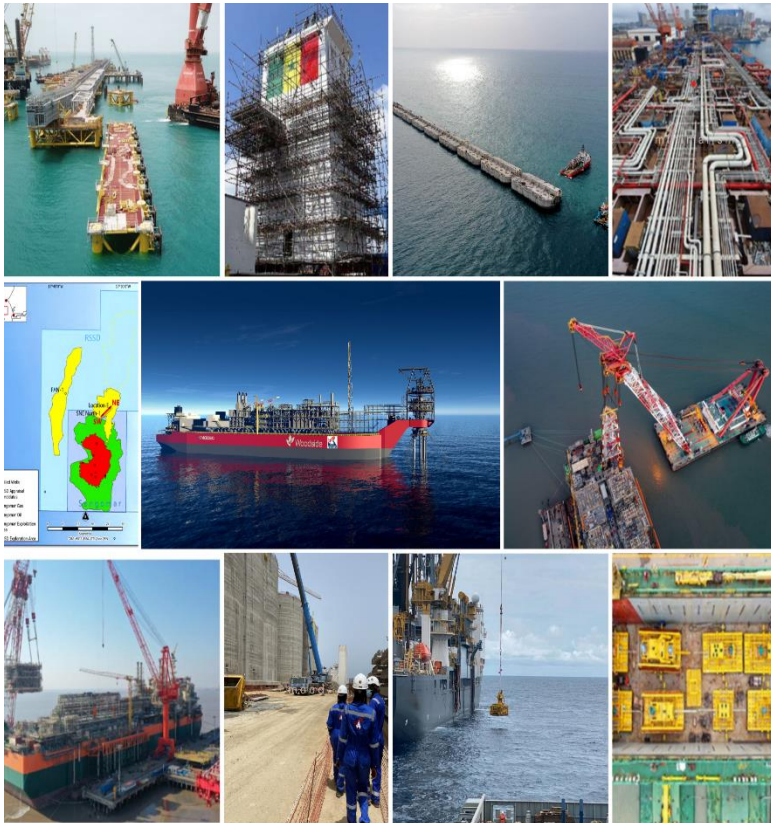




PETROSEN
EXPLORATION & PRODUCTION



PETROSEN Exploration & Production

Senegal Oil & Gas Projects Overview

**Lagos, From 13 to 16
February 2023**

OUTLINE

- 1. Country Overview*
- 2. Petrosen Presentation*
- 3. Exploration History*
- 4. Sangomar Project*
- 5. GTA Project*
- 6. Yakaar-Teranga Project*
- 7. Senegal Opened Blocks*
- 8. Tax and Fiscal Terms*
- 9. Summary and conclusion*

COUNTRY OVERVIEW

Official name

Senegal

Capital

Dakar

Currency

1 Euro = 655.96 FCFA
1 USD ~ 550 FCFA

Official language

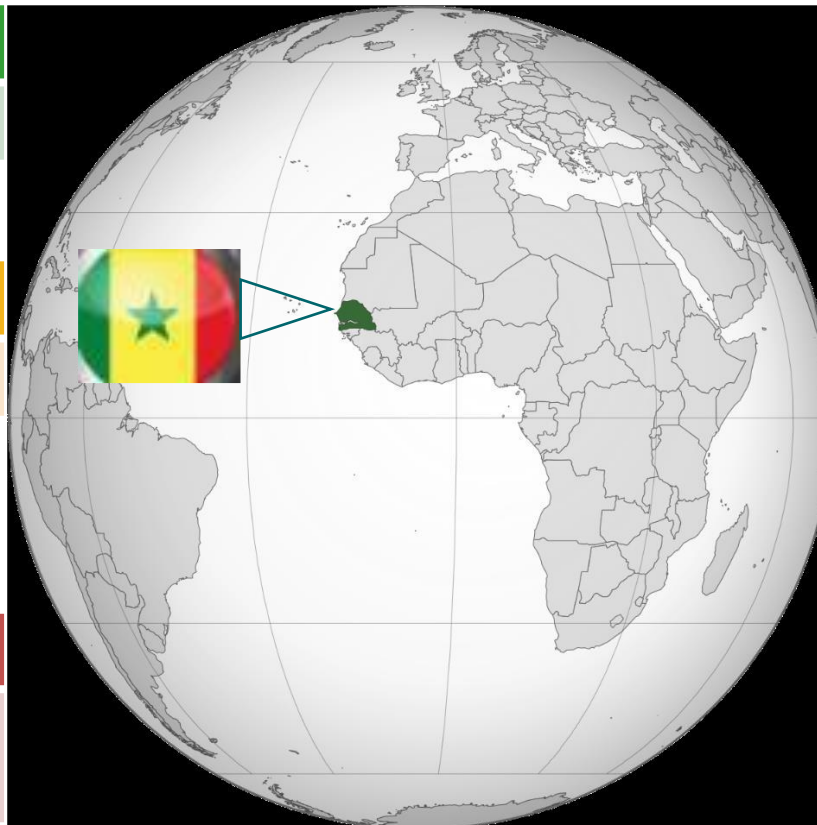
French

Area

196,722 km²

Population

~ 17 millions



Country with high potential in term of development

PETROSEN PRESENTATION



Creation in 1981



From 1994 to 2019



PETROSEN
Since 2020

**PETROSEN
HOLDPING**

PETROSEN E&P

Upstream
Midstream

PETROSEN T&S

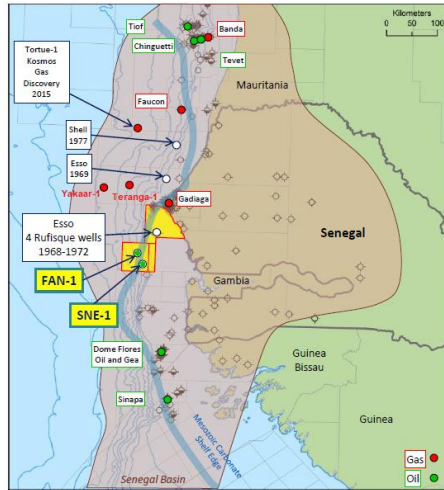
Downteam
Trading

- Contribute to making Senegal self-sufficient in energy resources
- Securing the country's supply of petroleum products and stimulating the free competition.

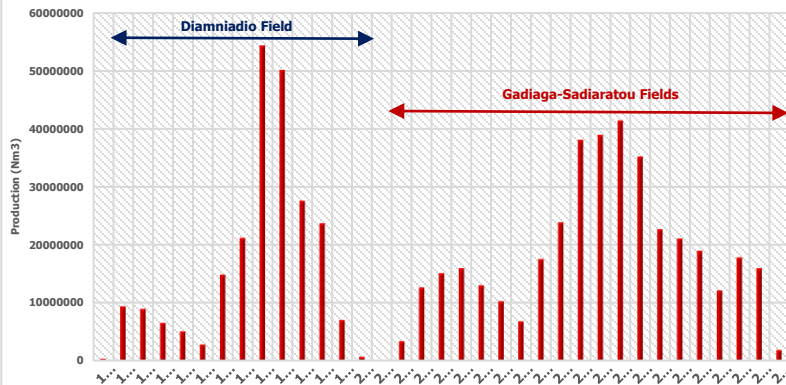
EXPLORATION HISTORY

Seismic & well Data

- ❑ 60 900 km of 2D seismic
- ❑ 27150 km² of 3D seismic
- ❑ Good offshore coverage
- ❑ +180 Exploration Wells (1 well per 1337 km²).
- ❑ It is an under explored basin



GAS PRODUCTION IN DIMANIADIO AND GADIAGA-SADIARATOU FIELDS



Hydrocarbon discoveries, Prospects and Leads

❑ Diamniadio in 1961

Many small oil and gas fields in the Maastrichtian section

❑ Dome Flore & Gea in 1967

About 1 billion barrels of heavy oil in the Oligocene limestone

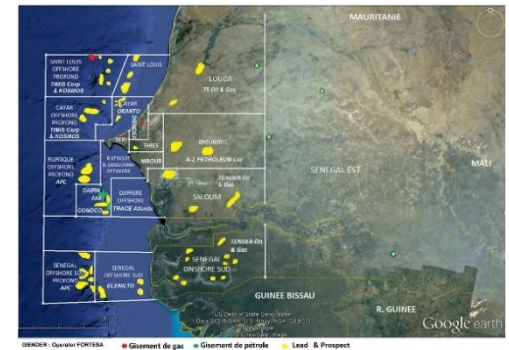
❑ Gadiaga in 1976 / 1997

gas reserves in Campanian and Senonian sandstones.

❑ Sangomar Offshore Profond in 2014, 2017

4 oil & gas discoveries in Cenomanian & Albian Reservoirs

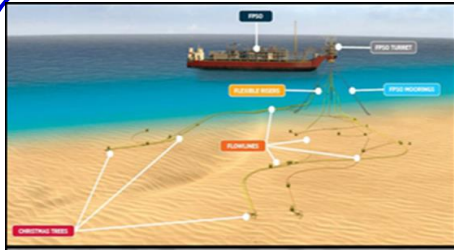
❑ Many prospects and leads to be drilled in the basin



❑ Saint Louis & Cayar offshore Profond in 2015, 2016, 2017

3 great gas discoveries in Cenomanian & Albian Reservoir

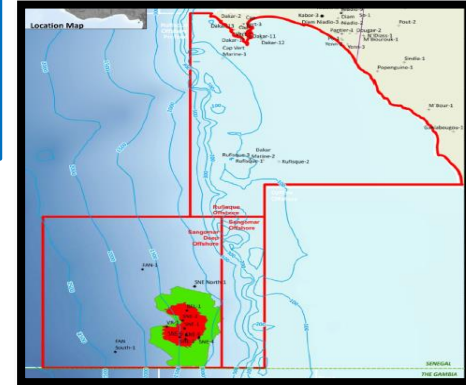
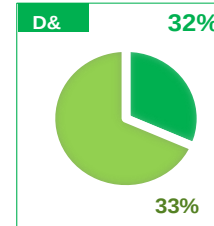
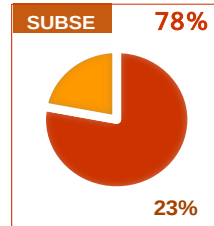
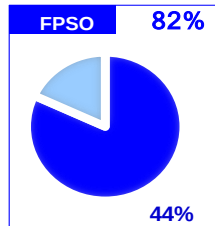
Oil and gas Projects overview – **SANGOMAR PROJECT**



**Development Concept
(Drilling Rig + FPSO)**

- **630MMbbl of oil**
- **4TCF of gas**
- Woodside 82%
- PETROSEN 18%

- Discovery : 2014.
- FID : january 2020
- Execution Rate: **77%**
- First Oil : **Q2-2023**



**Drilling Campaign ongoing
with 02 rigs (23 wells forecasted)**



**Subsea activities: operated by
Seven Vega vessel**

- ❖ Phase 1 : **4,6 Billion USD** expected
 - **Production rate** : 100 000bpd
 - **Domestic** : 60 – 90 Mscf/day
 - **GPL** : 200 – 340 t/day
 - **C5+** : 80 – 150 t/day
 - **SNE North discovery**: 83 mbd with 378 bcf of gas

- ❖ **Future Phases**: Gas production for gas to power

- ❖ Local Content : exemples
 - Forecasted Expenses: **420 Billion USD**, **173 Billion USD** dalready expended in local projects.
 - Rate of local suppliers in the project : **33%**
 - Rate of hires : **50%**



FPSO : Construction site in China

Oil and gas Projects overview – **GTA PROJECT**



Drilling Campaign



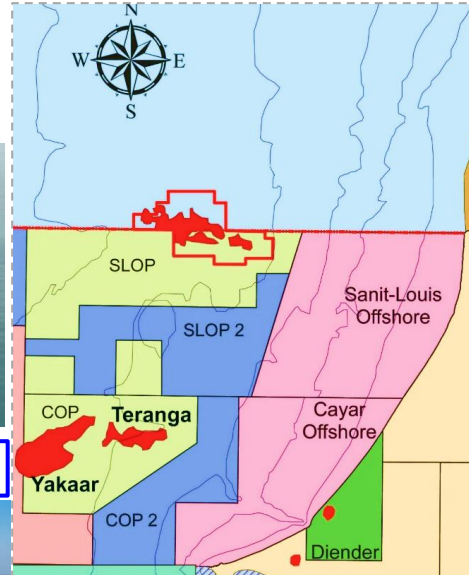
Subsea : Pipelay 30" & 6" MEG



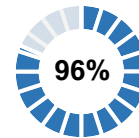
FPSO : Moving to site

- **+15TCF of Gas**
- BP, Kosmos, PETROSEN, SMH

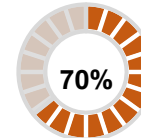
- FID : December 2018
- Execution rate : **87%**
- First Gas : **Q2-2023**



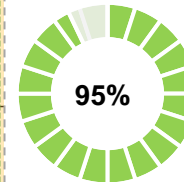
FPSO



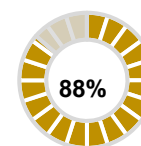
SUBSEA



Hub



FLNG



Hub-terminal : on Finilization



FLNG : Onsite: **Q2- 2023**

Phase I : **4,8 billion** dollars of investment

- **2.5 mtpa of GNL**
- **70 mmscfd of domestic gas (MAU&SEN)**
- 10 mtpa of GNL : global objectif (all phases)**
- Future Phases: start from 2026-2027**

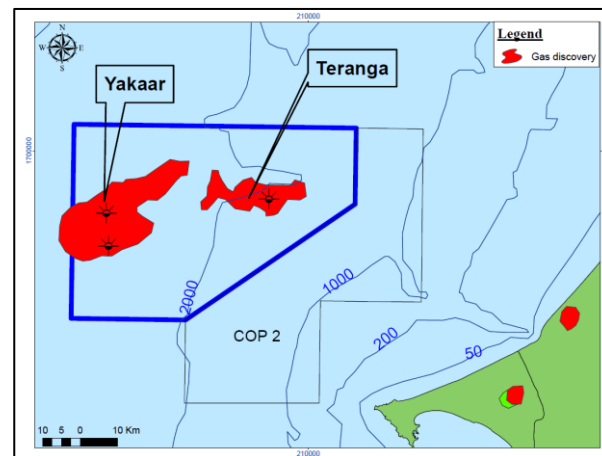
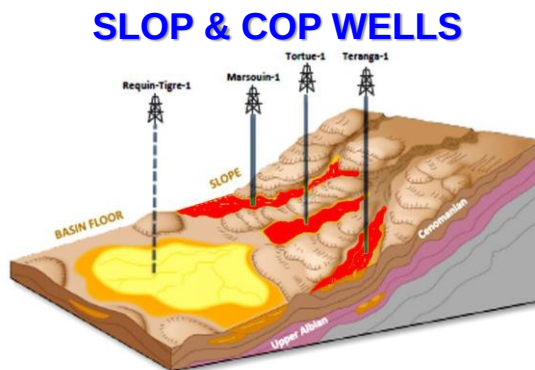
Local Content:

- **+137.800** Beneficiaries of social program
- **+1600** direct & indirect jobs.
- **+277** companies & SME

Oil and gas Projects overview – **YAKAAR-TERANGA PROJECT**

CAYAR OFFSHORE PROFOND

- ❑ Teranga-1 gas well 2016
- ❑ Gas resources in place : 5 Tcf
- ❑ Yakaar-1 gas well 2017
- ❑ Resources in place : 15 Tcf BP
- ❑ **Development wells forecasted for 2024**

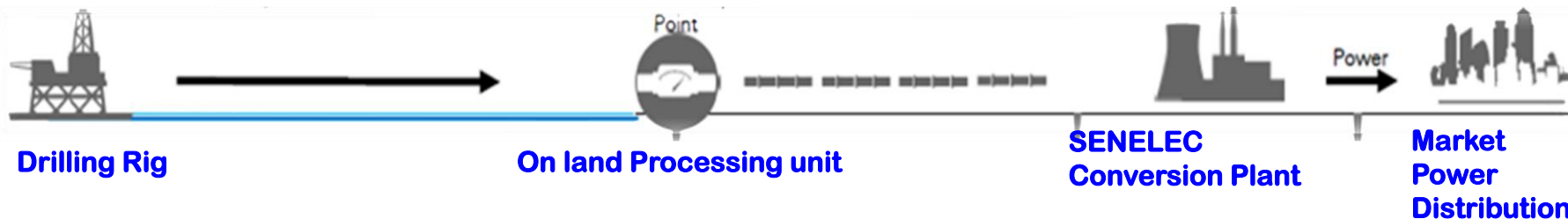
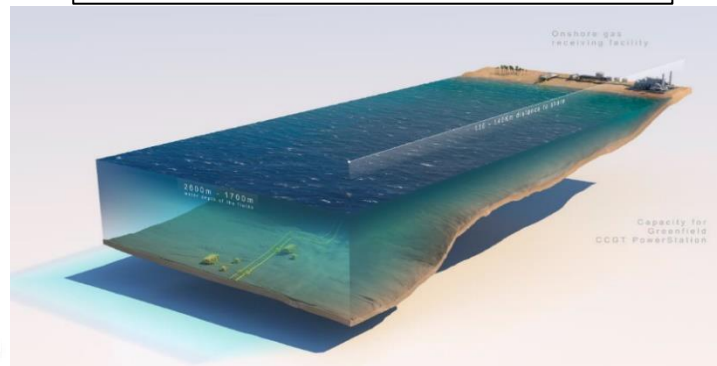


Development Phase I

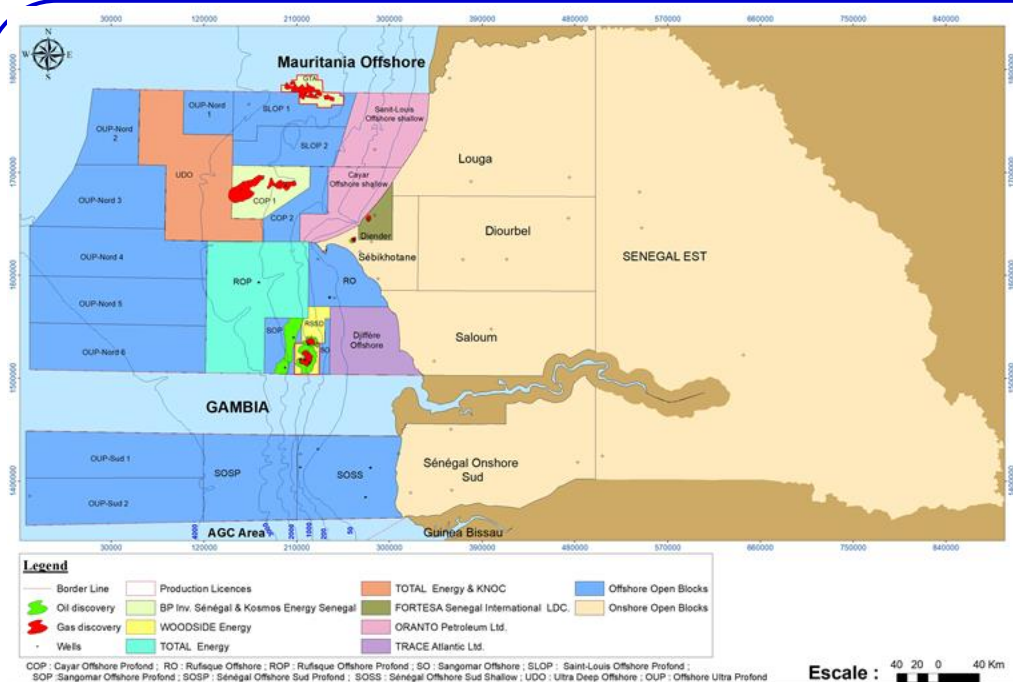
- **Forecasted for 2024** (150 mmscf/d of gas supply equivalent to 1 TCF for 20 years)
- Total Investment : 2-3 Billion USD

PERSPECTIVES

- Power availability at low cost
- Local Content development with Unit Plant on Land
- Local industry Development (Fertilisers & methanol Unit Plant)



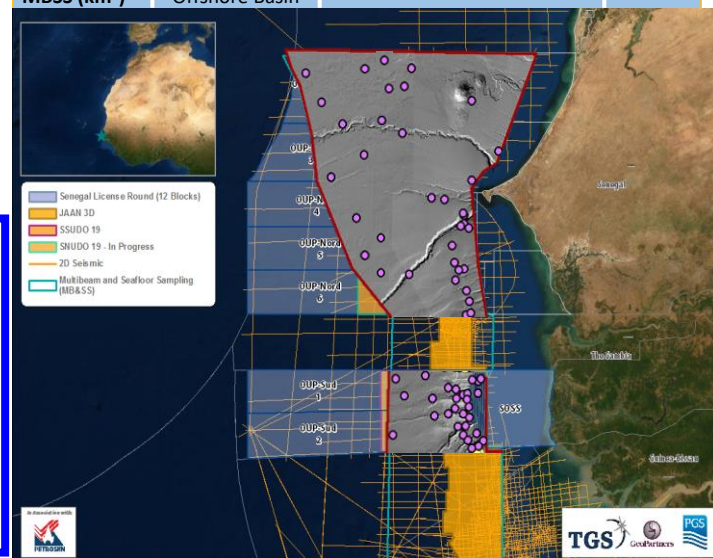
Senegal Opened blocks - *Offshore and Onshore*



❑ The Senegalese onshore basin extends over nearly **60,000 km²** and covers six (06) blocks : **Louga, Diourbel, Sebikhotane, Saloum, Senegal Onshore Sud et Senegal Est**

❑ Two **sub-basins** have been identified in the Senegal East block.

DATA	CAMPAIN	AREA	SIZE
2D seismic (km)	NWAAM 2011/2012	MSGBC	4073
	NWAAM 2017	MSGBC	10306
3D seismic (km ²)	JAAN 2019	SOSS & SOSP	4250
		OUP-Sud1 & OUP-Sud2	4614
		OUP-Nord4, OUP-Nord5 & OUP-Nord6	5191
		OUP-Nord1	1859
MBSS (km ²)	Offshore Basin	Offshore blocks	63000



16 offshore opened blocks with available data

Tax and Fiscal Terms

LAW N° 2019-03 OF FEBRUARY 2019 (NEW PETROLEUM CODE)

Contracting Model: PRODUCTION SHARING CONTRACT (PSC)

PETROSEN'S PARTICIPATION

EXPLORATION PERIOD

- *Initial Period: 4 Years*
- *1st Renewal Period: 3 Years*
- *2nd Period Period: 3 Years*

- *Exploration Phases: Carried Interest of 10%*
- *After Commercial Discovery: Working Interest Up to 20%*

EXPLOITATION PERIOD

- *Initial Period: 20 Years*
- *Extension Period: 10 Years*

FISCAL REGIME

- *Thirty per cent (30%) Income Tax applied on Net Profit*

Oil and Gas Projects overview - *Summary and conclusion*

WHY INVEST IN SENEGAL

