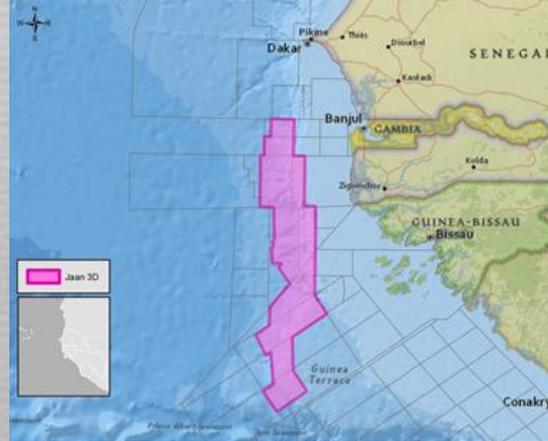
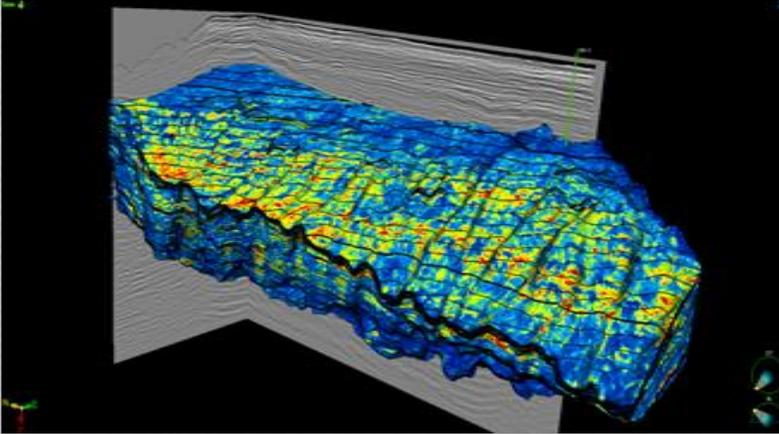




GeoPartners

Core Services

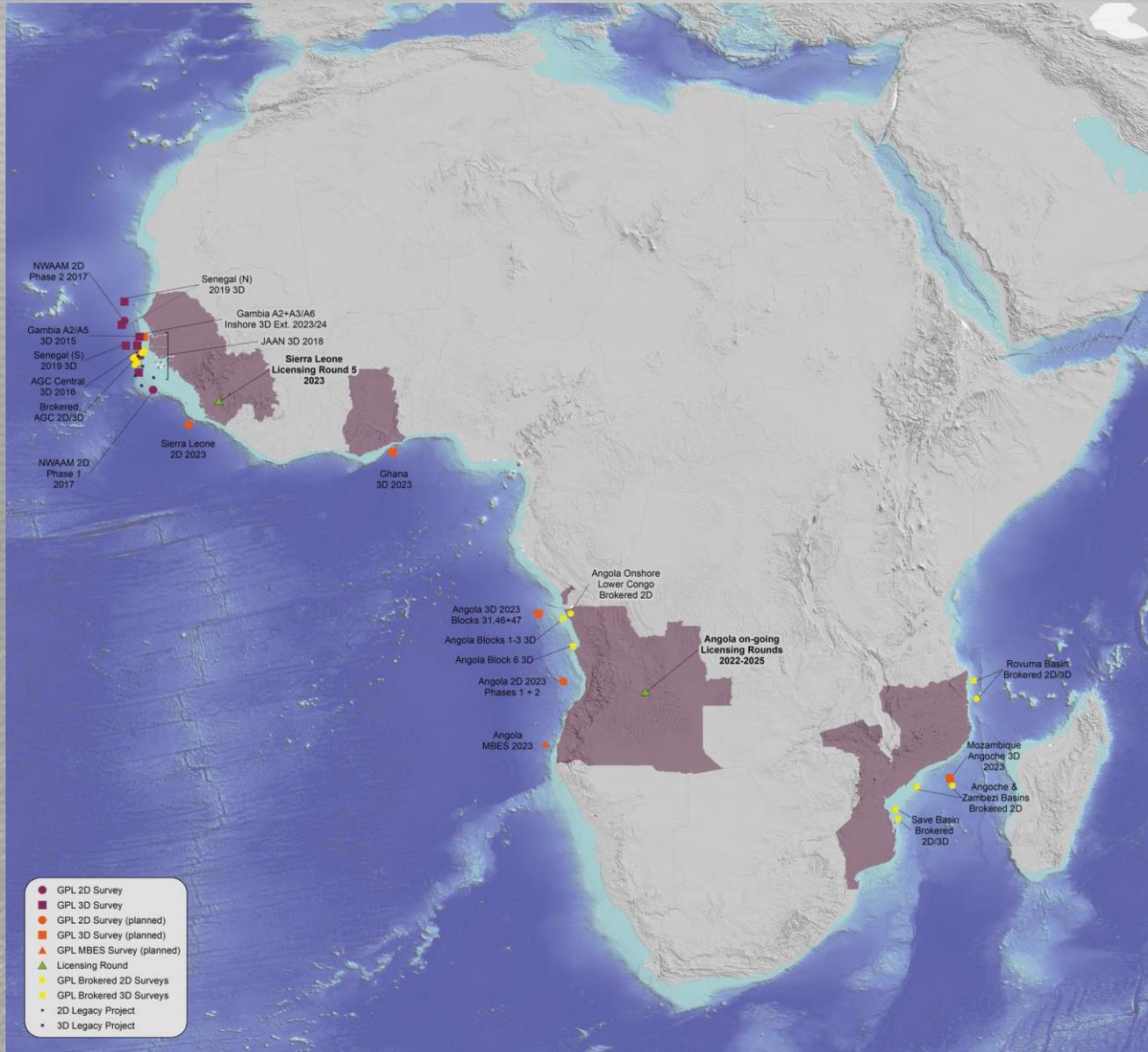


GeoPartners are an established International Geophysical and Geological company, specializing in providing a range of technical support services to Government Agencies, National Oil Companies and the International Energy Industry. We have a global portfolio in the creation, acquisition, marketing and financing of Multi-Client Projects. In November 2022, we celebrated 13 years of activities in Europe and Africa.

CORE SERVICES:

- Survey Design
- Seismic Data Acquisition
- Land, Marine, TZ, 2D, 3D
- Seismic Data Processing
- Depth Imaging
- Multi-Client Surveys
- Interpretation Services
- Licence Rounds
- Technical Advisories
- Project and Quality Control
- Gravity/Magnetic/Resistivity
- Rock Physics

Current Pan-African Activities



Active in 11 countries

Ongoing License Round support

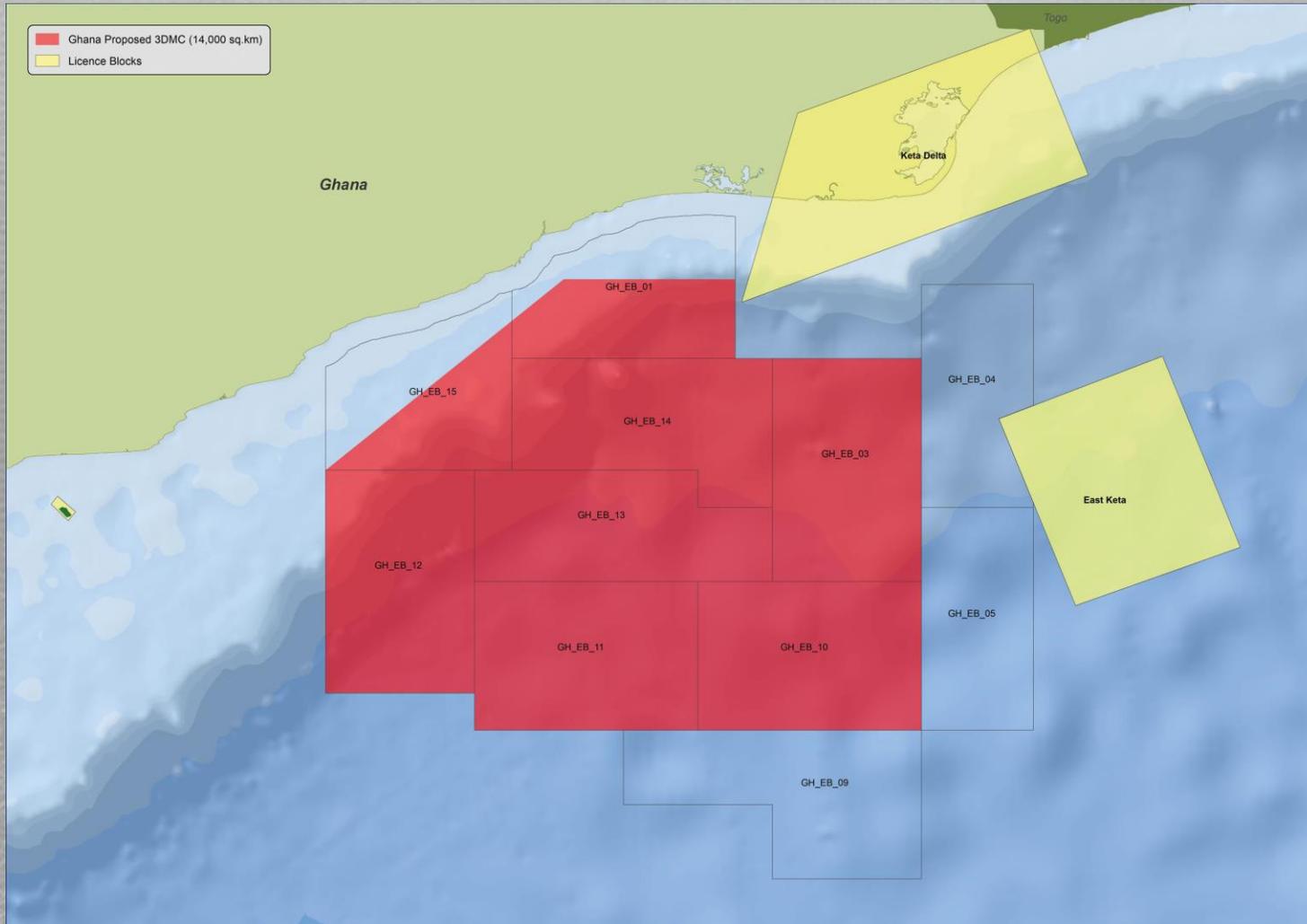
New data acquisition

Data brokerage

Legacy data reprocessing and merging

Block technical work, geophysical acquisition and promotion

Ghana 23 - Keta Basin 3D Multi-Client Survey



New survey proposal of approx. 14,000 sq. km

Covers the majority of the Ministry designated open blocks in the Keta basin

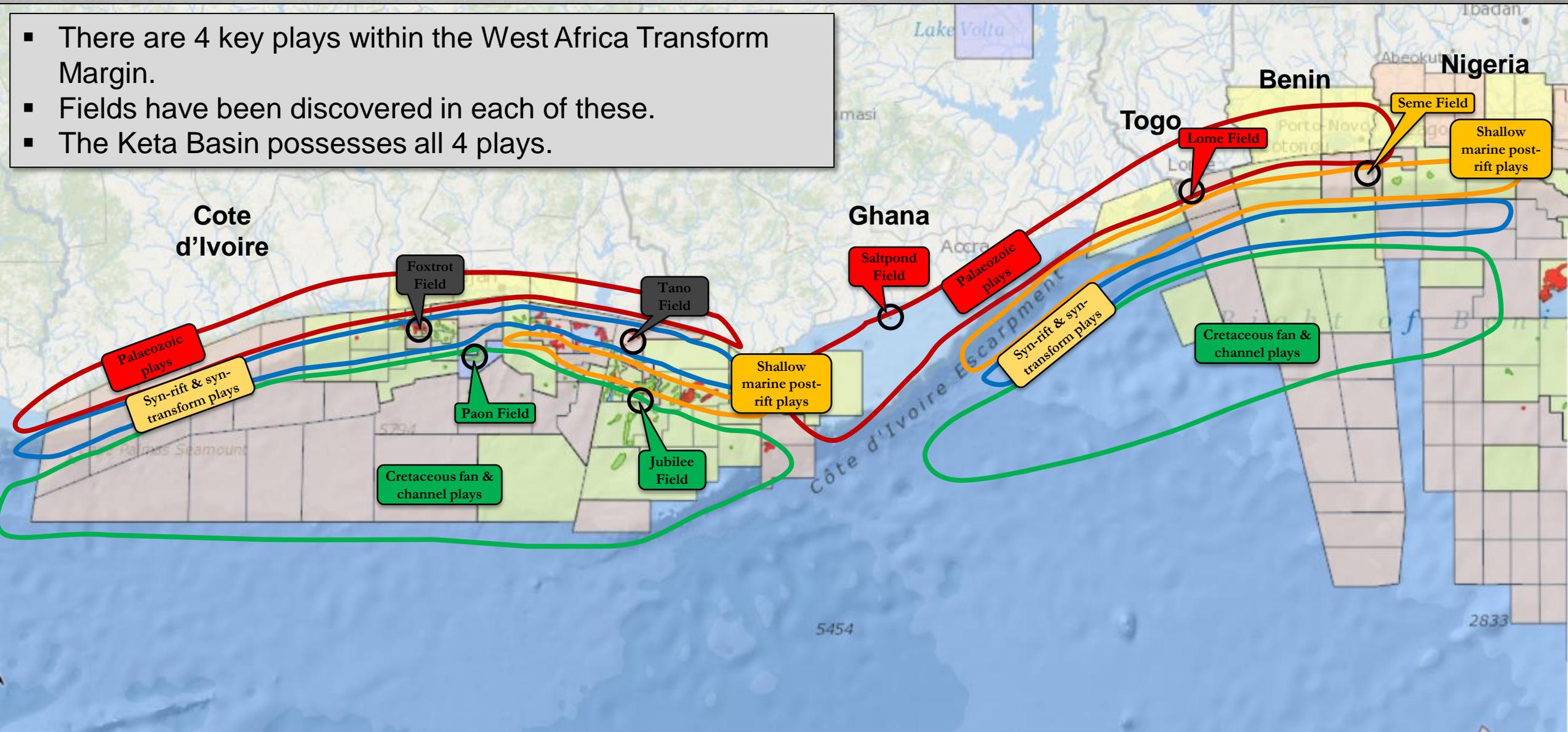
Earliest commencement Q2 2023 with a duration of 6 months

Early provision of processed volumes to allow initial overview of exploration potential

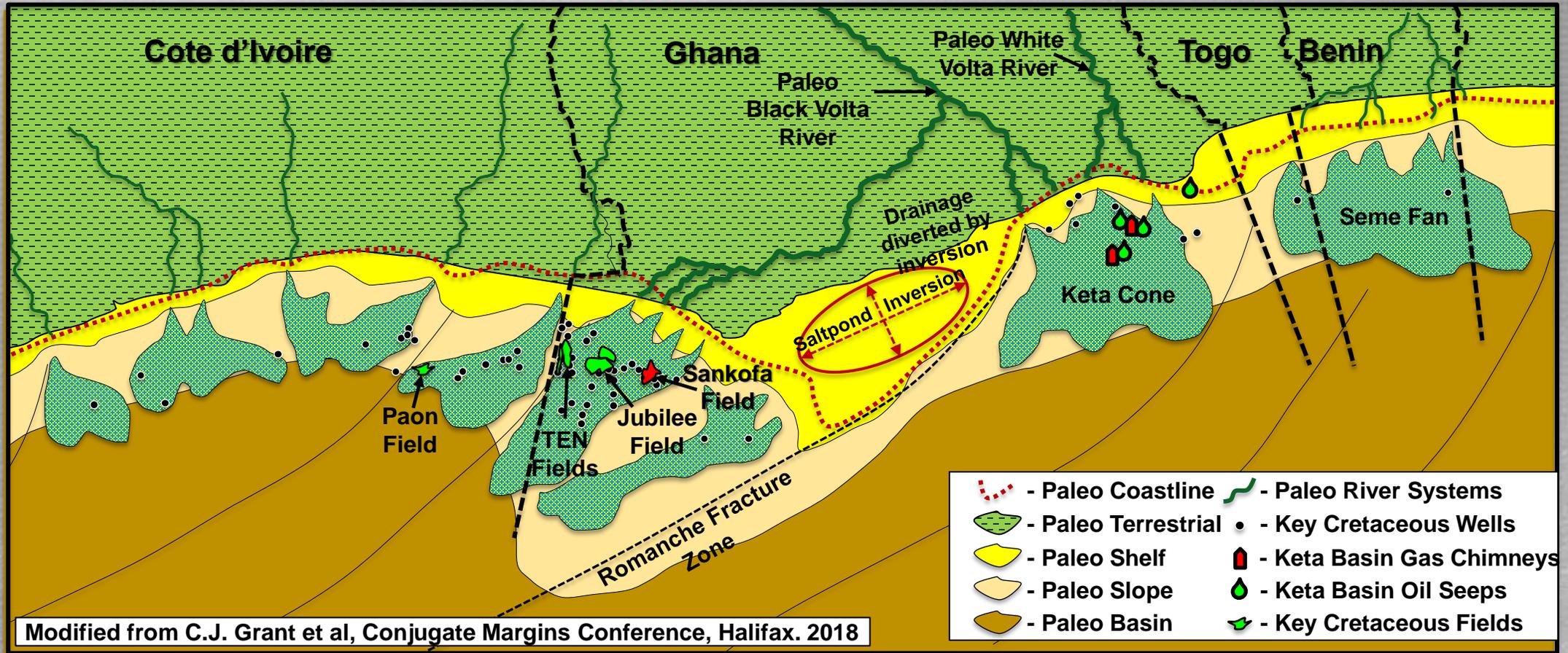
Application of advanced processing techniques to highlight extensive prospective trends

Successful and tested plays in the West Africa Transform Margin

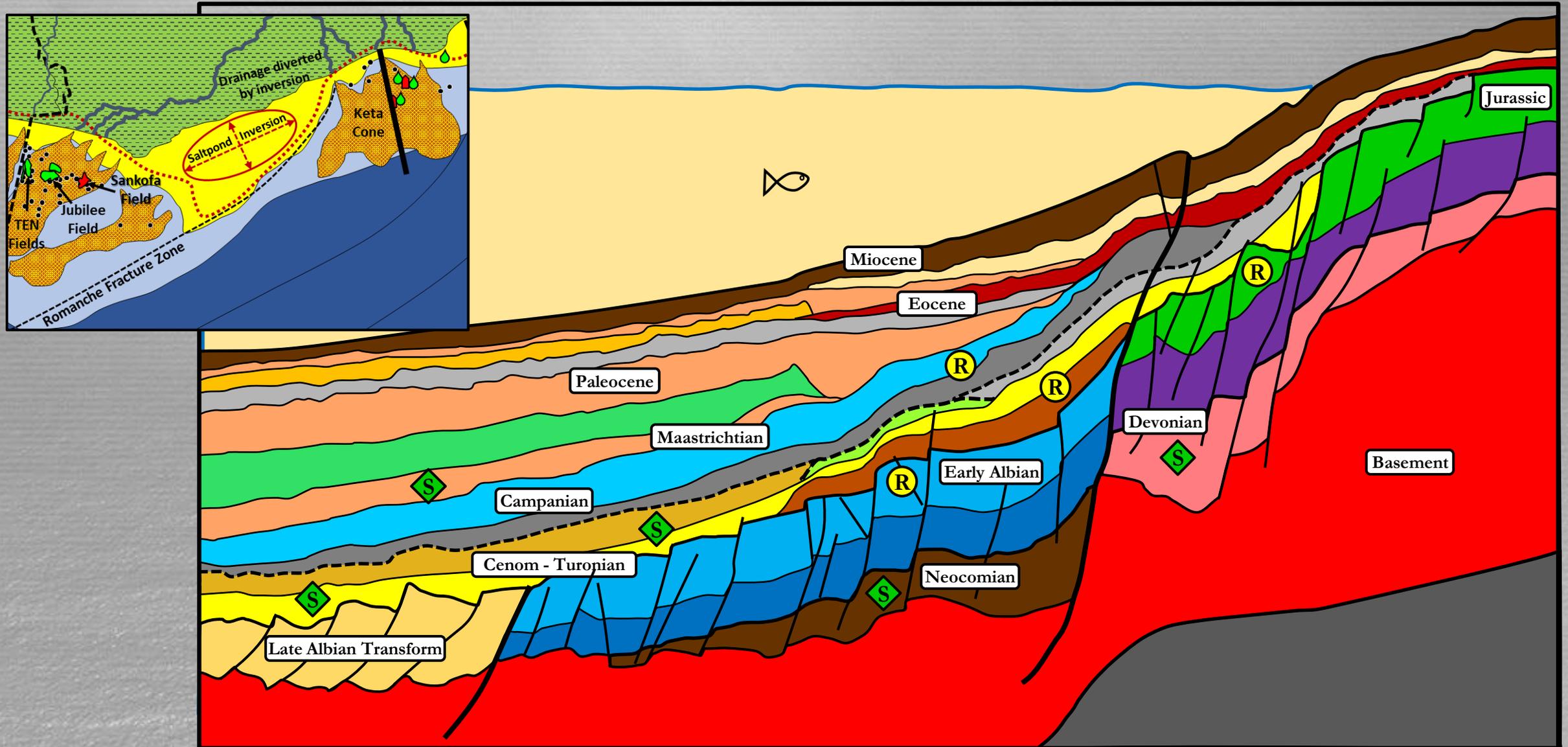
- There are 4 key plays within the West Africa Transform Margin.
- Fields have been discovered in each of these.
- The Keta Basin possesses all 4 plays.



Cretaceous paleoenvironment map showing dominant deepwater fan systems (predominantly Cenomanian-Turonian-Coniacian)



Keta Basin Geosection Showing Structure and Stratigraphy



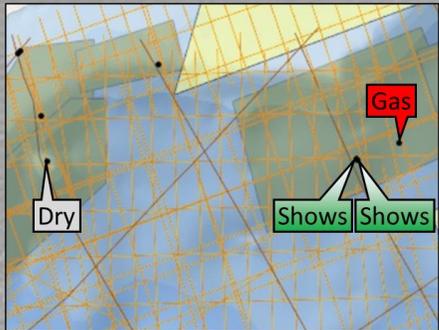
5 key reasons to look again at the Keta Basin

#1

Historically under-explored basin:

Only 6 wells drilled on 3D data.

3 out of 4 deepwater wells found HCs.

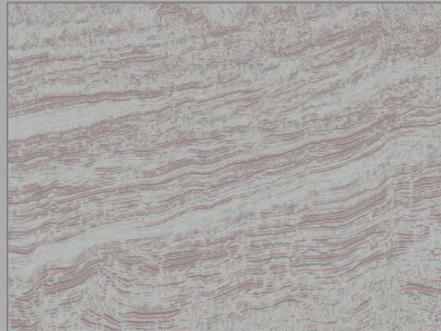


Opportunity:
Re-model deep water using well results

#2

Multiple stacked mass-flow sand systems:

Sand-rich system with stacked units



Opportunity:
Drill deepwater with modern 3D data

#3

Source Rocks:

Several mature source rocks across basin.

Miococene expulsion & charge modelled.

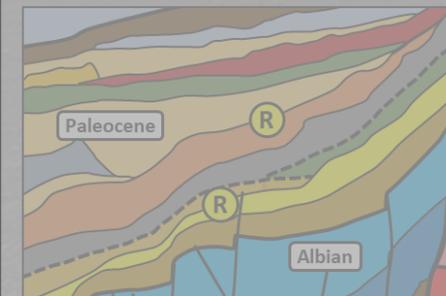


Opportunity:
Reduced risk to charge

#4

Pre-charge inversion forms traps:

Inversion of basin-bounding fault cuts-off sand systems.

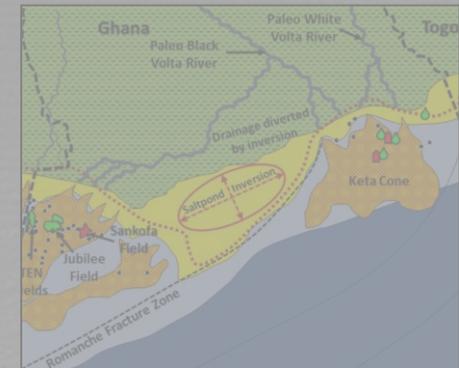


Opportunity:
Reduced risk to trap, especially stratigraphic

#5

Sand Provenance & Qualities:

Sand provenance indicates excellent reservoir qualities.



Opportunity:
Reservoir qualities likely similar to Tano.

Results of wells drilled

Most wells have shows indicating hydrocarbon charge:

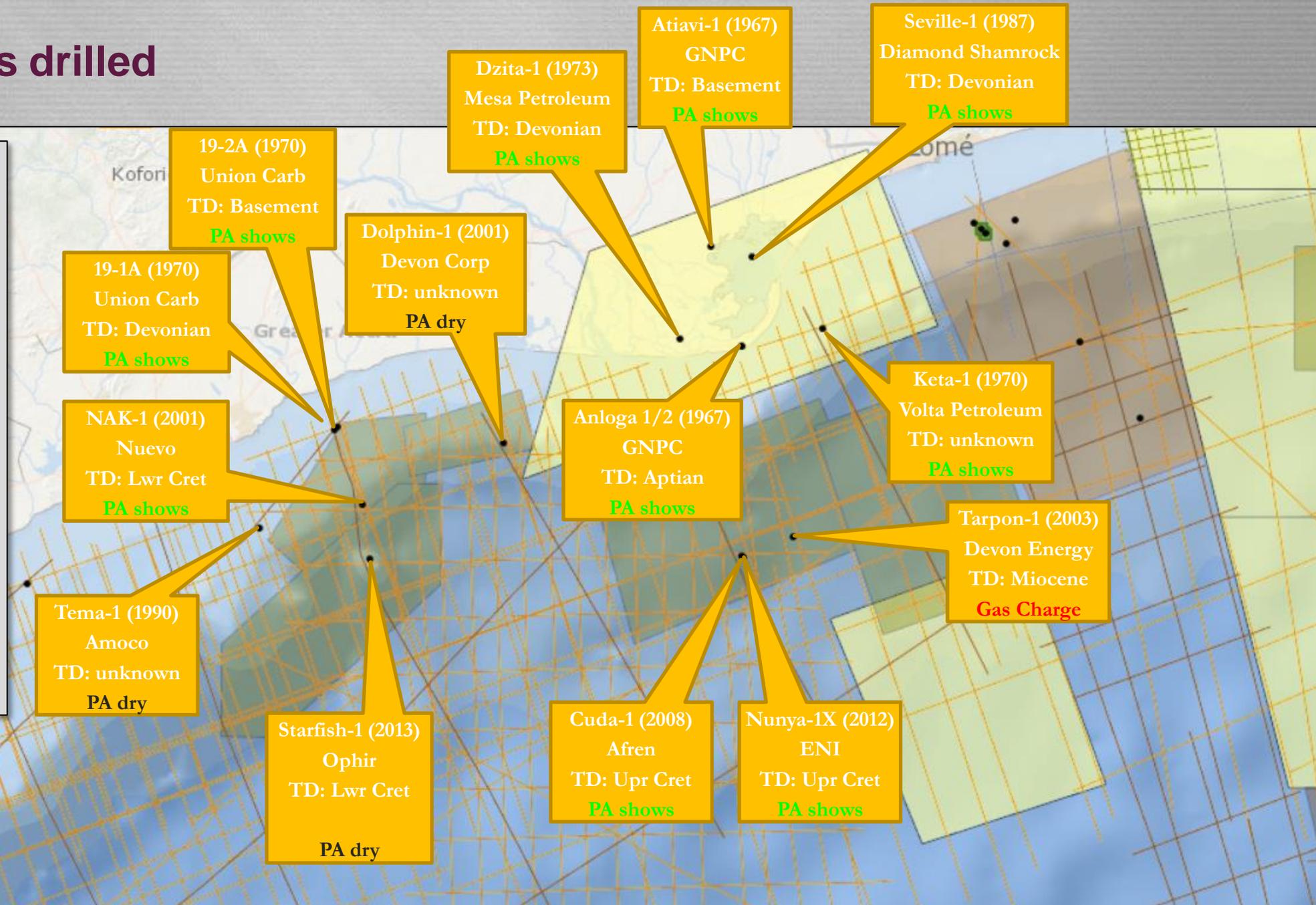
- throughout the basin
- from multiple source rocks

Shows are seen in:

- Devonian,
- Lower Cretaceous
- Upper Cretaceous

Deepwater wildcats found:

- Oil shows & Gas charge



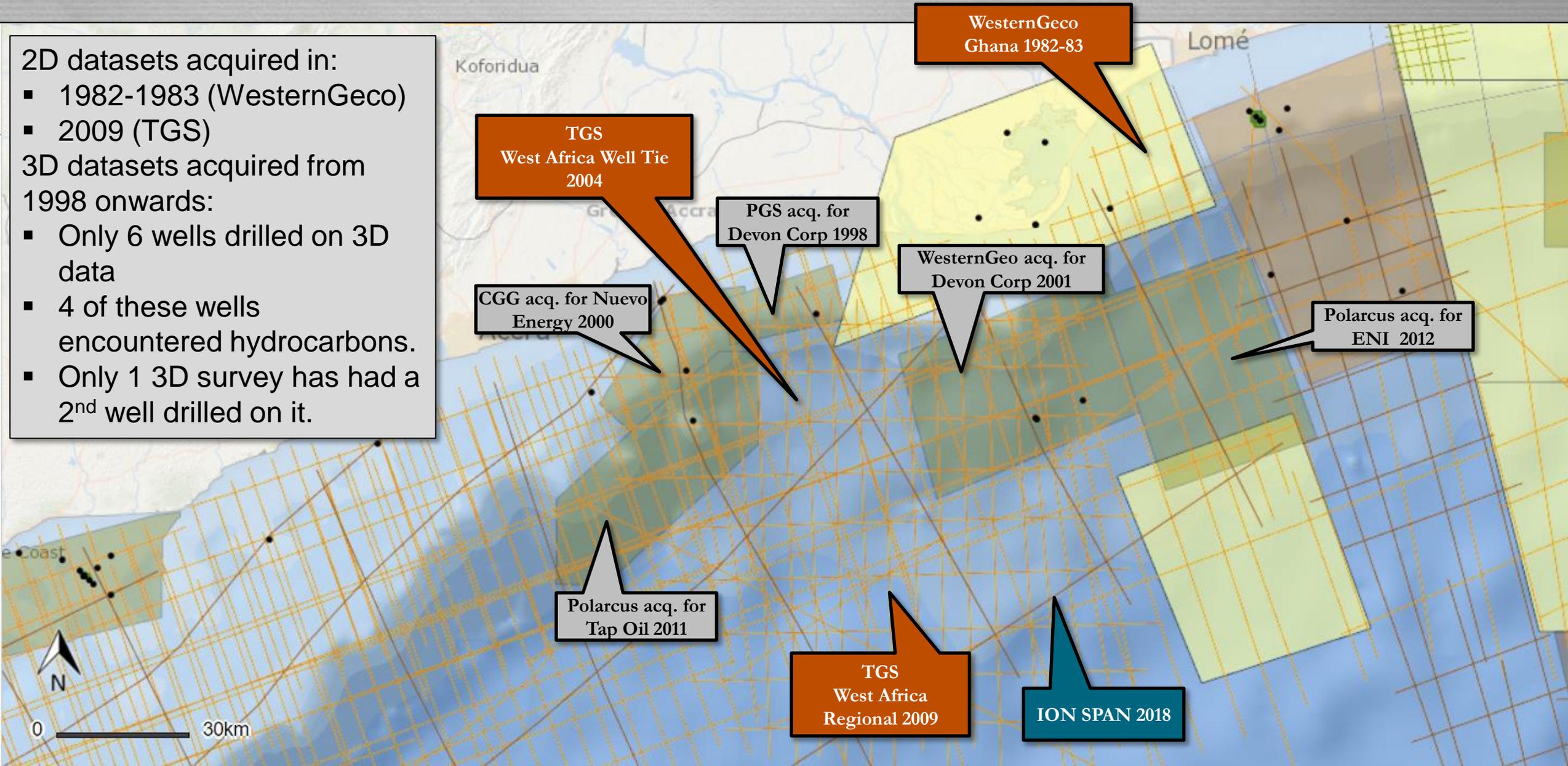
Legacy seismic datasets

2D datasets acquired in:

- 1982-1983 (WesternGeco)
- 2009 (TGS)

3D datasets acquired from 1998 onwards:

- Only 6 wells drilled on 3D data
- 4 of these wells encountered hydrocarbons.
- Only 1 3D survey has had a 2nd well drilled on it.



5 key reasons to look again at the Keta Basin

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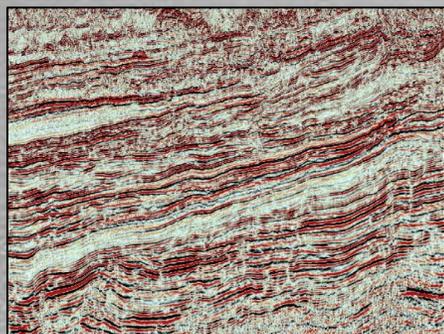


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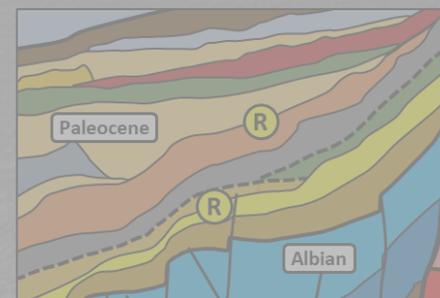


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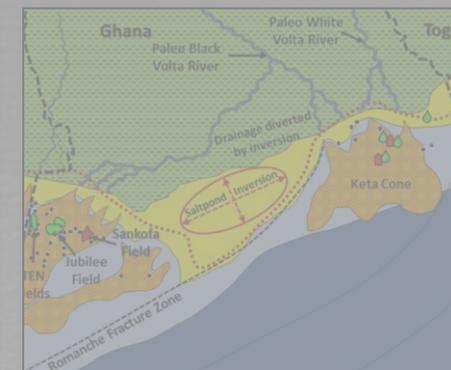


Opportunity:
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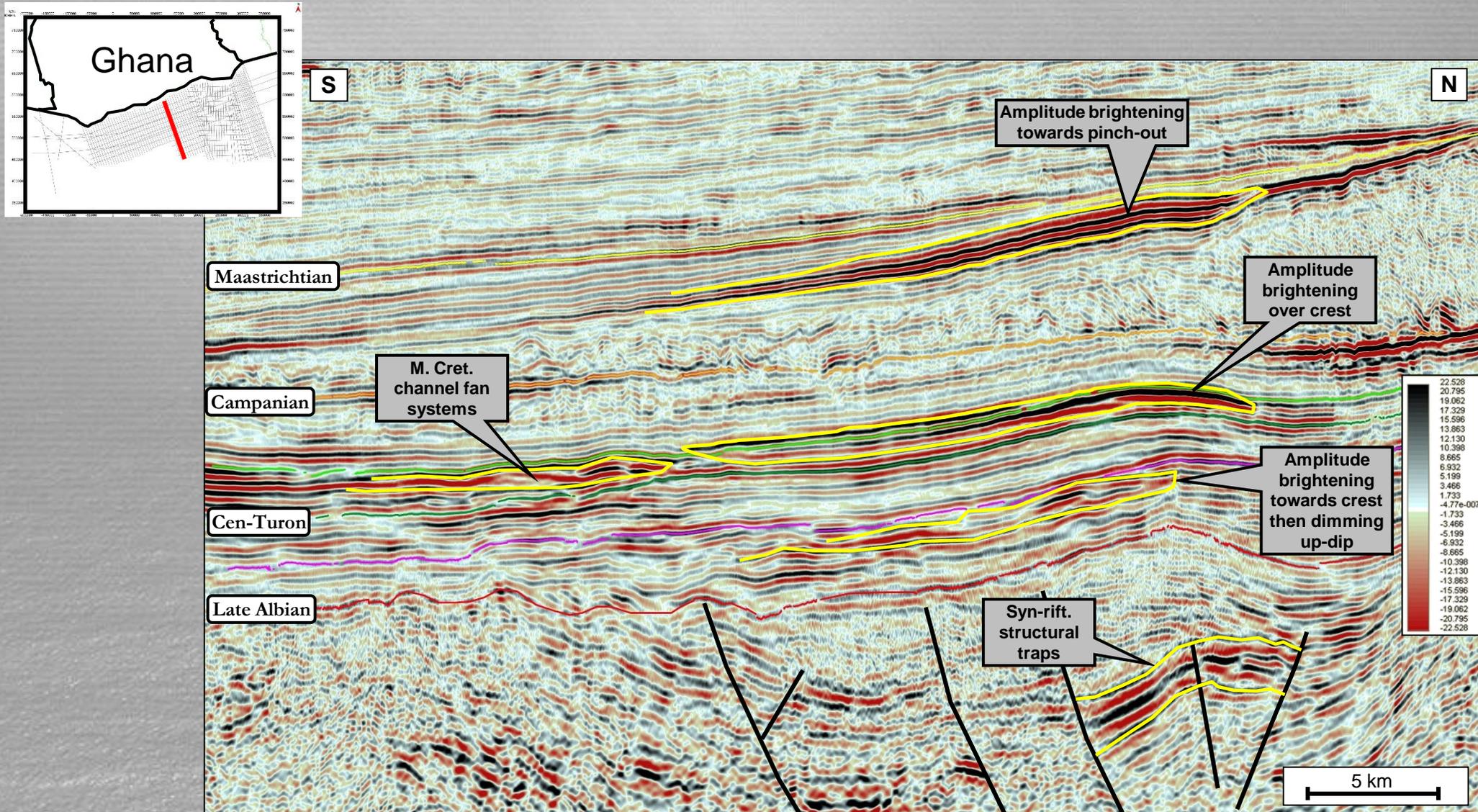
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Opportunity:
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Examples of Plays Shown by TGS at PESGB/HGS Africa Conference, 2011



Modified from P. Conn et al, 10th PESGB/HGS Conference on African E & P, 7th September 2011

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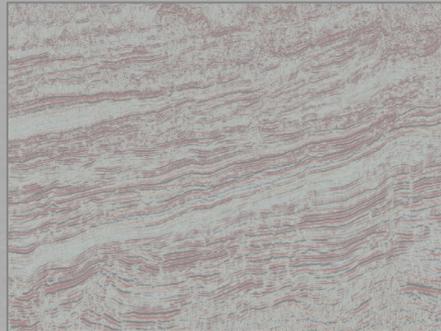


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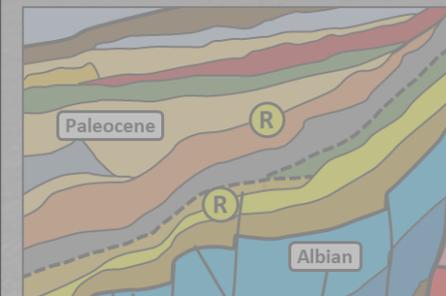


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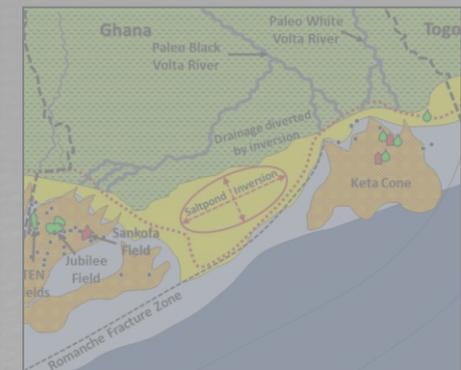


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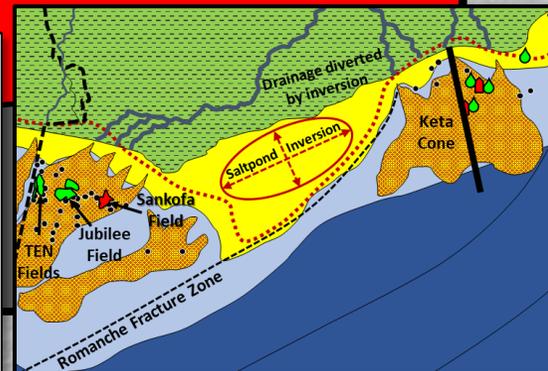
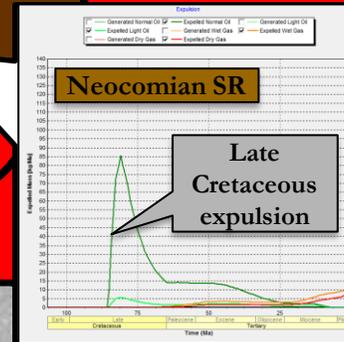
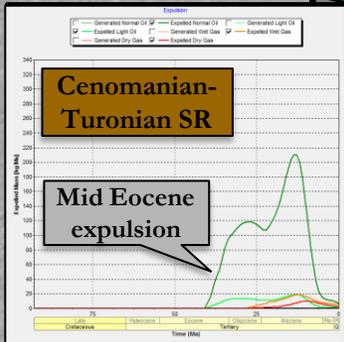
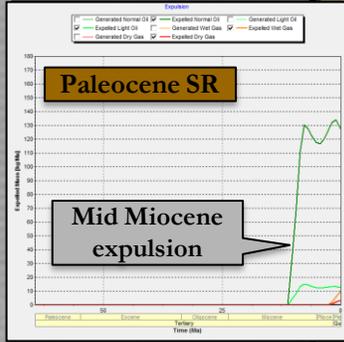
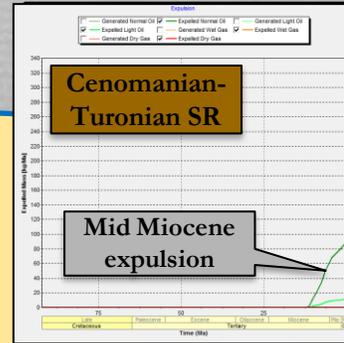
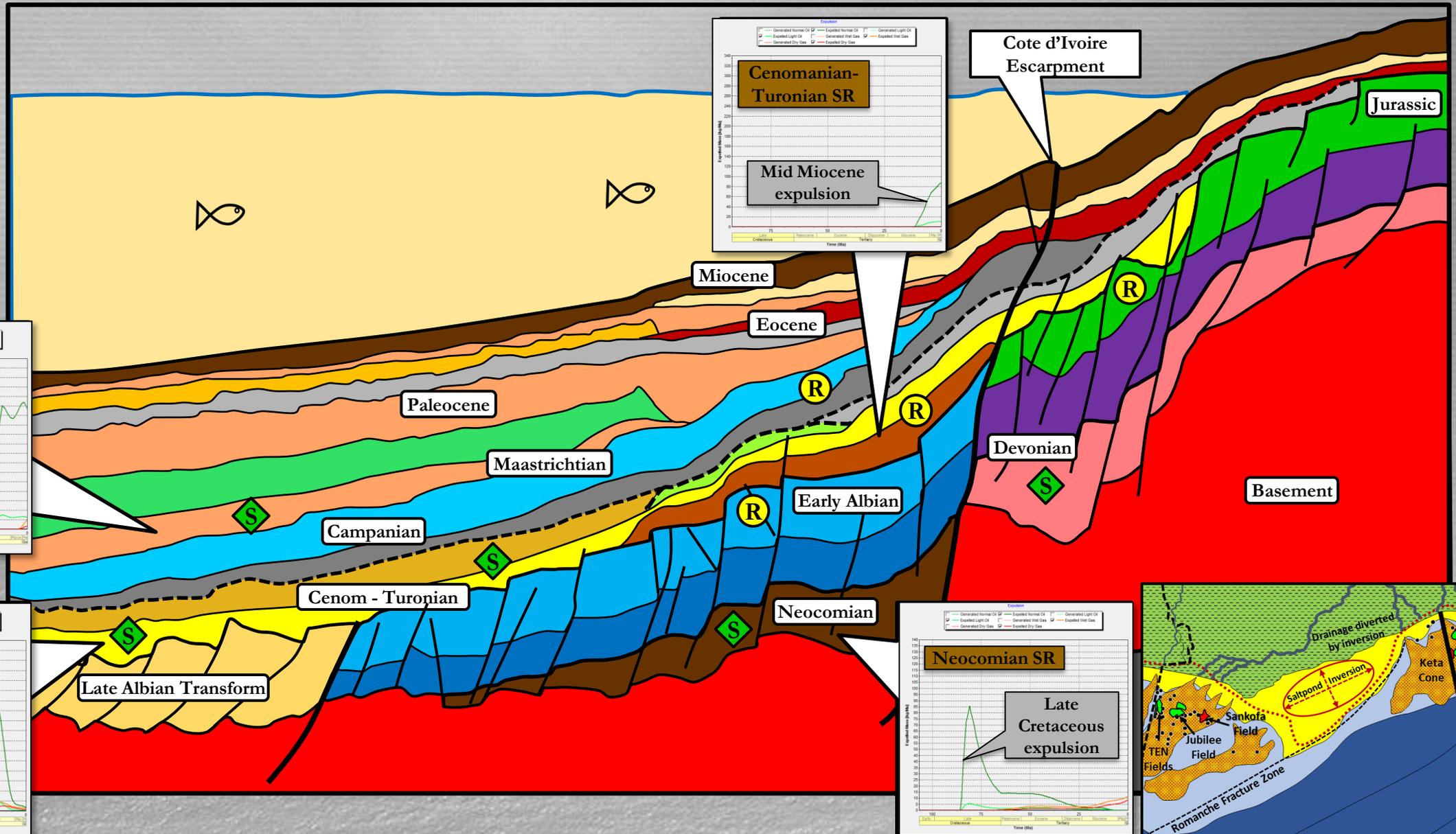
Sand Provenance & Qualities:

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Opportunity:
Reservoir qualities likely similar to Tano.

Source Rocks in Several Intervals, Miocene Expulsion



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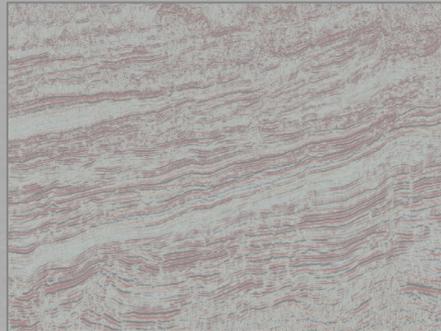


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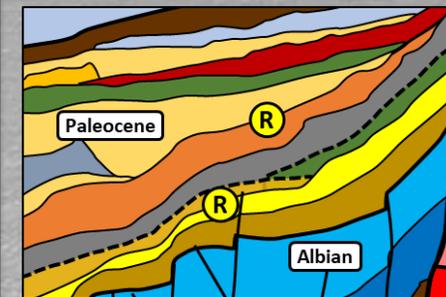


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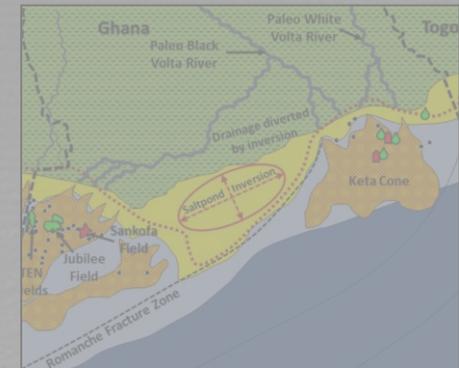


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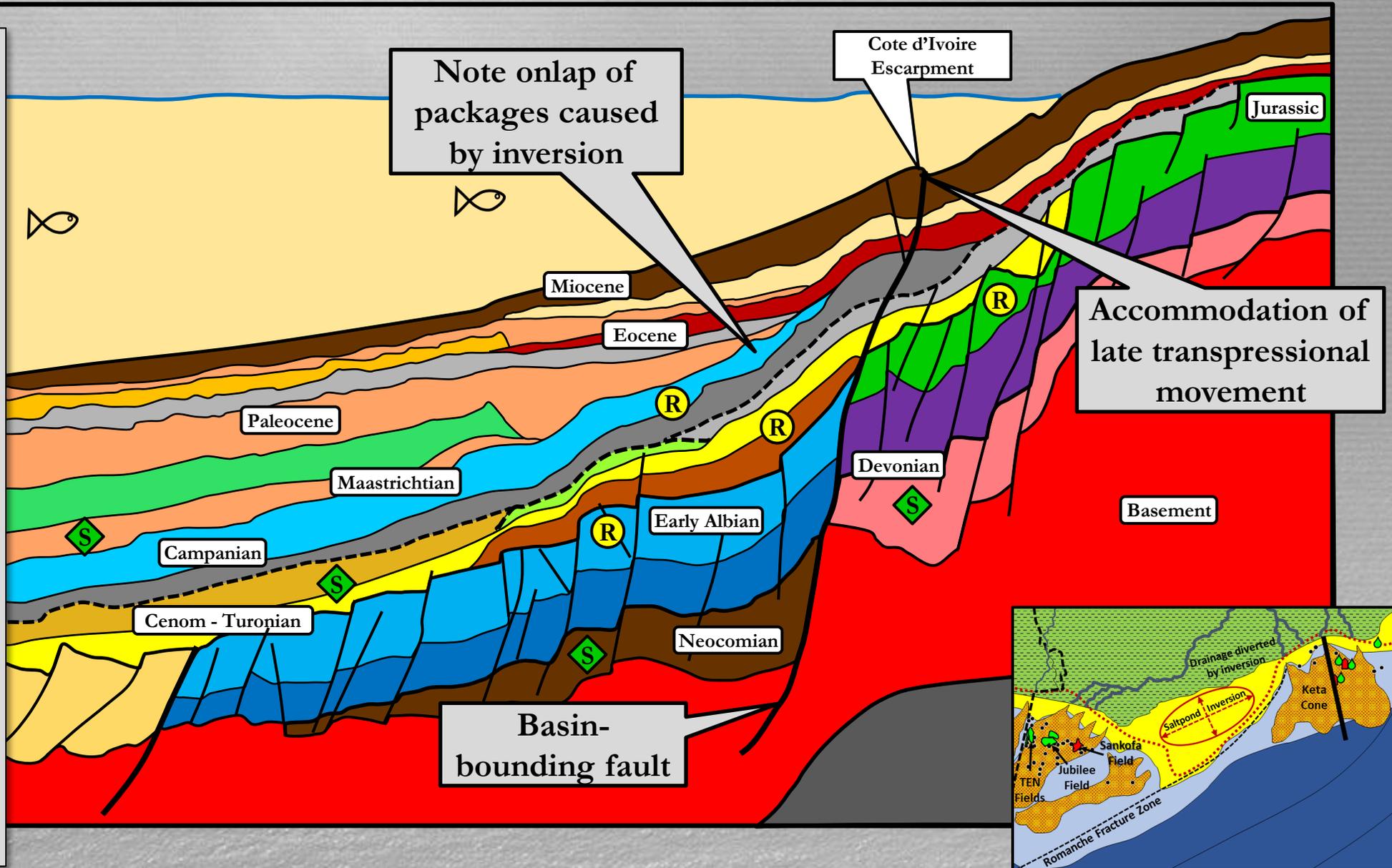
Campanian Inversion Forms Traps Prior to Charge

Throughout the WATM, a significant risk to exploration is created by late-stage tectonism resulting in trap breach.

In Cote d'Ivoire, this is the biggest cause of failure in deepwater wells.

In the Keta Basin, all post-rift tectonic strains are accommodated by the basin-bounding fault.

Inversion ceased in Campanian forming onlap traps. These were in place before charge.



5 key reasons to look again at the Keta Basin

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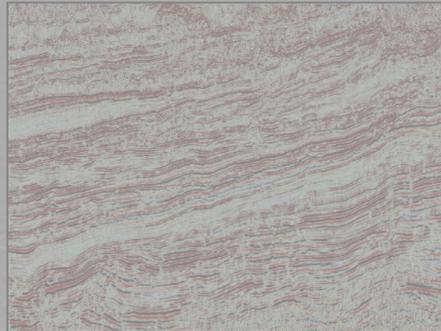
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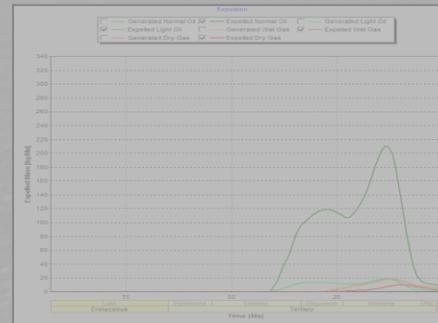
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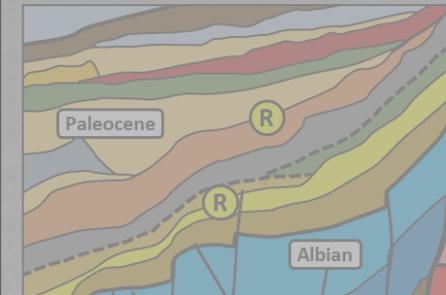
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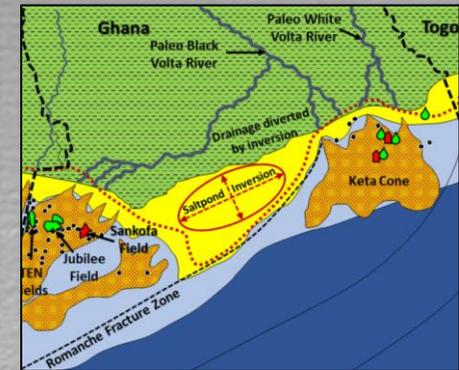
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Opportunity:

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Sand Provenance and Qualities – Volta Basin & Jubilee

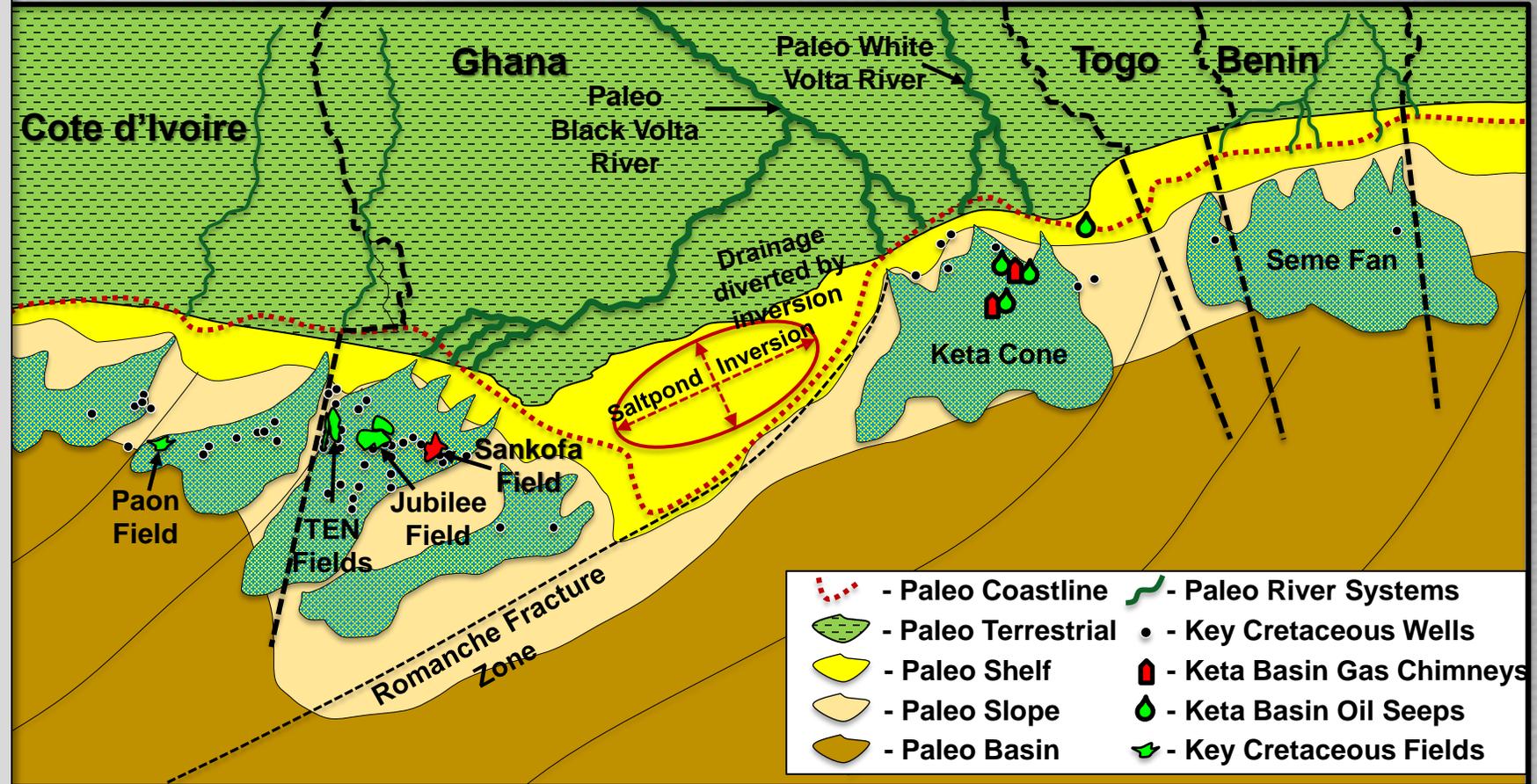
The two paleo-river systems in Ghana are the White & Black Volta Rivers.

These drain from the Volta Basin, reworking pre-rift clastic sediments.

This leads to mineralogical maturity and an absence of pore-clogging minerals.

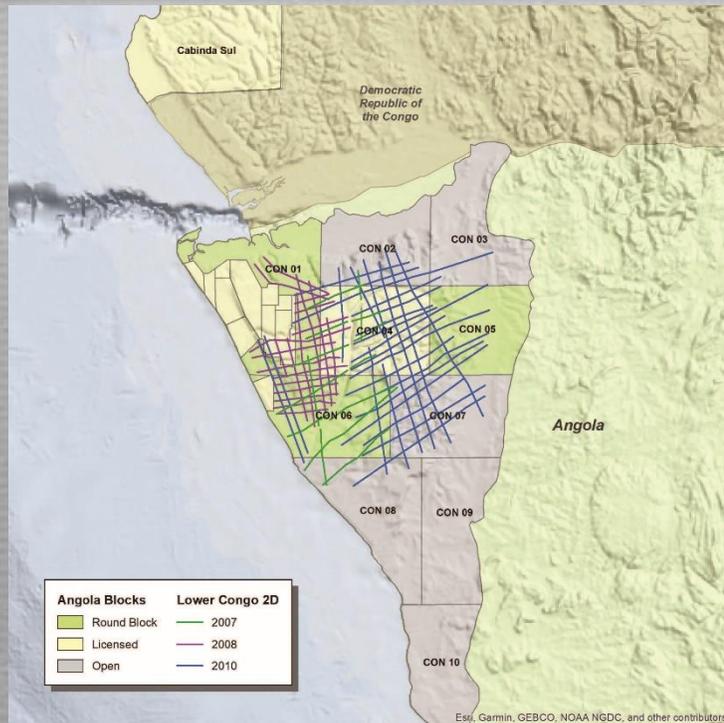
The Saltpond Inversion in the Early Cretaceous diverted the Black Volta River to the Tano Basin where the Jubilee & Mahogany Sands were deposited.

The Keta Basin has the same sand provenance as the Tano Basin.



Modified from C.J. Grant et al, Conjugate Margins Conference, Halifax. 2018

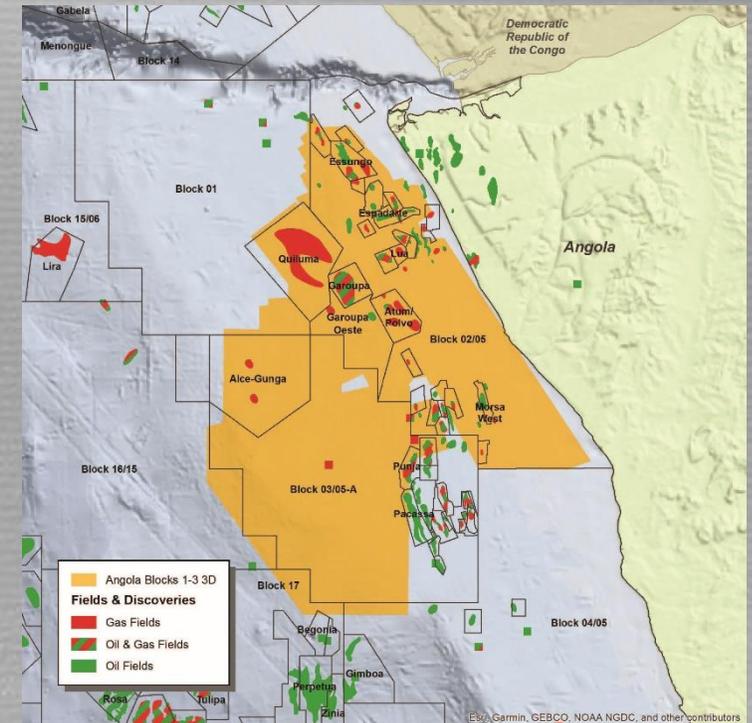
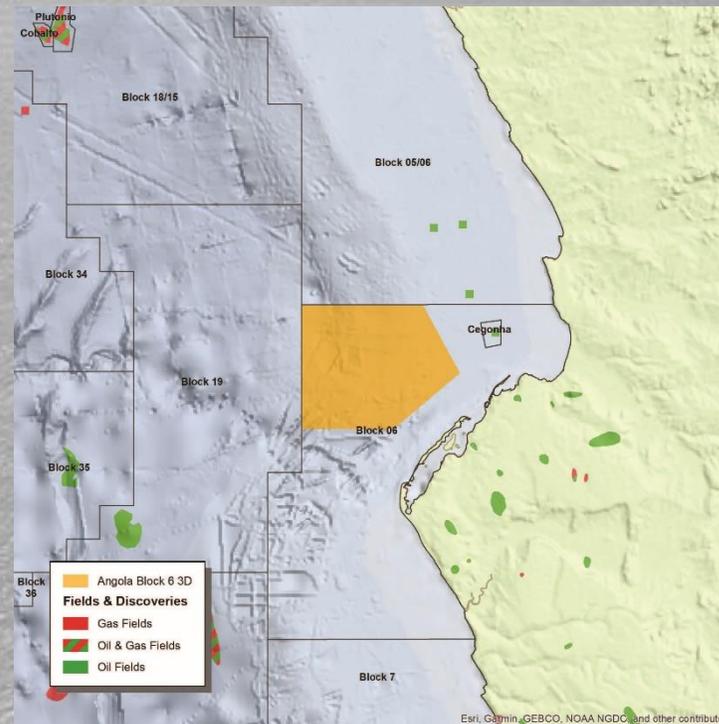
Angola 23 – Data Availability



Block 6, offshore Lower Congo basin

1200 sq. km 2007 3D survey

Full offset and angle stack time deliverables



Onshore Lower Congo basin

1,700 km 2D legacy data

Covers area including blocks awarded in recent LR commitments and previous commercial discoveries

Blocks 1,2,3 full reprocessing

8 legacy surveys totalling over 10,000 sq. km

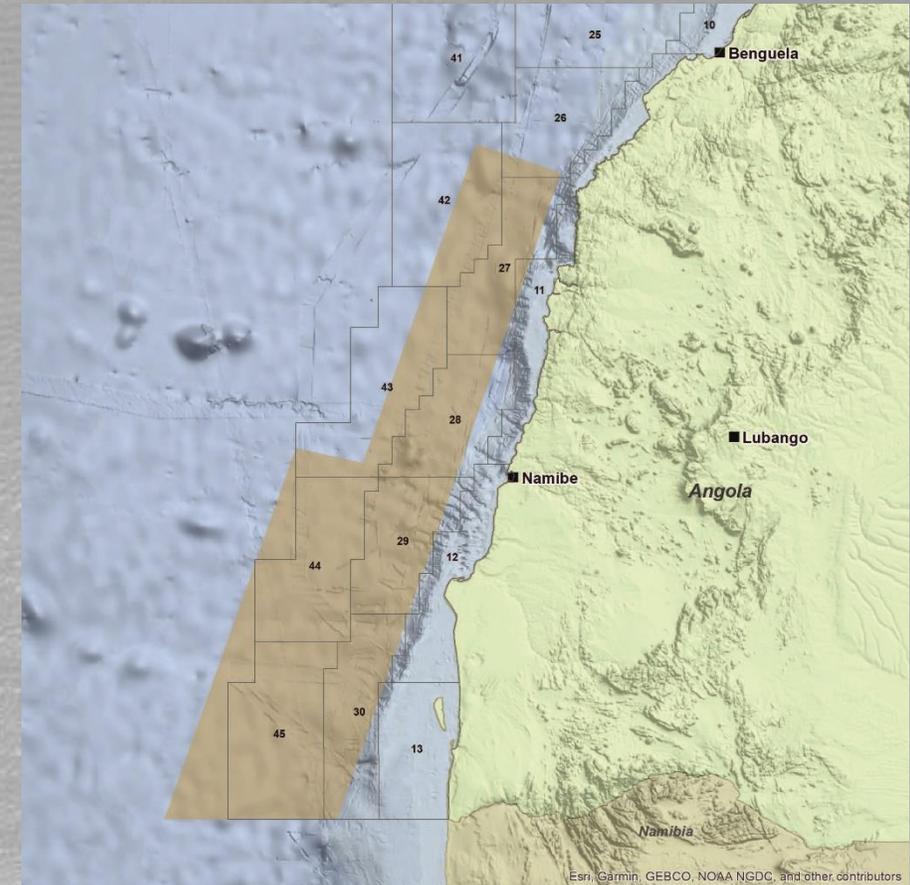
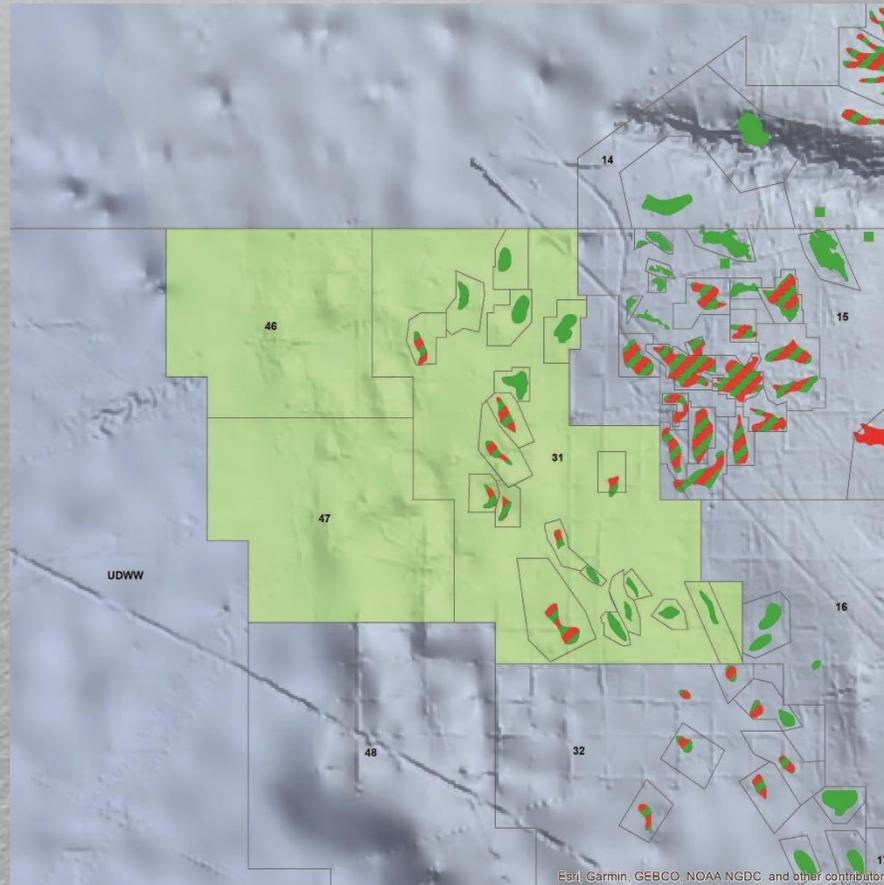
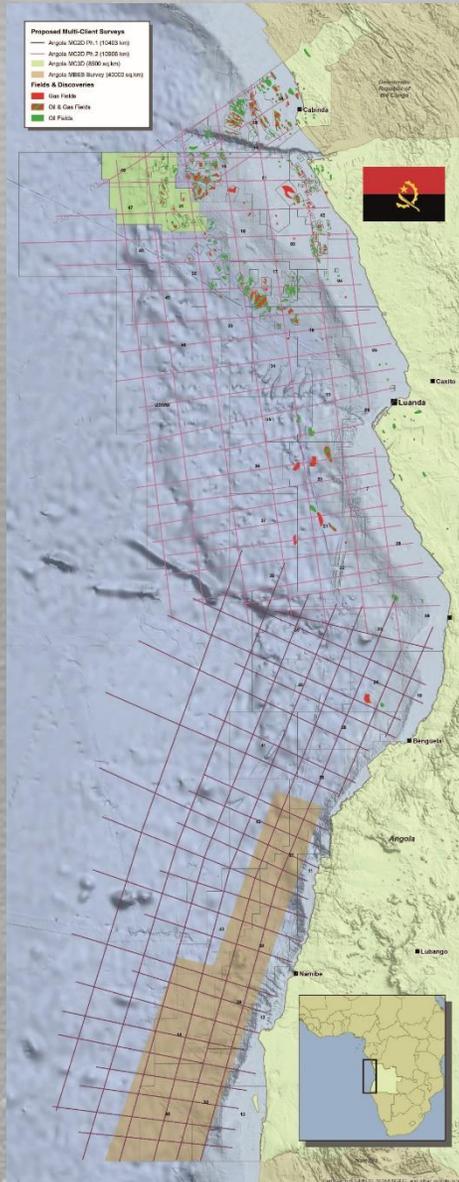
Start date Q2 2023

Full suite deliverables Q2 2024

Angola 23 – New Data Acquisition

4 new acquisition proposals offshore Angola

- New phased 2D survey for source rock distribution and maturity assessment
- New ultra-long offset 3D acquisition to highlight pre-salt opportunities
- New sparse node 3D acquisition to supplement legacy data reprocessing with FWI
- New Multi-Beam Echo Sounder seep finding survey in Namibe basin



Sierra Leone 23 – New Data Acquisition



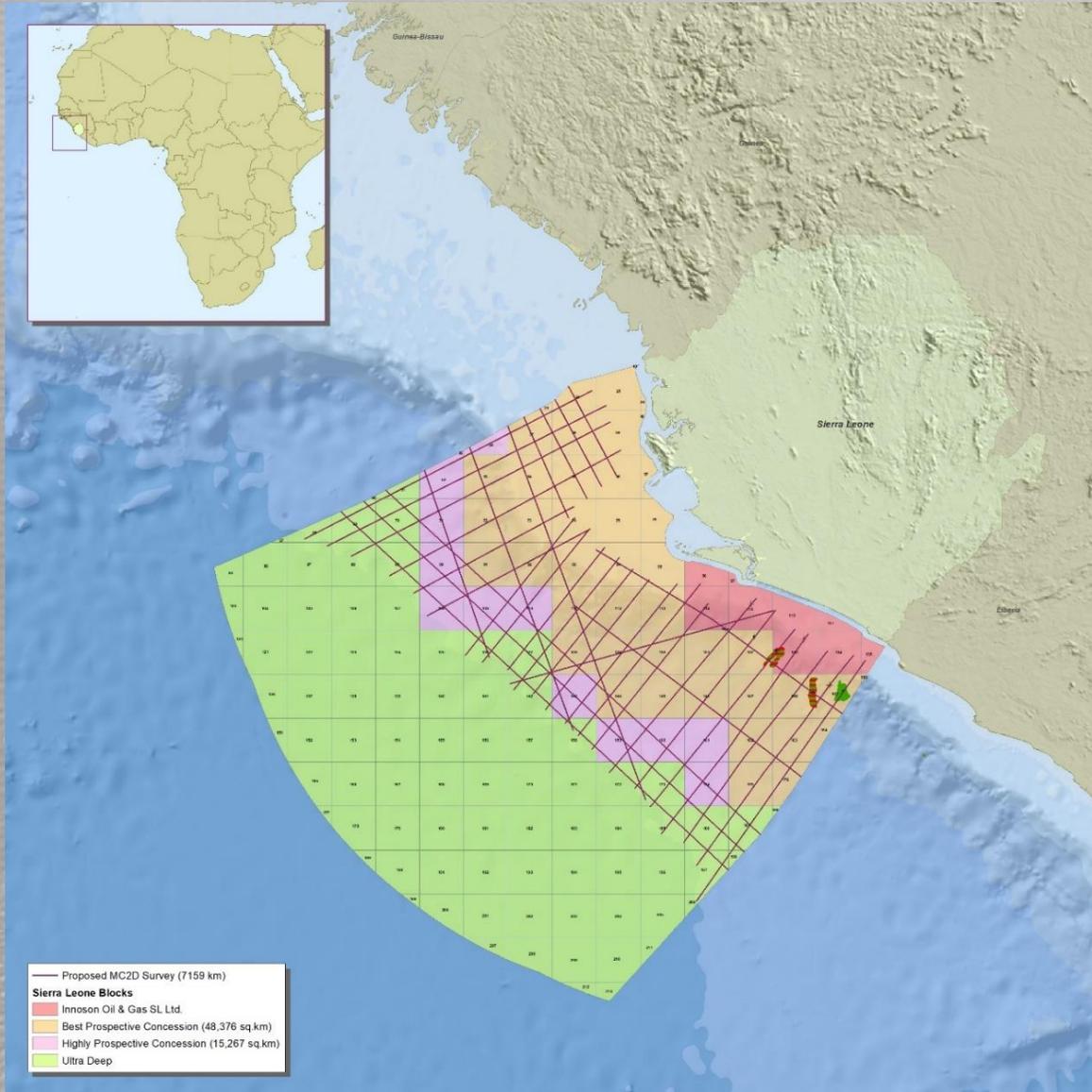
Ongoing 5th Licensing Round extended until September 2023

New survey proposal provides first single complete offshore well tie survey

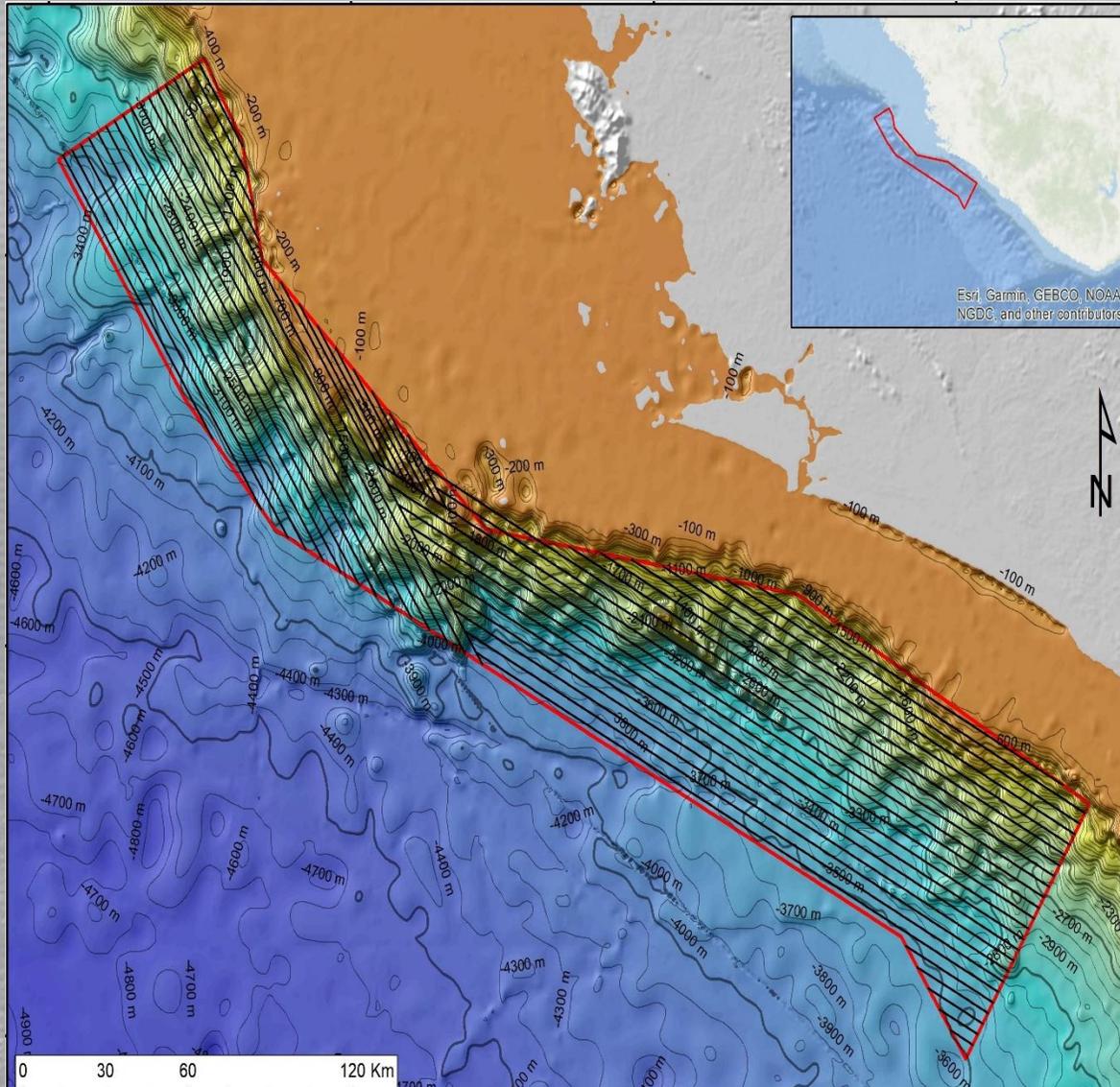
Covers inshore to ultra-deep and the full range of PDSL derived prospective concessions

Top reasons to invest in Sierra Leone's Upstream Oil & Gas Sector:

- Previous exploration and drilling history has been positive, Venus-B1, Jupiter-1, Mercury-1, and Savannah-1X wells.
- Sierra Leone is one of the most competitive African countries in regards to post-tax government share
- Working within Sierra Leone and PDSL is “fast-paced, efficient and transparent”.
- Recent and continued exploration successes in conjugate Guyana and Suriname.



Sierra Leone 23 – New Data Acquisition



New Multi-Beam Echo Sounder survey proposal

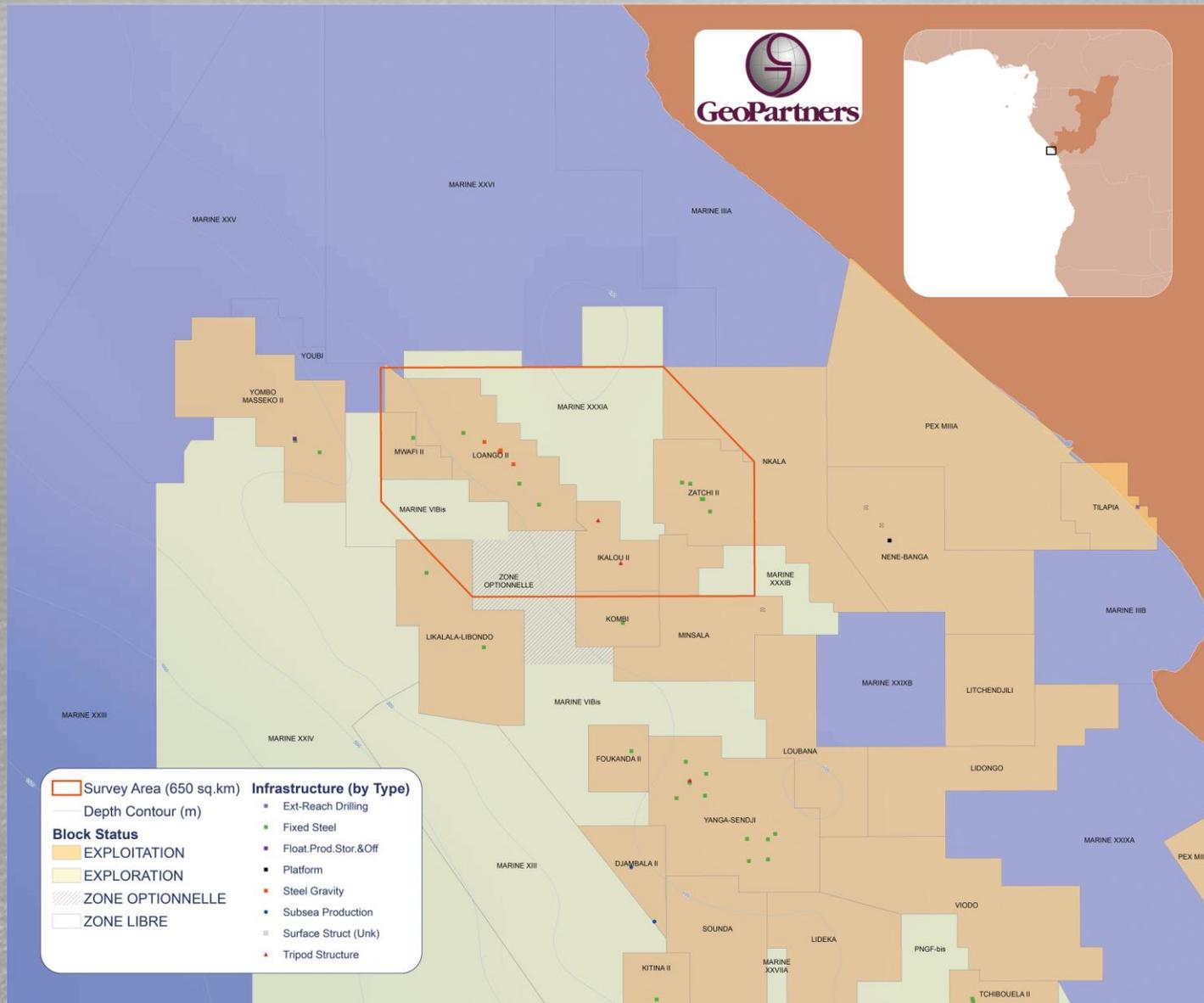
Includes Geotechnical Sampling and Heat Flow measurements

Covers full extent of offshore prospective area from 500 – 3000m WD

Planned to start after completion of environmental exclusion period in May 23

Deliverables include for:
Headspace gas analysis
Total scanning fluorescence
C15+ extract analysis

Congo 23 – Peu Profond 3D Multi-Client Survey



New Multi-Client 3D opportunity
Offshore Congo

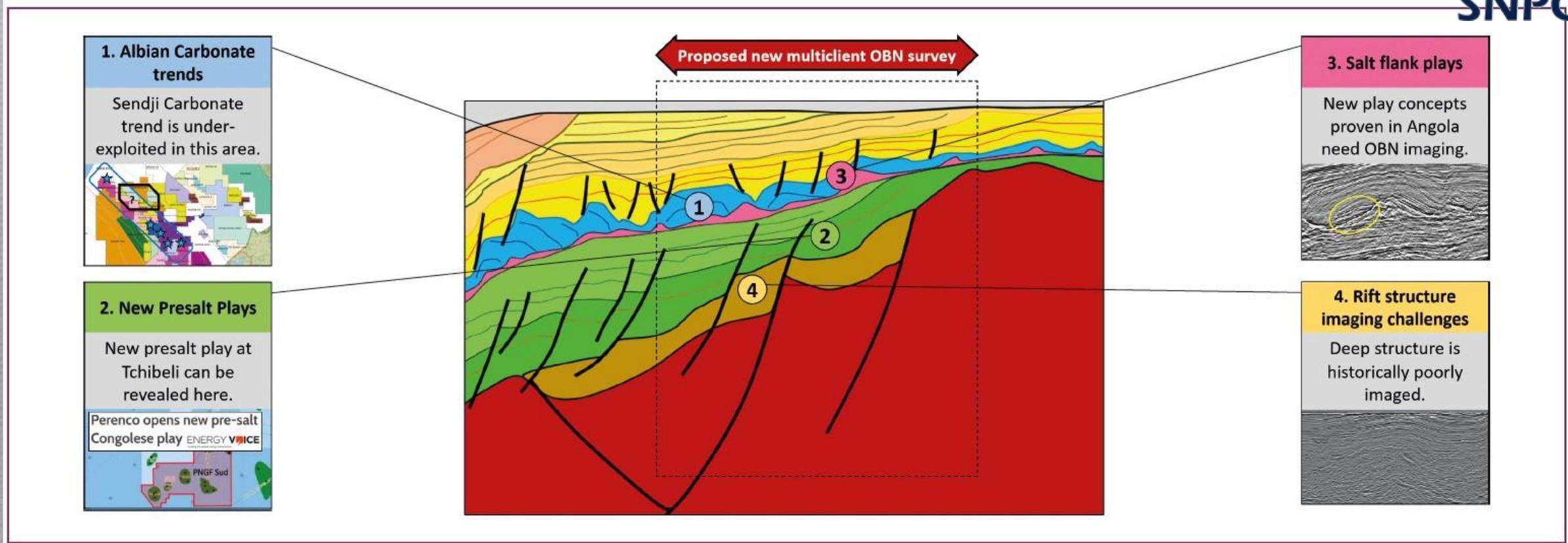
650 sq. km hybrid survey in area of
existing production facilities

SNPC farming out facilities and require
new baseline survey to look at pre-salt
opportunities

Estimated start date Q4 2023

Deliverables to include Time and
Depth migrations

Congo 23 – Peu Profond 3D Multi-Client Survey



4 key reasons why new data is required in the Congo Peu Profond area:

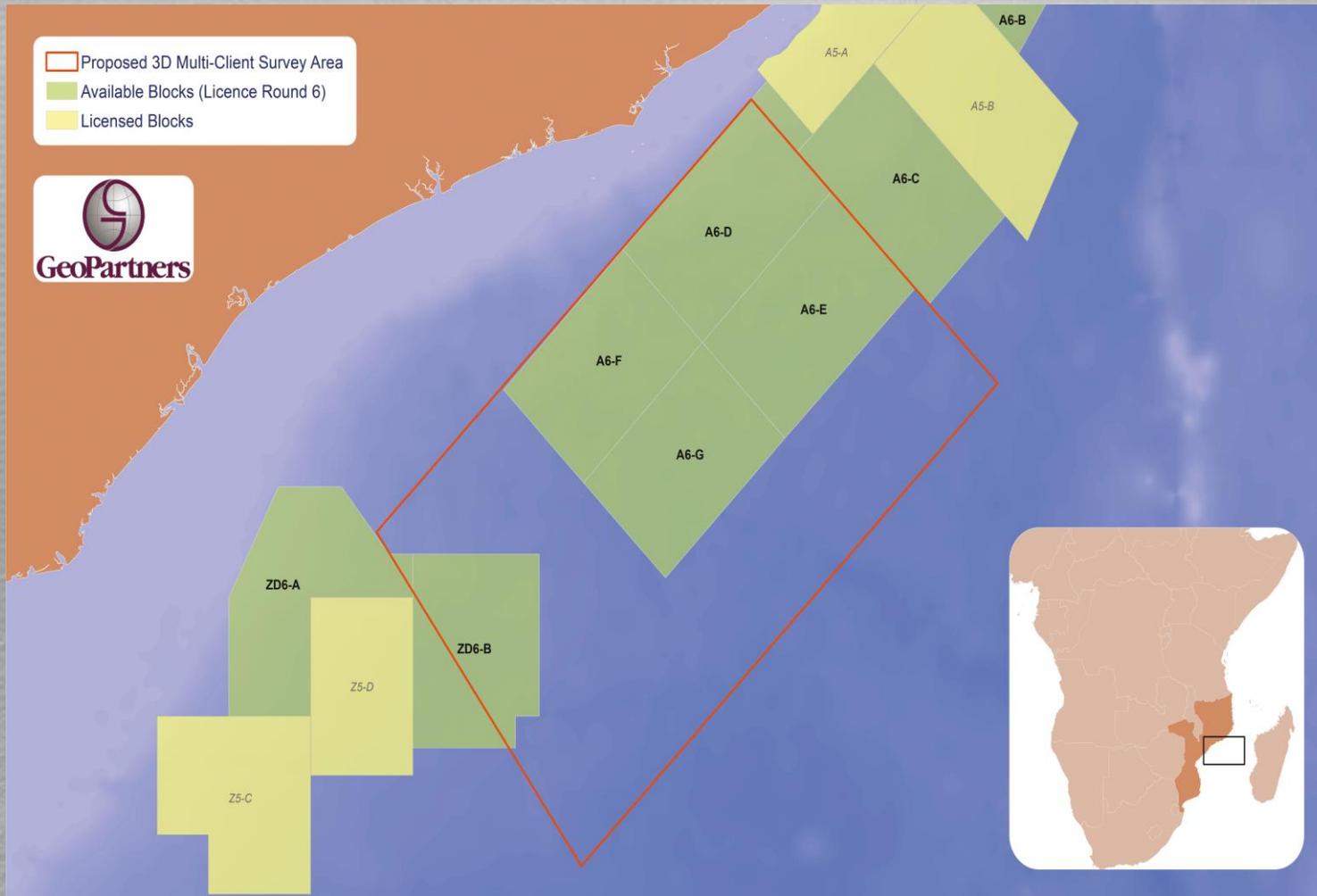
1) Albian Carbonate trends

2) New Pre-salt plays (Tchibeli)

3) Salt flank plays

4) Rift structure imaging challenges

Mozambique 23 - Angoche 3D Multi-Client Survey



New Multi-Client 3D opportunity in the Angoche basin

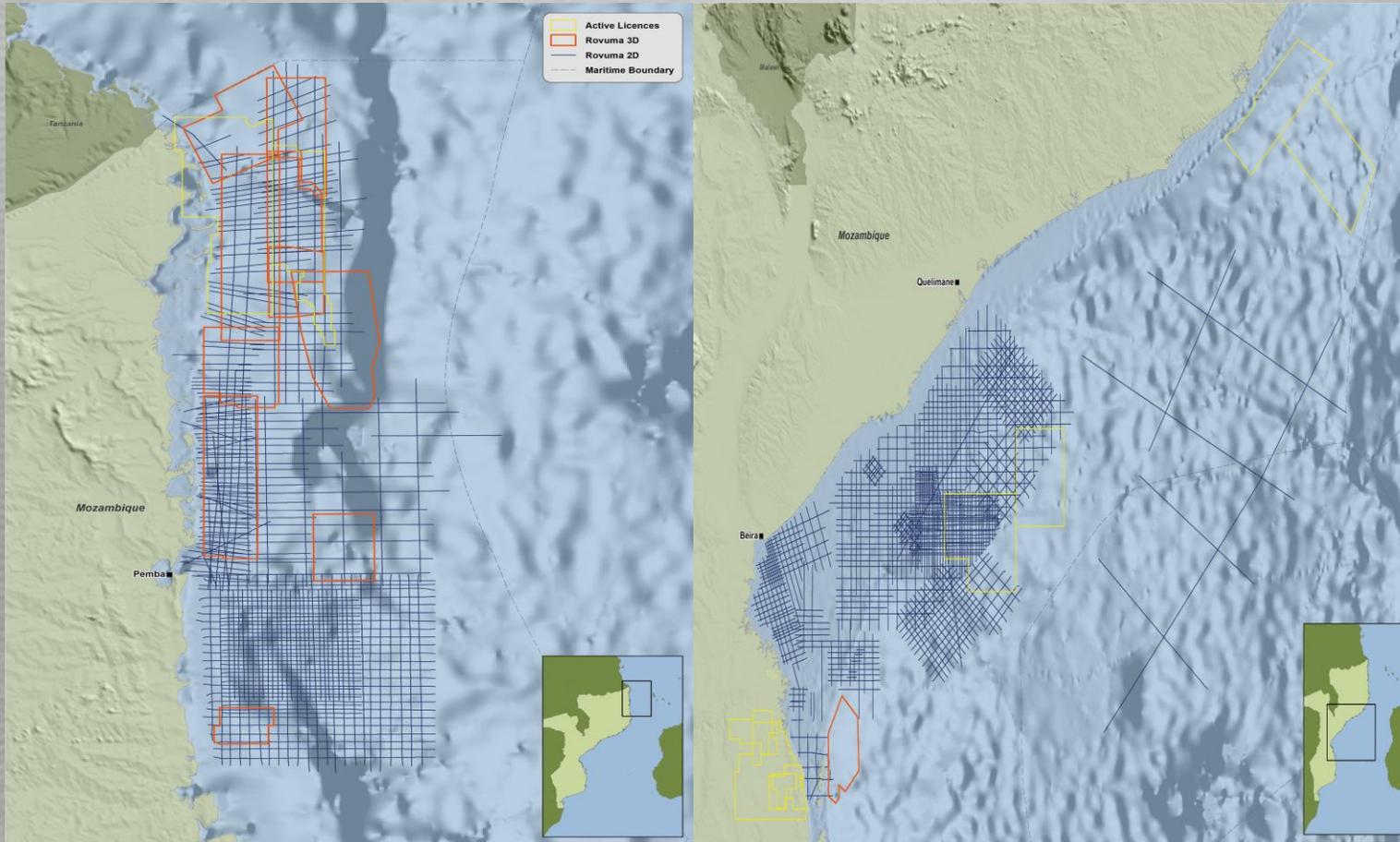
Up to 20,000 sq. km 3D on blocks awarded post 6LR

Estimated start date Q4 2023

Duration 9 months

Deliverables to include Time and Depth migrations

Mozambique Offshore Legacy Brokerage



Legacy data brokerage offshore

42,000 km 2D

23,000 km 3D

Covers all 16 blocks offered in the 6th Licence Round

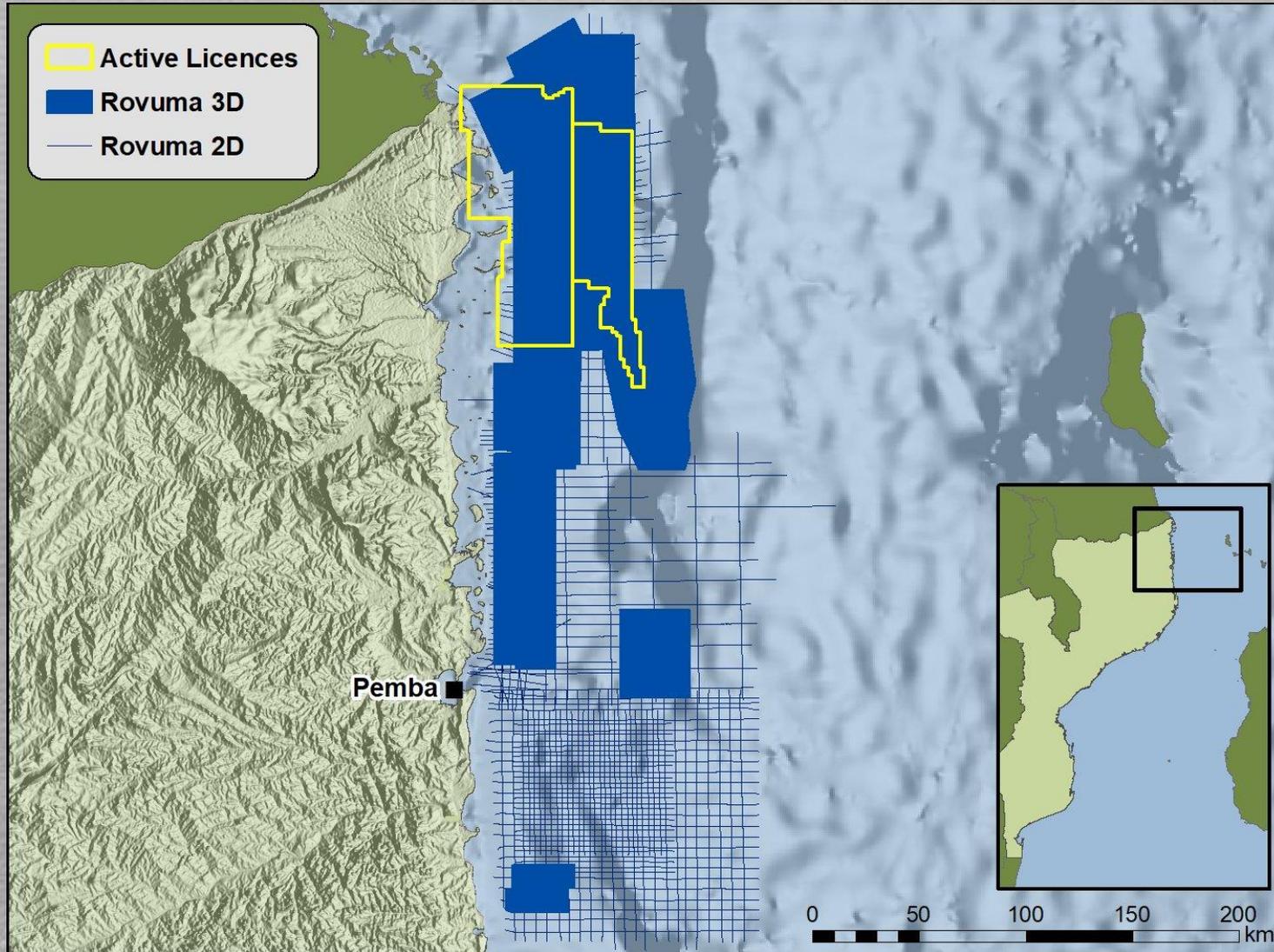
Regional perspective

Merging and Reconditioning project
RovumaMerge 21

Blocks not awarded in 6th Licence Round available for direct negotiation

Information: www.inp-legacy-seismic-mz.com

Mozambique RovumaMerge 21



Reconditioning project covering the entire Rovuma Basin

Provides data on all the blocks available in the 6th Licence Round

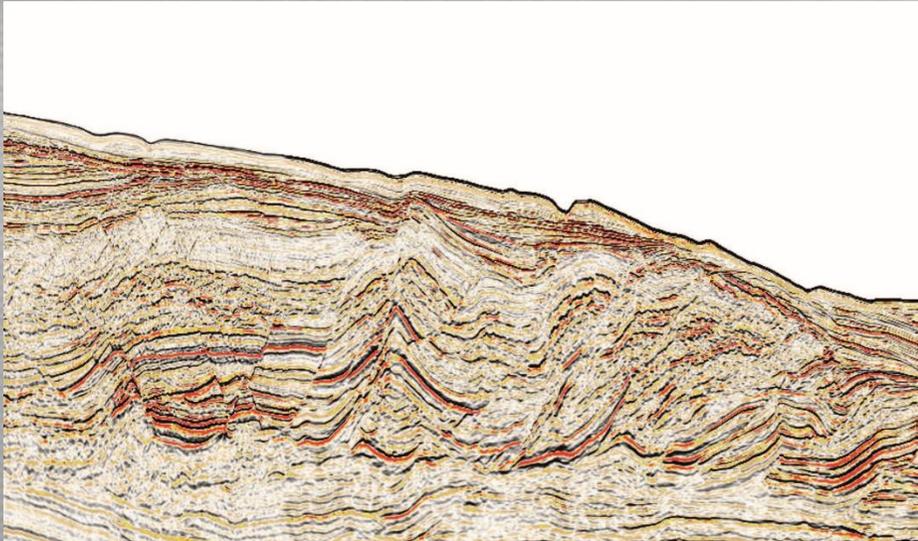
Total area re-gridded:

20,000 sq. km 3D

16,000 km 2D

Deliverables full offset and angle stacks

Mozambique RovumaMerge 21

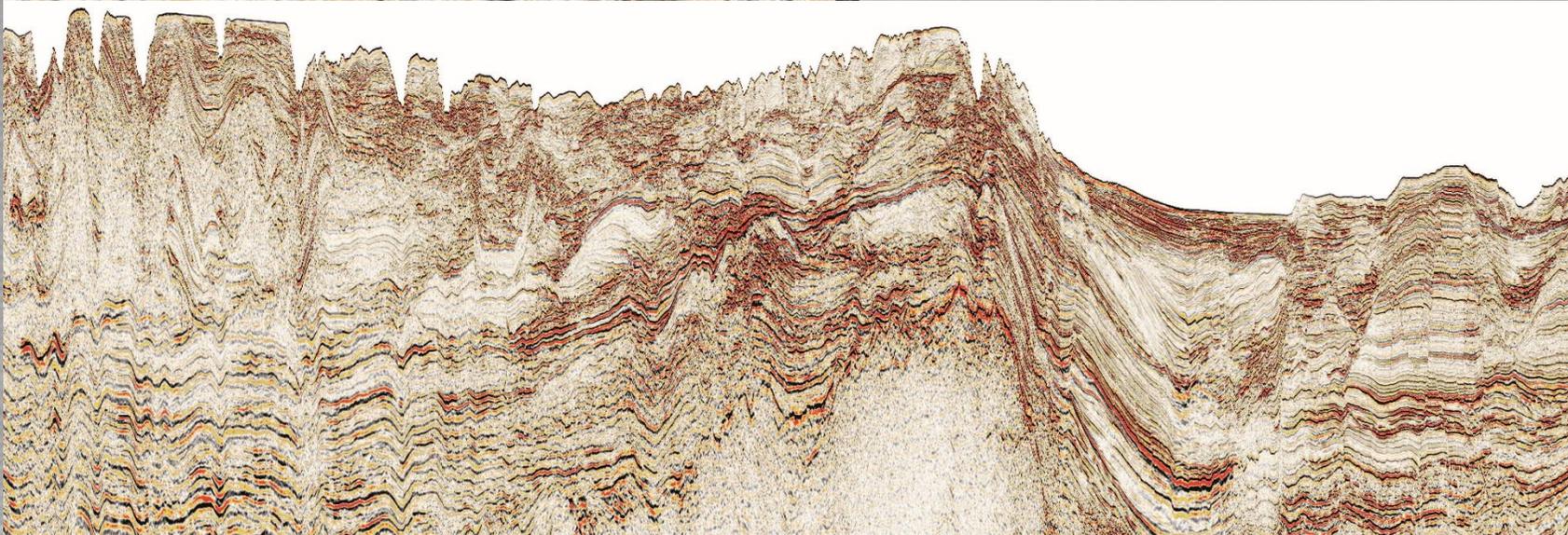


Final images show benefits of reconditioning

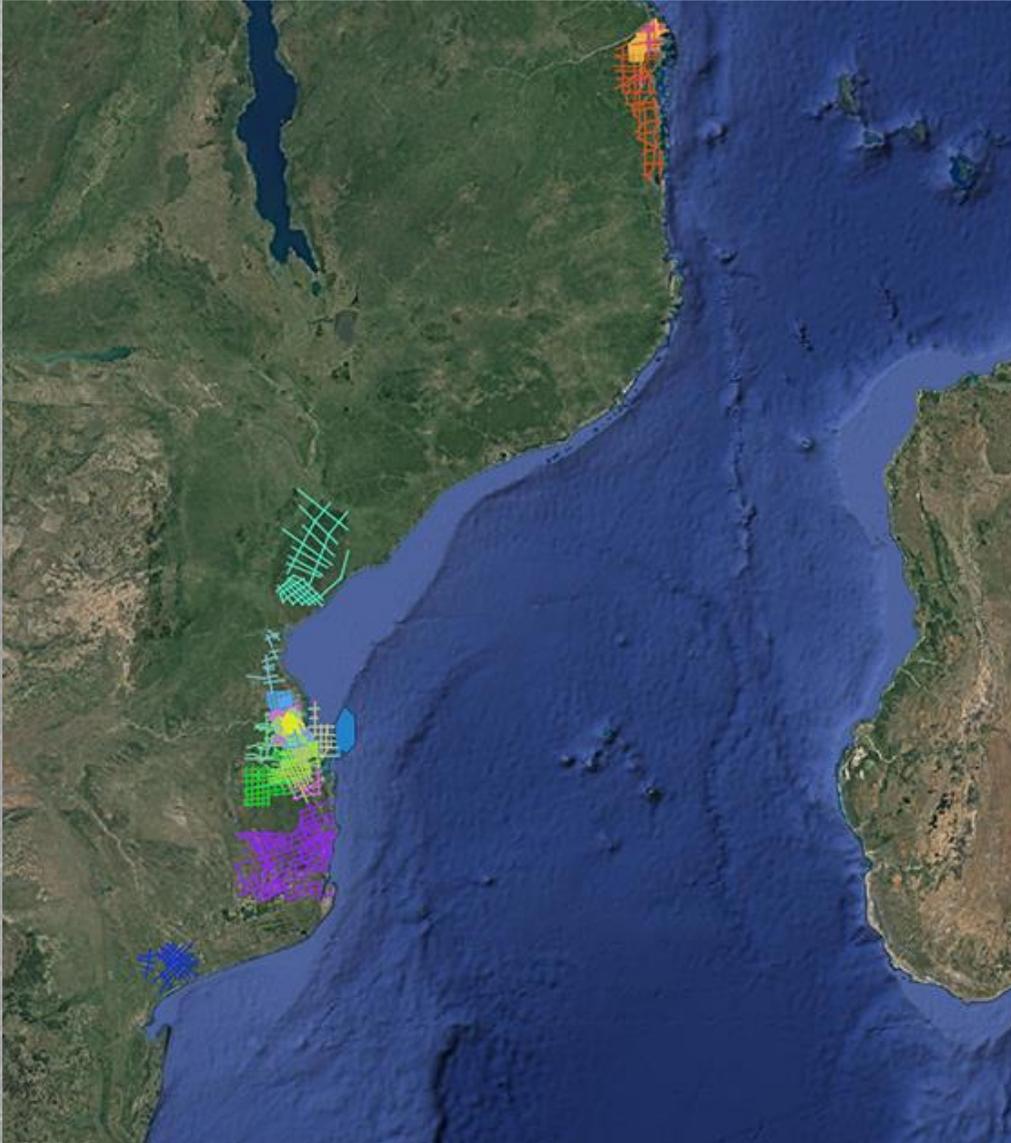
Single unique interpretable volume

Excellent opportunity for investment in basin of imminent production

Additional surveys can be added as required



Mozambique Onshore Legacy Brokerage



Legacy data brokerage onshore

19,000 km 2D

Covers:

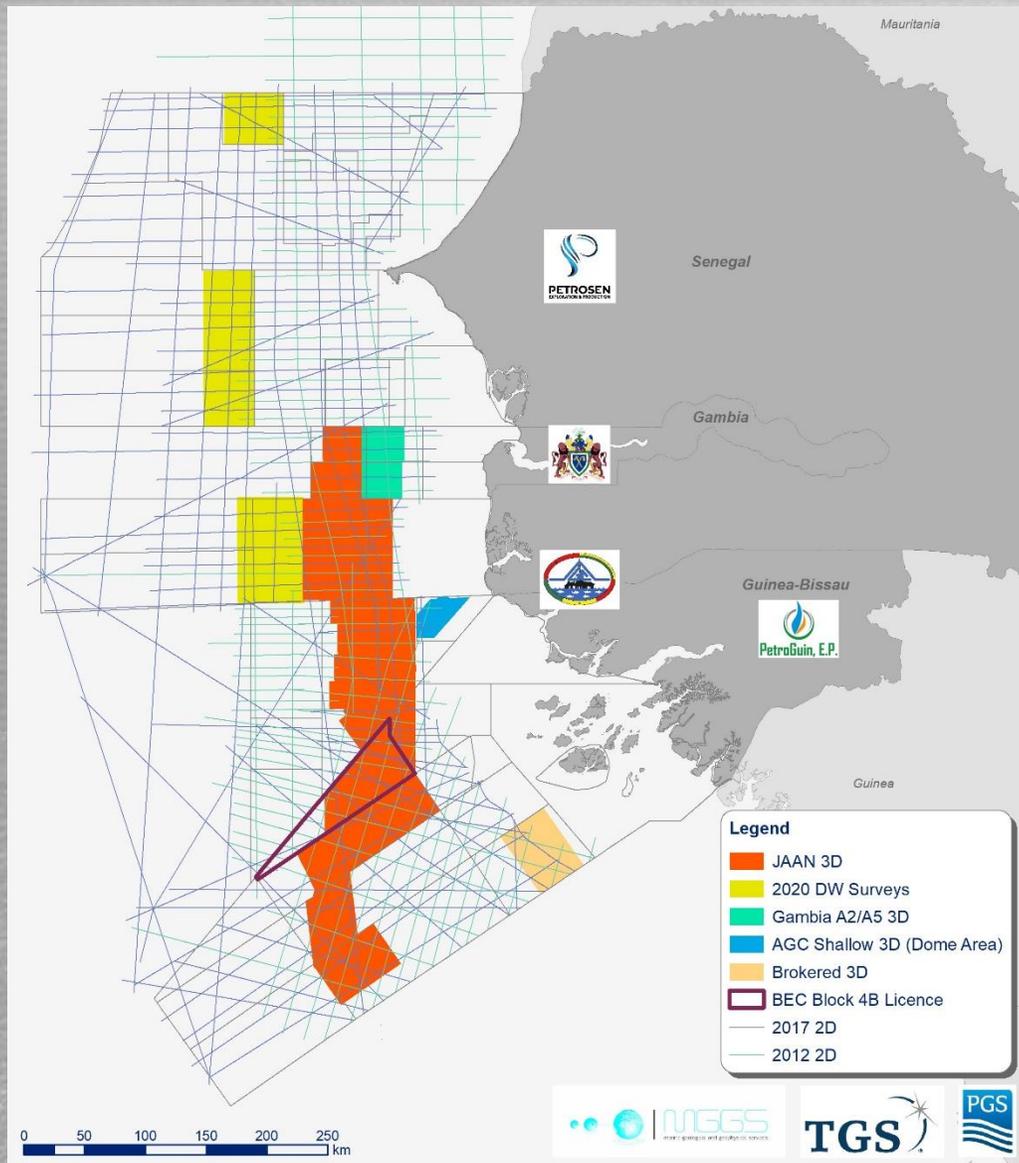
Rovuma Basin

Limpopo Basin (Pande and Temane producing assets)

Regional perspective

Blocks previously not awarded in Licence Rounds available for direct negotiation

MSGBC BASIN Current Activities



Access to the largest database of new and legacy seismic in the wider basin, some 52,000 km 2D and 48,000 sq. km of 3D seismic

Ongoing support for government activities and promotion of cross border cooperation and data sharing

Ongoing TGS/GP/PGS partnership to drive forward exploration on the region though new data acquisition

Current activities:

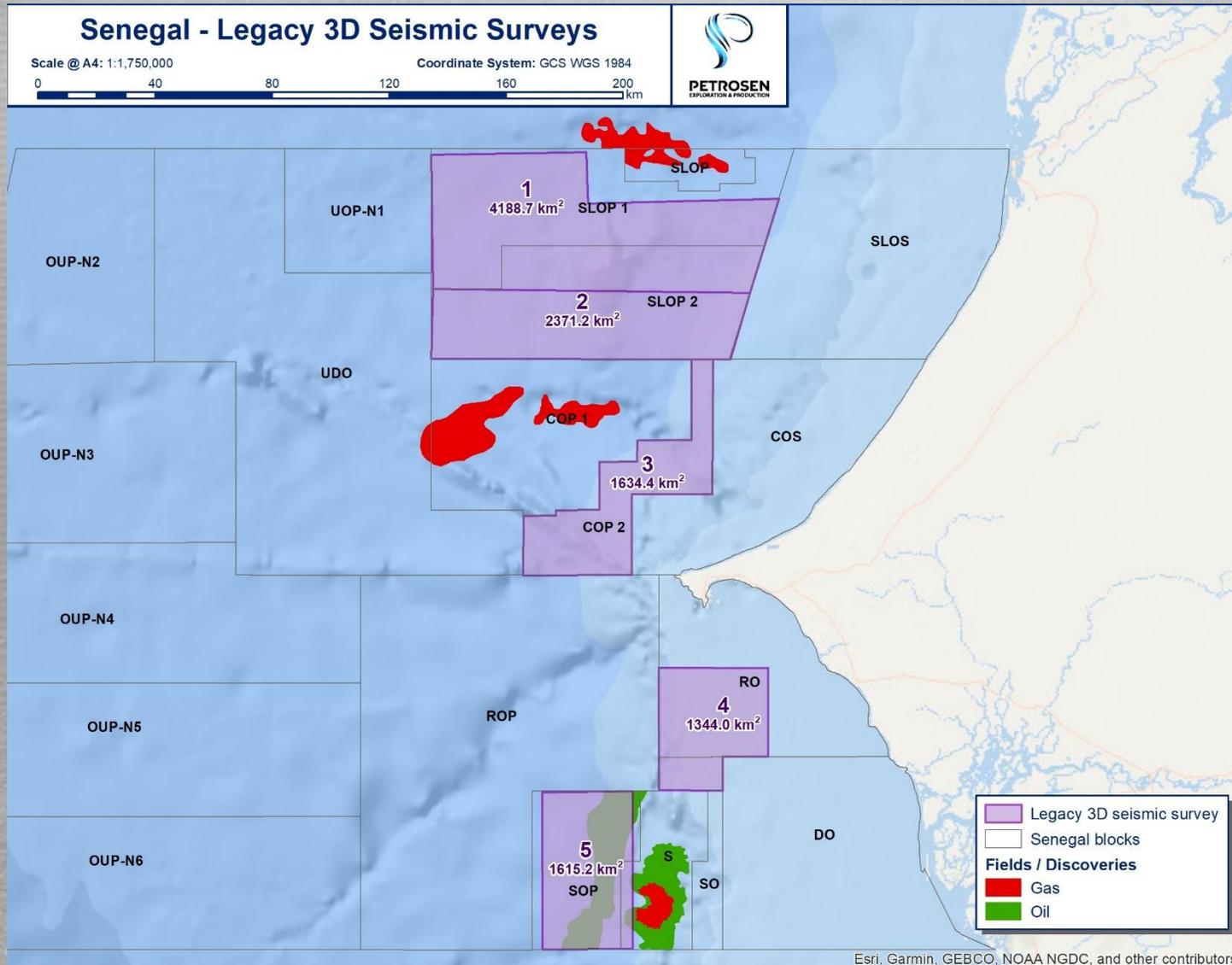
Senegal – support Petrosen post 2020 licence round and promotion of acquired DW MC3D and legacy 3D surveys and negotiable fiscal terms

Gambia – new survey planning

AGC – promotion of inshore shallow water Dome Flore and Gea block

Guinea Bissau – continuing Block 4B promotion

Projects 2023 – Senegal Legacy 3D brokerage



Over 12,000 sq. km of legacy 3D data now available

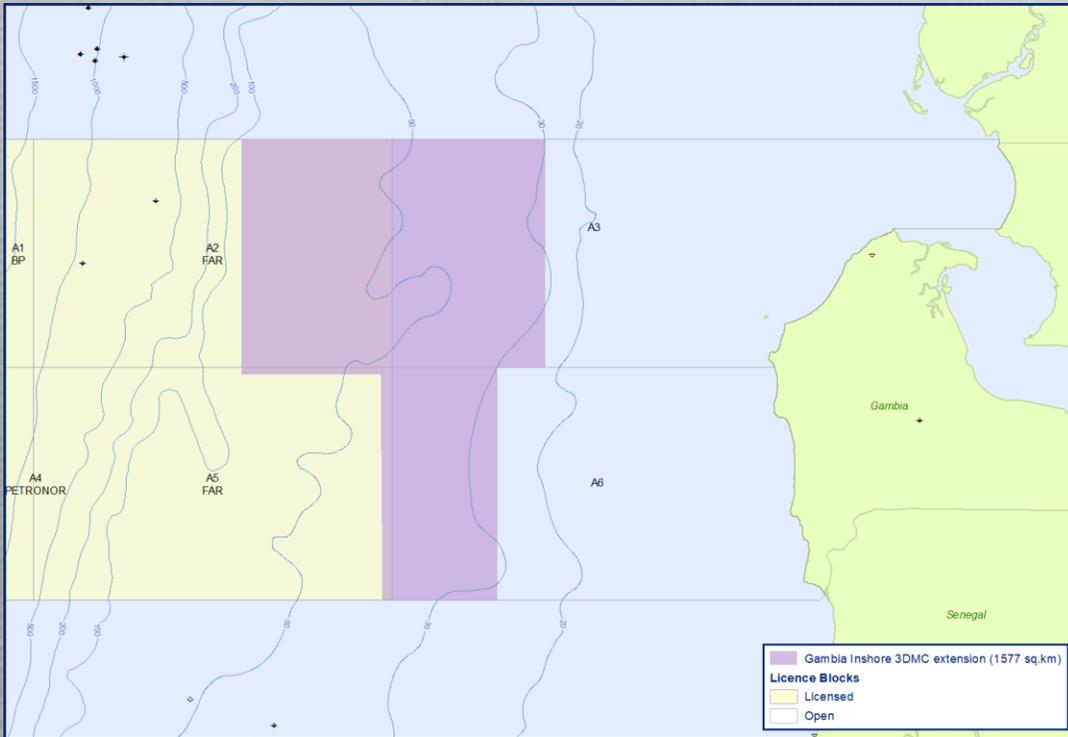
Datasets available contiguous to the ongoing Sangomar development

Datasets available contiguous to the ongoing Greater Tortue Ahmeyim development project

Legacy modern PSTM and PSDM datasets available

Projects 2023/24 – Gambia 3D

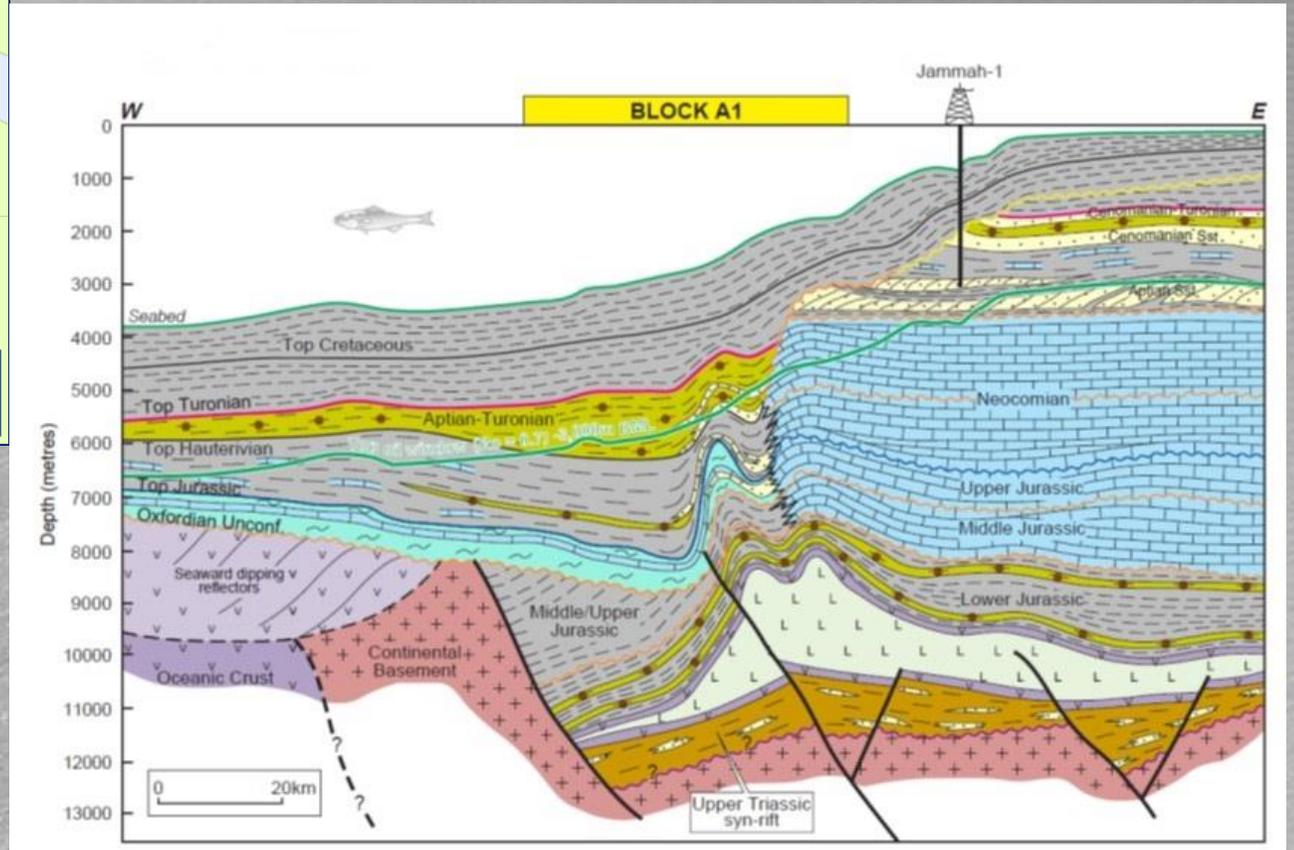
Current activities include support for Ministry data management reorganisation and new acquisition planning



New survey proposal

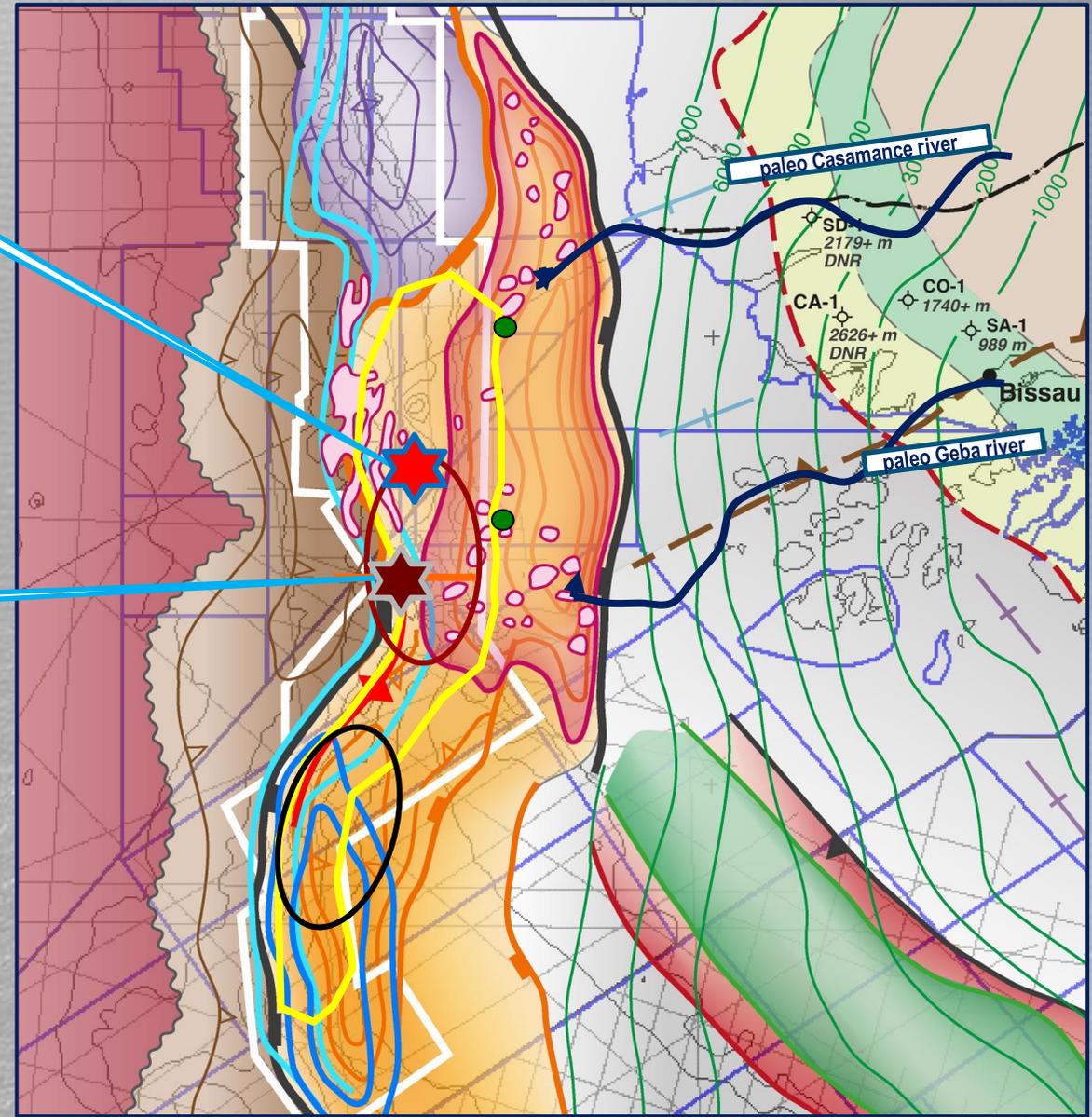
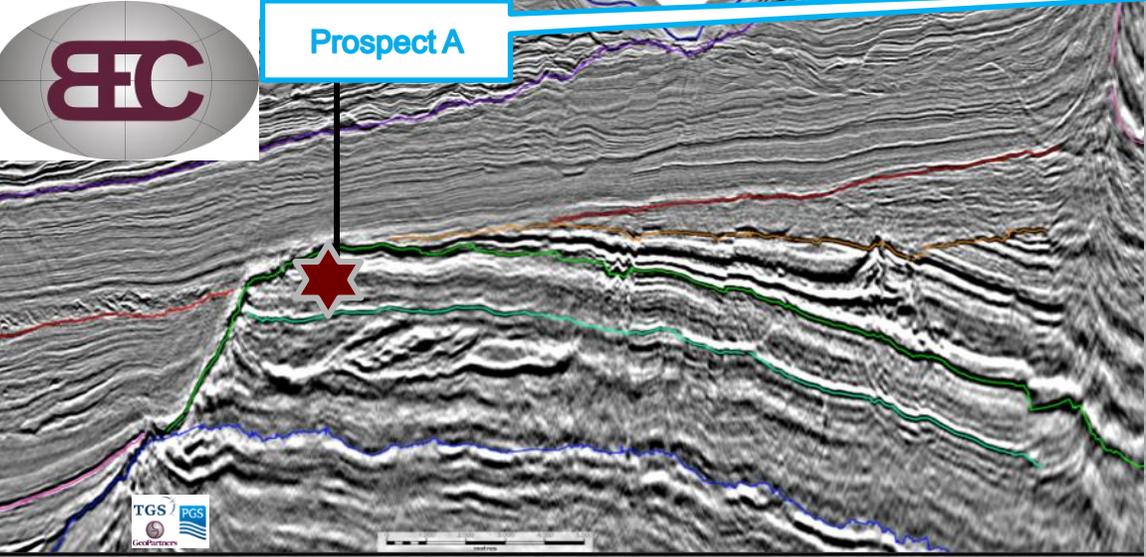
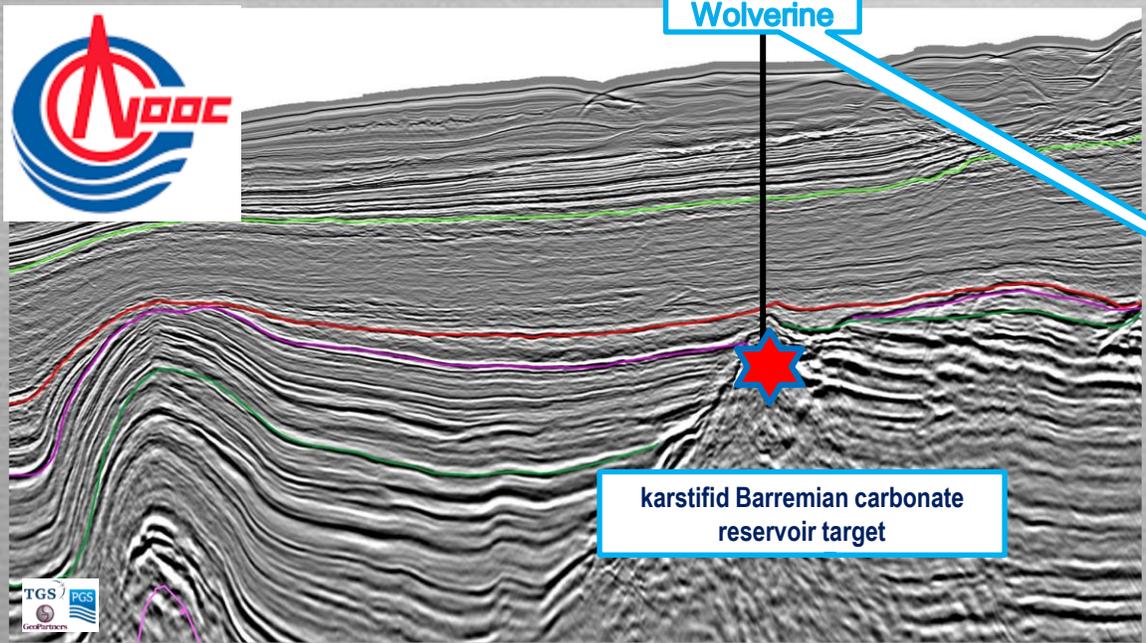
1,600 sq. km in shallow water

Final survey outline subject to legacy data reprocessing about to commence





Block 4B and drill ready analogues





GeoPartners