Hydrocarbon show analysis, well 6-2

The hydrocarbon shows from the 6-2 well were analyzed by Dan Jarvie of Worldwide Geochemistry. The graph below highlights the three hydrocarbon bearing zones, fluid types, and intervals for production testing. The diversity of show types is apparent and can be further referenced in the report by the well logging company. As per prior statements by ReconAfrica, the data and interpretation presented is used to only to prove the presence of one or more petroleum systems at this time.

Mud gas chromatography by Horizon Well Logging shows the potential for oil and wet gas production. These same zones also have high oil saturation indices (OSI) or oil-crossover where laboratory S1(oil) normalized by total organic carbon (TOC) is the amount of oil per unit of TOC. When this ratio exceeds 100 mg oil/g TOC, potential production is indicated (Jarvie and Baker, 1984). It has been used successfully in conventional high porosity, stacked sand pay zones in the Deep Water Gulf of Mexico (Jarvie et al., 2001) and many other conventional plays (e.g., Jarvie et al., 1995). In Namibia as elsewhere, the potential for production depends on reservoir size and quality (e.g., porosity, permeability, pressure, oil quality). The OSI cutoff value is lower in conventional (organic-lean) reservoir rocks as TOC itself is derived only from the carbon in oil. Very light oils (>40°API) in such reservoirs lose upwards of 70% of their oil content prior to be analyzed due to lack of sorption by organic matter, depressurization, evaporation, sample handling and processing (Jarvie, 2020).

Various zones in the 6-2 have oil shows and oil-crossover indicative of generated petroleum, migration, and trapping in a conventional, reservoir quality rock demonstrating all the necessary components and processes of effective petroleum systems (Magoon and Dow, 1994).



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