The Kwanza Shelf is witnessing a resurgence in exploration interest with new insights indicating that the potential of this misunderstood hydrocarbon system has been previously underestimated. Historic exploration on the Kwanza Shelf has seen 23 exploration wells drilled, 18 of which were spudded prior to 1993. Only two exploration wells were drilled on 3D data, with the remainder based on 2D data of various 1980s vintages. Analyses of well results demonstrate that the key elements of a petroleum system are present, with successful reservoirs in both the pre- and post-salt. However, historical wells were unlikely to be optimally positioned due to a limited understanding of the 3D structure obtained from vintage 2D seismic data.

In partnership with Agência Nacional de Petróleo, Gás e Biocombustíveis (ANPG), PGS has acquired a new multisensor GeoStreamer survey over the Kwanza Shelf. This new data provides enhanced subsurface illumination through broadband acquisition and the use of modern processing workflows tailored to the unique imaging challenges of shallow water and salt presence. This new broadband 3D multiclient dataset will equip explorers with the tools to identify and unlock the pre- and post-salt plays in this underexplored area of the Angolan offshore.
Unlocking Prospectivity on the Kwanza Shelf

New data shows that the evolution of the Kwanza Shelf demonstrates key elements of a prolific hydrocarbon system, ready for the 2021 licence round.

GEORGINIA KATZAROS AND AVIRL BURRELL, PG, JEAN-APRONSE COLSOUL AND NAIRE JUDITH RICARDO CAHUMBA QUENGUE, ANPG

The Kwanza Shelf has been overlooked in recent exploration cycles due to the industry focused on the offshore deepwater and ultra-deepwater trends. However, with new data from the GeoStreamer 3D survey, unlocking the prospectivity of the shallow water shelf is now possible. New data shows that the evolution of the Kwanza Shelf demonstrates key elements of a prolific hydrocarbon system, ready for the 2021 licence round. The absence of adequate seismic data on the shelf has posed significant challenges to exploration, with the imaging of basement after targeting poorly imaged pre-salt highs. New data from the 2021 licence round opens up the underexplored shelf for the shallow water Kwanza Shelf.

New Data for 2021 Round

The shallow water Kwanza Shelf is an exciting underexplored area that can now be evaluated in detail using new shallow water seismic data. The new data presents multiple untapped opportunities and raises improved understanding of the geology, helping to unlock the prospectivity of the shallow water shelf for the upcoming 2021 licence round.

References:


For More Information: