastic, forward charge and trap model. Results of the near term efficiency study will be used to prioritize exploration activity, geosciences spending, and manpower allocation to maximize PEP's near-term profitability. Results of both studies will be used to select candidate plays for analysis using a fully stochastic kinematic tool (CERPlay 2).

This study complements PEP's ongoing, petroleum system-based studies of the geohistory of each basin, and the move to a portfolio-driven exploration business process based upon consistent and unbiased risk analysis.
