



Trinidad & Tobago Exploration Potential Unveiled by High Repeat Offshore Satellite Oil Seep History

Author: ¹Clément BLAIZOT

¹ c.blaizot.seeps@gmail.com- presenter, Oil Seep Consultant, Trinidad and Tobago

Theme: HR: Petroleum systems and geochemistry

Key Words: Oil Seeps, exploration, deepwater, frontier

Trinidad & Tobago is located at the meeting point of the Caribbean Islands and South America, right in between Venezuela to the West, Guyana to the East and Barbados to the North. The region is a prolific hydrocarbon discoveries area mainly with the famous onshore oil fields of the Orinoco belt in Venezuela. However, Trinidad & Tobago itself has had its share of success, mainly with Trinidad Basin and Tobago Basin.

We will focus here in the deep-water frontier areas of Trinidad & Tobago, a large sedimentary prism fed by the Orinoco River, mainly in the area of the Northeast Caribbean Deformed Belt. This sweet spot where attractive blocks 23, 25 and 27 have just recently been acquired by BP and Shell expands as far as the edges of world class Guyana Basin to the East. In satellite oil seeps studies, time and recurrence are the key to assess the true potential of an area.

Large amounts of SAR satellite dates enable high coverage of data on every location of a study zone (60 to 100 different dates per each X/Y). Those high coverages allow for spatial proximity and seep repeat and are best suited to offer what we're hunting: concentrated oil seeps in the same place repeating themselves over time. Satellite oil seeps are a very powerful tool to highlight the presence of a generative petroleum system and the escapes of migration plumbing systems both in mature and frontier areas. They deliver two vital pieces of information: are there any seeps and where?

The purpose of this presentation is to discuss the presence of numerous and repetitive offshore oil seeps in Trinidad & Tobago's eastern boundaries with Guyana shaping at least 3 very promising oil seep anomalies. This new seep data could revive the interest in the area which is still largely underexplored compared to nearby basins