



**GLOBAL E&P
SUMMIT**

THE ENERGY ONLINE SERIES

BRAZILIAN EXPLORATORY OPPORTUNITIES & STRATEGIES TO IMPROVE ATTRACTIVENESS



ONLINE CONFERENCE

JULY 2nd, 2020

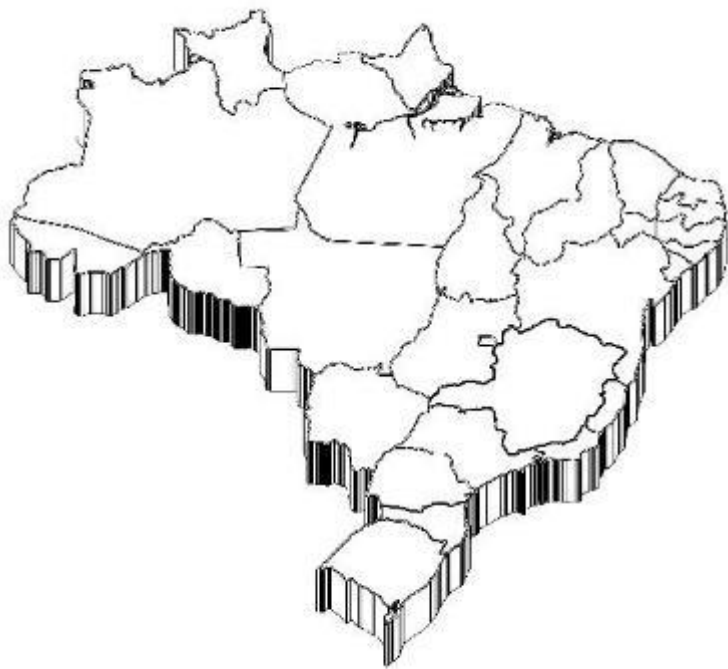
Ronan Ávila, MS.c.

Deputy Superintendent of Block Definition

NOTICE

- The ANP's institutional presentation is based on current and reliable information, but no representation or warranty is made as to its accurateness and completeness, and it should not be relied upon as such.
- Projections and estimated values are included without any guarantee as to their future realization.
- Forward-looking data, information, projections and opinions expressed during the presentation are subject to change without prior notice.

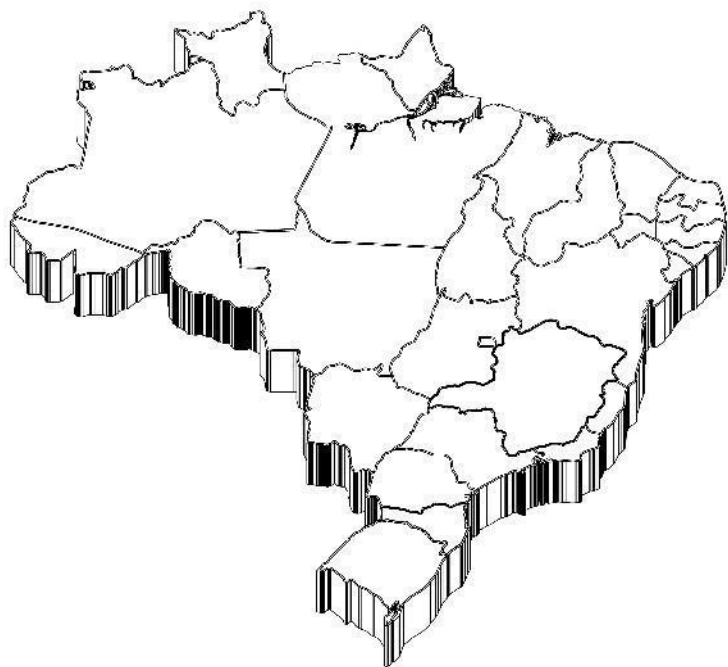




OUTLINE

- BRAZIL E&P OVERVIEW & FUTURE LICENSING ROUNDS
- OPPORTUNITIES
 - OFFSHORE (PRE-SALT & POS-SALT)
 - ONSHORE (MATURE & FRONTIER BASINS)
- FINAL REMARKS





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1st oil kind evidence. The State (Imperator) became the owner of the subsurface resources (constitution)

Beginnig of whale oil replacement

Standard Oil, Shell and Texaco installed in Brazil. Increased fuel imports

National Consul of Petroleum (CNP)
Lobato well, 1st oil discovered
Candeias 1st comercial field
3 refineries installed (SP & RS) – 1.650 bbl

1824

1870

1897-1915

1938-1941





*Law nº 2004, Petrobras.
Monopoly model, except distribution*

*Auto industry expanded
their investments*

*National Consul of Petroleum (CNP) was extinct
National Fuel Department was founded (DNC)*

ANP and CNPE
*Law nº 9.478
Flexible Monopoly Rules
PRH-ANP & PDI*

1953

1960

1990

1997-1999





	PRESALT		
<i>Bidding rounds. Concession Regime. ANP delimit the blocks & CNPE deliberate.</i> FREE COMPETITION	<i>Tupi Prospect Law nº 12.351 (Poduction Share, Presalt Polygon & strategic areas) "STAND BY" BIDDING ROUNDS</i>	<i>Three Bidding Rounds 11,12th on concession regime 1st on production share (Libra)</i>	<i>Bidding Rounds Calendar Local content new politcs Good results on bidding rounds Royalties reduction for incremental prod.</i> OPEN ACREAGE
1999	2007-2013	2013	2017-2019



WHAT'S NEXT?



2020-2022



BIDDING ROUNDS



SEPIA AND ATAPU FIELDS

Studies ongoing

3rd quarter, 2021

ORDINANCE No 23, Jan. 23th, 2020



96 EXPLORATORY BLOCKS

ANP studies ✓

CNPE will define new schedule

RESOLUTION N° 24, Oct. 18th, 2019



3 EXPLORATORY BLOCKS

ANP studies ✓

MME => CNPE deliberation

RESOLUTION N° 19, Dec. 11th, 2018



> 1.700 EXPLORATORY BLOCKS & FIELDS

On demand bidding rounds

Market driven choices

RESOLUTION N° 17, Jun. 08th, 2017

RESOLUTION N° 24, Oct. 18th, 2018

+ REATE: Revitalization of Oil&Gas E&P Activities Onshore (Res. N°27,12/2019)

http://www.mme.gov.br/documents/36074/252491/Resolucao_CNPE_27.pdf/17910fc6-bbd4-6d2b-9025-5559688d5a03

+ BidSIM: Improve Bid Rounds Attractiveness (Gov. Decree 10,320/2020)

<https://presrepublica.jusbrasil.com.br/legislacao/830380834/decreto-10320-20>

SEPIA & ATAPU FIELDS

Surplus Volumes

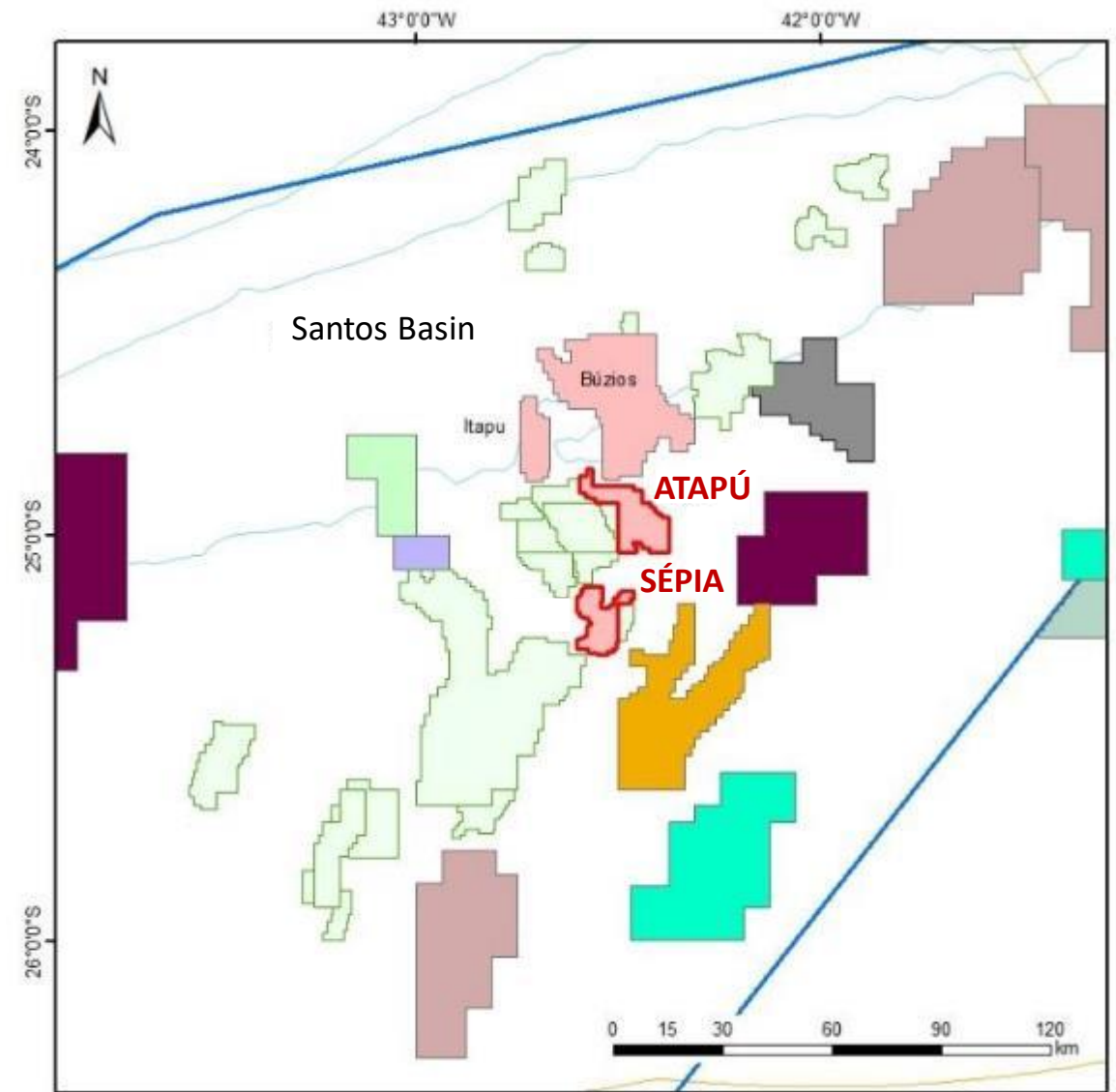


MME Ordinance n° 23/2020, Jan. 27th, 2020

ANP RD 0290/2020

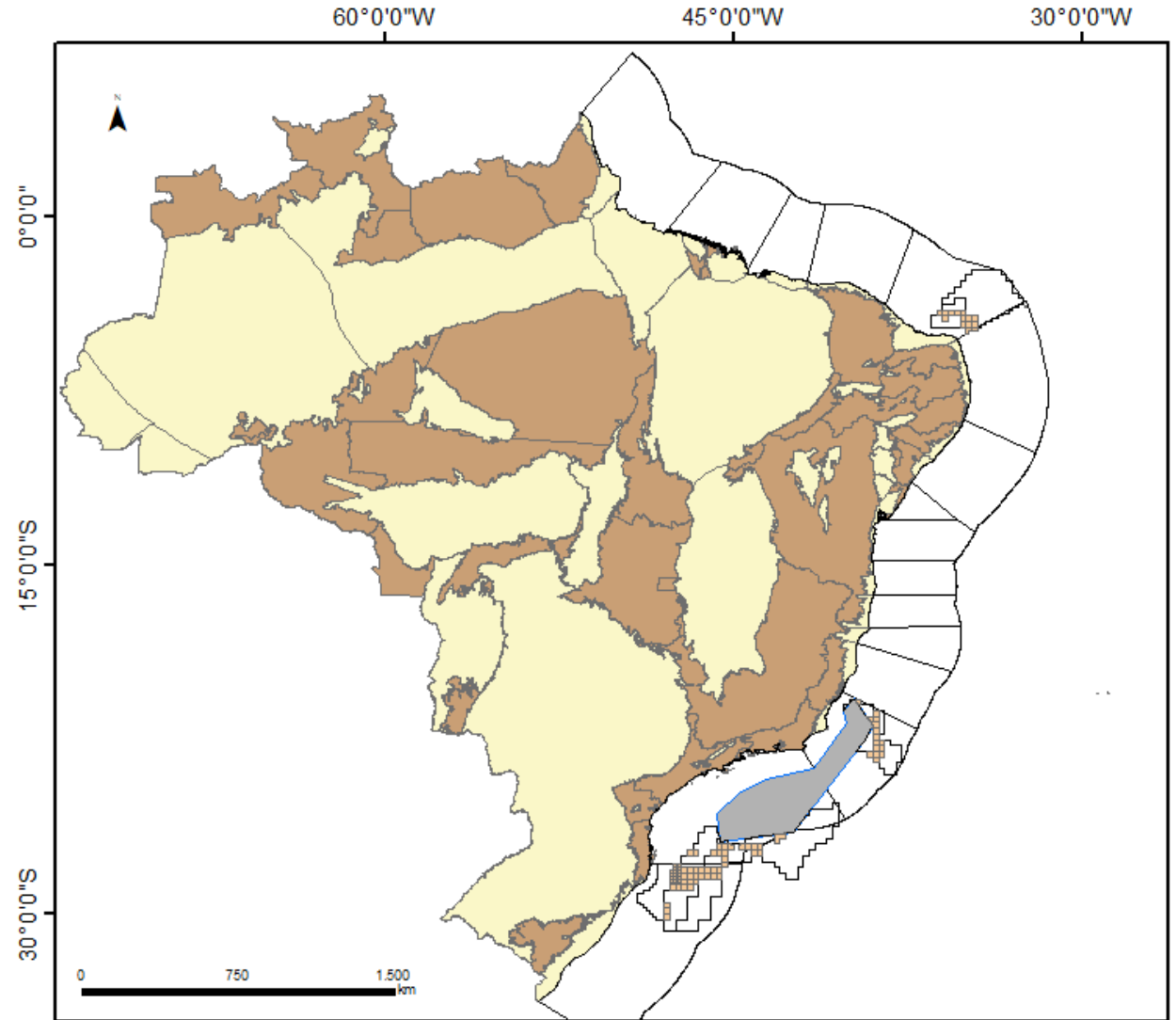
I) Approved Action Plan & II) Allow SDP, SDB e SPL

<http://www.anp.gov.br/reunioes-da-diretoria-colegiada/deciso-es-em-circuito-deliberativo>



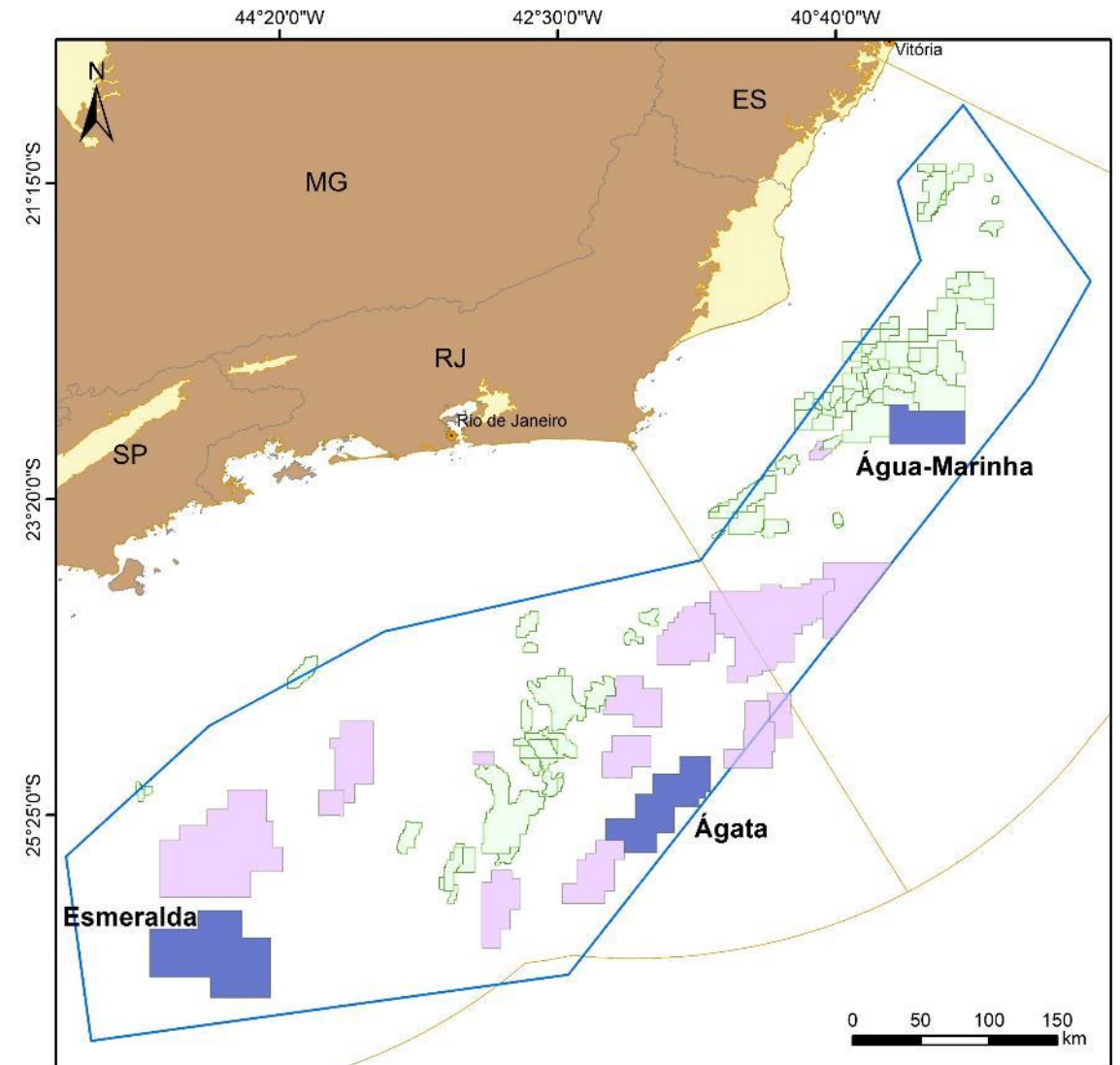
PPSA & Petrobras are negotiating compensation and co-participation agreement

96 EXPLORATORY BLOCKS

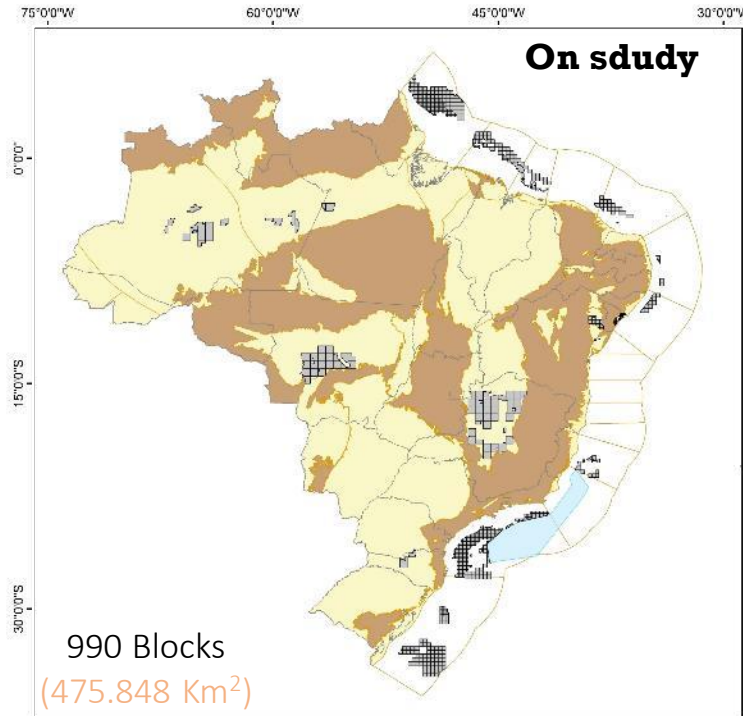


ANP board approved on April 1st, 2020, temporary suspension of the 17th Bidding Round which was scheduled for 2020. ANP complied the letter from the MME requesting the suspension in view of the economic and social scenario due to the Covid-19 pandemic.

3 EXPLORATORY BLOCKS

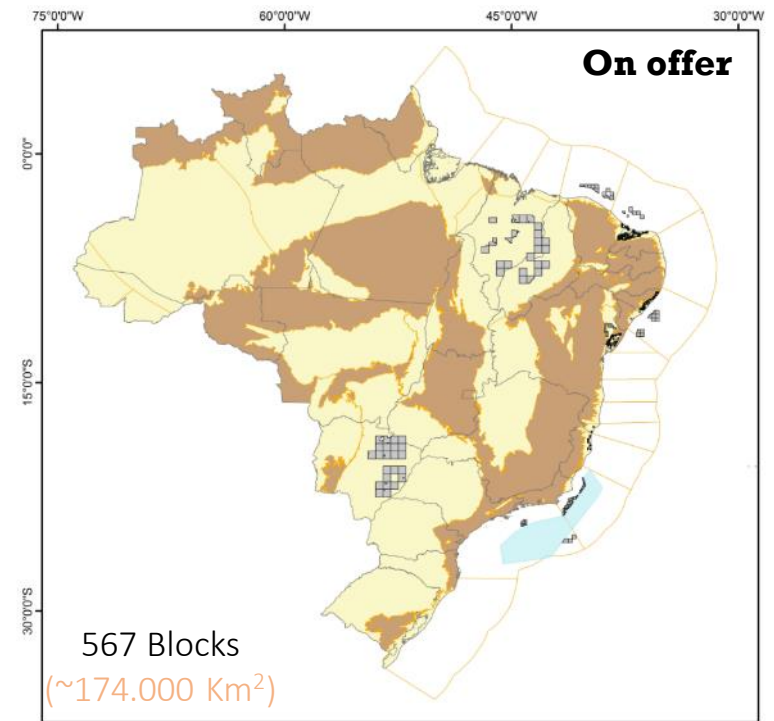
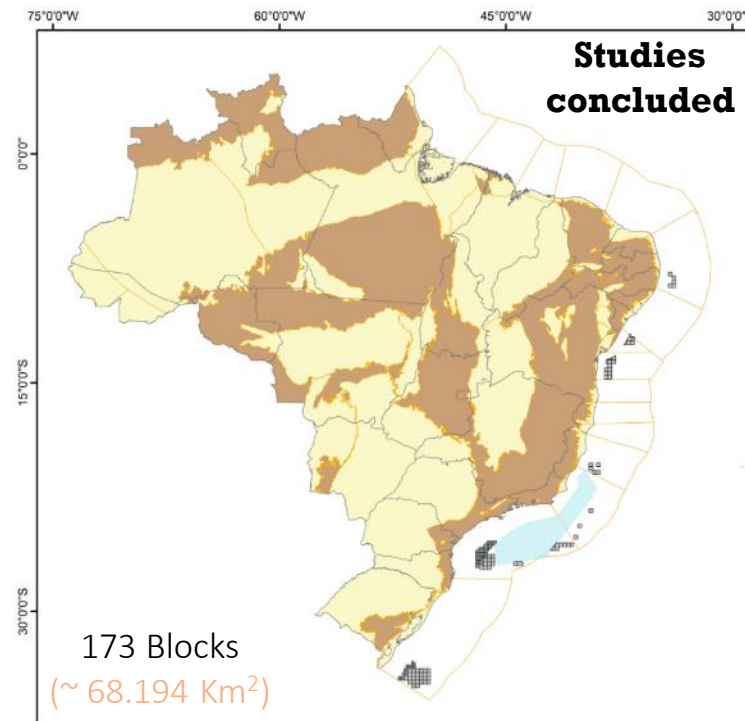


> 1,700 EXPLORATORY BLOCKS



Nomination

<http://rodadas.anp.gov.br/pt/nominacao-de-areas>

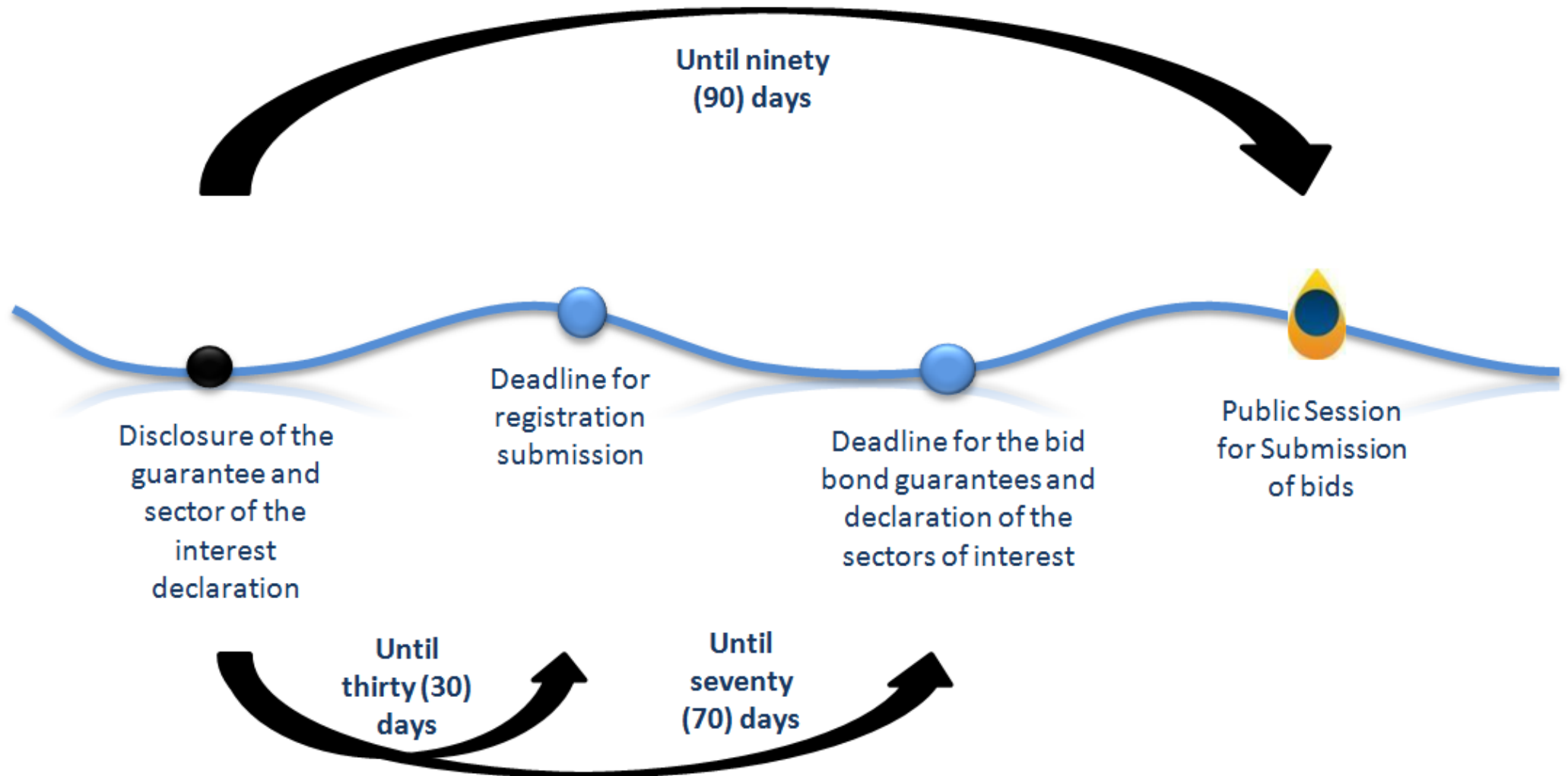


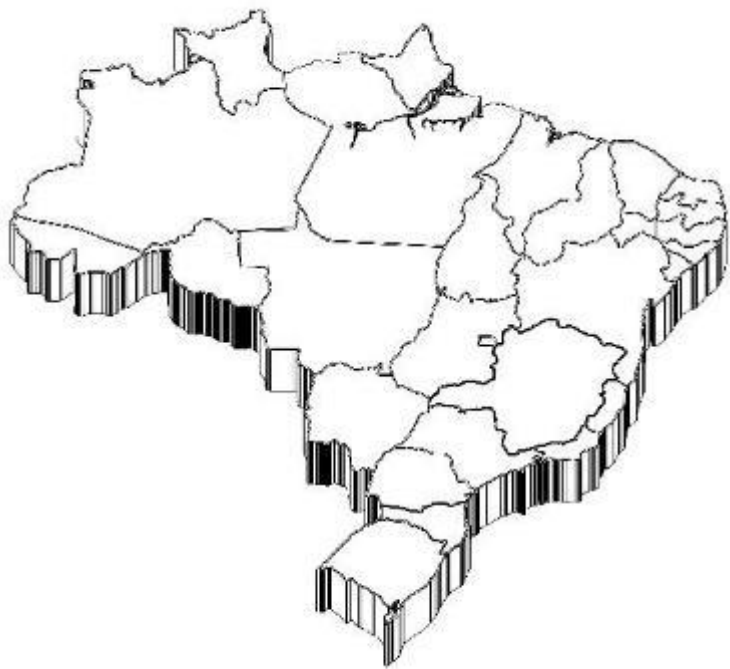
Declaration of Interested

<http://rodadas.anp.gov.br/pt/oferta-permanente/inscricao-de-licitantes>

<http://rodadas.anp.gov.br/pt/oferta-permanente/blocos-exploratorios>

COMPANIES CAN SUBMIT THEIR REGISTRATION ANYTIME

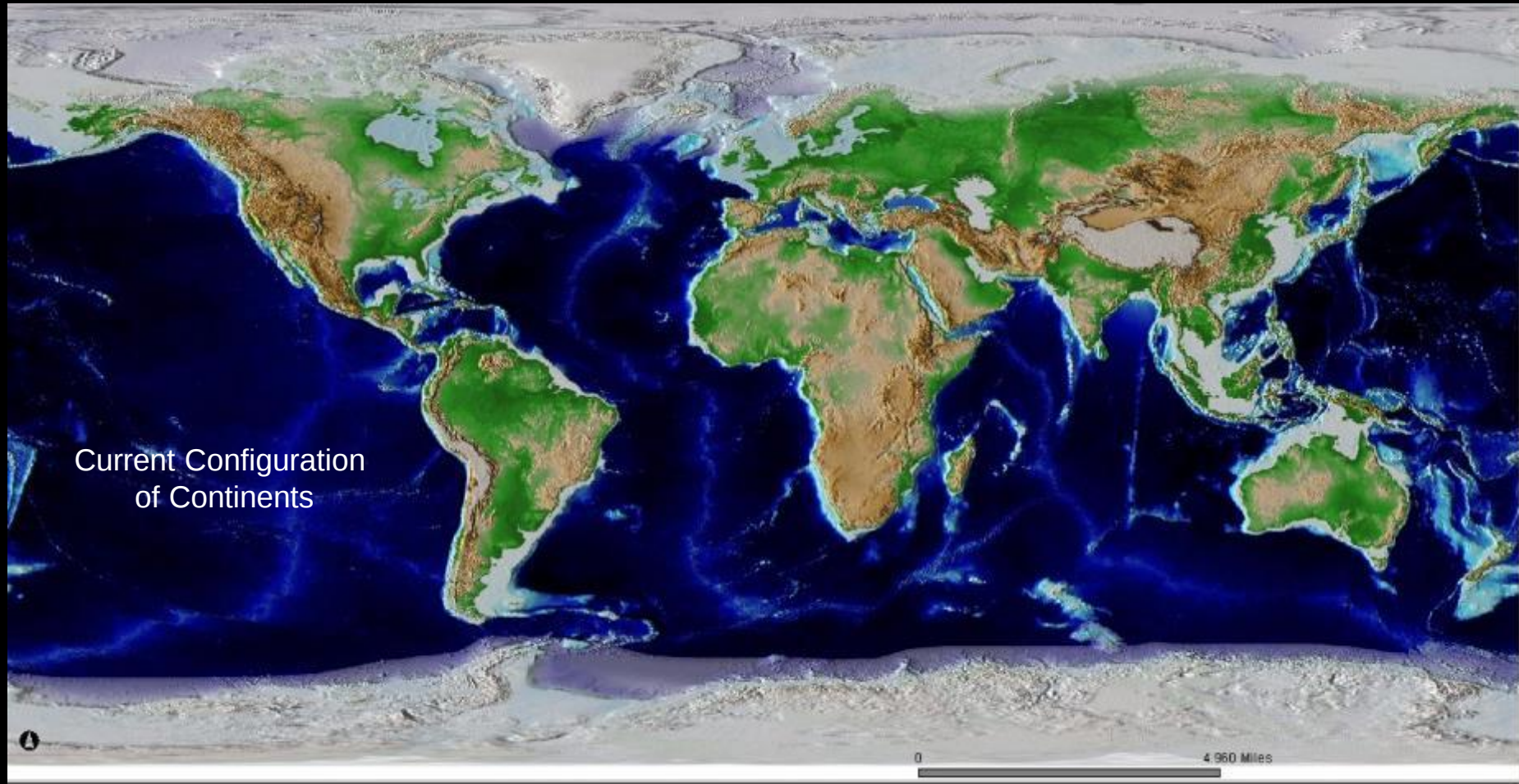




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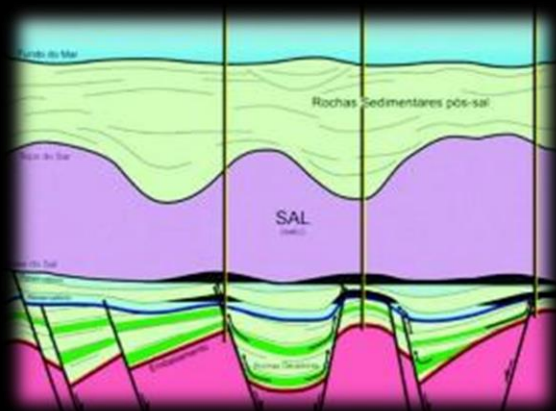


SINBPA/Petrobras
Scotese

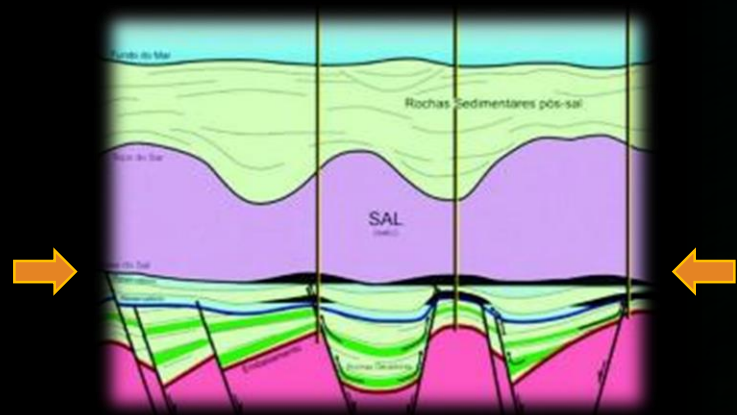
SEDIMENTARY BASINS AND PRE-SALT POLYGON



PRE-SALT

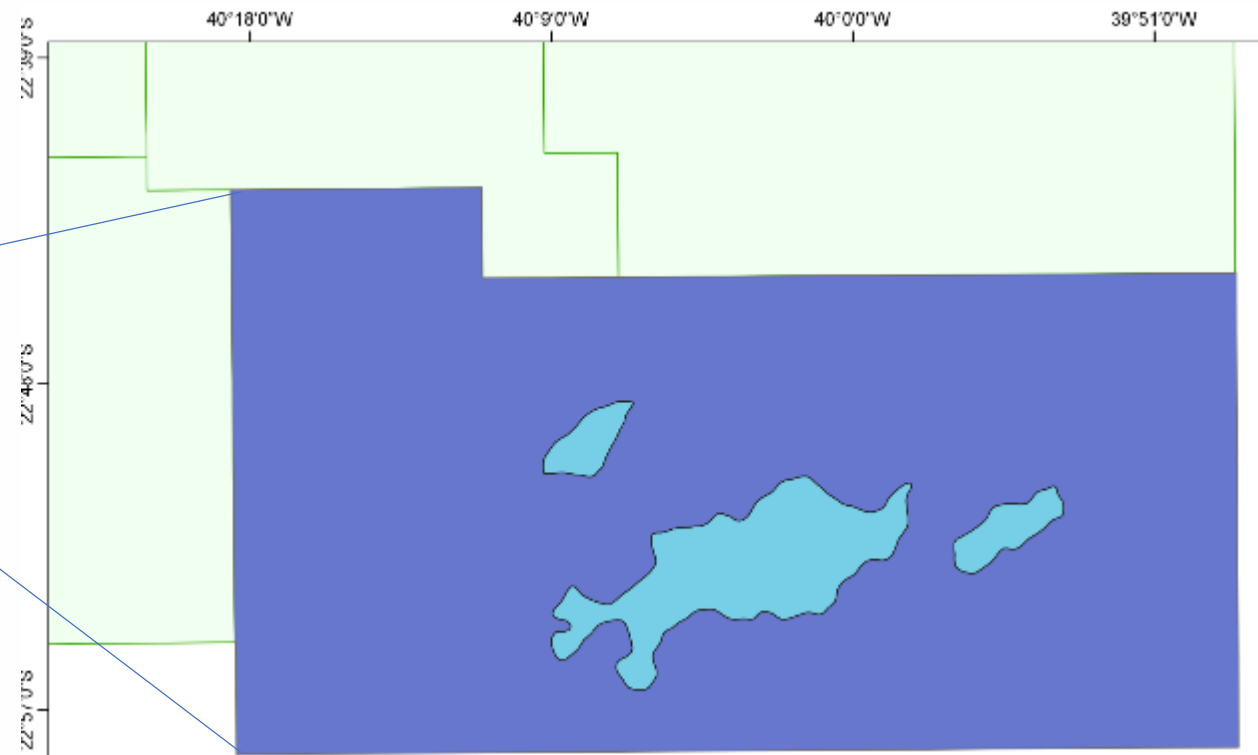
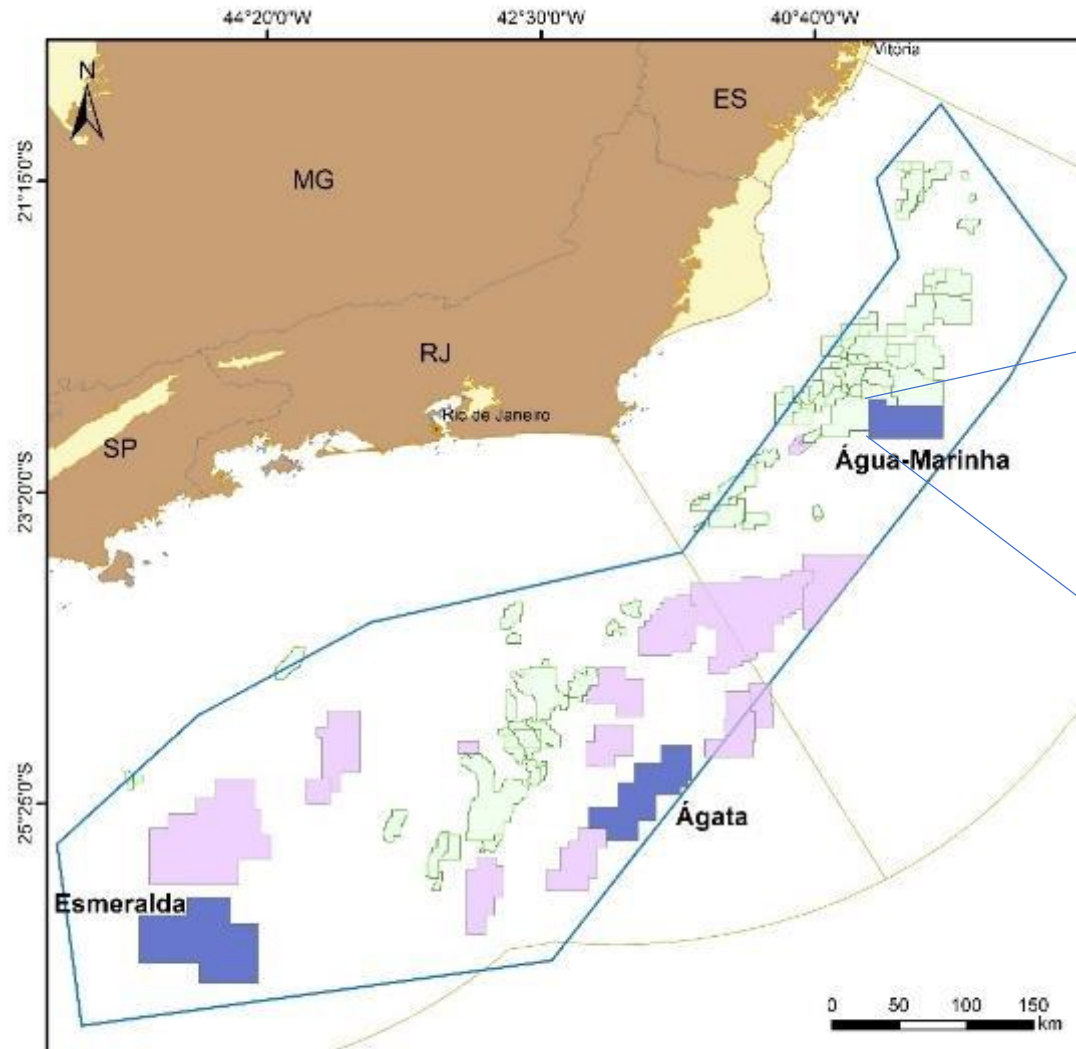


PRE-SALT



PRE-SALT

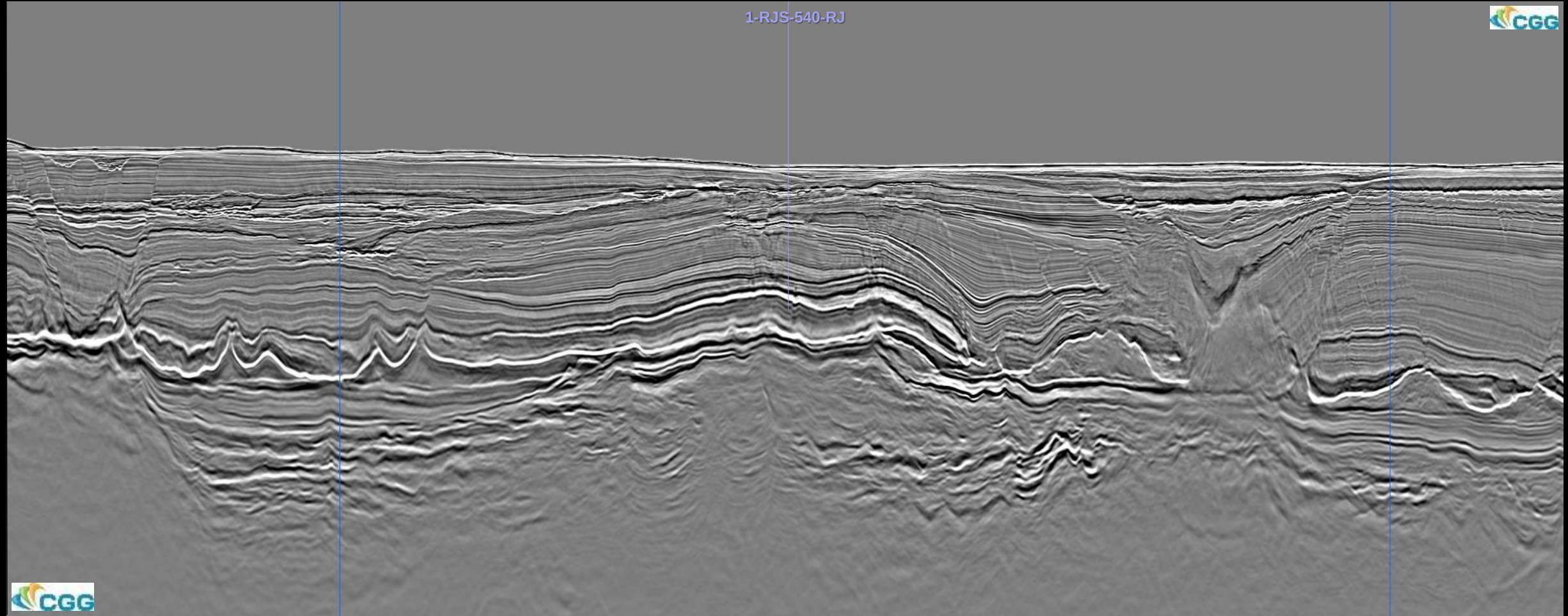
Available Opportunities – LP7



VERY LOW GEOLOGICAL RISK PROSPECT

Neighbor to Several Fields

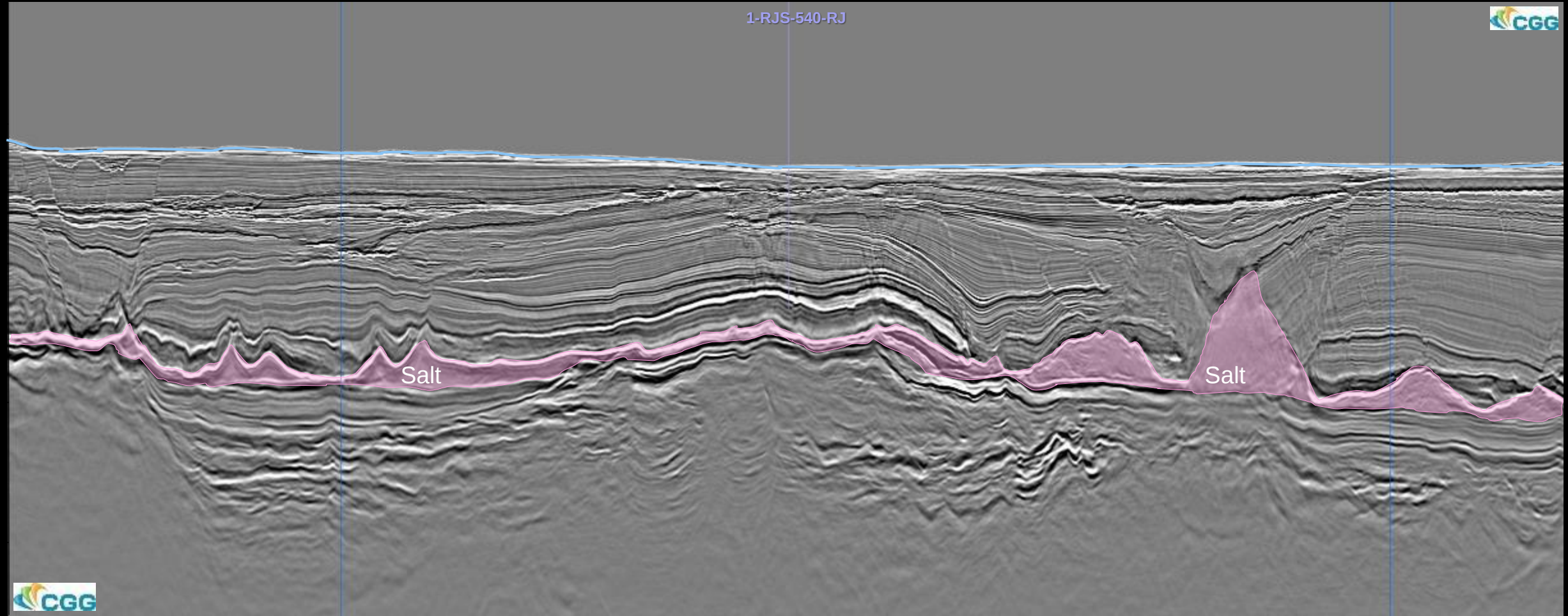
ÁGUA MARINHA BLOCK



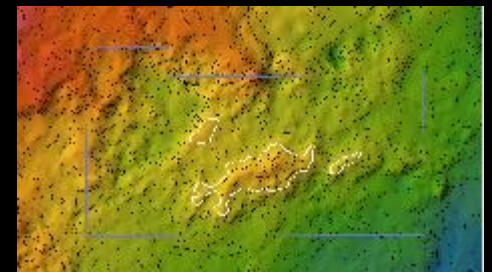
0264_BMC_CAMPOS_FASE_II (RTM) – Arbitrary line - Courtesy CGG

6 Km

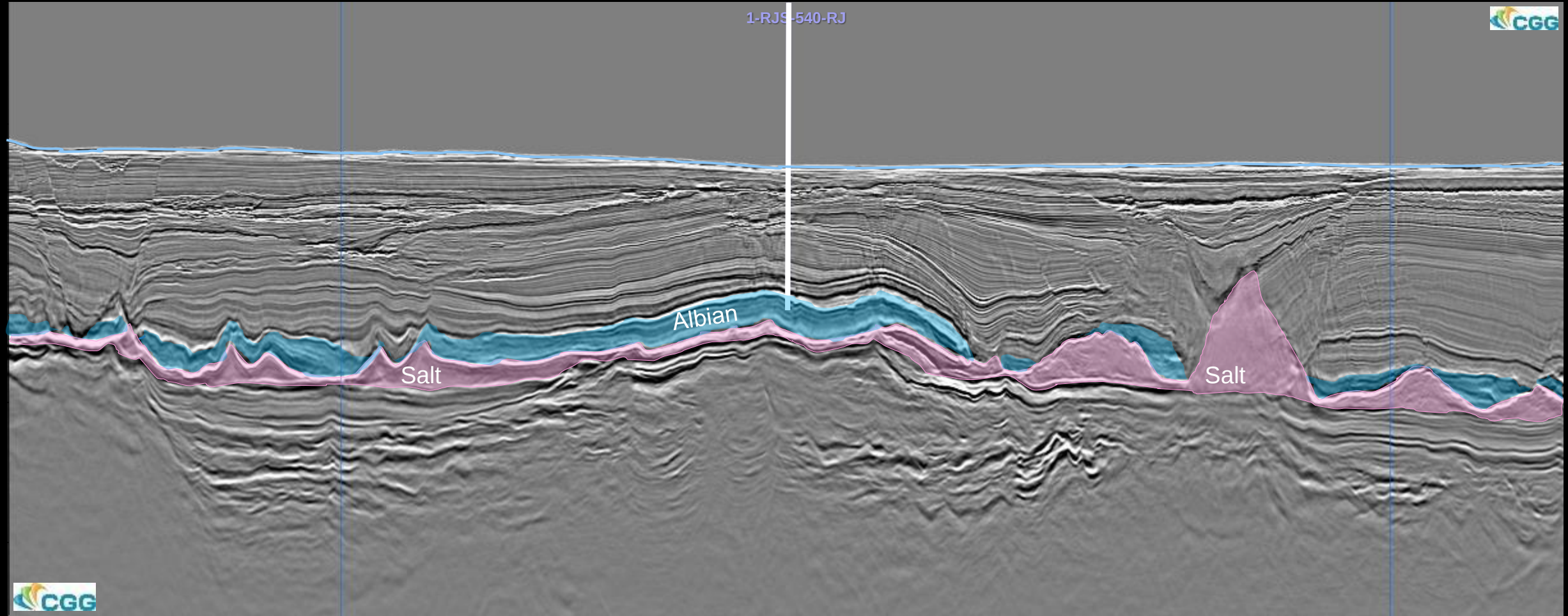
ÁGUA MARINHA BLOCK



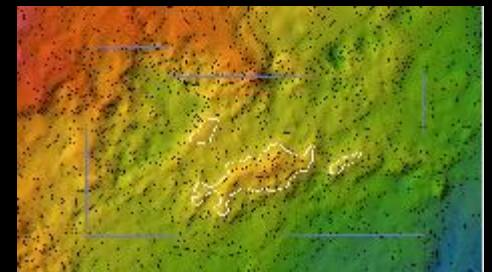
0264_BMC_CAMPOS_FASE_II (RTM) – Arbitrary line - Courtesy CGG



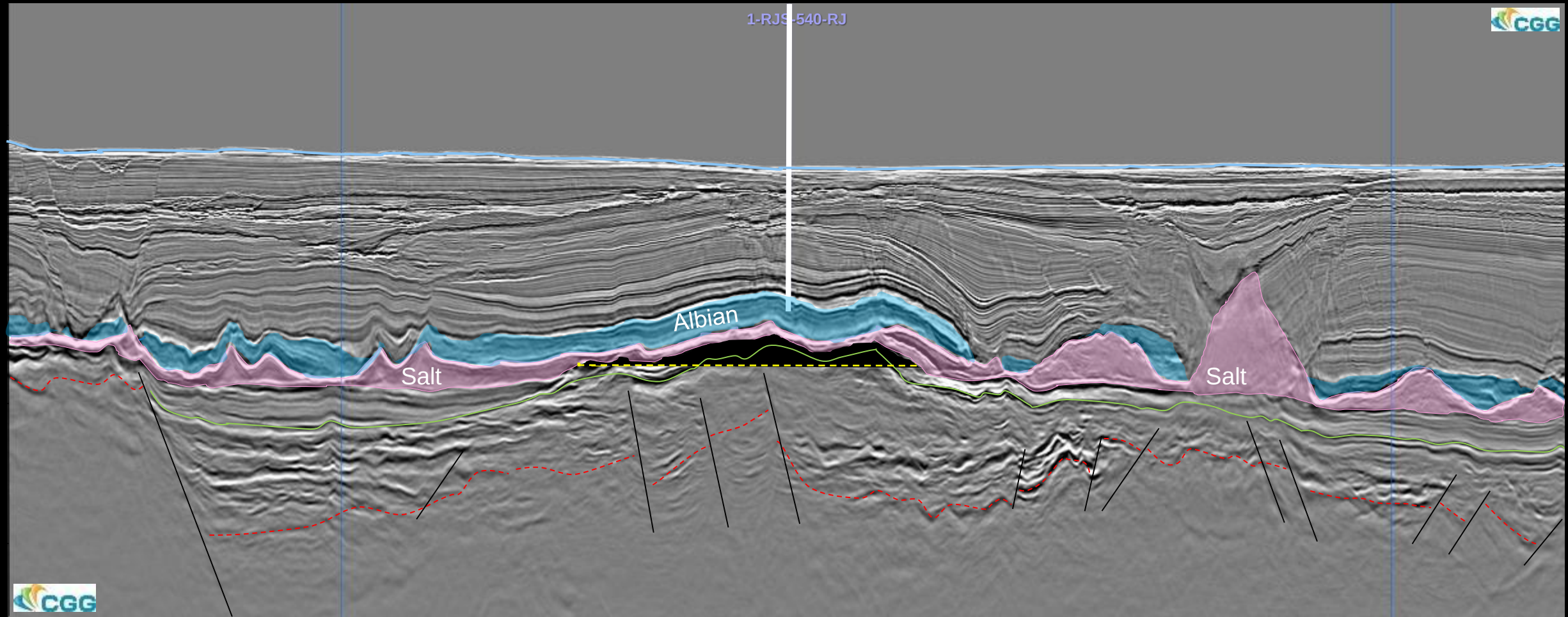
ÁGUA MARINHA BLOCK



0264_BMC_CAMPOS_FASE_II (RTM) – Arbitrary line - Courtesy CGG

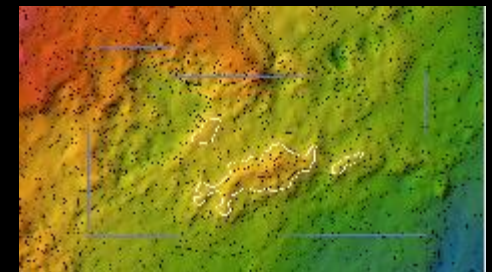


ÁGUA MARINHA BLOCK



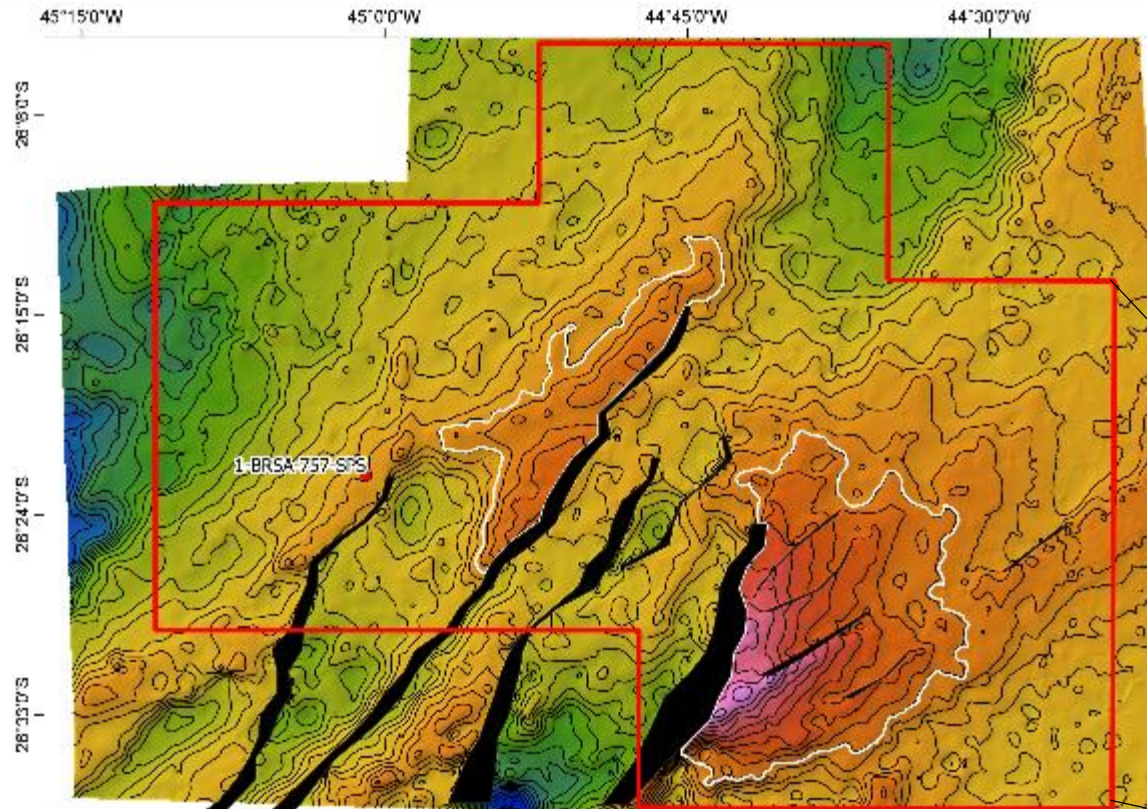
0264_BMC_CAMPOS_FASE_II (RTM) – Arbitrary line - Courtesy CGG

— Top of Quissamã F. - - - - - Basement — Top of Rift - - - - - Spill Point



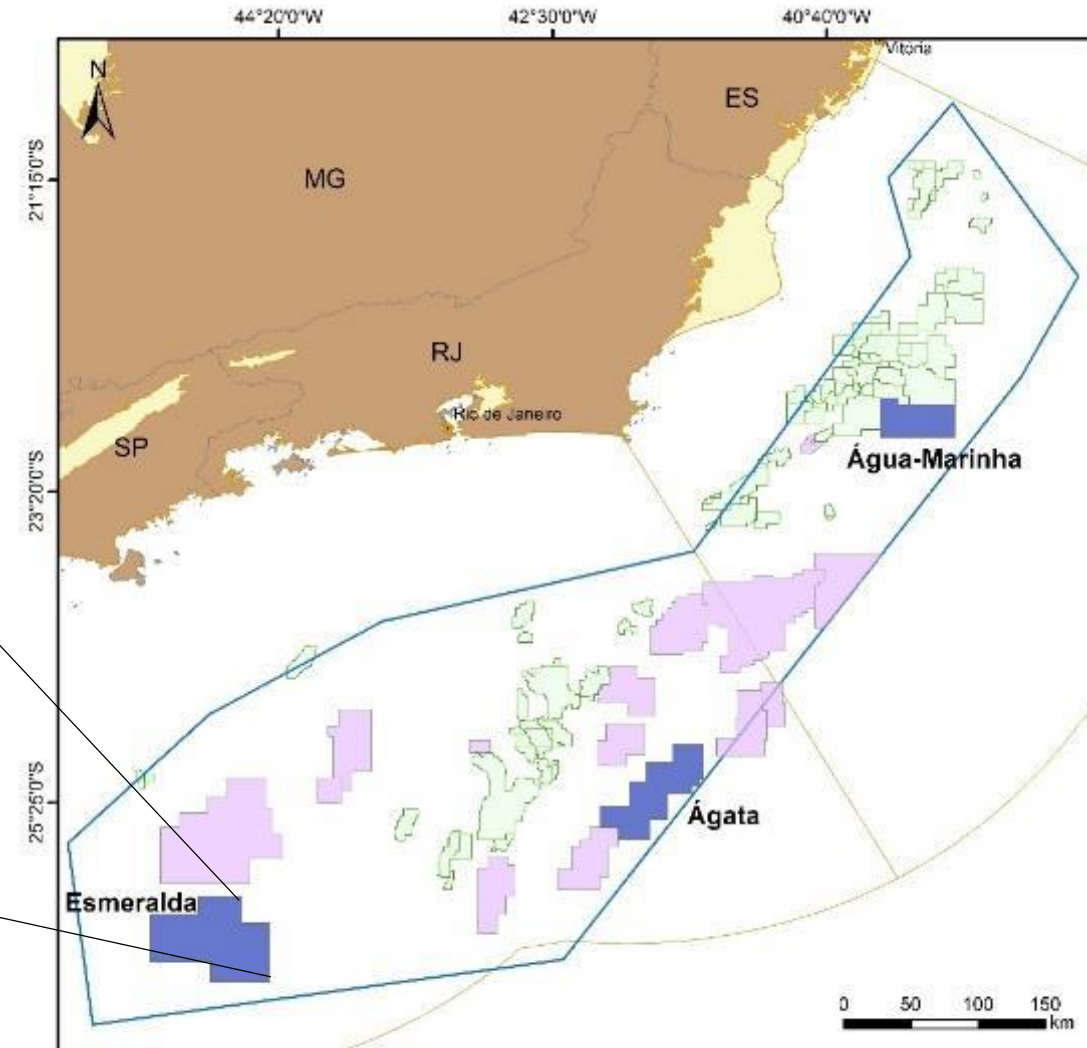
PRE-SALT

Available Opportunities – LP7

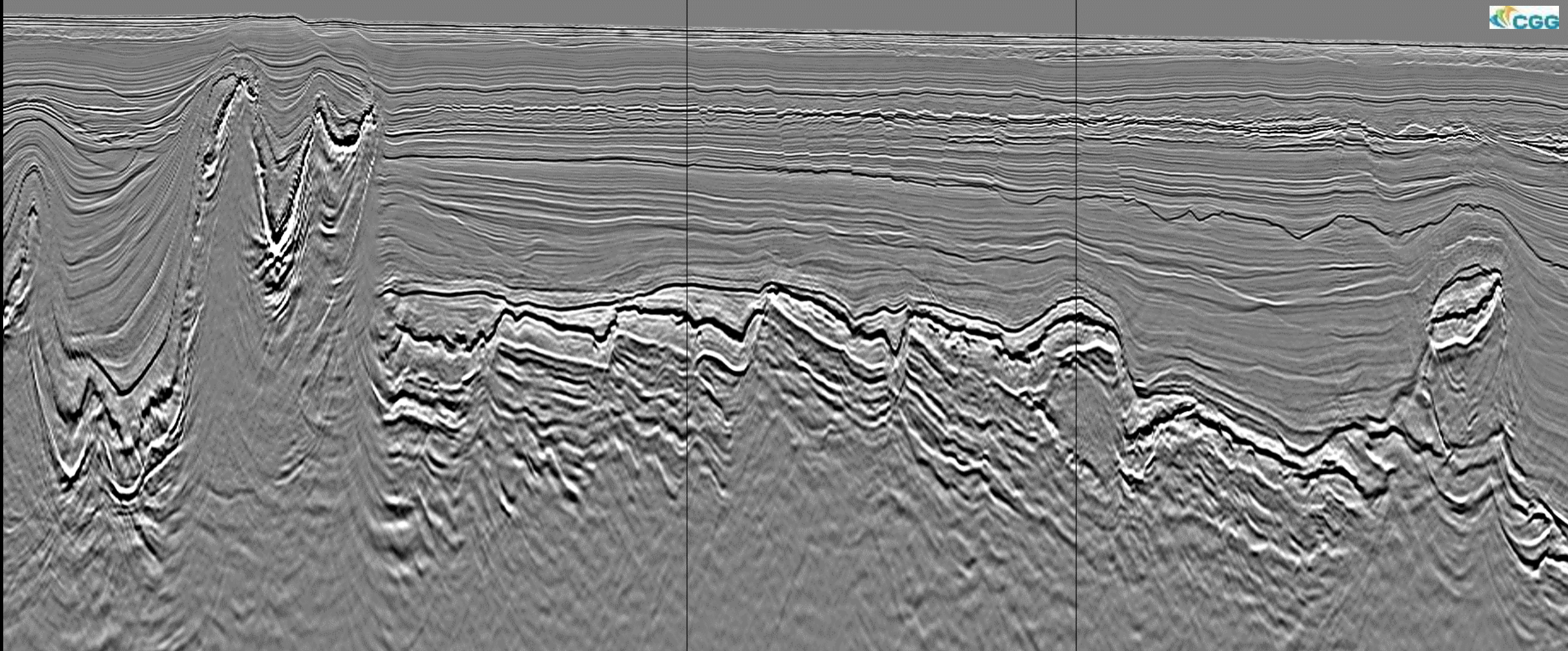


MODERATE GEOLOGICAL RISK PROSPECT

Relevant Volumes

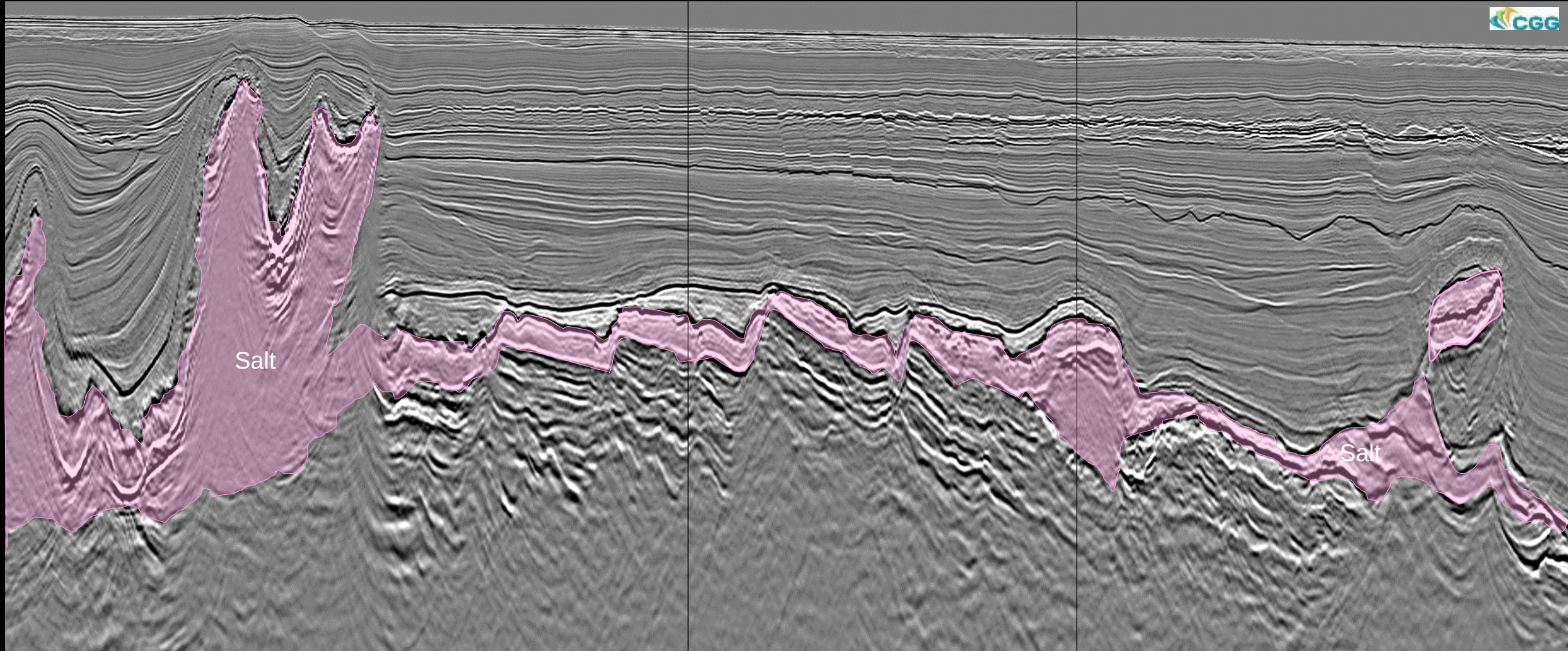


ESMERALDA BLOCK



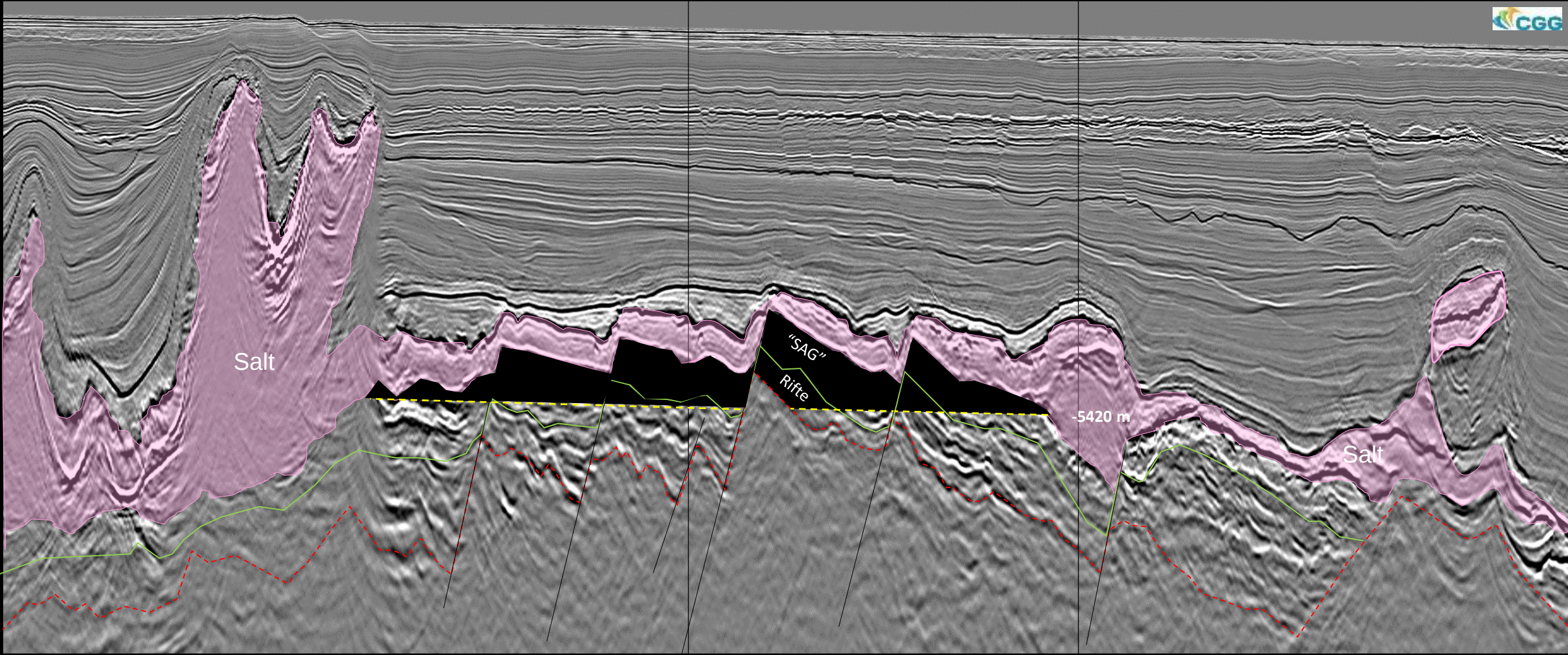
R0264_SANTOS_CONSTELLATION (RTM) – Arbitrary line – Courtesy CGG

ESMERALDA BLOCK



R0264_SANTOS_CONSTELLATION (RTM) – Arbitrary line – Courtesy CGG

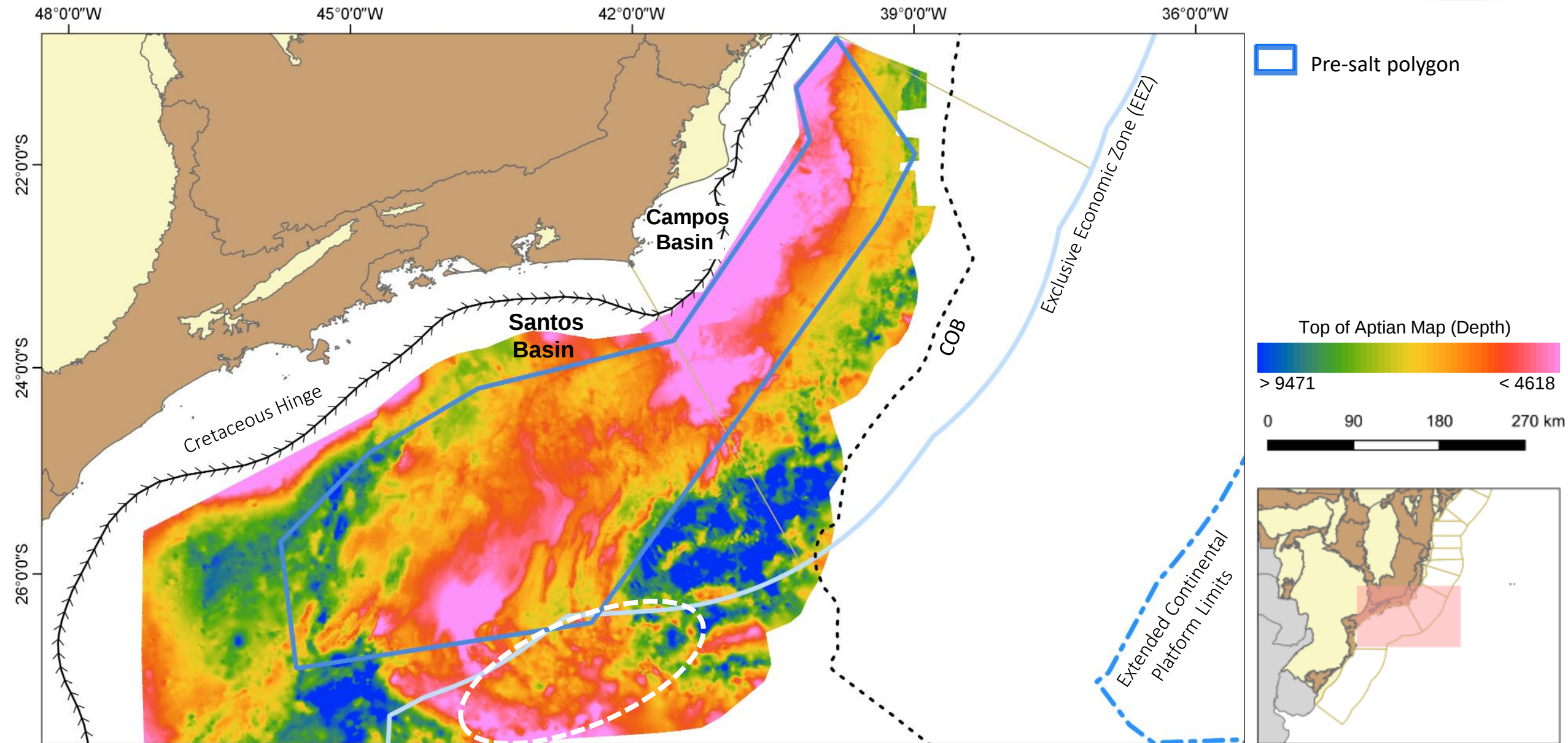
ESMERALDA BLOCK



R0264_SANTOS_CONSTELLATION (RTM) – Arbitrary line – Courtesy CGG

----- Basement
 ————— Top of Rift
 - - - - - Spill Point

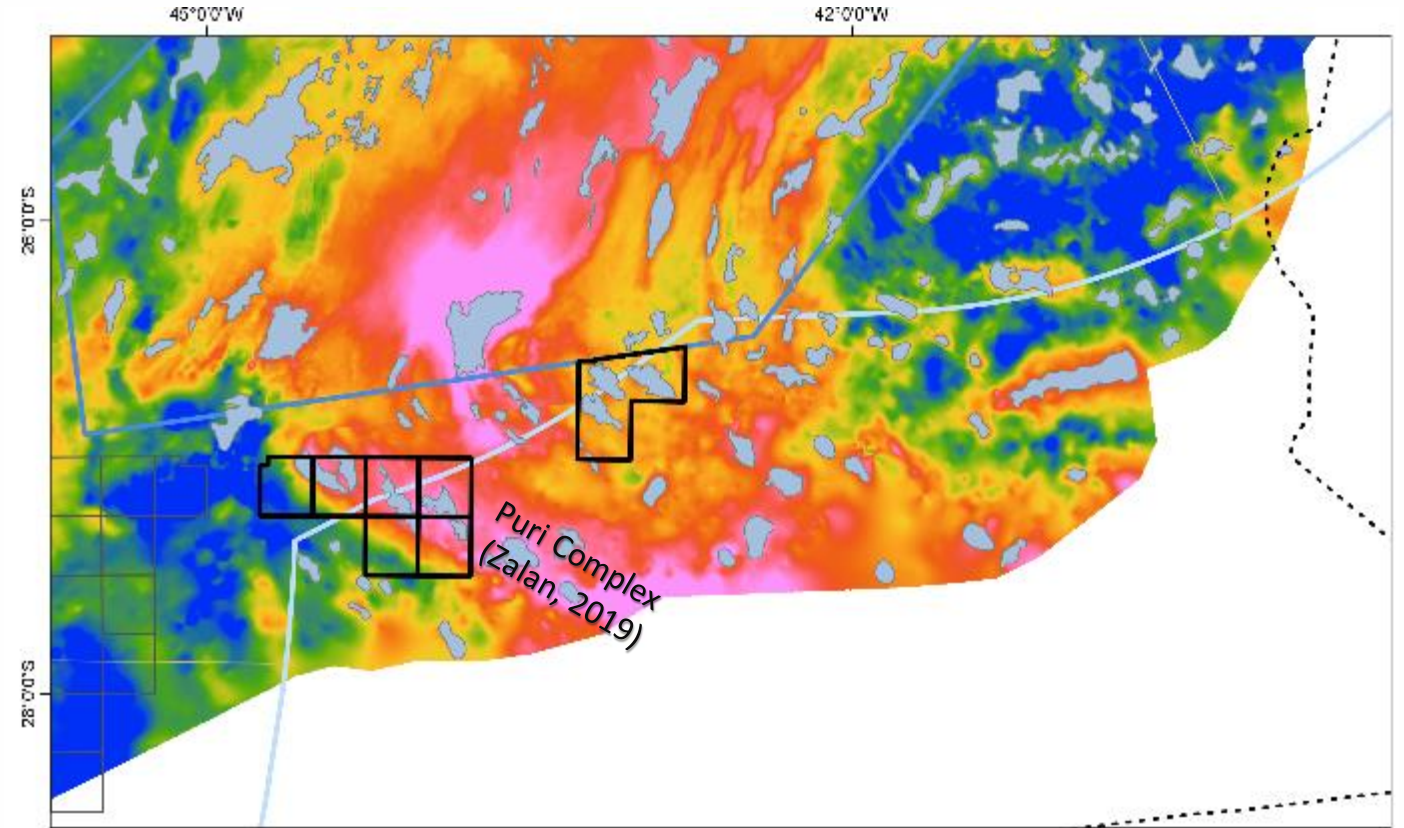
PRE-SALT



PRE-SALT

ROUND
Brazil 17
OIL AND GAS CONCESSIONS

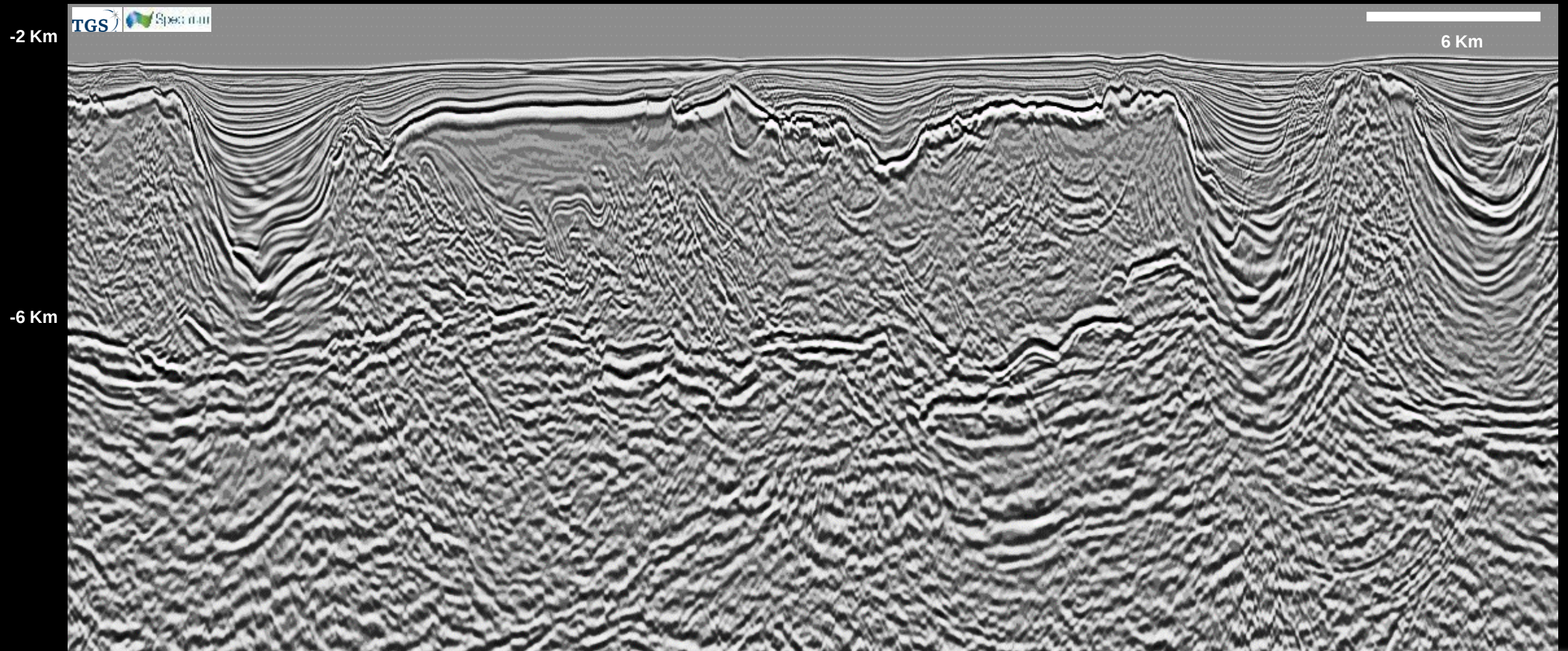
PRE-SALT PLAY FRONTIER AREAS



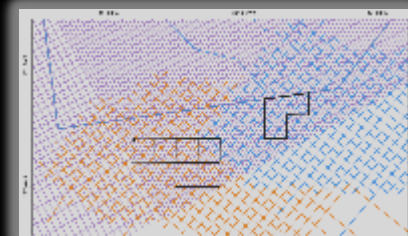
OUTSIDE PRE-SALT POLYGON

Some Blocks Beyond 200 Nautical Miles

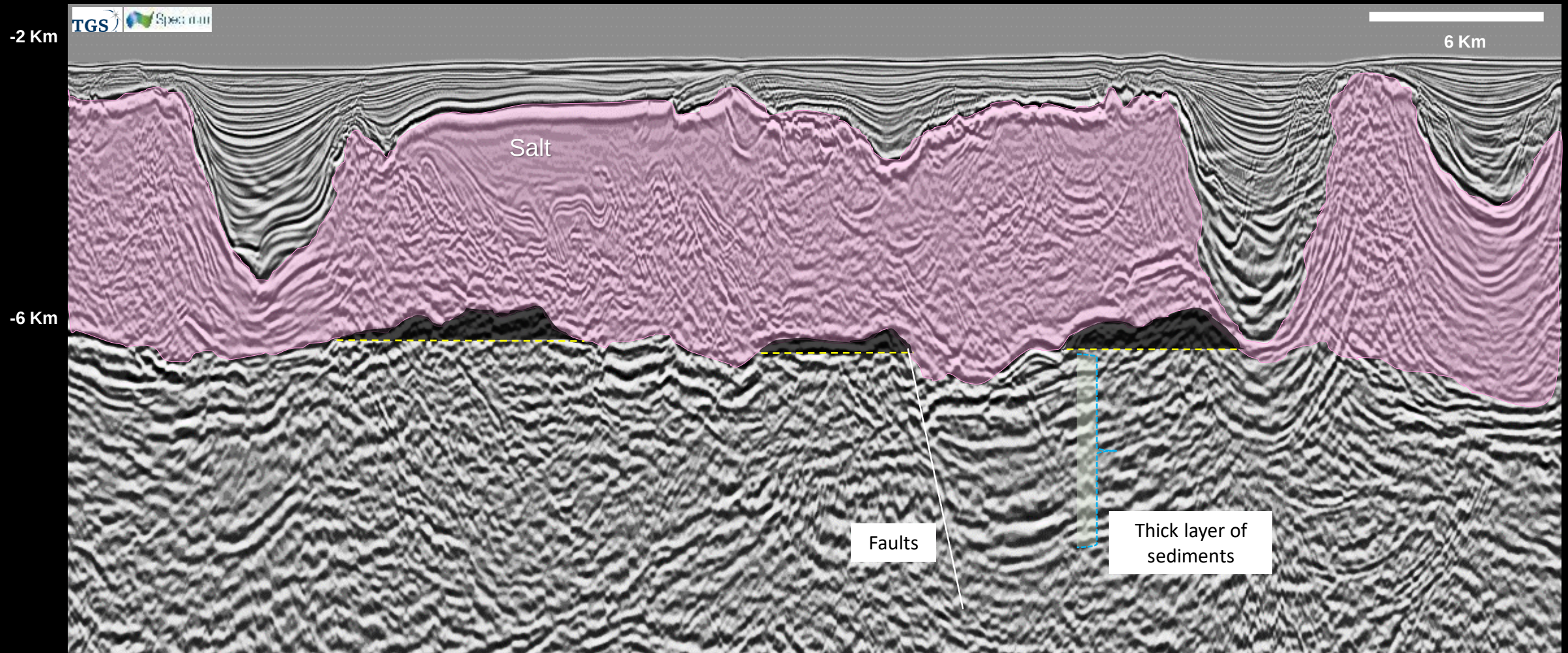
2D SEISMIC



0257_SCP2 (KPSDM) – Courtesy TGS Spectrum

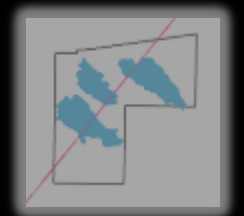


2D SEISMIC

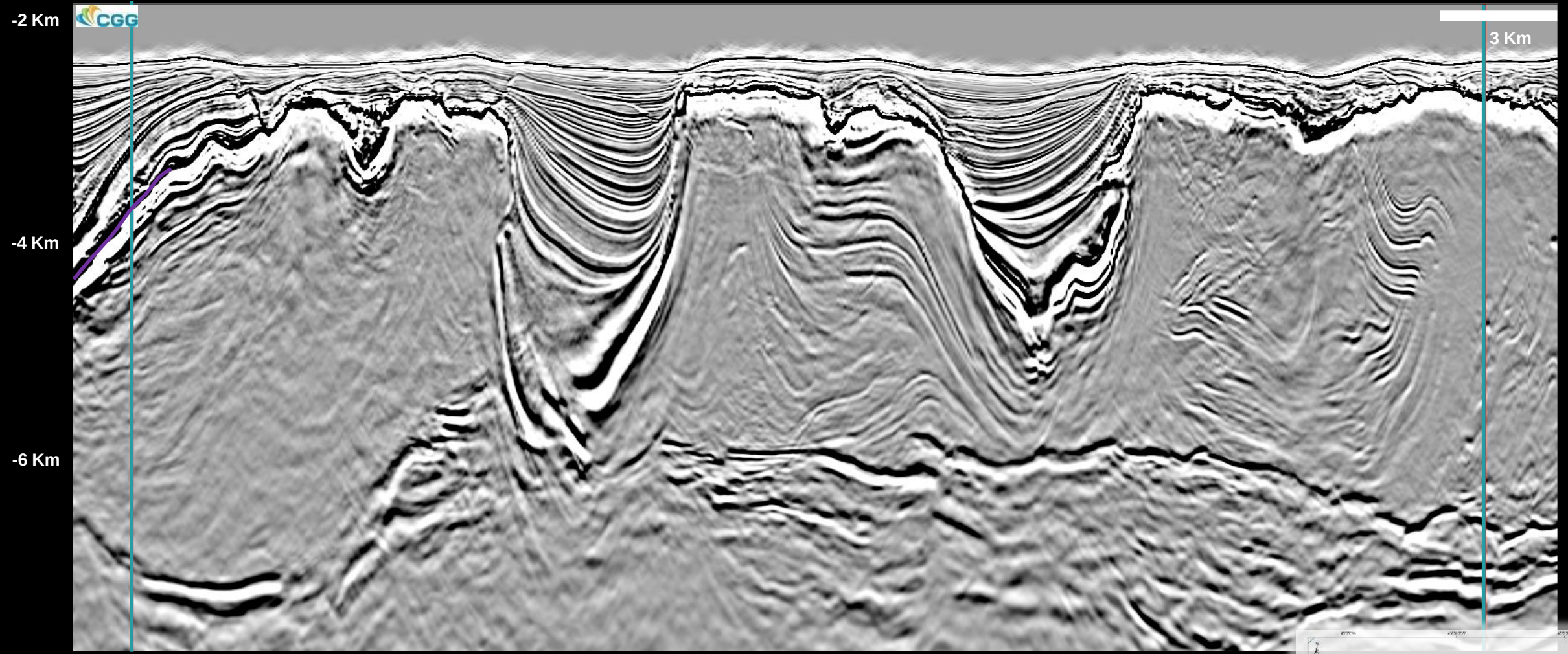


0257_SCP2 (KPSDM) – Courtesy TGS Spectrum

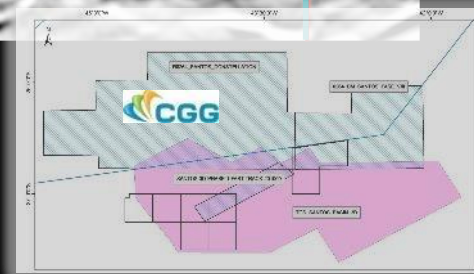
----- Spill Point



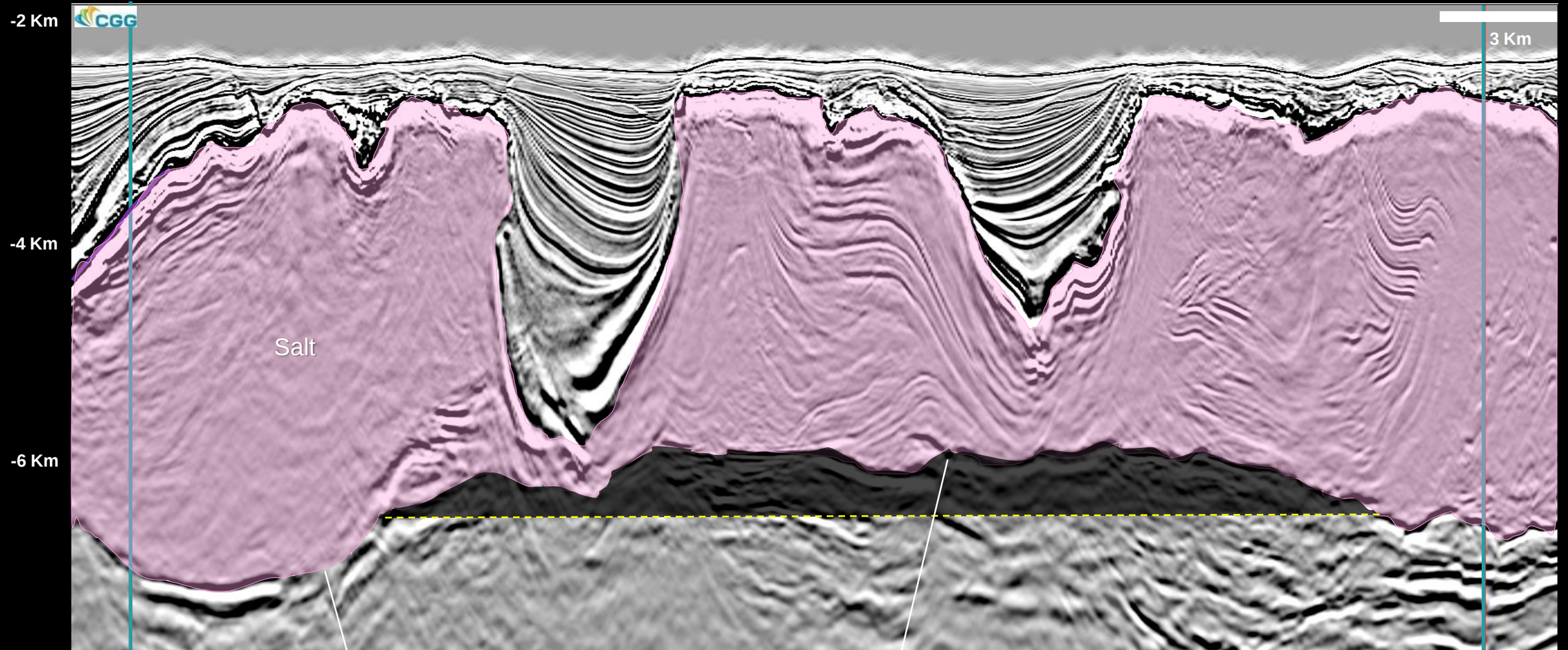
3D SEISMIC



0264_BM_SANTOS_FASE_VIII (RTM) – Arbitrary Line – Courtesy CGG



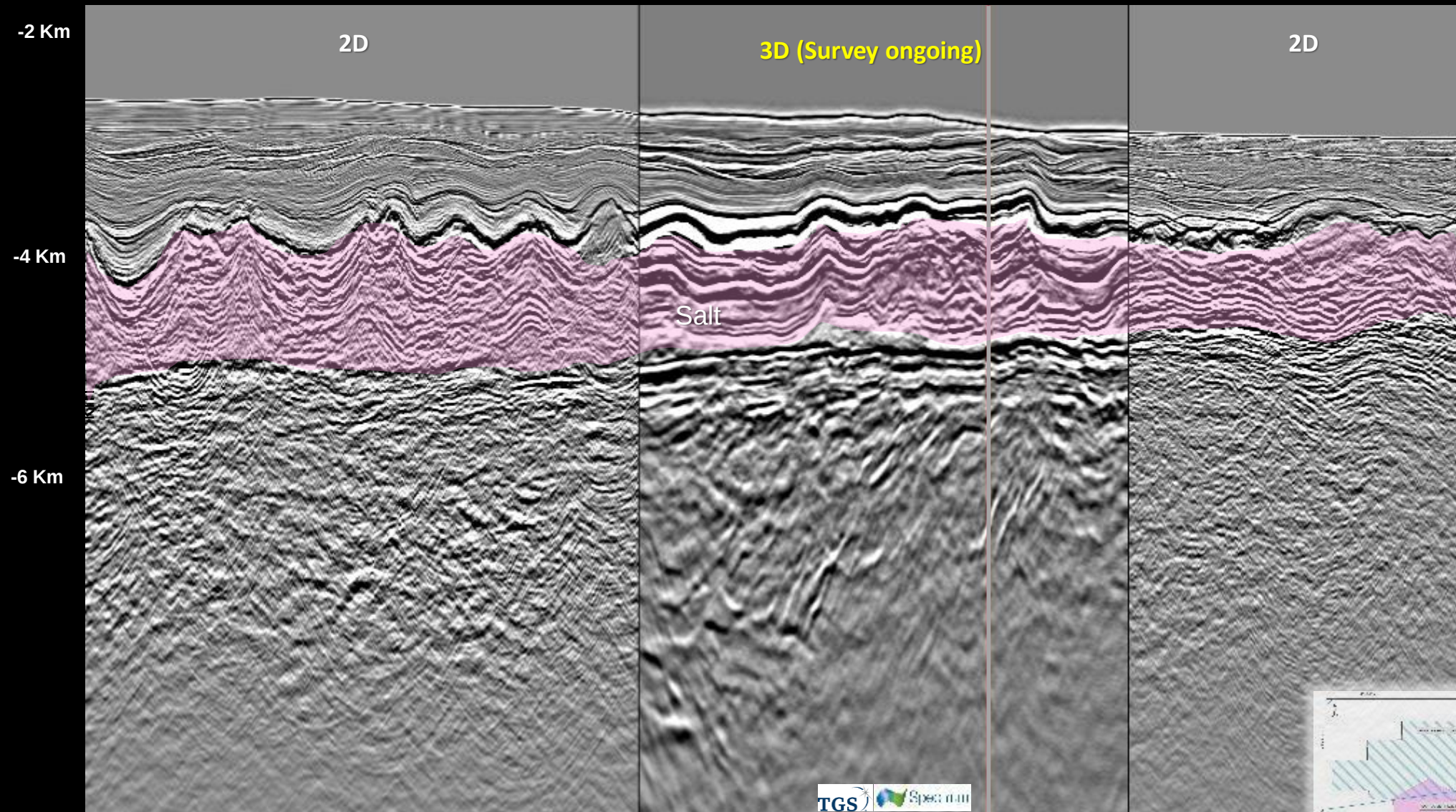
3D SEISMIC



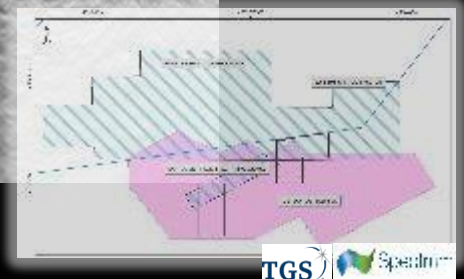
0264_BM_SANTOS_FASE_VIII (RTM) – Arbitrary Line – Courtesy CGG

----- Spill Point

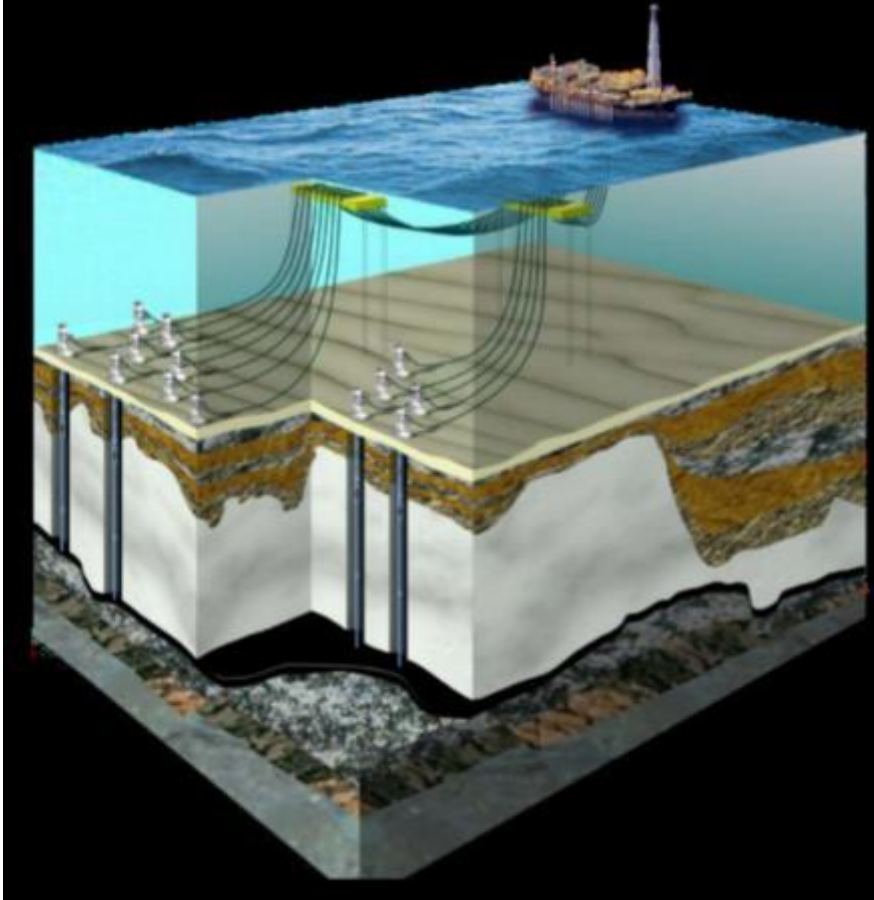
NEW SEISMIC INFORMATION – SURVEY ONGOING



0257_SCP3 (KPSDM) & SANTOS_3D-PHASE-1 (Fast track) – Courtesy TGS Spectrum



Government Initiatives



Decree n° 10, 320/2020

- It creates a work group, including (MME, ME and ANP) to improve the bidding round process in Brazil (BidSIM)
- There will be a reevaluation of Petrobras preferred rights in bids for production sharing agreements
- Reevaluation of productions sharing vs. concession agreements

PL n° 3,178/2019

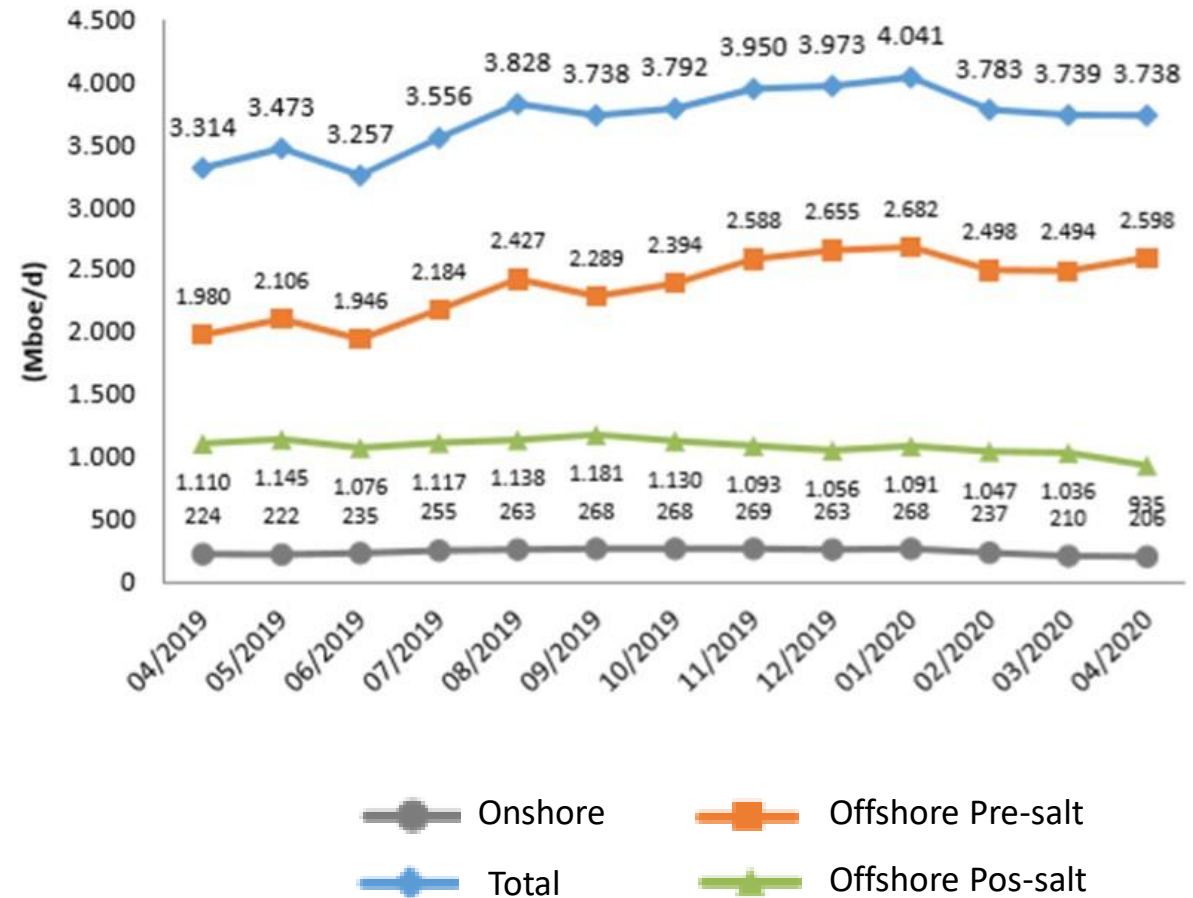
- **Propose to revoke Petrobras preferred Rights in bids for production sharing regime, and whether**
- **National Energy Policy Council should decide on contracts regime applied to pre-salt areas**

ALWAYS RESPECTING SIGNED CONTRACTS

Production Highlights

- Offshore field (Pre and Pos-salt) represents 96,7% & 86% of Brazilian oil and gas production, respectively
- Total Production: 2,958 MMbbl/d of Oil and 124 MMm³/d of Gas
- 69,5% of total Brazilian production comes from Pre-salt play (113 well)
- Total production occurred with 6,989 well (508 offshore and 6,481 onshore)

Brazilian Production (Oil and Gas)



E&P ENVIRONMENT

Three Different Profile



E&P STRATEGIC INITIATIVES - MAXIMIZING OIL & GAS PRODUCTION

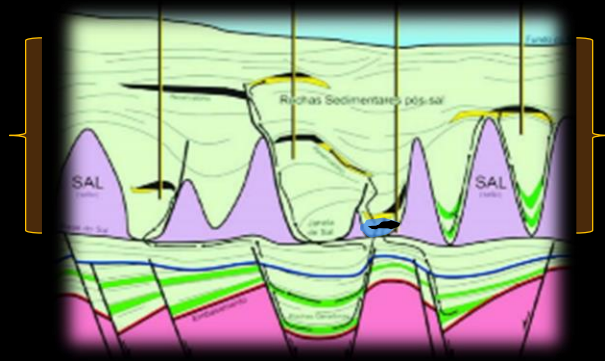
Accelerate the Pre-Salt Development

Improve Recovery Factor in Mature Fields & Advance to New Frontiers

Revitalize Onshore Exploration and Production

ATTRACT RIGHT PLAYERS TO EACH E&P ENVIRONMENT

POS-SALT



POS-SALT



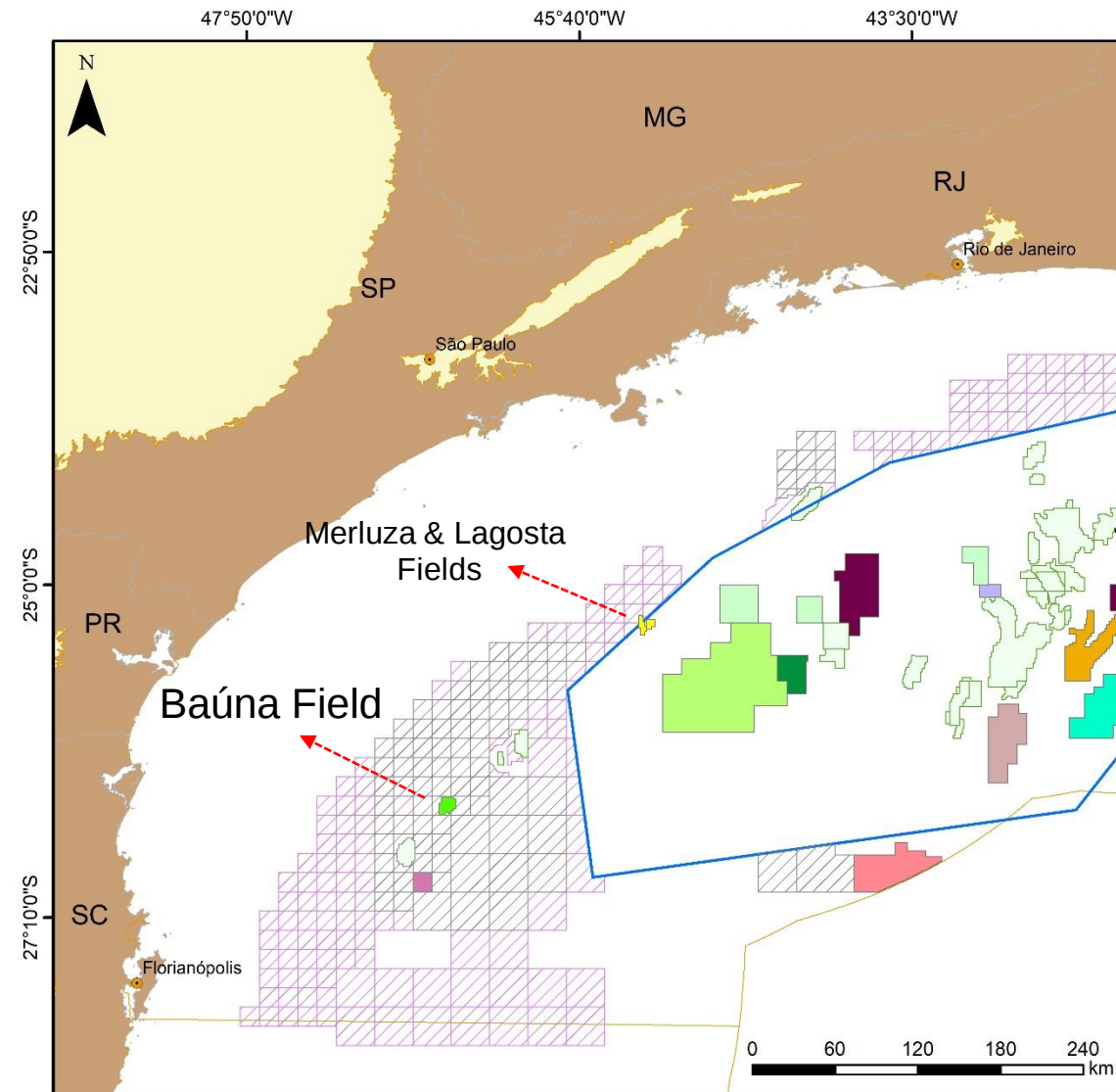
70 BLOCKS ON OFFER

Campos, Santos, SEAL,
Ceará & Potiguar Basins



ANP Encourage Nomination

<http://rodadas.anp.gov.br/pt/nominacao-de-areas>



BR- Divestment Plan

Focus on Improve Recovery Factor

“On Offer” – Teaser BR

Petrobras > Karoon

<https://www.investidorpetrobras.com.br/resultados-e-comunicados/teasers/>

ANP - Permanent Offer

On Offer

On Study

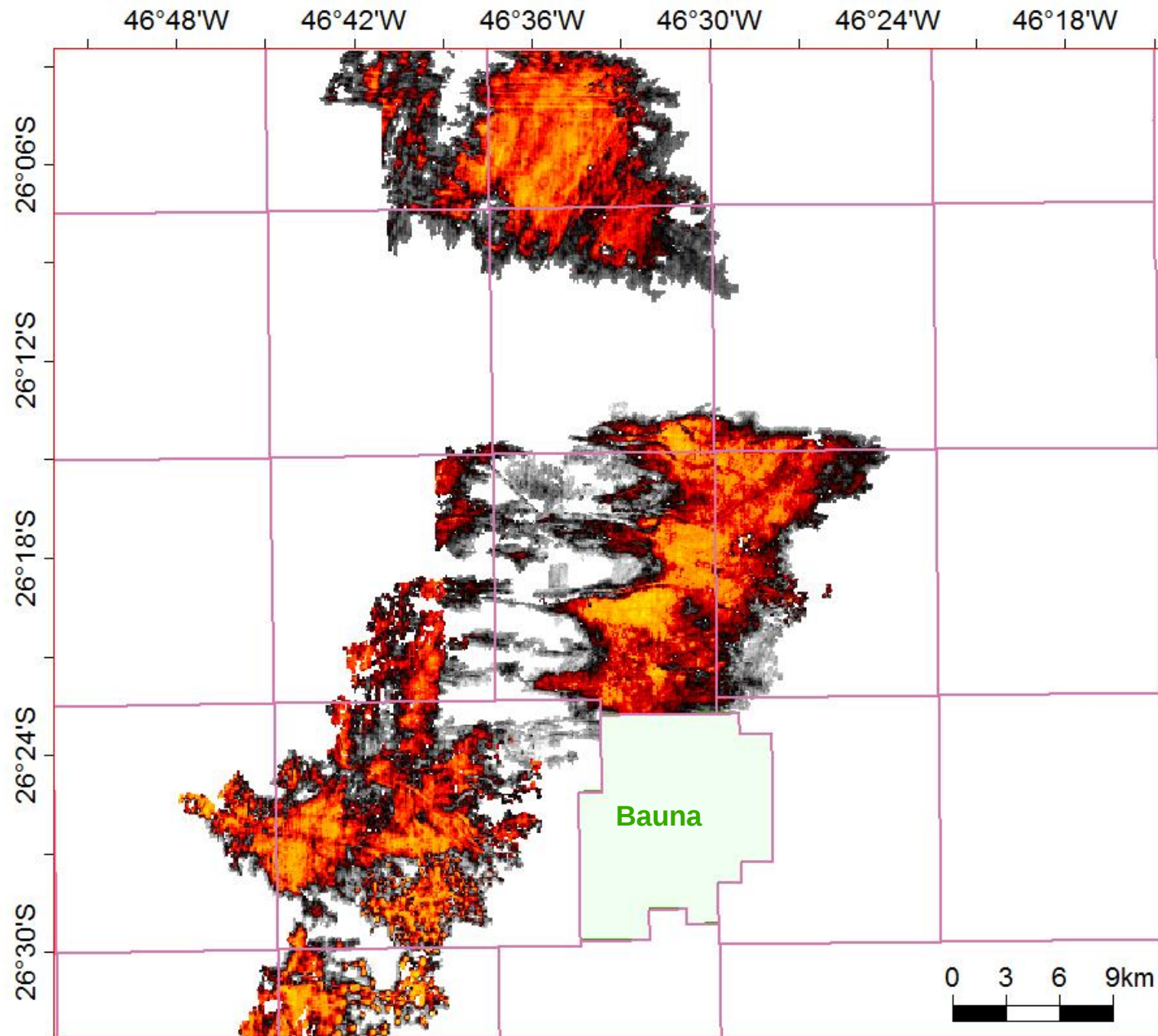
Field

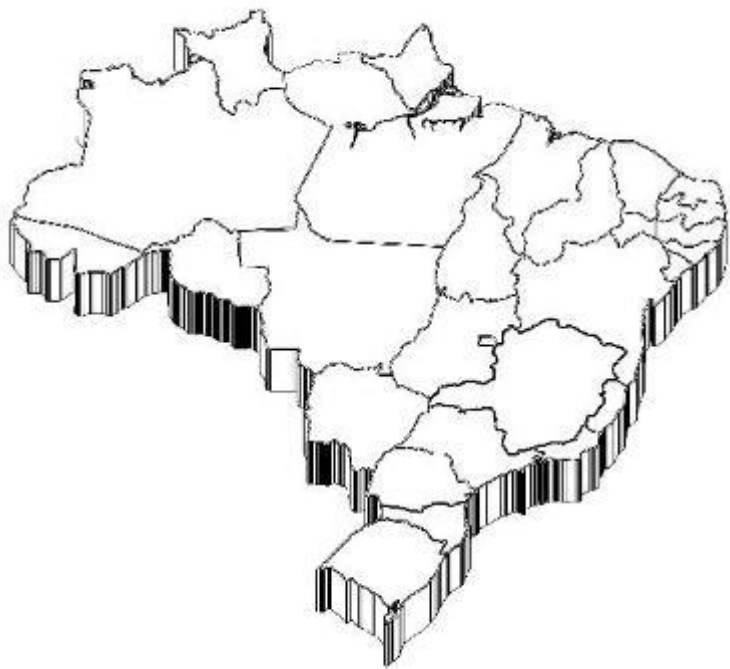
Block



POS-SALT

Sandstone Turbidites





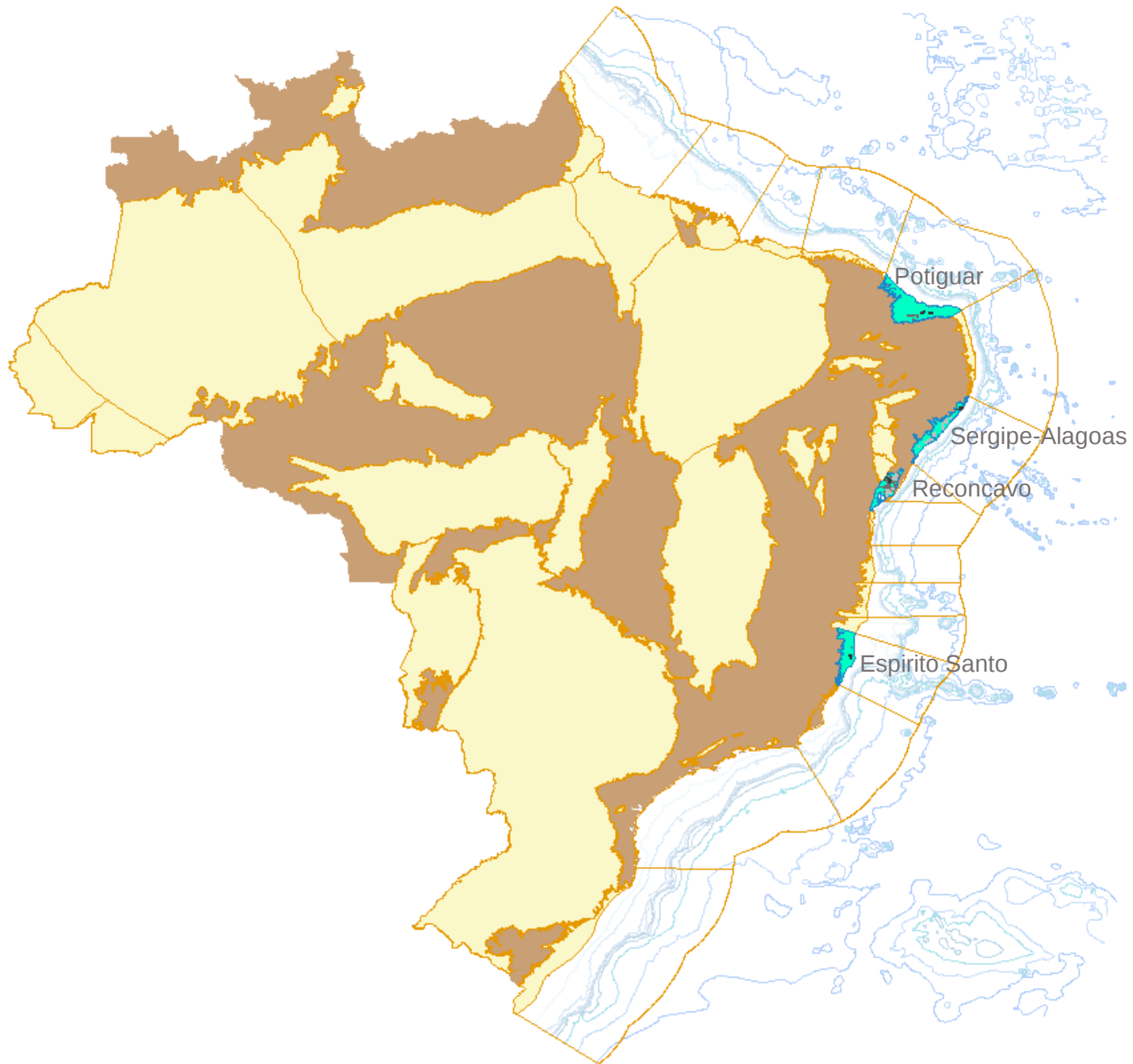
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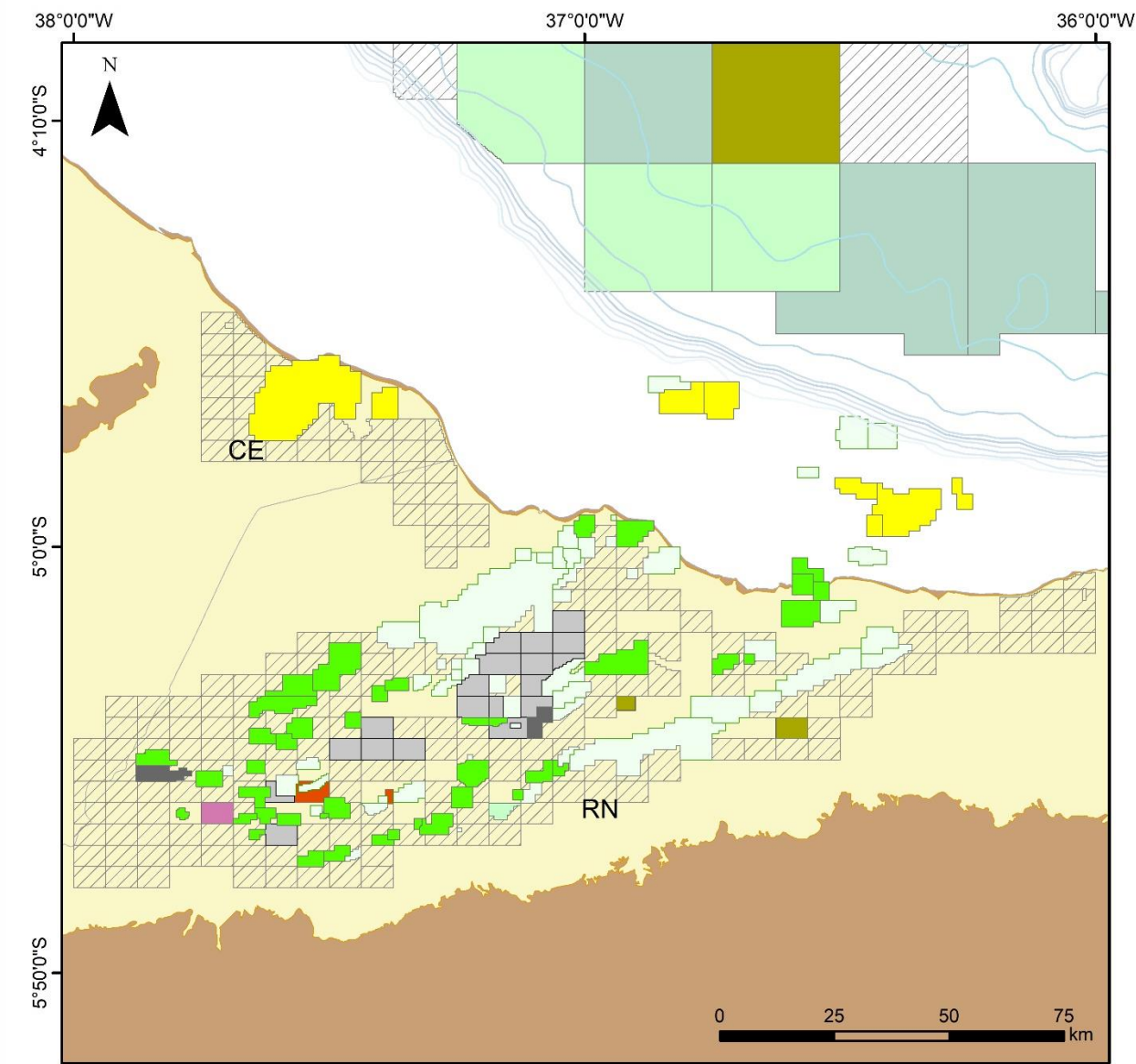


Onshore Mature Basins *Permanent Offer*

- WELL-KNOWN GEOLOGY
- AVAILABLE INFRASTRUCTURE
- SMALL AND MEDIUM-SIZE COMPANIES PROFILE
- POSITIVE SOCIAL LOCAL IMPACT
- RECENT DISCOVERIES REPORTED
- ON DEMAND BIDDING ROUNDS



POTIGUAR SEDIMENTAR BASIN



Onshore/Shallow Waters, Refineries
and Other non-Strategic Assets

Goal: Dramatically Improve Onshore Oil
& Gas Exploration and Production

BR- Divestment Plan

- “On Offer” – Teaser BR
- Farmout 2019

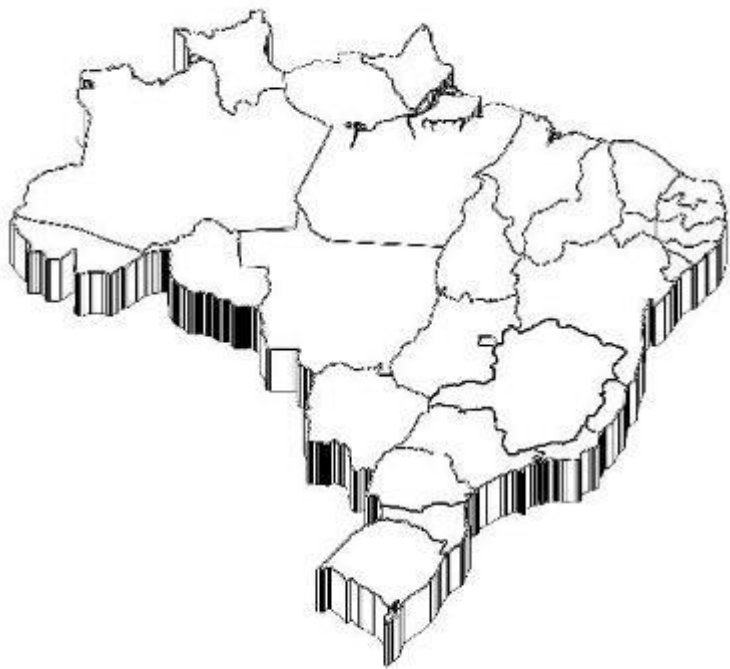
ANP - Permanent Offer



Field

Block

- | | |
|-----|-----|
| R7 | R14 |
| R11 | R15 |
| R13 | OP |



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REATE 2020

Pillars



- Innovate and simplify rules
- Stimulate the entry of new companies
- Enable large-scale production of onshore gas in compliance with the guidelines of the new gas market
- Promote free competition
- Recognize the value of onshore E&P activity for regional development

REVITALIZATION PLAN FOR OIL AND GAS E&P ONSHORE ACTIVITIES





Art. 5 ...the Subcommittees

REATE 2020

Revitalization of Oil&Gas
E&P Activities Onshore
(Res.N^o27,12/2019)

Art. 4

I – Ministry of Mines and Energy (MME), which coordinates;

II – Civil House of the Presidency of the Republic;

III – Ministry of Economy (ME);

IV – Ministry of the Environment (MMA);

V – National Agency of Petroleum, Natural Gas and Biofuels (**ANP**);

VI – Administrative Council for Economic Defense (CADE); and

VII – Energy Research Company (EPE)



The background of the slide features a close-up, low-angle shot of three hands reaching down to assemble four interlocking puzzle pieces. The hands are positioned at the top, bottom, and right edges of the frame, with fingers carefully placing the pieces. The puzzle pieces are a light, neutral color, contrasting with the darker, slightly shadowed hands. The overall lighting is soft, creating a sense of focus and precision in the assembly process.

SDB-ANP Multi-criteria Analysis

...

INFRASTRUCTURE

DATA AVAILABLE

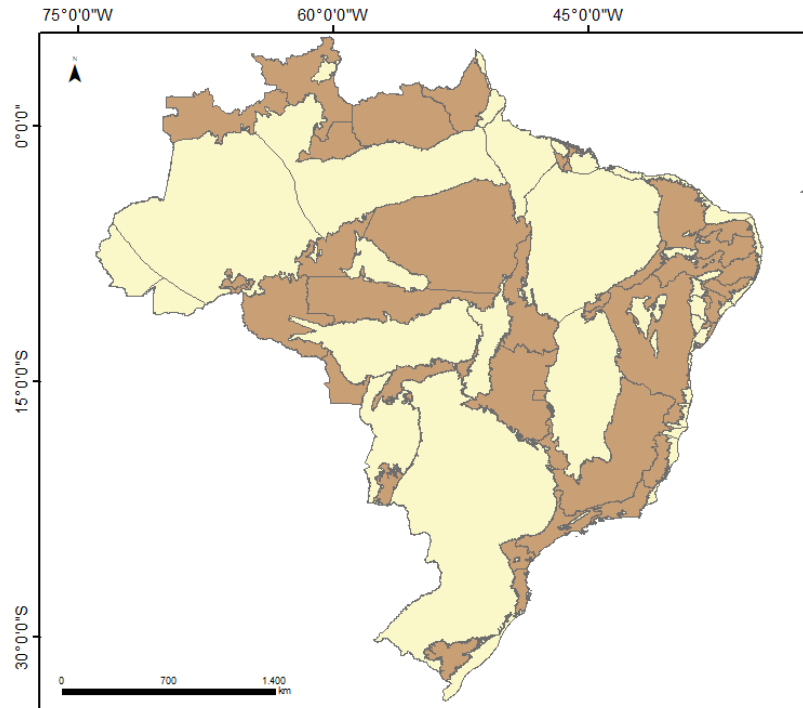
EXPLORATORY HISTORY

EXP. ATTRACTIVENESS

...

Onshore Frontier Basins

Reate 2020 – Muti-criteria Analysis

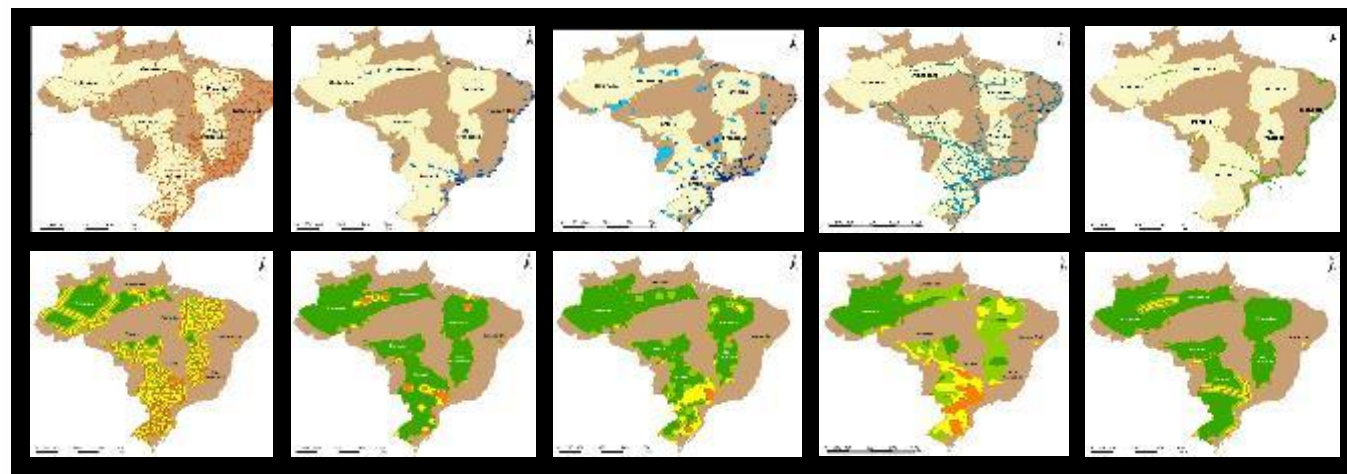
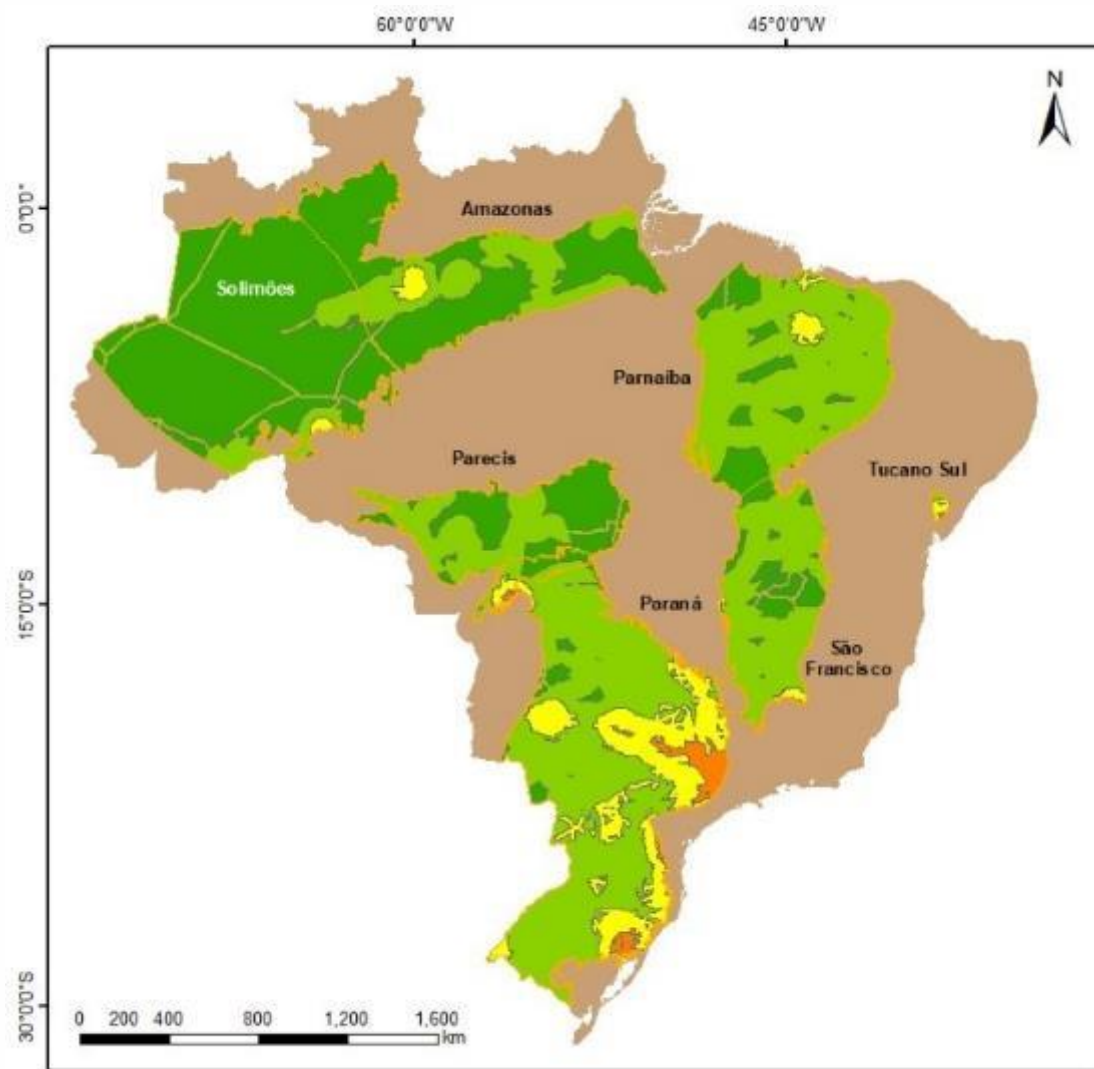


ANP Encourage Nomination



INFRASTRUCTURE

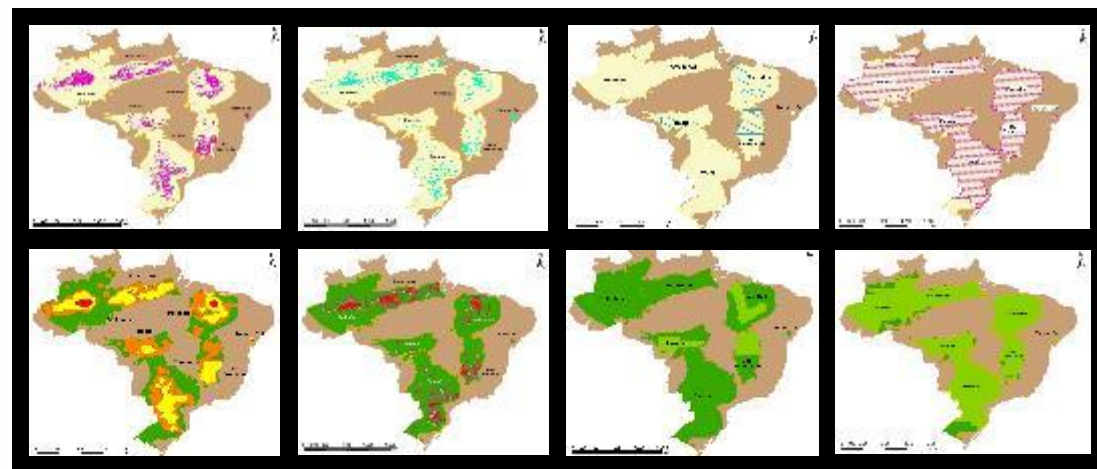
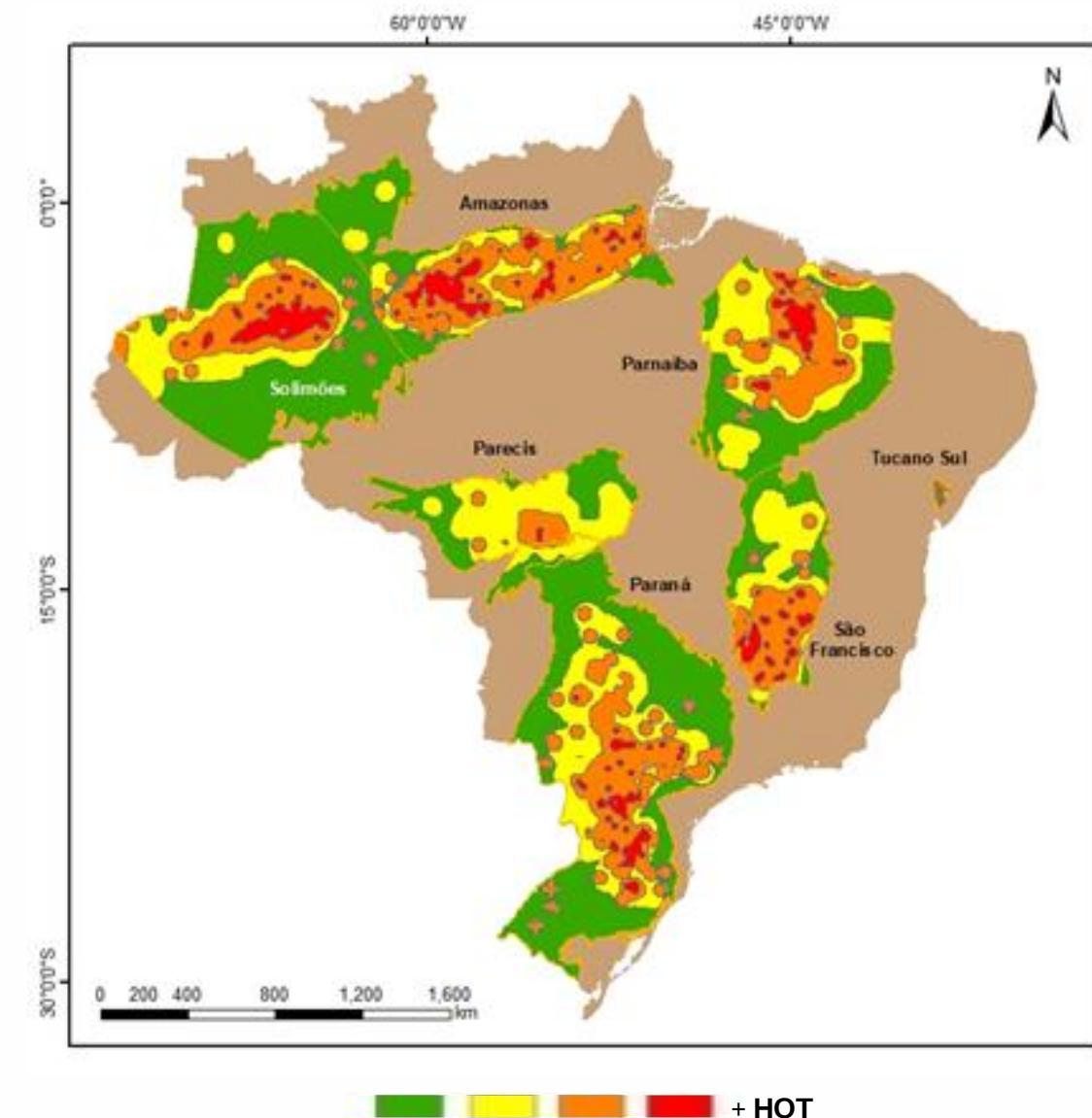
Multi-criteria Analysis



Highways & roads; thermoelectric, urban density, electrical line and oil & gas pipelines

DATA AVAILABLE

Multi-criteria Analysis



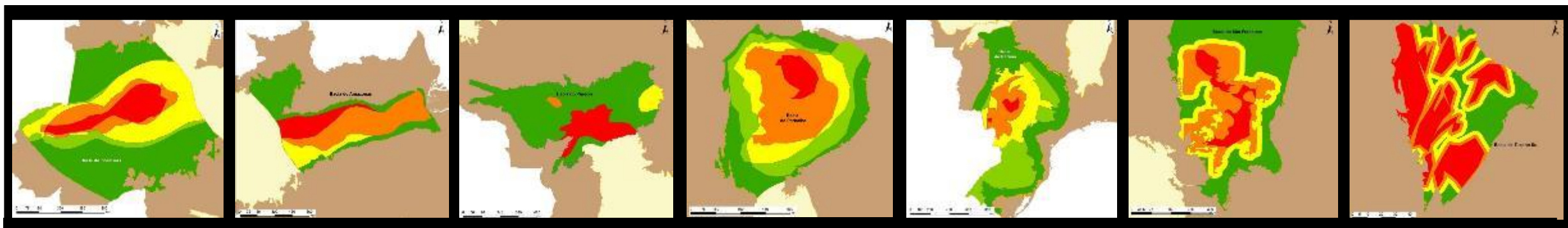
Mainly seismic and well information

EXP. ATTRACTIVENESS

Multi-criteria Analysis



Field proximity, exploratory opportunities, petroleum system status

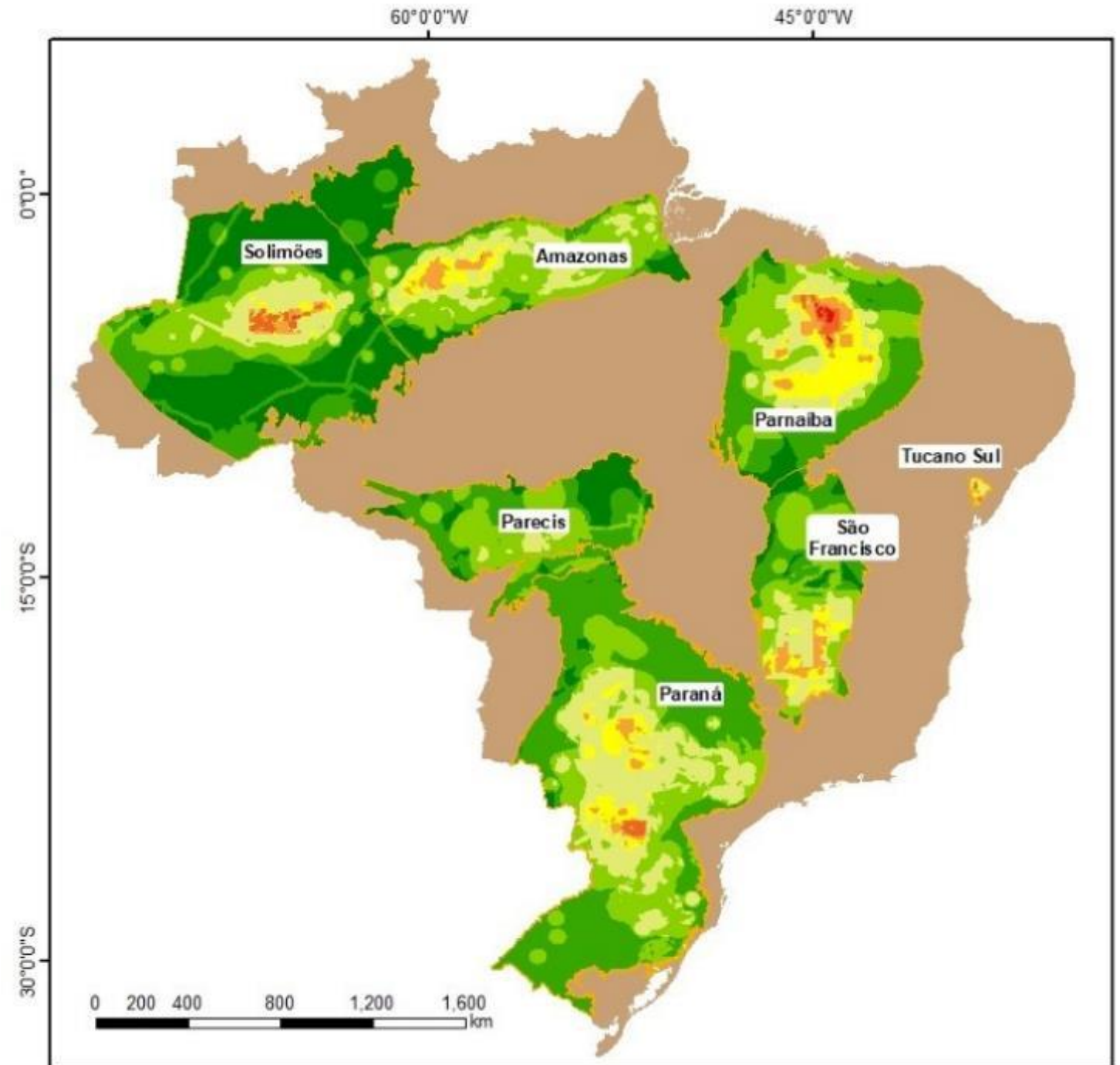


Geological Evaluation

+ HOT

RESULTS

Multi-criteria Analysis



REAL CASE

Recent News

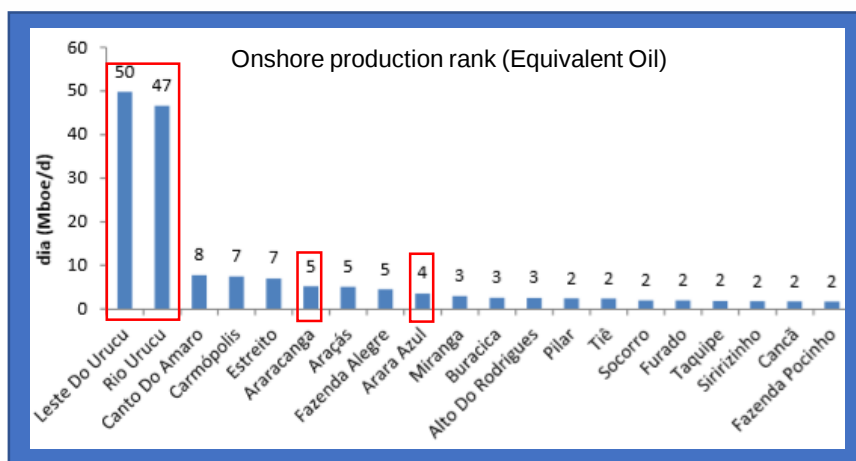
BR- Divestment Plan

“On Offer” – Teaser BR

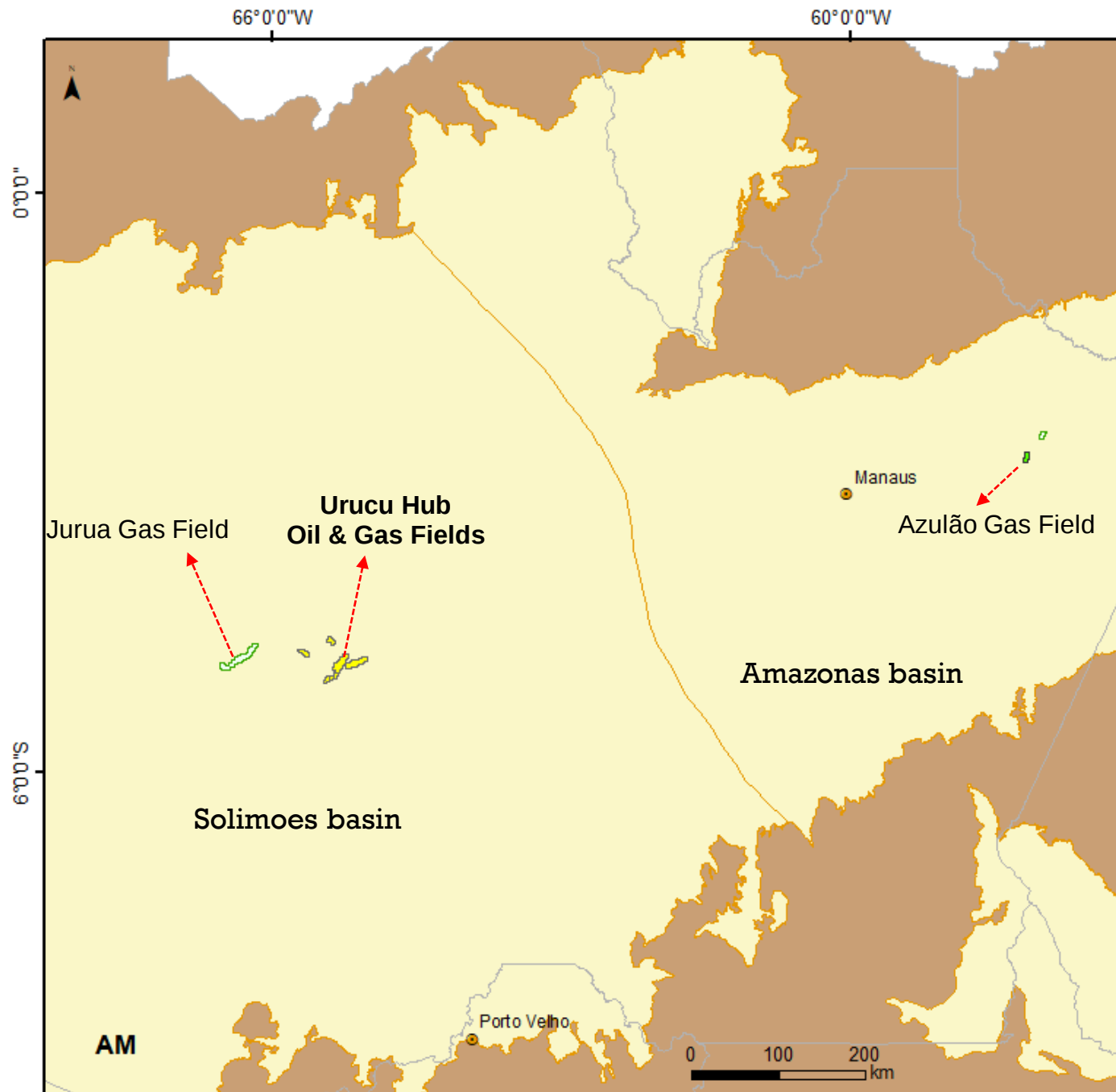
Petrobras > Eneva (2019)

https://www.agenciapetrobras.com.br/Materia/ExibirMateria?p_materia=982843

<https://www.investidorpetrobras.com.br/resultados-e-comunicados/teasers/>



Total Solimoes prod.: 106,253 boe/d
16,525 bpd oil and condensate
14,281 Mm3/d gas
1.150 ton/d GLP boe/d



April, 2020

REAL CASE

Muti-criteria Analysis



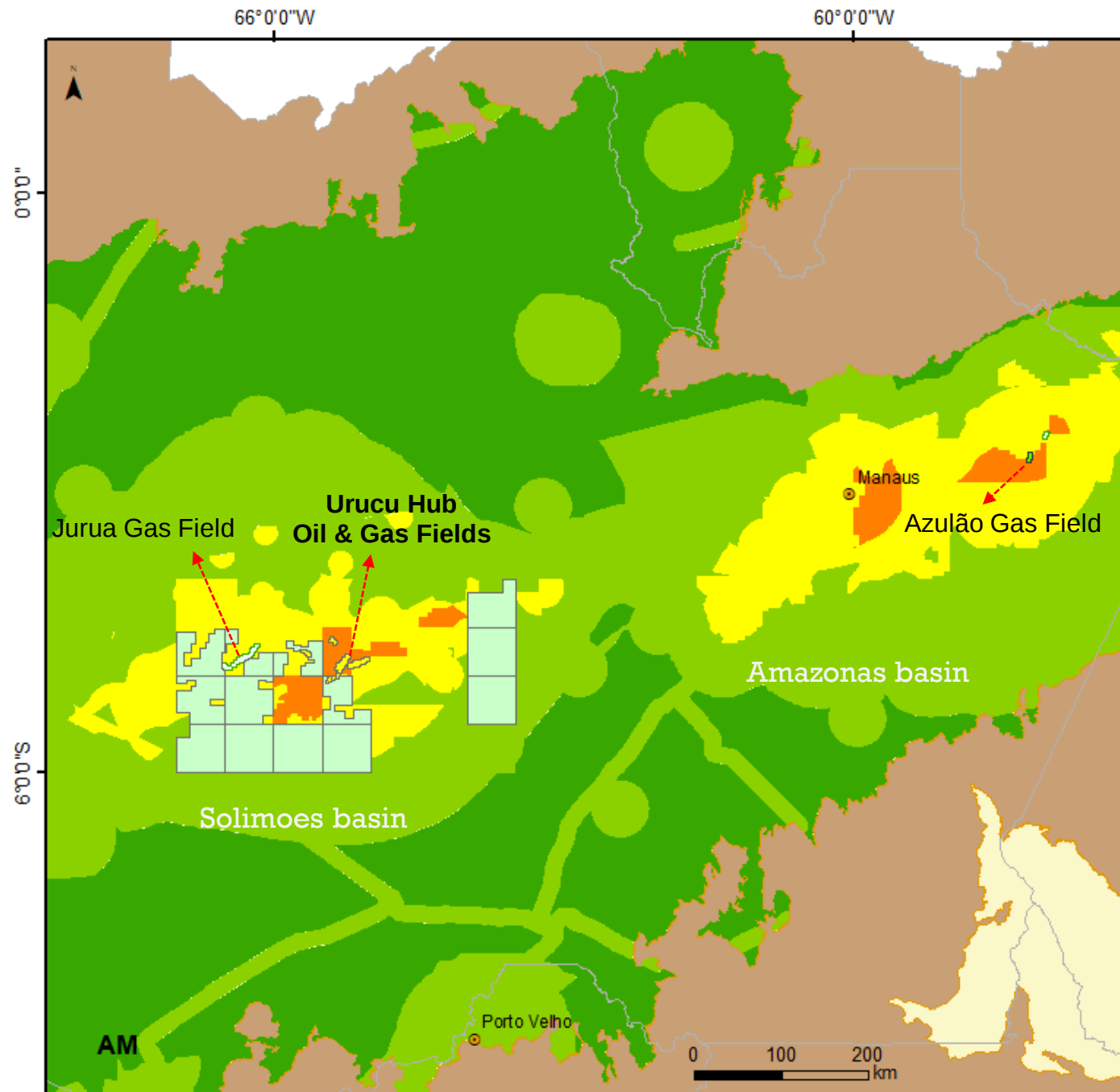
BR- Divestment Plan

“On Offer” – Teaser BR

Petrobras > Eneva (2019)

https://www.agenciapetrobras.com.br/Materia/ExibirMateria?p_materia=982843

Round 7 – Blocks with contracts ongoing



REAL CASE

Muti-criteria Analysis



BR- Divestment Plan

 “On Offer” – Teaser BR

https://www.agenciapetrobras.com.br/Materia/ExibirMateria?p_materia=982843

 Round 7 – Blocks with contracts ongoing

ANP - Permanent Offer

 **Blocks on Study**
 **Field on Study**

ANP Encourage Nomination

<http://rodadas.anp.gov.br/pt/nominacao-de-areas>

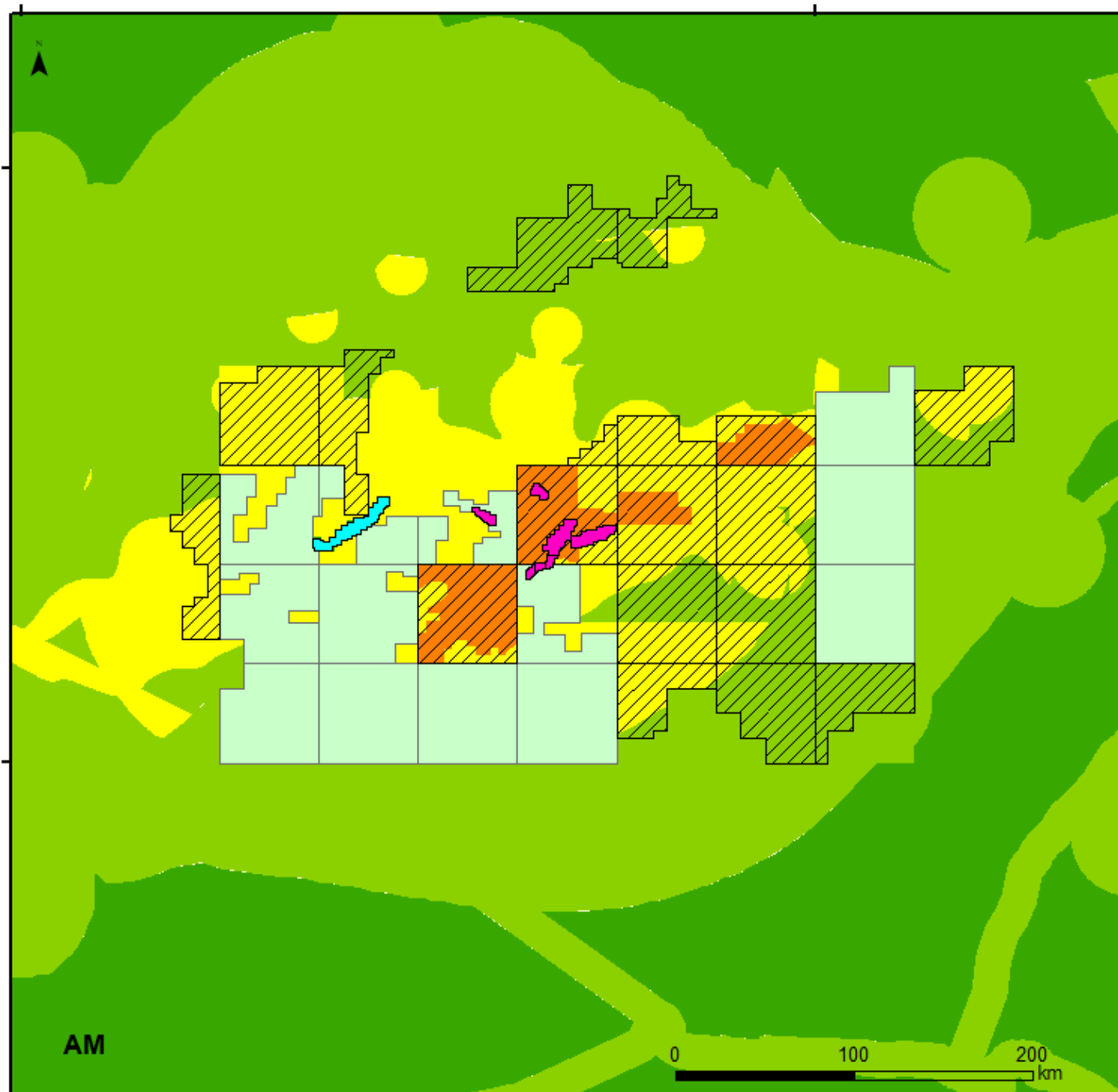


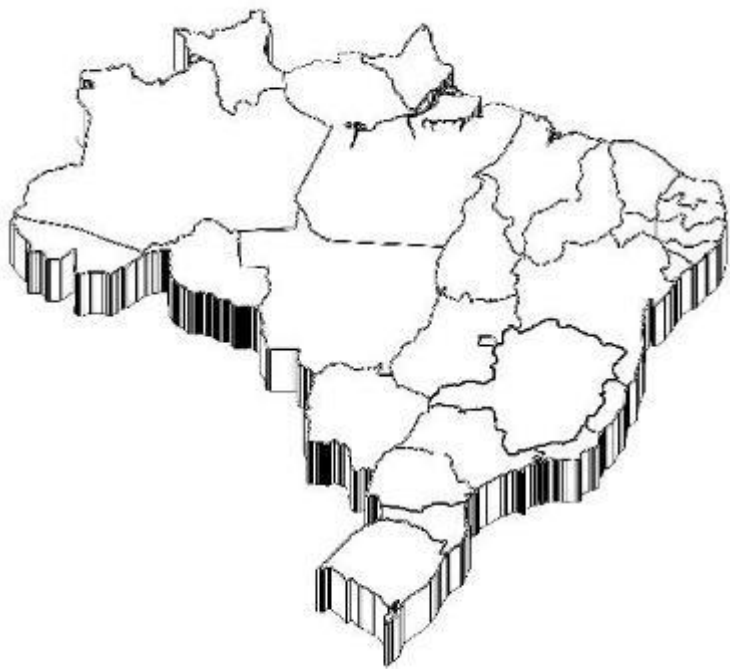
68°0'0"W

64°0'0"W

3°0'0"S

6°0'0"S





OUTLINE

- BRAZIL E&P OVERVIEW & FUTURE LICENSING ROUNDS
- OPPORTUNITIES
 - OFFSHORE (PRE-SALT & POS-SALT)
 - ONSHORE (MATURE & FRONTIER BASINS)
- FINAL REMARKS



Final Remarks



Attract Right Players to Each E&P Environment

TRANSFER OF
RIGHTS SURPLUS
Brazil
PRODUCTION SHARE

Studies ongoing. Schedule to 3rd quarter, 2021

PRE-SALT
Brazil
PRODUCTION SHARE

Geological evaluation concluded. Submitted to MME

OPEN
ACREAGE
Brazil
OIL AND GAS CONCESSIONS

Block on offer and on study

Governmental Discussions Ongoing

- Gov. Decree 10,320/2020
- PL nº 3,178/2019

Goal: Accelerate Exploration
and Development

PRE-SALT

Final Remarks



Attract Right Players to Each E&P Environment



Geological evaluation concluded
CNPE will define new schedule

Block on offer and on study

Market-driven choices. **On Demand Bidding Rounds**

ANP Encourage Nomination

<http://rodadas.anp.gov.br/pt/nominacao-de-areas>



Support Petrobras Divestment Plan – Shallow Waters, Refineries and Other non-Strategic Asset

Governmental Discussions Ongoing

- Gov. Decree 10,320/2020
- PL nº 3,178/2019

Goal: Improve the Recovery Factor in
Mature Fields & Advance to Frontier Areas

POS-SALT

Final Remarks



Attract Right Players to Each E&P Environment



Block on offer and on study on Mature & Frontier Basins

COMPANIES CAN SUBMIT THEIR REGISTRATION ANYTIME

ANP Encourage Nomination

<http://rodadas.anp.gov.br/pt/nominacao-de-areas>

Support Petrobras Divestment Plan – Onshore, Refineries and Other non-Strategic Asset

Governmental Discussions Ongoing

REATE: Revitalization Onshore Oil and Gas E&P Activities

(Res. N^o27,12/2019)

Goal: Dramatically Improve Onshore
Oil & Gas Exploration and Production

ONSHORE

National Agency of Petroleum, Natural Gas and Biofuels - ANP

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Additional Information

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

www.anp.gov.br

<http://rodadas.anp.gov.br/pt/nominacao-de-areas>