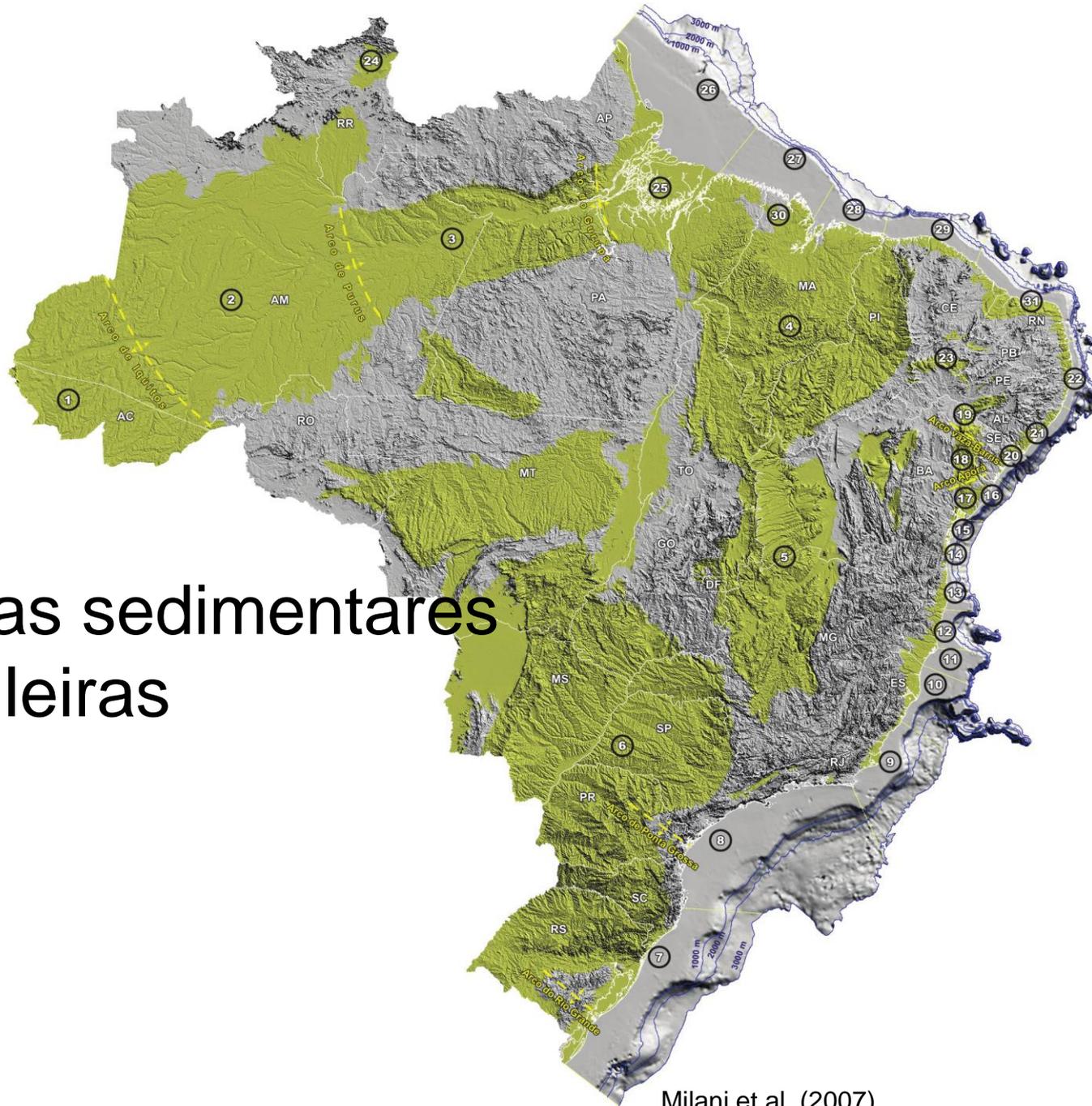


Petróleo nas bacias sedimentares brasileiras

GSA0301-Recursos Energéticos

Bacias sedimentares brasileiras



Milani et al. (2007)

Bacias sedimentares brasileiras

1,018 B bbl (2019)
~60% Pré-sal
~3 milhões de barris/dia

Bacia do Solimões

Bacia do Parnaíba

Bacia Potiguar

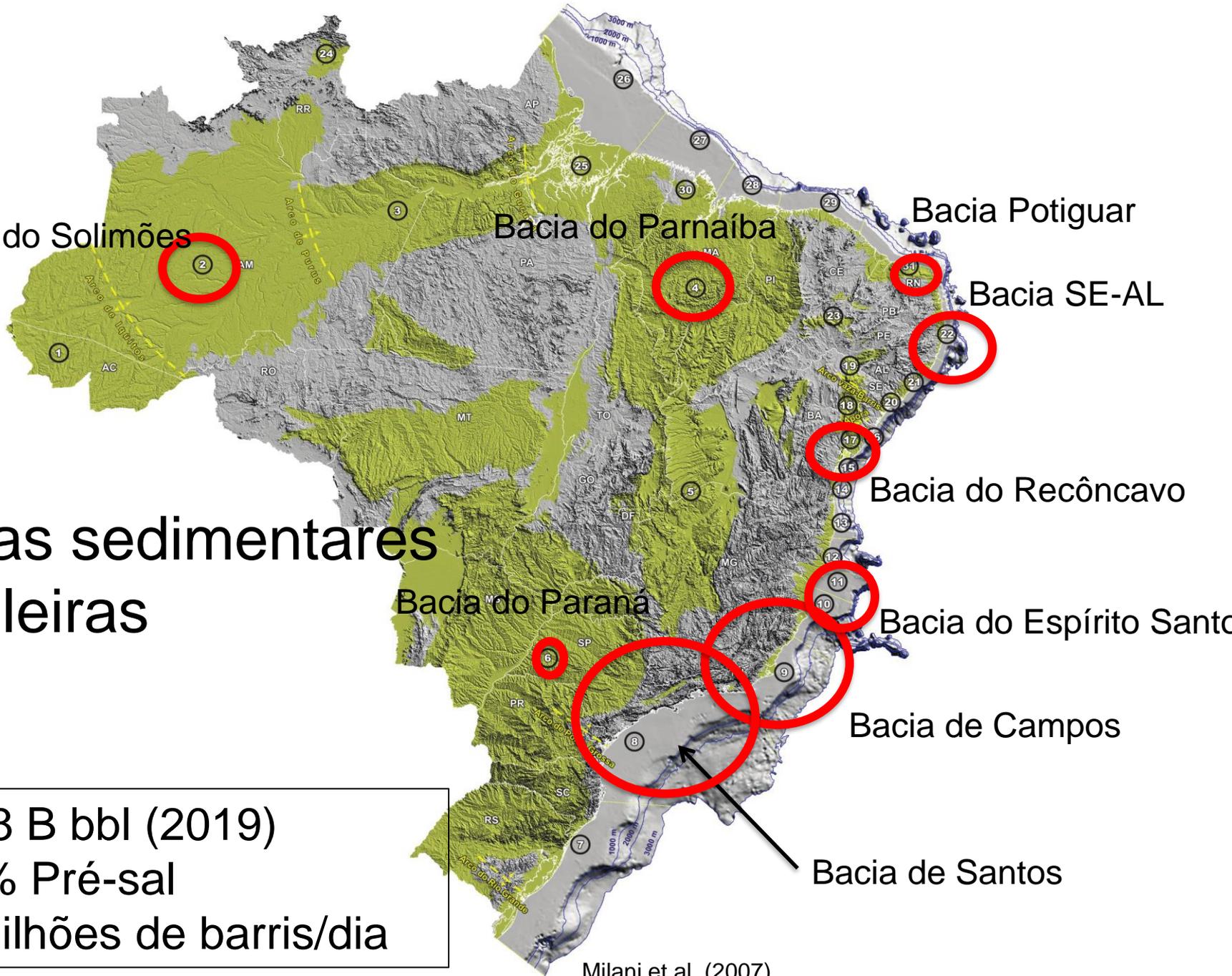
Bacia SE-AL

Bacia do Recôncavo

Bacia do Espírito Santo

Bacia de Campos

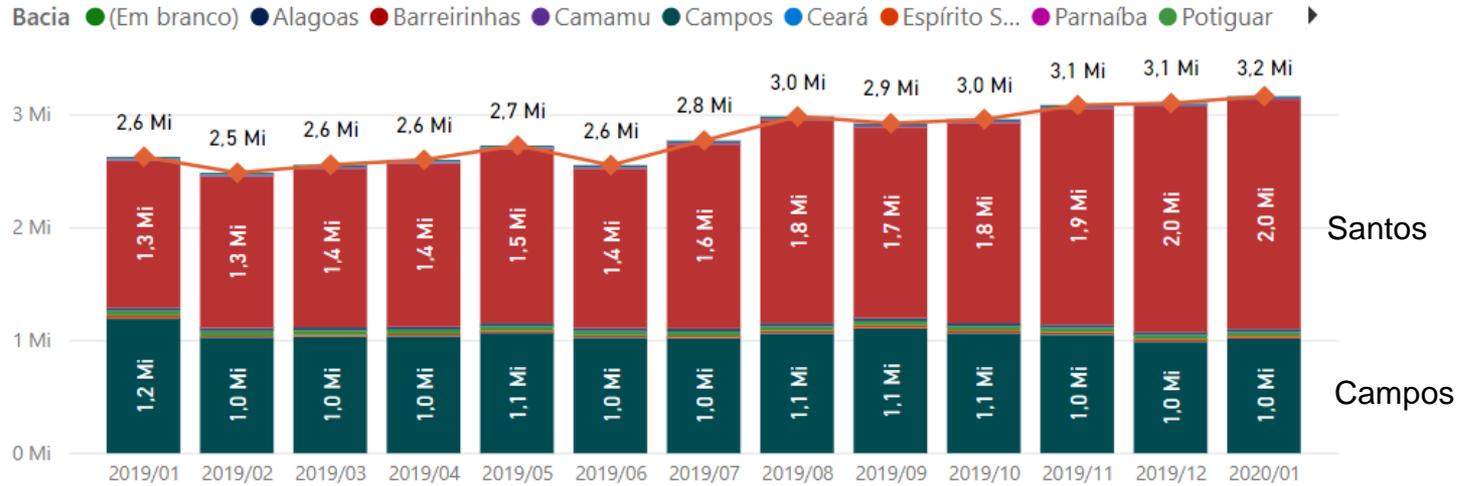
Bacia de Santos



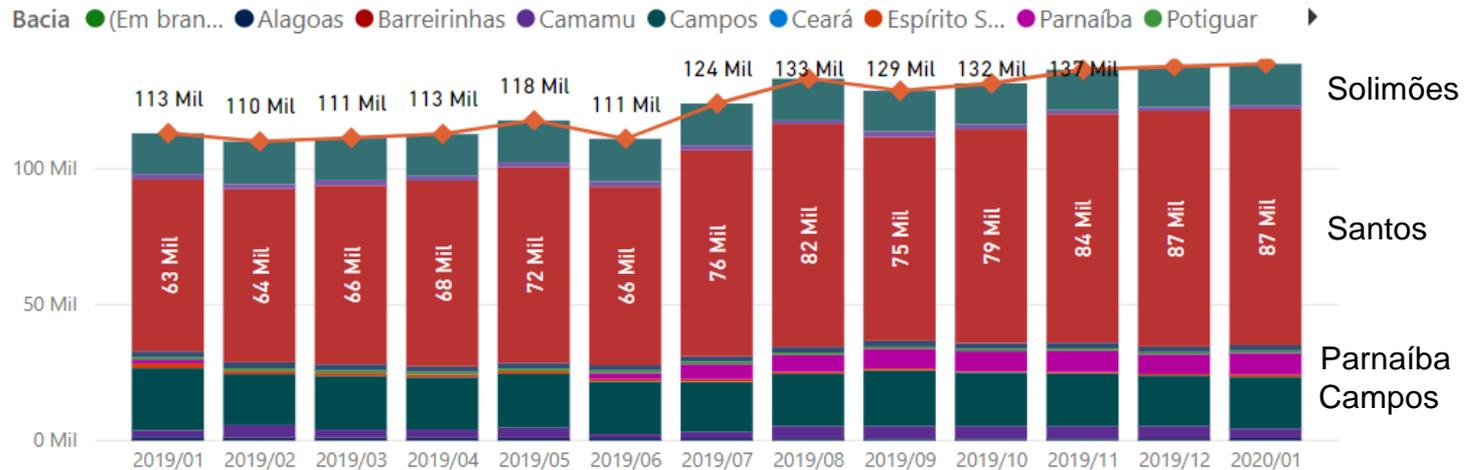
Milani et al. (2007)

Produção de óleo e gás

Petróleo



Gás Natural Total



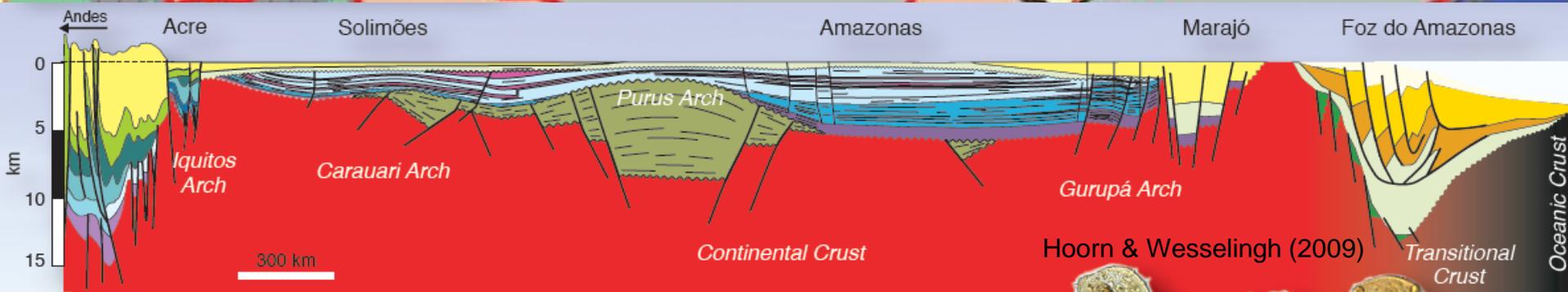
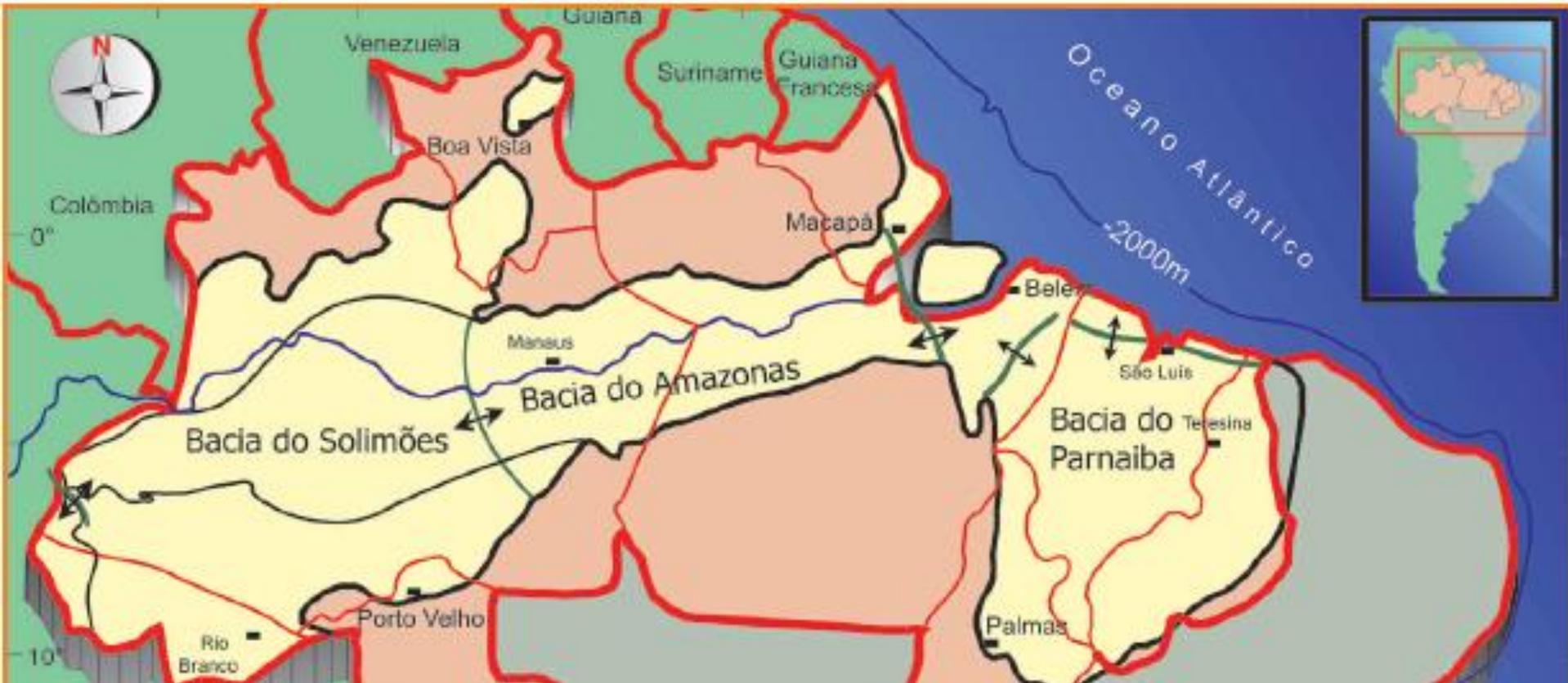
Classificação das bacias sedimentares brasileiras

BACIAS	SINÉCLISES	RIFT	Margem distensiva
FORMATO	ARREDONDADO	ALONGADO	QUADRANGULAR
ÁREA	600.000 – 1.000.000 km ²	20.000 – 40.000 km ²	100.000 – 200.000 km ²
ESPESSURA DO PREENCHIMENTO	5.000 m	8.000 m	6.000 m
ROCHAS PREDOMINANTES	SILICICLÁSTICAS, ÍGNEAS, EVAPORÍTICAS	SILICICLÁSTICAS	SILICICLÁSTICAS, CARBONÁTICAS, EVAPORÍTICAS
IDADE	PALEOZÓICA E MESOZÓICA	MESOZÓICA	MESOZÓICA E CENOZÓICA
ÓLEO	1,7%	3,0%	95,3%
GÁS	26,9%	18,0%	55,1%

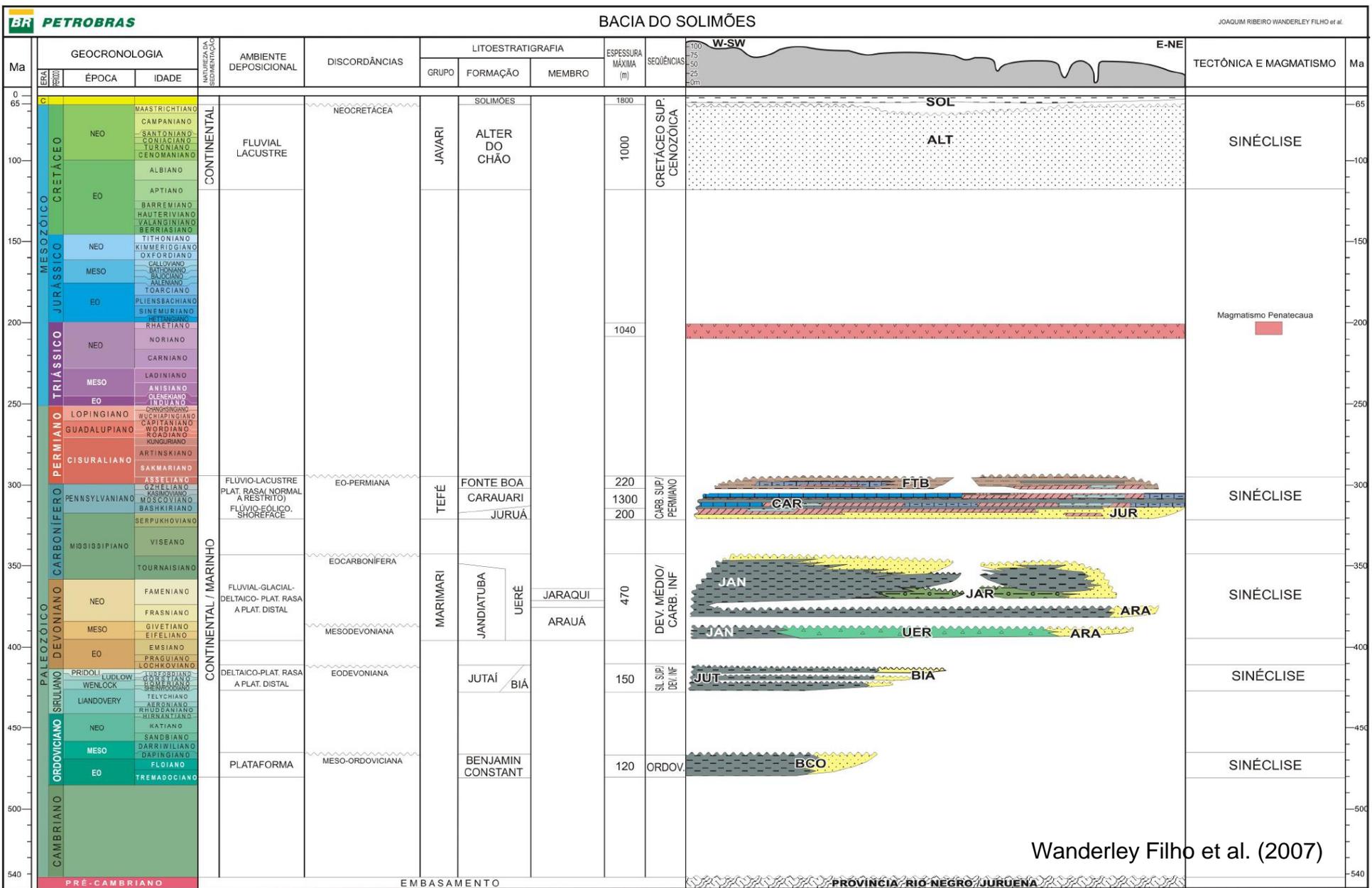
Feijó (2005)

Bacia do Solimões (sinéclise)

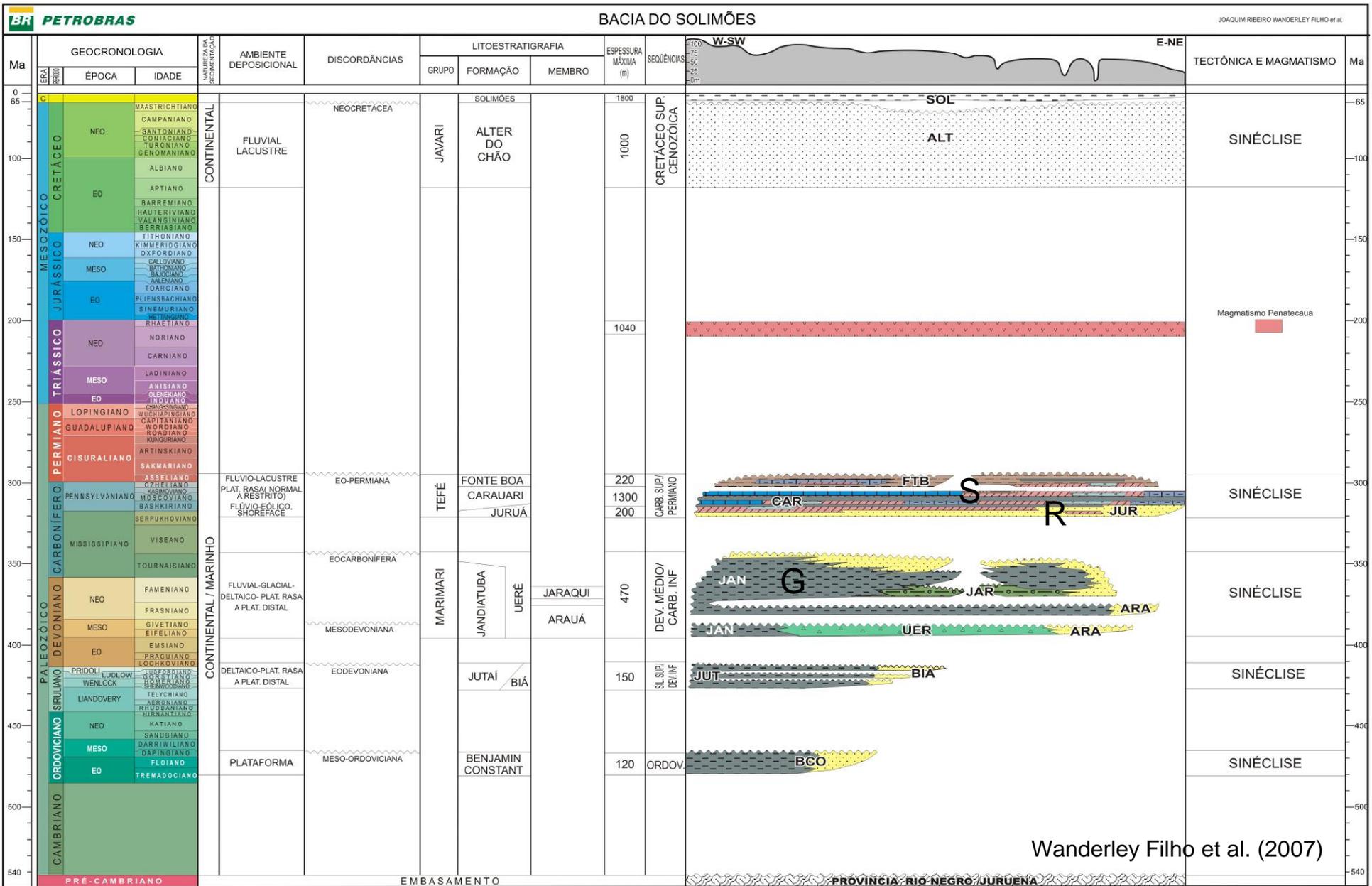
Wanderley Filho et al. (2006)



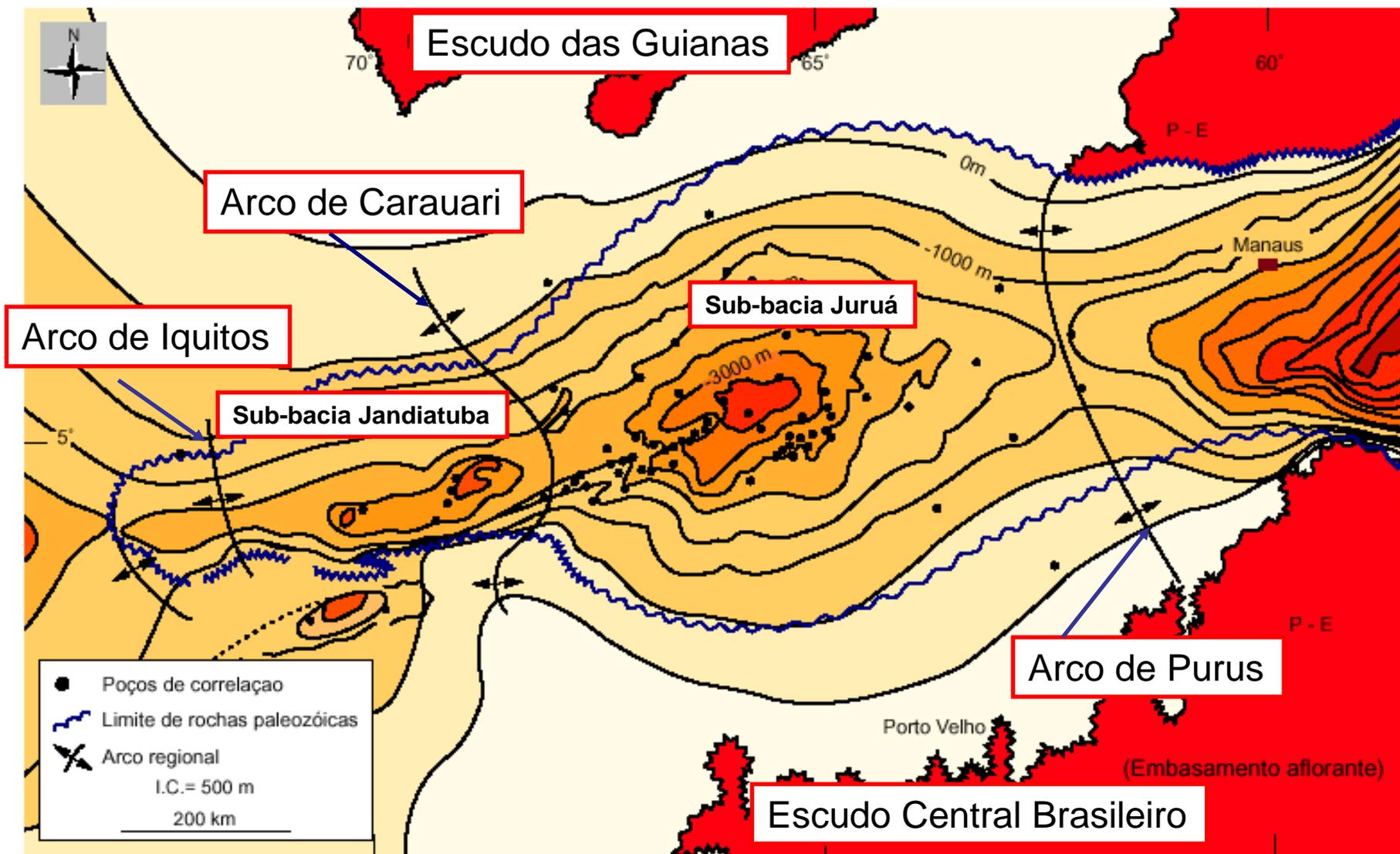
Estratigrafia



SP Jandiátuba-Juruá (!)



Configuração estrutural



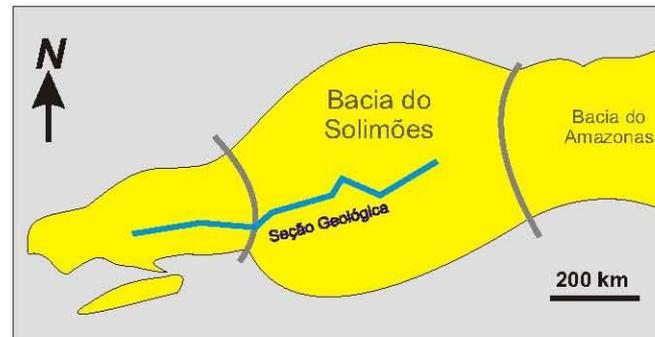
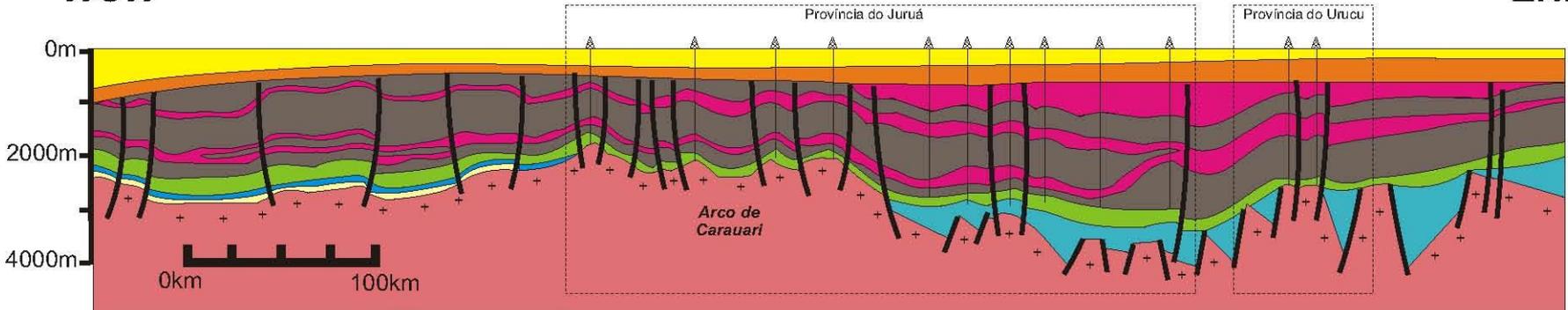
MAPA ESTRUTURAL EM PROFUNDIDADE DA BASE DO PALEOZÓICO (EIRAS, 1996, MODIFICADO DE GOZAGA INÉDITO).

Arcabouço estrutural

Seção Geológica Esquemática da Bacia do Solimões
Solimões Basin Schematic Cross-Section

WSW

ENE

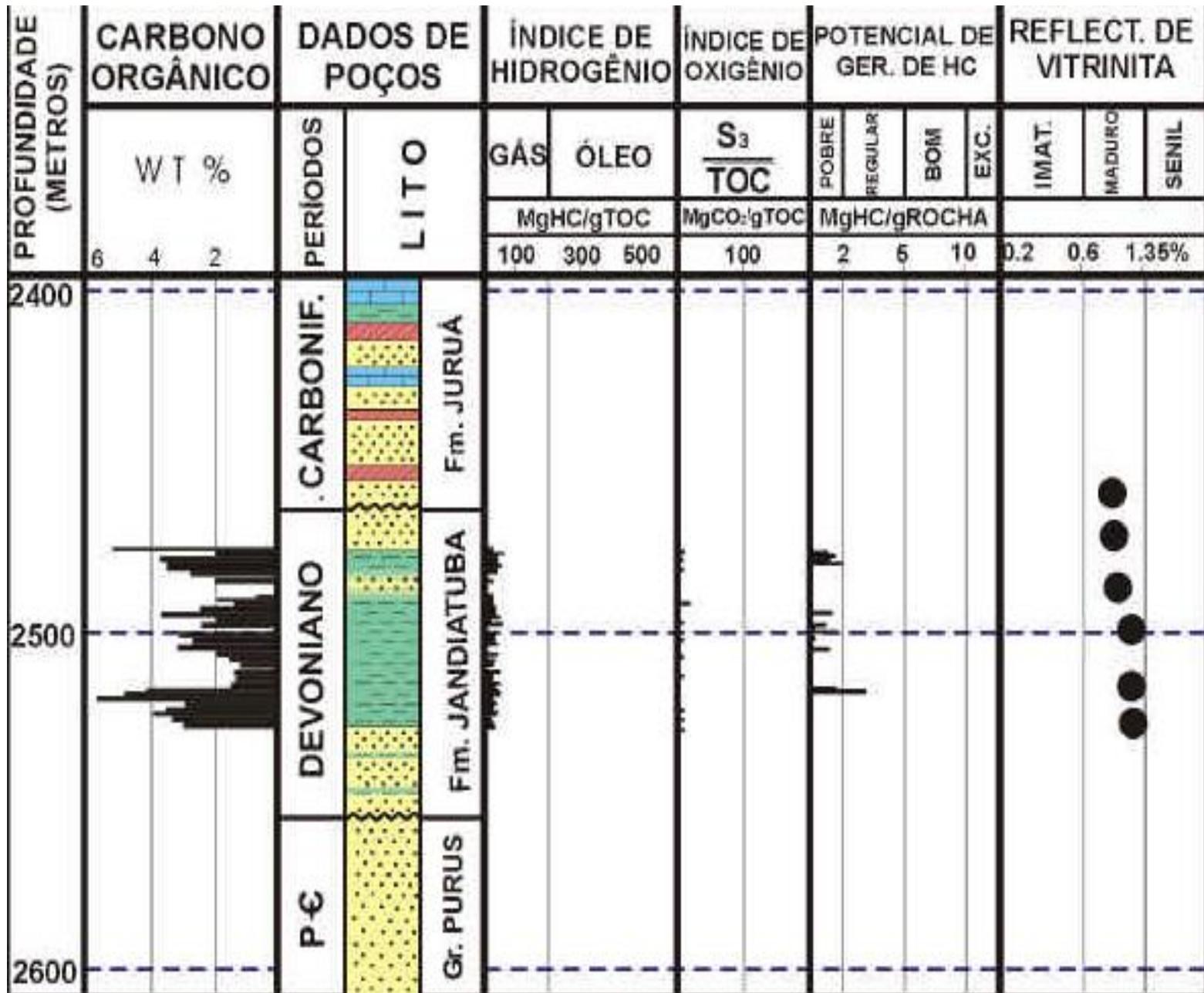


Modificado de Eiras, 1996
Modified from Eiras, 1996

Principais elementos estruturais:

- Altos estruturais internos
- Soleiras de rochas ígneas básicas (3)
- Falhas reversas
- Anticlinais

Rocha geradora: Folhelho marinho devoniano (Fm. Jandiutuba)

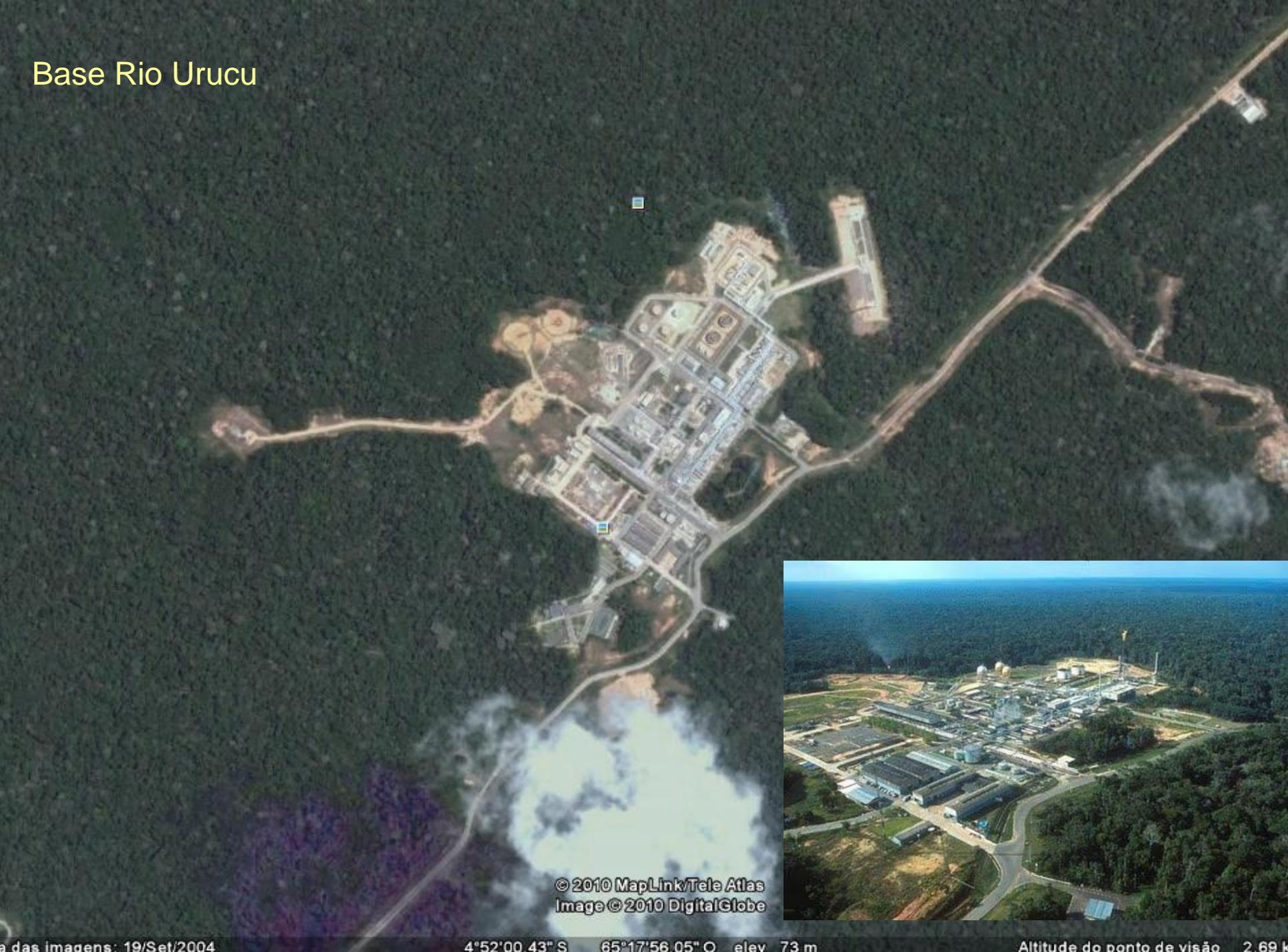


Armadilhas: anticlinais associadas a falhas reversas



O uso de técnicas modernas na aquisição e processamento de dados permitiu a obtenção de seções sísmicas de excelente qualidade.

Base Rio Urucu

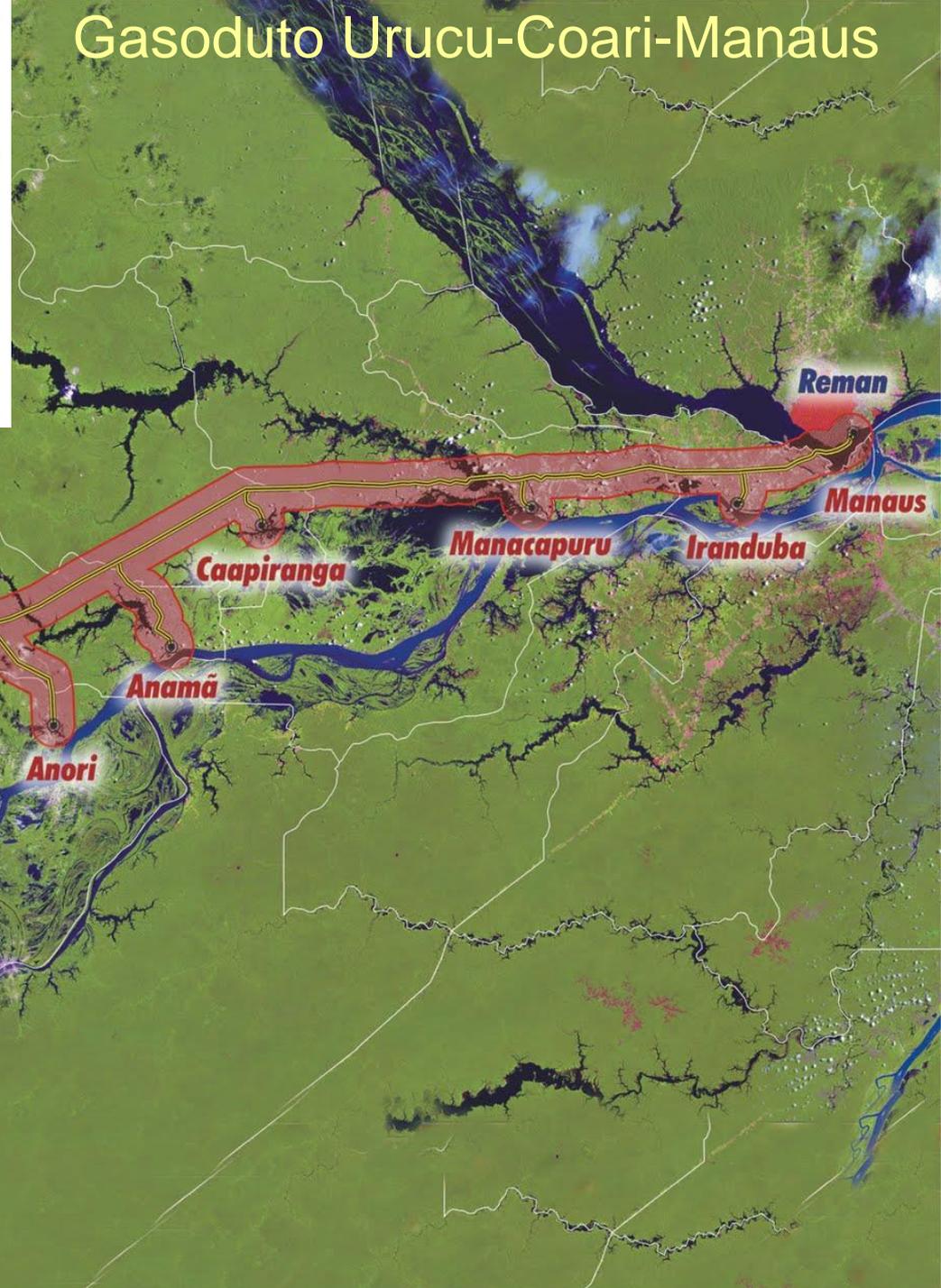
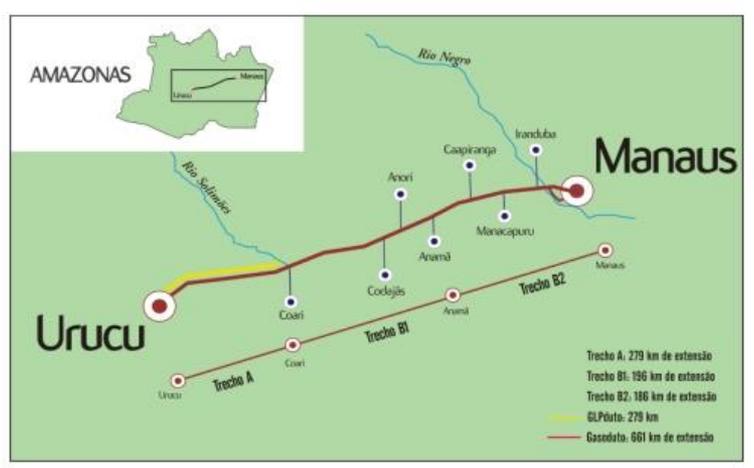


© 2010 MapLink/Tele Atlas
Image © 2010 DigitalGlobe



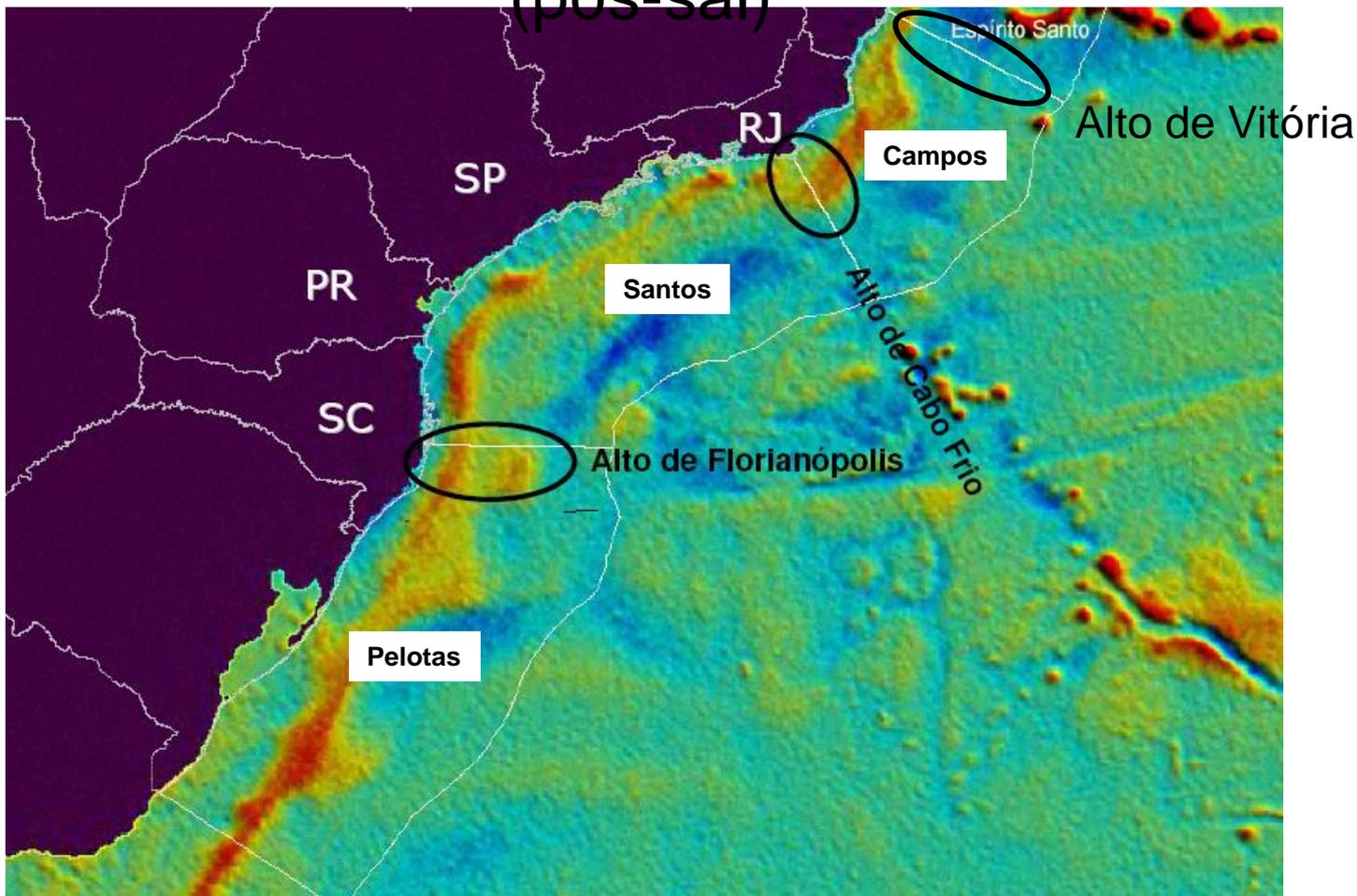
Gás (40% reinjetado)
GLP
Petróleo leve

Gasoduto Urucu-Coari-Manaus

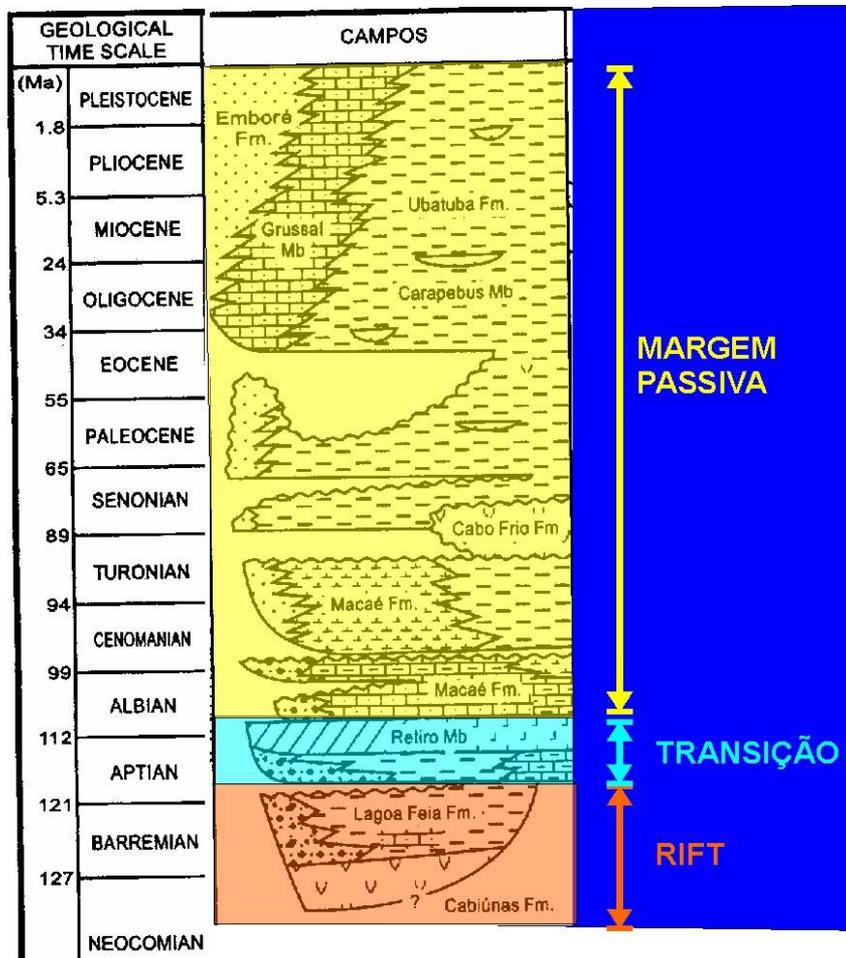


Bacia de Campos

O petróleo da Bacia de Campos (pós-sal)



Estratigrafia



Adaptado de Milani & Thomaz Filho (2000)

Margem passiva

Fm. Emborê: arenitos costeiros e calcários de plataforma

Fm. Ubatuba: pelitos marinhos e arenitos turbidíticos (Mb. Carapebus)

Fm. Cabo Frio: rochas vulcânicas

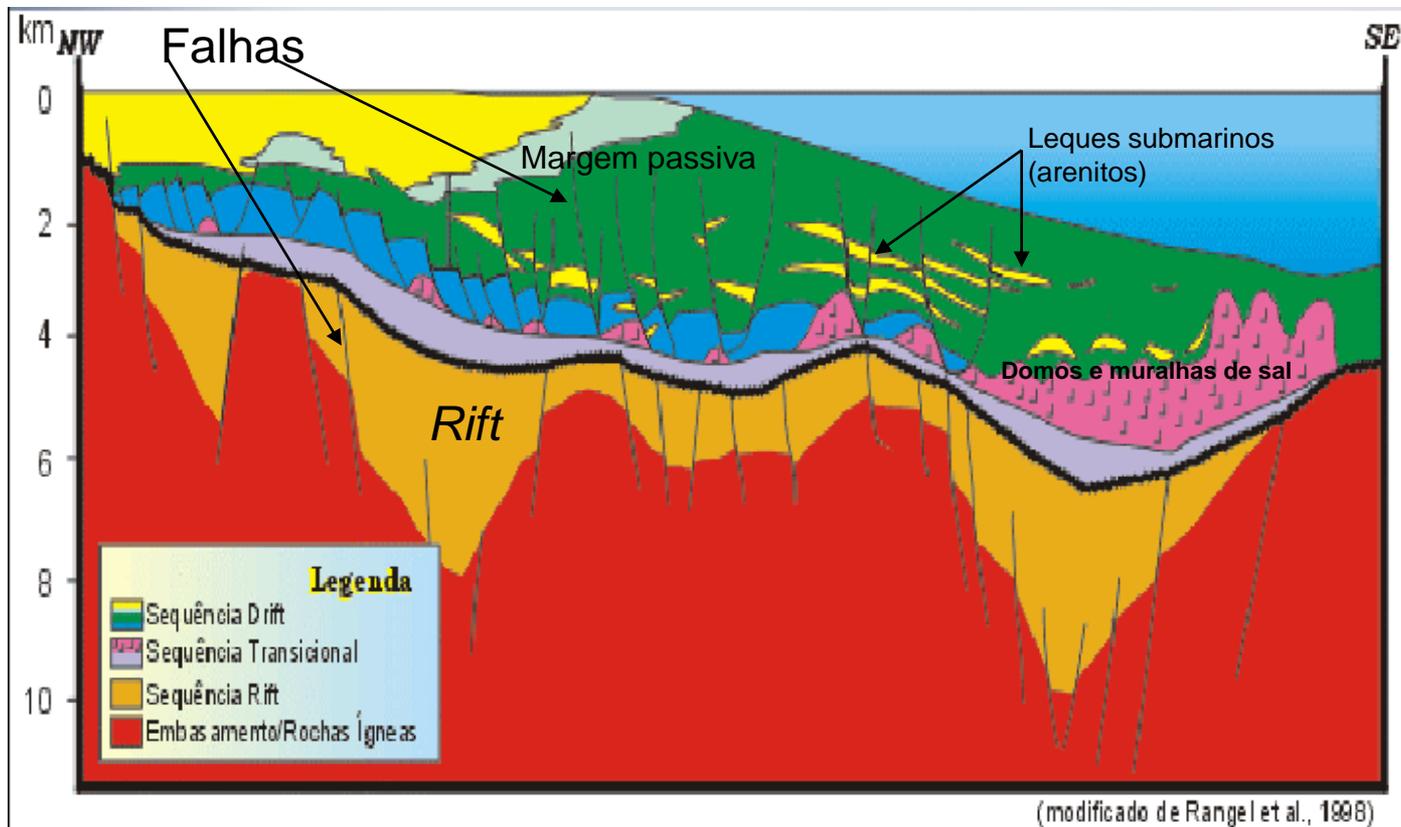
Fm. Macaé: calários e margas de plataforma (calcarenitos e calcilutitos)

Rift e transição

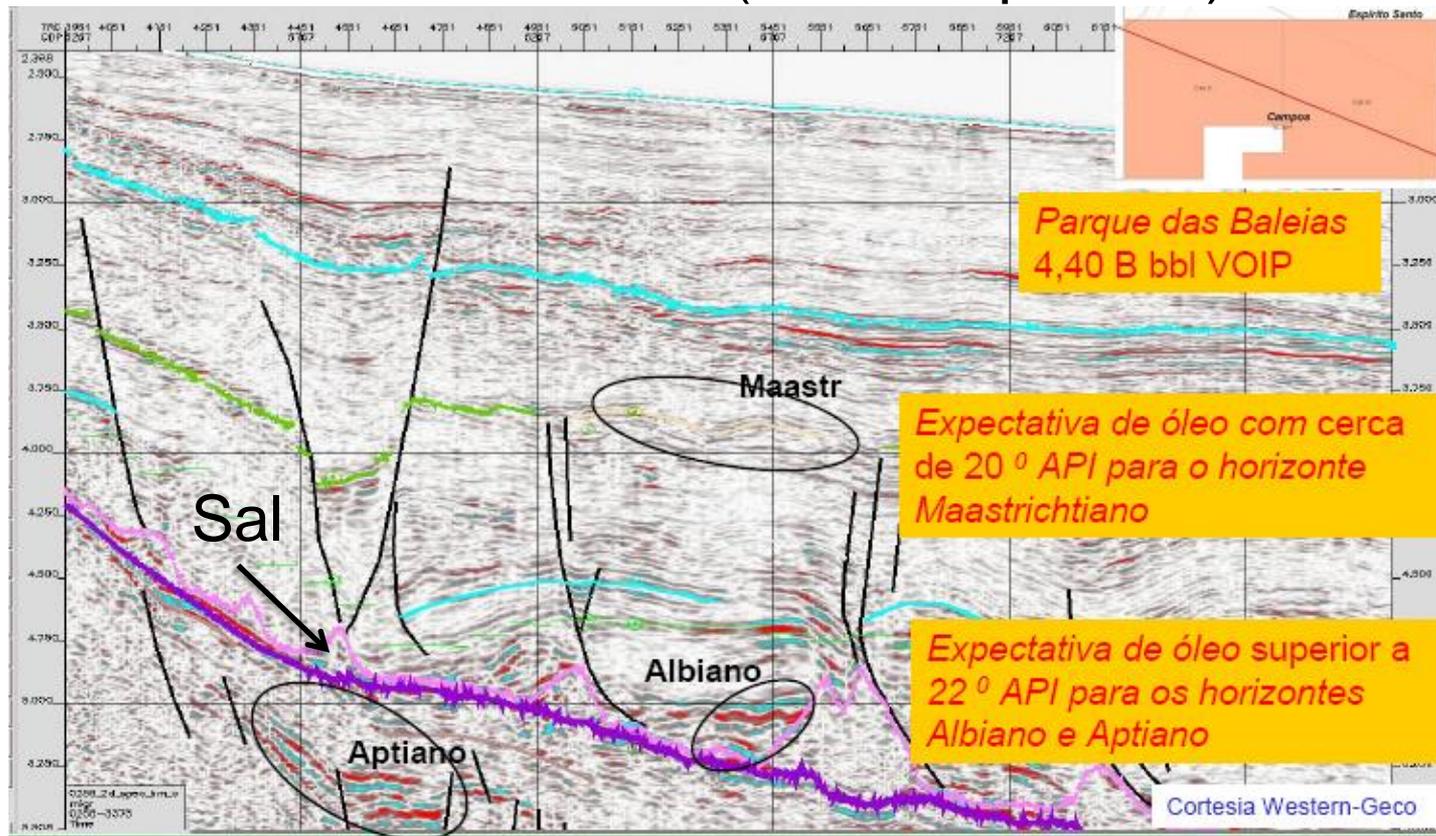
Fm. Lagoa Feia: folhelhos lacustres, conglomerados aluviais, calcários e evaporitos

Fm. Cabiúnas: basaltos

Perfil esquemático da bacia de Campos

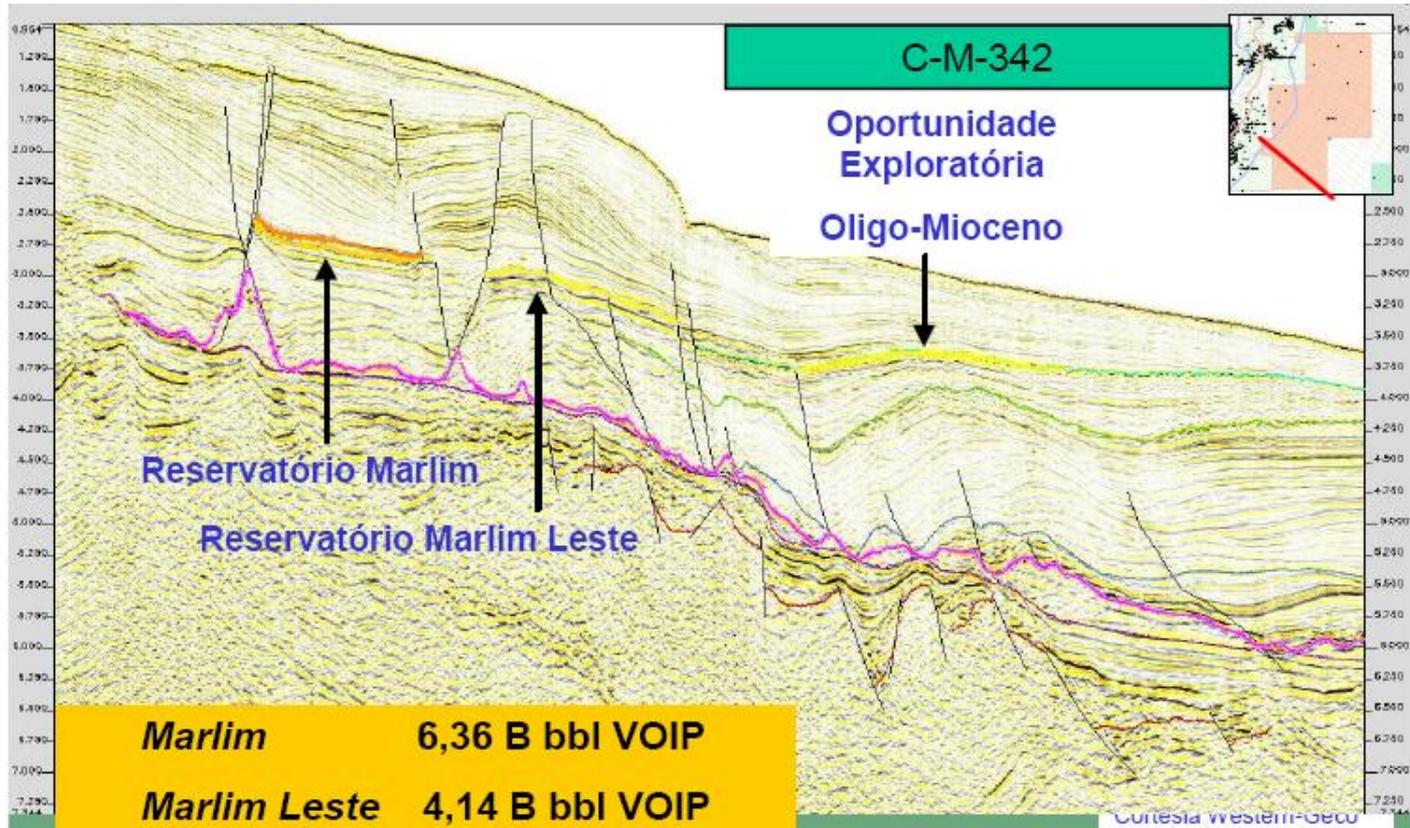


Reservatórios do Albiano (calcários pós-sal) e Maestrichtiano (arenitos pós-sal)



ANP-R9 (2007)

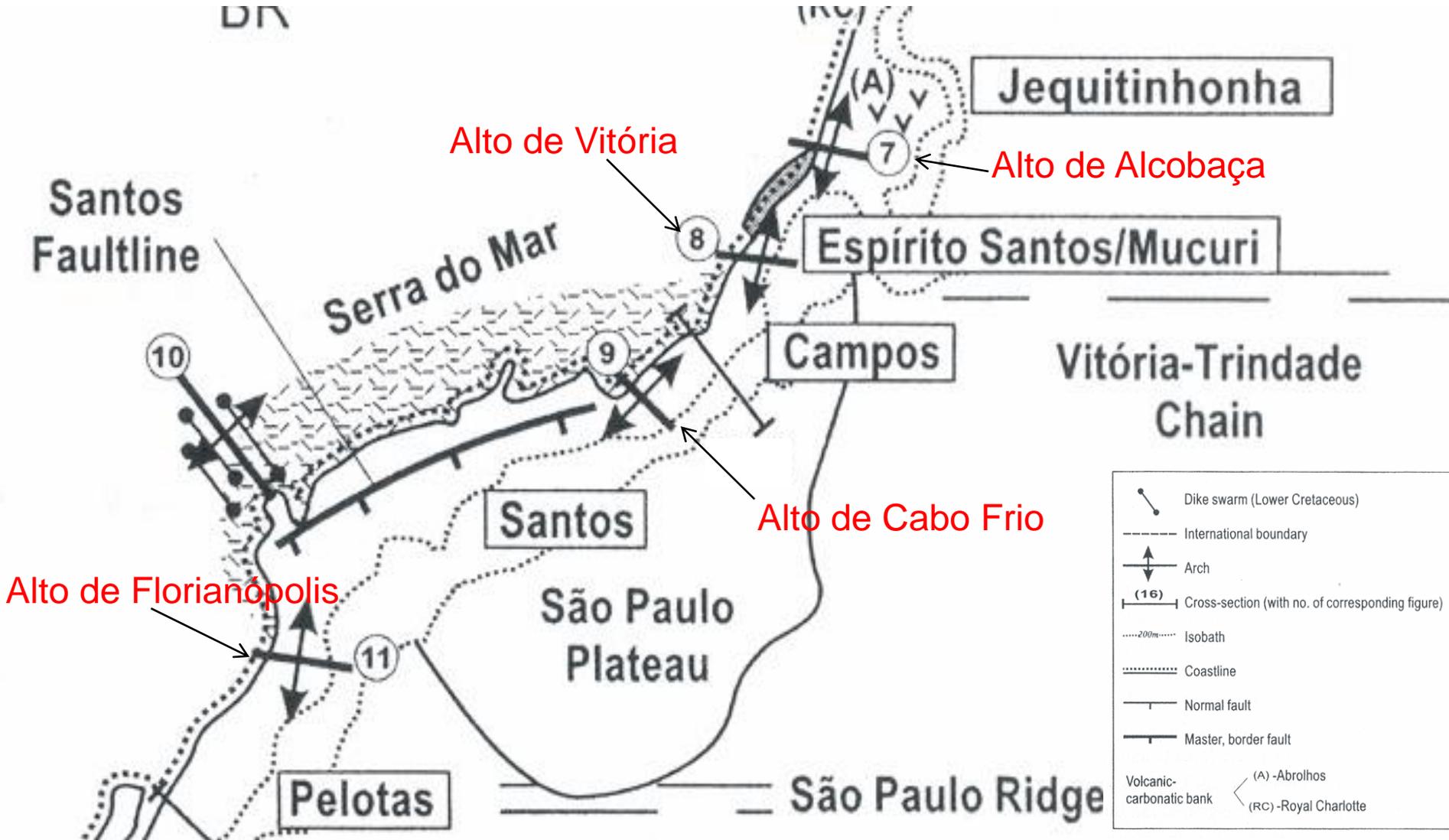
Reservatórios terciários (Pós-sal)



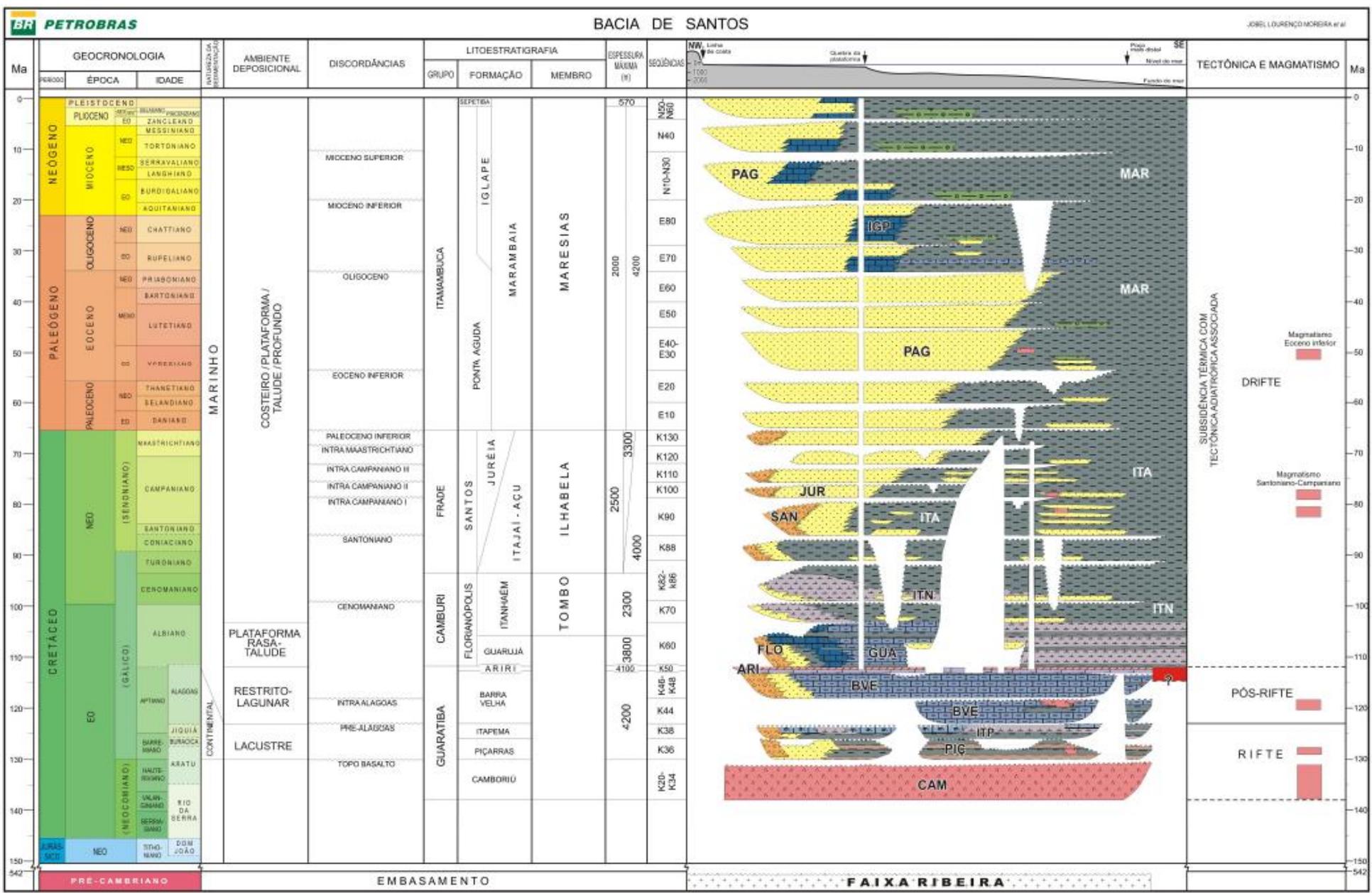
ANP-R9 (2007)

Bacia de Santos

Localização



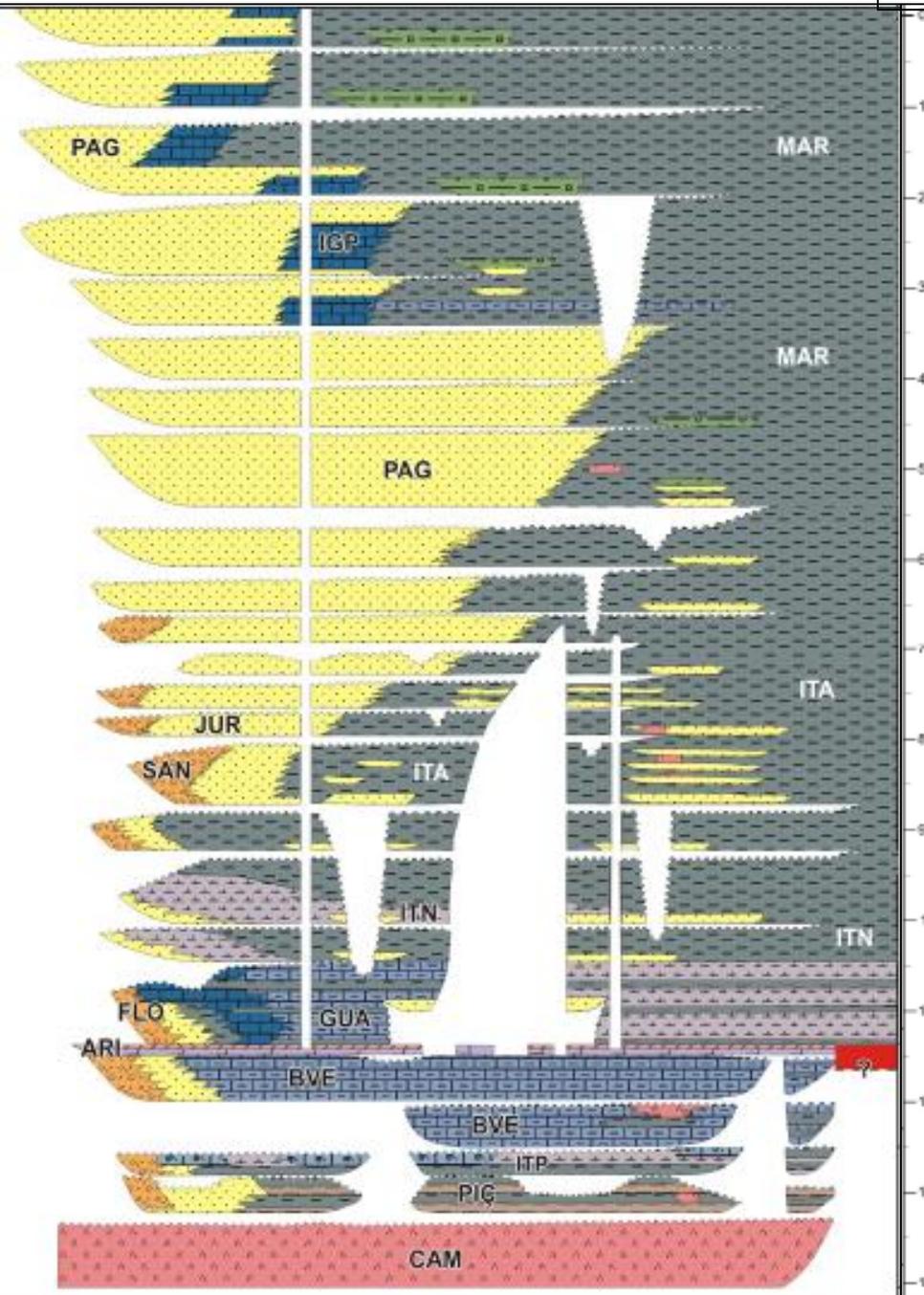
Estratigrafia



Moreira et al. (2007)

Estratigrafia

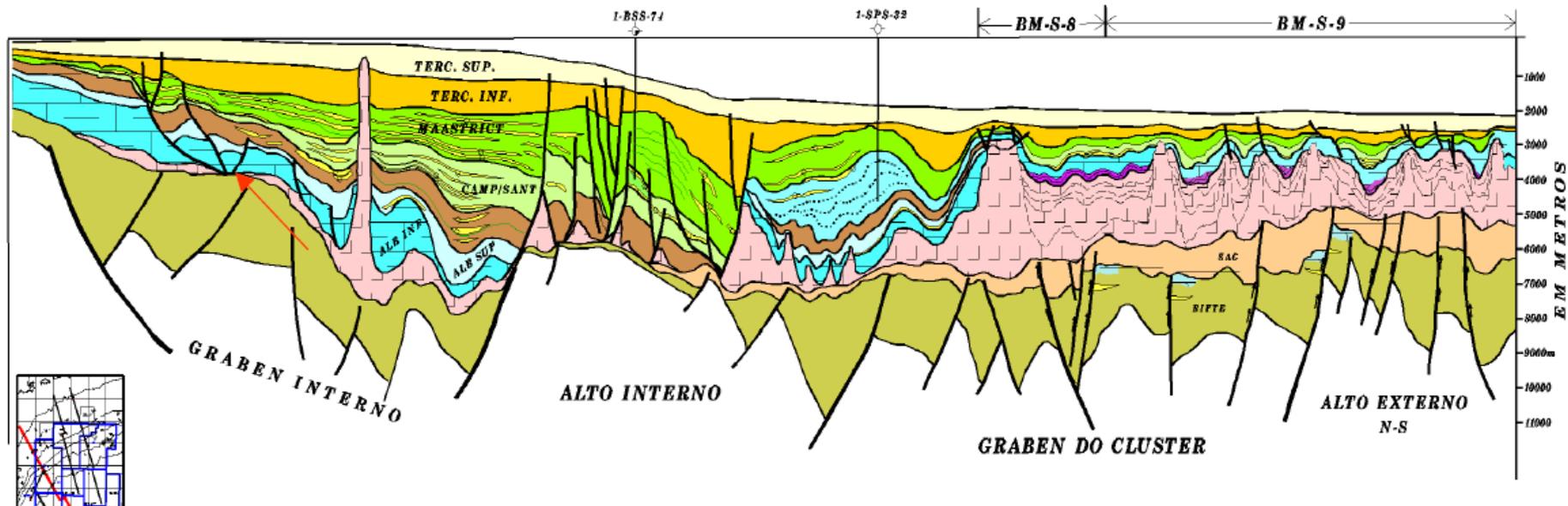
Ma



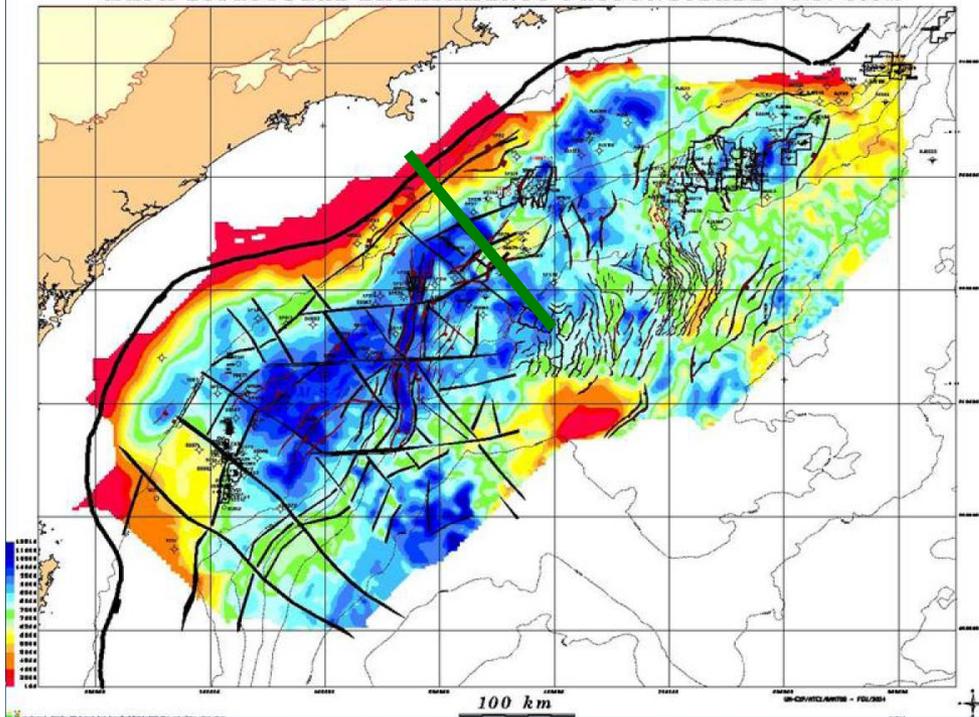
Drift (subsidiência termal, mar aberto)

Pós-rift (subsidiência termal, golfo)

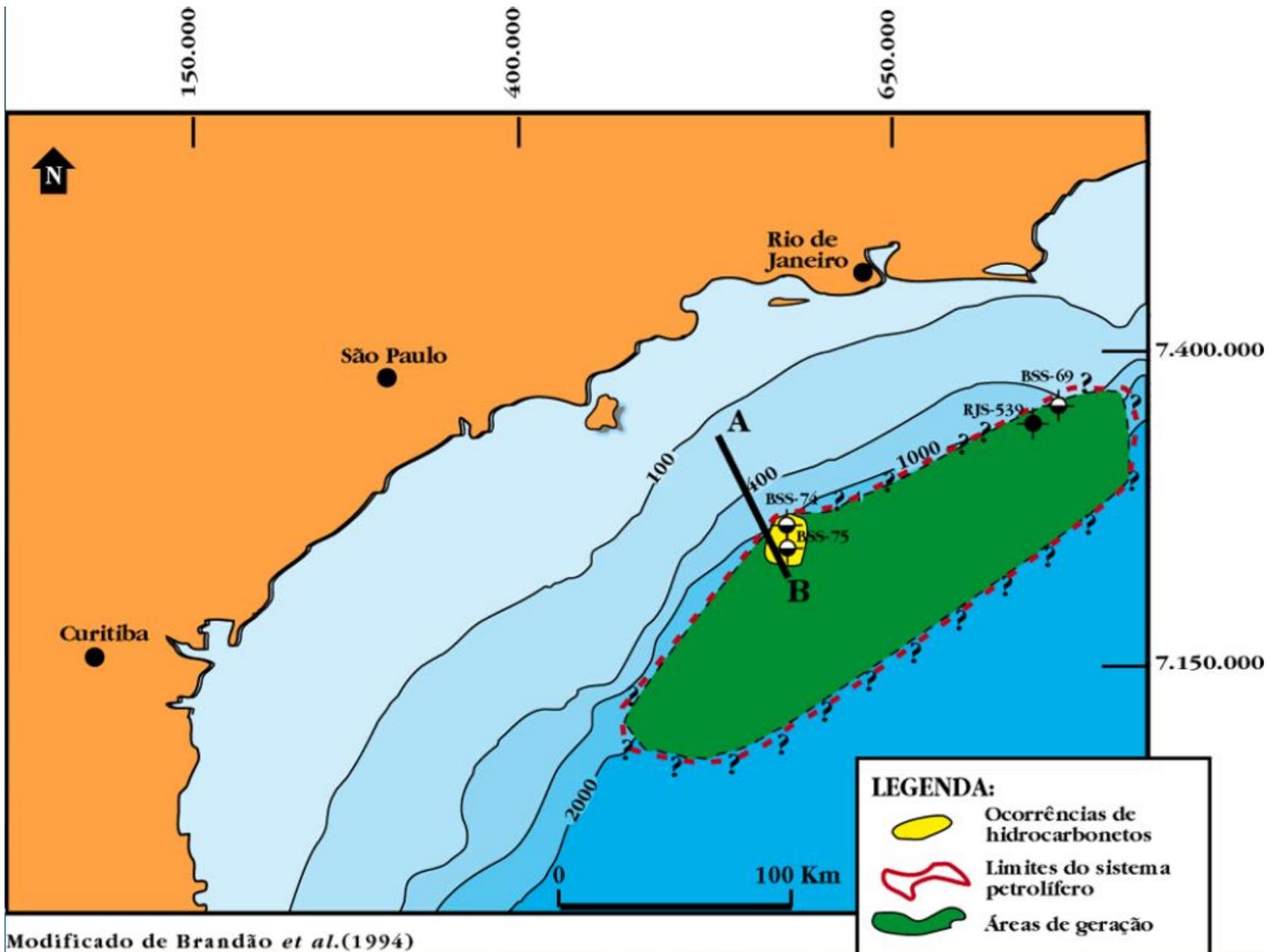
Rift (subsidiência mecânica, continental)



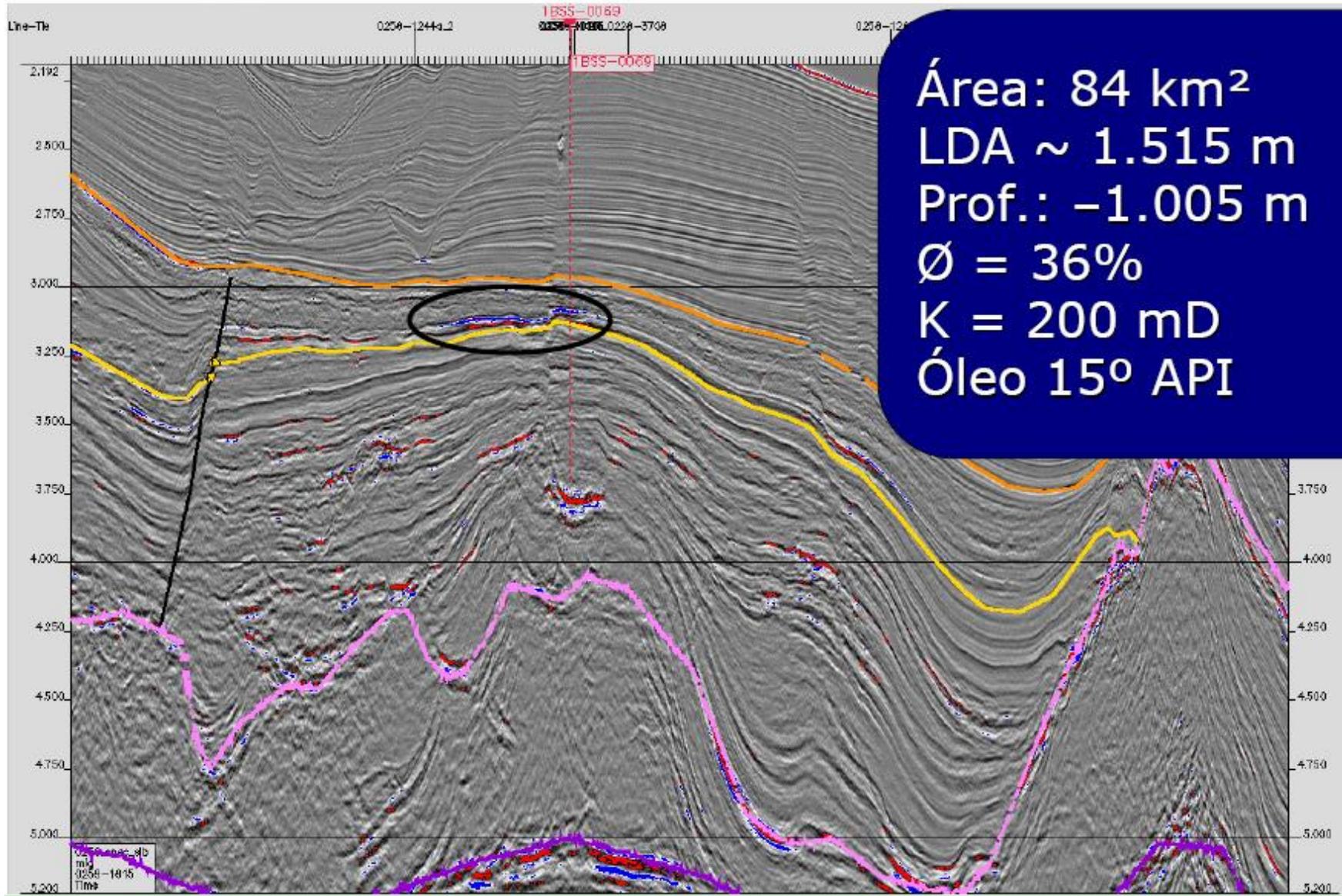
MAPA ESTRUTURAL EMBASAMENTO PROFUNDIDADE - I.C.=500m



Geradora lacustre (fms. Piçarras e Itapema)

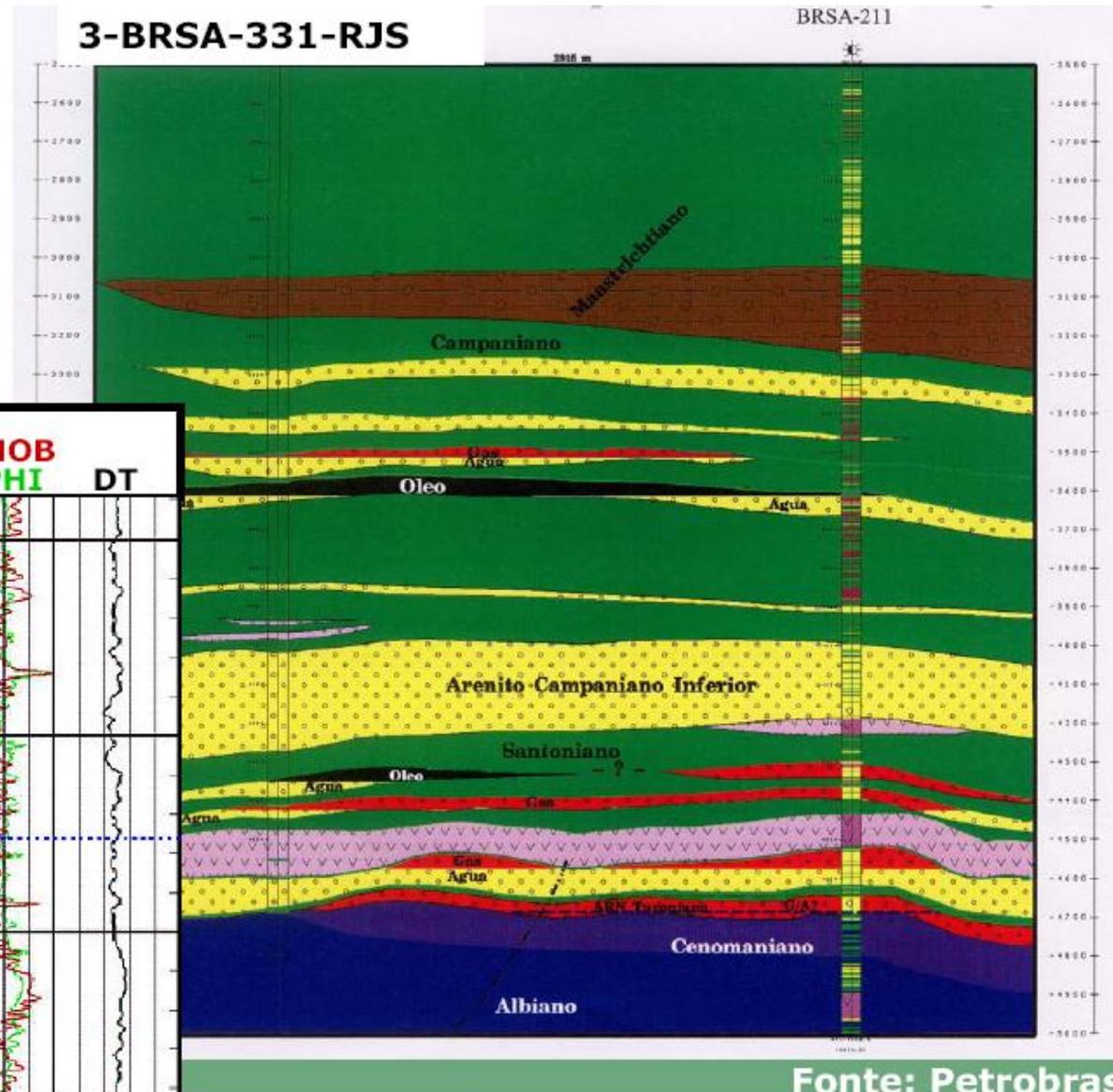


Armadilhas em turbiditos do Terciário (Pós-sal) (Campo Oliva)



Armadilha em turbiditos do Neocretáceo (Pós-sal) (Campo de Urunguá)

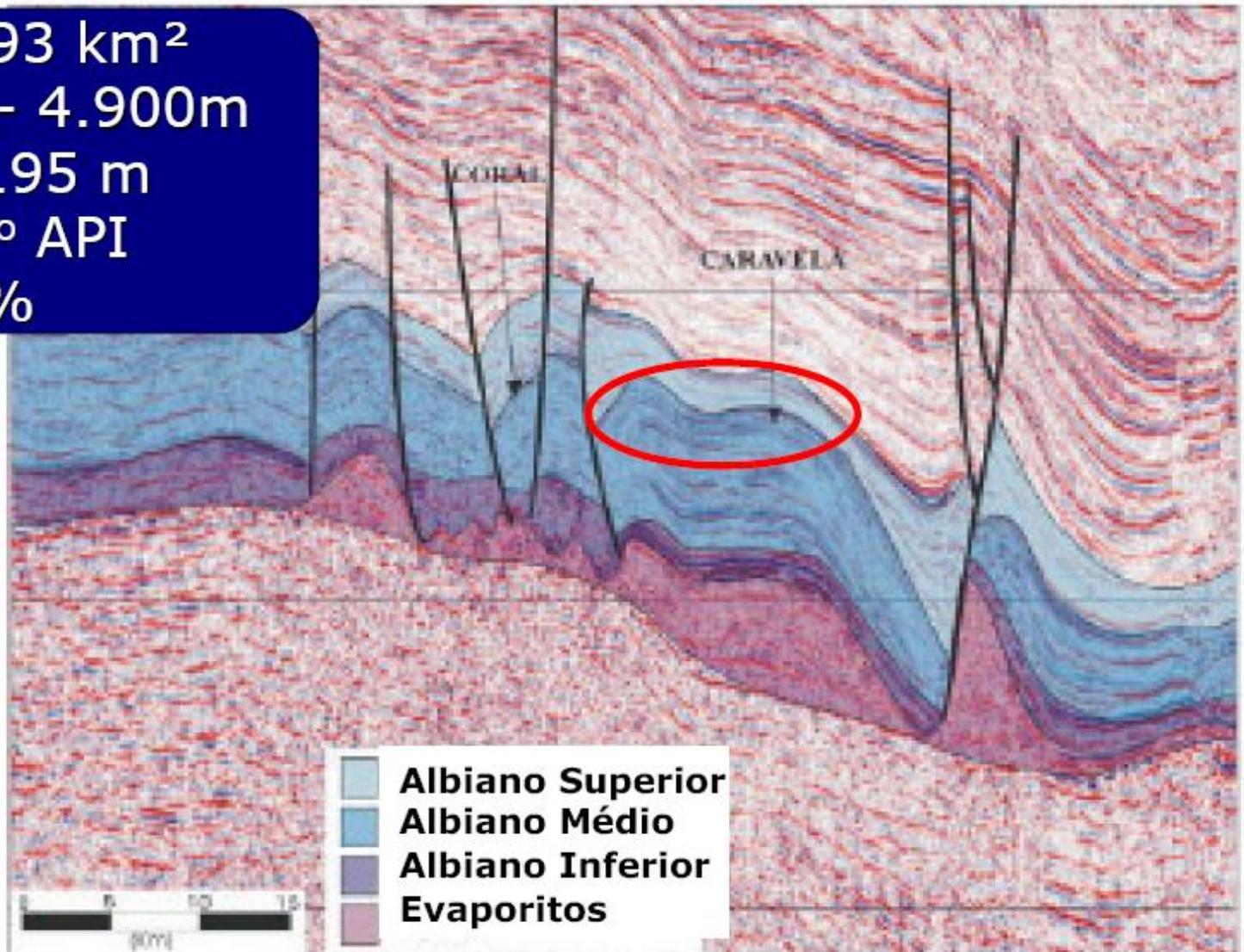
Área: 64 km²
Prof.: - 3.600 m
LDA = 1.391 m
Óleo 32,5° API
Ø = 26 %



Fonte: Petrobras

Campo de óleo em calcário albio (pós-sal) (Campo de Caravela)

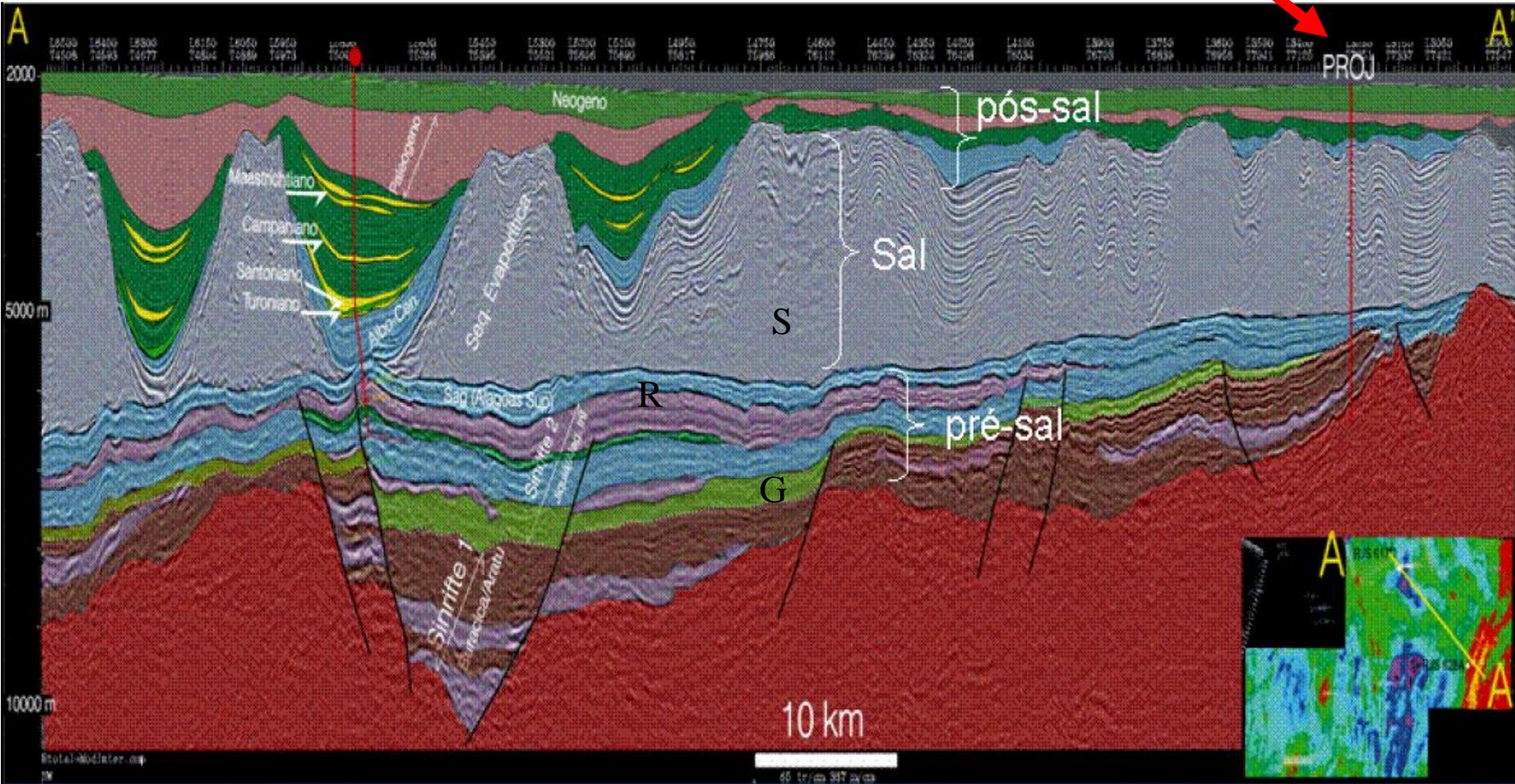
Área: 193 km²
Prof. ~ - 4.900m
LDA = 195 m
Óleo 40° API
Ø = 13%



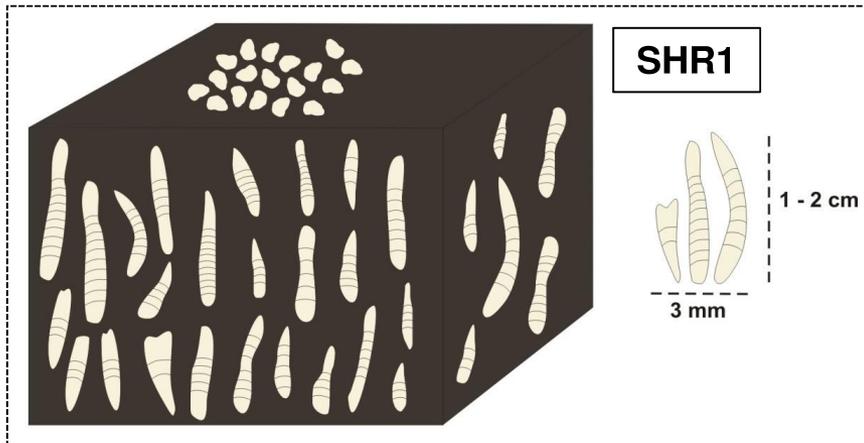
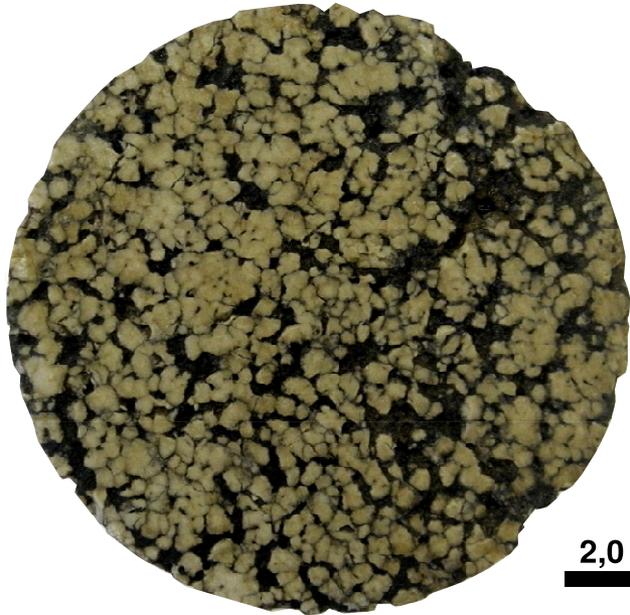
Pré-sal



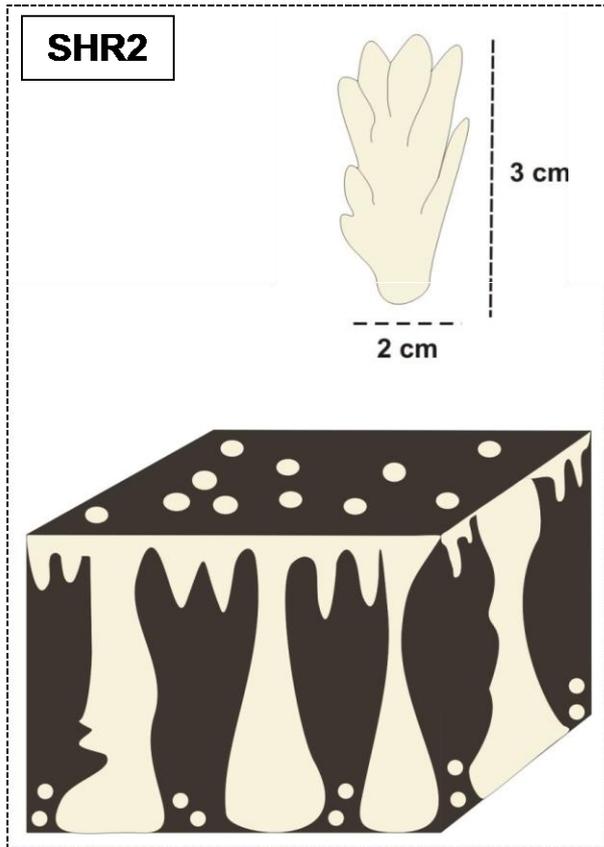
Armadilhas na seção Pré-sal



Reservatório (Franco)

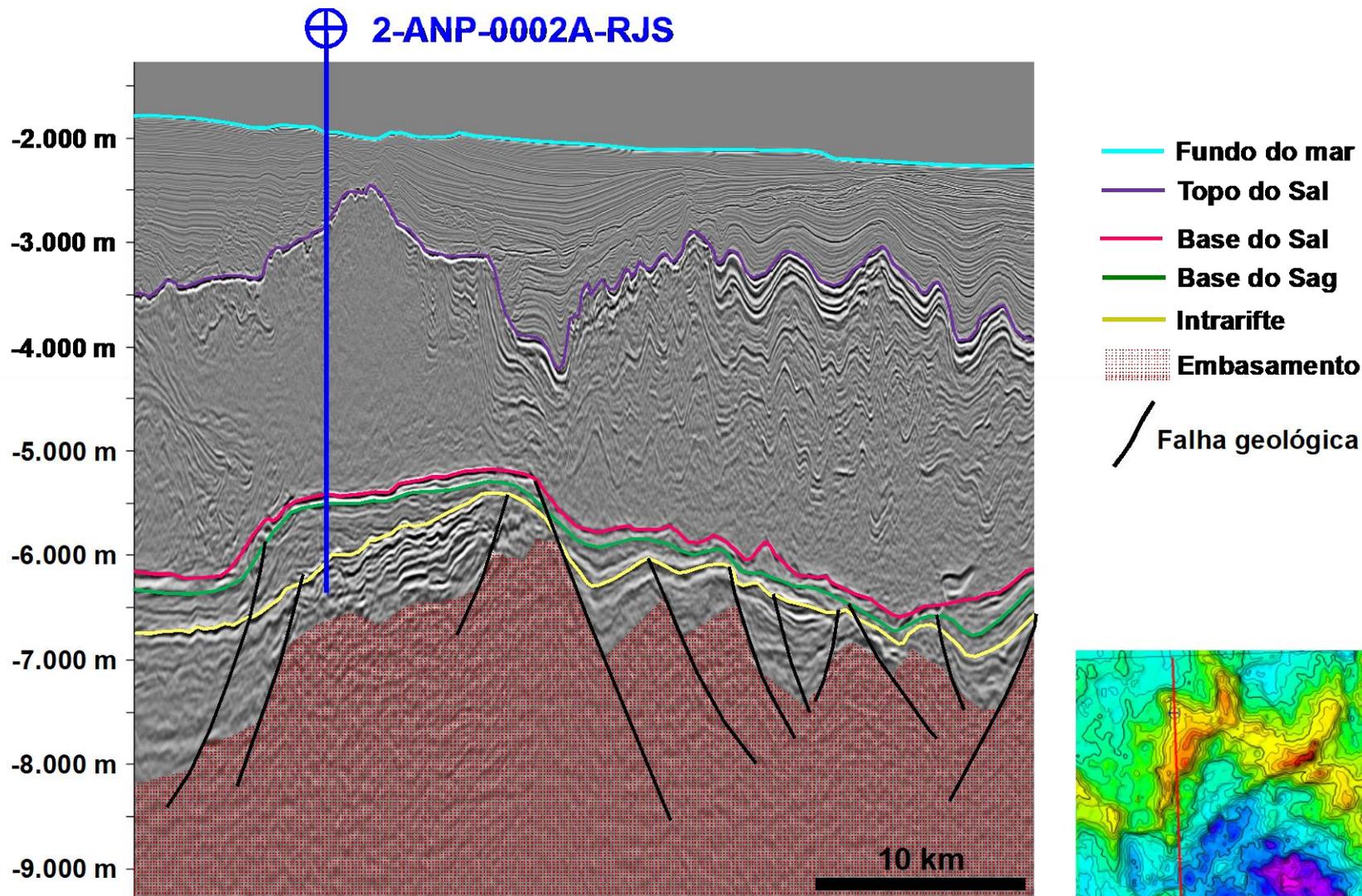


Reservatório (Franco)

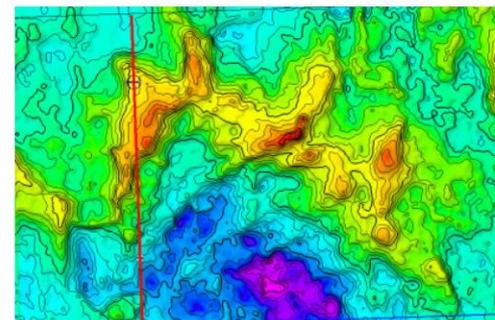


2,0 cm

Armadilha (Campo de Libra)



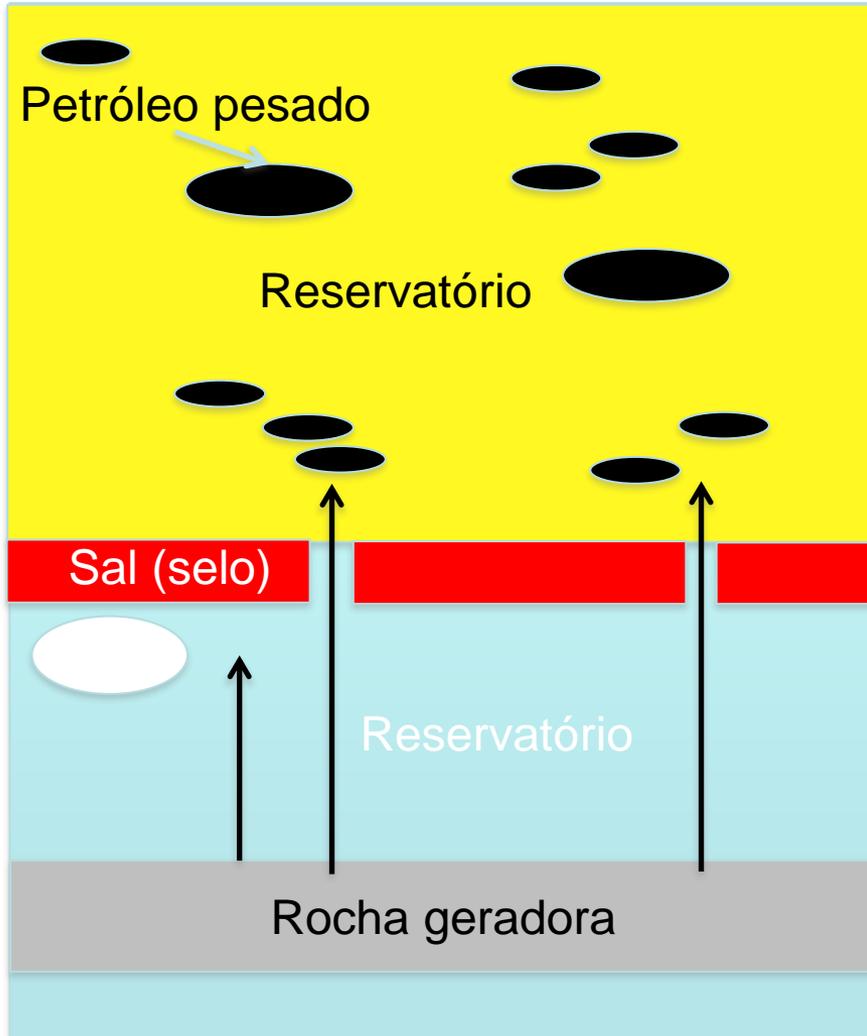
Inline 1664 – Cortesia CGG-Veritas



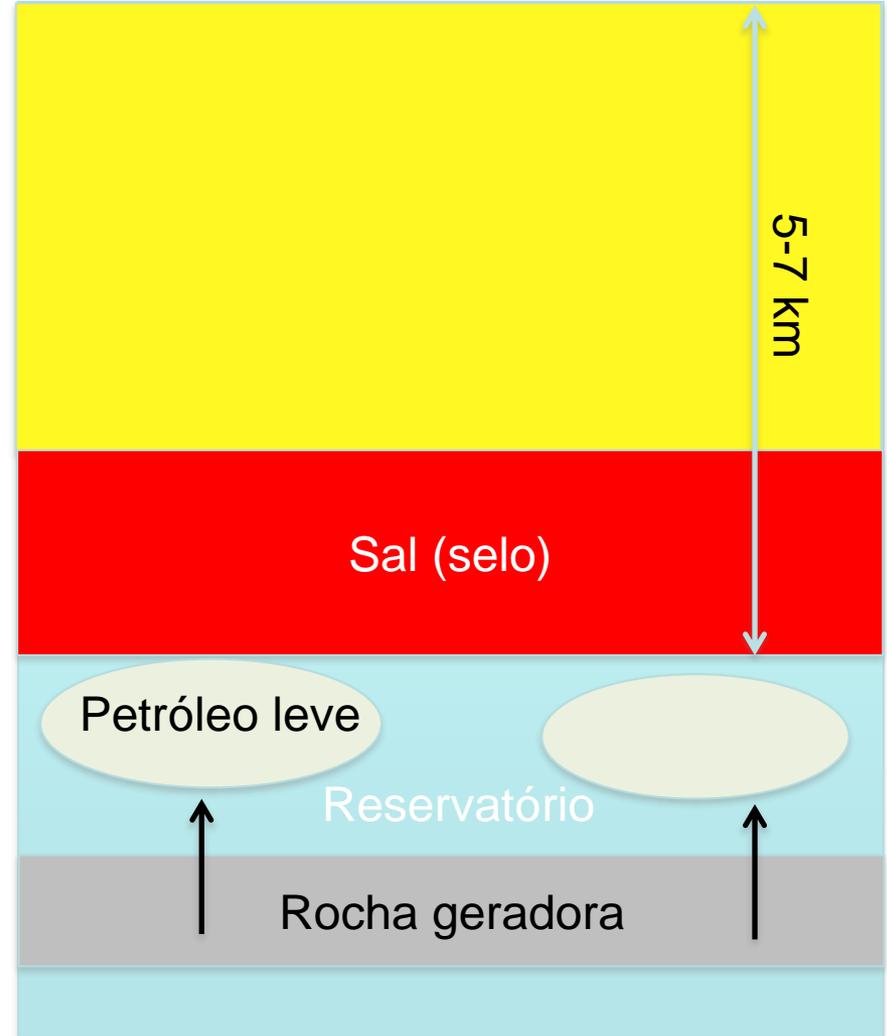
ANP (2013)

Pós-sal vs. Pré-Sal

Bacia de Campos



Bacia de Santos

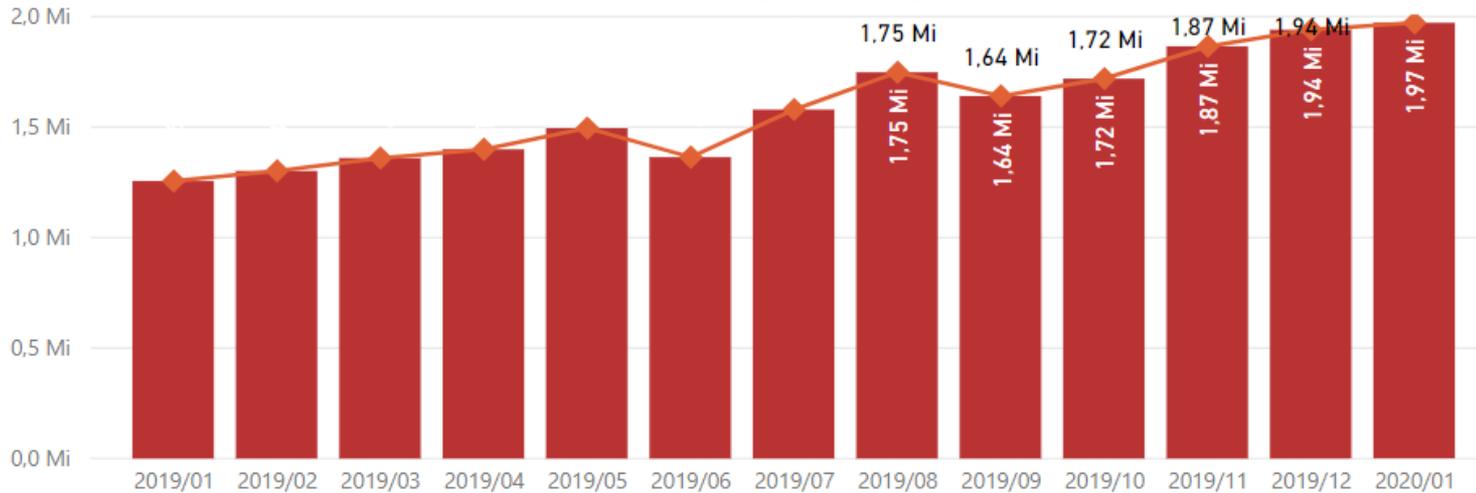


Pré-Sal (Santos) versus Pós-Sal (Campos)

Petróleo

Bacia ● Santos ◆ Petróleo

Pré-Sal (Santos)



Petróleo

Bacia ● Campos ◆ Petróleo

Pós-Sal (Campos)

