AGC and Guinea-Bissau

EXPLORATION AND DATA SERVICES

marine geological and geophysical services

The Opportunity

- Marine Geological and Geophysical Services (MGGS) in partnership with Future Energy Consultants (FEC) are excited to be able to offer a comprehensive exploration solution for the AGC zone and Guinea-Bissau in the MSGBC Basin.
- We have formed a joint venture with the two governmental organisations to be able to offer 2D and 3D seismic data, alongside exploration geoscientists to prepare interpretations, presentations and reports, as well as fast-tracking block awards with favorable terms.

Glossary

MSGBC

- The MSGBC Basin is located in West Africa and is a collection of mini-sub basins in **M**auritania, **S**enegal, The **G**ambia, Guinea-**B**issau and Guinea-**C**onakry.

AGC

- The AGC Zone is the offshore joint development zone between Senegal and Guinea-Bissau (in French: **A**gence de **G**estion et de **C**oopération).

PetroGuin E. P.

- is the national oil company of Guinea-Bissau

Introduction

MGGS have a long history of working in the MSGBC region performing services including shore rep managing supply logistics, seismic and other geophysical data acquisition, EIA and vessel permitting, as well as block negotiations.

Over the decades of working with the local suppliers and interacting with the government Minister and representatives from the national institutions, a strong bond of trust has been established.

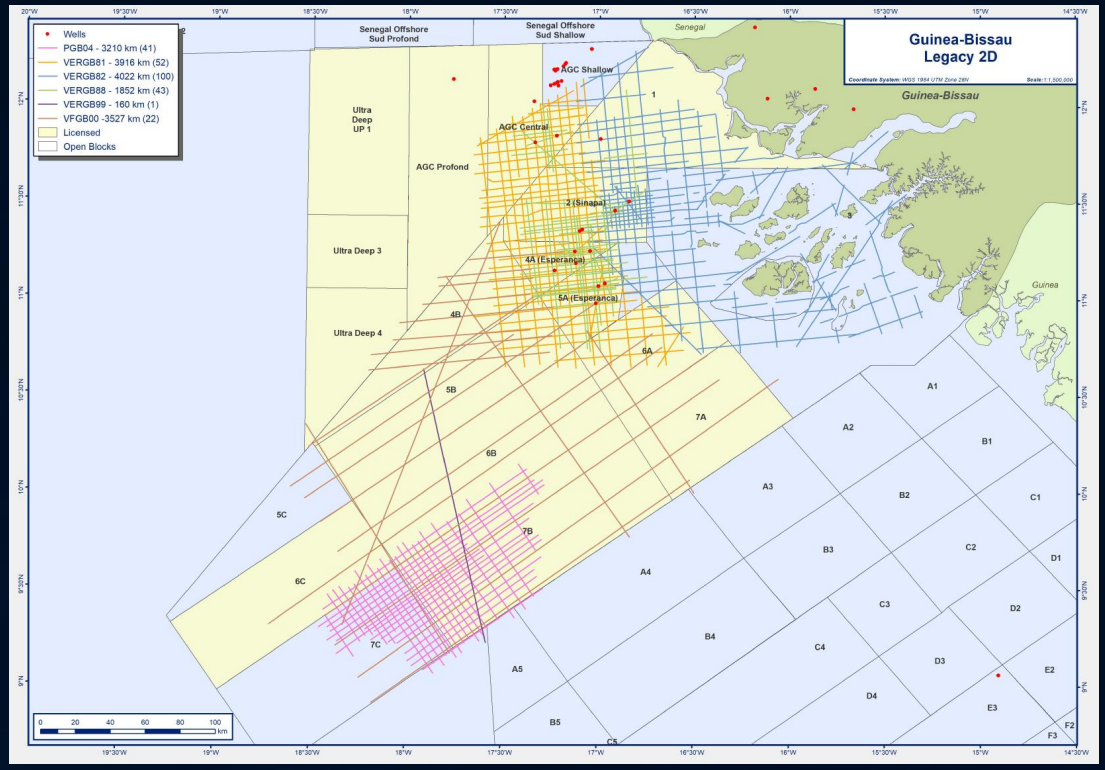
Now with the government agencies seeking to increase investment into their exploration acreage, a joint technical venture has been established empowering the MGGS with the ability to market and promote all necessary services to interested exploration comapnies

Database available

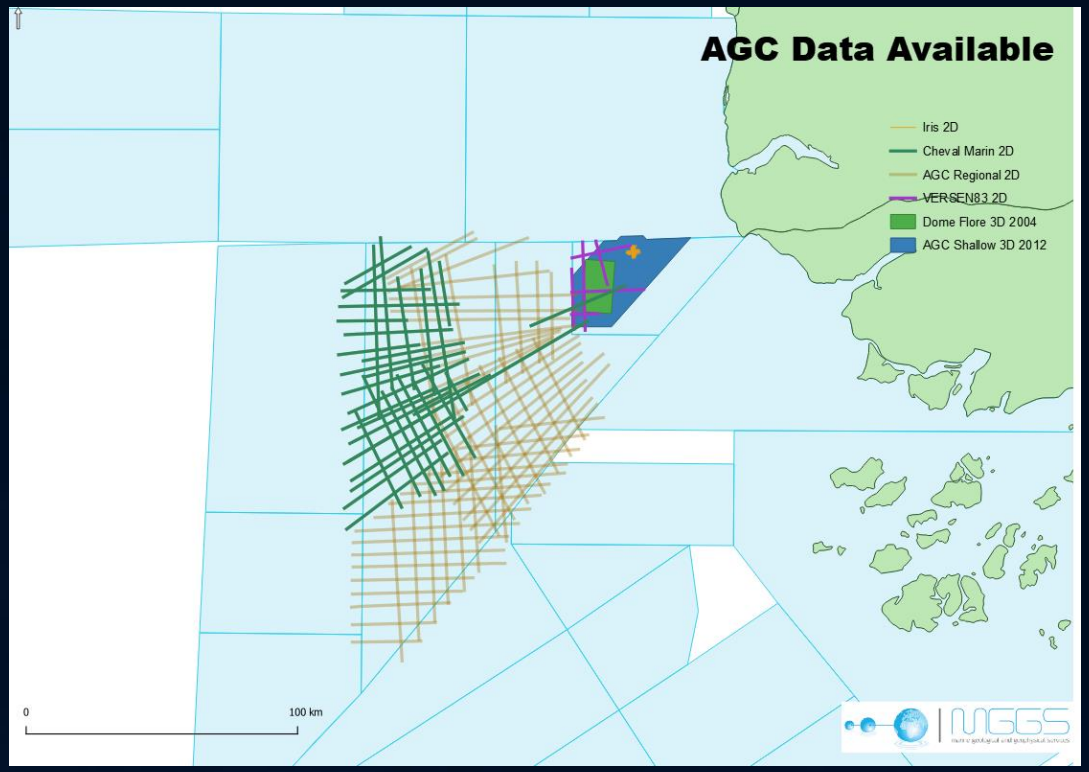
SEISMIC AND WELLS

FUTURE ENERGY CONSULTANTS EST. 2021

Seismic Data Available in Guinea-Bissau



Seismic Data available in AGC



Block Farm-in Opportunity

AGC SHALLOW

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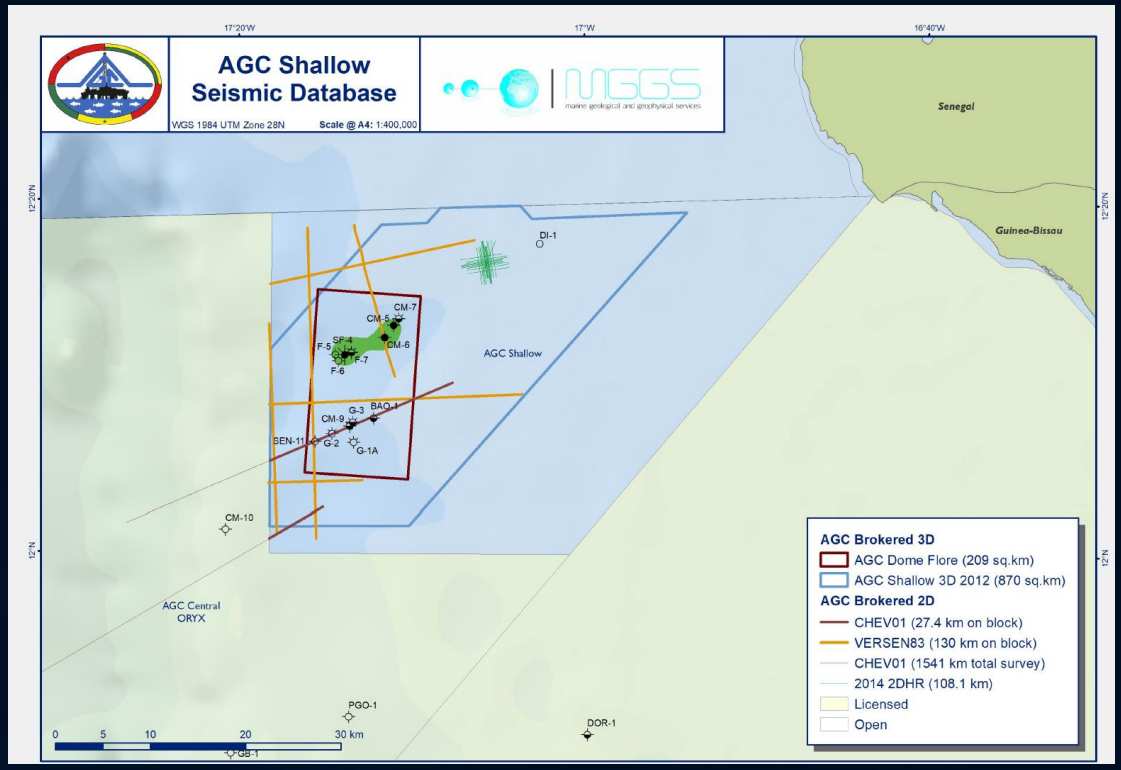
AGC Shallow – Key Facts

- The AGC Shallow license block is located 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.

AGC Shallow Block Data



380 km2 2003 PSTM 3D seismic covering Domes Flore & Géa.

886 km2 2012 PSTM & PSDM 3D seismic covering Domes Flore, Géa & Iris.

32 High Resolution 2D seismic lines acquired in 2014 covering Dome Iris.

13 well logs.

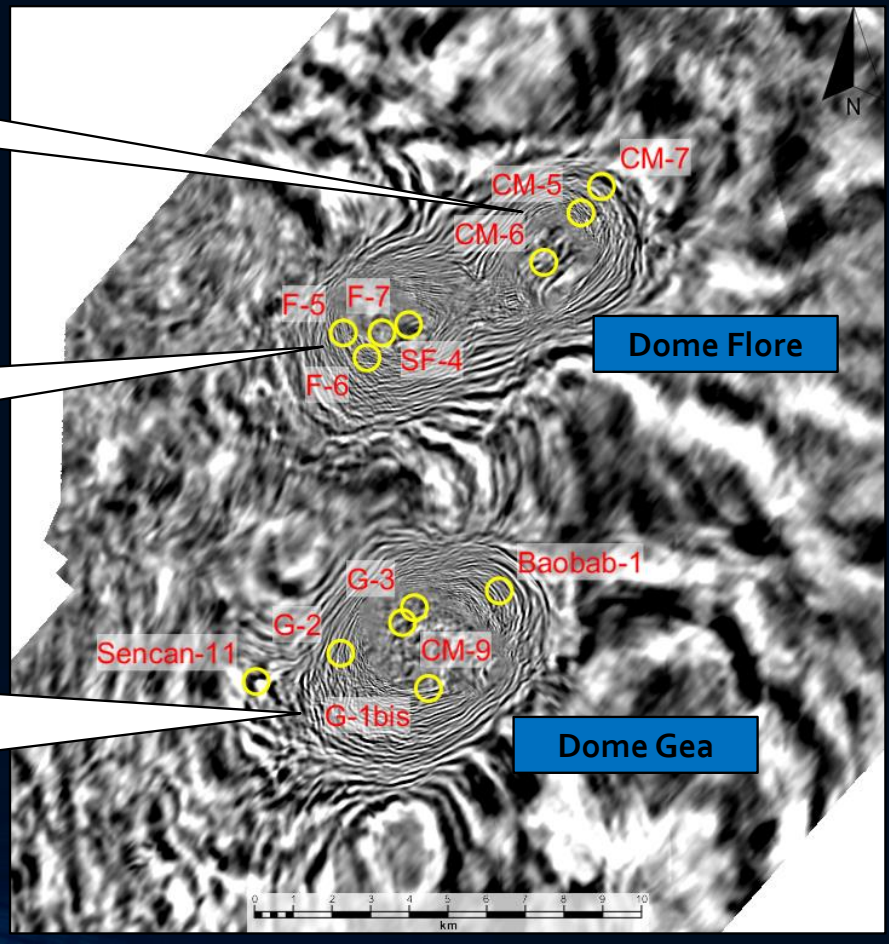
Reports from previous block operators

AGC Shallow Previous Drilling

	Oligocene	Paleocene	Maastrichtian	Other
CM-6	13 m oil column	Trace oil and gas shows	Light oil shows	
CM-5	11 m high viscosity heavy oil column (10-12° API)			
CM-7		Bitumen/fluorescence and gas shows		Oil show in Lower Senonian Light live oil Cenomanian/Albian

	Miocene	Oligocene	Eocene	Paleocene	Maastrichtian
F-5		Oil		Trace oil	
F-6		Oil		Trace oil	
SF-4	Heavy oil	Heavy oil	Heavy oil	Bitumen	Flowed 13 bbl oil (33.6° API) on 60 min test
F-7			Large quantities of bitumen	Trace heavy oil shows	

	Miocene	Oligocene	Paleocene	Maastrichtian
G-2		26 m heavy oil column		
CM-9	• Unit flowed est rate 63-70 bbl light oil (32° API) • Second unit flowed water with slug of heavy oil (10.6° API)	26 m gross oil column		
Baobab-1		36 m gross heavy oil column 10-13° API from core extracts	Light oil shows in 45 m section	Water wet with oil shows



AGC Shallow - Play Concepts

Tertiary reservoirs**: HEAVY OIL**

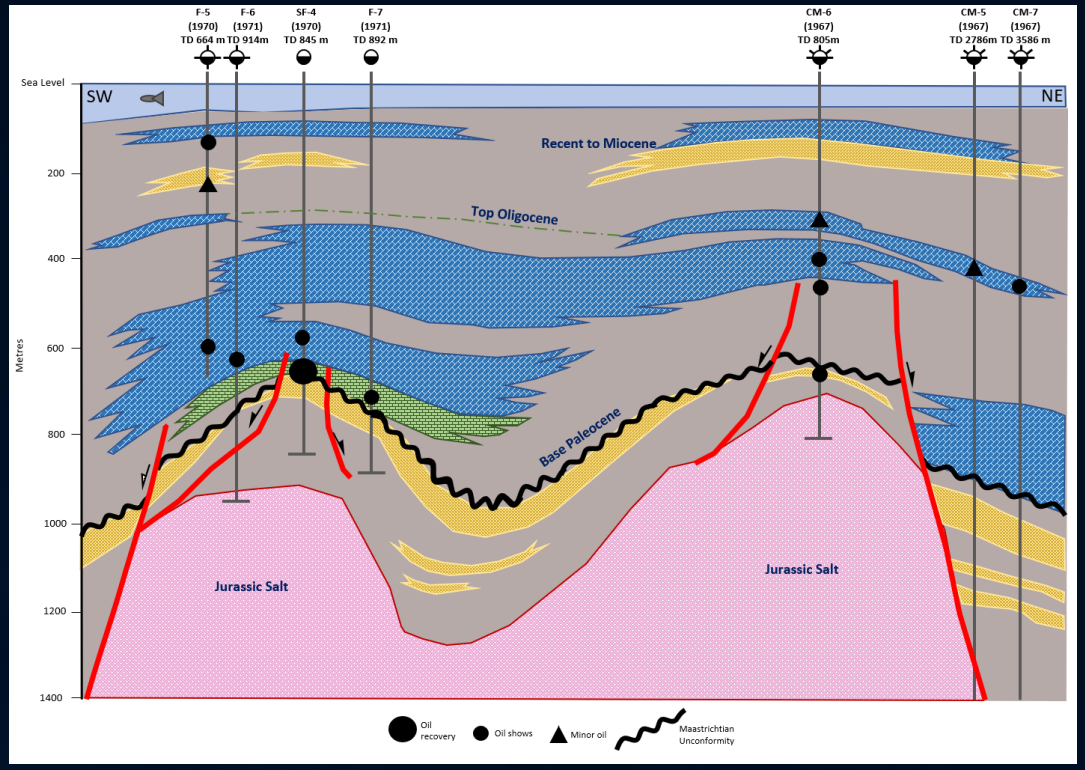
Dome flore discovery : 9-11°API

Dome Gea discovery: 13°API

Maastrichtian & Albian reservoir**: LIGHT OIL**

Baobab-1 well: 34°API

CM-7 well: *light oil*

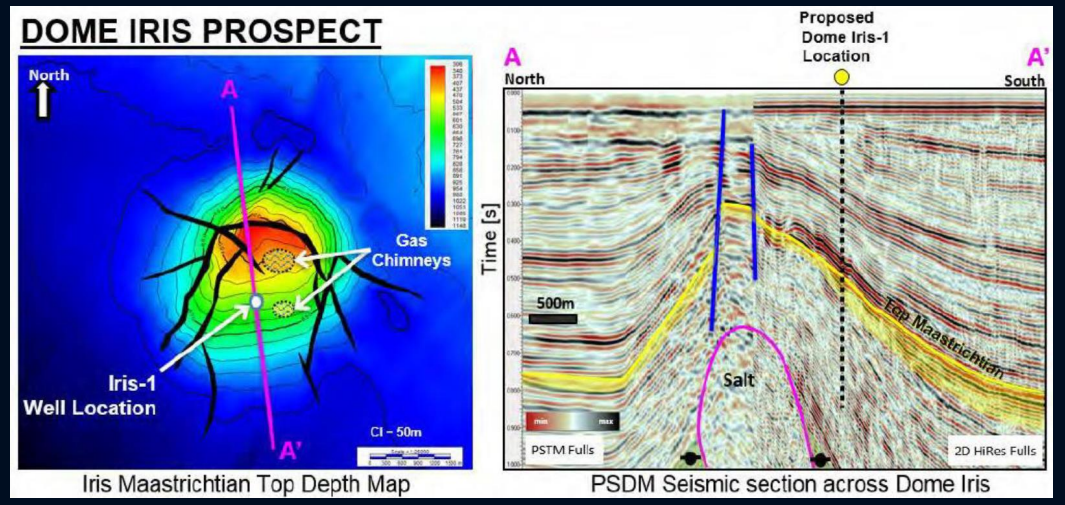


Dome Flore (P50 = 934 mmbbls)

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.

AGC Shallow – Dome Iris

- Dome Iris
  - Primary target : Maastrichtian sands
  - Porosities expected : 25 %
  - Permeabilities expected : 200mD
- Proposed well (by Oryx):
  - Dome Iris 1, TD: 975 m
  - Economic from 15 MMbbls oil recovered
  - Even @ US$ 40/ bbl , 96MMbbls (iris dome)
  - NPV@10%, US$ 300+million,
  - Development plan : 14 producers, 5 injector wells



Iris Maastrichtian Top Depth Map

PSDM Seismic section across Dome Iris

Exploration Services

BLOCK ENTRY SUPPORT

FUTURE ENERGY CONSULTANTS
EST. 2021

Block Entry

- MGGS have the full support of AGC and PetroGuin to facilitate fast-track negotiations enabling awarding of exploration licenses in short-timescales.
- All seismic data are held live allowing for swift data reviews and encourage data licensing ahead of block awards and negotiations.
- MGGS have partnered with FEC to be able to provide technical G&G support to enable fast technical subsurface interpretations to be performed.

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