



# CORPORATE PRESENTATION March, 2018









# Panoro Energy

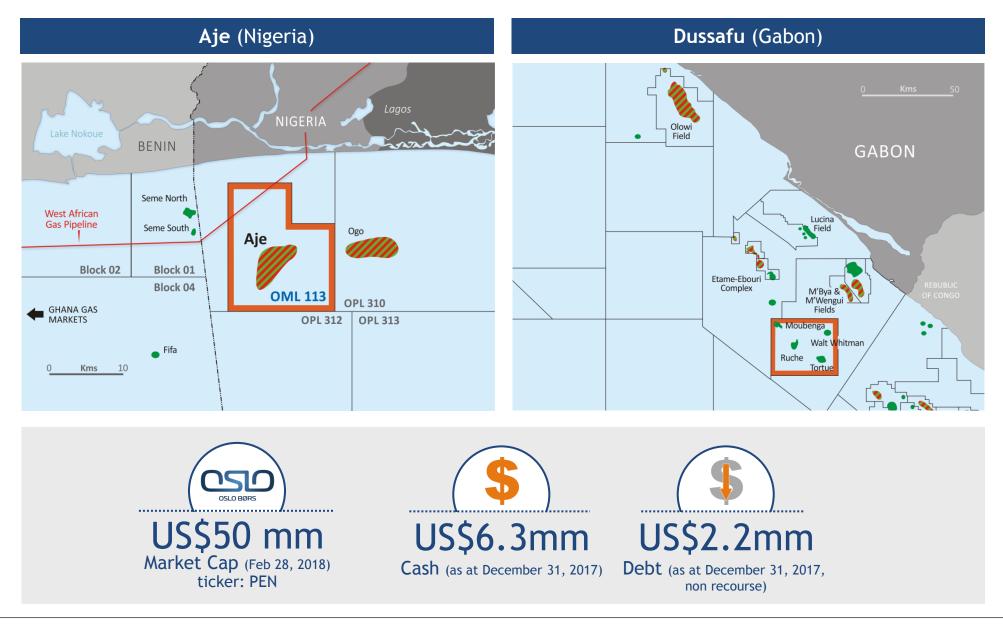
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# PANORO OVERVIEW

#### TWO CORE ASSETS IN WEST AFRICA WITH PRODUCTION, DISCOVERED RESOURCES & SIGNIFICANT EXPLORATION UPSIDE



# PANORO TEAM

#### **EXECUTIVE MANAGEMENT TEAM**



#### **BOARD OF DIRECTORS**



# Corporate Presentation DUSSAFU Gabon



Panoro Energy --

# DUSSAFU MARIN (GABON)

#### LARGE DEVELOPMENT BLOCK WITH MULTIPLE DISCOVERIES AND EXPLORATION PROSPECTS

PROJECT OWNERSHIP POST BWE TRANSACTIONS				
Operator	BW Energy Gabon 91.66% Subsidiary of BW Offshore			
Panoro Working Interest	8.33%			
Other Partners	Back-in right for 10% held by Affiliate of Tullow Oil; past costs payable if elected			
Gabon Oil Company	10.00% (to be finalised)			

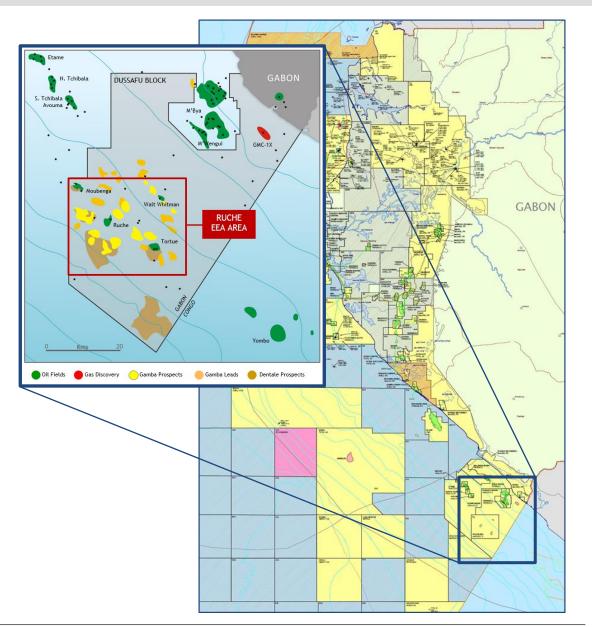
OWNERCHUR ROOT RUNE TRANCACTION

#### LICENSE

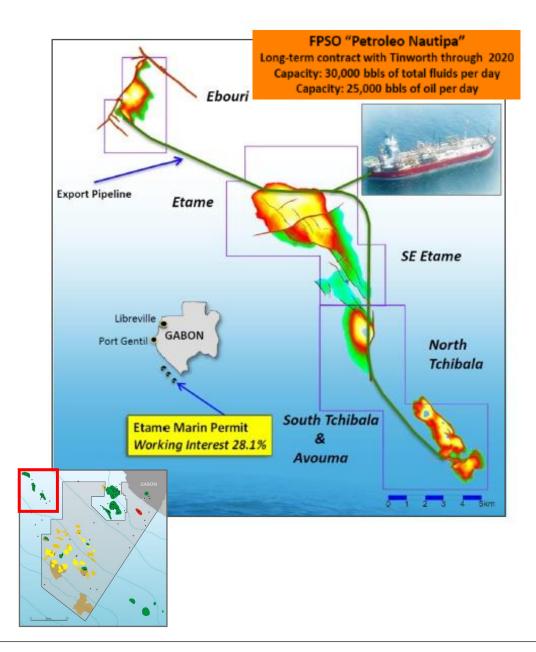
- Four pre-salt oil discoveries with upside/appraisal potential
- 850 km2 exclusive exploitation area (EEA), valid for 20 years
- Panoro's oil discoveries in Ruche (2011) and Tortue (2013) were step change in the success rate of identifying oil-bearing structures
- Panoro 2014 3D seismic campaign over entire EEA
- Updated FDP agreed with Gabon

#### CURRENT ACTIVITY

- Phase 1 Tortue development underway
- Drilling commenced late January
- First oil scheduled for 2H 2018
- Phase 1 consists of 2 development wells plus 1 appraisal sidetrack

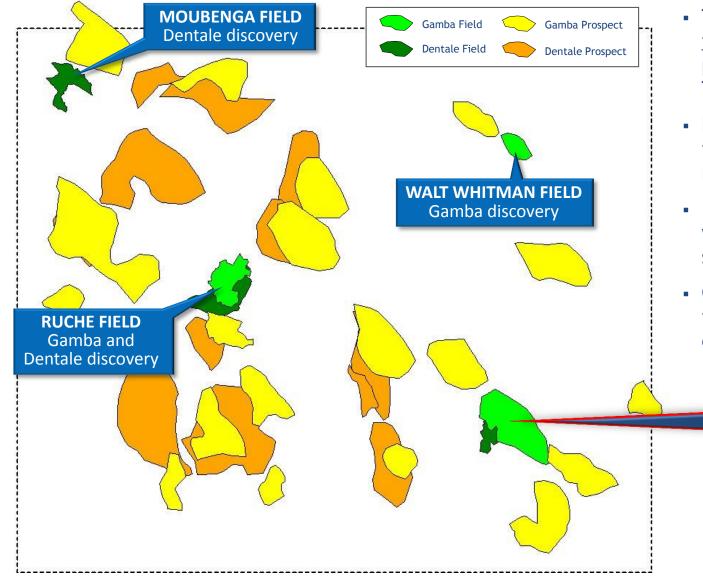


# NEARBY ETAME MARIN ANALOG



- Etame field is located a few kilometres away from the Dussafu Marine Permit and carries much of the same characteristics
- Initial development with 3 subsea wells tied back to an FPSO at Etame - similar to the initial development plan for the Dussafu Marine Permit
- In production for 15 years; average rates of 15-20 kbopd
- BWO have operated the FPSO at Etame for the past 15 years and have over 100 employees in country
- Initial Etame reserves: 20-25 million barrels of oil
  - 100+ million barrels of oil produced through 2017
  - Expected ultimate recovery of block up to ~150 Mmbo
  - All Etame fields have ended up producing greater than their initial sanction case reserve estimates.

# **RESERVES AND RESOURCES UPDATE - RUCHE EEA AREA**



- Tortue mid case reserve estimates <u>increased by over 80%</u> compared to previous independent reviews of Tortue<sup>1</sup>
- Large increase due to revised interpretation of 2014 seismic and reference to Etame analogues
- Reserve cases based on 4 Tortue wells, 2 in first phase and 2 in second phase
- Other discoveries including Ruche, to be updated, with upside from earlier estimates

#### **TORTUE FIELD<sup>2</sup>**

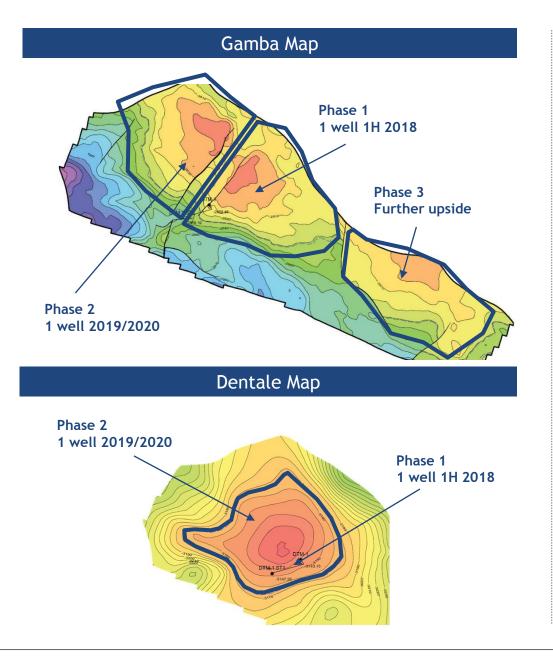
Reserves Low "1P" 15.9 million barrels Mid "2P" 23.5 million barrels High "3P" 31.4 million barrels Contingent Resources Low "1C" 3.7 million barrels

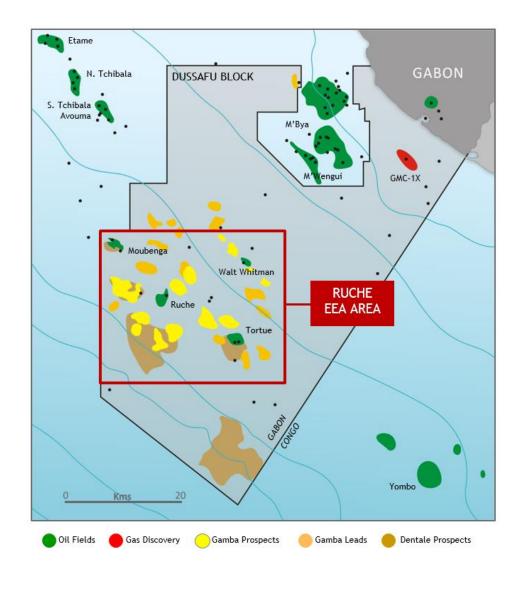
Mid "2C" 11.6 million barrels High "3C" 28.9 million barrels

#### 1. From Gaffney Cline & Associates 2014

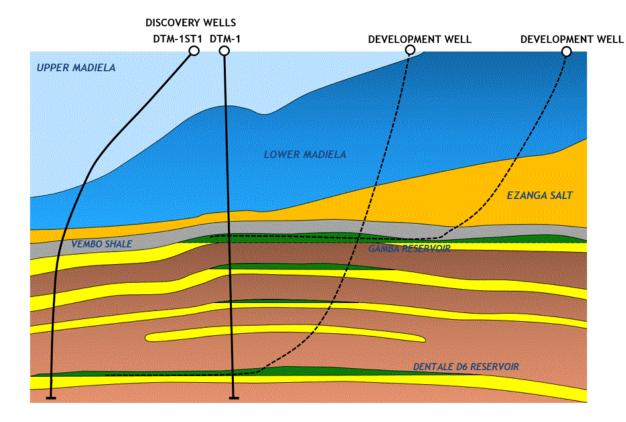
2. From preliminary NSAI report Jdecember 2018. Figures are Gross Reserves after economic cut-off, before royalty, production sharing with Gabon government and exercise of any back-in rights or participation of GOC

# TORTUE MAPS





# TORTUE PHASE 1 DRILLING - HORIZONTAL WELLS



- High specification jack-up rig to start in Q1 2018
- 2 Horizontal oil production wells
  - Provision for gas lift
  - Well design similar to successful Etame wells to the north
- 1 appraisal sidetrack to the north to prepare for Tortue Phase 2 development



Borr Norve Jack-up Rig

# TIMELINE

RUCHE AREA EEA	2017		2018				2019				2020			
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Engineering														
Subsea														
FPSO														
Drilling														
Installation														
Hookup and Commissioning						<b></b>								
Phase 1 Production														
Phase 2 Drilling														
Phase 2 Production														

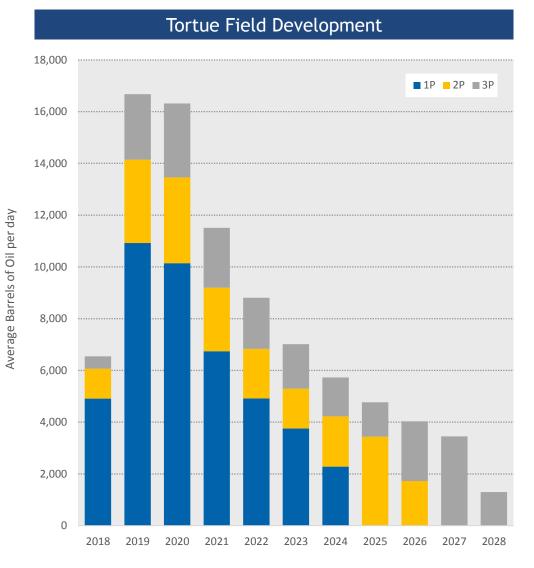
#### Phased development

- Aiming to achieve first oil at Dussafu in 2H 2018
- Depending on results of phase 1 and appraisal well, phase 2 drilling at Tortue may consist of 2 further development wells to increase production
- Next successive phases would tie back existing discoveries or further yet to be discovered resources nearby

# PRODUCTION FORECAST, TORTUE PHASE 1 AND 2

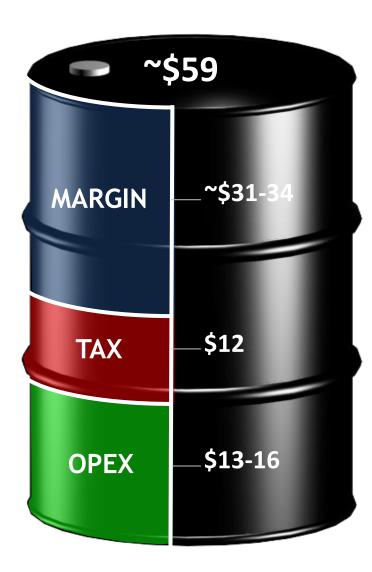
**Tortue Reserves** 

Total 1P = 15.9 MMbbl Total 2P = 23.5 MMbbl Total 3P = 31.4 MMbbl



1. From preliminary NSAI report December 2018 Figures are Gross Reserves after economic cut-off, before royalty, production sharing with Gabon government and exercise of any back-in rights or participation of GOC

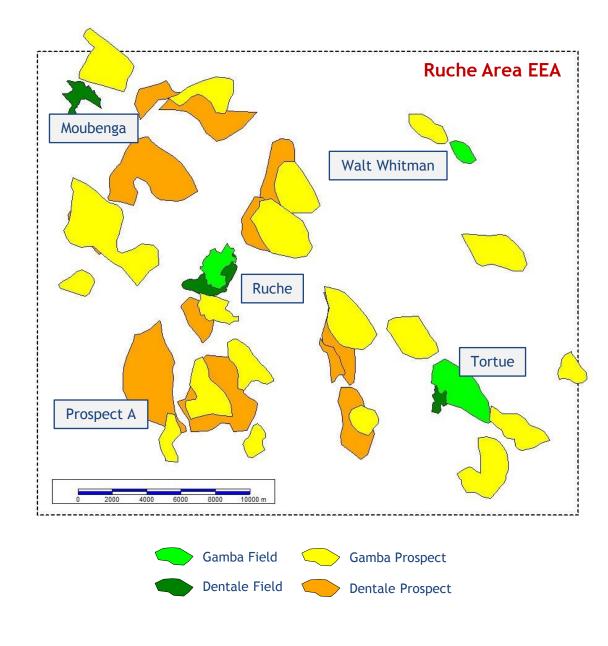
# FINANCIAL METRICS - TORTUE FIELD OIL DEVELOPMENT 2P CASE



- Illustrative economics based on \$59\*/ barrel realised oil price, \$0.1 discount to Brent based on analogue
- Production Sharing Contract
- Favourable fiscal terms
  - During cost recovery phase over 50% of revenue is net cashflow to contractor
- Initial OPEX = \$13-16/bbl
- Field Life OPEX = \$20/bbl
- 23.5 mmbbls recovered
- Initial Production rate of 15,000 bopd
- Capex to first oil \$160-170 million, including:
  - 2 wells tied back to FPSO
  - 1 appraisal side-track
  - FPSO deployment and installation
  - Contingency
- Phase 2 capex in 2019/20 \$80 million
  - 2 additional wells tied back

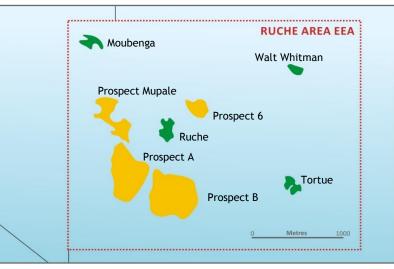
\* From NASI model based on forward curve average over field life

# TORTUE JUST THE BEGINNING...



#### **Ruche Area EEA Discoveries and Prospects**

- Potential to be World Class asset
- In total 13 robust prospects and over 14 leads identified within the Ruche EEA area
- All have potential for inclusion in FDP once drilled
- Prospects A and B alone have combined P50 of 482 million barrels of gross unrisked prospective resources
- Four main prospects have been matured into potential drilling targets





# Corporate Presentation

# AJE Nigeria

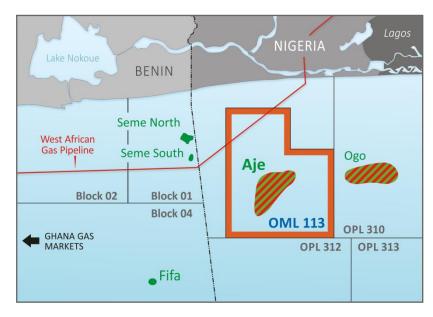


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# OML 113 AJE LICENSE OVERVIEW

#### HISTORY AND STATUS

PROJECT INFORMATION				
Operator	YFP			
Revenue Interest	Initially 12.19%			
Paying Interest	16.255%			
Working Interest	6.502%			
Other Partners	NewAge, EER, MX Oil			



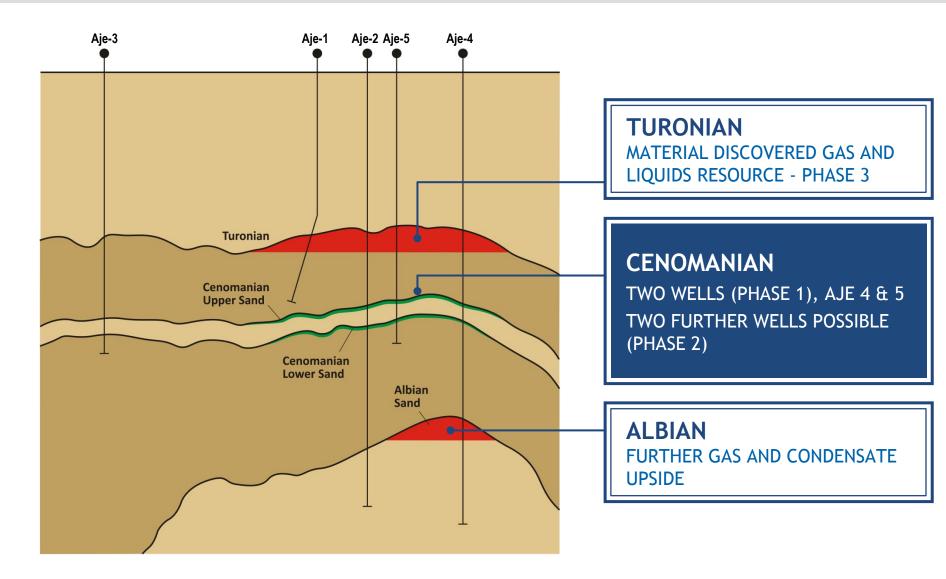
- Geologically and geographically unique in Nigeria
- One of many Cretaceous oil discoveries along the Transform Margin
- Fields along this trend include Jubillee and Sankofa in Ghana
- Aje has been producing oil since May 2016
- Currently producing from Cenomanian and Turonian reservoirs, through FPSO
- Significant gas and oil resources to be developed in the Turonian
- The Aje field produced an average of 403 barrels of oil per day net to Panoro (12.1913%) during the 3rd quarter
- Production from the Aje field has continued from the Aje-4 and Aje-5 wells
- Regular liftings Continuous efforts to reduce costs at Aje have already resulted in a material decrease in the overall operational expenditures
- Recent arbitration settled January 2018

# MAY 2016 AJE FIELD COMMENCED COMMERCIAL PRODUCTION



# OML 113 AJE FIELD

#### **CENOMANIAN OIL JUST THE START**



# NIGERIAN GAS IN CONTEXT

- 7<sup>th</sup> largest population in world (180 million people)
- Largest economy in Africa
- 9<sup>th</sup> largest gas reserves in world
- Domestic gas prices rising (>\$3.50/mscf)
- Nigerian gas production for domestic power: 600 mmscf per day, while demand is estimated at 2700 mmscf per day
- Large infrastructure investment required in order to meet local demand
- Due to irregular supply of electricity, Nigerian businesses and families estimated to spend \$22 billion per annum to buy diesel for power generation



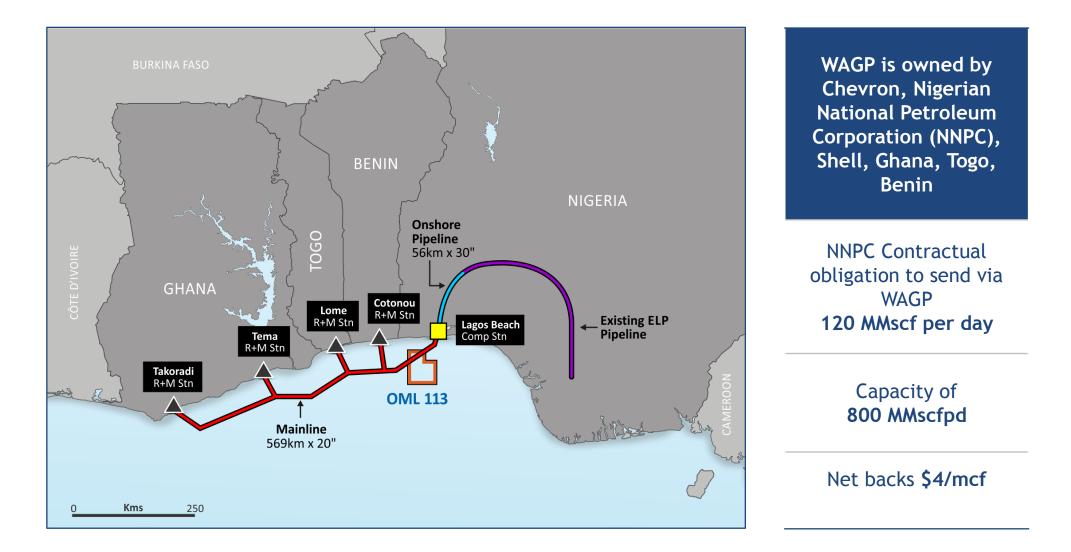


# OML 113 GAS RESOURCES IN CONTEXT



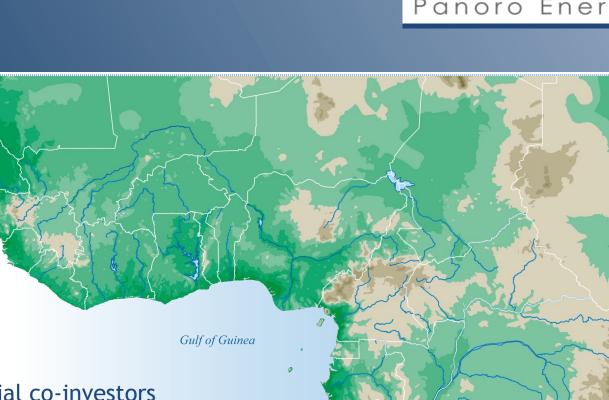
- Nigerian installed gas fired power generation capacity estimated at 10,000 MW
- Only 3,600 MW actually generated largely due to gas constraints
- Generation generally in the West (70%) while consumption is weighted to the West
- Infrastructure constrained
- OML 113 strategically located near large gas markets near Lagos and the West Africa pipeline

# WEST AFRICAN GAS PIPELINE



# AFRICA STRATEGY

- Build business through M&A
- Use existing regional knowledge base and strong local network
- Prioritise pre salt, transform margin plays
- Cooperation with industry and financial co-investors
- Evaluate both oil and gas opportunities
- Focus primarily on production and development assets, operated or non operated
- Maintain strong financial discipline



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