Exploration Opportunities Offshore South Africa

Deep Water West Coast

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APPEX 2018

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OUTLINE

- Offshore oil and gas exploration and production activity
- Onshore activity in South Africa
- Offshore data coverage
- Orange Basin deep water prospectivity
- Conclusions

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OFFSHORE OIL AND GAS EXPLORATION AND PRODUCTION ACTIVITY

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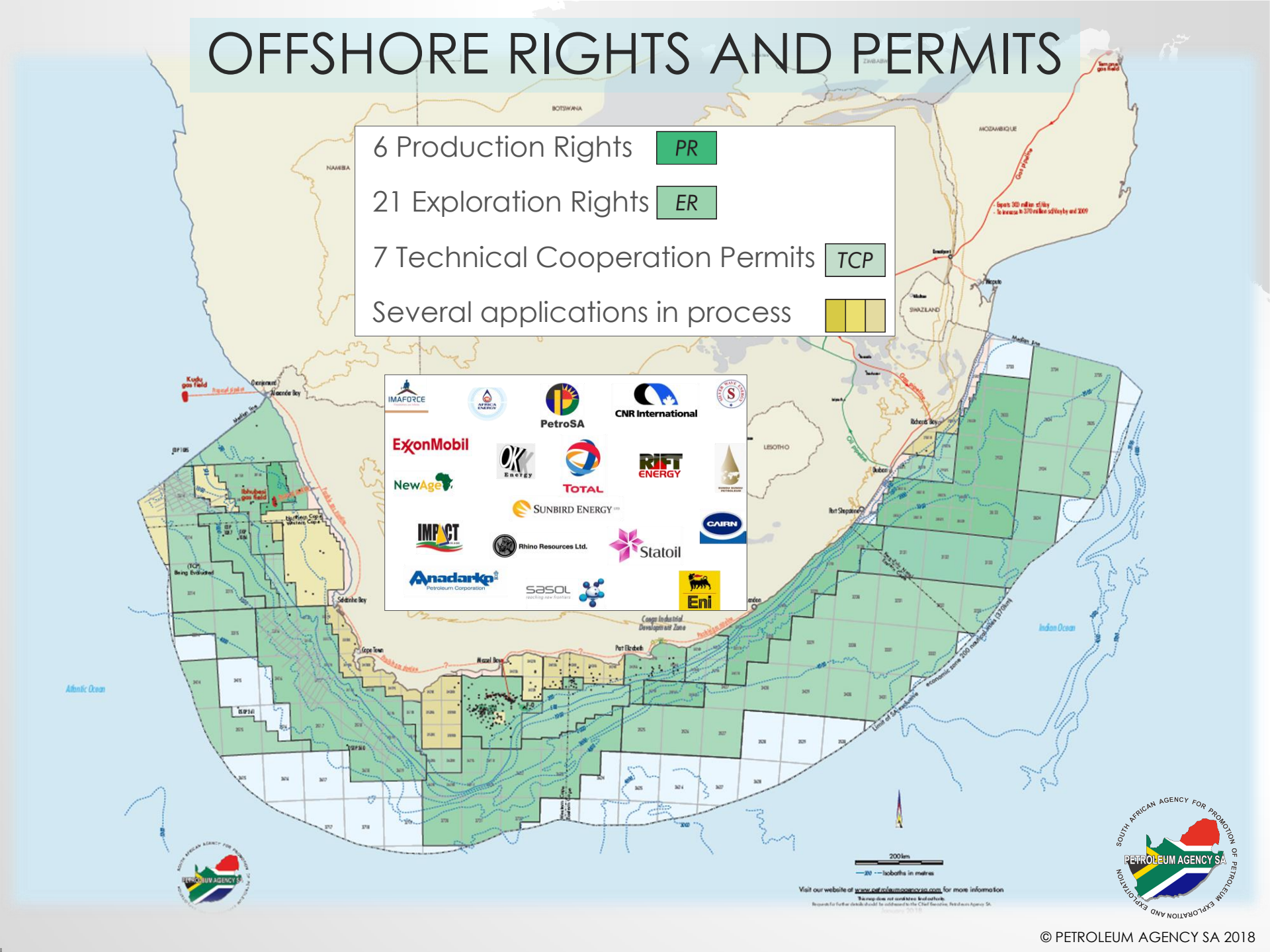
OFFSHORE RIGHTS AND PERMITS



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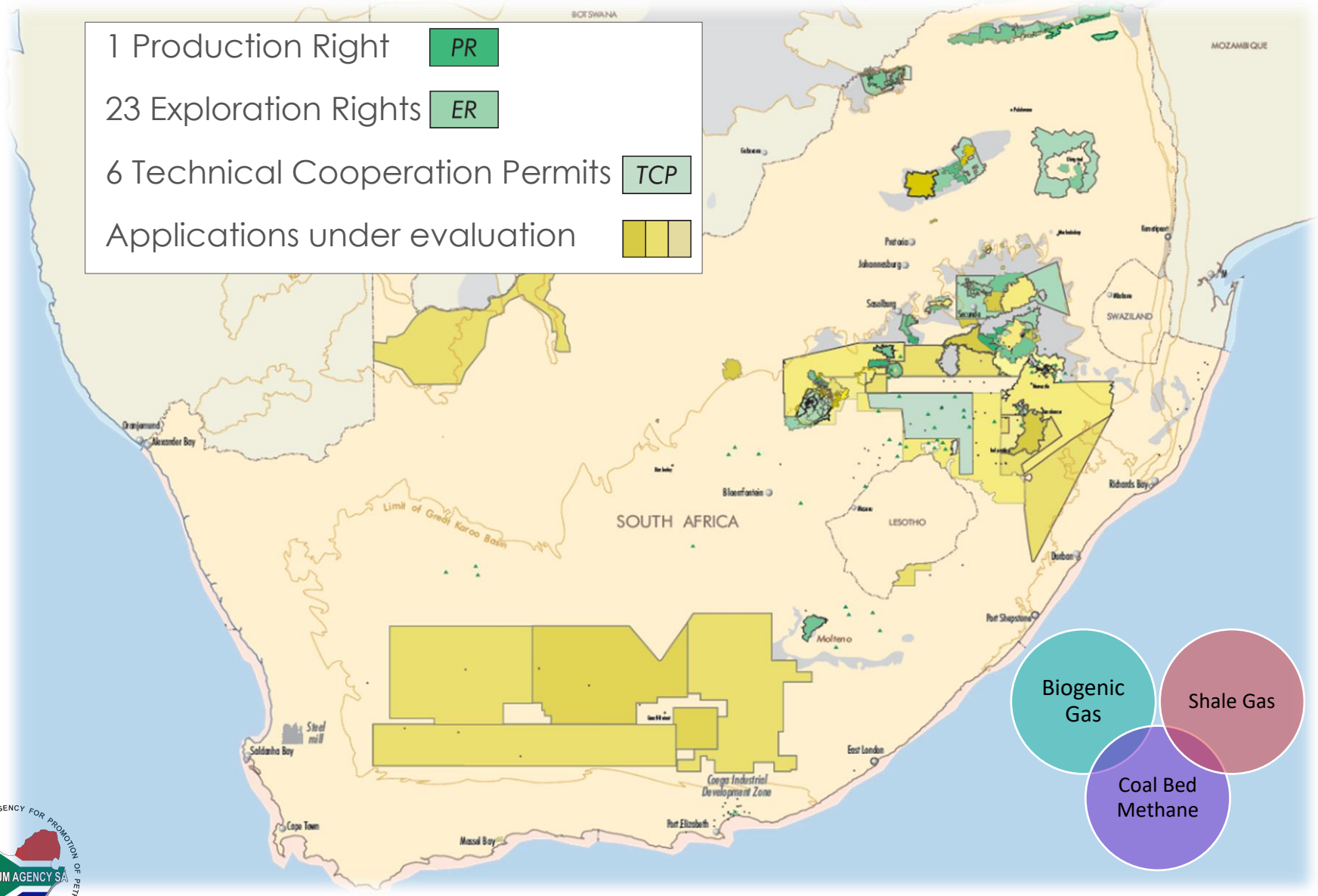

SOUTH AFRICAN AGENCY FOR PROMOTION OF PETROLEUM EXPLORATION AND EXPLOITATION
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OFFSHORE DATA COVERAGE

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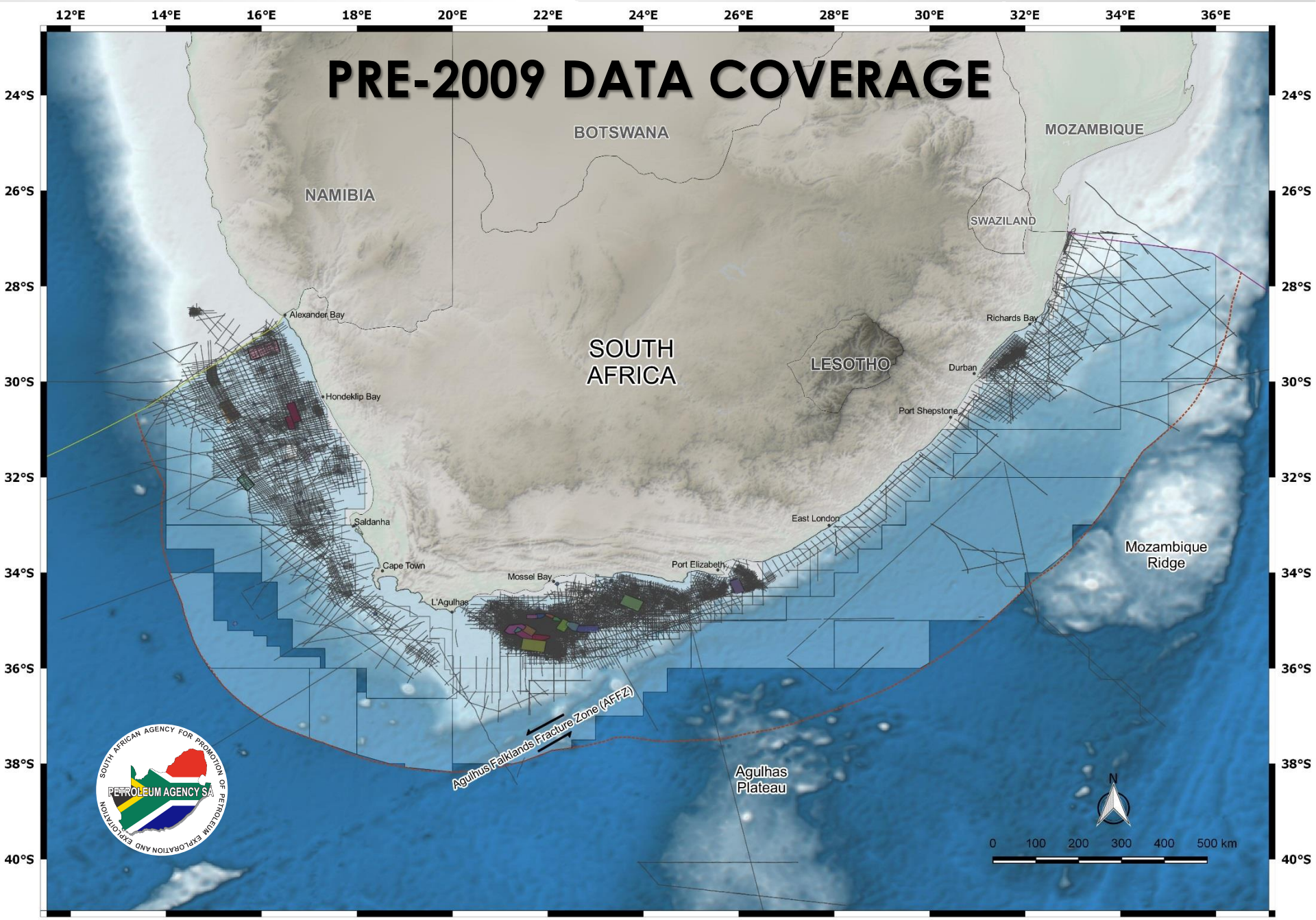

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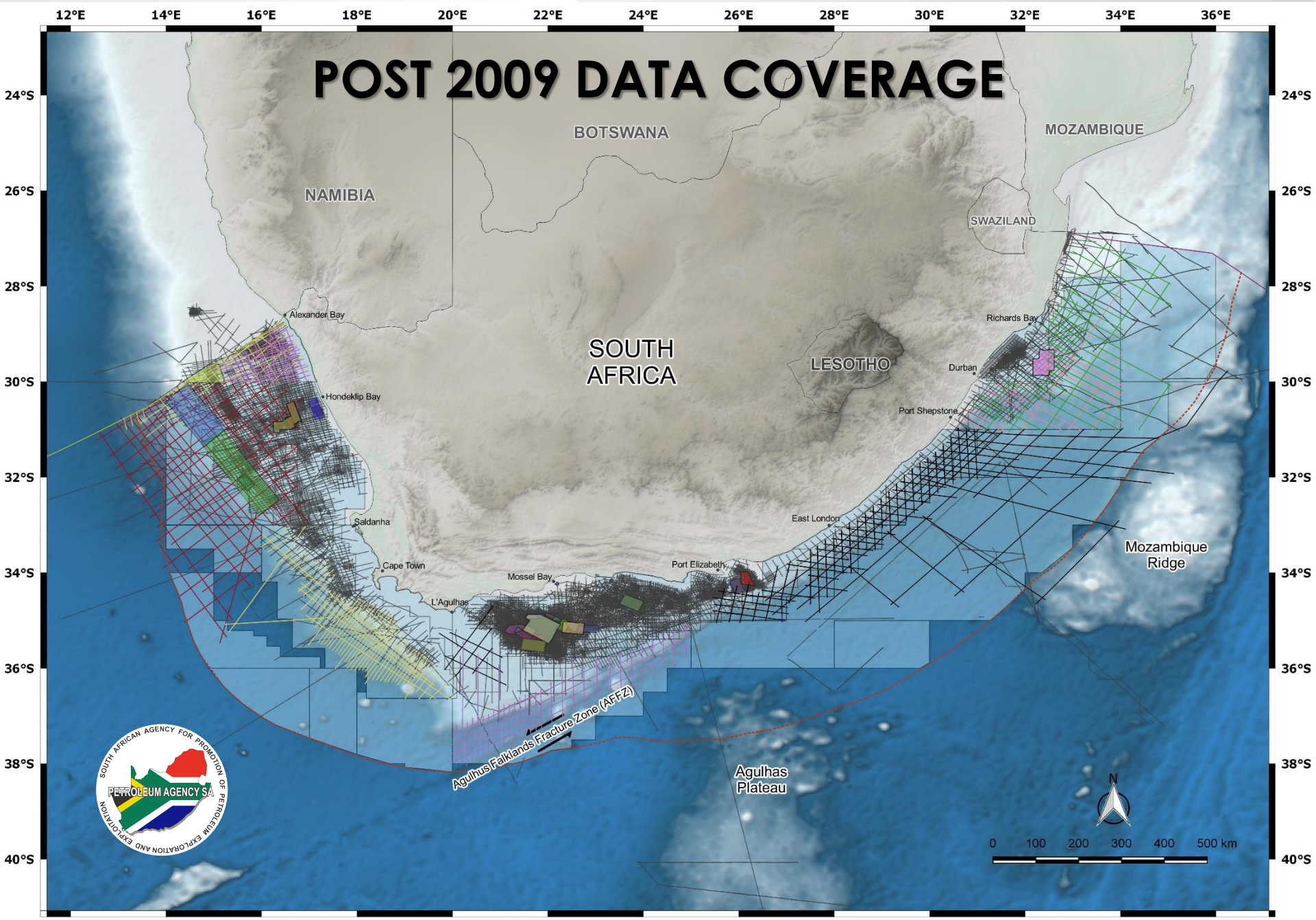

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ORANGE BASIN DEEP WATER PROSPECTIVITY

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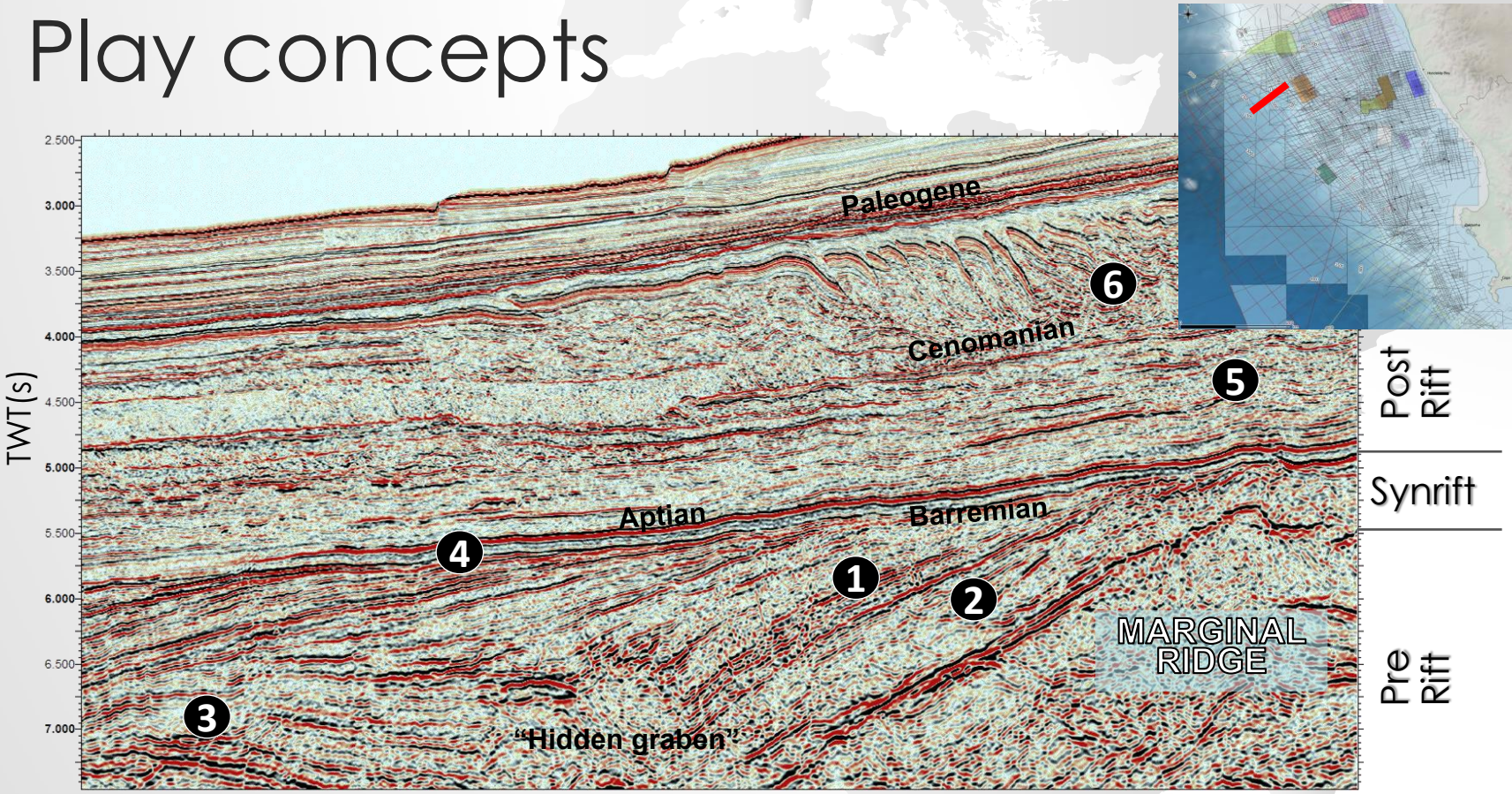
NORTHERN AREA DEEP WATER AREA
Play concepts



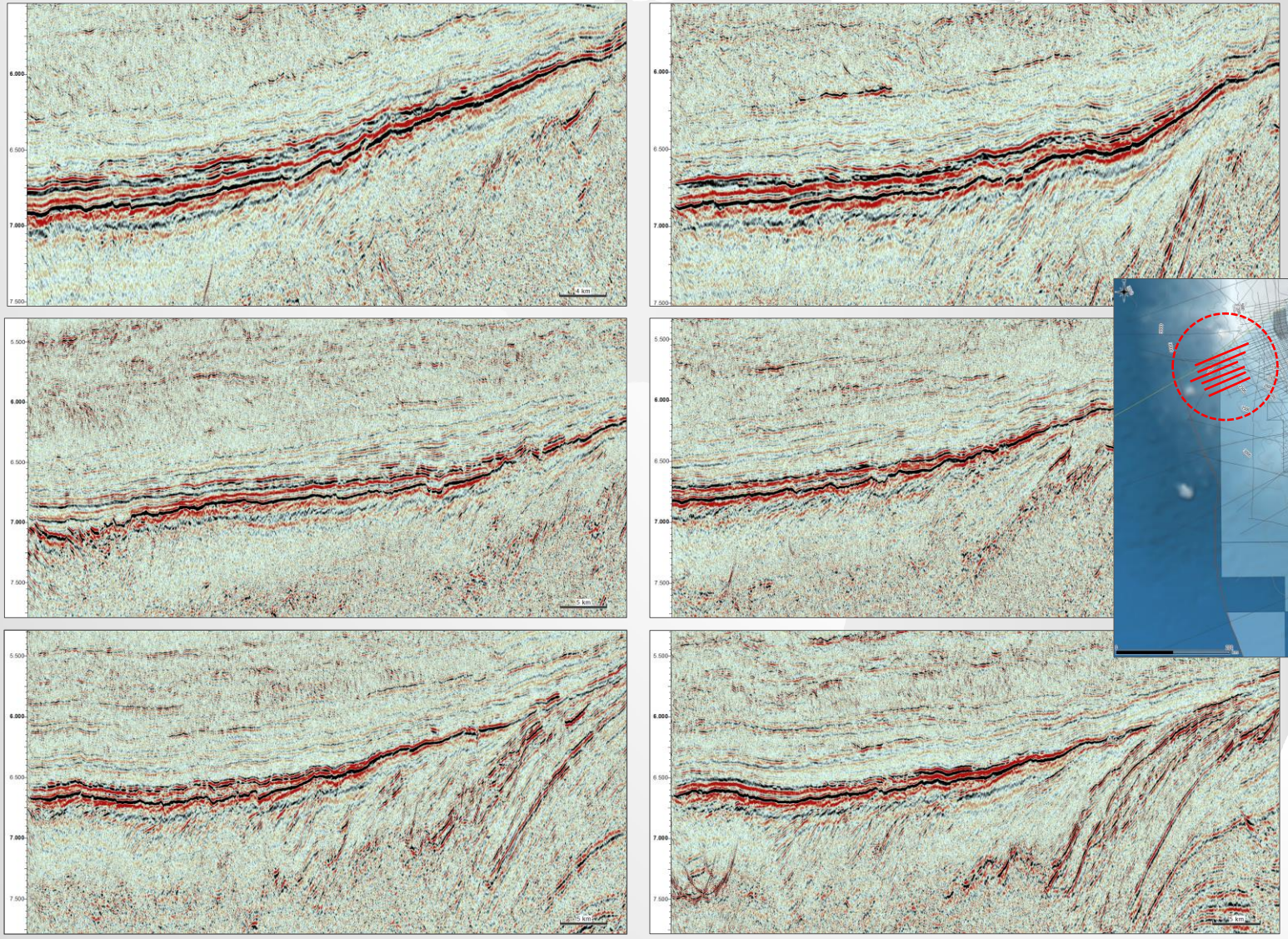
Synrift

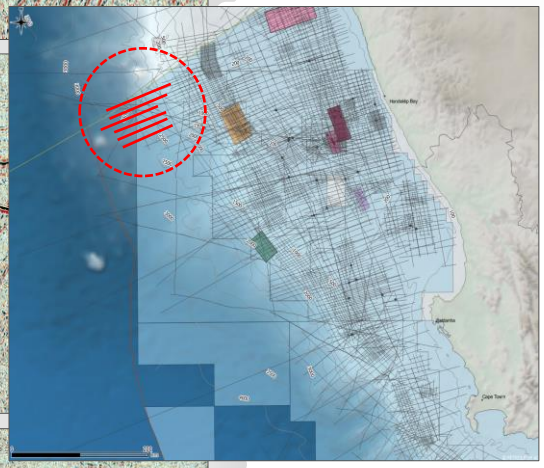
1. Truncation traps on Barremian TST (kudu-Like)
2. Onlap/pinchout traps against basement high
3. Anticlinal traps (synrift drape?)

Post-Rift

4. Aptian/Albian onlap/pinchout bff/lower slope complex
5. "Turonian" lower slope channel complexes (below decollement
6. Gravitational fold/thrust imbricates

Basin Floor fan on 2D dip lines





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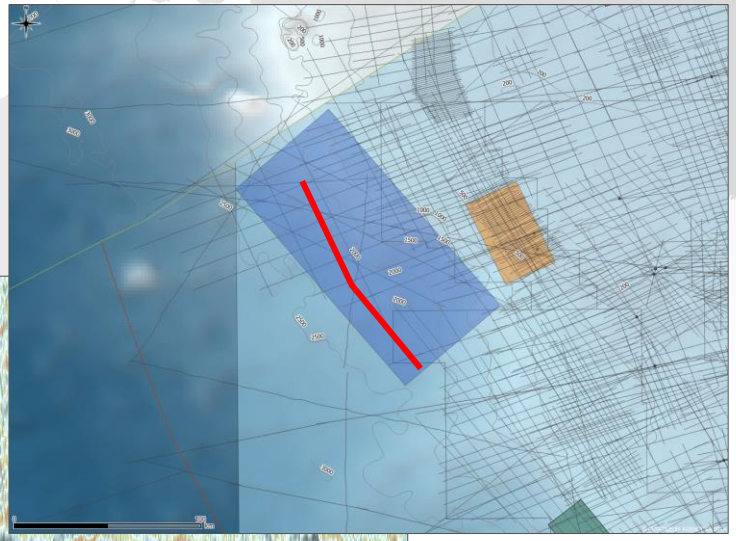
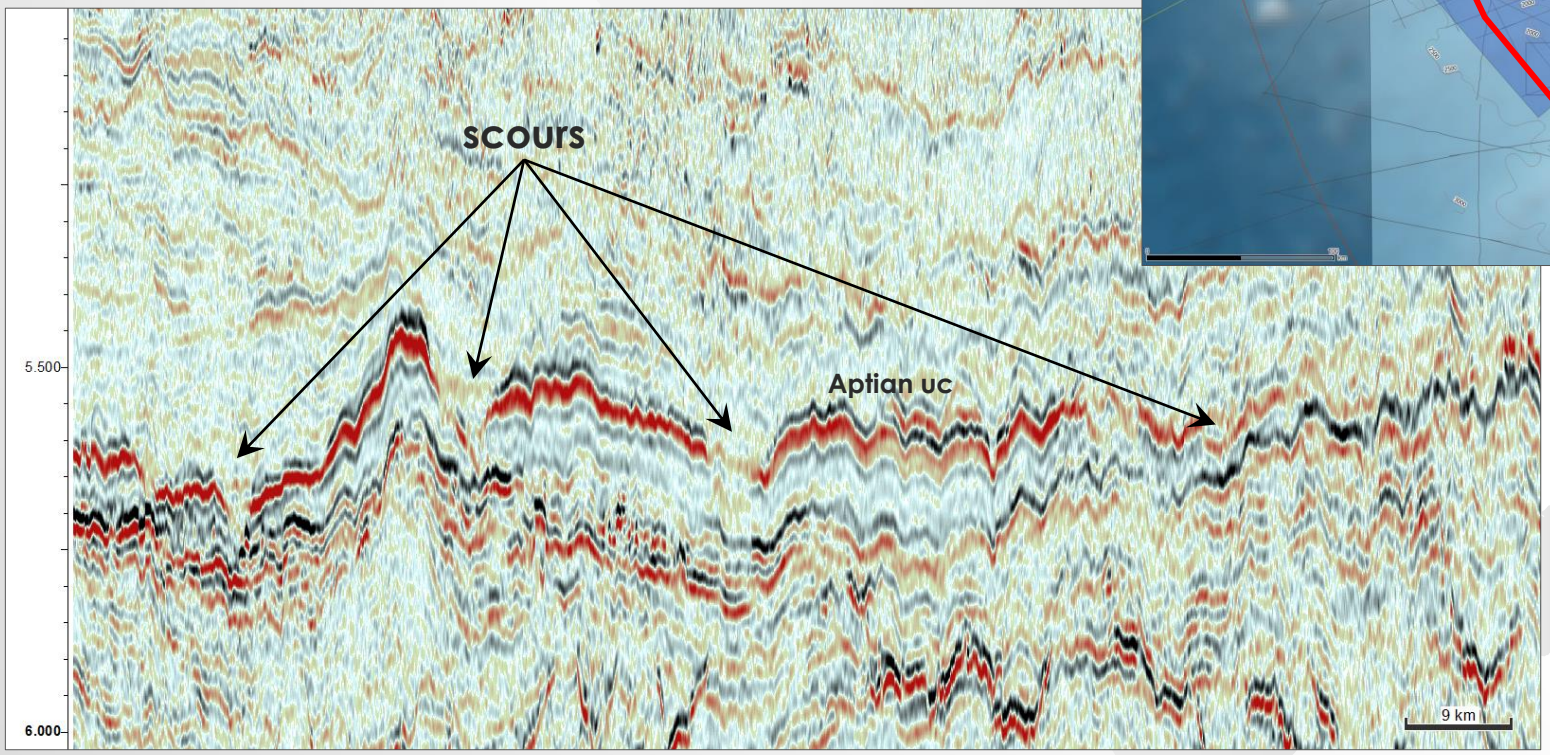
Scours in Aptian UC: Feeders for BFF's





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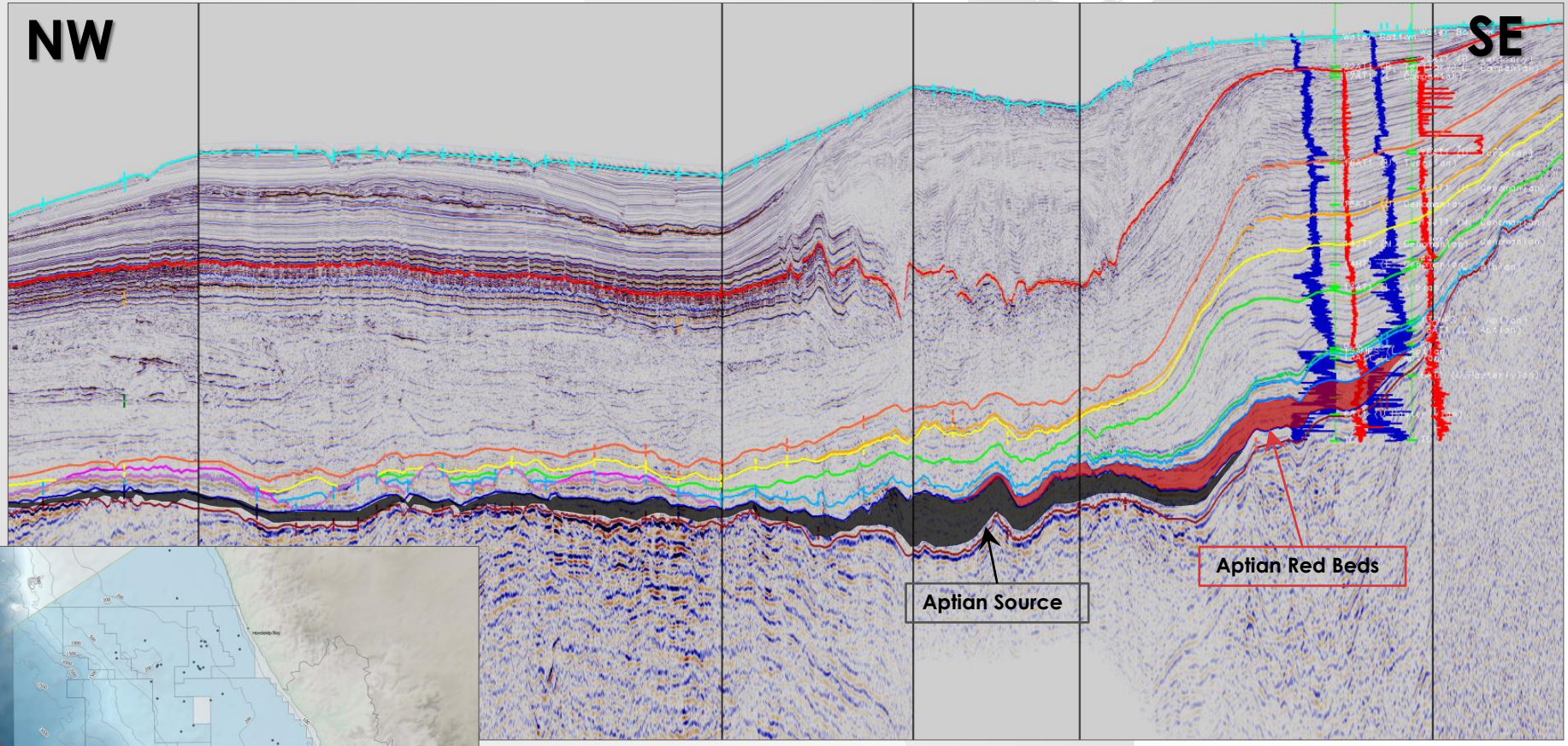
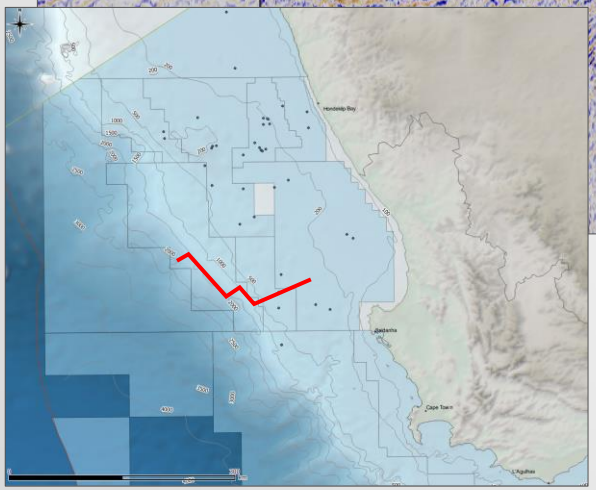
CENTRAL DEEP WATER AREA
Play concepts





Stable Shelf grading to Base of Slope Setting

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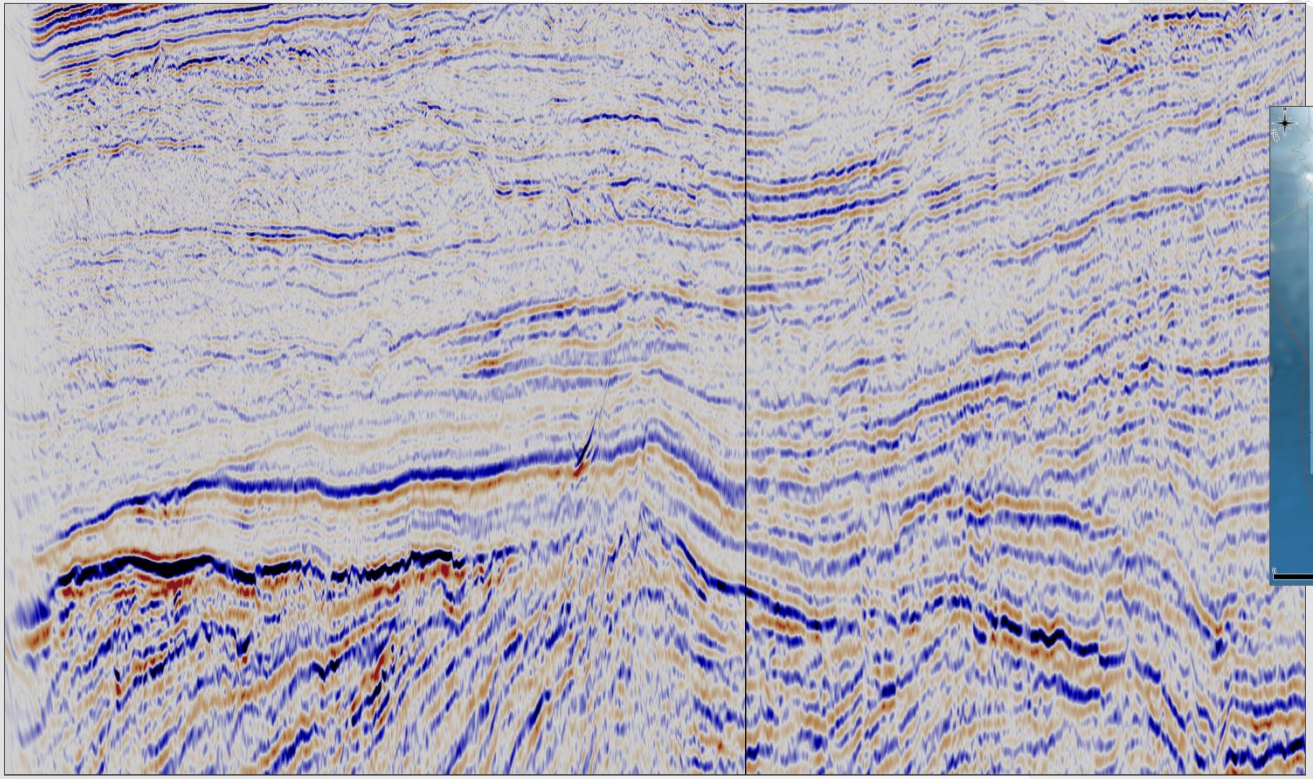
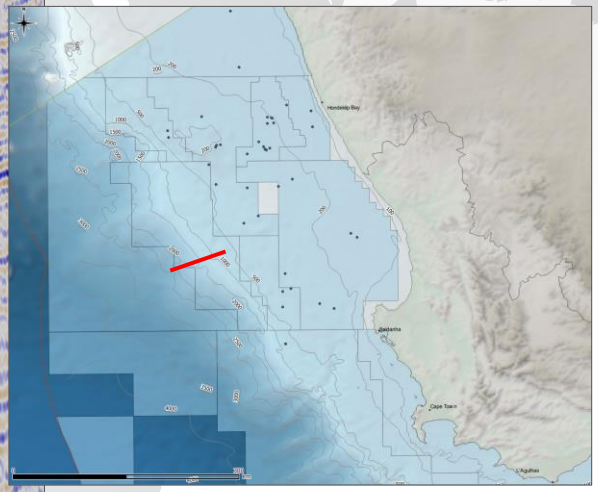
Base of Slope Sands over Basement High





blue : positive
reflection coefficient

brown : negative
reflection coefficient

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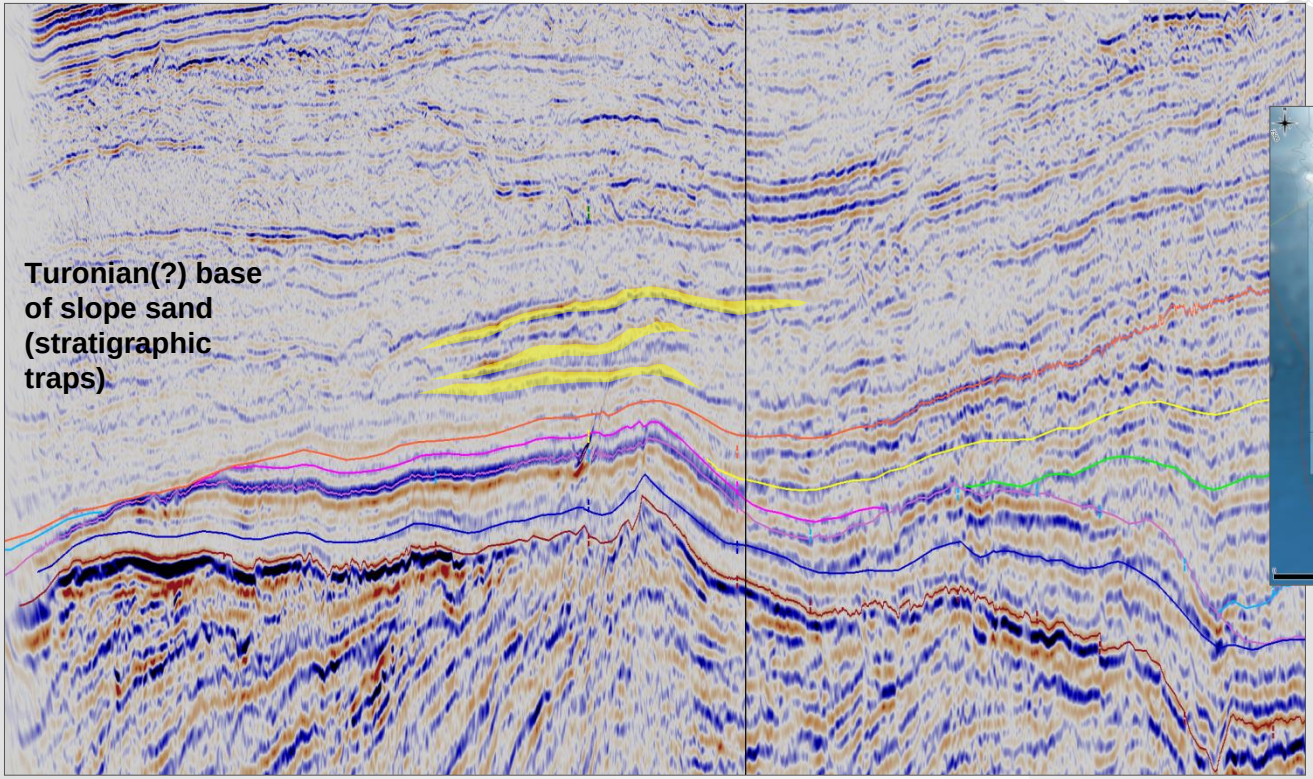
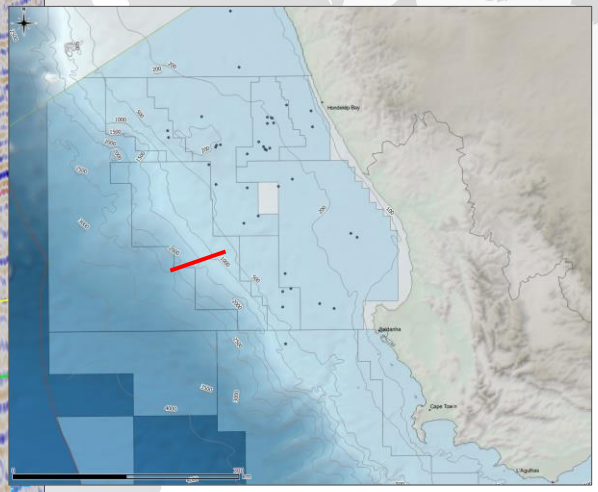
Base of Slope Sands over Basement High





blue : positive reflection coefficient
brown : negative reflection coefficient

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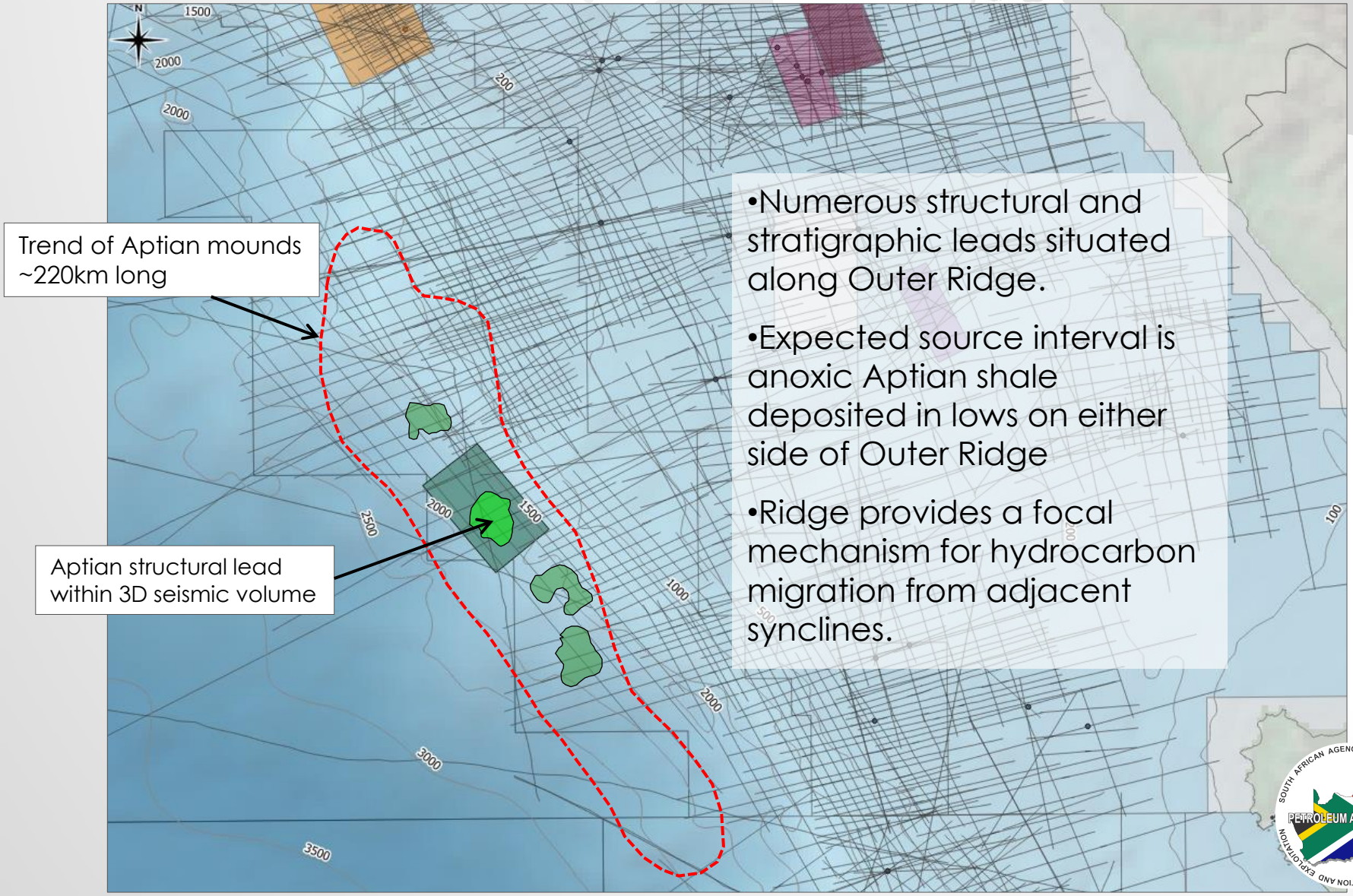
Numerous structural leads situated along Outer Ridge.



Aptian Cabernet Lead: Large Structure with possible carbonates

maximum area
of closure
(blue dashed line)
~220 km^2

RMS Amplitude Map
Late Aptian Event

Hard event is lacking
obvious clastic characteristics
(channel cuts, etc.) but has
well developed fracture pattern.

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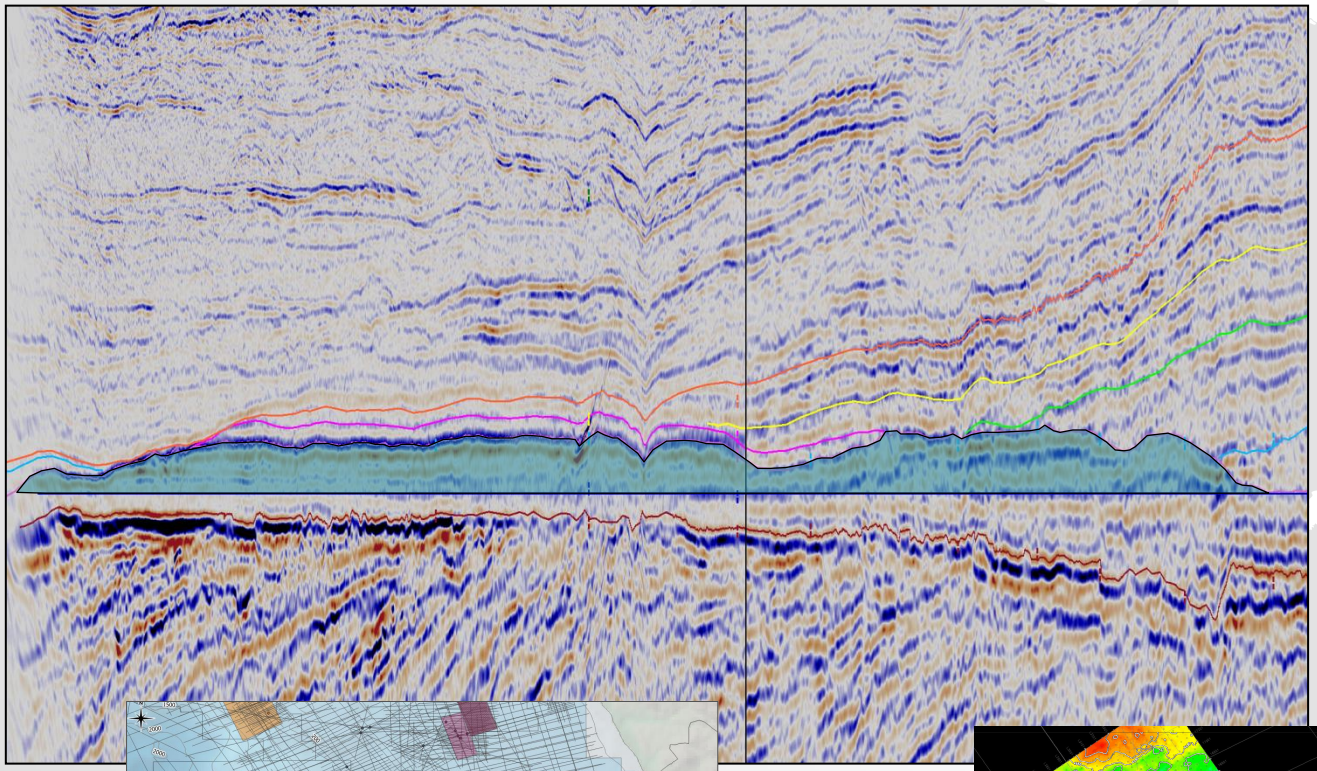
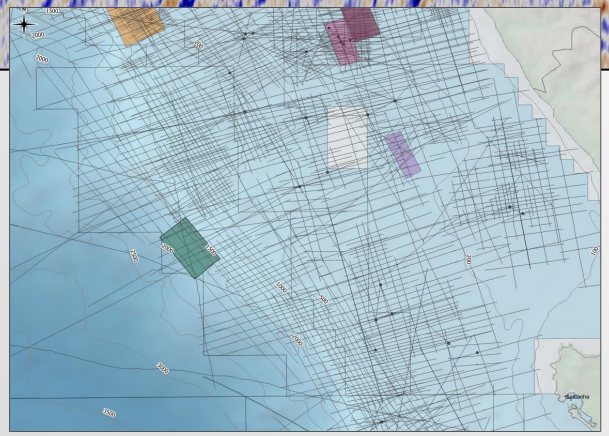
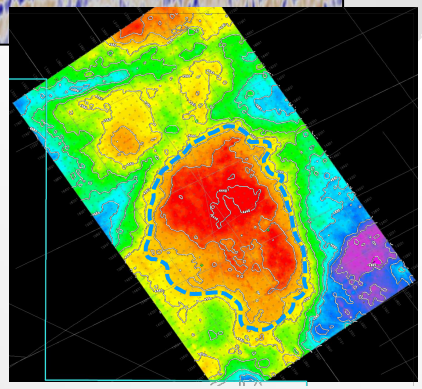
Cabernet Lead Play Concept: Aptian Mounds: Carbonate Build-up over Basement High?



Aptian(?) age build-up carbonate reef?
Topseal:
slope/base of slope clastics





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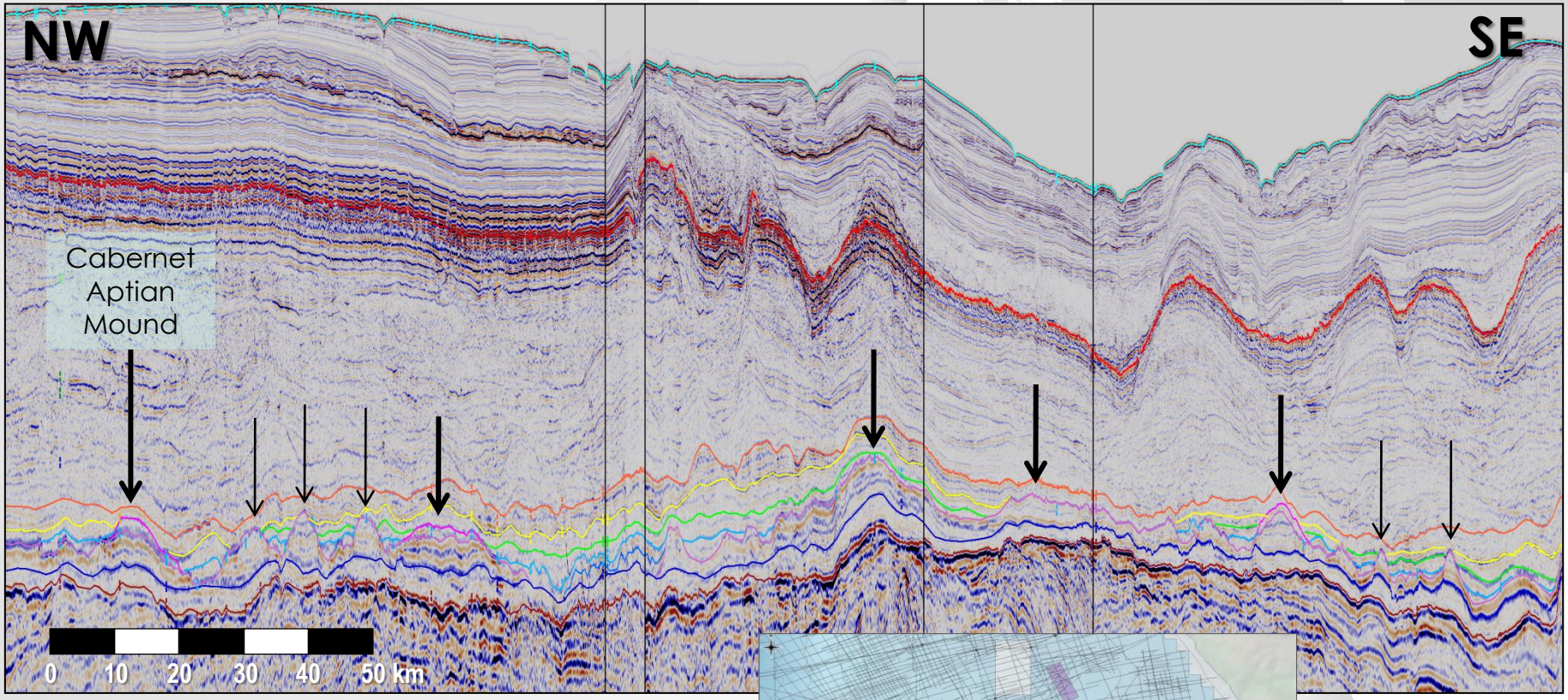
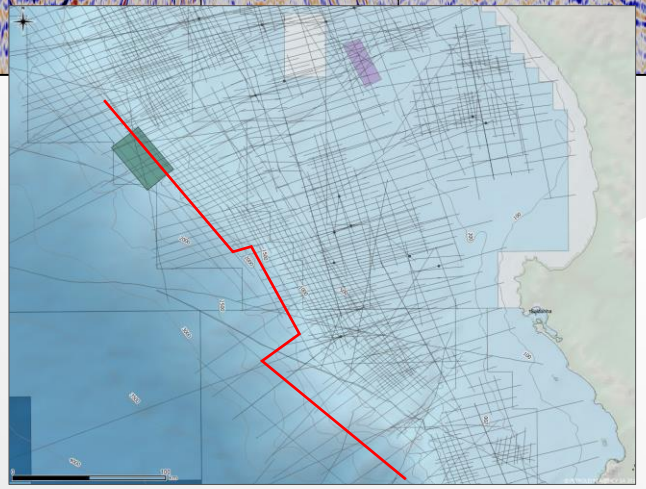
Additional Aptian Mounds





*Additional stratigraphic potential between the mounds

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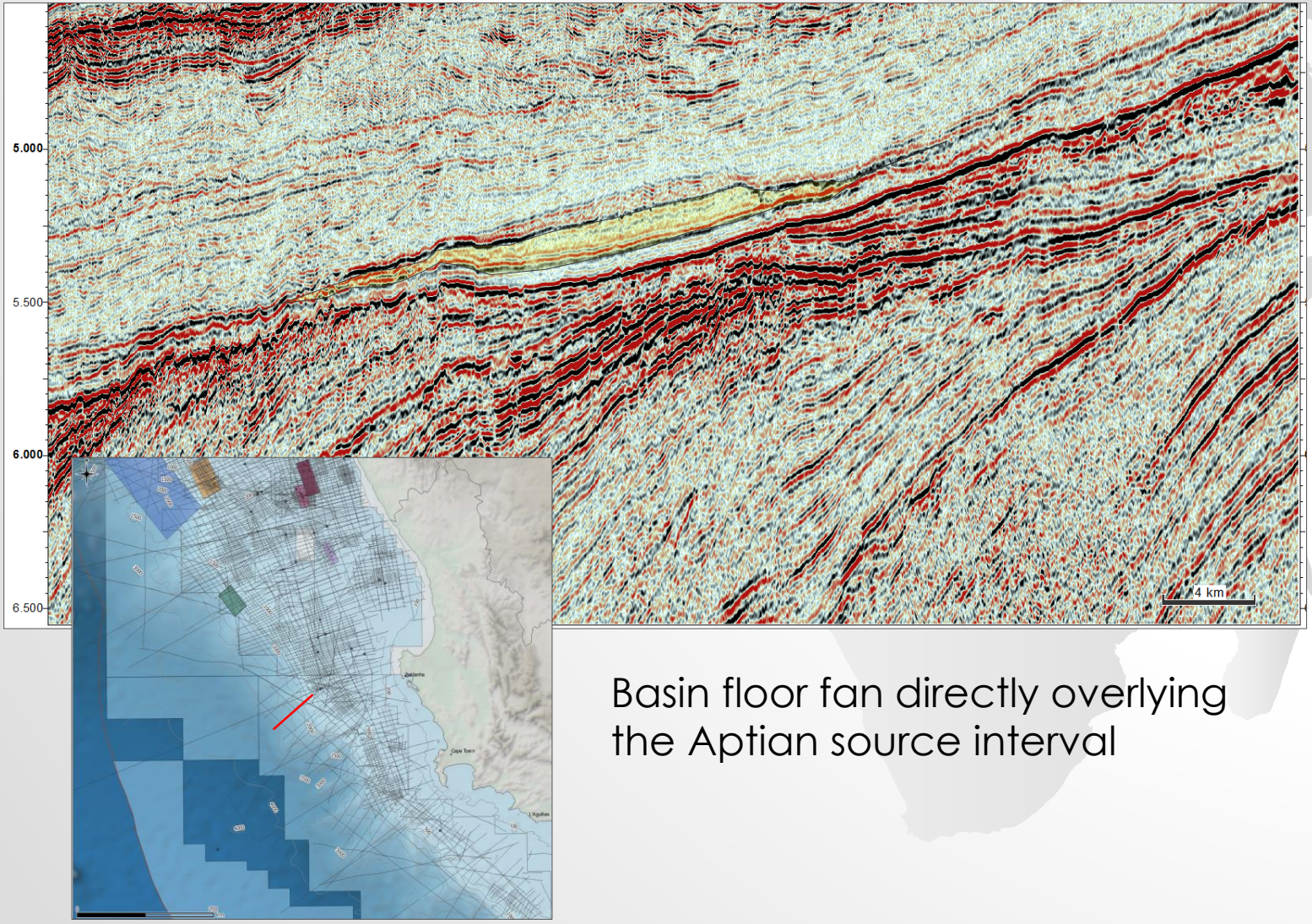
DEEP WATER AREA SOUTH
Play concepts



Basin floor fan directly overlying the Aptian source interval

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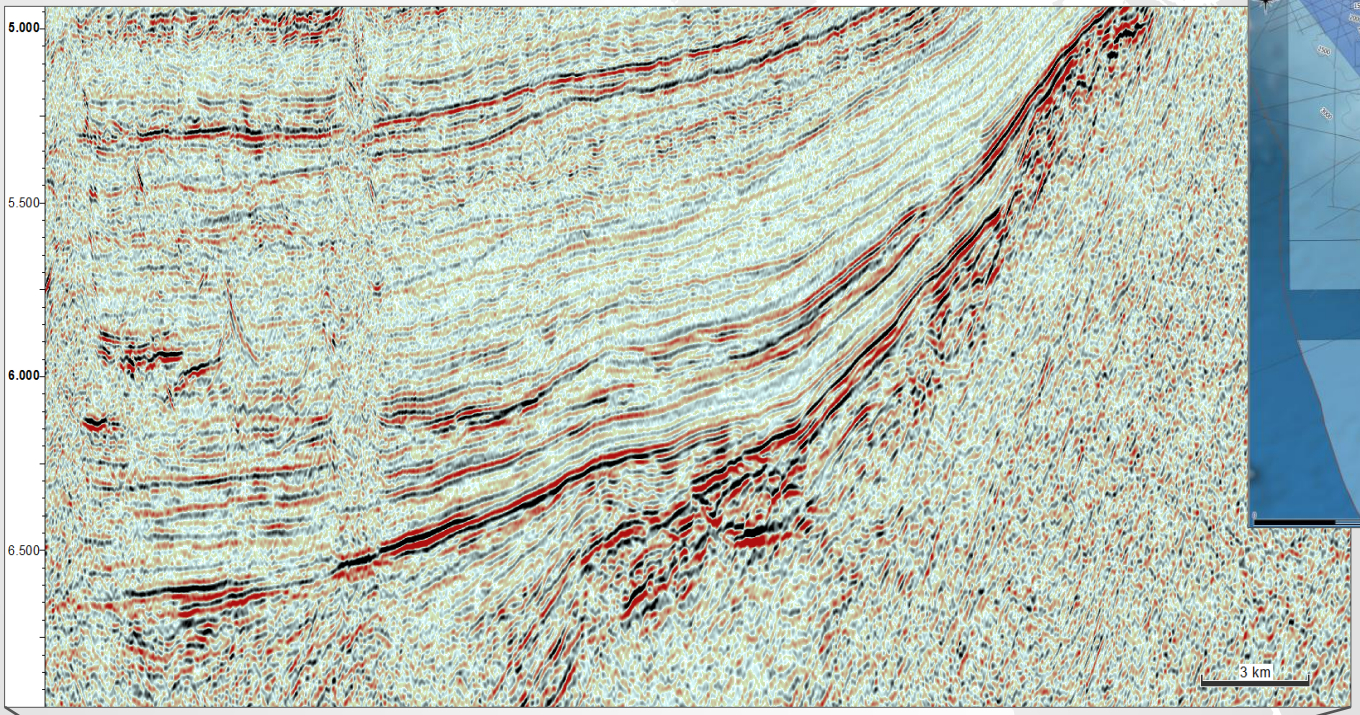
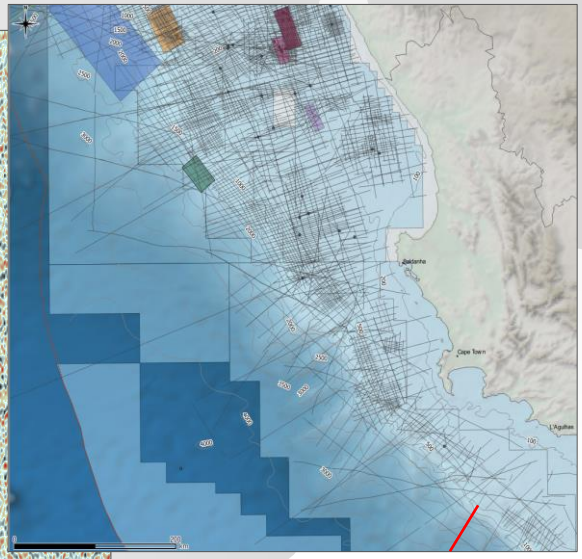
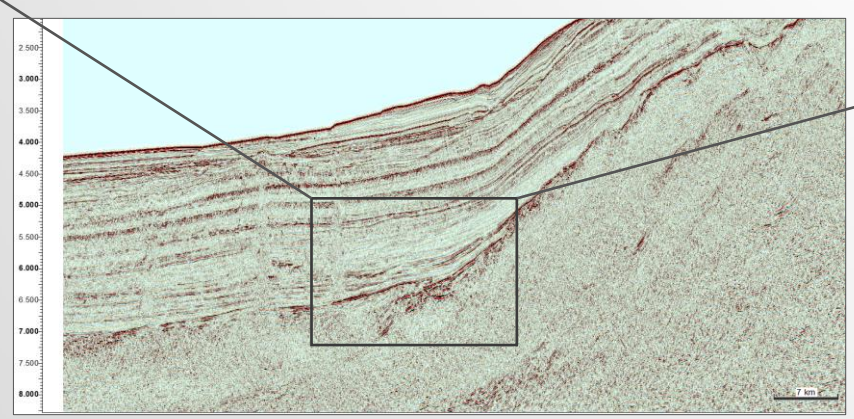
Pinch out







Mid Aptian pinch out potential against basement

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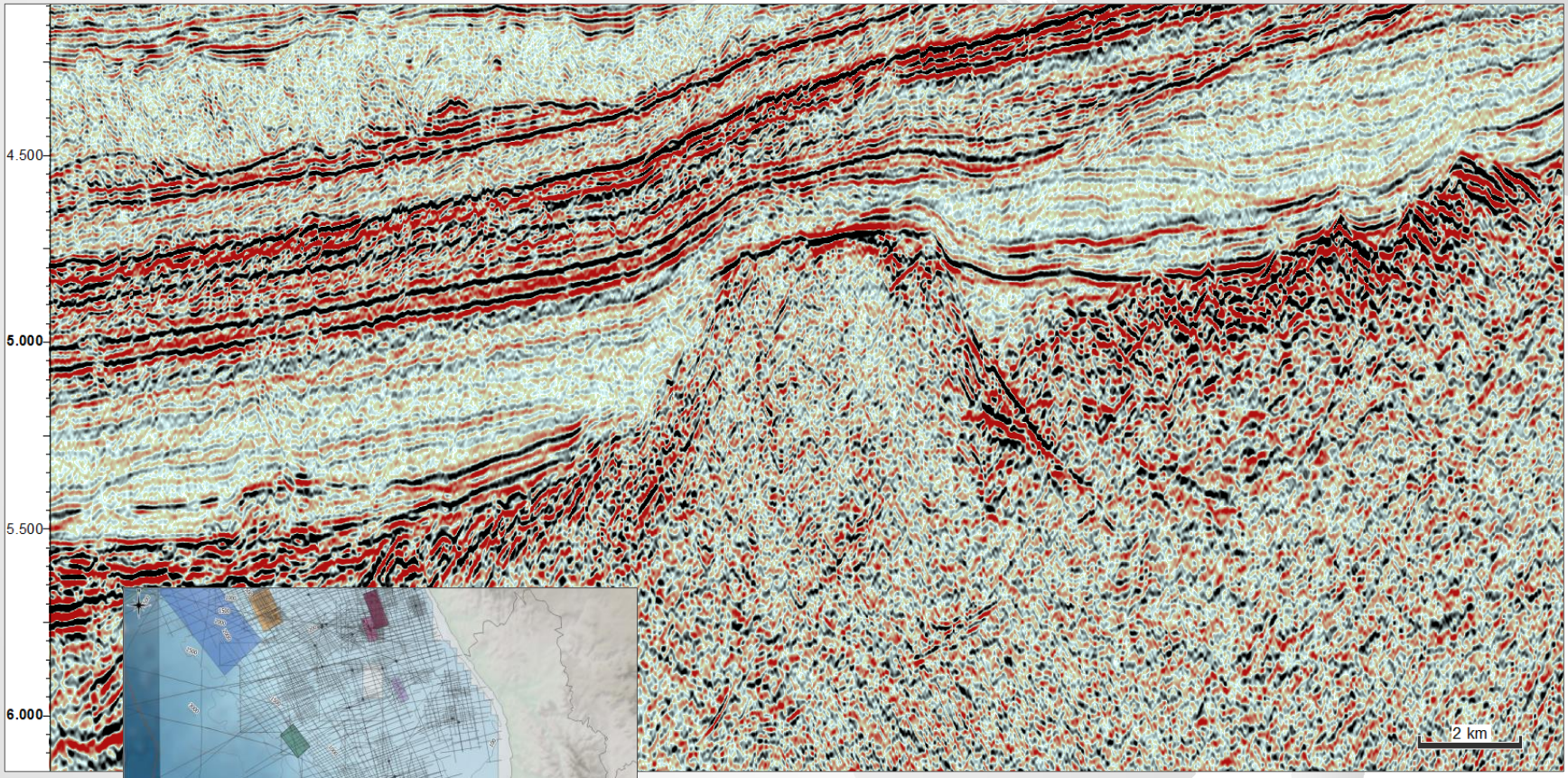
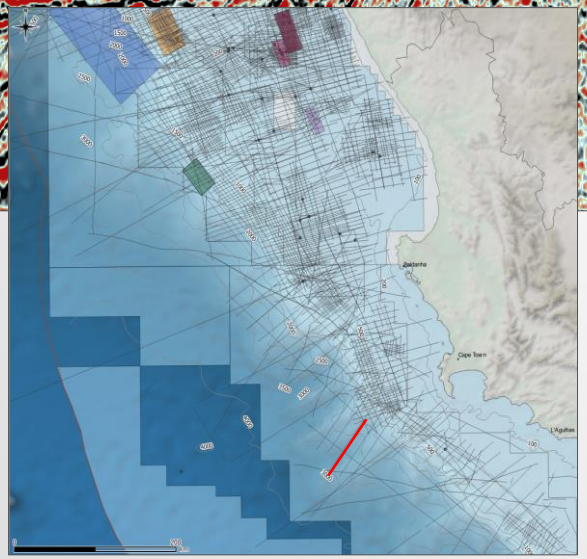
Pinch out/drape





Potential pinch-out againt basement high and sediment draping

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CONCLUSIONS

- Attractive play types
- Structural and stratigraphic closures
- Large exciting leads identified
- Encouraging source rock/maturity potential

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THANK YOU

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