Brazil Beyond the Pre-salt: Onshore Frontier Basins & the Reservoir-to-Wire (R2W)

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Location: Online

Date: Monday, March 15th 2021, 12:00-1:00 pm Mountain Time

ABSTRACT

The Brazilian oil & gas industry is going through a huge revolution due to the pre-salt province's giant discoveries. The high operational costs and technological requirements make this province a game for the big players. In the other hand, the Brazilian oil & gas industry has left barely untouched more than 2,500,000 km² of onshore frontier basins. The Paleozoic Solimões and Parnaiba basins have already proven their potential with current oil and gas production, respectively, whereas the Amazonas and Paraná basins are still waiting to be unleashed. The successful monetization case of the Parnaíba Basin, through the reservoir-to-wire model, is proposed here as a game changer for the onshore frontier basins in Brazil. The model is based on implementing gas-fired power plants as near as possible of the gas fields. The largest private onshore operator in Brazil has successfully implemented this concept in the Parnaíba Basin, and it will soon replicate it in the Amazonas Basin. The lack of onshore infrastructure in the country is a heritage of the successful onshore exploration along the last decades. Luckily, for the reservoir-to-wire business model, the transmission lines network in Brazil is at least ten times more extensive than the existing gas pipelines, making the gas monetization more efficient through energy generation. Several government initiatives are focused on revitalizing Brazil's onshore activities, such as the REATE, Gás-para-crescer, and others. Considering the desired economic growth, energy is a bottleneck. In contrast, the replication of the reservoir-to-wire model to the extensive and promising onshore frontier basins is an elegant alternative to the other expensive natural gas sources.

BIOGRAPHY

Head of Exploration at Eneva and a professor in the FGV MBA Program for Oil & Gas, Frederico Miranda, worked extensively over 15 years in the Paleozoic onshore basins in Brazil, such as Parnaiba, Amazonas, Solimões, and more recently Paraná. Mr. Miranda holds an Msc. in Geology and Stratigraphy from the Federal University of Rio de Janeiro, focused on Parnaiba's unconventional resources. Also, hold specializations in Basin Analysis from the State University of Rio de Janeiro and in Petrophysics by Petrobras Corporate University.