

OPPORTUNITIES IN THE BRAZILIAN E&P SCENARIUM






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Brazil is taking a leading role in the E&P sector



2022



8th

Crude Oil and
Condensate
producer
(BP Statistical
Review 2021)



84

E&P company
groups, 50% foreign
(April 2021)

Production:

3M

Bpd of oil
production
(February 2022)

133M

M³ of gas
production
(February 2022)

Reserves:

13B

Bbl in proved oil
reserves
(Dec 2021)

379B

M³ in proved gas
reserves
(Dec 2021)

Forecast

Potential to reach
more than



5

million oil bpd in
2030 (EPE)

Potential to be the



5th

Largest crude oil
exporter in 2030
(EPE)

E&P at a glance



Pre-Salt

One of the best plays in the world and the most competitive deepwater assets.

75% of production
127 producer wells
22,375 Average well production (boe/d)

Prod: **2,841,633** boe/d

Post-Salt

Green and brownfields, deep and shallow waters.

19% of production
468 producer wells
1,544 Average well production (boe/d)

Prod: **722,963** boe/d

Onshore

Mature basins and new frontier basins (gas prone).

5% of production
5,681 producer wells
33 Average well production (boe/d)

Prod: **189,888** boe/d

*February, 2022

27_B

Barrels equivalent of O&G produced to date

375

Fields under development or production

248

Exploratory Blocks

400+

Production Installations

90

Billion dollars E&P Investments Forecast 2021 – 2025

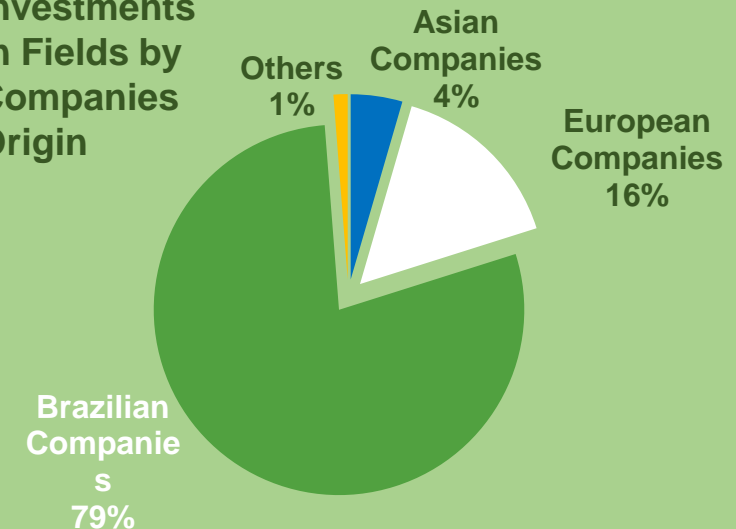
11

Billion dollars Decommissioning Costs 2022-2026

30,000+
Wells drilled

19,000+
Km of O&G pipelines

Investments in Fields by Companies Origin





248 Exploration Blocks

Area: ~188 thousand km²

39 operators

Offshore

141 Exploration Blocks (57%)

Area: 103 thousand km² (55%)

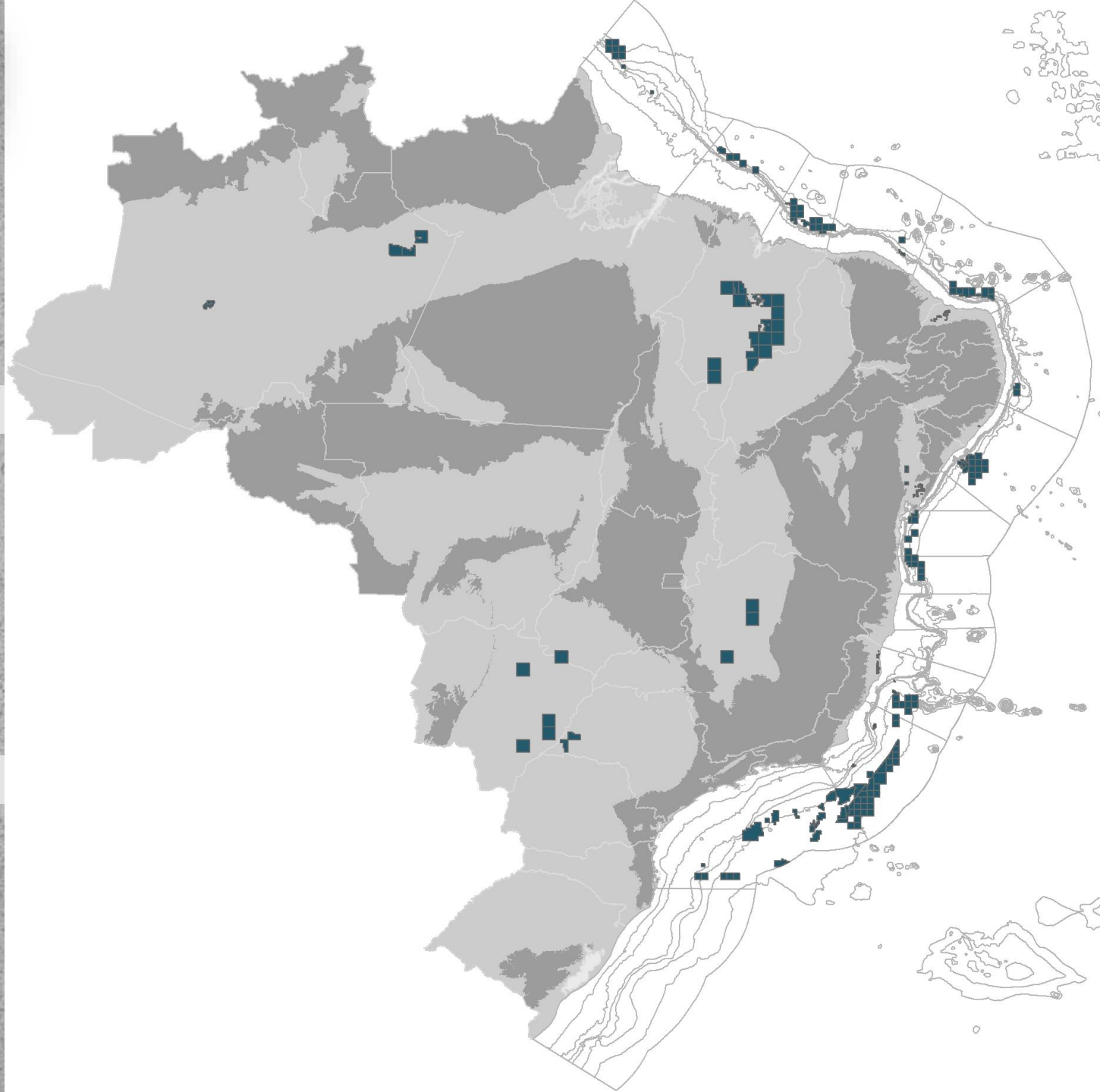
18 operators

Onshore

107 Exploration Blocks (43%)

Aea: ~85 thousand km² (45%)

22 operators



Proved Reserves

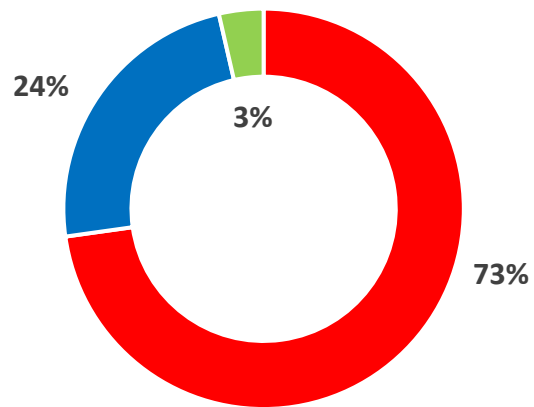
Dec/21

Oil
13.242 Billion bbl

Gas
378.653 Billion m³

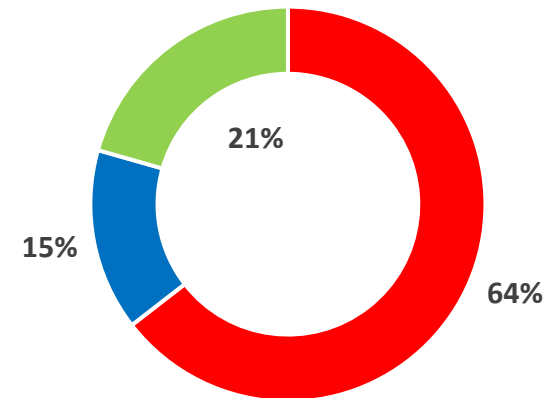
Dec/21

Oil Proven Reserves



■ Pre-Salt ■ Conventional Offshore ■ Onshore

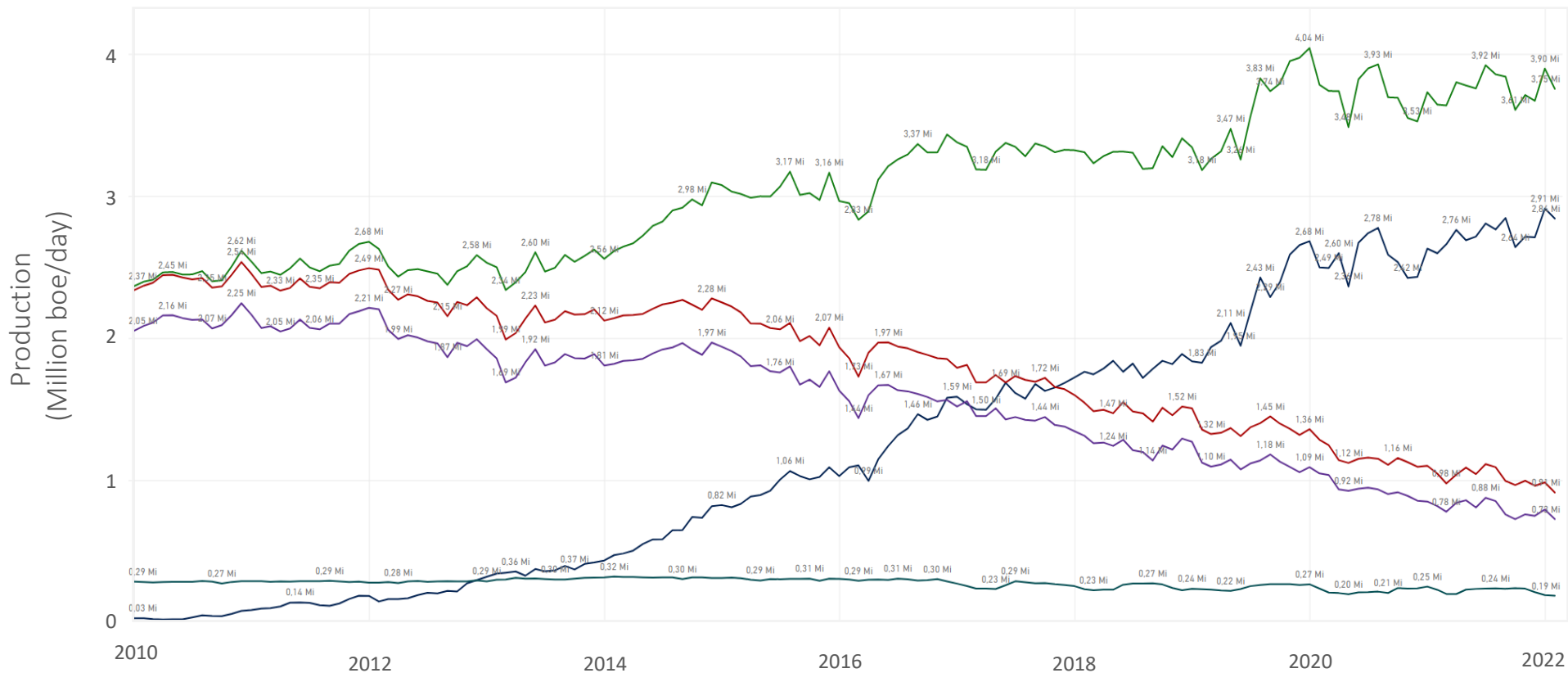
Gas Proven Reserves



■ Pre-Salt ■ Conventional Offshore ■ Onshore

Oil Production

Total Production: 6,149 wells
Pre-salt Production: 127 wells



3.755 MM boe/d
2.917 MM bbl/d

2.842 MM boe/d
2.235 MM bbl/d

— Total
 — Pre-salt
 — Non pre-salt Offshore
 — Non pre-salt Total
 — Onshore

E&P strategic goals



RIGHT ASSETS IN THE RIGHT HANDS

Petrobras Divestment Plan plays key role in this goal. Support small and medium producers market



INCREASE THE RECOVERY FACTOR

Brazil's Current RF: 10% This represents an enormous opportunity in the **mature fields**. Need to reduce OPEX and decommissioning costs



INCREASE EXPLORATORY ACTIVITIES

The COVID-19 pandemic accelerated **energy transition** discussions and reinforced the **sense of urgency** in exploring our resources



MAKE VIABLE THE MARGINAL DISCOVERIES

There are many **marginal discoveries** in the **different environments** that could be developed if we address the correct incentives to make them viable

We need to keep increasing **above ground competitiveness** in order to achieve our main goals

Ongoing measures to attract investments



KEEP OFFERING AREAS

Open Acreage
+
Ongoing Petrobras
Divestment Plan



PUBLIC DATA AVAILABLE FOR FREE

Download:
Reate.cprm.gov.br/anp



MARGINAL FIELD DEFINITION

Draft under public
consultation. Specific
incentives should be
discussed afterwards



ROYALTIES REDUCTION FOR SMALL AND MEDIUM COMPANIES

New ANP Resolution
approved by ANP

Already implemented:
royalties reduction for
incremental production

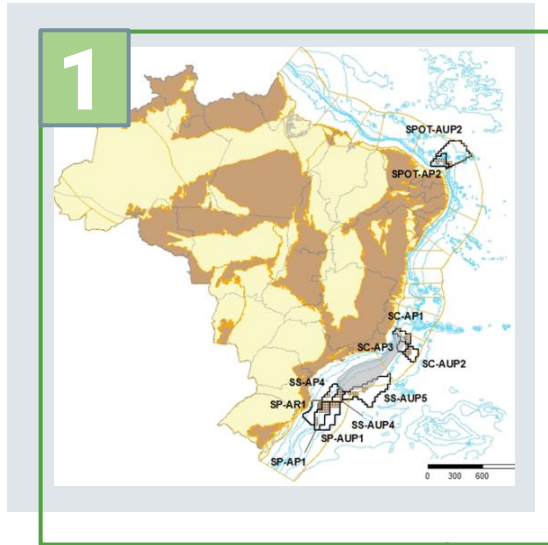


OTHER REGULATORY MEASURES TO REDUCE ABOVE GROUND RISKS AND IMPROVE FISCAL TERMS

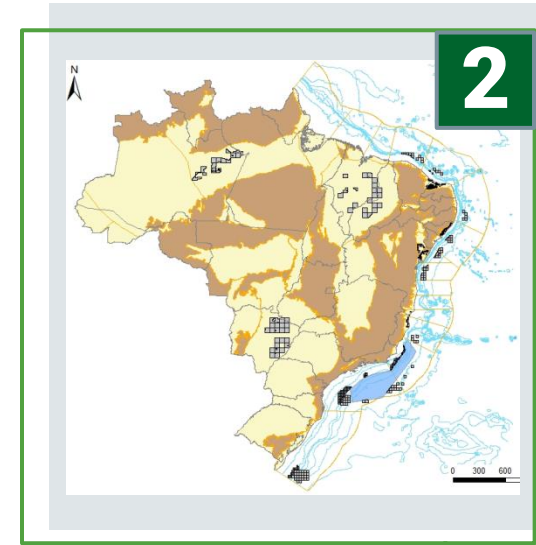
Measures under REATE,
PROMAR and BIDSIM
programs, including studies to
improve environmental
licensing process and
competitiveness of marginal
discoveries

Also, the new gas law was a
decisive step towards a
competitive gas market, with
great opportunities

More opportunities in the Open Acreage auction



11 blocks available within the pre-salt polygon.
Publishing of the Tender Protocol scheduled to August 9th 2022
The 1st cycle depends on the **interest declaration**



1,009 blocks available.
Additional 350 blocks and 11 marginal fields under study to be added in the future.
The 4th cycle depends on the **interest declaration**



#1

Exploration Opportunities

Onshore Mature Basins



Good Infrastructure and advanced Geological knowledge

Free public data – easy access

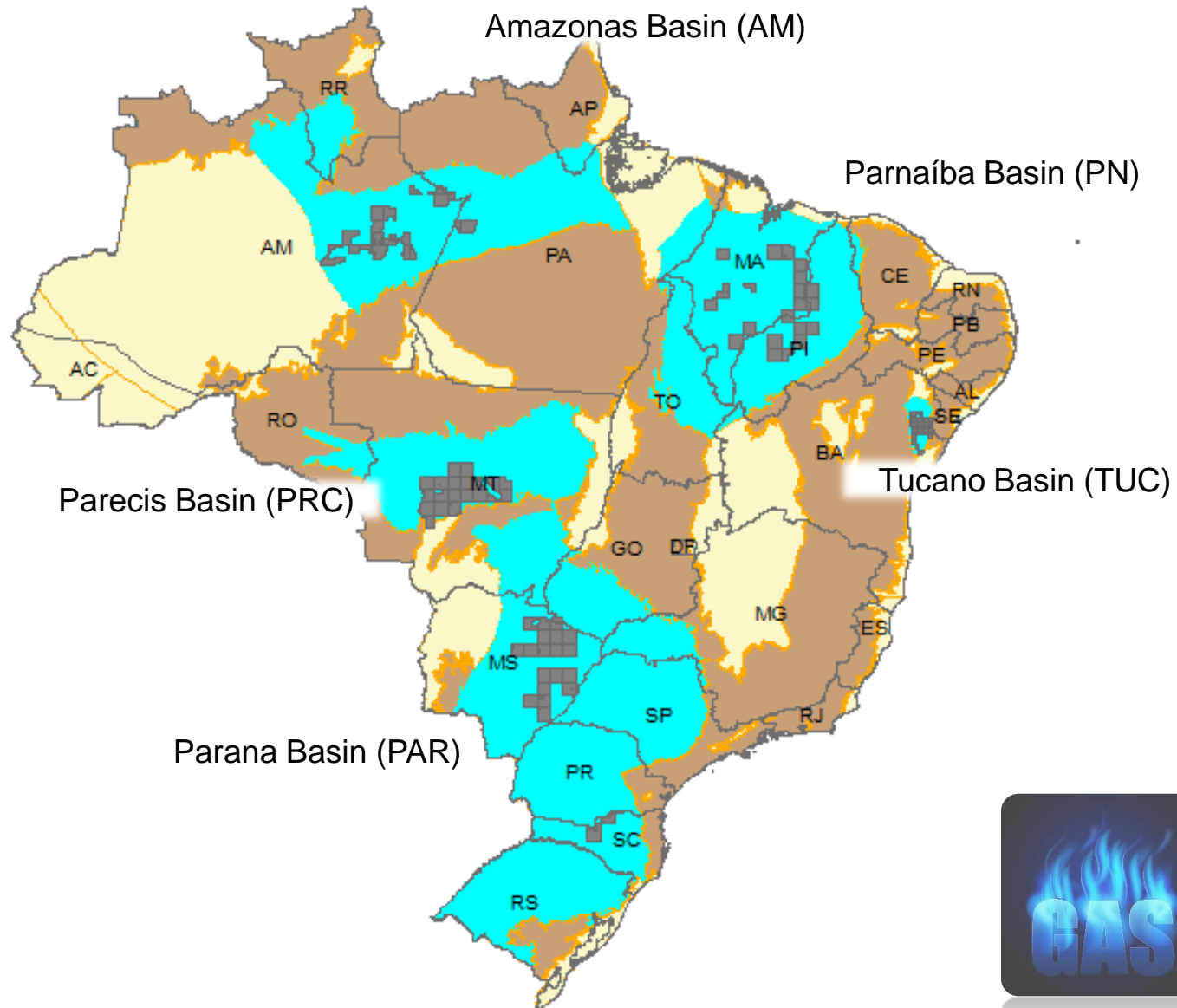
<https://reate.cprm.gov.br/anp/>

Minimum Bonus (R\$ 50,000 ~ US\$ 10,000)

Many Blocks on Offer on Open Acreage

Recent new discoveries and plays

Onshore New Frontier Basins



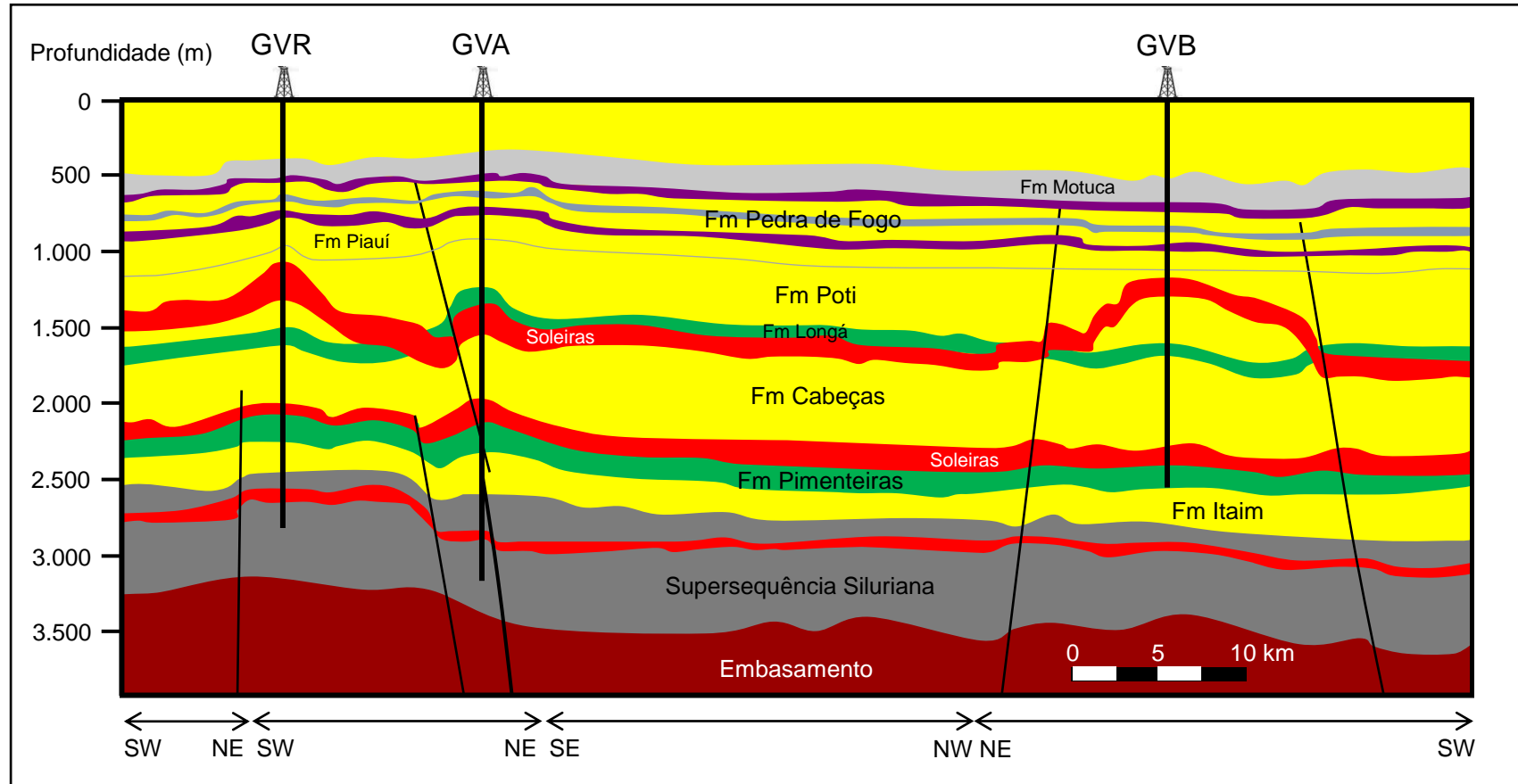
Available Blocks

AM (21), PN (21), TUC (39),
PRC (20), e PAR (21)



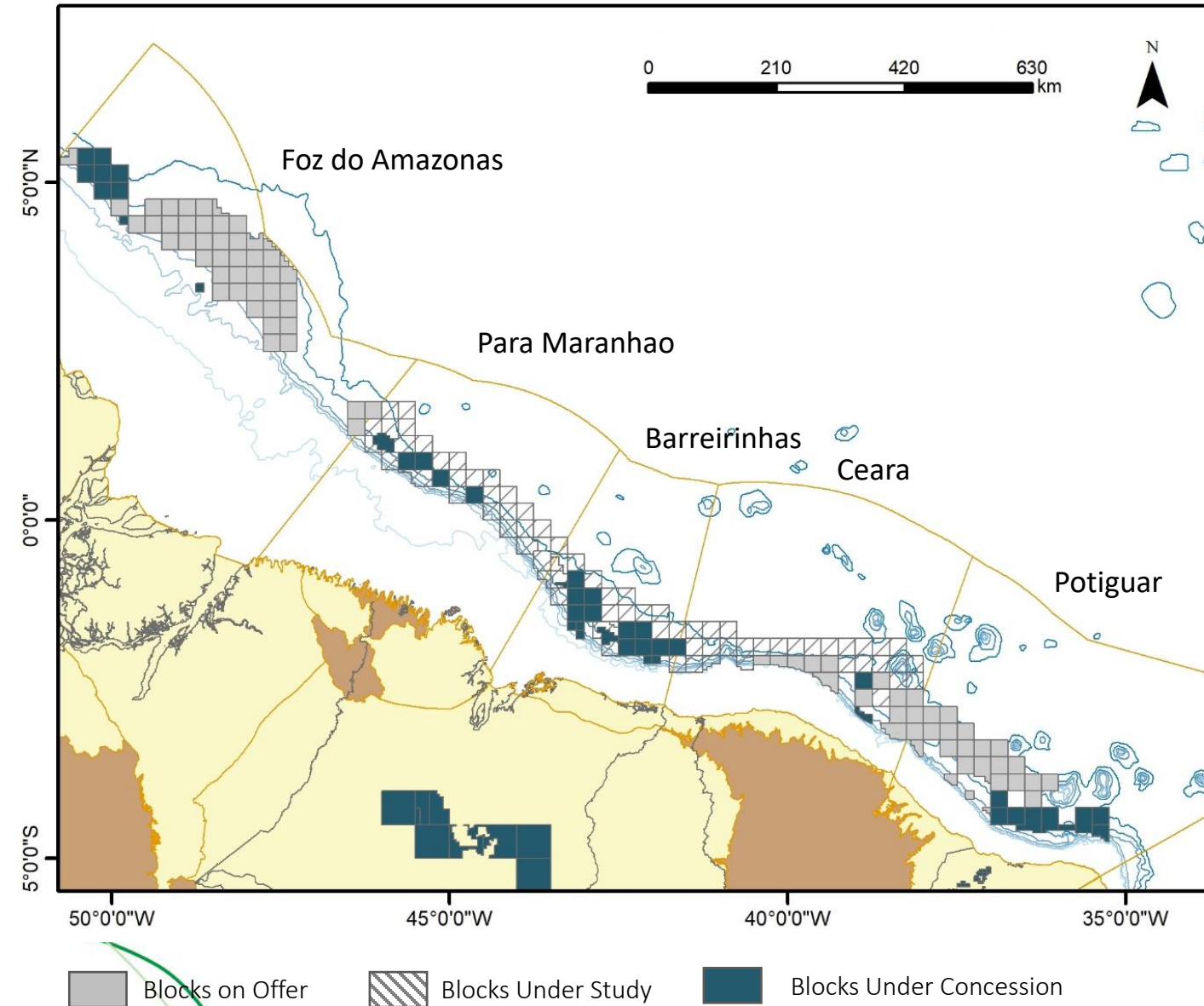
Parnaíba Basin

Geological Section: Gavioes Cluster



Source: Cunha *et al.*, 2012

Equatorial Margin



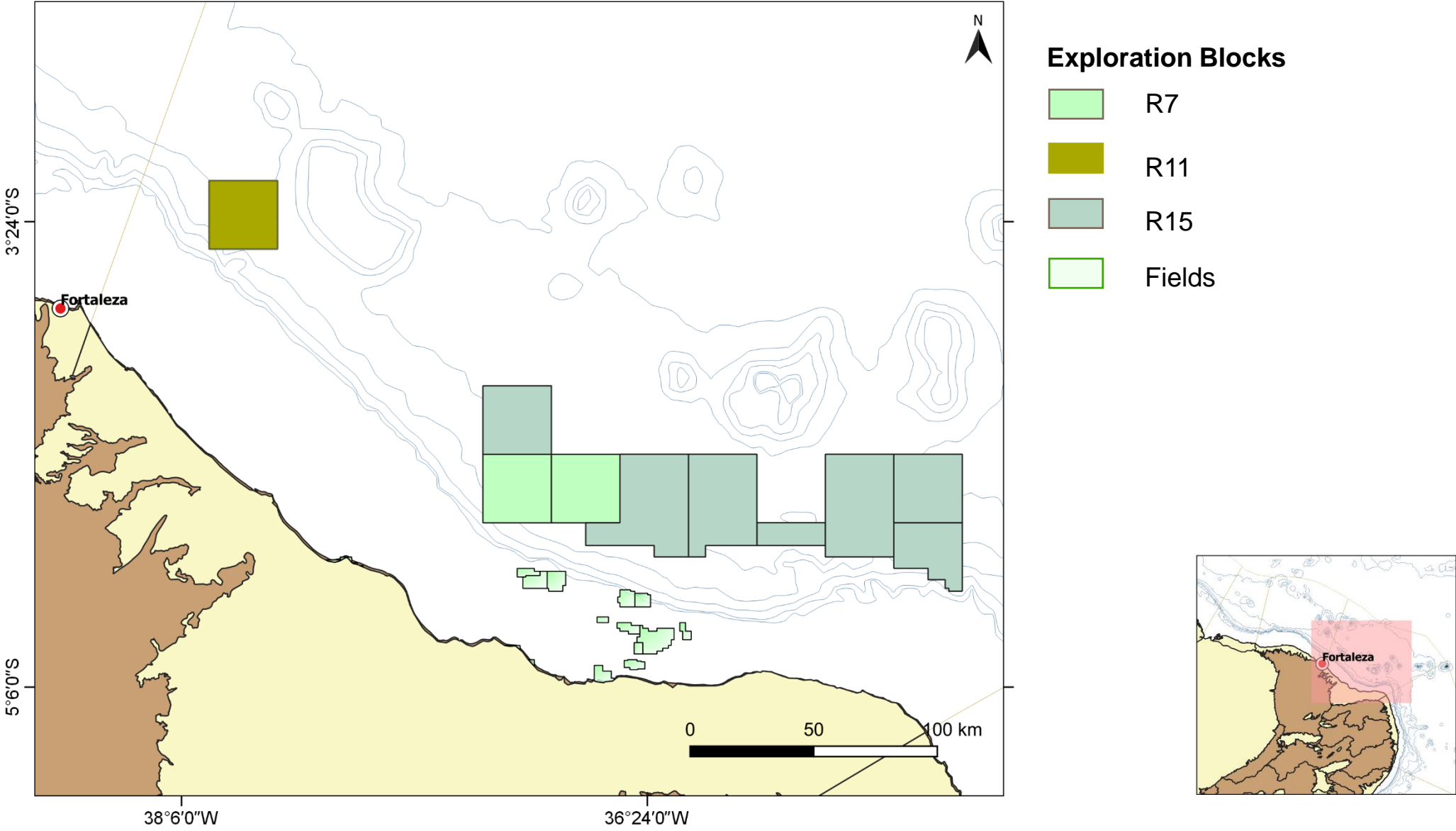
Worldclass Exploration Potential

Analogue to West Africa, Guyana and Suriname

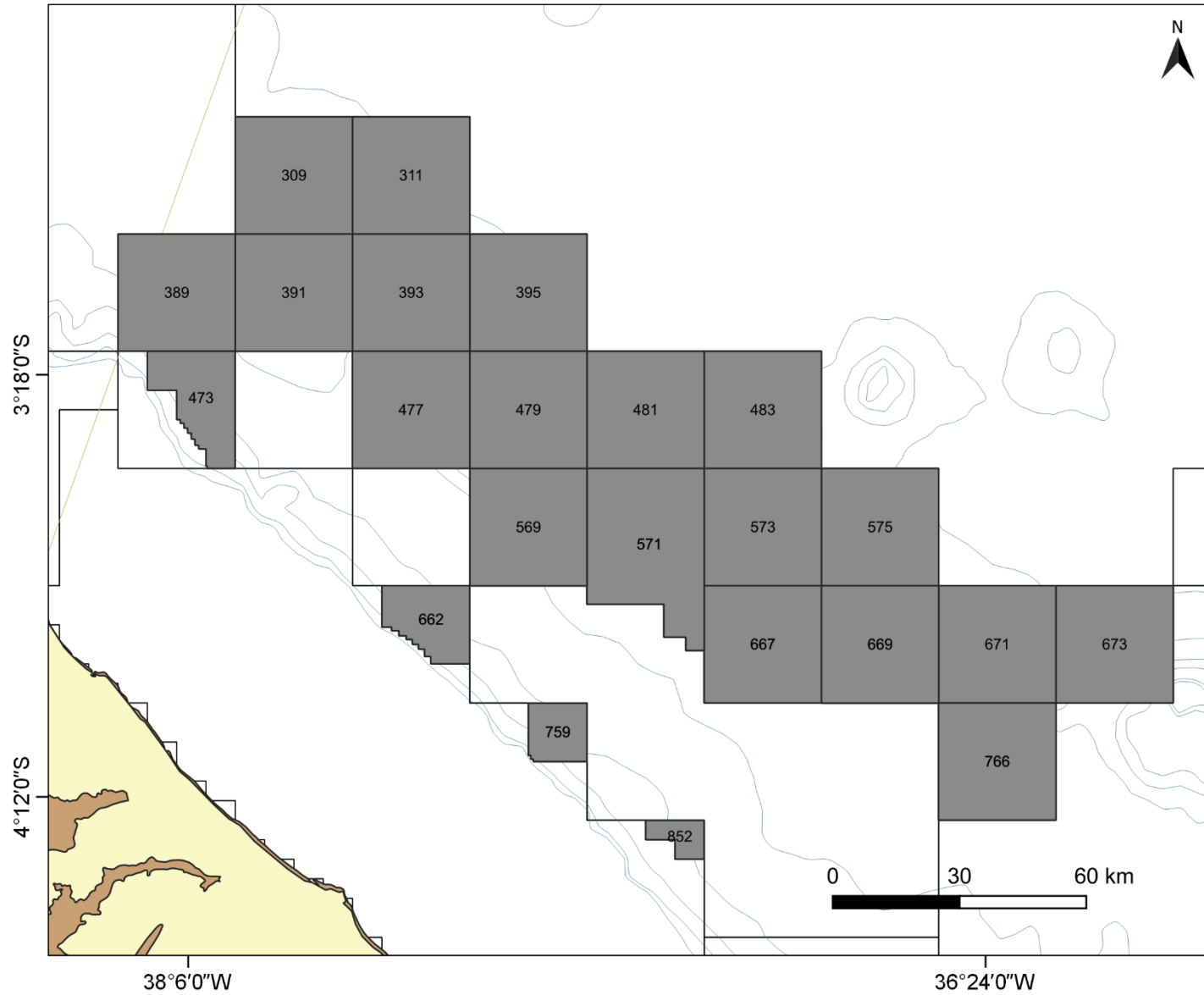
83 Blocks on Offer – Open Acreage

71 Blocks under study

Offshore Potiguar Basin

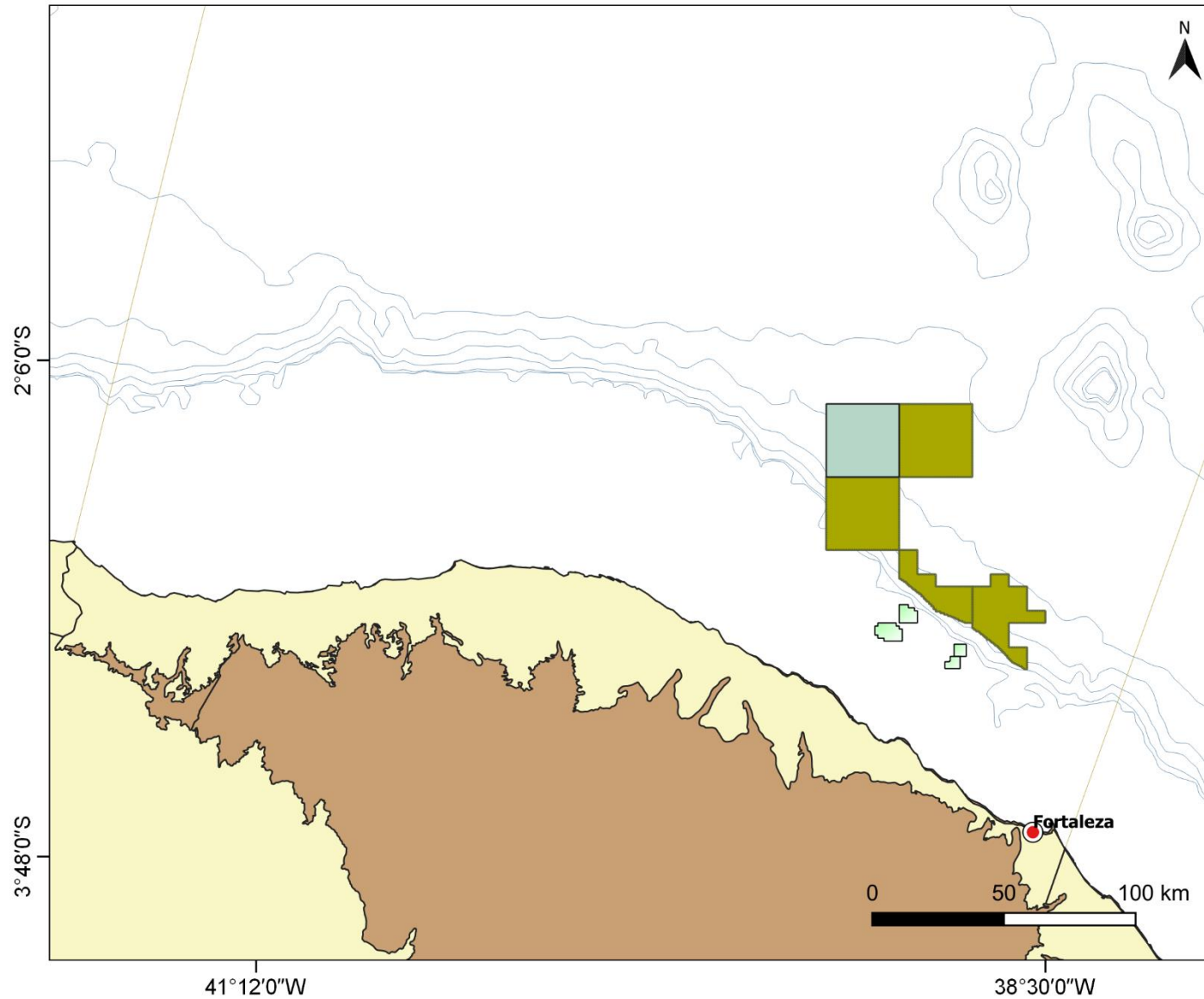


Offshore Potiguar Basin






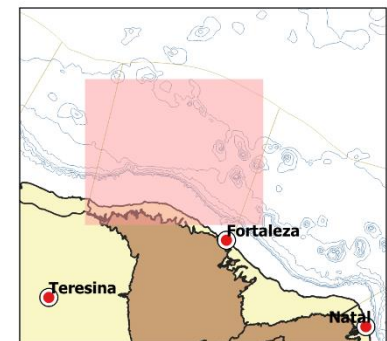
23 Blocks on Offer

Offshore Ceara Basin

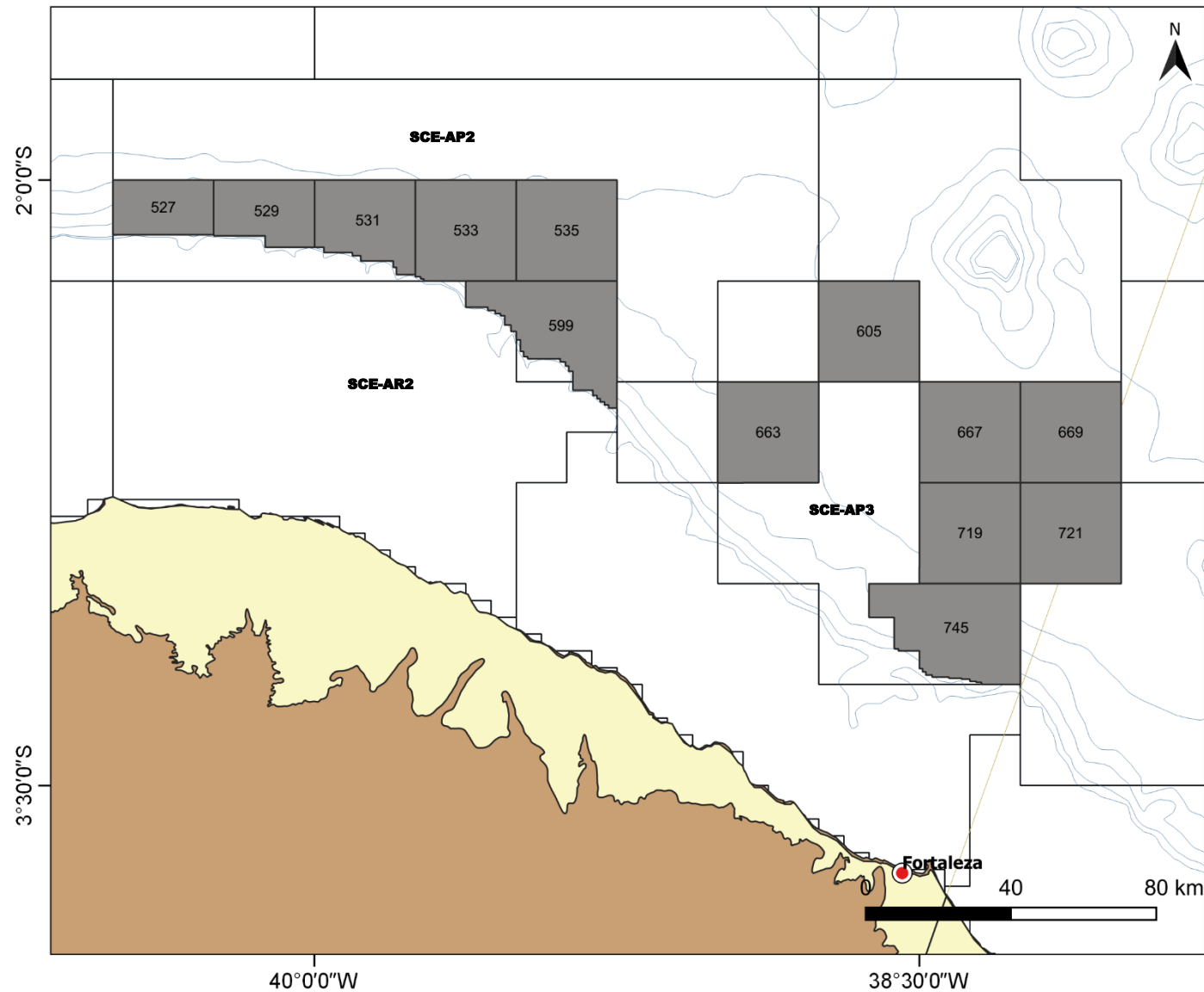


Exploration Blocks

-  R11
-  R15
-  Fields

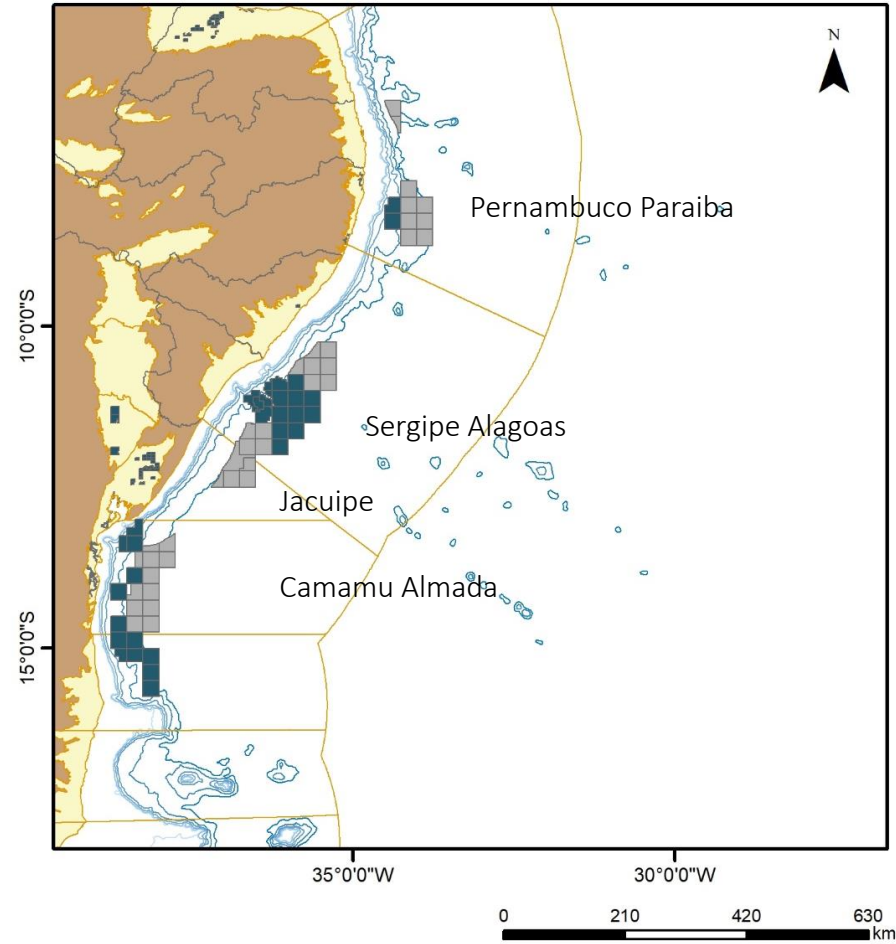
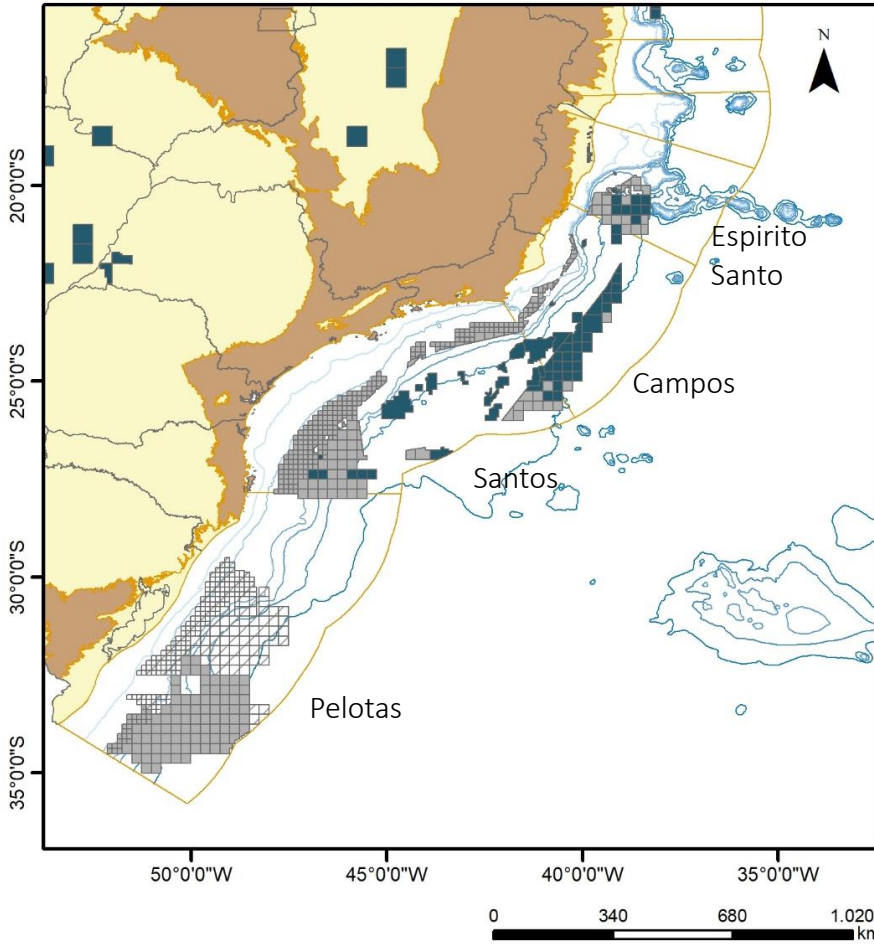


Offshore Ceara Basin



13 Blocks on Offer

East Margin Offshore Basins



New Frontier and Consolidated Basins

World Class Plays

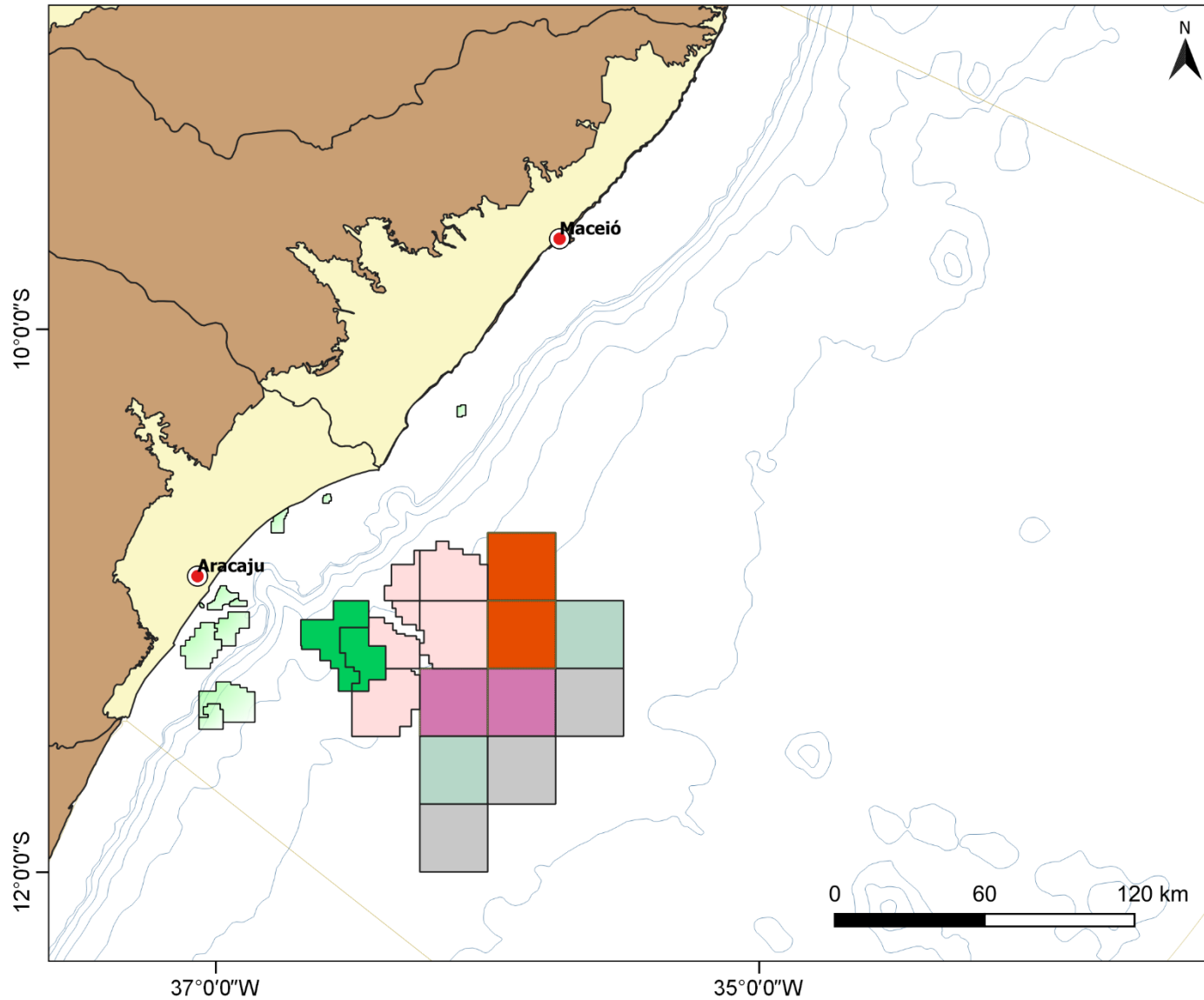
Several Giant Fields

463 Blocks on Offer – Open Acreage

224 Blocks under Study

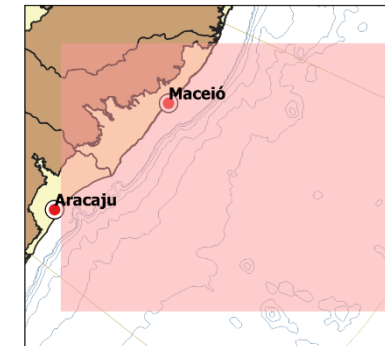
Blocks on Offer
 Blocks Under Study
 Blocks Under Concession

Sergipe Alagoas Offshore Basin

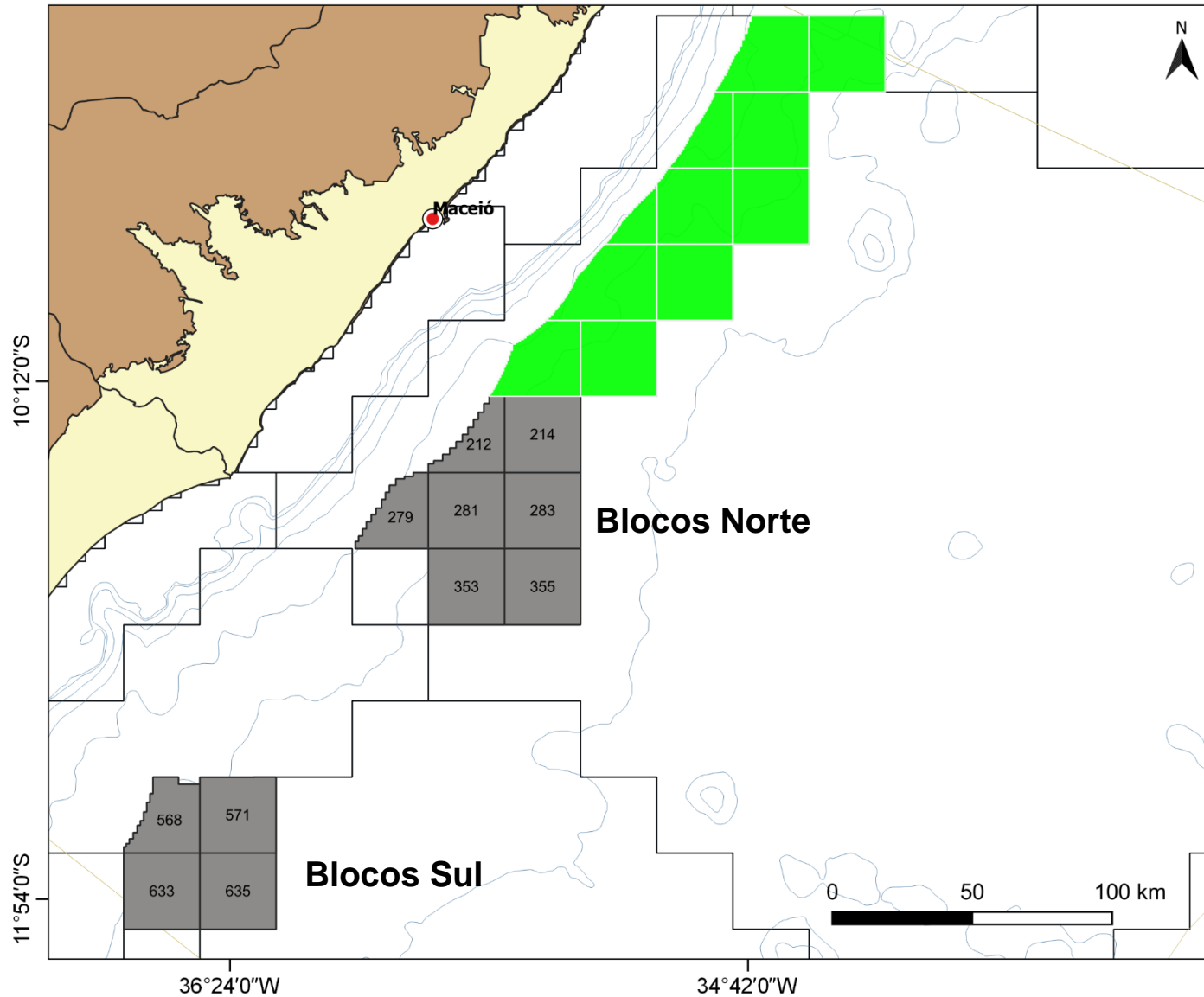


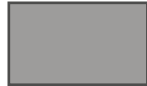
Exploration Blocks

- R2
- R6
- R13
- R14
- R15
- 1st Cycle Open Accreage
- Fields

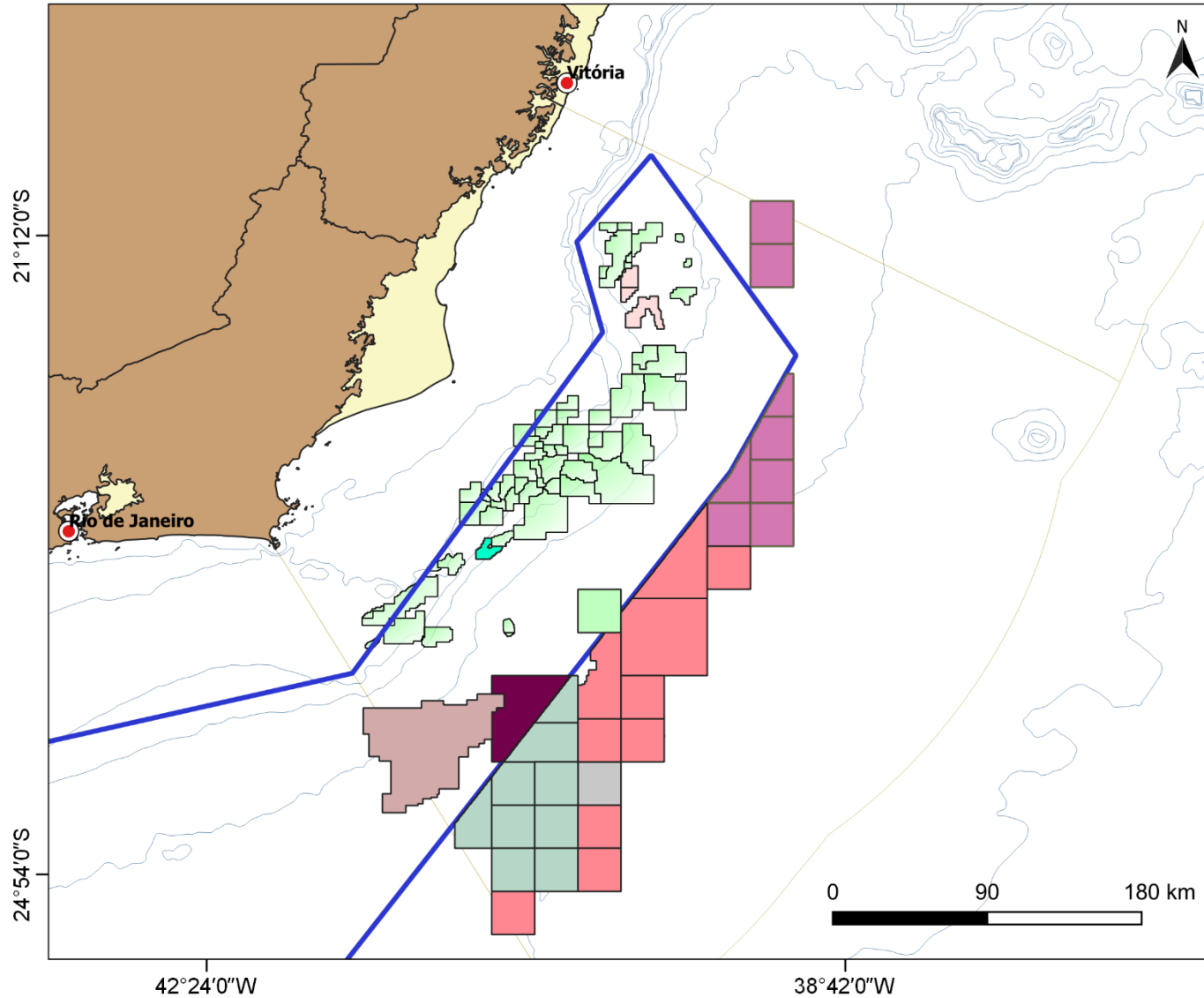


Sergipe Alagoas Offshore Basin



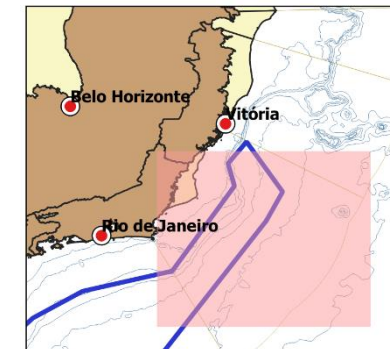

11 Blocks on Offer

Campos Basin

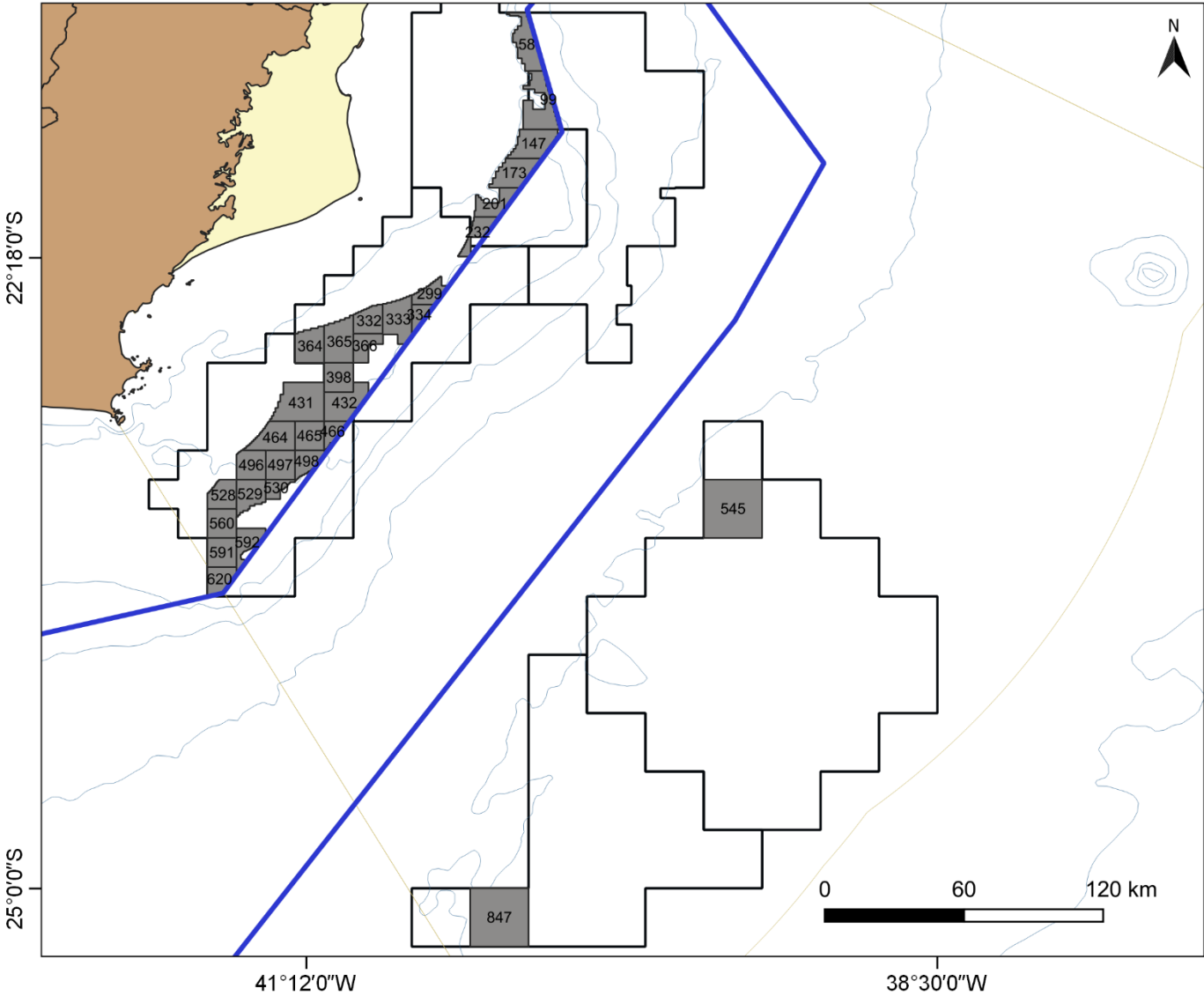



Exploration Blocks

- | | | | |
|--|------------------------|--|----------------------|
| | R6 | | Production Sharing 3 |
| | R7 | | Production Sharing 4 |
| | R14 | | Production Sharing 5 |
| | R15 | | |
| | R16 | | |
| | 2nd Cycle Open Acreage | | |
| | Fields | | |

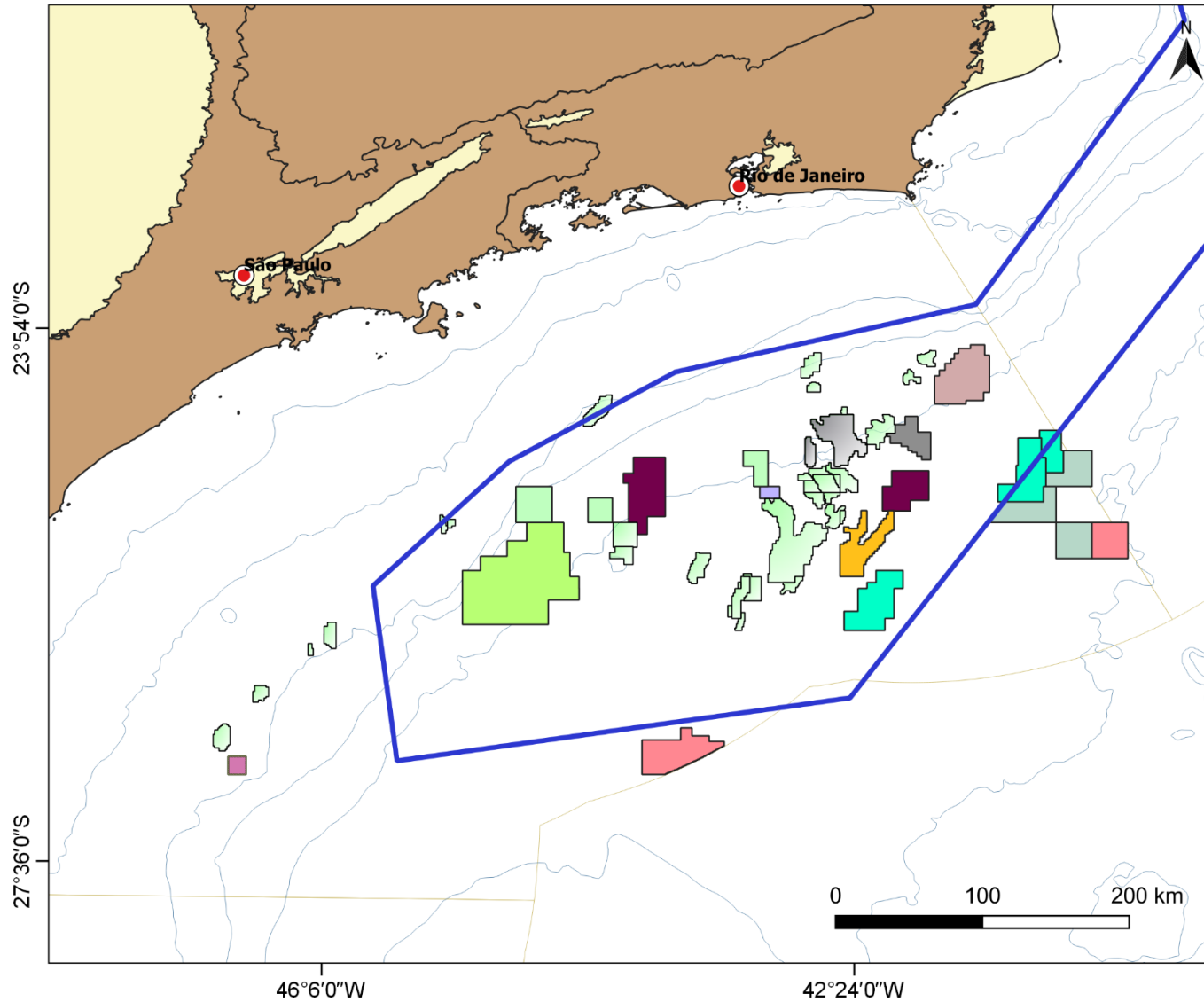


Campos Basin

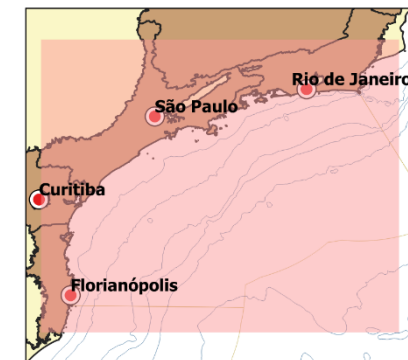
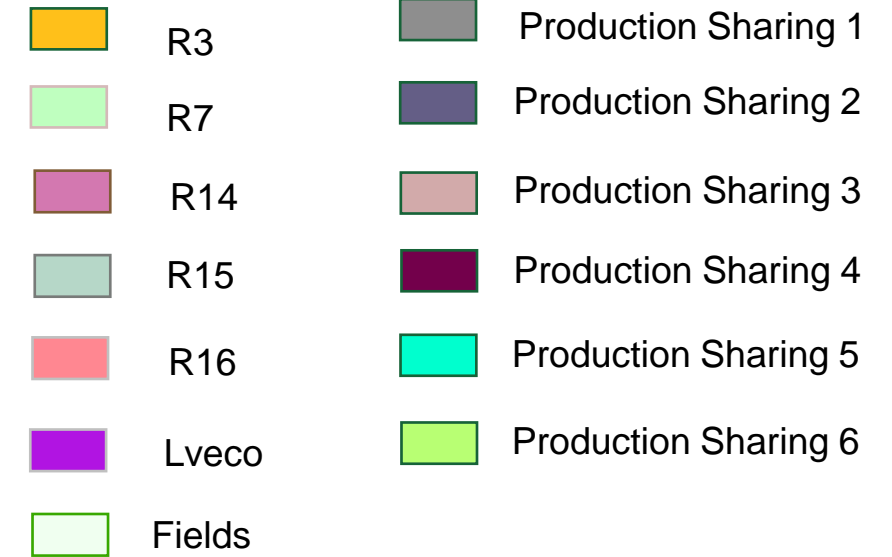



31 Blocks on Offer

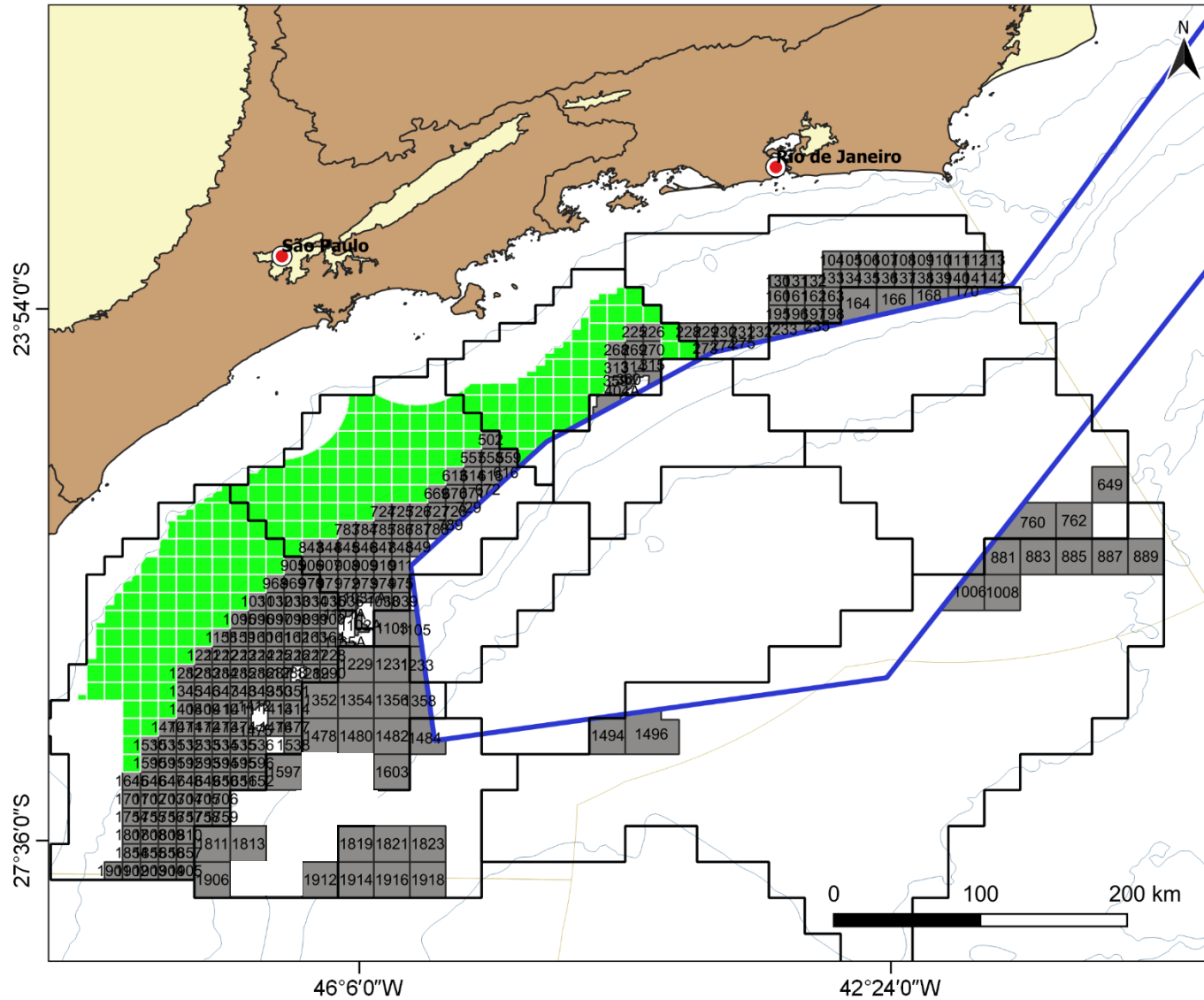
Santos Basin



Exploration Blocks

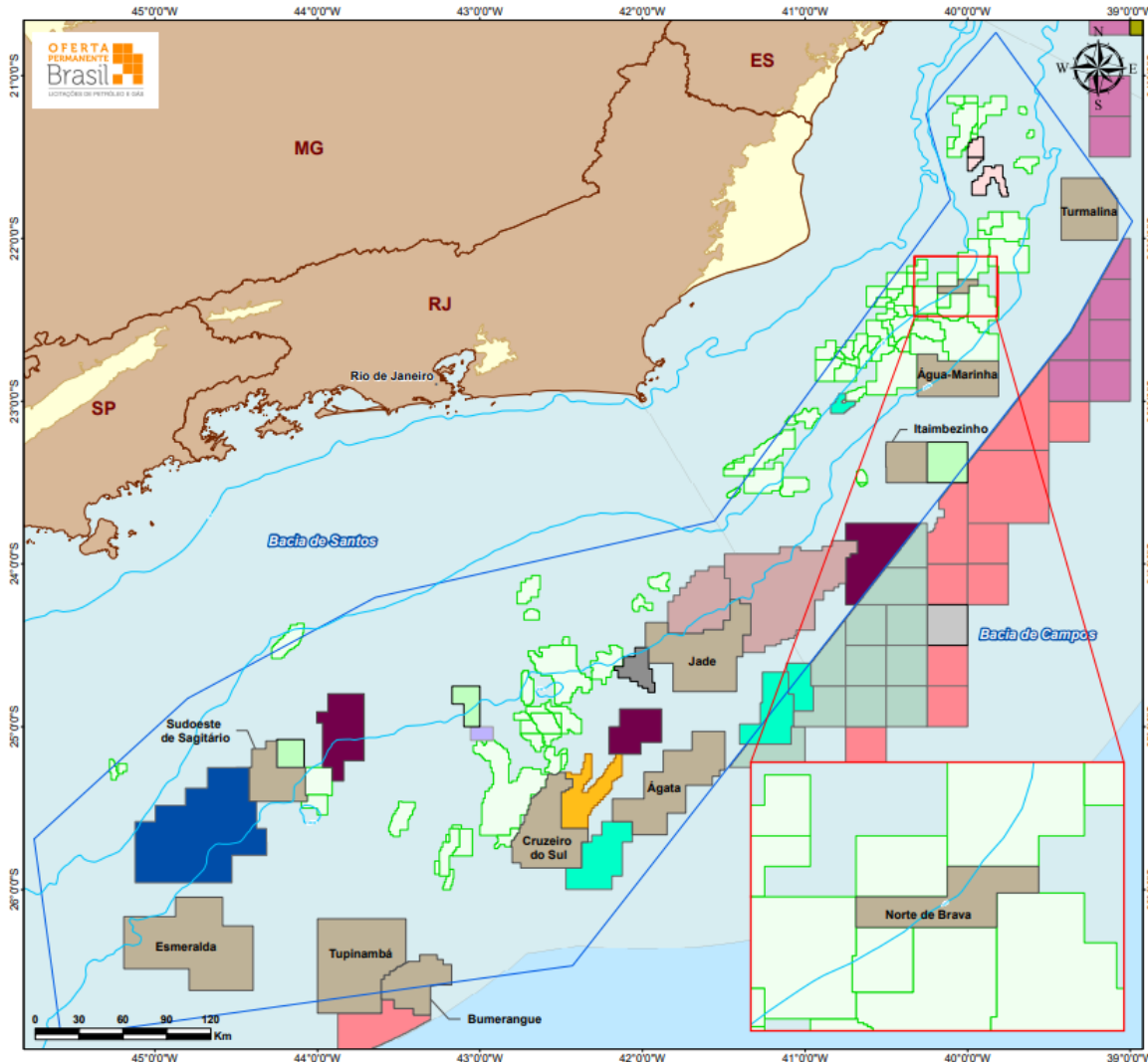


Santos Basin



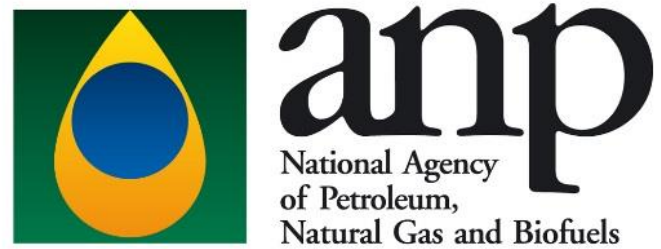
252 Blocks on Offer

Pre-salt Opportunities Open Acreage



11 Blocks

- Agata
- Água Marinha
- Bumerangue
- Cruzeiro do Sul
- Esmeralda
- Itaimbezinho
- Jade
- N of Brava
- SW Sagitário
- Tupinambá
- Turmalina



<http://rodadas.anp.gov.br/pt/>

www.gov.br/anp/pt-br

<https://www.gov.br/anp/pt-br/assuntos/investments-opportunities-in-brazil>

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