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Subdividing Plays for Play Assessment: How Much is too Much? How Much is too Little?

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SUMMARY

Play assessment attempts to project the untested potential for a family of prospects contained within a play. As part of this process, plays can be subdivided into geologically distinct areas referred to herein as geologic subplays. Geologic subplays provide a mechanism for representing spatial variations in key geologic properties that influence the remaining potential for the play. The use of Geographic Information Systems (GIS) or related mapping software greatly facilitates the definition, management, and analysis of geologic subplays.

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The granularity at which play analyses can be performed varies markedly. At one end of the spectrum the entire play could be represented as a single entity. With this approach, it is not necessary to define relationships among subplays thereby simplifying the analysis. However, spatial variations within the play cannot be represented which limits the capability to address many critical business questions. On the other end of the spectrum, every identified prospect could be represented as a distinct geologic subplay. This approach maximizes the detail available to address critical business questions, but requires complex risk dependency and volume relationships to obtain a robust aggregation of multiple prospects. This begs the question – what is the optimal level of detail? To a large extent, the appropriate level of granularity will vary with the business questions being addressed and the specificity of the available data. Appropriate workflows can be defined to transition from one level of detail to another to address changing business objectives.