

### **Creaming Curves and Discovery Trends of Five Basins from the Gulf of Mexico to Northern South America**

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The ideal discovery path of a basin begins with the most profitable well continuing in a profitable and successful development plan that maintains cost effective discoveries without dry holes. While this may be the ideal discovery path, it is not very realistic. The path, which when plotted as a graph of cumulative reserves versus total number of wildcats, is seen to follow "steps", or more commonly, a "creaming curve." In general, these "steps" can be explained as giant field discoveries. We have taken three giant-producing areas, the Villahermosa Uplift in Mexico, the Maracaibo basin and the Eastern Venezuela basin in Venezuela and looked at the creaming curves for those petroleum systems. We compared these data to creaming curves for limited giant producing areas of the Guajira Peninsula in Colombia and northern offshore of Trinidad and the non-giant producing area of the Guyana-Suriname continental shelf. We have compiled data from public databases, such as the USGS, and the Caribbean Basins, Tectonics and Hydrocarbons project. Using ESRI ArcMap, we have attempted to show discovery trends by way of geologic location and technological advances. This information may be used to predict more potential areas of discovery.