The whole picture – oil and gas exploration in the Caribbean

A prosperous roadmap can be put in place for the whole region, says Anthony T. Bryan, but

Very careful management is the key

There is a mad rush for the ‘frontier provinces’ of oil and gas in the Caribbean. Encouraged by the massive discoveries in Guyana since 2015 a number of international oil companies (IOCs) and state companies (NOCs) are rushing to tie up acreage in bid rounds in the expectation that their investments will eventually pay off.

Countries in the Circum-Caribbean region have opened their territorial waters to deepwater exploration for oil and gas. Is the Caribbean poised to become a new, and not mythical El Dorado for oil and gas? Its early 2019 and time for a reality check!

French Guiana is the country that inspired the Caribbean momentum in deepwater exploration. It began following the discovery of the Zaedyus well by UK exploration company Tullow Energy in late 2011. The Zaedyus well substantiated the theory of Tullow geologists that the geological features offshore Ghana (where the huge Jubilee field had been discovered in 2007) are replicated on the opposite side of the Atlantic, in the now named Guyana-Suriname Basin (GSB). In 2011 French Guiana was actually the hottest of the deepwater ‘frontier provinces’ – the P10 (10 per cent probability) reserve estimate of the Zaedyus is 840m barrels of oil equivalent (boe).

In 2013 I reported on the dash for deepwater oil and gas in the countries of the wider Caribbean. (Bryan, 2013). But with the exception of Trinidad and Tobago, which is a mature oil province with 105
Years of production and where 39 deepwater blocs (12,000 feet to 19,000 feet) were marked at that time for exploration and oil plays, there was not much optimism about a deepwater oil and gas future for the Caribbean region. The plunge in oil prices starting in 2014 hurt the finances of oil-producing countries such as Trinidad, but it did not dampen the enthusiasm for regional oil exploration since most IOCs are in the business for the long run.

Why is there this renewed interest in Caribbean oil and gas?

The development of technology to facilitate the exploration and developing of hydrocarbon resources in deep water has resulted in the interest shown in the countries of the Caribbean region. The recent geological surveys demonstrate that the region consists of a series of structural elements, the most prominent being the Venezuelan and Colombian deep sea sub-oceanic depressions, the Nicaraguan Rise, and the Greater and Lesser Antilles bordering the Caribbean Sea in the North and East.

In a 2012 report, the US Geological Survey of 31 priority geological provinces in South America and the Caribbean assessed the undiscovered conventional hydrocarbon potential at 126bn barrels of crude oil and 679trn cubic feet (tcf) of natural gas. In the Guyana-Suriname Basin the crude oil potential was assessed at 13.6bn barrels and natural gas at 21tcf. (USGS, 2012)

Guyana

The impressive hydrocarbon discoveries in Guyana’s deep water since 2015 have validated the findings of the US Geological Survey. The IOCs Exxon and Hess announced more than two billion barrels in new discoveries offshore of Guyana at the end of 2018 increasing their overall recoverable resources in the region to about five billion barrels of oil equivalent. Guyana’s oil production is expected to begin in 2020 at a rate of 120,000 barrels per day (bpd). There are still 17 more prospects to drill, so Guyana’s crude production could reach a potential 750,000 bpd by 2025. It will easily surpass Trinidad’s oil
Production and could move ahead of Venezuela and Mexico if they do not address their current production declines.

But it’s not a smooth path. Guyana faces some practical challenges. The country is new to hydrocarbon resource development and has to continue to develop strategic plans that may include establishing a state energy company with associated legislation, as well as laws for hydrocarbon extraction, fiscal regimes, state participation, operating agreements such as PSAs, and environmental protection statutes among other measures. Available expertise from Trinidad and Tobago, Mexico, Canada, other producer nations, and a number of international agencies are contributing to this transition.

There are other hurdles to overcome. These are mostly above ground issues including: unresolved border and territorial disputes (with Venezuela and Suriname), and management of the potential windfall (mainly the absorptive capacity of a small population faced with potential wealth).

Guyana’s relative period of political stability over the past two decades was recently put in doubt by the defection of a member of the ruling coalition that precipitated the fall of the current government and a call for new elections.

The above ground risks will require studied responses, and in some cases diplomatic resolution. The major threat is the maritime border claim by Venezuela of sovereignty over Guyana’s EEZ. Guyana is pursuing a judicial settlement to the matter at the level of the International Court of Justice. In 2019 the longer-term risk is that political implosion in Venezuela could provoke increased military pressure on Guyana’s border from a desperate political regime.

French Guiana
In French Guiana expectations of a boom have given away to disappointment. After the Zaedyus find in 2011 four other appraisal wells were unsuccessful. A partnership of Shell, Tullow, Northpet and Wessek Exploration has so far failed to discover commercial hydrocarbons in French Guiana’s exploration acreage. It is difficult to predict the results of future activities.

**Suriname**

While there is abundant oil in Guyana’s offshore fields in the GSB, nothing of significance has been found as yet in offshore Suriname. Kosmos Energy has hit two dry holes in a row. Experts say that analyses of prospects offshore Suriname still look favorable. Exploration continues apace with joint venture partners that are looking at prospects in Block 42 that will be tested in 2020. (OilNow, October 2018)

Suriname’s expected windfall may simply be a matter of time and more investment. Over the past 35 years, the country has produced oil from a small number of onshore wells, and in the event of successful offshore oil plays, in its deepwater province of 150,000 square km, it is well prepared.

The regulatory system for oil and gas has been in place for many years, and unlike Guyana, the country has most of the resident skills, and the local negotiating capacity to deal with the IOCs. The state oil company Staatsolie has been in the business of attracting exploration and production (E&P) contracts, offering bids, and negotiating production sharing contracts (PSCs) since 2004. The company is both the regulator and market participant.

**Trinidad and Tobago**

Trinidad and Tobago (T&T) the Caribbean’s major oil, natural gas, and LNG producer had to face the full brunt of the global fall in oil and natural gas prices that began in 2014. Despite the volatility of
Energy prices, increased costs, and tighter environmental standards, the major oil and gas companies in T&T have adopted new technologies for land and offshore exploration, as well as additional investments to keep the industry resilient.

Trinidad is a natural gas economy that services large multiple locally-based world class competitive industries including methanol, ethanol, aluminium, and ammonium sulphate. Gas production is on the rise and expectations are that gas production will stabilise over the period 2020 to 2023 at approximately four billion cubic feet per day based on the level of investment to be undertaken by upstream companies and cross border sharing agreements with Venezuela for the 14tcf of natural gas available to both countries.

But the situation is tenuous. If the Maduro government in Venezuela does not survive the current political impasse, the planned cross-border investments and energy sharing agreements with T&T may be in doubt.

**Other Caribbean countries**

As a consequence of Guyana’s fortunes, major upstream companies are exploring for hydrocarbons in the territorial waters of Barbados, Grenada, Jamaica, The Bahamas and Haiti. Other than Guyana and Barbados, the prospects are mixed or uncertain. But T&T with its experience, technical expertise, capacity and multiple service companies has signed MOUs with the governments of Guyana and Grenada and is negotiating a similar agreement with Barbados.

**The Caribbean’s future**
At present, the deep-water exploration in the Southern Caribbean and the ‘Three Guianas’ (Guyana, French Guiana and Suriname) is not a recipe for hyperbole. Rather it is an opportunity for us to design the roadmaps for regional prosperity.

- First, the potential for unequal distribution of revenue from energy rents is great, and movement toward the ‘resource curse’ is almost certain, unless watchdogs such as the Extractive Industries Transparency Initiative (EITI) are entrenched from the beginning, and proper sovereign wealth (heritage and stabilisation) funds are established promptly.

- Second, this is an opportunity to fund rapid diversification into renewable energy (RE) even though fossil fuels will be present for the foreseeable future.

- Third, Trinidad and Tobago and Guyana should take a leadership role in advancing a regional sustainable energy future that requires a holistic vision of regional energy cooperation. It would integrate our regional energy policy with trade, economics, environment, security, foreign relations and geopolitical considerations, while extending the dialogue with producing and consuming countries alike.

- Finally, leaders and the public should be made aware that energy revenue earned must transcend political cycles and generations. Abundant natural resources will do little to promote economic development without sound economic management, and a willingness to address the political factors that may conflict with sound policy choices.

References


About the contributor

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