



## Exploration success in the Subandean Trend of South America

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The Subandean Basins of South America extending from Trinidad to Tierra del Fuego have been the object of intensive exploratory activities (Fig. 1). The largest amount of hydrocarbons discovered during the last 30 years in these basins was found in complex structural terrains. A total of 59 Billion Barrels of Oil Equivalent (BBOE) have been discovered in areas affected by compressional tectonics. Of these basins, the largest discoveries are in the Furrrial Trend of Venezuela (24 BBOE), followed by the Chaco area in Bolivia and Argentina (13 BBOE), the Llanos Foothills of Colombia (4.4 BBOE), and the Madre de Dios Basin of Peru (4.2 BBOE).

Even though the Andean trend extends continuously from Tierra del Fuego to northern Venezuela, the discovered accumulations are clustered in very specific areas. These include in a broad sense: a) western margin of the San Jorge, Neuquén and Cuyo basins; b) Chaco Subandean area; c) Madre de Dios trend; d)

Llanos Foothills, e) Upper and Lower Magdalena; f) Barinas Basin; and g) Furrrial trend. Several other areas along the trend are believed to contain all the elements of a working petroleum system, but have not been thoroughly explored so far.

Despite successes, these complex structural terrains are not for the “casual explorer”. Success is difficult, challenging and expensive. The key to discoveries has been “plain old” detailed field work, new play concepts, adequate geologic models, advances in seismic imaging, new drilling technology and above all, persistence.

Repsol YPF has been the most aggressive company working on this trend with present activities extending from Tierra del Fuego to Trinidad. This has resulted in discoveries of over 6 BBOE, with the most recent one, Kinteroni, discovered in Peru in 2008, in the poorly explored Madre de Dios Basin of Peru.



Figure 1. Subandean basins of South America.