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## **Brazilian bid rounds – Block definition strategy**

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Brazil has 29 sedimentary basins comprising a total area of 6,400,000 km<sup>2</sup>; 4,700,000 km<sup>2</sup> located onshore and 1,700,000 km<sup>2</sup> offshore.

In spite of such a huge sedimentary territory, only eight basins are producing areas. Many of the basins remain under-explored or totally unknown.

Total proved reserves amount to around 13 billions barrels of oil and condensate and around 7.8 Tcf of gas. 74% of Brazilian production comes from offshore fields, and 23% of its reserves are located in water over 1000 meters deep. By the end of 2000, Brazilian daily production averaged 1.3 millions barrels of oil and 470 Mcf of gas (72% of the demand), from a total of 8907 production wells.

All this success has been acquired under the monopoly of Petrobras, the Brazilian state-owned company created in 1954.

In order to expand frontiers in oil exploration and associated activities and to attract investments, the Brazilian government and the Nation's Congress had approved on August 6<sup>th</sup> 1997, the Law 9478, known as the "Petroleum Law", which broke the Petrobras state monopoly and opened the sector to private initiative.

Within this new scenario it was necessary to create an entity to regulate this opening and the market's operations. The ANP (National Petroleum Agency) was then created in January 1998 as a Federal Autarchy, functioning within a special independent and self-governing context.

Before the start of the bidding process, a total of 115 blocks (among 133 requested) located in 18 basins (encompassing 7% of the total sedimentary area), were granted to Petrobras as a certification of its rights (art. 33 of the Petroleum Law), under a commitment of three years to relinquish those without exploratory success. This process is known as "Round Zero". Besides these areas, Petrobras kept some blocks in which petroleum fields were already under development or production. The remaining sedimentary area was then analyzed by the ANP team for new block definition and selection for bid rounds.

In the first bid round, accomplished on June 14<sup>th</sup> and 15<sup>th</sup> 1999, a total of 27 blocks were offered in 8 different basins, from onshore to offshore deep water. The main strategy used by ANP consisted in defining big blocks where few data were available and small blocks in mature basins. Those blocks not conceded to Petrobras were part of the analyzed area. A total of 12 blocks was then awarded to 11 companies after a preliminary interest of 58 companies from 14 countries, including Petrobras.

The second bid round took place on June 17<sup>th</sup> 2000, with the offering of 23 blocks in 9 basins. At that time some changes on strategy were introduced, as deferral of one year of commitment for onshore blocks in mature basins, in order to attract small companies. Some deep-water blocks were also offered in basins with new speculative seismic surveys, aiming to attract big petroleum companies. A total of 21 blocks was then awarded for 16 companies, among foreign and domestic small companies.

The third bid round took place on June 19<sup>th</sup> and 20<sup>th</sup> 2001, with the offering of 53 blocks in 12 basins. For this round, ANP team defined and selected more blocks in Brazil's equatorial margin and, as a consequence of more speculative seismic survey data, blocks went deeper offshore. A total of 34 of these blocks was then awarded for 22 companies among foreign and domestic, including new players. (Fig 1 shows the location of blocks of the three bid rounds above).

The fourth bid round is now in progress, with the offering of 55 blocks in 19 basins (Fig 2). As new strategy, ANP included some blocks located in new frontier areas, as the onshore Paleozoic and Proterozoic basins and also some more blocks in the equatorial margin, where new speculative seismic data are available. Additionally, some of the 58 blocks relinquished by Petrobras from "round zero" were re-analyzed and re-shaped for offering.

From the third bid round ahead, ANP established a proper size for what is called an exploratory basic unit, that is a polygon with 3'45" of longitude x 2'30" of latitude, equivalent to an extension of the UTM projection system for larger scales. Any designed block shall be composed of multiples of four of these units, just to facilitate the minimum 50% first relinquishment, as stated in the contract agreement (Fig 3).

Summarizing, the definition and selection of blocks on a series of different basins, mature to new frontier, onshore to offshore, shallow to deep waters, on high or low demand areas, derive basically from their geologic study and amount of available data, taken in consideration for the proper choice. This selection is just a part of a broader process, since some of these basins have lot of data while others have quite a few. Generally, few data on new frontier basins generate big blocks, while mature basins give origin to small ones.

Brazil has experienced a recent speculative seismic survey race offshore, when a total of 22 ships were surveying almost the entire 9,000 km of its coast. As a

consequence, a lot of new data came available for new geologic studies and knowledge of several offshore basins. This huge new data, plus some nominations of areas made by several companies, has been used for block selections.

It is important to emphasize that any selection is rather dependent from technical criteria than geopolitics, but according to the strategic premises of the Mining and Energy Ministry, that is to maintain a mix of opportunities to contemplate small and big companies, Brazilian and foreigners, with diverse budget profiles.

As the attractiveness of blocks is also a function of the dynamic changes of the elements that compose the oil exploration, such as oil price, site of new discoveries, foreign market, social-economic necessities, technical data acquisition, new geologic paradigms, new technologic achievements etc, each bid round has specific characteristics.

Some New Frontier areas will be purpose of special studies to be conducted as a series of projects, contracted to Brazilian universities and to the Brazilian Geologic Survey, aiming to provide ANP with new data for the next bid rounds. Also, from September 2002 ahead, ANP will count with additional relinquishments from the first and following bids, in order to design and select new blocks for future rounds.

ANP is also studying a new design for other rounds in a near future, making them more than one per year and even specifically for some company interest. Changes may also be done in the size of blocks in mature basins, perhaps considering multiples of the basic area units, like in the Gulf of Mexico.

Whatever the changes that will be introduced in the future, ANP is strongly linked to the performance and dynamic market's interests.



