

## Cameroon Oil and Gas Industry

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Date of Submission: 01-11-2020

Date of Acceptance: 15-11-2020

**ABSTRACT:** Cameroon is the smallest oil producer in sub-Saharan Africa, having a declining production level. Crude Oil Production in Cameroon averaged 85.27 BBL/D/1K (thousands of barrel per day) from 1993 until 2020, reaching an all-time high of 138 BBL/D/1K in February of 1993 and a record low of 59 BBL/D/1K in August of 2011. It declined by nearly 40 percent over the decade through 1996. However, the pace of the decline has slowed. Private oil companies are responsible for exploration and exploitation, but the government remains a key player in the sector. Cameroon, an oil exporter with a bloated bureaucracy, was still reeling from the 2014-2016 oil price collapse, one of the most significant oil price slumps in modern times. The country had also increased security spending countering Boko Haram incursions in the north since 2014, while battling to quell an armed secessionist struggle in its English-speaking regions since 2017. The economic shock and insecurity were already a burden, but were compounded by necessary increases in humanitarian spending. Then, the coronavirus struck. In five months, following the outbreak of the coronavirus in Cameroon on 6 March, 2020, the government has spent slightly

over 21.9 billion francs CFA (circa \$54.1 million) in its response to the pandemic, according to a report on relief web on 29 July, 2020. This crisis would mean the loss of a projected oil and gas sector innovations. The paper highlights the oil and gas industry of Cameroon.

**KEYWORDS:** Cameroon, Crude oil, Oil and Gas industry

### I. INTRODUCTION

#### Historical background of Cameroon

Cameroon holds 200,000,000 barrels of proven oil reserves as of 2016 till 2020, ranking 55th in the world and accounting for about 0.01% of the world's total oil reserves of 1,650,585,140,000 barrels. Cameroon has proven reserves equivalent to 13.7 times its annual consumption. This means that, without Net Exports, there would be about 14 years of oil left (at current consumption levels and excluding unproven reserves) with a consumption of 40,000 barrels per day (B/d) of oil as of the year 2016. Cameroon ranks 110th in the world for oil consumption.

Table1: Cameroon major Petroleum events

Cameroon major historical dates	Historical events
1947	Start of oil exploration by the French Bureau of oil exploration
1972	first commercial discovery of oil in the basin of the Rio del Rey, Betika field
1974	Creation of the National Fund for Stabilization of Prices of Hydrocarbons (HSPC)-(CSPH)
1976	Creation of the National Company of Refining (SONARA)
1977	Cameroon became an oil producing country, through the production of its first tonne of oil in the basin of the Rio del Rey, Kole field
1979	Creation of the Cameroon Deposits of Oil (SCDP)
1997	Release, for the first time, a field in the basin of Douala / Kribi-Campo (Ebome)

1980	Creation of the NHC(SNH)
2000	Liberalisation of the downstream petroleum sector
2006	The Cameroon embarked on the development of gas resources, through the signature between the State of Cameroon and the company Perenco's first contract for the development and operation of natural gas, and signing a Memorandum of Understanding with the National Company of Equatorial Guinea Gas, for gas export to that country.

## II. DISCUSSION

Three types of crude oil produced and marketed in Cameroon include:

- **Kole**

Medium sweet crude oil available at the FSO Massango(269,000 DWT converted tanker)

results from the production of 30 different offshore oil fields in North Cameroon.

Currently marketed by Perenco via spot cargoes at a rate of 4 cargoes of 950K bbl per year. Located offshore 51 miles west of limbe.

**Table 2: Properties of Kole crude oil**

Country	Assay year	Load point	API	Sulfur (Weight %)	Pourpoint (°C)	Nitrogen (ppm)	Nickel (ppm)	Vanadium (ppm)	Viscosity cst(centi-stoke)
Cameroon	2018	FSO Massongo	28.7	0.398	-12	3.190	15	8	11.56

- **Lokele**

Perenco equity oil currently marketed by SNH. Located offshore 51 miles west of limbe.

**Table 3: Properties of Lokele crude oil**

Country	Assay year	Load point	API	Sulfur (Weight %)	Pourpoint (°C)	Nitrogen (ppm)	Nickel (ppm)	vanadium (ppm)	Viscosity cst(centi-stoke)
Cameroon	2016	FSO Massongo	24.3	0.325	-18	2820	20	3	16.42

- **Ebonne**

Very light sweet crude oil available at the FSO La Lobe. Located offshore 700m, south-West of Kribi city in Cameroon. Currently marketed by SNH.

**Table 4: Properties of Ebonne crude oil**

Country	Assay year	Load point	API	Sulfur (Weight %)	Pourpoint (°C)	Nitrogen (ppm)	Nickel (ppm)	vanadium (ppm)	Viscosity cst(centi-stoke)
Cameroon	2018	Ebome Terminal	53.7	0.038	-60	104	<1	<1	0.80

Major exploratory oil and gas companies in Cameroon include; Addax Cameroun, Perenco, Glencore, Naslan Energy, Haliburton, Schlumberger, Weatherford, Victoria Oil & Gas, Bowleven Plc, Tradexamongst. Bowleven operates three shallow blocks in the EtindePermit area.

Sterling Energy is the operator of high potential deep-water offshore exploration block, owned together with Murphy Oil. Perenco has operated in Cameroon since 1993, as a partner with ExxonMobil and SNH.

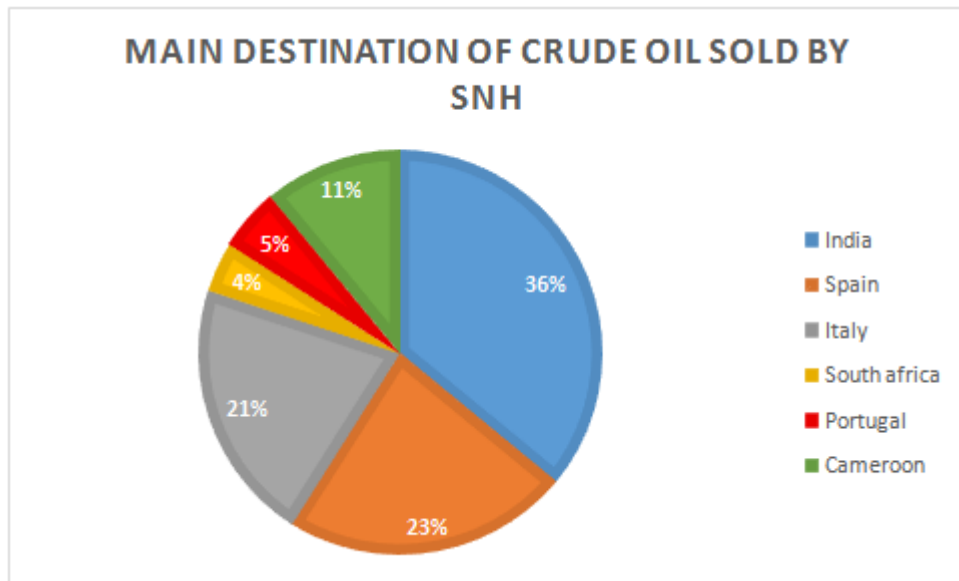


Figure 1: Main destination of crude oil sold by SNH

### Upstream

#### a. Oil Reserves:

Most of Cameroon's known commercial oil reserves are located in the offshore Rio del Rey Basin (89%) with the remaining 11% located in the Douala Basin. Rio del Rey consists of approximately 7000 km<sup>2</sup> offshore. Douala / Kribi-Campo is 19 000km<sup>2</sup>, of which 7000km<sup>2</sup> is onshore.

#### A. The coastal basins (producing):

- Rio Del Rey: about 7 000 km<sup>2</sup>.
- Douala/Kribi-Campo: 19 000 km<sup>2</sup>, of which 7 000 km<sup>2</sup> onshore.

#### B. Intracratonic basins (non-producing):

- Logone Birni: 27 000 km<sup>2</sup>, of which 8 506 km<sup>2</sup> awarded to Chinese company Yan Chang, which won a production sharing contract in April 2009, for oil prospection and exploration on the Zina and Makary blocks.
- Mamfe: about 2 400 km<sup>2</sup>. Helio magnetotelluric and geological studies on the prospectivity of the basin completed.
- Garoua: 7 800 km<sup>2</sup>. 500 km of 2D seismic data collected. Surface geological studies completed.

#### b. Gas Reserves:

Substantial gas reserves have been noted in Cameroon but have not been exploited due to the lack of a local gas market. In 2007 Sonagas (the

National Gas Company of Equatorial Guinea) and SNH (the National Hydrocarbon Corporation of Cameroon) agreed Heads of Agreement relating to export of Cameroon natural gas to Equatorial Guinea. Sonagas claims that preliminary studies have confirmed that Cameroon has sufficient natural gas reserves to be able to supply Equatorial Guinea with a minimum volume of 200mcf of gas per day for 20 years from 2010.

### National Hydrocarbons Corporation (SNH)

SNH sells the share of national crude oil production accruing to the State on the international market, through contracts, as well as its own share as an investor. It also carries out trading activities on behalf of one of its partners, at their request. The selling prices of Cameroonian crude oil grades are set in relation to Dated Brent, which is the reference crude oil of the London market. Depending on market conditions, the prices feature discounts or premiums, which reflect the difference in quality compared to Brent, the cost of transport to target markets, the cyclical demand for this type of crude oil, etc.

Sales revenues are transferred to the Public Treasury after deduction of production costs. These transfers alone (excluding taxes and dividends) amount to about CFAF 4,400 billion for the 2010-2019 decade.

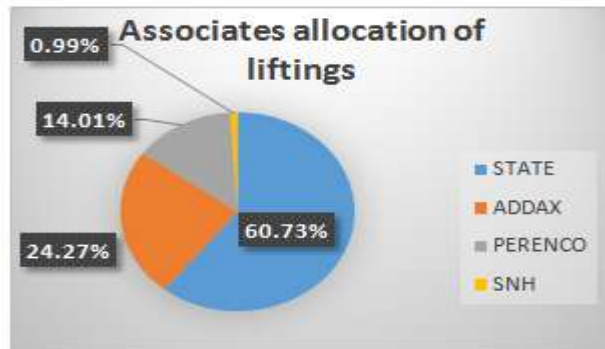


Figure 2 : Associates allocation of liftings

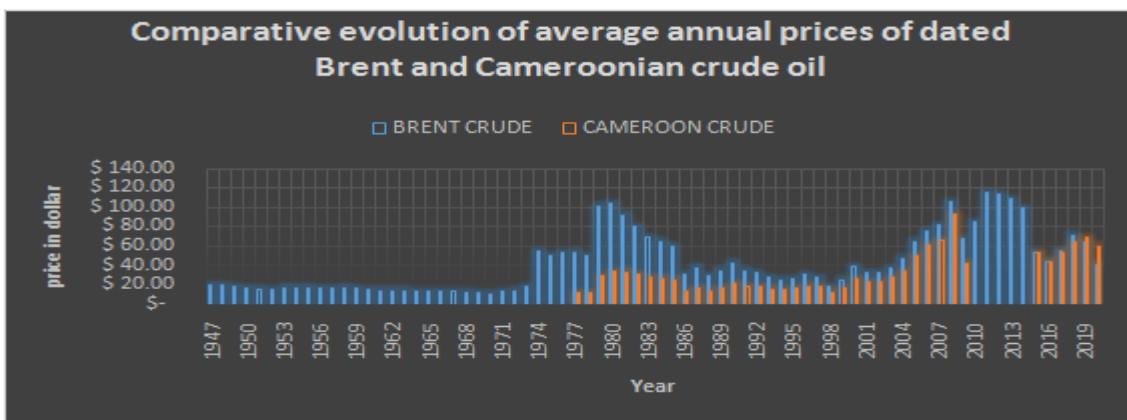


Figure 3: Comparative evolution of average annual prices of dated Brent and Cameroonian crude oil

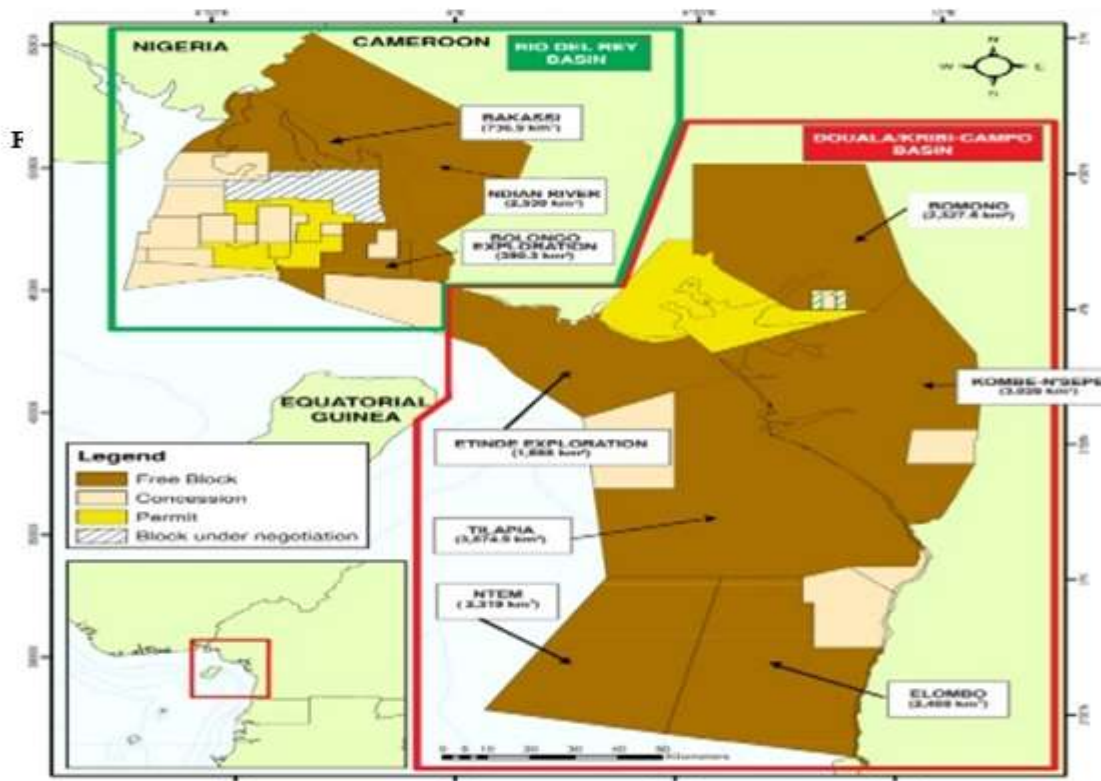


Figure 4: Crude oil producing sedimentary basins in Cameroon

### III. CONCLUSIONS

- In Cameroon, there are two main types of sedimentary basins, which belong to three active African petroleum systems, namely, Niger Delta, West African salt basins and Southern and Central Africa rifts.
- The Chad Cameroon Oil Pipeline transports Doba Crude oil from the Doba oil fields in southern Chad to a floating export facility at Kribi, Cameroon.
- Recent promising subsoil include nine free blocks which are on promotion in the Rio del Rey (RDR) and Douala/Kribi-Campo (DKC) producing basins:
  - Bakassi, Bolongo Exploration and Ndian River (RDR);
  - Etinde Exploration, Elombo, Ntem, Tilapia, Kombe-Nsepe and Bomono(DKC)

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