

Old wells – new plays: evaluating previous drilling results to guide current and future exploration from offshore Argentina

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The opening of the South Atlantic generated a number of prolific hydrocarbon-bearing basins in both South America and West Africa, many of which have been extensively exploited. The notable exception to this is the continental shelf of Argentina. Here, with the exception of the Austral and San Jorge Basins, drilling has been limited in the Colorado, Malvinas, Rawson, Salado and San Julian Basins. Despite some encouraging results and all elements of the petroleum system having been proven, exploration of these basins had tailed off by the early 1990s. Now, oil industry interest is once again beginning to focus on this underexplored region, no doubt encouraged by the potential for hydrocarbons plays at a number of different stratigraphic levels. As part of this new wave of exploration we have generated an extensive database of enhanced legacy seismic and well data, supplemented by regional datasets from analogous basins. Examination of this integrated database has led to a more thorough understanding of the key geological risks; reservoir presence and hydrocarbon charge; as well as the commercial results of previous exploration efforts. Critically, this includes placing drilling results in their historical context with respect to the data used to identify prospects and plays, so that the “fairness” of each well test can be properly evaluated. From this database review, and by using analogues from successful wells drilled in the Austral and San Jorge Basins, as well as elsewhere, we have distinguished the key proven petroleum plays from those which require further analysis, ultimately helping to guide future exploration offshore Argentina.