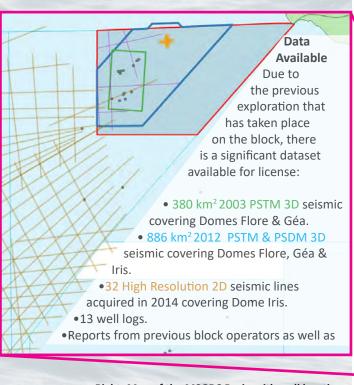


# Shallow License Opportunity



Mauritania

Sénégal

Guinea Bissau

Republic of Guinea

Right: Map of the MSGBC Basin with well locations Above: Enlarge map detailing data availble in AGC Shallow

The Management and Cooperation Agency between Senegal and Guinea-Bissau (AGC) was created on October 14, 1993 with a view to the joint exploitation

of the maritime zone located between the azimuths 268 ° and 220 ° traced from from Cape Roxo (Green lines above).

The AGC Shallow license block is located in the AGC (Agence de Gestion et de Cooperation entre Le Sénégal et la Guinée Bissau) Joint Development Zone, which lies within the Casamance Salt sub-Basin and greater MSGBC Basin. It is a 1,700 km2 nearshore license block with water depths ranging from 25m to 100m at its maximum. The block is available to companies interested in an opportunity to develop a proven oil resource with already identified exploration upside.



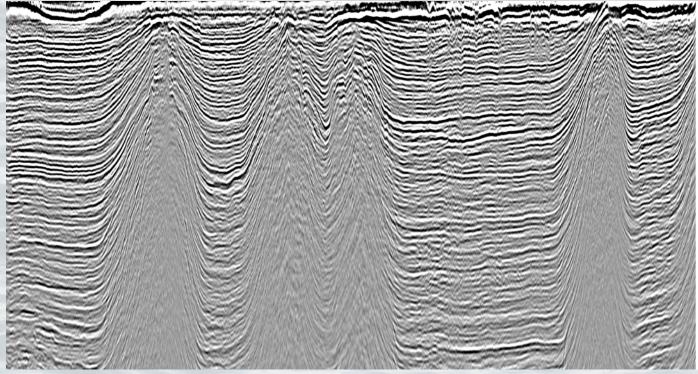
For more information regarding the AGC Joint Development Zone or the AGC Shallow Block application proceedure please contact:

boucar.faye@agc-sngb.org





### Shallow License Opportunity



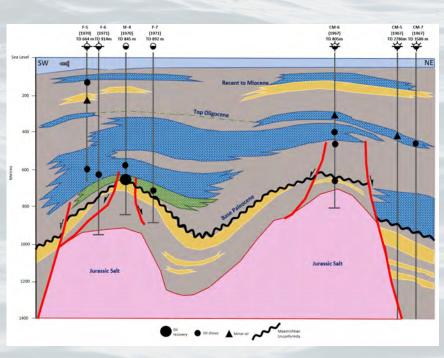
Sample image above from the 2012 3D survey acquired over the AGC Shallow Block Dome Géa (left), Dome Iris -undrilled (right) and Dome Flore (middle)

### **Proven Discoveries**

The block has a long exploration history with the first wells drilled in the 1960s, which targeted the top of two salt structures, Dome Flore and Dome Géa that were identified using 2D seismic data, which has since been overshot with 3D seismic. These exploration wells led to the discovery of significant volumes of heavy oil in Oligocene carbonates as well as lighter oil in deeper Maastrichtian sandstones.

### **Previous Results**

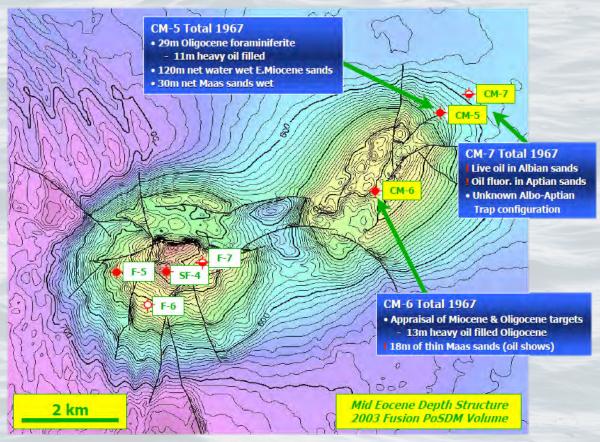
Wells CM-5, CM-6 and CM-7, drilled in 50m water depths, first confirmed an oil discovery on the block in 1967, penetrating Oligocene carbonates at approximately 300m to 400m depths subsea that contained heavy, biodegraded oil on the Dome Flore structure crest. Subsequent wells drilled in 1970 encountered heavy oil in Oligocene carbonates over Dome Géa with a number of appraisal wells confirming the structure closures and a large volume of heavy oil with an API of around 9°



- 11°. P50 estimates indicate oil in place of approximately 1.5 billion barrels between Domes Flore and Géa within the Oligocene carbonates.



### 1967 – drilling of Dome Flore NE



Copetao (Total) and Exxon started with seismic in 1958 which led to a series of wells in 1967. An average 12m oil column found in Oligocene.

CM7 confirms water leg with OWC at 427m SS

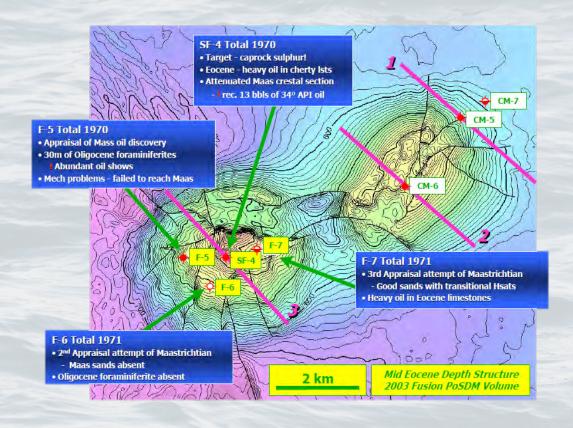
Well Name	Spud Date	Operator	Hydrocarbon Indications	TD (Metres)
CM-5	June 1967	COPETAO	Oil shows	2786
CM-5 Mini	July 1967	COPETAO	Oil shows	474
CM-6	July 1967	COPETAO	Oil shows	804.5
CM-7	August 1967	COPETAO	Oil shows	3586

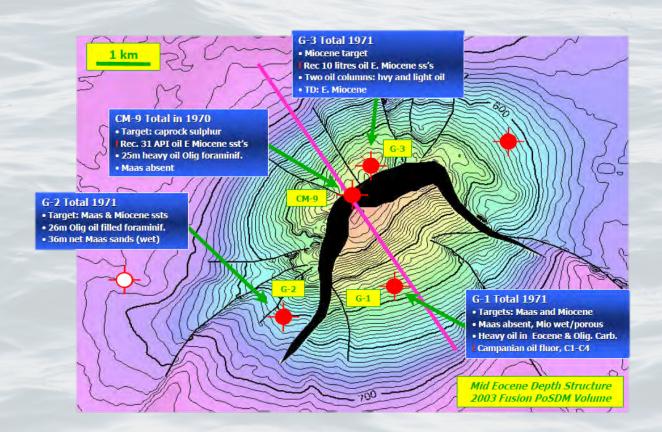
The biodegradation of the Oligocene oil appears limited to the shallow interval, leaving good quality, flowing oils within deeper intervals. Several appraisal wells penetrated deeper intervals and of particular interest, SF-4 (to appraise the Dome Flore field) encountered 34° light oil in the Maastrichtian at around 700m depth on the flanks of the Dome Flore structure that flowed 13 barrels of oil during a 60 minute test. A number of wells drilled in the 1967 and 1970 campaigns encountered light oil within the Maastrichtian on and around Domes Flore and Géa and in addition, Baobab-1, drilled in 1996 encountered light oil in the Maastrichtian of Dome Géa with associated log information showing porosities of 36%.

No wells have been drilled on the block since Baobab-1 in 1996.



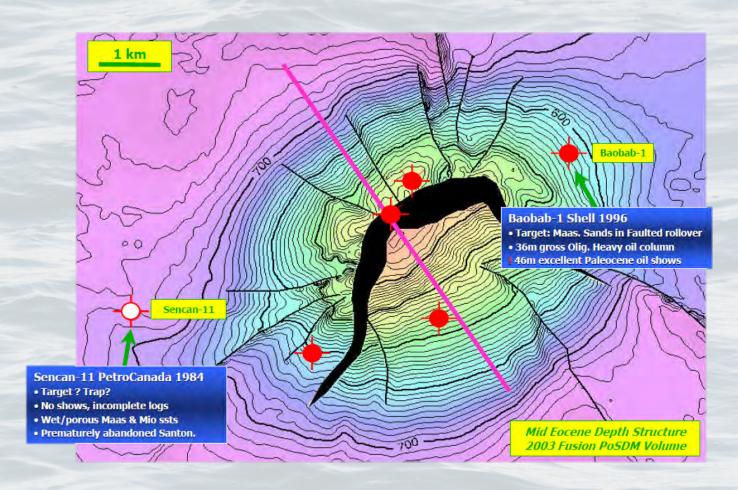
## 1970/71 – drilling of Dome Flore SW







### 80s/90s – drilling of Dome Gea



Well Name	Spud Date	Operator	Hydrocarbon Indications	TD (Metres
Sencan-011	December 1983	PetroCanada	Dry	2468
Baobab-1	January 1996	Casamance Petroleum	Oil shows	1224.4

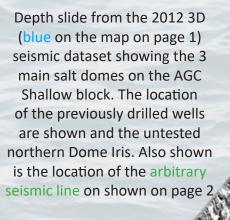
PetroCanada drilled Sencan-11 in 1983 to test the western extremity of the dome and a deep sand prograde package. The well did not reach the deep sand.

Casamance Petroleum shot 3D seismic in 1992 and after Pecten (Shell) farmed in they drilled Baobab-1 in 1996 to test the completely undrilled eastern flank of the Dome – although it was water wet it did have some oil shows in deeper sands.

Since Shell the block has been operated by Fusion, Markmore, Sterling, Oryx and most recently Best Petroleum, though no further wells have been drilled. Oryx acquired a new 3D in 2012 and also acquired 32 high resolution 2D lines (orange on map on page 1) over the undrilled salt dome (named Iris).



# Shallow License Opportunity



Major opportunities exist for the development of these discovered oils in the AGC Shallow license area, with the smaller Maastrichtian light oil opportunity alongside the larger heavy oil production using modern technologies

Companies interested in making a proposal to AGC are encouraged to begin discussions by contacting AGC authorities via Papa Boucar Faye (Hydrocarbons Advisor, AGC) by email — <a href="mailto:boucar.faye@agc-sngb.org">boucar.faye@agc-sngb.org</a>. The AGC Authority require applicants to propose plans for the development of the known discoveries and a future work program to evaluate the upside potential of the block. Companies are encouraged to study the available datasets and to demonstrate their competence in offshore operatorship.

For more information regarding all of the availble seismic data or to book a data review session please contact

Marc Guillon at: marc.guillon@mggs.eu



Official data broker for the AGC Shallow Block



### **Application Process**

- An expression of interest (EOI) to be sent by end of May to the Secretary General of AGC, confirmed to M. Papa Boucar Faye (Hydrocarbon Advisor, AGC)- <u>boucar.faye@agc-sngb.org</u>
- Companies will then receive confirmation from AGC that their EOI has been received by AGC
- Companies will then have to prepare a precise work program detailing how they intend to develop the hydrocarbons on the AGC Shallow block
- To attain access to the seismic data, previous drilling information and reports required to prepare their work program, they are invited to get in touch with MGGS
- Companies will have to submit their presentation of their work program to AGC. AGC may request an online presentation/clarification of this work program for evaluation of this commitment
- AGC will invite the selected company for finalisation of the terms and negotiations of the PSC

For more information or any clarifications please contact AGC Authority through Papa Boucar Faye (Hydrocarbons Advisor, AGC)

boucar.faye@agc-sngb.org

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