

The Oil/ Gas Giants Provinces 2015-2030



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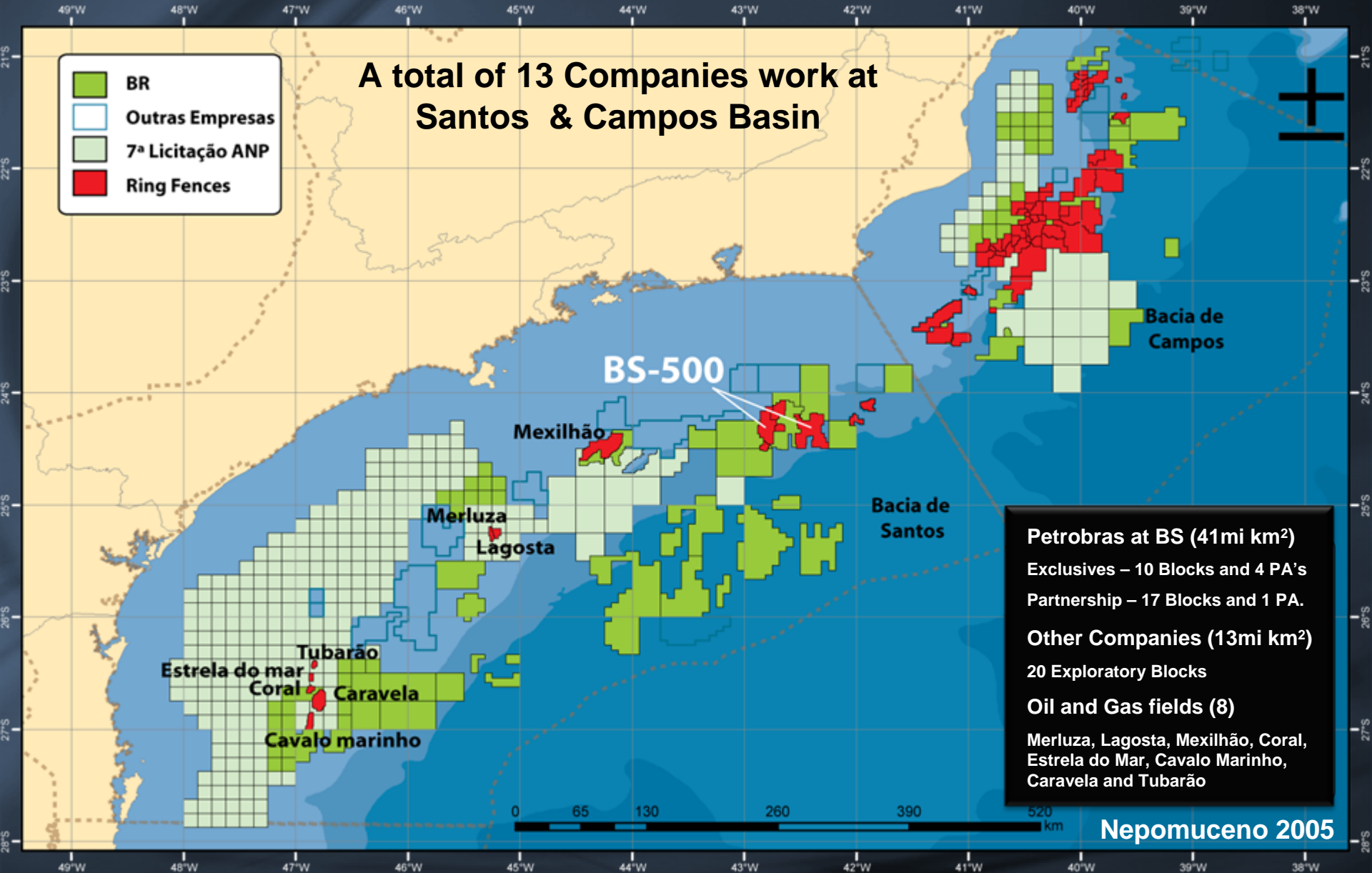
GREAT CAMPOS



**GO
 DEPPER!!!!
 IN BRAZILIAN
 SOUTHERN
 BASINS**



Santos & Campos Basin (350mil km area from 0 to 3.000m depth)

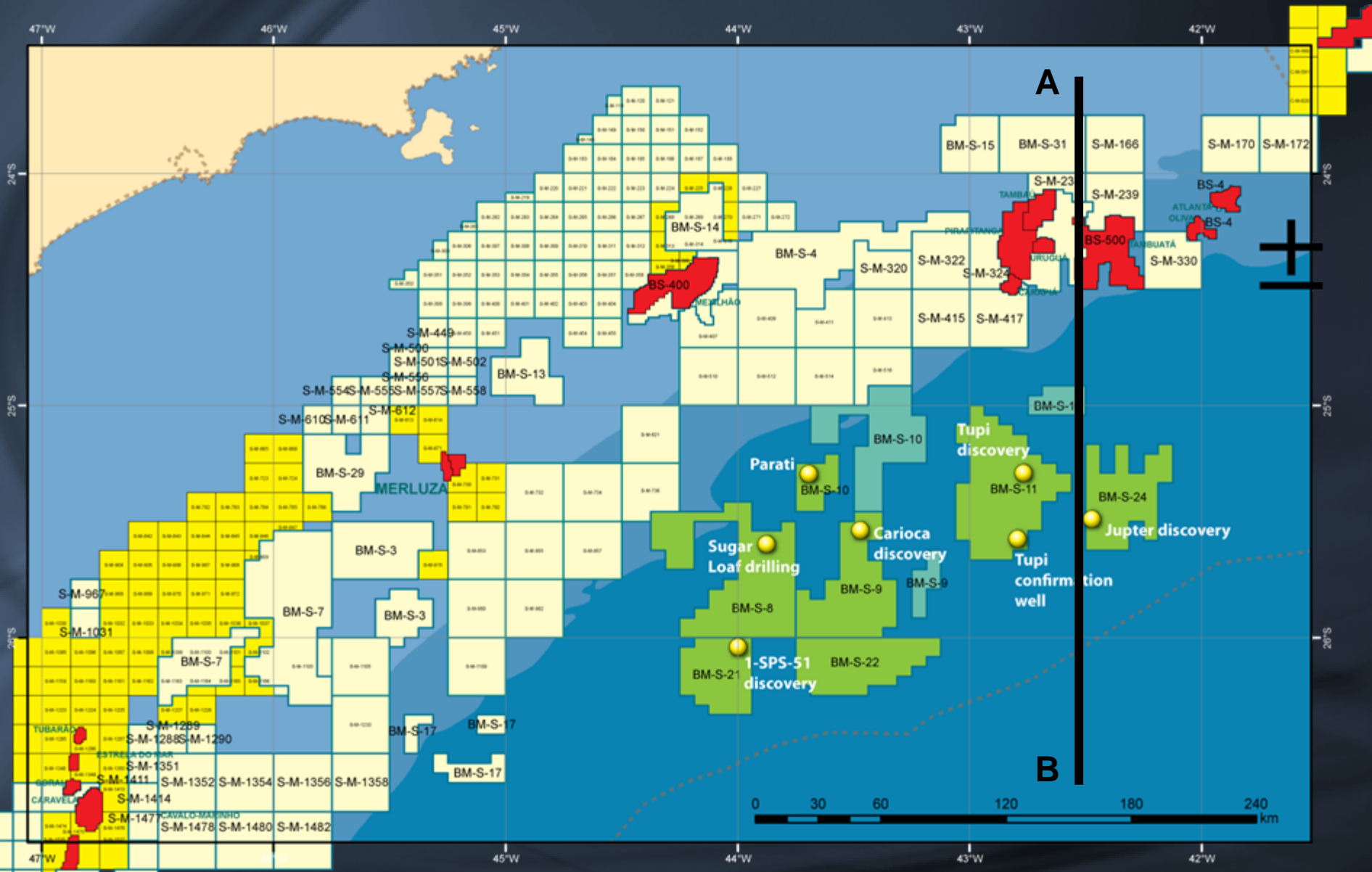


Petrobras at BS (41mi km²)
 Exclusives – 10 Blocks and 4 PA's
 Partnership – 17 Blocks and 1 PA.

Other Companies (13mi km²)
 20 Exploratory Blocks

Oil and Gas fields (8)
 Merluza, Lagosta, Mexilhão, Coral,
 Estrela do Mar, Cavalo Marinho,
 Caravela and Tubarão

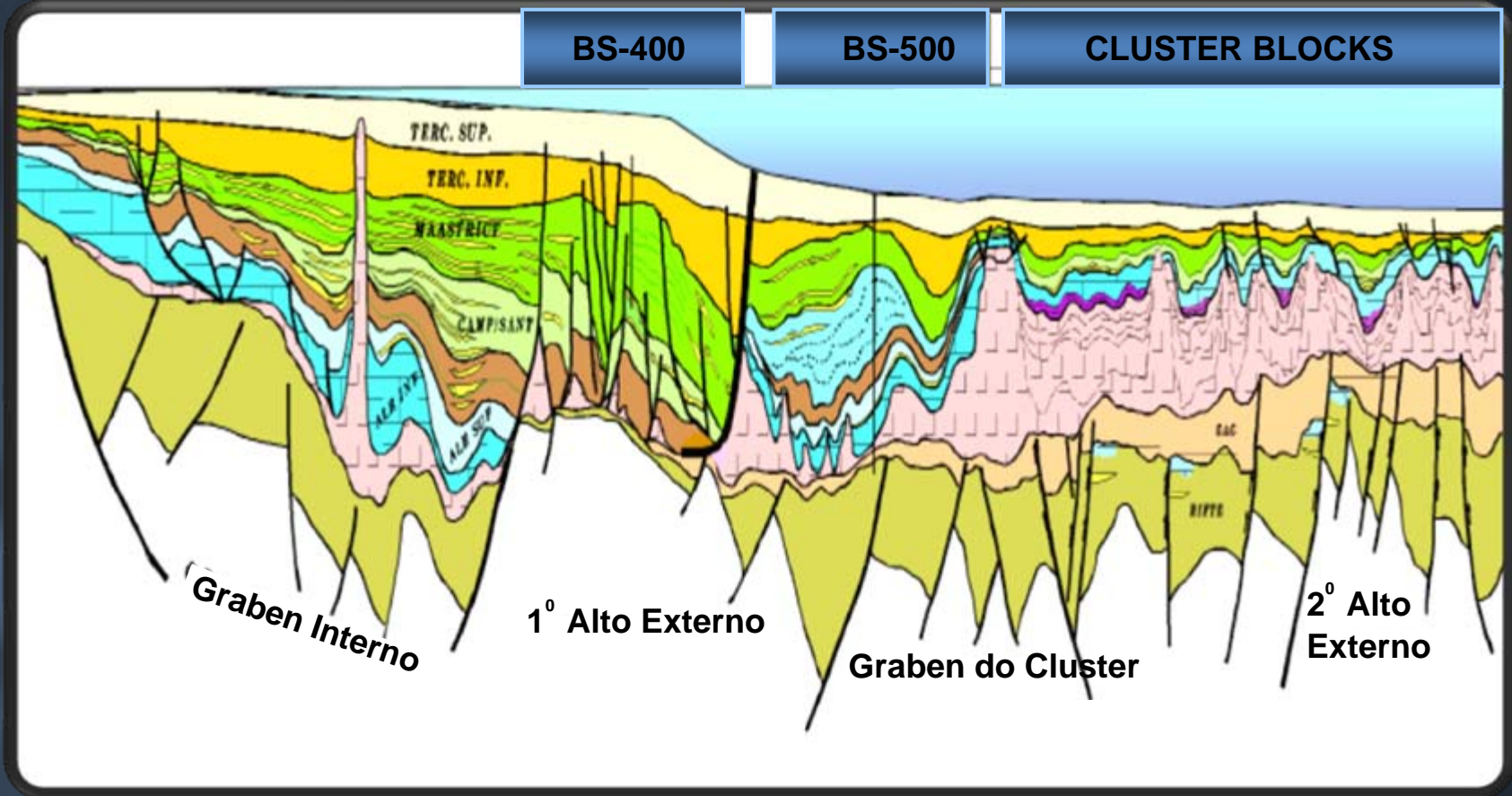
THE PRE-SALT DISCOVERIES



PRE-SALT IN THE SANTOS BASIN

A

B



Petrobras 2006

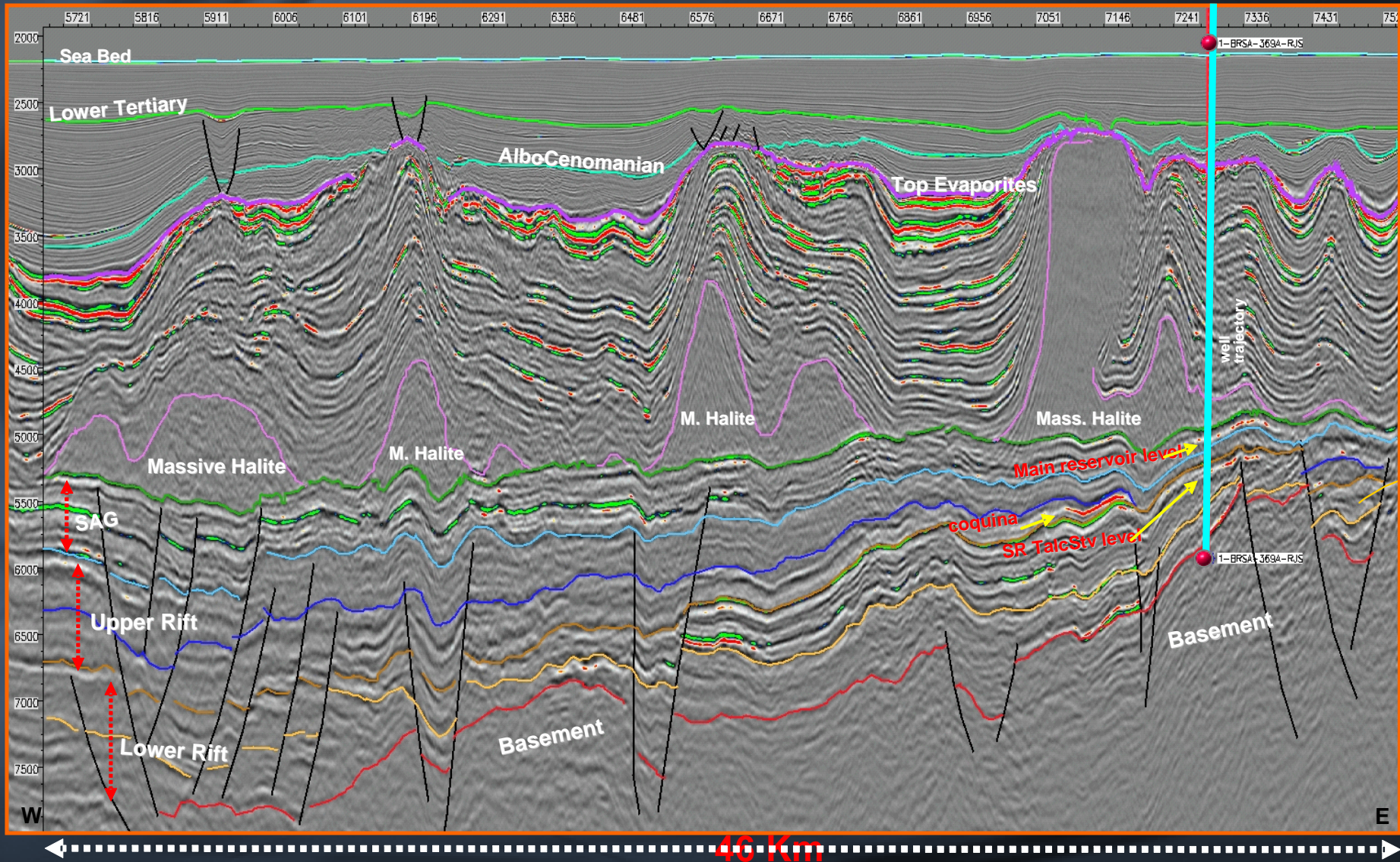
GRABEN DO CLUSTER

EXIGIHO

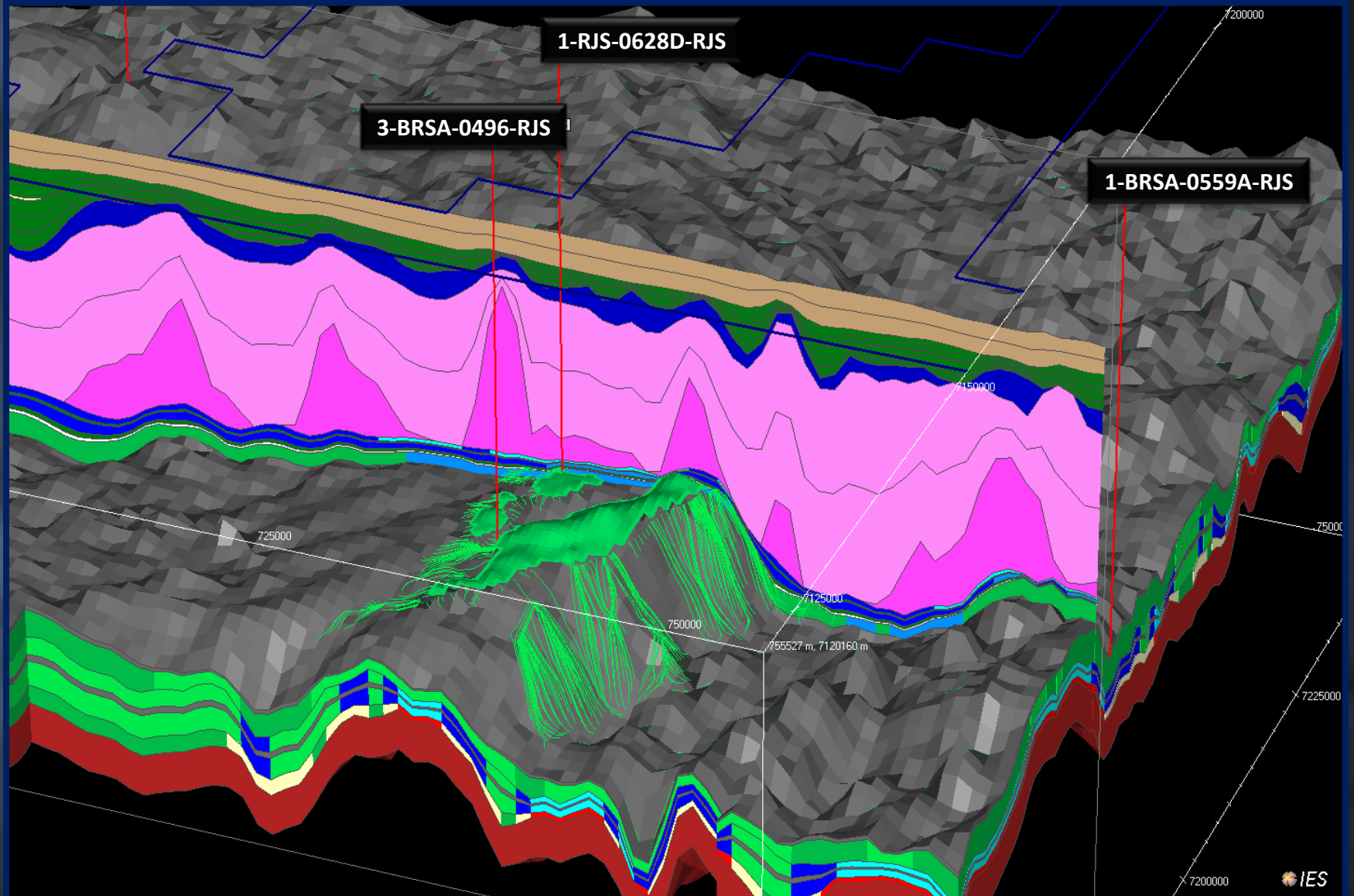
So VHO

SEISMIC SECTION IN DEPTH : THE TUPI HIGH AND THE MAIN SOURCE AND RESERVOIRS HORIZONS, SANTOS BASIN

Tupi

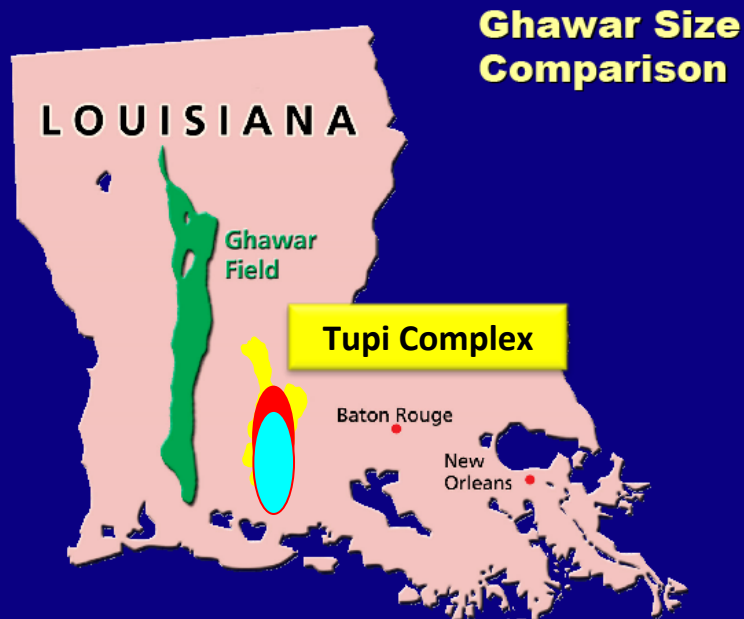


TUPI OIL FIELD



Tupi x Gawar Oil Field maps

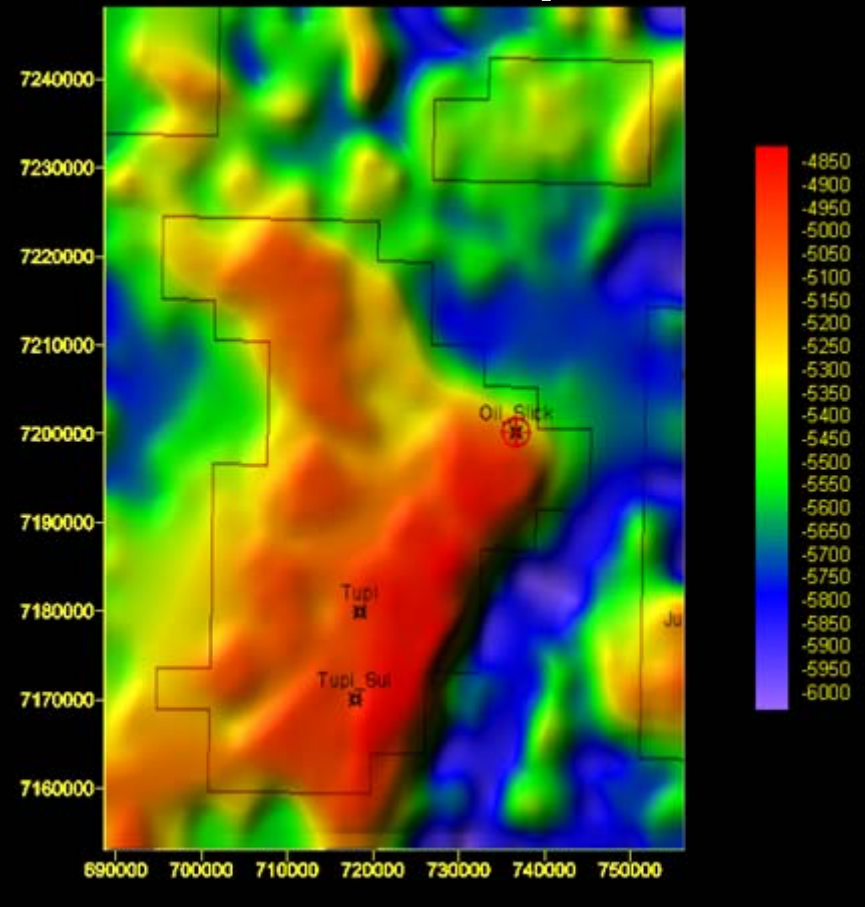
Structural map



(Modified from Abdulkader M. Afifi, 2005)

GAWAR FIELD: 2050 M²

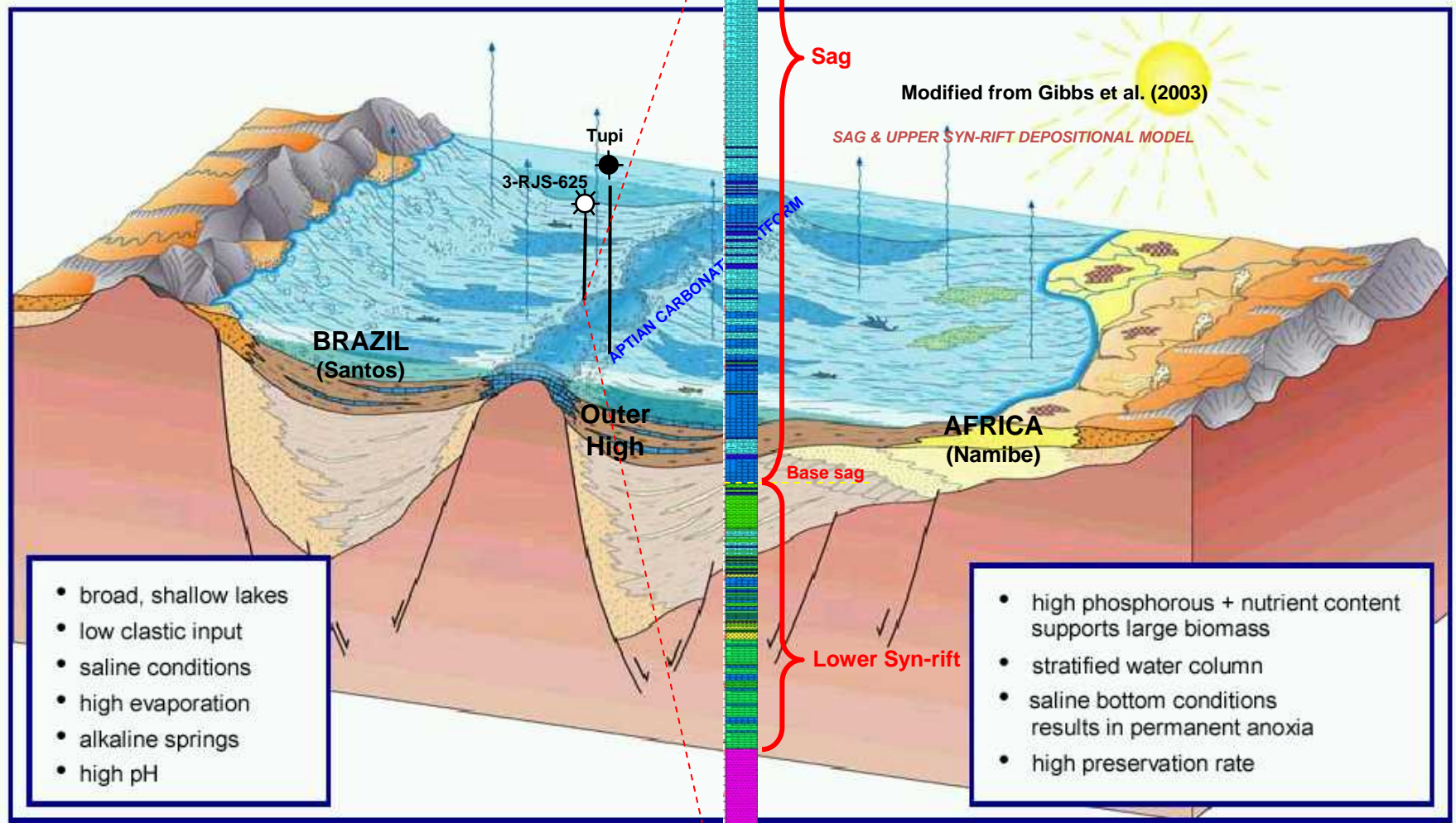
Production: 5 mm bbl/d



TUPI FIELD: 1240 Km²

Production: ? mm bbl/d

3-RJS-625
 Pre-Salt section
 WD = 1012 m
 TD = 6595 m



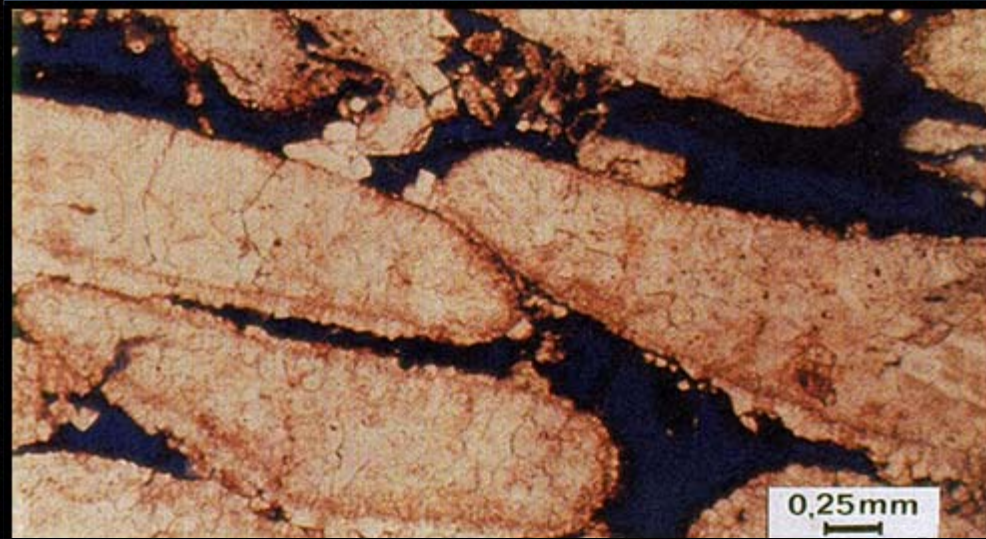
- broad, shallow lakes
- low clastic input
- saline conditions
- high evaporation
- alkaline springs
- high pH

- high phosphorous + nutrient content supports large biomass
- stratified water column
- saline bottom conditions results in permanent anoxia
- high preservation rate

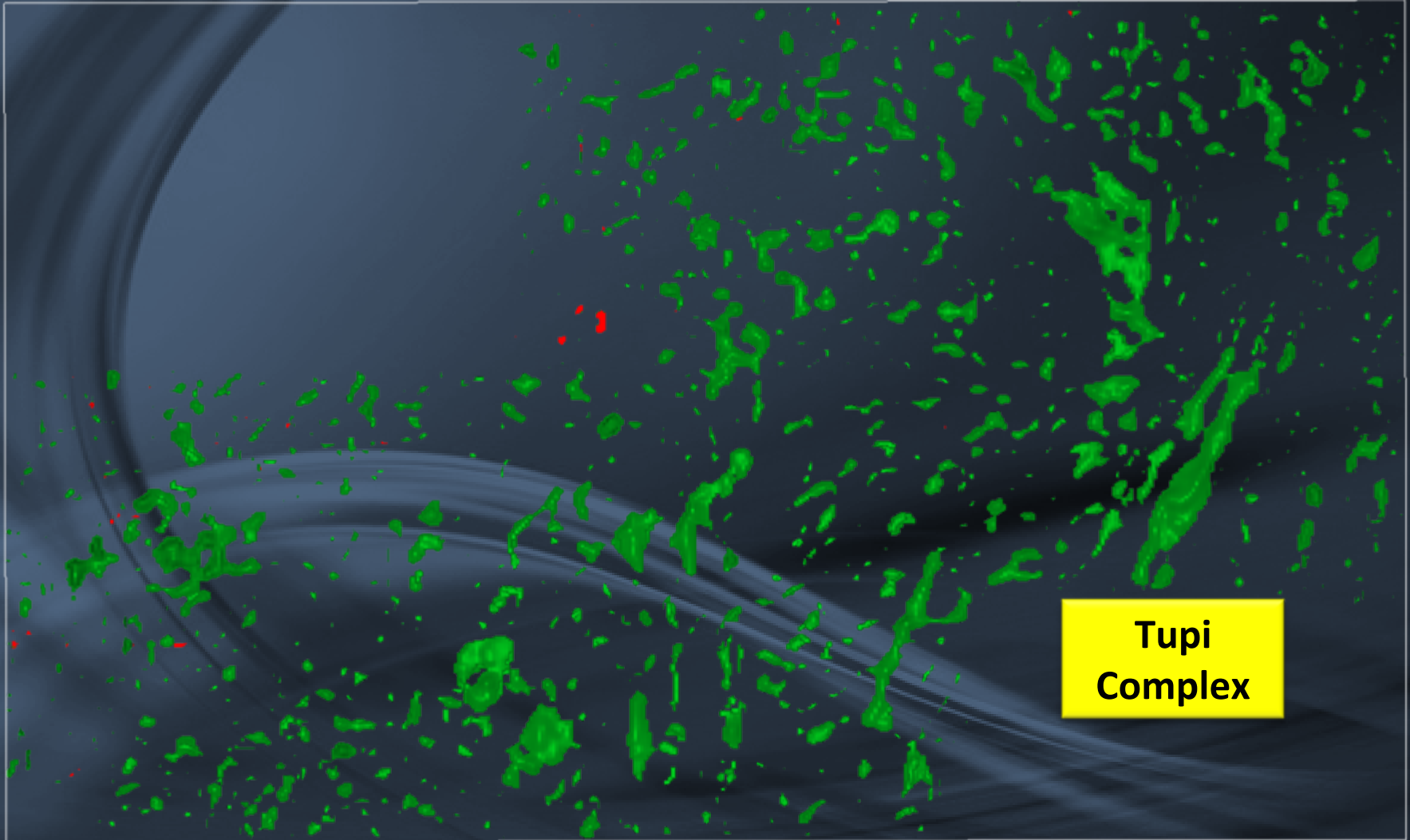
MACROSCOPIC VIEW OF STROMATOLITE RESERVOIRS, TUPI FIELD, SANTOS BASIN



MACROSCOPIC & MICROSCOPIC VIEW OF COQUINAS RESERVOIRS, CAMPOS BASIN



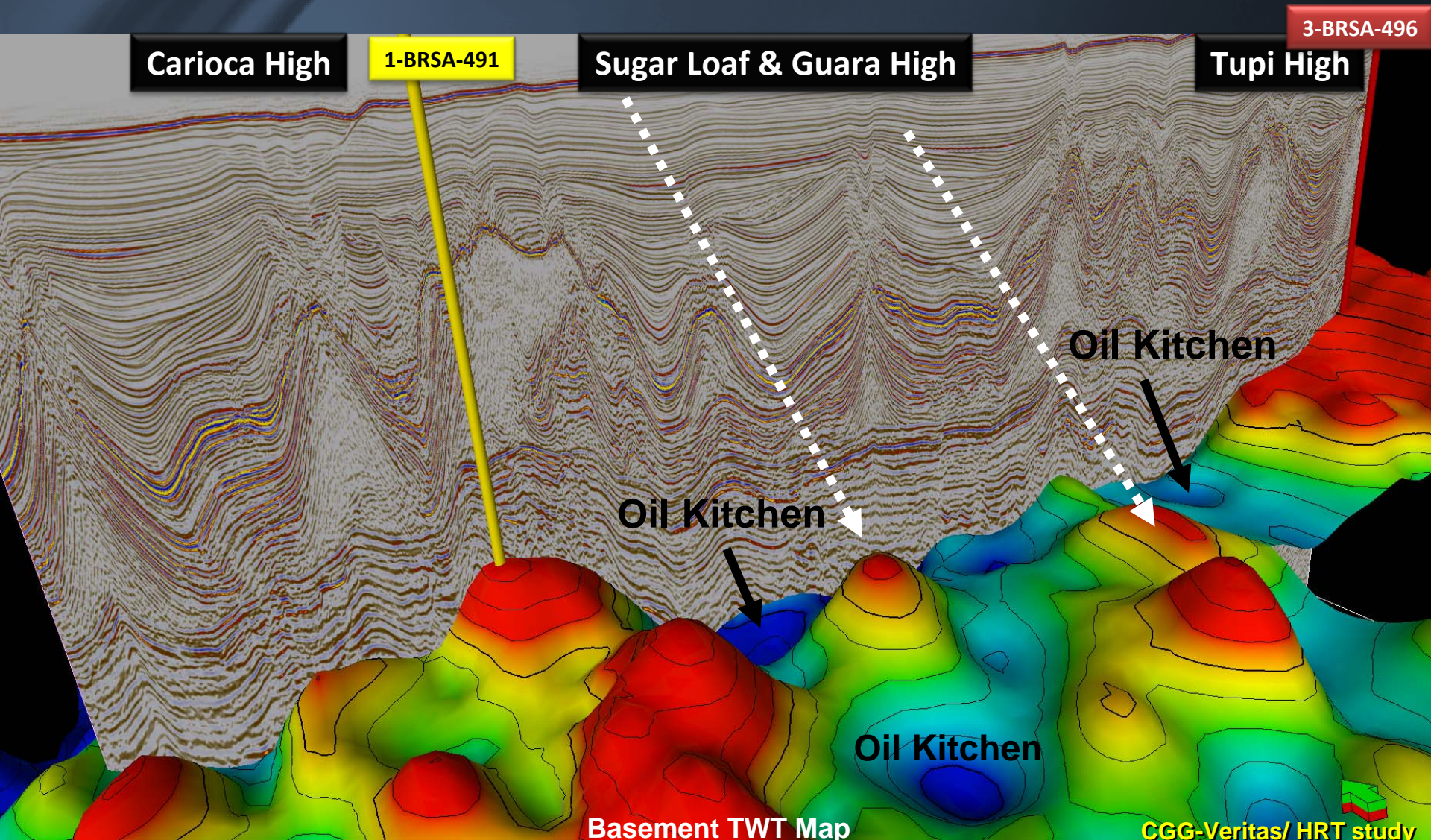
PRE-SALT ACCUMULATIONS (POTENTIAL SAG RESERVOIRS LEVELS)



**Tupi
Complex**

RESULTS POINTS TO ABOUT 20-30 BBBLs OF RESERVES HC'S IN PRE-SALT

Main Pre-salt Oil Discoveries in Ultra Deep Water Santos



Main Pre-salt Oil Discoveries in Ultra Deep Water Santos

Carioca High

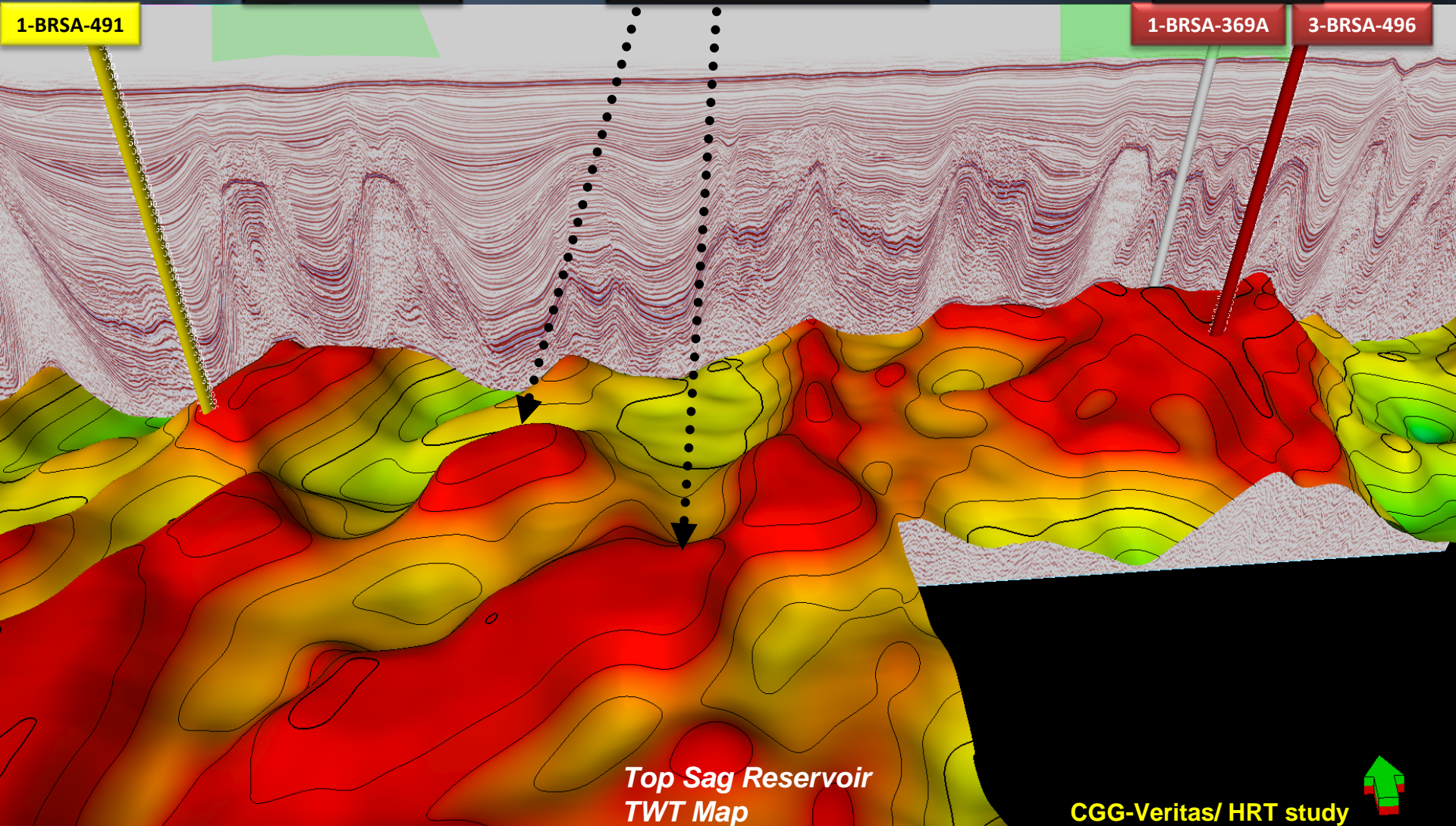
Sugar Loaf & Guara

Tupi High

1-BRSA-491

1-BRSA-369A

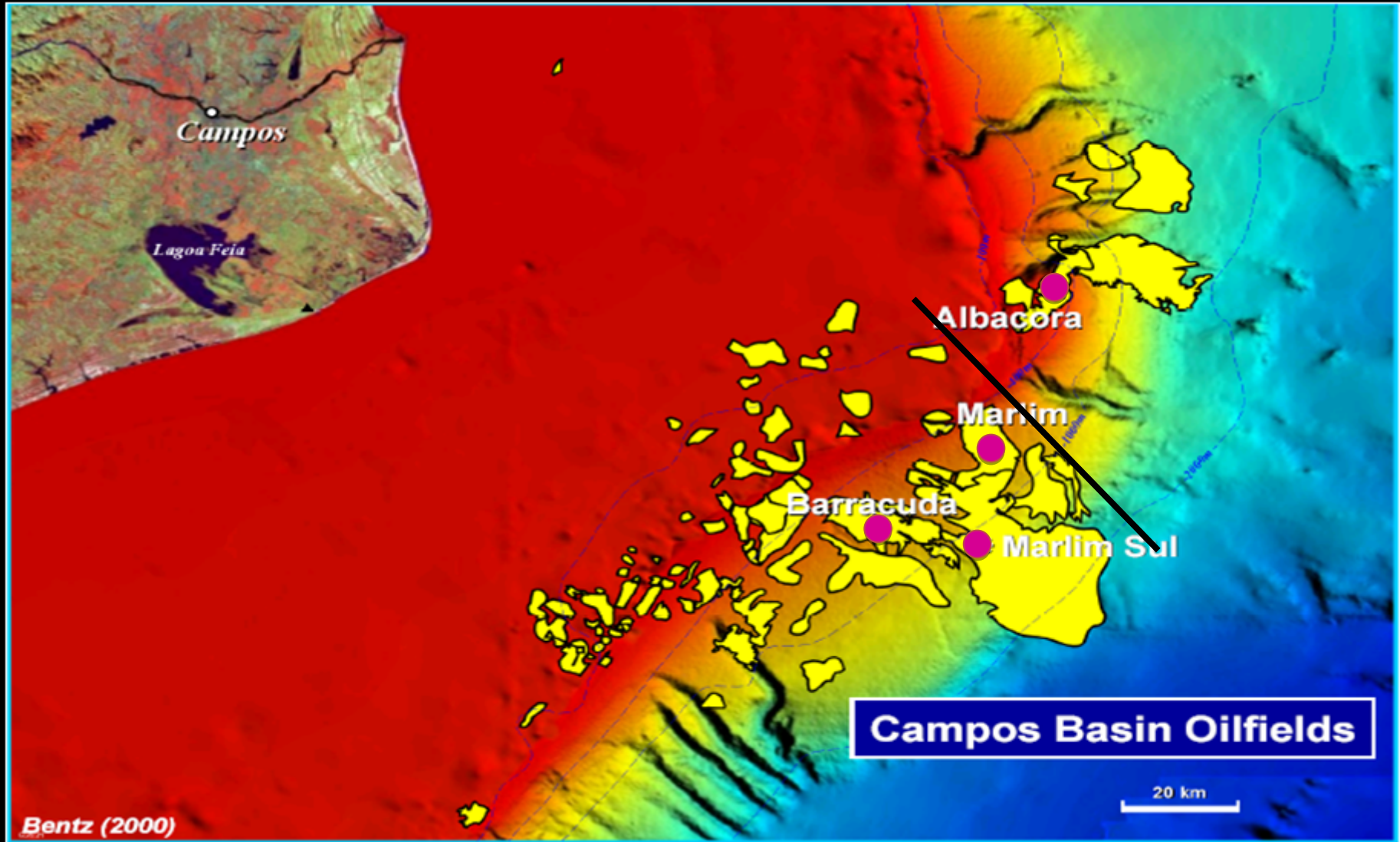
3-BRSA-496



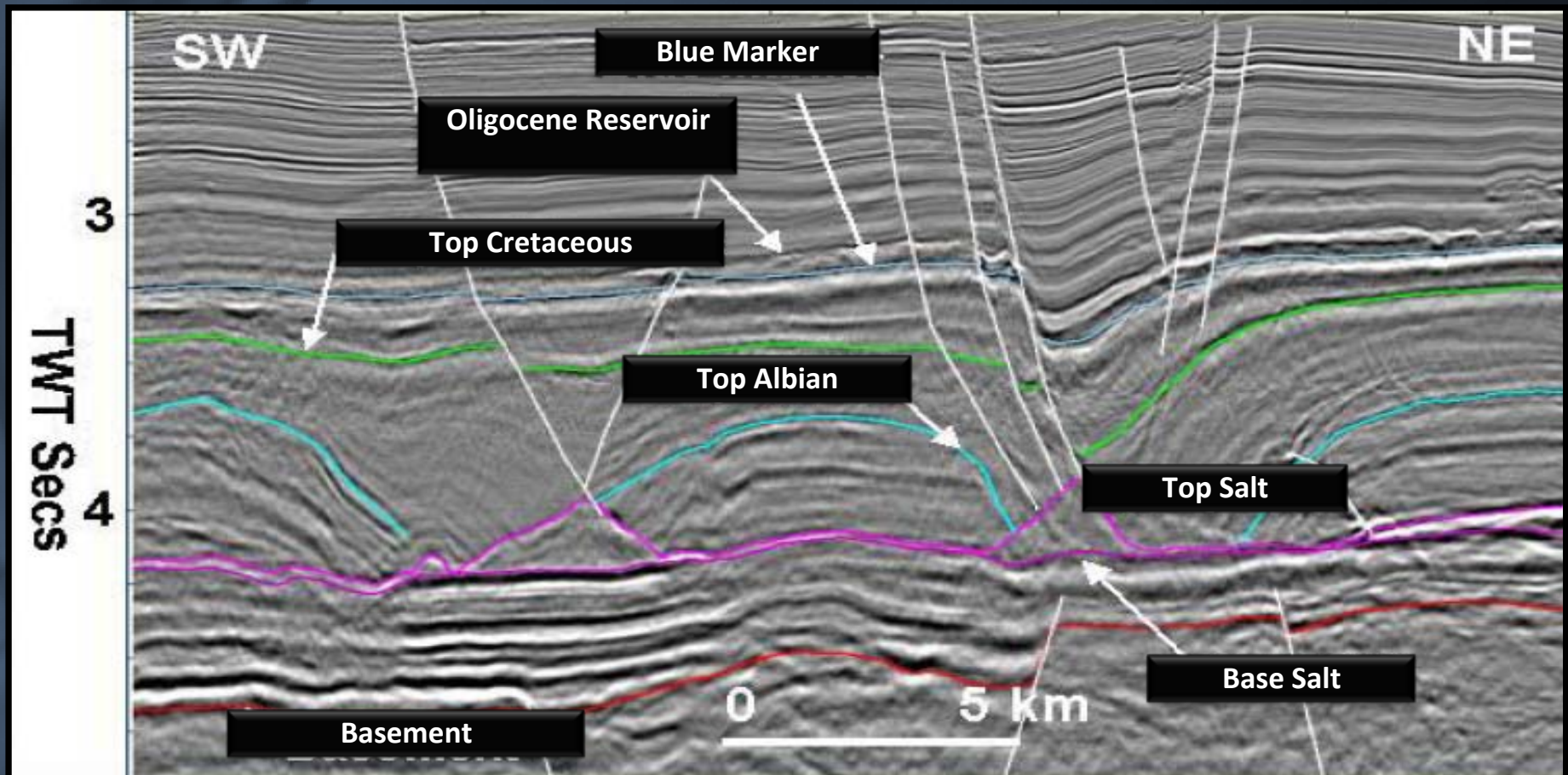
Top Sag Reservoir
TWT Map



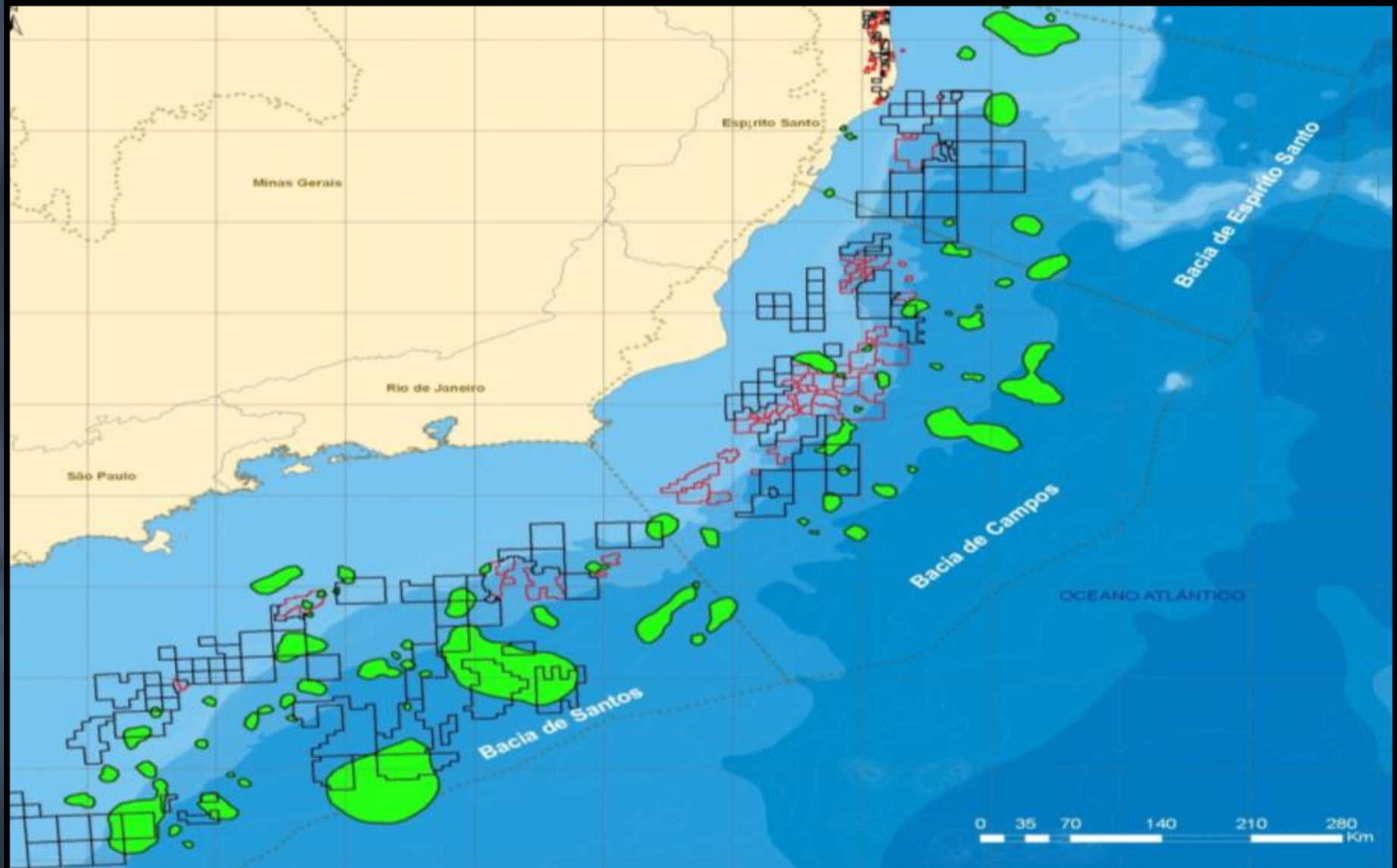
Main Oil Occurrences at Campos Basin



MARLIN FIELD POST-SALT



THE PRE-SALT HYDROCARBON POTENTIAL OF THE GREATER CAMPOS BASINS



EXPLORATION EFFORTS (BRAZIL X EUA)

Brazil x EUA

