

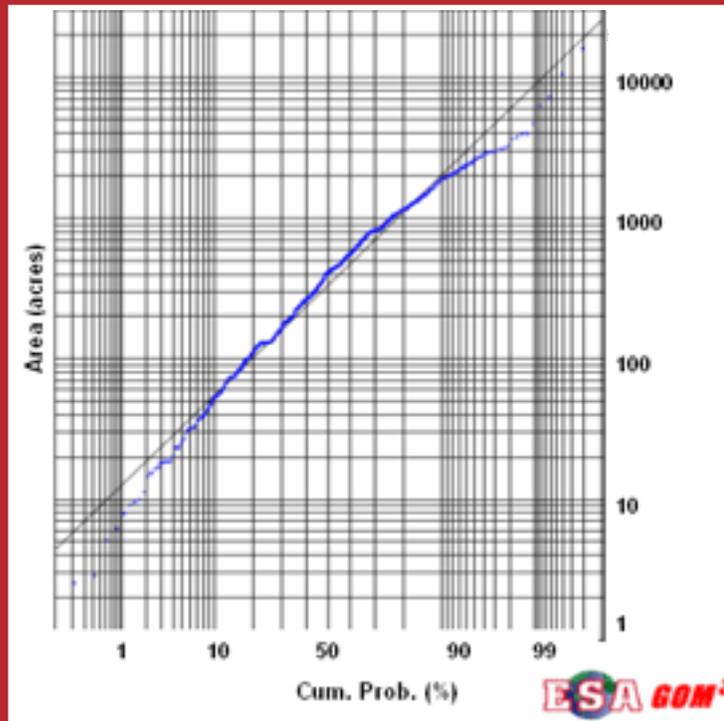
May 2006 Monthly Newsletter*Volumetric Distributions in GOM³*

In developing and evaluating a prospect, critical information on the range of likely thickness, area and related characteristics can be derived from play and series level data on volumetric parameters in GOM³.

Distributions on volumetric parameters can be accessed either in the form of charts or in reports. In either event, the first step is to load the play or series desired. For instance, to load the Upper Miocene 3 Progradational play, pick Map Layers, then Geology from the GOM³ Tool Bar. In the dialog box that opens, click the Plays tab and choose the play from the list. This will load two outlines into the map; one, the boundaries of proved hydrocarbons within that unit; second, MMS' mapping of the extent of the reservoir facies.

By making the theme active and clicking within either outline with the Hot Link Tool, you can choose from two reports. ESA's Play Report provides basic statistics on all of the sands and pools in the play. The other is MMS' Description on the geology and potential of the play from their last Assessment report. Alternatively, click on Charts. This lists about two dozen charts.

There are three chart types. Several show the number and volumes of discoveries over time. A half-dozen charts show the correlations between, for instance, reservoir pressure and depth or sand porosity and depth.



Above: Upper Miocene 1 Progradational 1 Distribution of Sand Area.

Most importantly for volumetric analysis, there are nearly 20 charts that give the cumulative probability distributions of all variables that go into estimation of recoverable oil and gas in a reservoir (see Figure). From these displays, it is easy to read off the 10% and 90% of the distribution on porosity of all sands in the play. The same charts can be generated for sand area, thickness, water saturation, oil and gas recovery factors as

well as the distributions on oil and gas estimated ultimate recovery (EUR). All of the data for play and series reports and charts can also be directly dumped to Excel by clicking on Tables from the GOM³ Tool Bar.

In preparing or evaluating a prospect in the Upper Miocene 3 Progradational play, or where that play was being used as an analog for another play, the play reports and charts in GOM³ give a strong empirical basis for the range of values to expect for all key volumetric variables. Perhaps your prospect is bigger, thicker or more porous, but in that case at least you can place it against the characteristics of what others before you have actually found.

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