



# Marintec

## SOUTH AMERICA

14ª edição

# New Changes in Regulations and Oil and Gas Opportunities in Brazil

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# Summary

- **O&G in a Global Context**
- **Pré-Sal Petróleo – Roles and Activities**
- **National Policies in Place at MME**
- **2017 E&P Checklist**
- **Bidding Rounds Schedule**
- **O&G Companies Operating in Brazil**



# O&G in a Global Context

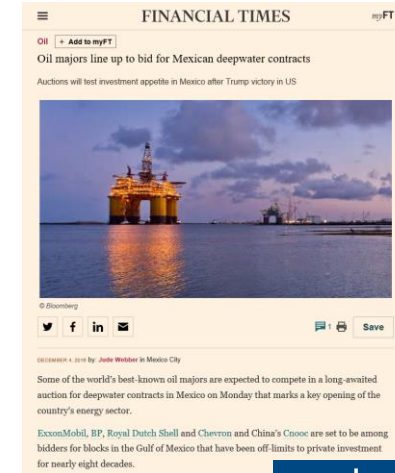


## Nigeria Awards 2017 Crude Oil Term Contracts To 39 Companies

By Tsvetana Paraskova - Jan 04, 2017, 12:03 PM CST




State-held Nigerian National Petroleum Corporation (NNPC) has awarded the 2017/2018 crude oil term contracts to 38 companies to lift 32,000 bpd each and an NNPC unit to load 90,000 bpd, NNPC said on Tuesday.



FINANCIAL TIMES myFT

Oil majors line up to bid for Mexican deepwater contracts

Auctions will test investment appetite in Mexico after Trump victory in US



© Bloomberg

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DECEMBER 4, 2016 By Justin Weidner in Mexico City

Some of the world's best-known oil majors are expected to compete in a long-awaited auction for deepwater contracts in Mexico on Monday that marks a key opening of the country's energy sector.

ExxonMobil, BP, Royal Dutch Shell and Chevron and China's CNOOC are set to be among bidders for blocks in the Gulf of Mexico that have been off-limits to private investment for nearly eight decades.



## Argentina gears up for offshore bid rounds

First event scheduled for next year with deep-water rounds in 2018 and 2019 in push to explore vast

offshore play



PLANO ESTRATÉGICO  
PLANO DE NEGÓCIOS E GESTÃO 2017- 2021

Setembro 2016

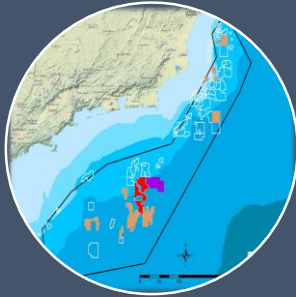


PETROBRAS



PARIS2015  
UN CLIMATE CHANGE CONFERENCE  
COP21·CMP11

# Pré-Sal Petróleo S.A.



Management of  
production sharing  
agreements (PSA's)



Representation of the  
State in unitization  
agreements



Commercialization of  
the State's petroleum  
and natural gas

Maximizing the economic results to the State from pre-salt activities



# Unitization agreements

## Agreements signed so far

- Tartaruga Mestiça
- Lula
- Nautilus
- Sapinhoá

## Under negotiation

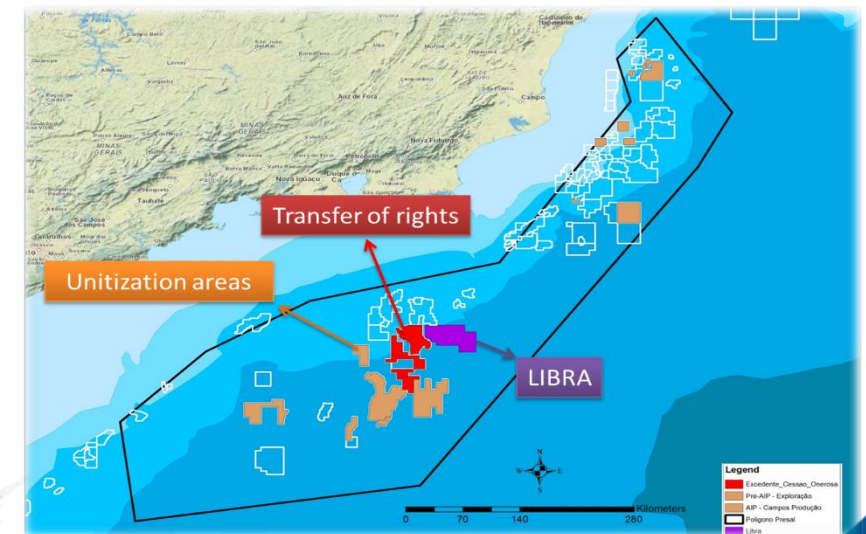
- Pre-unitization: Libra
- Unitizations: Pirambu, Albacora, Baleia Azul and South of Sapinhoá

## General info

- Working with 6 additional areas with potential for unitization
- About 9 Bboe in place (State's share) in all known areas with potential for unitization

## Points of attention

- Timeframe for negotiation of new cases



# Libra: the first production sharing agreement

## Consortium basic info

- Bid Round in Oct 21, 2013
- Signature Bonus: R\$ 15 billion
- Petrobras (40%); Shell (20%); Total (20%); CNODC (10%); CNOOC (10%)

## Main field characteristics

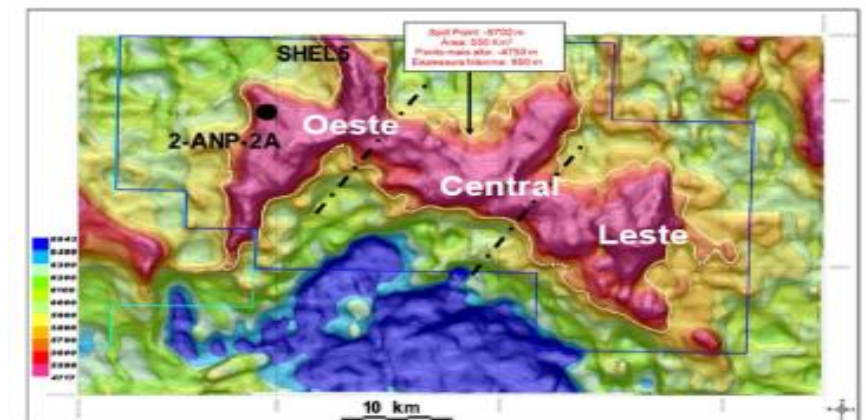
- Discoverer: 2-ANP-2A – RJS
- API 27°; GOR 410-450 m<sup>3</sup>/m<sup>3</sup>; CO<sub>2</sub> 40-42%
- High productivity: 3667 bopd (choke 32/64")

## Short-term goal

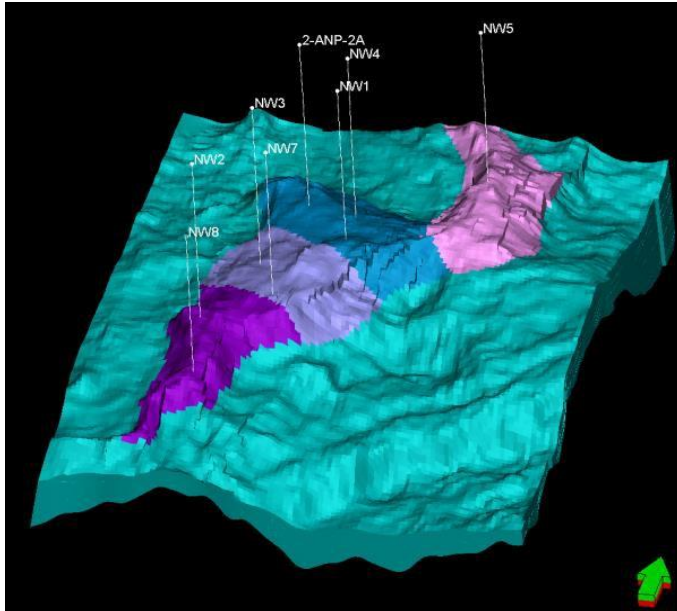
- Extended well test in 2017 - 30 Mbpd

## Main challenges

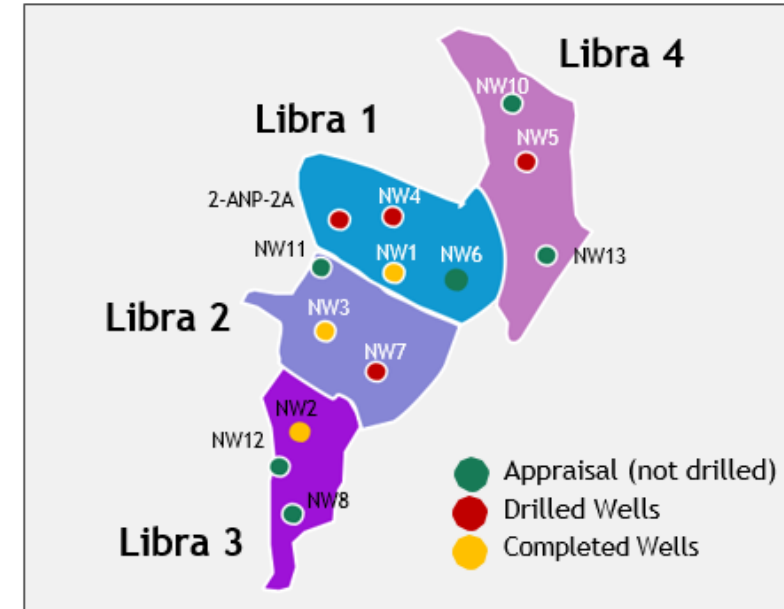
- Cost reduction
- Conciliation of fast-track development vs. local content requirements



# Libra: Integrated Development Plan



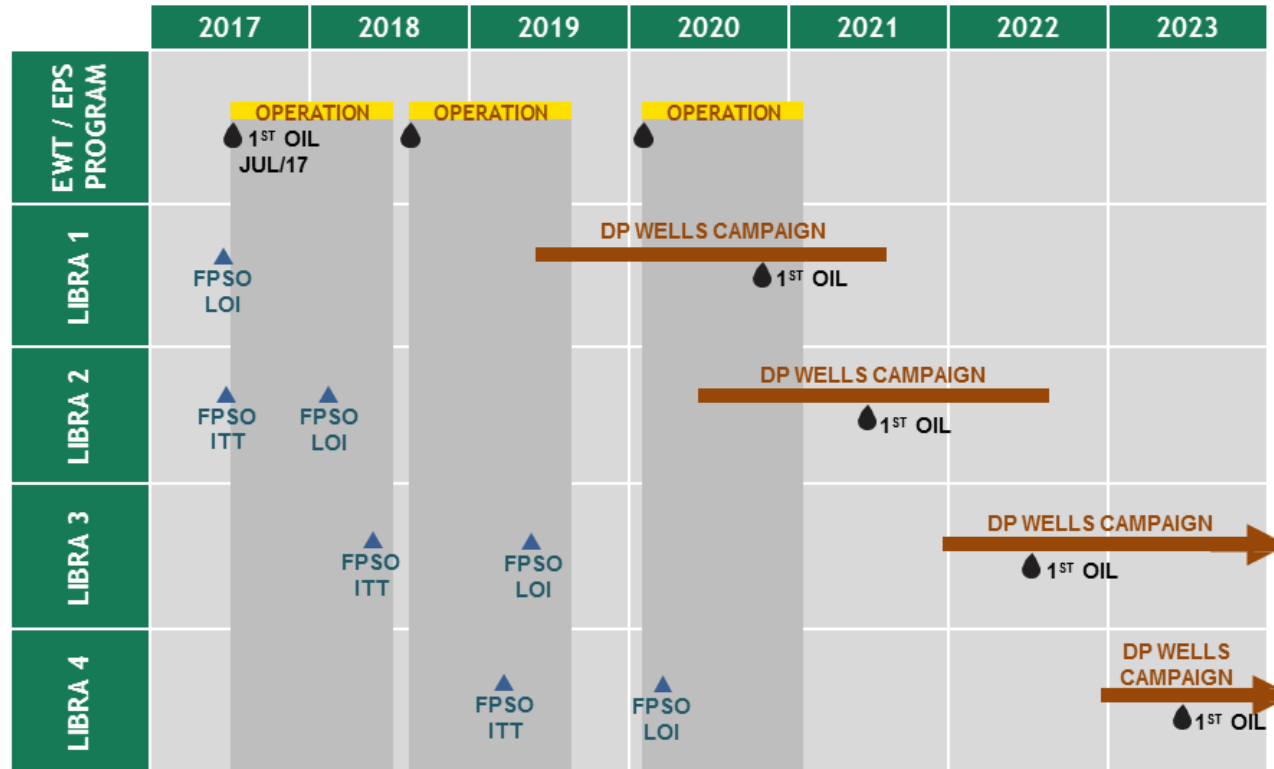
RESERVOIR DATA
Pre-Salt Microbial
Aptian Carbonates
27 API Oil
Reservoir Depth 5,300 m
GOR 415 scm/scm
CO <sub>2</sub> content ~ 40%



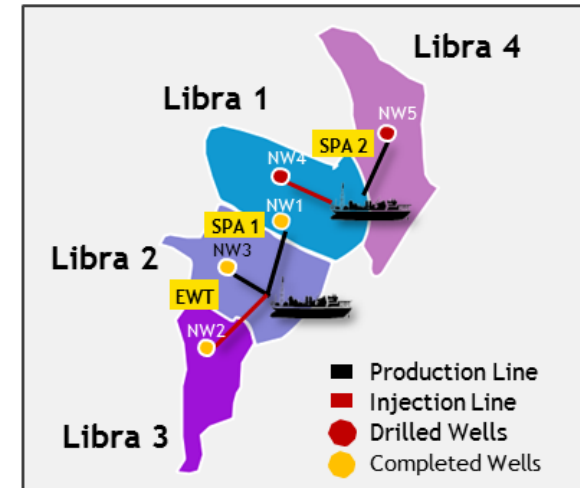
- Current base case → 4 FPU's (WD = 2,100m);
- Objective → anticipation, with an acceptable level of risk;
- Sequence based on availability of reservoir information;



# Libra EWT de-risking campaign



Ref: Forecast Apr/17, Petrobras Business Plan 17-21 and Libra Business Plan 2017





# FPSO Pioneiro de Libra

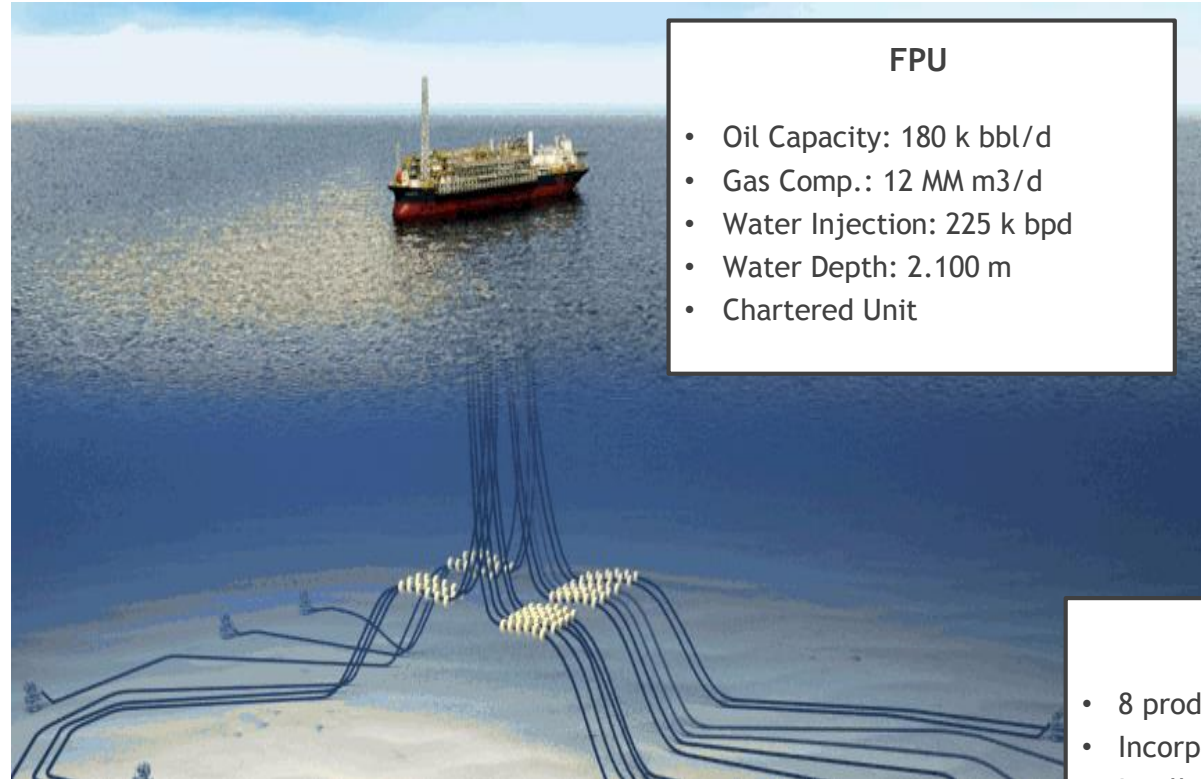


# Libra : Pilot Project

## STANDARD PRE-SALT PROJECTS SOLUTION

### SUBSEA & FLOW ASSURANCE

- 2<sup>nd</sup> generation of std. pre-salt X-Trees
- Full Gas reinjection
- Water Alternating Gas injection wells (WAG)
- Rigid or Flexible lines



### FPU

- Oil Capacity: 180 k bbl/d
- Gas Comp.: 12 MM m<sup>3</sup>/d
- Water Injection: 225 k bpd
- Water Depth: 2.100 m
- Chartered Unit

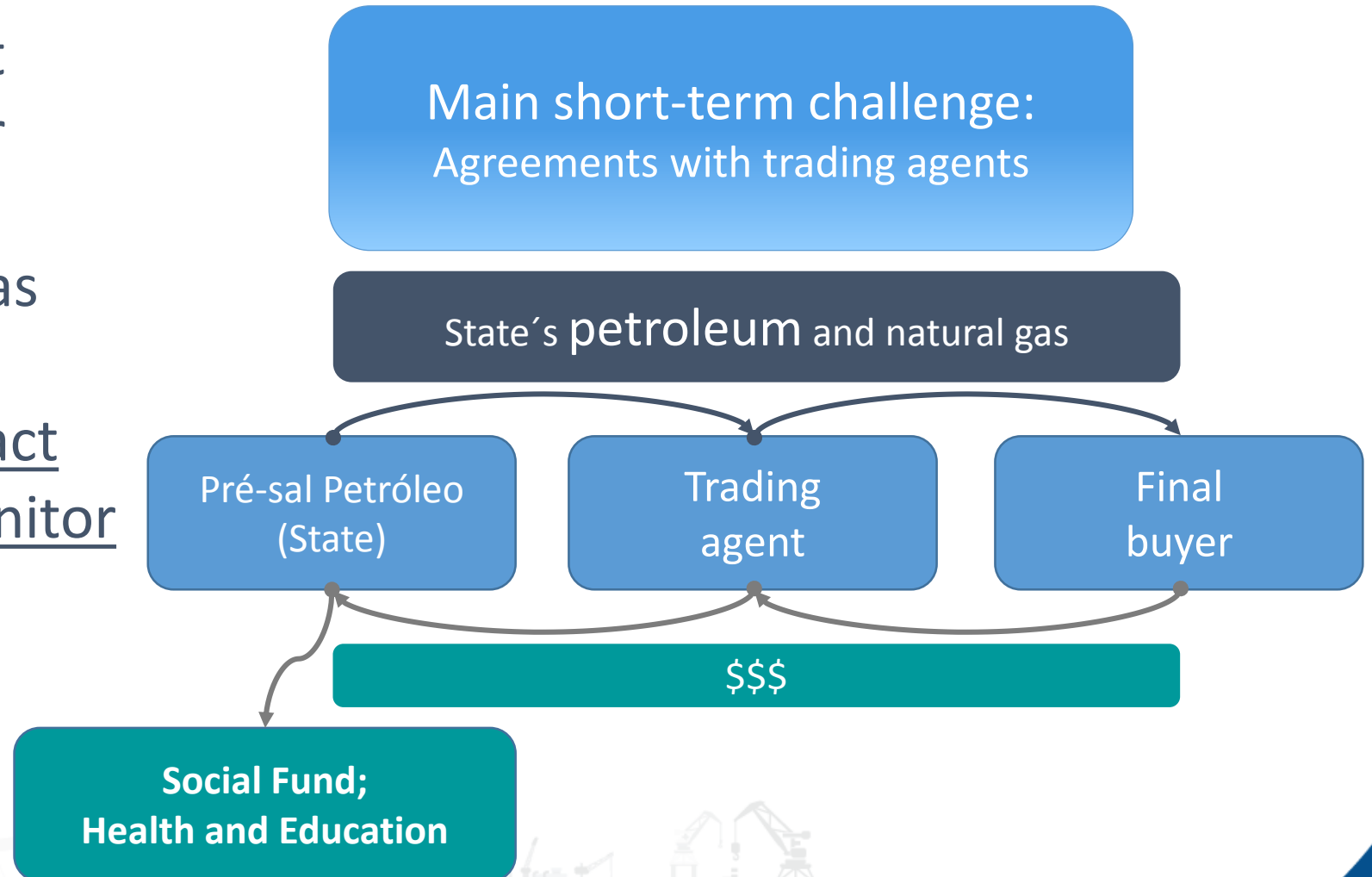
### WELLS

- 8 production and 9 injectors.
- Incorporation of 4 appraisal wells
- Intelligent Completion (2/3 zones)



# Commercialization

Pré-Sal Petróleo shall not commercialize directly or indirectly the State's petroleum and natural gas but shall manage the commercialization contract with a trading agent, monitor and audit the operations



# National Policies in Place at MME

## Upstream

## Midstream and Downstream



- E&P National Policy
- Onshore E&P Policy (Reate)
- Transfer of Rights Renegotiation
  - Local Content Policy
- Tax Regime Renewal (Repetro)
  - 2017-2019 Bidding Rounds
    - Unitization Agreements
- Petrobras' Right of First Refusal (Pre-salt Operatorship)

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CRESCER**

**COMBUSTÍVEL  
BRASIL**

  
RenovaBio

# 2017 E&P Checklist



## Officially Published

### ✓ 2018-2019 Bidding Rounds Planning:

- ❖ 4th Onshore Marginal Fields: Closed in May 11/17
- ❖ 14th Round: Due to close in Sep 27/17
- ❖ 15th Round: Due to close in May/18
- ❖ 16th Round: Due to close Q3/19
- ❖ 2nd and 3rd Pre-salt PSC: Due to close in Oct 27/17
- ❖ 4th Pre-salt PSC: Due to close in May/18
- ❖ 5th Pre-salt PSC: Due to close Q3/19

### ✓ Unitization Agreements

- ✓ Reference Price for Government Take
- ✓ Petrobras' Right of First Refusal (Pre-salt Ownership)
- ✓ Exploration Period Extension for 11th and 12th Concession Bidding Rounds
- ✓ PSC Government Share Oil and Gas Commercialization
- ✓ Local Content Policy
- ✓ E&P National Policy Review
- ✓ New Gas Policy
- ✓ Downstream Policy
- ✓ Biofuels Policy

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BRASIL



# 2017 E&P Checklist



## Upcoming Deliverables

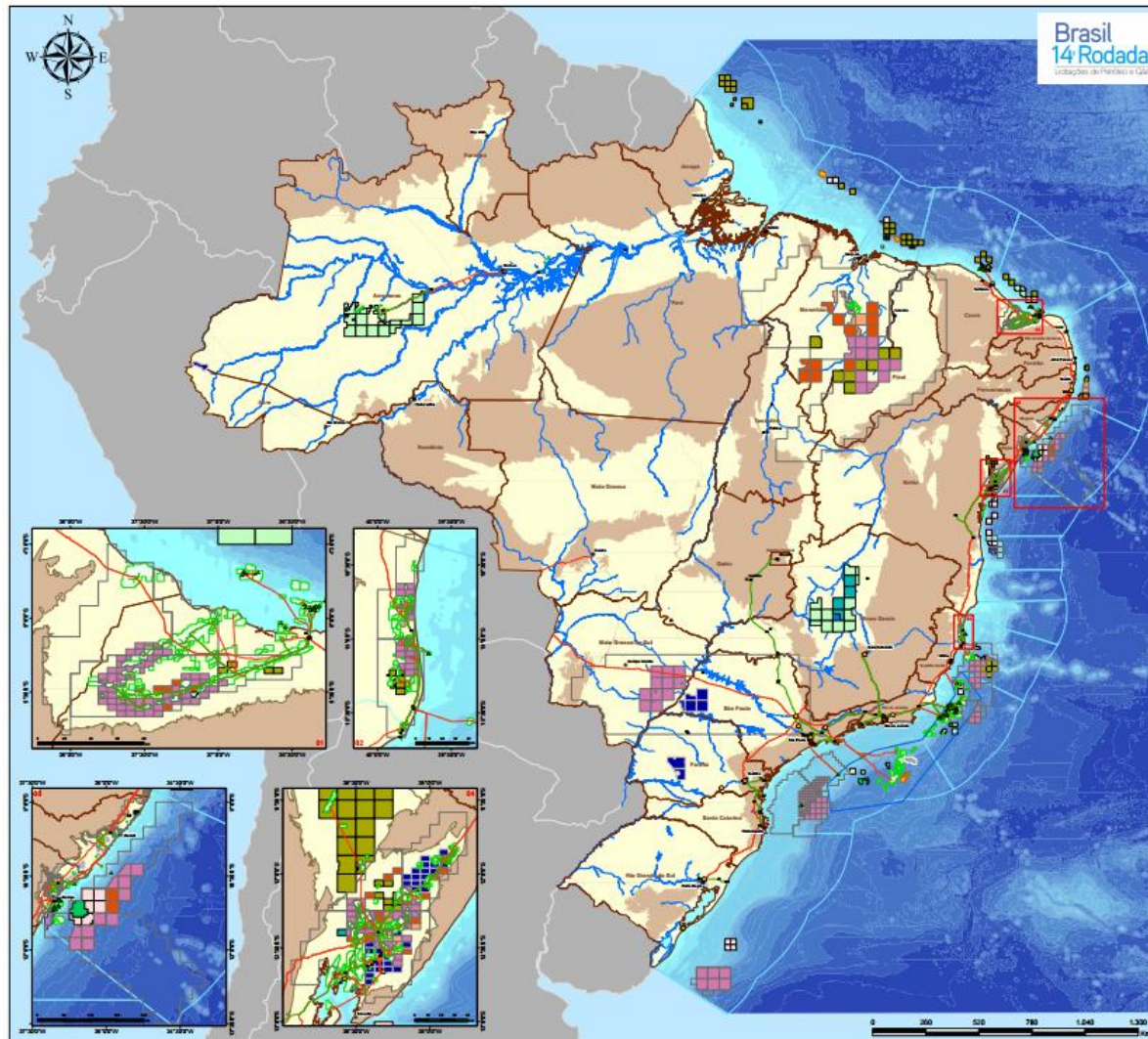
- Onshore E&P Policy: 
- Repetro Tax Regime Renewal
- Transfer of Rights Renegotiation
- New Gas Act
- New Biofuels Act



# Bidding Rounds Schedule



# 14th Concession Bidding Round – 27 Sep 2017

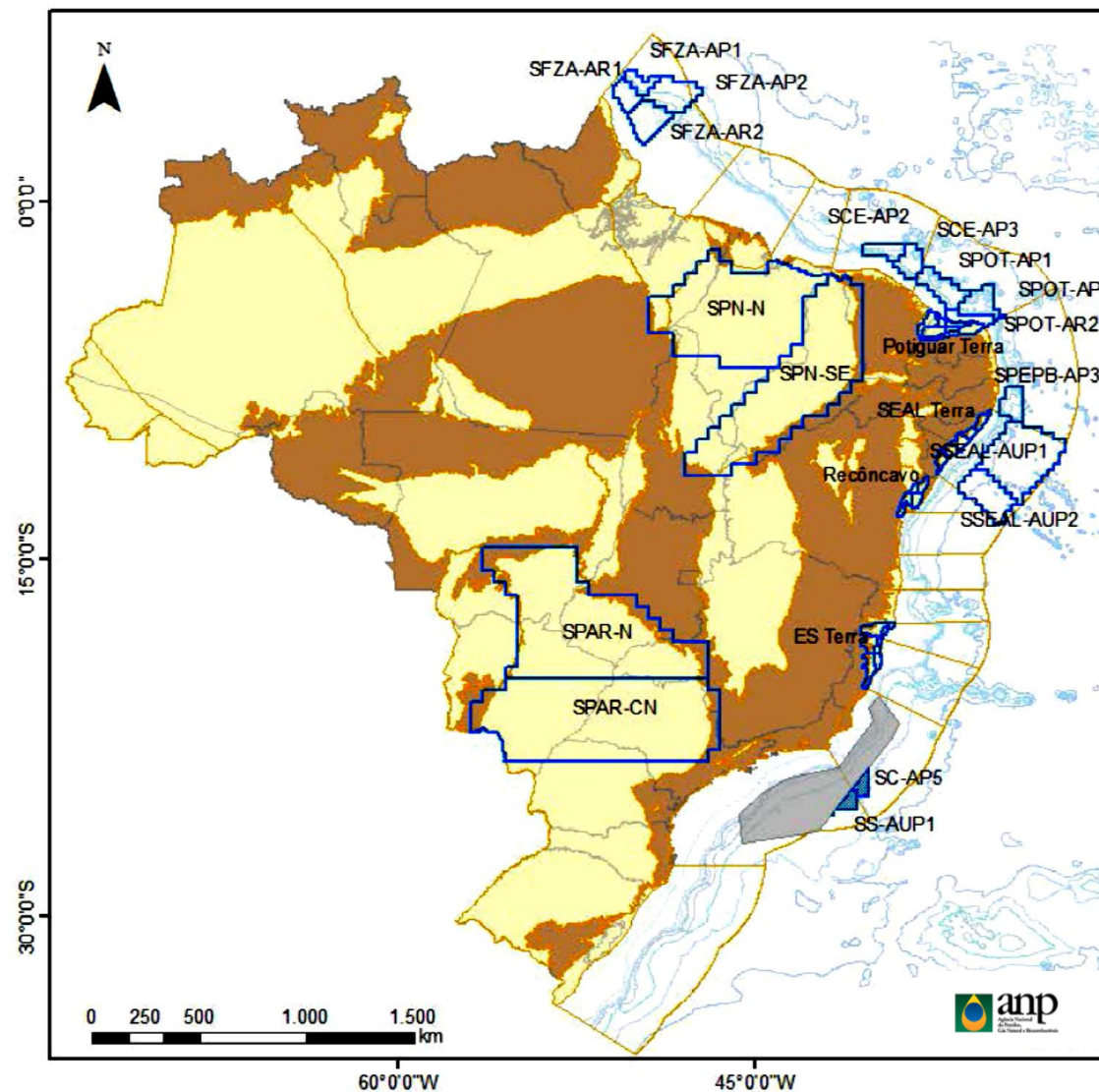


**Sedimentary Basins: 9**  
**Sectors: 12 Offshore and 17 Onshore**  
**Blocks: 287**

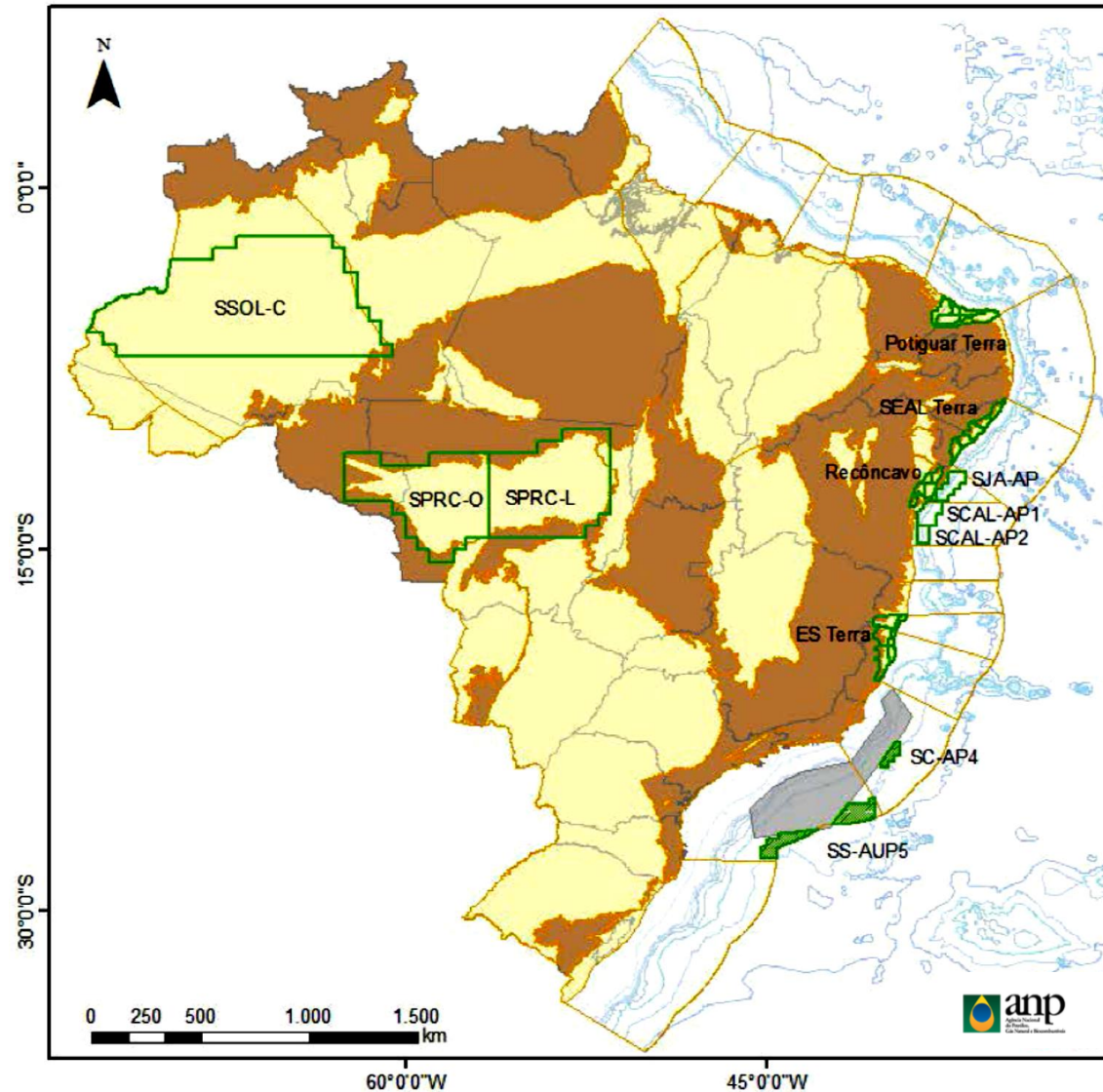
- Libra / Libra
- Área do Pré-Sal / Presalt Area
- Campos em Produção / Production Fields
- Blocos Exploratórios sob Concessão / Exploratory Blocks under Concession**
  - Rodada 2 / Round 2
  - Rodada 3 / Round 3
  - Rodada 4 / Round 4
  - Rodada 5 / Round 5
  - Rodada 6 / Round 6
  - Rodada 7 / Round 7
  - Rodada 9 / Round 9
  - Rodada 10 / Round 10
  - Rodada 11 / Round 11
  - Rodada 12 / Round 12
  - Rodada 13 / Round 13
- Blocos Ofertados - R14 / R14 Offered Blocks
- Oleodutos / Oil Pipelines
- Gasodutos / Gas Pipelines
- Terminais / Terminals
- Unidades de Processamento de Gás Natural / Natural Gas Processing Units
- ▲ Unidades de Produção: Plataformas Fixas e Sistemas Flutuantes / Production Units: Fixed Platforms and Floating Systems
- Refinarias / Refineries



# 15th Concession Bidding Round – May 2018

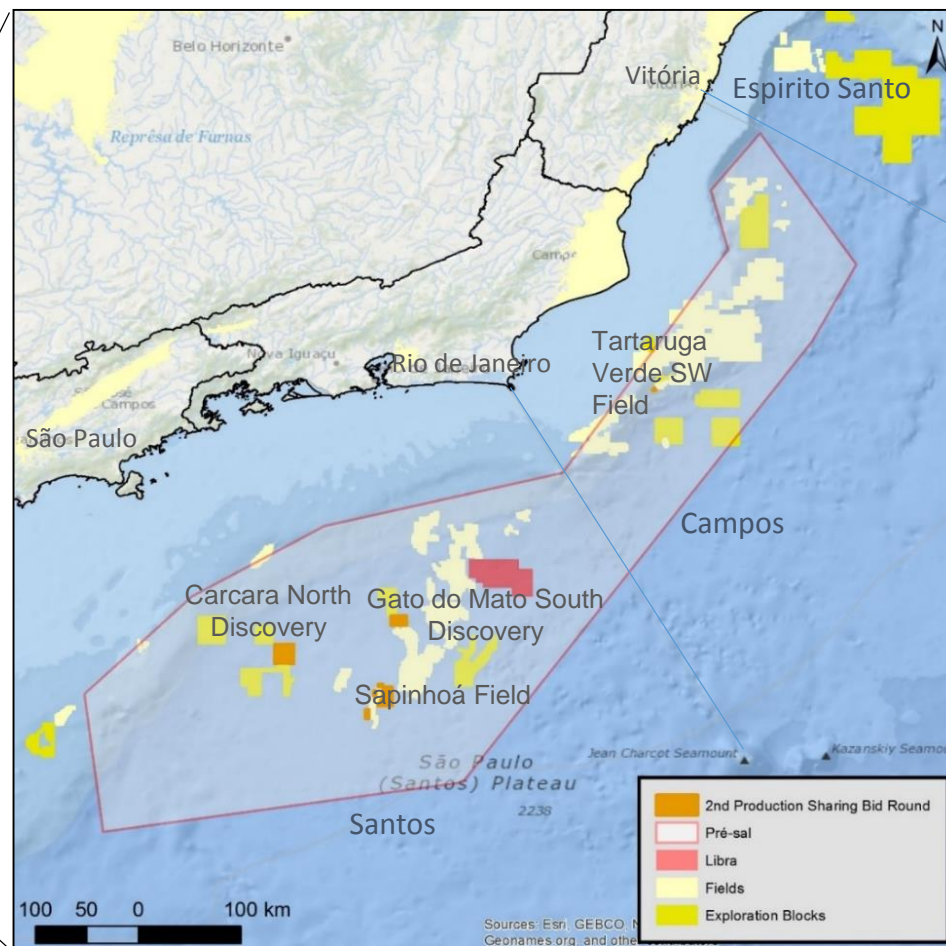
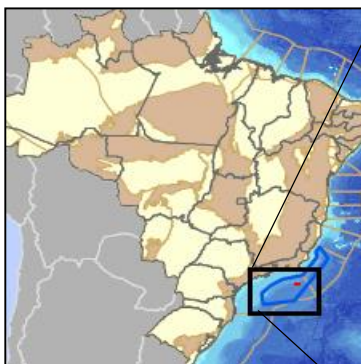


# 16th Concession Bidding Round – Q3 2019



# 2nd PSC Bidding Round

## 27 Oct 2017

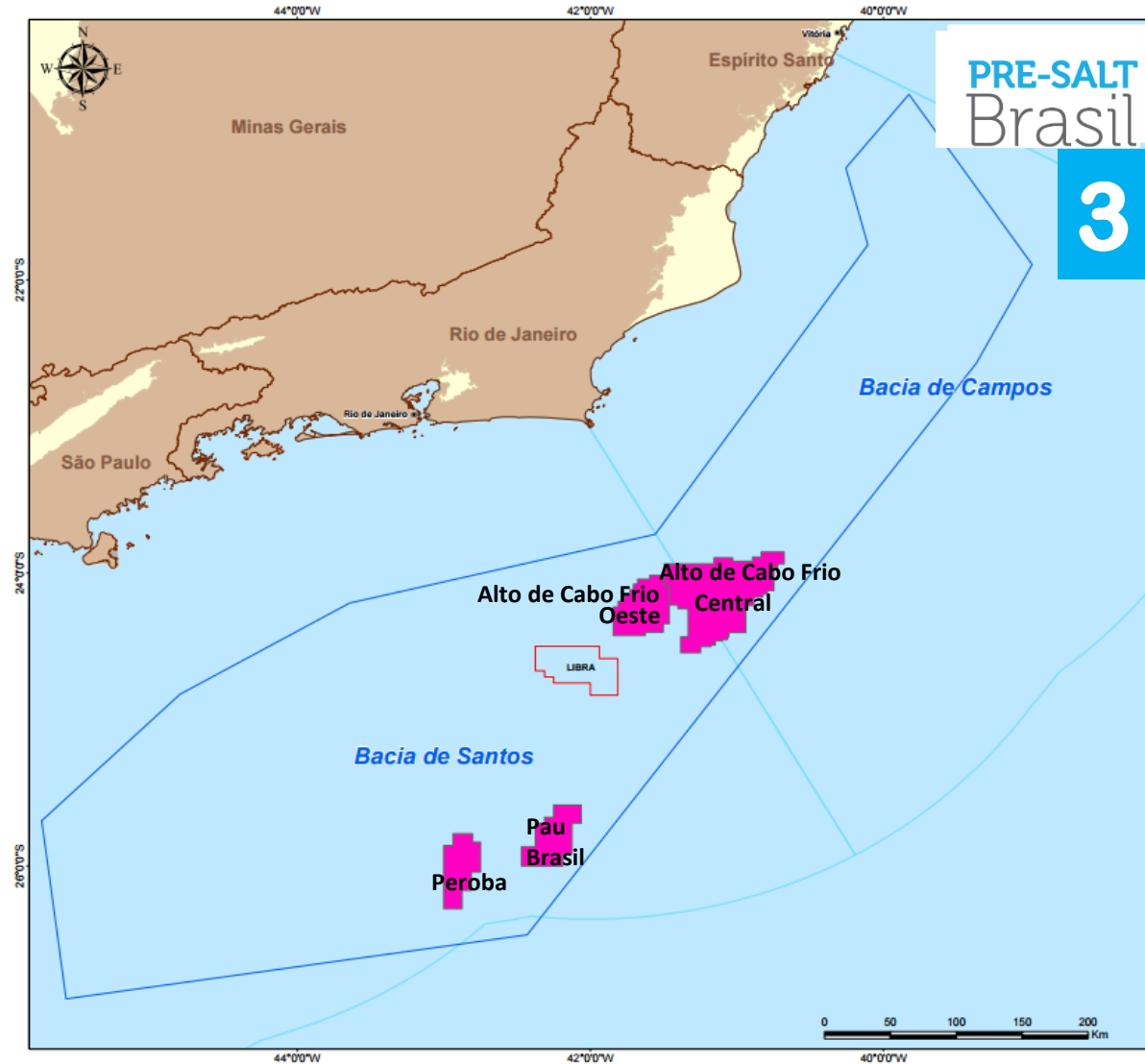


### Unitized Areas' Operators

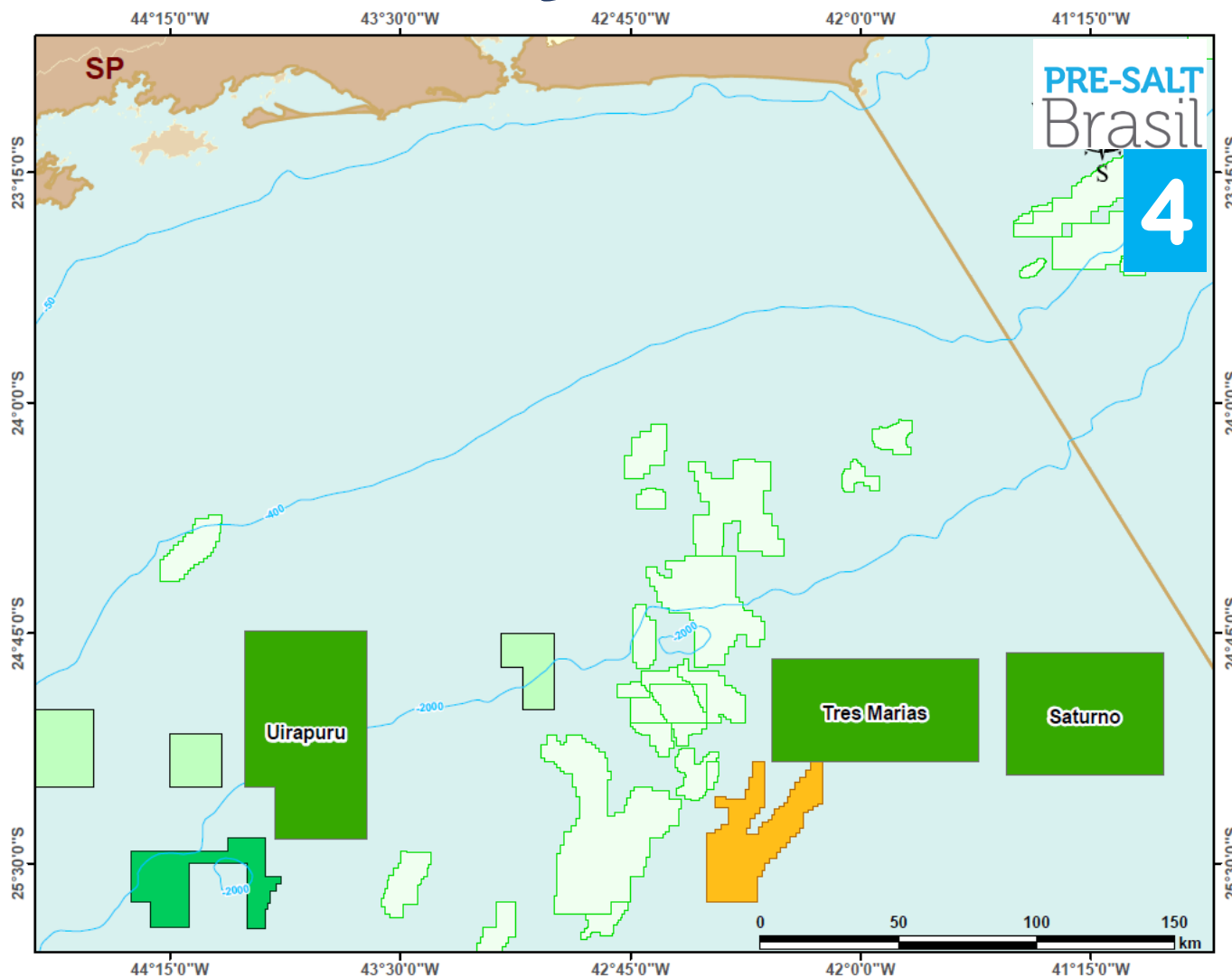


# 3rd PSC Bidding Round

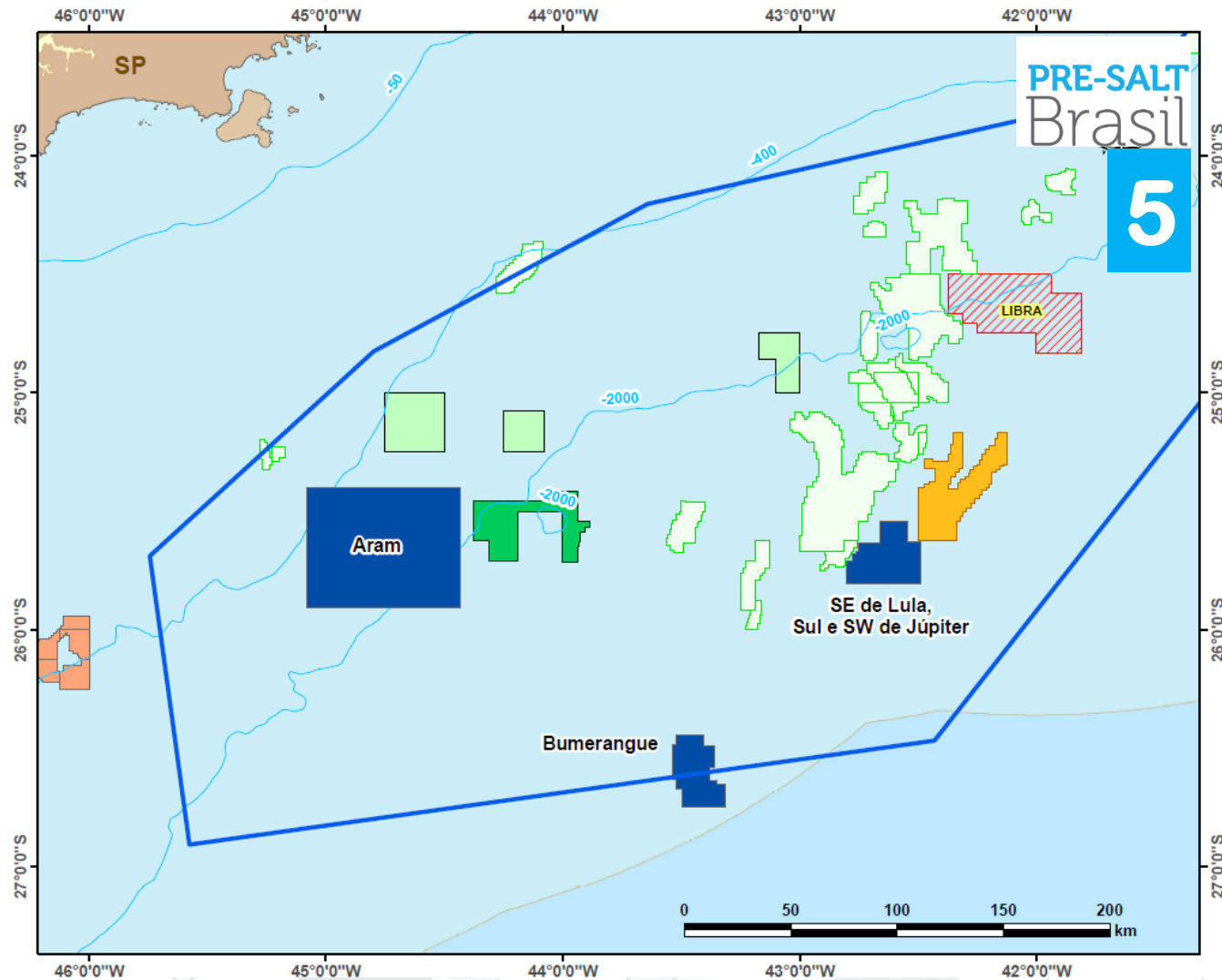
## 27 Oct 2017



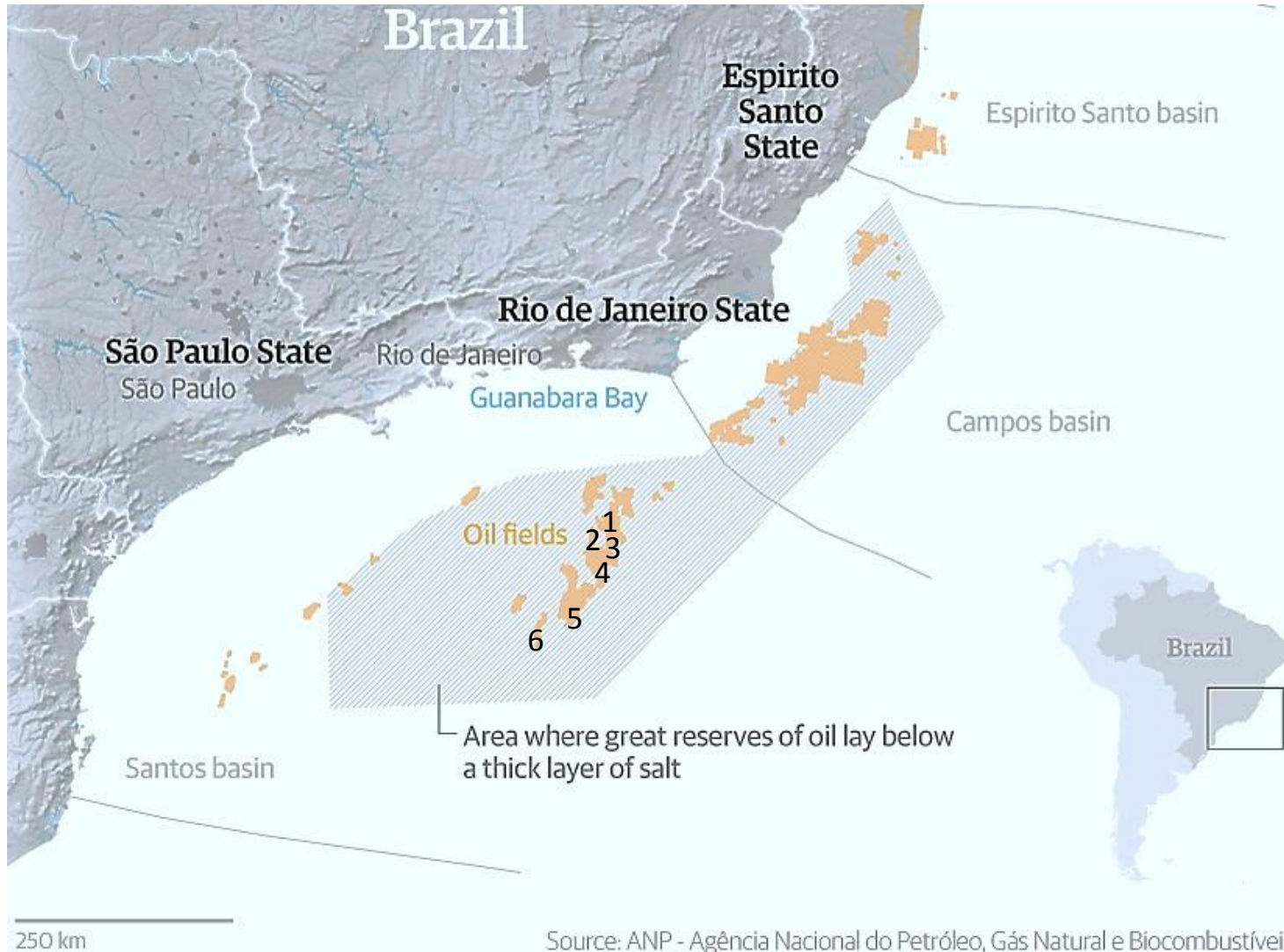
# 4th PSC Bidding Round May 2018



# 5th PSC Bidding Round Q3 2019



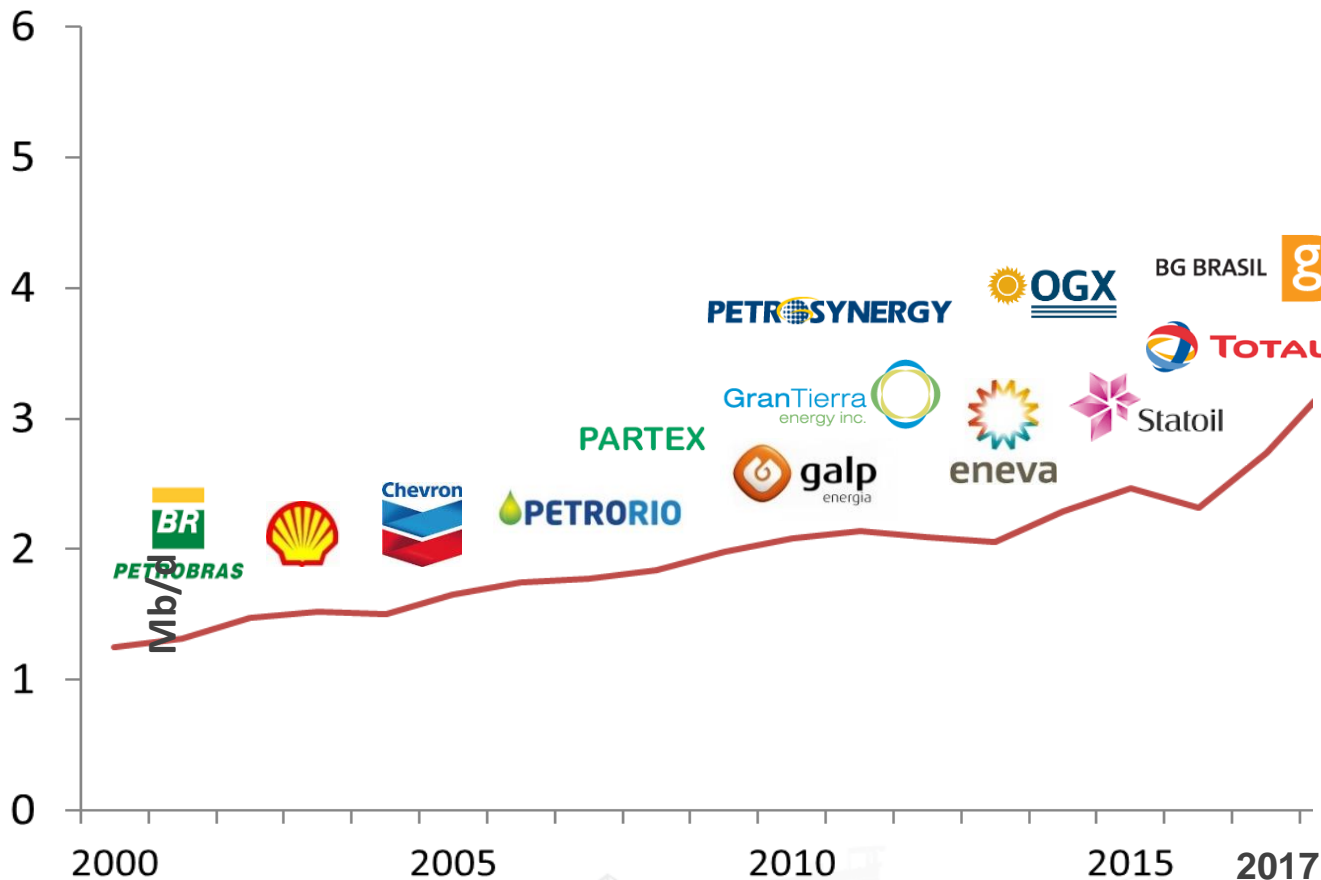
# Transfer of Rights



1. Búzios
2. Itapu
3. Atapu, Berbigão and Sururu
4. Sépia
5. Sul de Lula
6. Sul de Sapinhoá

200 to 300 km distance from Rio de Janeiro; >2.000 m depth from water line

# O&G Companies Operating in Brazil



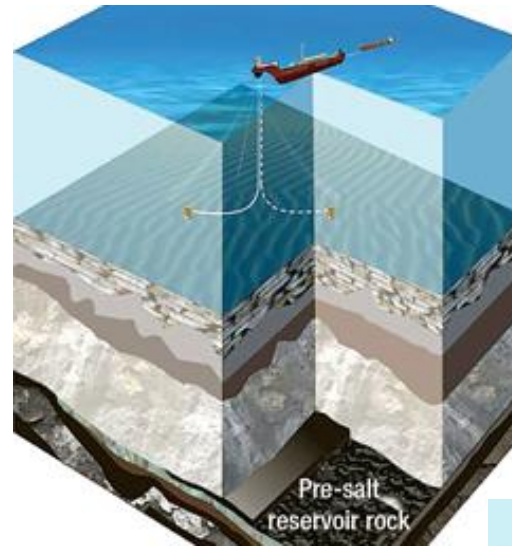
Producers

Other Operators





# Working together to Develop Brazil's Resources Thank you



# Thank You



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