

Repsol Sinopec Brasil

Apresentação Institucional



Setembro 2017



A Repsol Sinopec Brasil

A Repsol Sinopec Brasil é uma joint venture em que o grupo espanhol Repsol detém participação de 60% do capital e a companhia chinesa Sinopec, 40%.

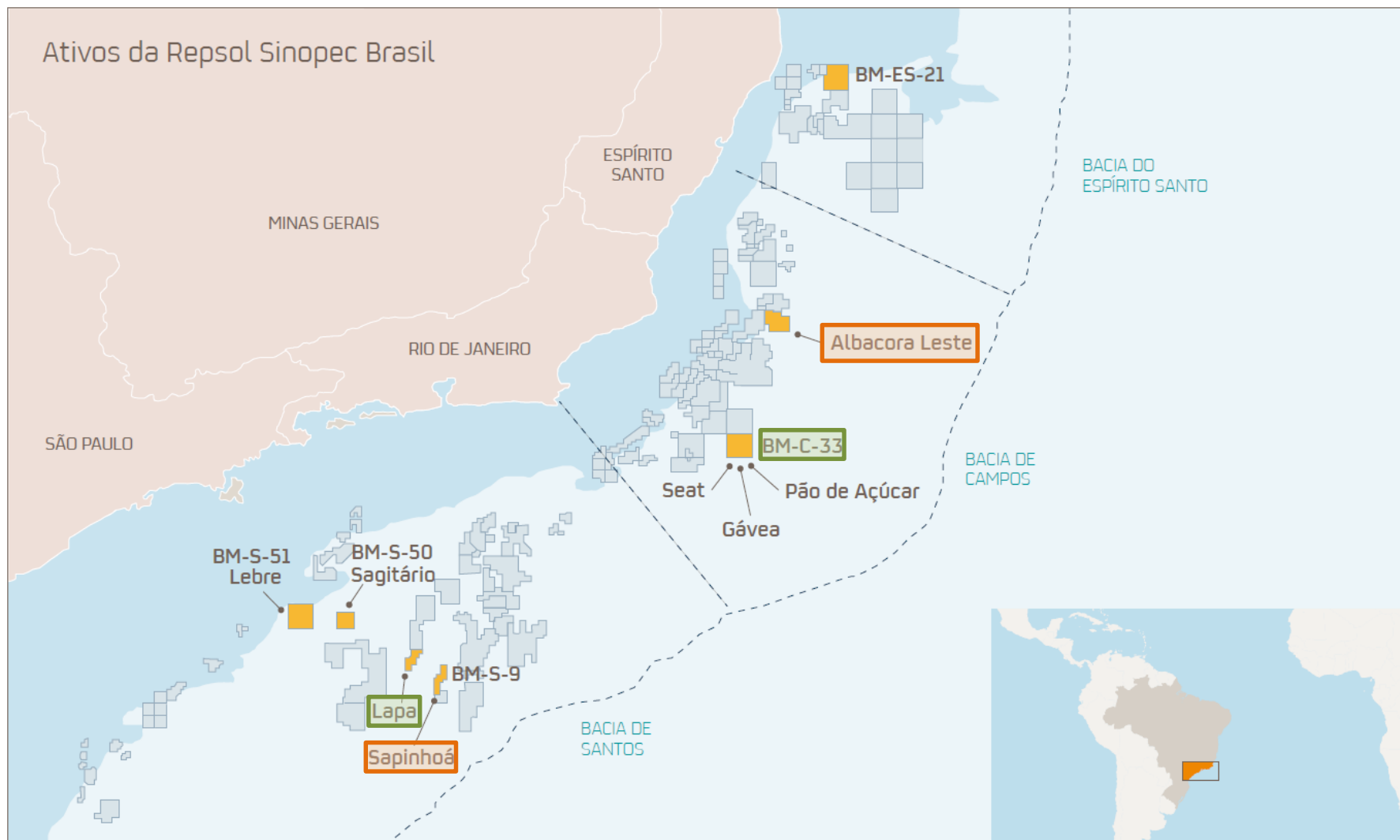
Este ano, a Repsol Sinopec Brasil completa 20 anos.

No setor de E&P, fomos pioneiros na abertura de mercado e na exploração do pré-sal e ao longo dessa trajetória, construímos um portfólio sólido de ativos, que inclui três campos produtivos (Sapinhoá, Lapa e Albacora Leste), além de blocos exploratórios com grande potencial.

Também realizamos uma das maiores descobertas de gás natural do país, conhecida como Pão de Açúcar, no bloco BM-C-33, no pré-sal da Bacia de Campos.

E hoje somos uma das empresas que mais produzem petróleo e gás natural no país.

Mapa de ativos



Visão e Cultura

Visão

Na Repsol Sinopec Brasil queremos ser uma empresa que busca o bem-estar das pessoas e que se antecipa na construção de um futuro melhor. Com esforço, talento e esperança, avançamos para oferecer as melhores soluções energéticas à sociedade e ao planeta.

Respeito

Cada um de nós, como parte da equipe Repsol Sinopec Brasil cuida das pessoas, da sociedade e do planeta, construindo relações de confiança com todos, começando pelo nosso próprio meio dentro da companhia.

Estamos abertos às ideias, crenças ou práticas quando são diferentes das nossas, conseguindo assim os melhores resultados.

Sentido de Antecipação

Na Repsol Sinopec Brasil agimos com visão de conjunto e pensando no futuro, sendo conscientes de que só assim seremos capazes de avançar, criar valor e tornar realidade o desafio que a nossa visão representa.



Nossos valores

Os nossos valores culturais moldam a nossa forma de trabalhar.
Estes valores resultam de duas atitudes inerentes à cultura da Repsol Sinopec Brasil:

Respeito e Sentido de Antecipação

Nossos valores

Integridade | Flexibilidade |

Responsabilidade | Transparência | Inovação



Pesquisa e Desenvolvimento

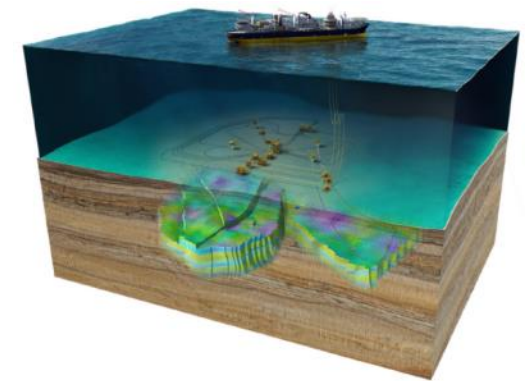
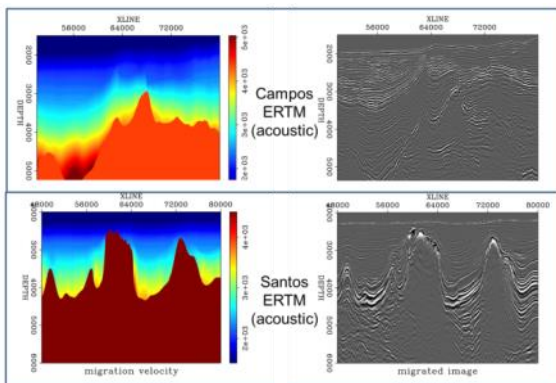
A Repsol Sinopec trabalha para desenvolver tecnologias avançadas para encarar os desafios de explorar e produzir petróleo e gás em águas brasileiras.

Nossas parcerias são essenciais, pois é dessa troca de conhecimento que nascem novas soluções para o setor.

Acreditamos na inovação tecnológica como elemento fundamental para construir um modelo energético mais eficiente e sustentável.

RSB: R&D highlights

Leo Soares, R&D Researcher (Technical Advisor – Geologist/Geophysicist)



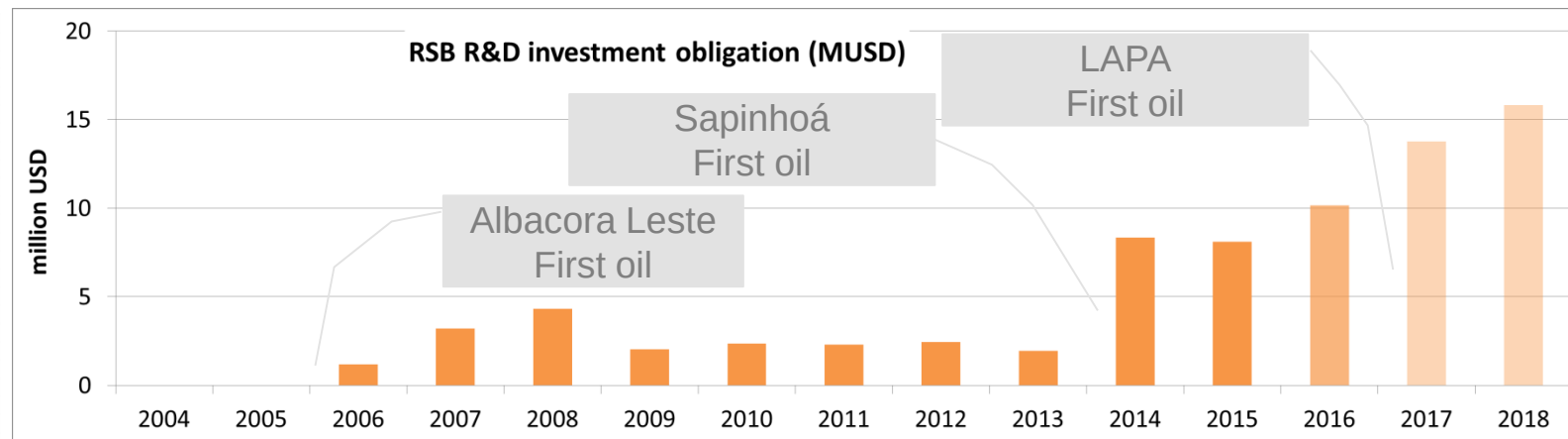
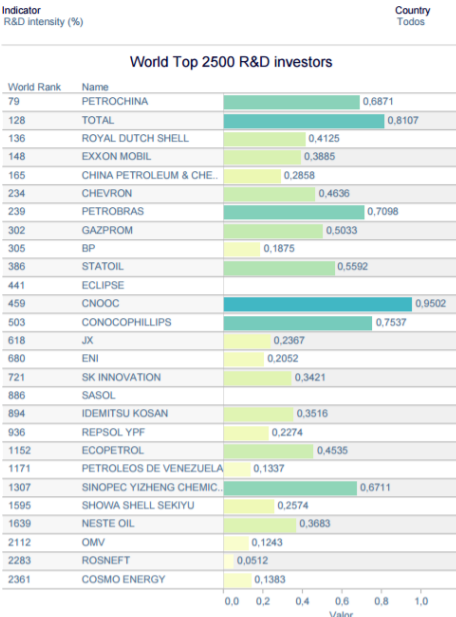
RSB: R&D highlights

R&D investment plan

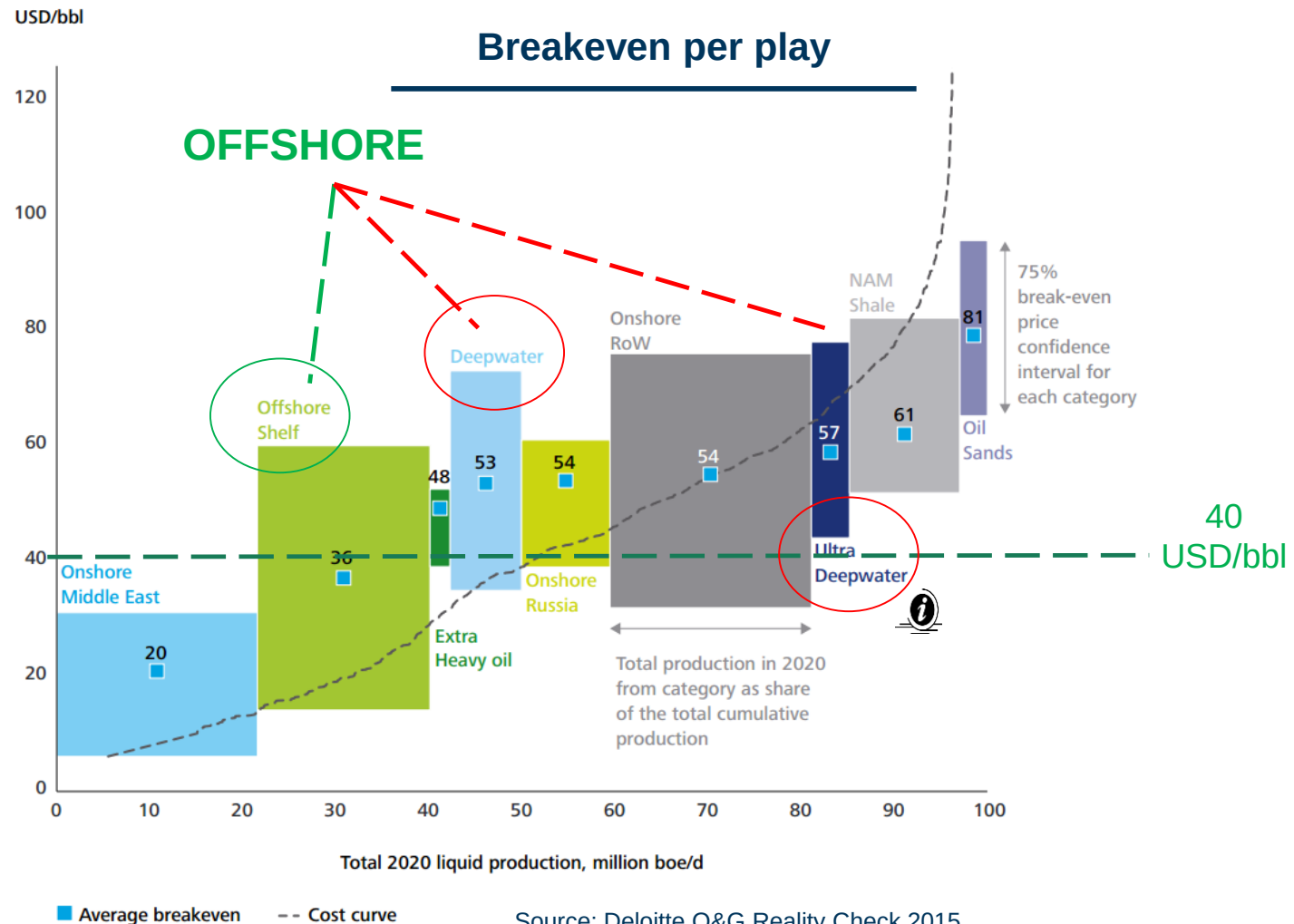


Investment obligations in R&D were ~20 MUSD during period 2006-2013.
Period 2014-18, the forecast is to generate additional obligations worth ~55 MUSD.

- ❑ RSB was one of the first international oil companies that generated R&D investment obligations, due to production of Albacora Leste.
- ❑ Sapinhoá production initiated in 2014, incurring in a significant increase of investment obligations.
- ❑ Total investment in the country exceeds 400 MUSD/yr: great opportunities for partnerships.



R&D goal: develop next generation of technologies associated to development, operation and decommissioning of offshore oil basins.



RSB: R&D highlights

Future perspective: Key Technology Areas for strategic plan 2014-18



Enabling technologies that allow to reduce deepwater costs, existing facilities and longer and deeper subsea tie-backs and debottlenecking and monitoring of existing facilities

Materials and Corrosion

- Endurance for the high external pressure and corrosion.
- Material selection and qualification of new materials.
- Improved monitoring of existing facilities.

Offshore Operations

- Faster and better concept design to reduce CAPEX and accelerate development.
- Longer tiebacks and debottlenecking.
- Decommissioning offshore facilities.

Power and Heating
Subsea leak detection
Decommissioning



ATLANTIS-SSSR
Subsea Seawater Sulphur
Removal for Injection

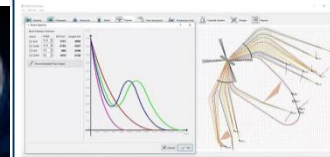
EMPIRE-s13Cr
Friction Welding for
Risers Applications

TAILS-DORIS
Rail Robot for Offshore
Facilities Integrity
Monitoring

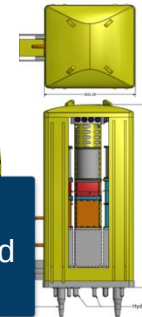
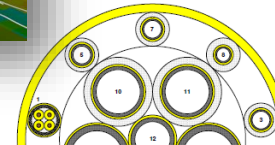
EMPIRE-CFR
Carbon Fibre
Flexible Risers



OATHKEEPER
Concept Selection
Topsides and subsea



ATLANTIS-NAUTILUS
Subsea Hydraulic Control and
Chemicals Injection



TAILS-HEADS
FPSO autonomous
oil spill detection

HERCULES
Subsea Collapse and
Corrosion



1

Visualize

2

Conceptualize

3

Define

4

Execute

5

Deploy
and Close

RSB: R&D highlights

Future perspective: Key Technology Areas for strategic plan 2014-18



Reduce drilling time in deep water wells (improved drilling performance and reduced NPT)
Reduce costs of abandonment (temporary and permanent) and improve monitoring.

Plug and Abandonment

- Logging through multiple casings.
- Tube and casing cutting.
- Alternative materials for plugging
- Formation creeping.

Well Technology



- Reduce non producing time (NPT).
- Increase Rate of Perforation (ROP) in hard formations.
- Improved logging tools.

Plug and Abandonment

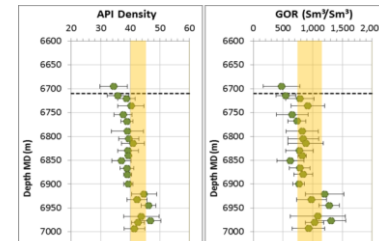
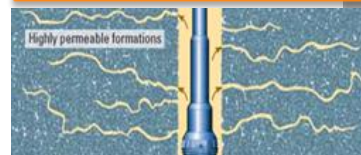
Electric DHSV



Hard Rock Drilling



CEMENT-SMPM
Advanced materials for Lost Circulation Control



GOLD-2
Software development

RSB: R&D highlights

Future perspective: Key Technology Areas for strategic plan 2014-18

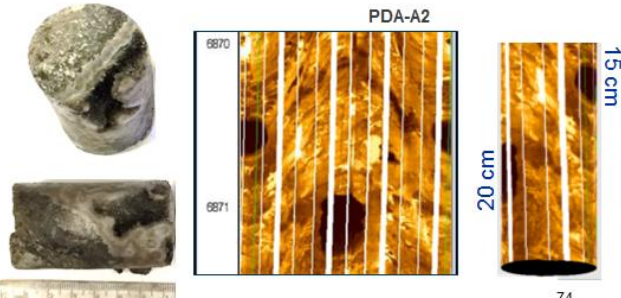


Improve image resolution in geological environments to reduce risks of drilling non-commercial wells in appraisal campaigns. Better understanding of pré-sal reservoirs

Subsurface Illumination



- Improve geological risk assessment.
- Optimise location of appraisal wells.
- Optimise drill performance through better shallow hazard assessment.
- Improved reservoir properties estimation.



VUGGY

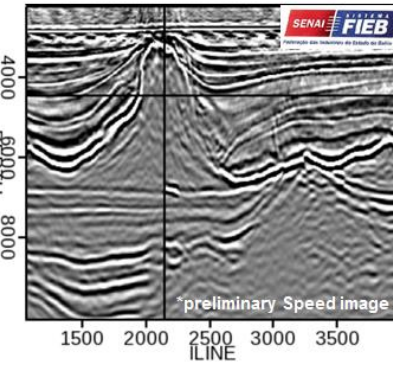
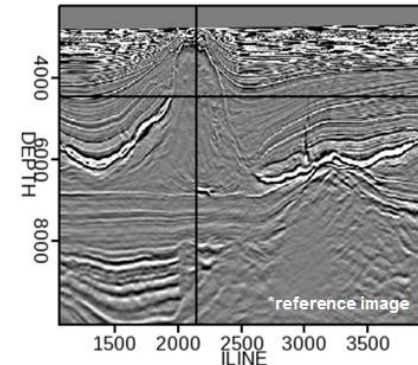
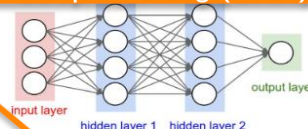
Characterise vugs and cavern porosity

CBPF

RMN in Well log and rock samples

S-EYES-FACIES

Facies attributes based in seismic data using deep learning (CNN)



SPEED-3

Viscoelastic 3D RTM
Viscoelastic 3D FWI
Full size demonstration and computing performance optimisation



RSB: R&D highlights

Future perspective: Key Technology Areas for strategic plan 2014-18



Improve productivity and recovery of existing oil fields already in production.
Improved design (reduced CAPEX and OPEX) of newer developments.

Fluid-Rock characterisation

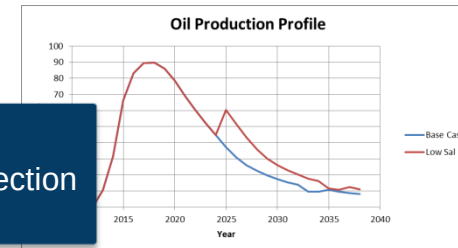


- Reduce CAPEX at design phase.
- Online monitoring to maximise production and minimise OPEX (flow assurance, solids formation)

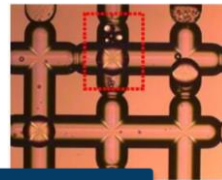
Enhanced Oil Recovery



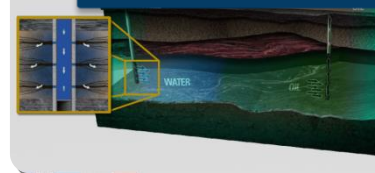
- Maximise productivity and recovery.
- Design of new strategies for enhanced oil recovery.



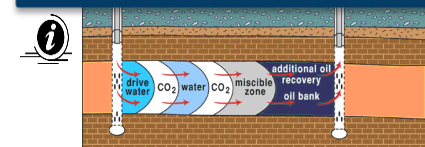
CYCLOP Gas Condensate Productivity BM-C-33



TWIN Tuned Salinity Water Injection Sapinhoá

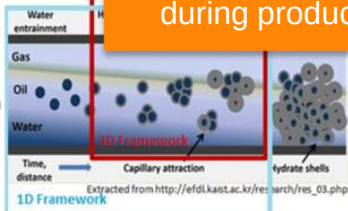


COIN CO₂ Scaling Deposition Lapa



ORWELL

Solids monitoring
during production



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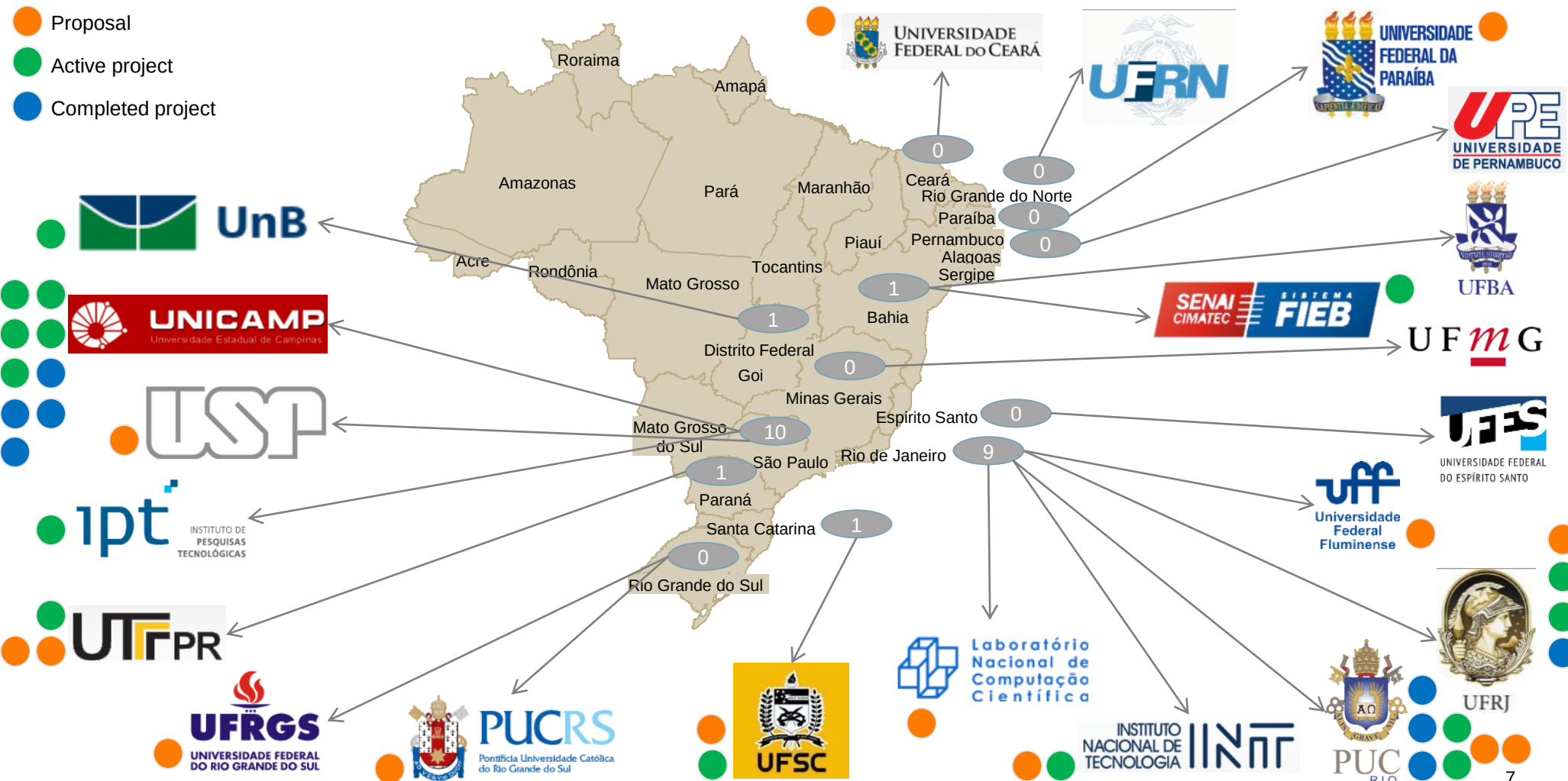
Deploy
and Close

RSB: R&D highlights

External executors



**Brazilian technology map with 21 universities and research institutes from 13 different states.
23 completed or active projects in 9 different universities (13 additional under evaluation).**



RSB: R&D highlights

Partners and internal executors



Partnership with other operators. Execution of activities with participation of Brazilian companies suppliers of equipment and services. Technology based small companies.

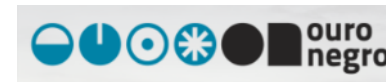
Operators



Service and Equipment Suppliers and Qualifiers



Small and Medium Enterprises



RSB: R&D highlights

Shareholders research centres



Partnership with shareholders (SINOPEC e REPSOL) research centres located in China and Spain. More than 2.000 researchers and state-of-the-art laboratory facilities.



中国石油化工股份有限公司石油工程技术研究院
Sinopec Research Institute of Petroleum Engineering

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OBRIGADO!

