

Opportunity Somalia
*Block 131: The
Leopard
Prospect*

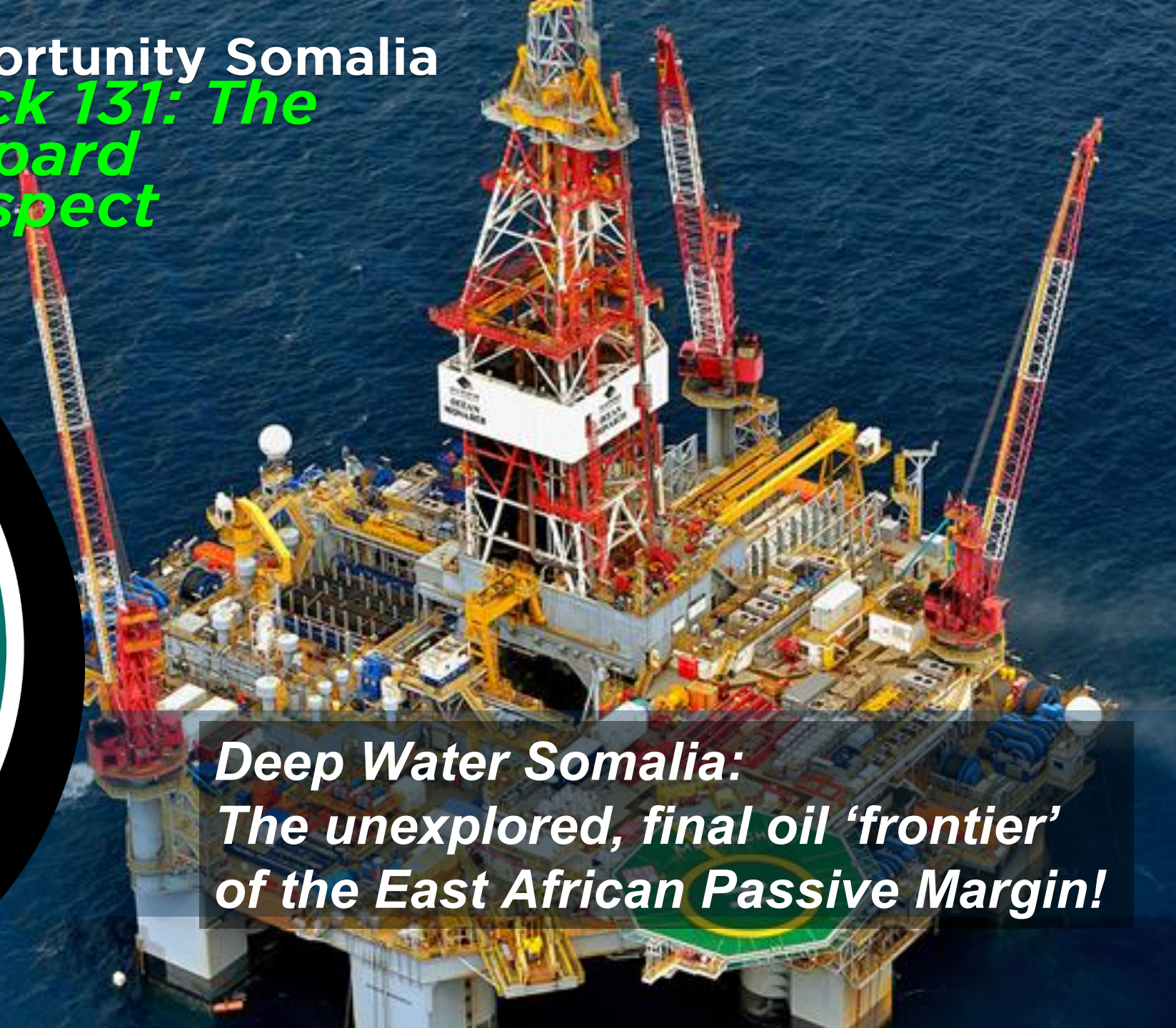


LIBERTY
PETROLEUM CORPORATION

Somalia Affiliate

PETROQUEST
AFRICA - 1

07th May 2026



*Deep Water Somalia:
The unexplored, final oil 'frontier'
of the East African Passive Margin!*

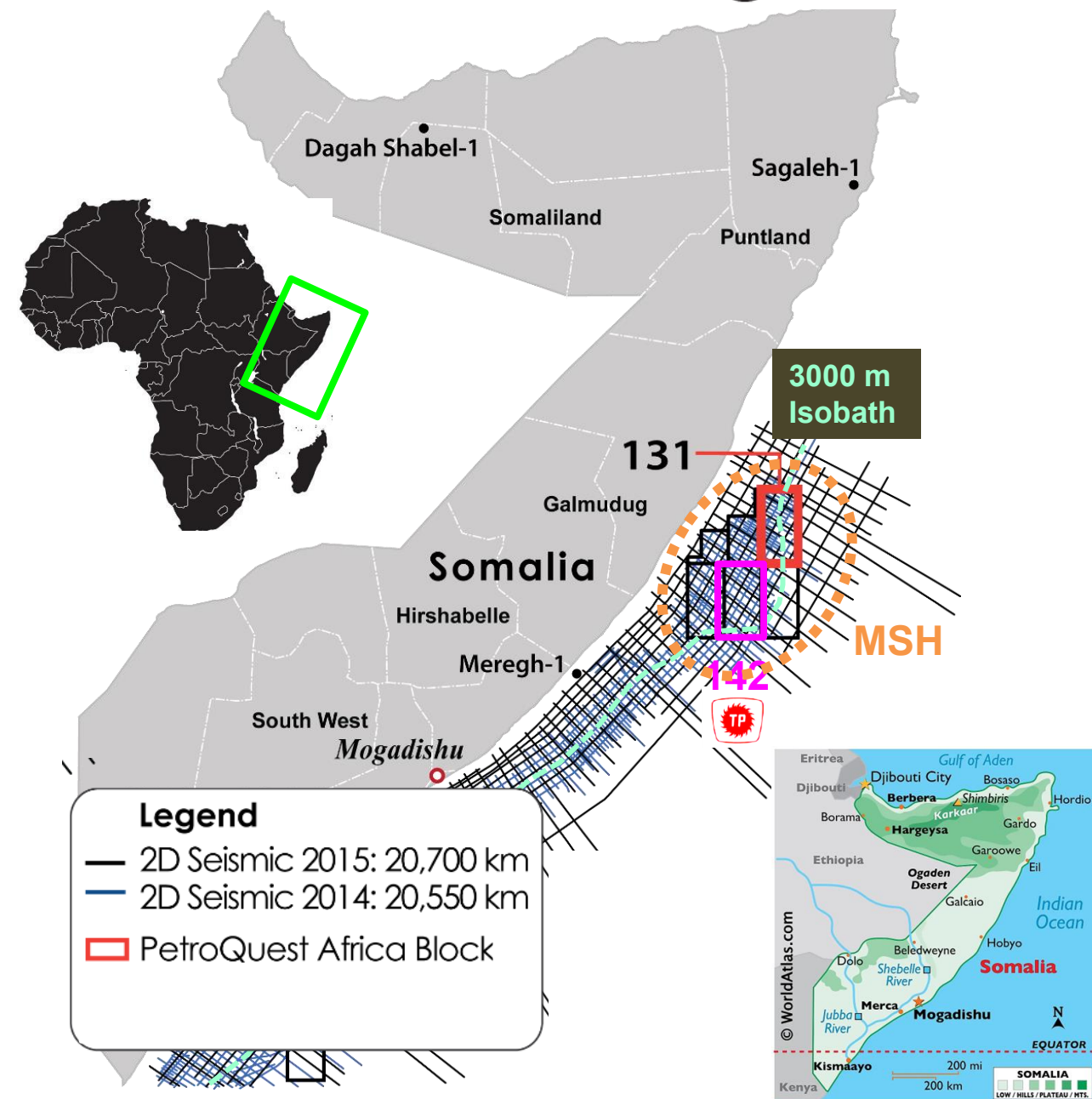
A Novel Oil Prone Model for the Offshore Somali Basin

And it's impact on the Leopard Prospect



Block 131 Mid Somalia High (MSH)

- The Leopard Prospect is located in block 131 Offshore Somalia within a structural terrain known as the Mid Somalia High (MSH)
- PetroQuest Africa 1 (PQA1) signed a PSA for Block 131 07th of March 2024.
- In 2024 we completed a detailed source rock and oil charge study across East Africa and in particular the Somali Basin, presenting a novel oil prone model for the Basin at IMAGE 2024 in Houston.
- In 2025 we designed, planned and costed a 3D survey with PGS/TGS over our Leopard Prospect for mobilisation in Q4 2026.

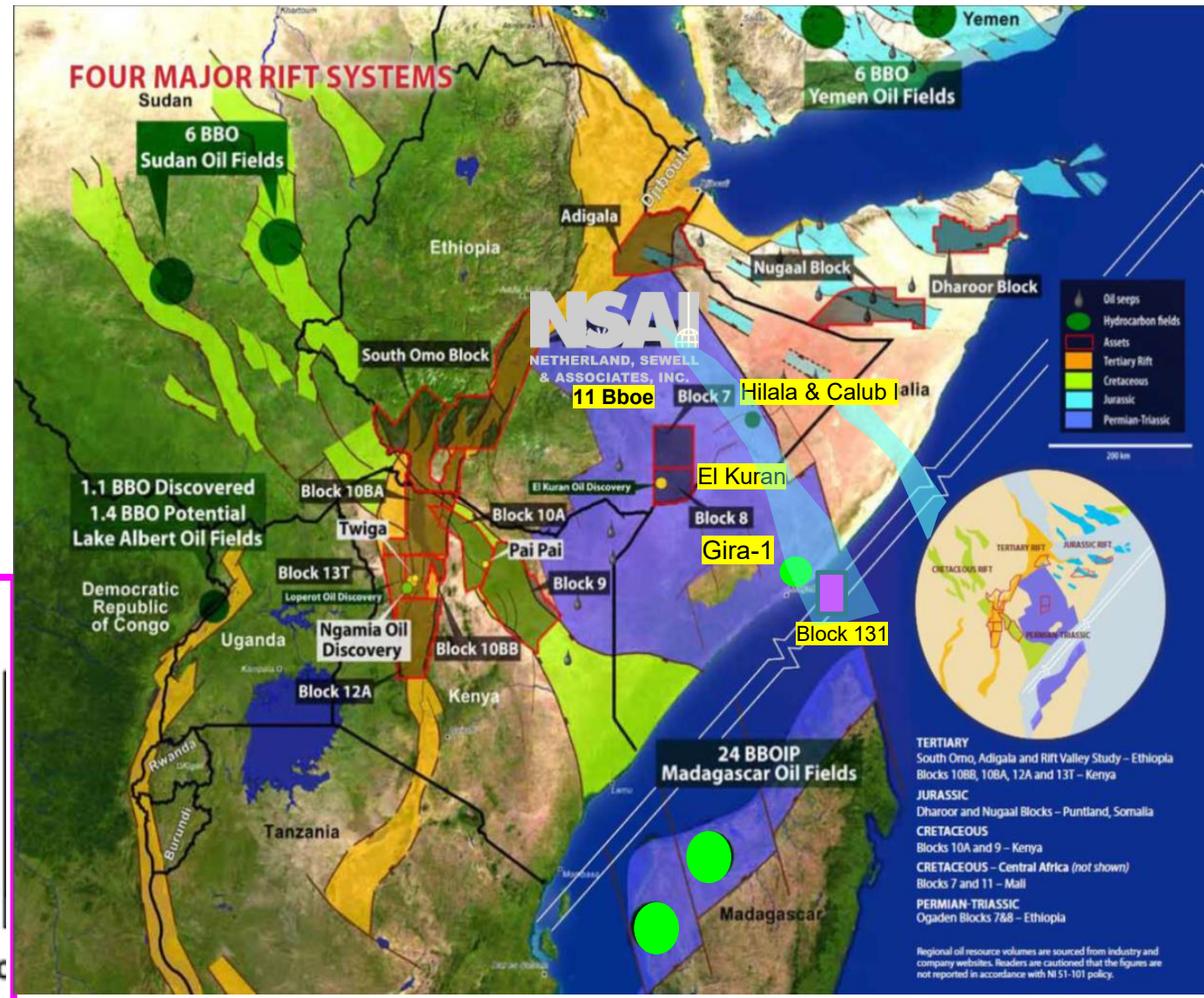
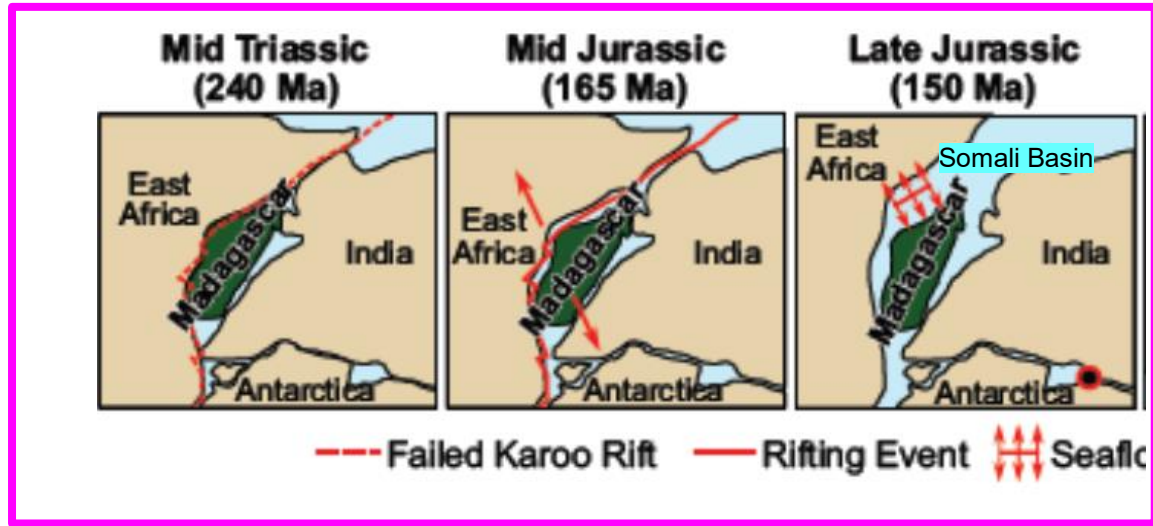


Block 131: Regional Setting & The Somali Basin (SB)

The Oil Story is Driven by the Evolution of the Somali Basin

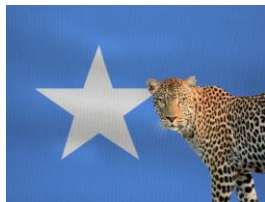
- 131 lies within a failed rift arm that extends NW into the Ogaden, paralleling the Yemen Rift Systems
- 131 hydrocarbon habitat is juxtaposed between the Calub GFs and the 24 BBOIP exhumed oil fields of Bemolanga/Tsimiroro onshore Morondava Basin Madagascar.
- 131's oil story is quite simple, being linked to the thermal maturation of pre-rift, syn-rift and post rift oil source rocks
- These source rocks were deposited during the opening of the SB.

Pre-Rift – Syn-Rift – Post-Rift

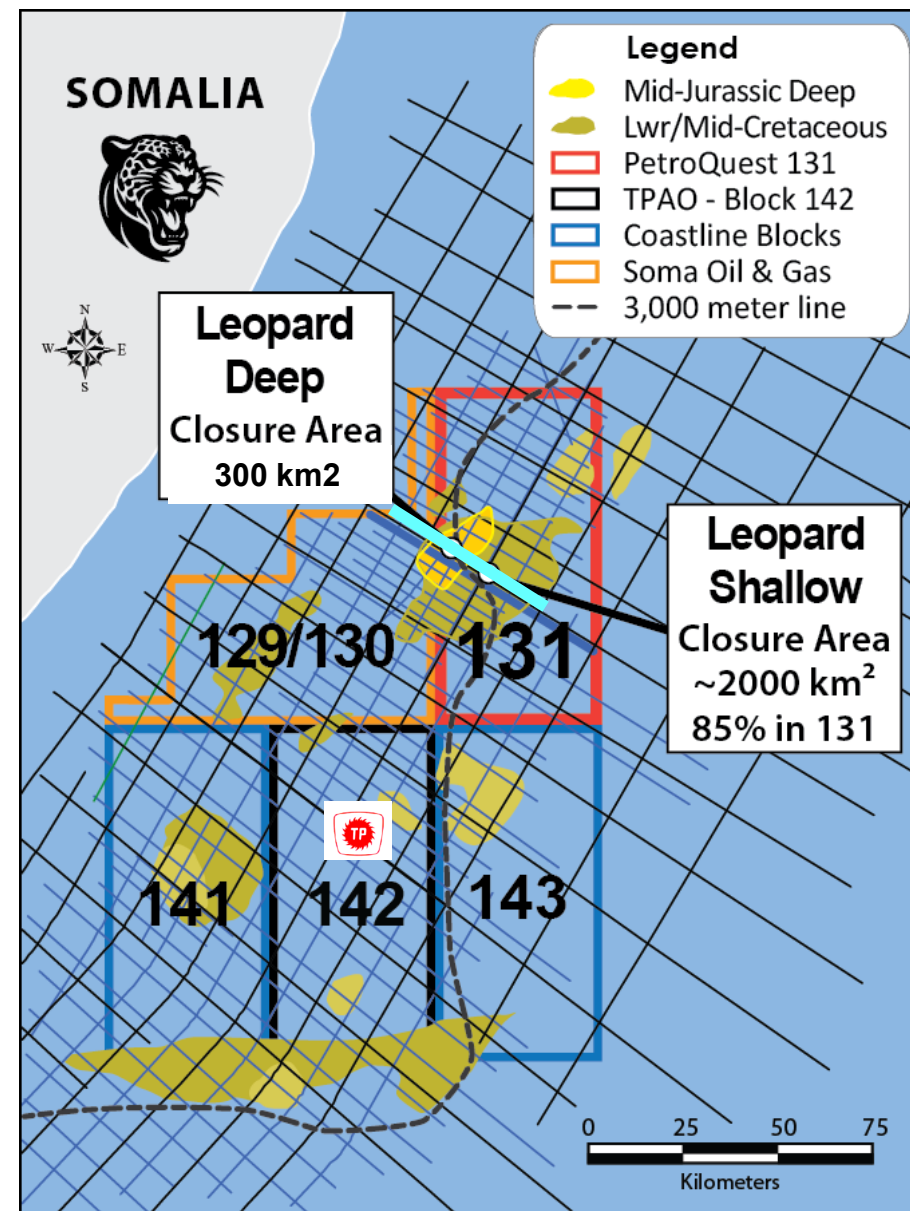
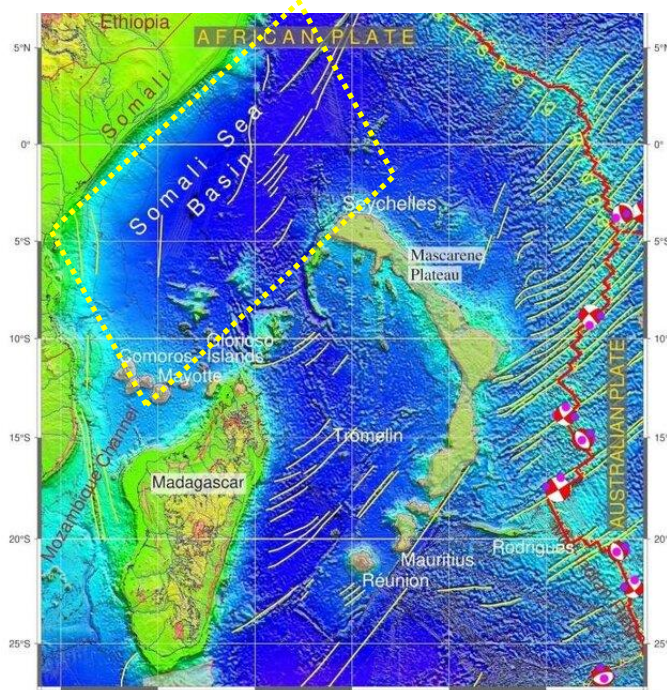
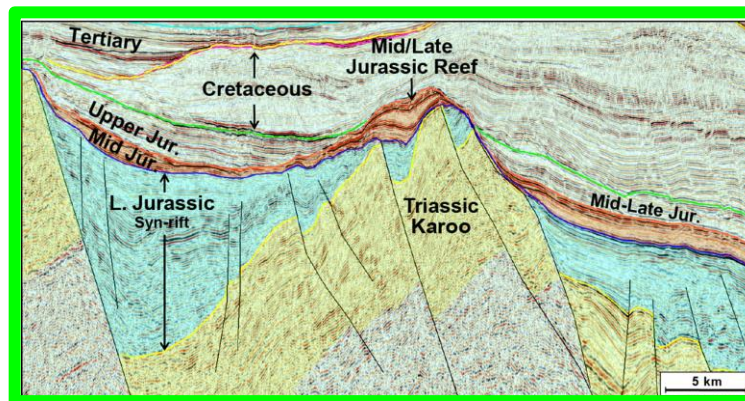


The Leopard Prospect - Mid Somalia High

Located In the Offshore **Obbia Basin**



The Leopard Horst



▶ **Leopard** is the one of the largest mapped independent closures offshore Somalia and is a combination horst and drape structure.

▶ **Leopard** has two key closures; 1) Middle Jurassic (Leopard Deep) & 2) Lower Cretaceous (Leopard Shallow).

▶ **Leopard** is located; within the Obbia Basin which it-self is part of the greater offshore Somali Basin

Stratigraphy: East African Margin (EA)

Two Geological Terrains; Tanzania-Kenya & Somalia

LPC has been active in EA since 2000;

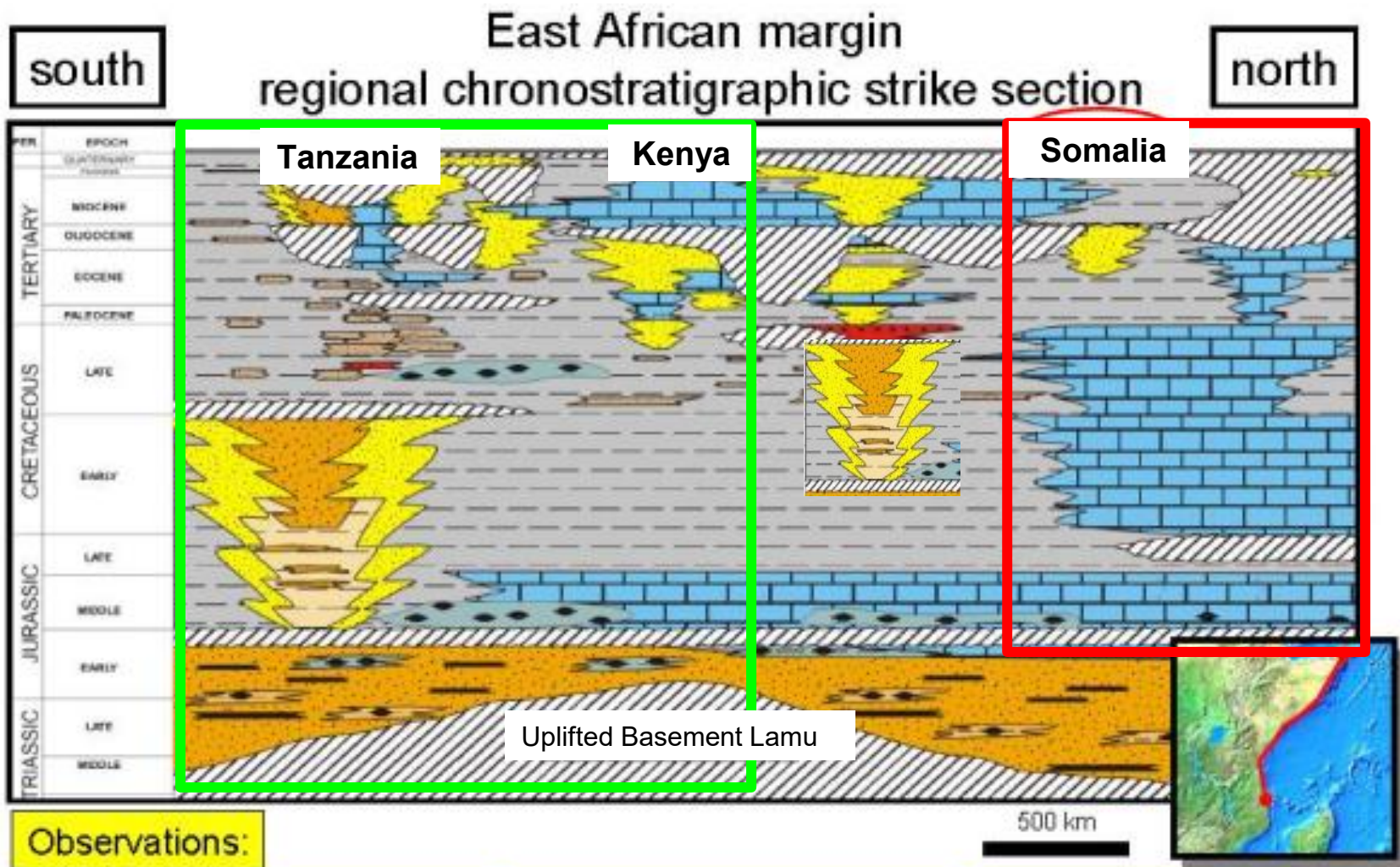
A) Seychelles Project, 2000 -2012 and

B) **Our Somalia Venture 2013-2026.**

To the North; The Petroleum System (PS) is dominated by carbonates with a shoaling of facies interpreted over the Mid Somalia High (MSH).

To the south: PS dominated by clastics of EA affinity.

- 1) Extensive onshore drilling in the Obbia Basin (pre-civil war) demonstrates a Petroleum System with a distinctly Ethiopian/Arabian affinity.
- 2) Based on seismic evidence we expect that Arabian Petroleum System to extend offshore into block 131.
- 3) Block 131 is located on the MSH which is linked to the onshore Obbia Basin through an embayment.



Observations:

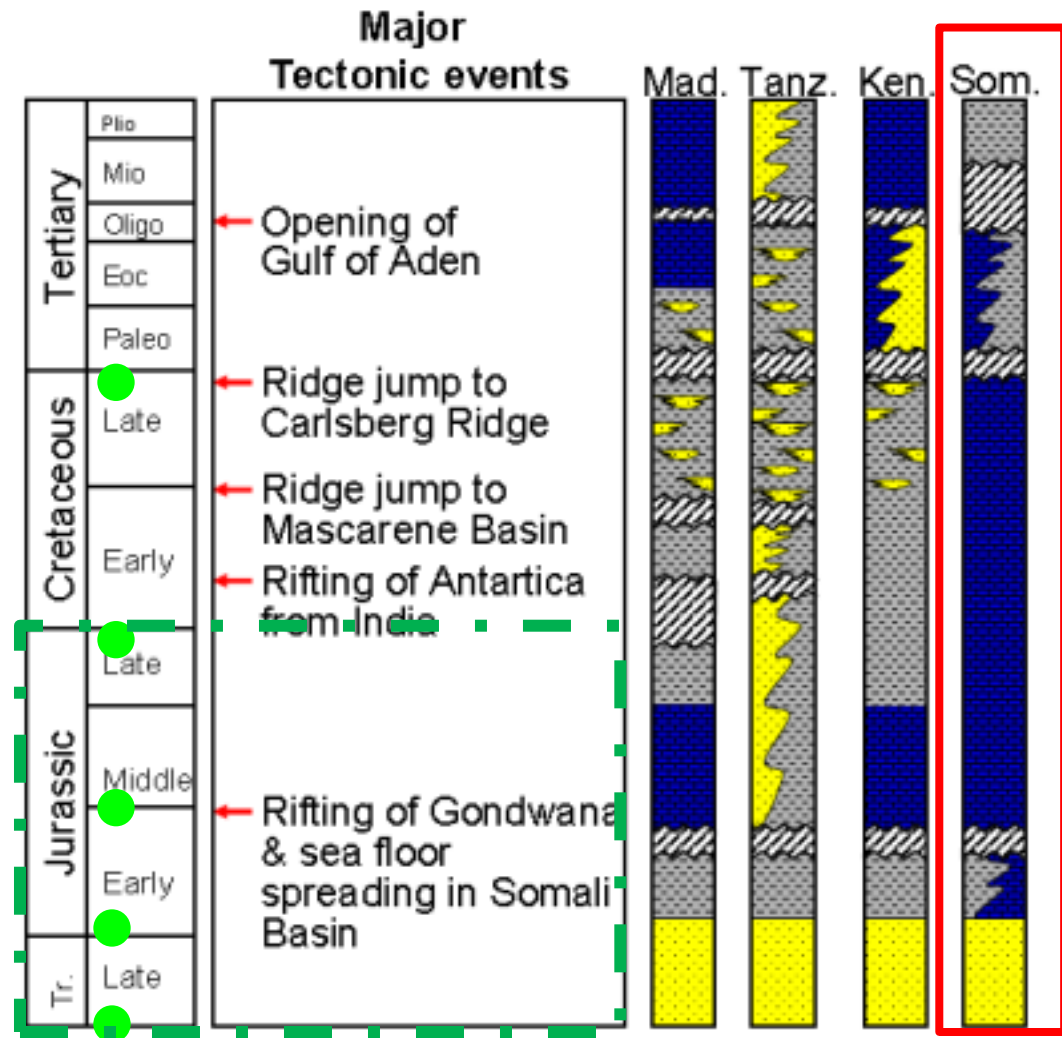
Variety of reservoir regimes
 - Carbonate
 - Siliciclastic (deltaic & turbiditic)

Source rock intervals
 - Early to Middle Jurassic
 - Late Cretaceous in Tanzania

Seals
 - Regional & intra-formational

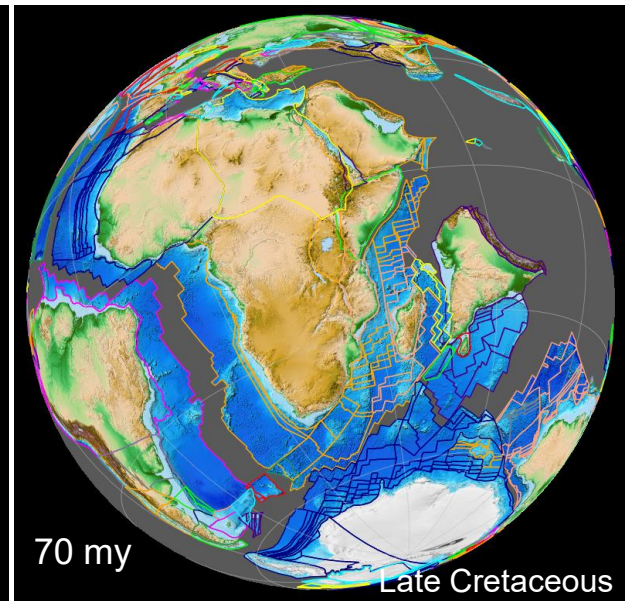
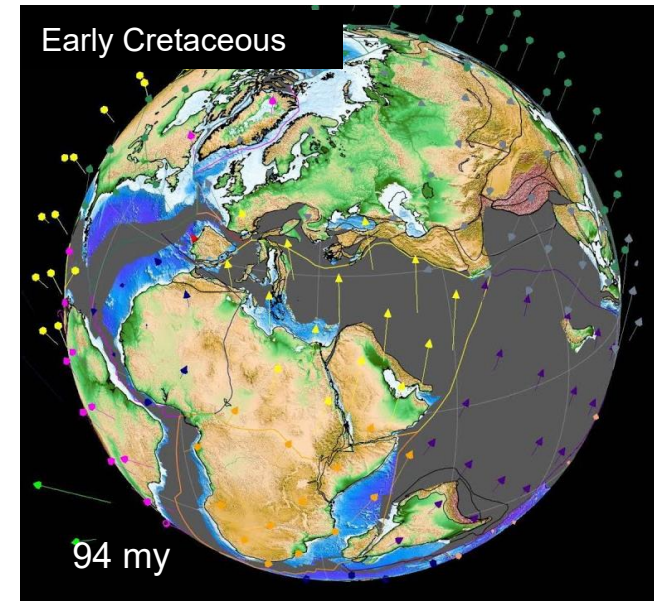
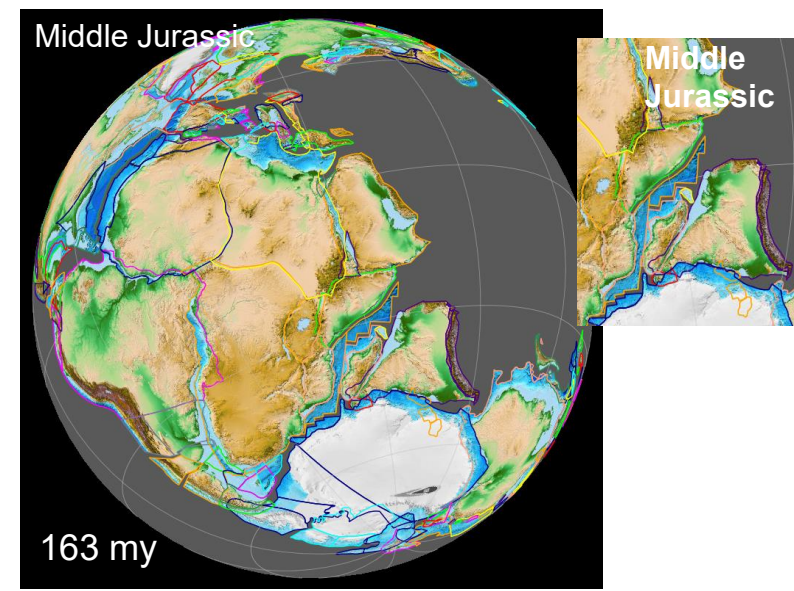
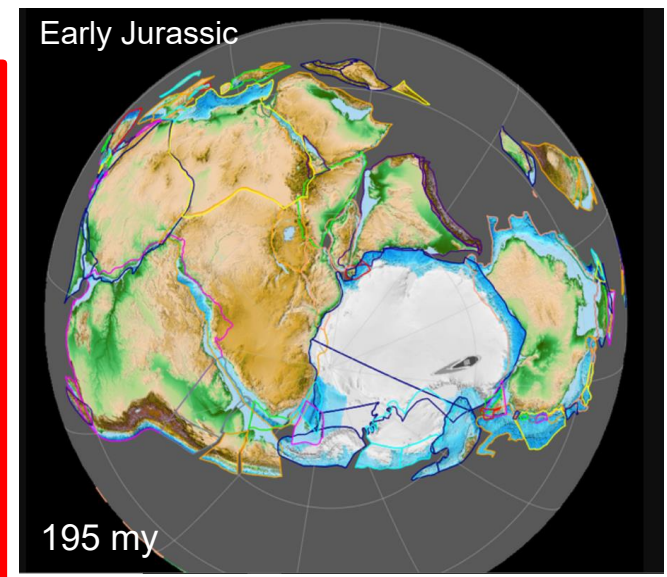
Tectono-Stratigraphy of the Somali Basin

Evolution of the East African Passive Margin



● Oil Source Families

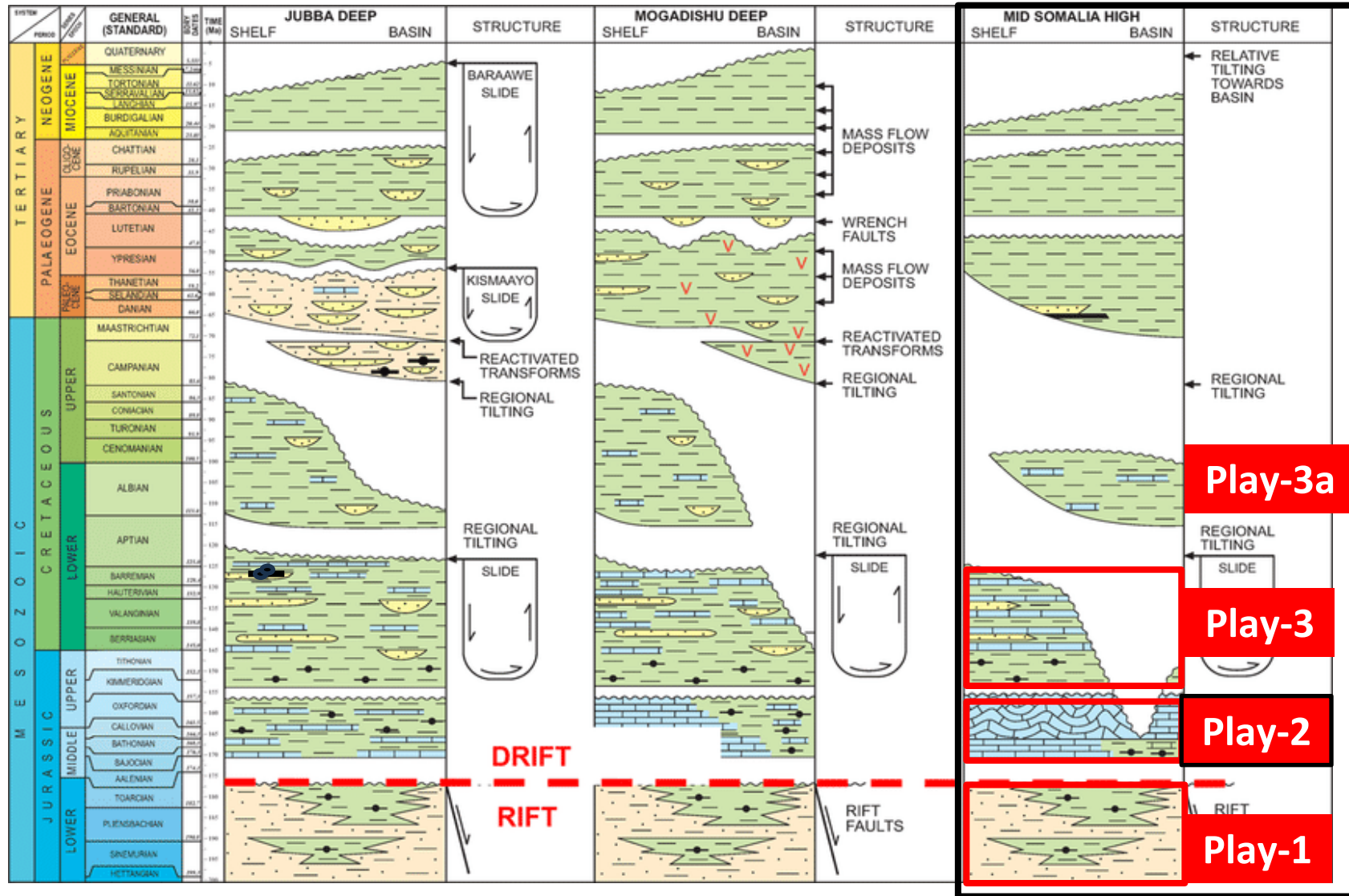
1st & 2nd Order Events



PSA 131 Obbia Basin - 4 Different Play Types

Leopard Prospect & Karoo Fault Blocks, Jur & K Shoals

Mid Somalia High



Block (PSA) 131 Plays Types
 Mid Somalia High

A Tethyan Realm Petroleum System

Play 3a: Mid drift Carbonate shoals
 Middle Cretaceous Limestones

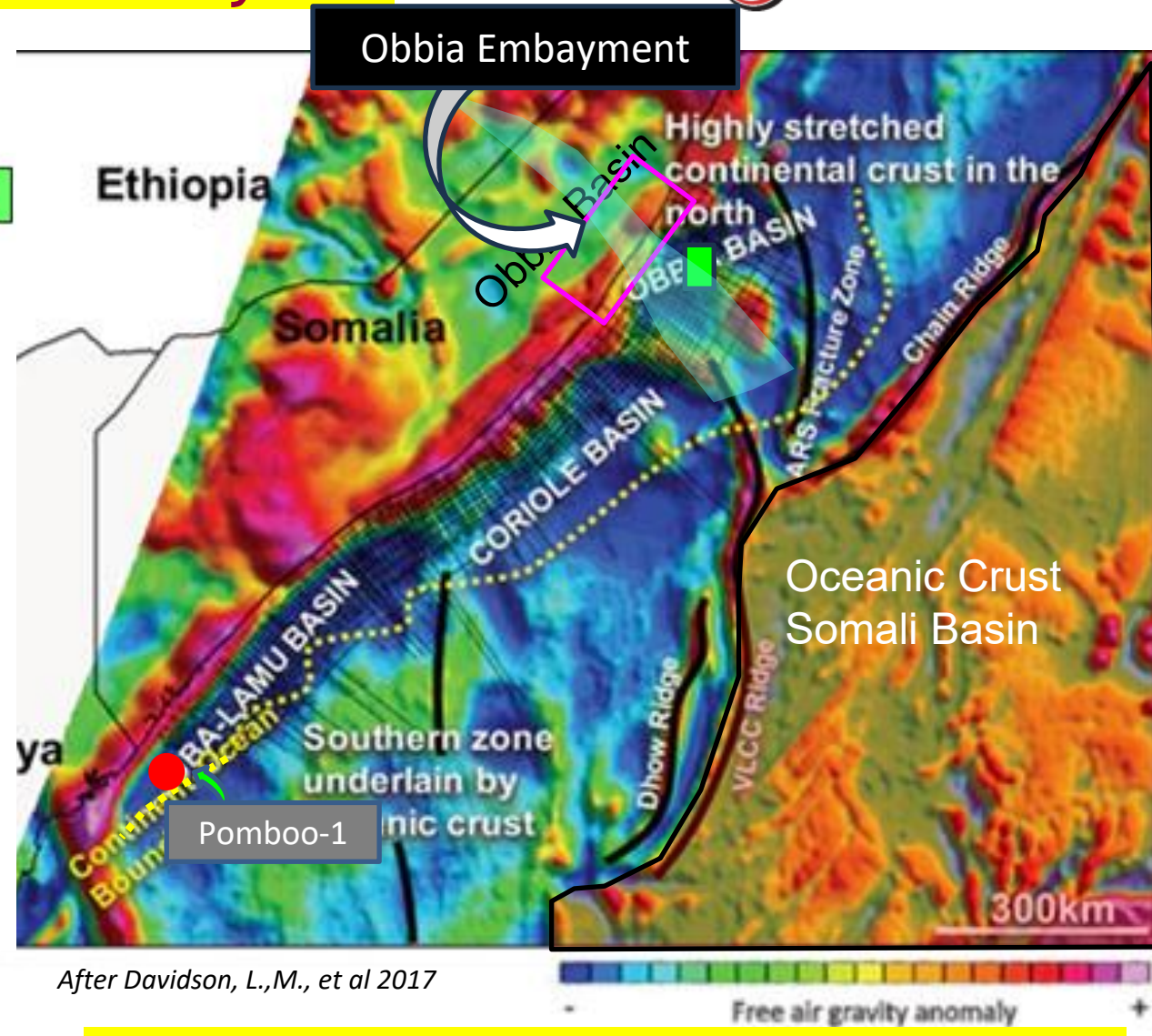
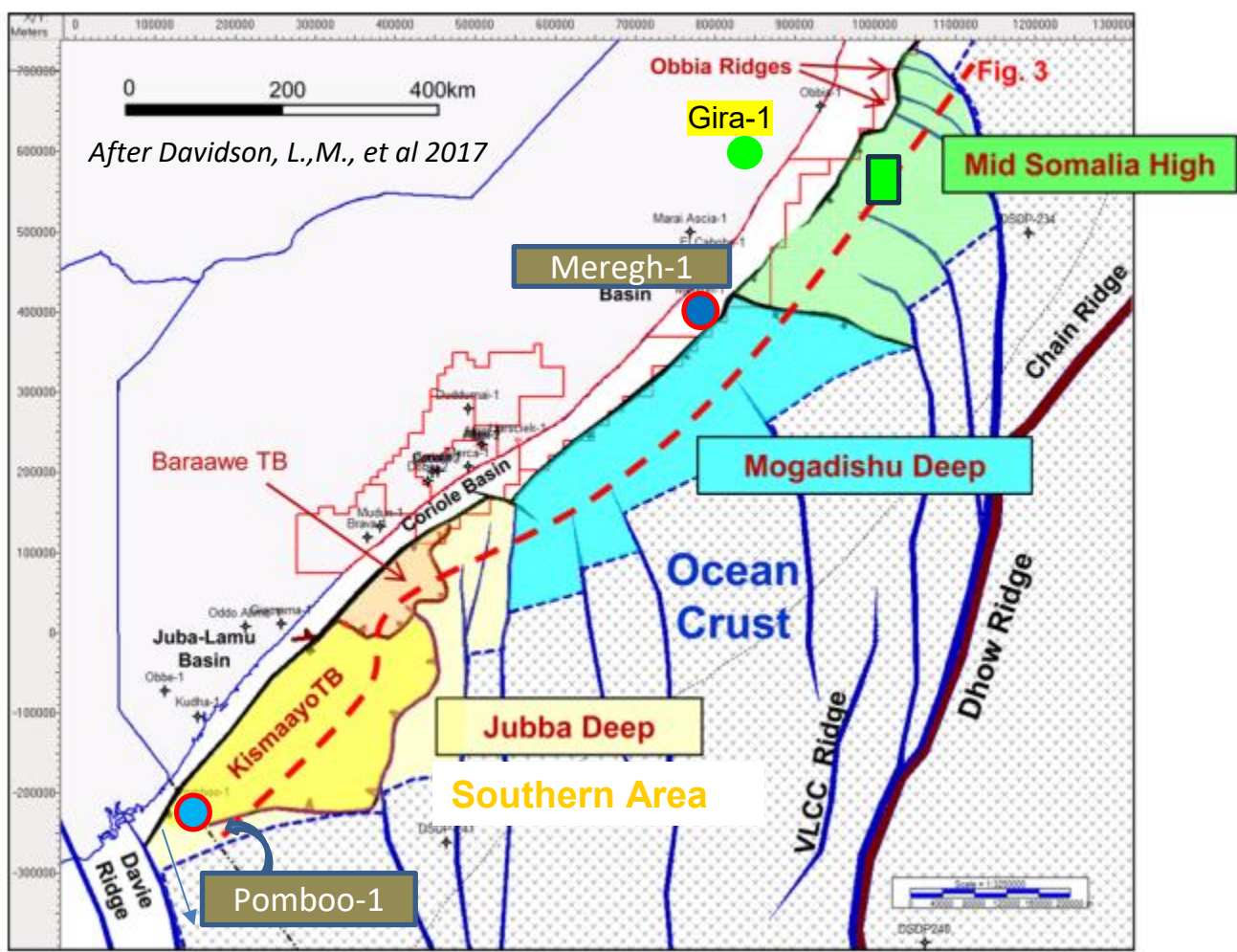
Play 3 : Early Drift Pulse 1, **Reservoir** Late Jurassic
 Lower K Limestones. **Source** (Upper Jurassic or
 Middle Jurassic) Organic Limestones/ Shales.
 Analogue **Zakum** (Abu Dhabi (Bbls)).

Play 2 : Syn-Post Rift; Tethyan Realm **Source**
 Organic Limestones **Reservoirs**, Grainstones and
 Reefal Limestones (**Arab D**) Saudi Arabian.
 Ethiopian and Abu Dhabi Analogues).

Play 1 : Pre- Rift-Syn-Rift Rotated Fault Blocks.
Source Sakamena Shales e.g. Madagascar (Bbls). ,
 Liassic organic shales; **Reservoirs** Fluvial &
 Shallow Marine Ssts.

Tectonic Relationships of the Various Offshore Somali Basins

The Offshore Obbia Basin & The Onshore Obbia Embayment

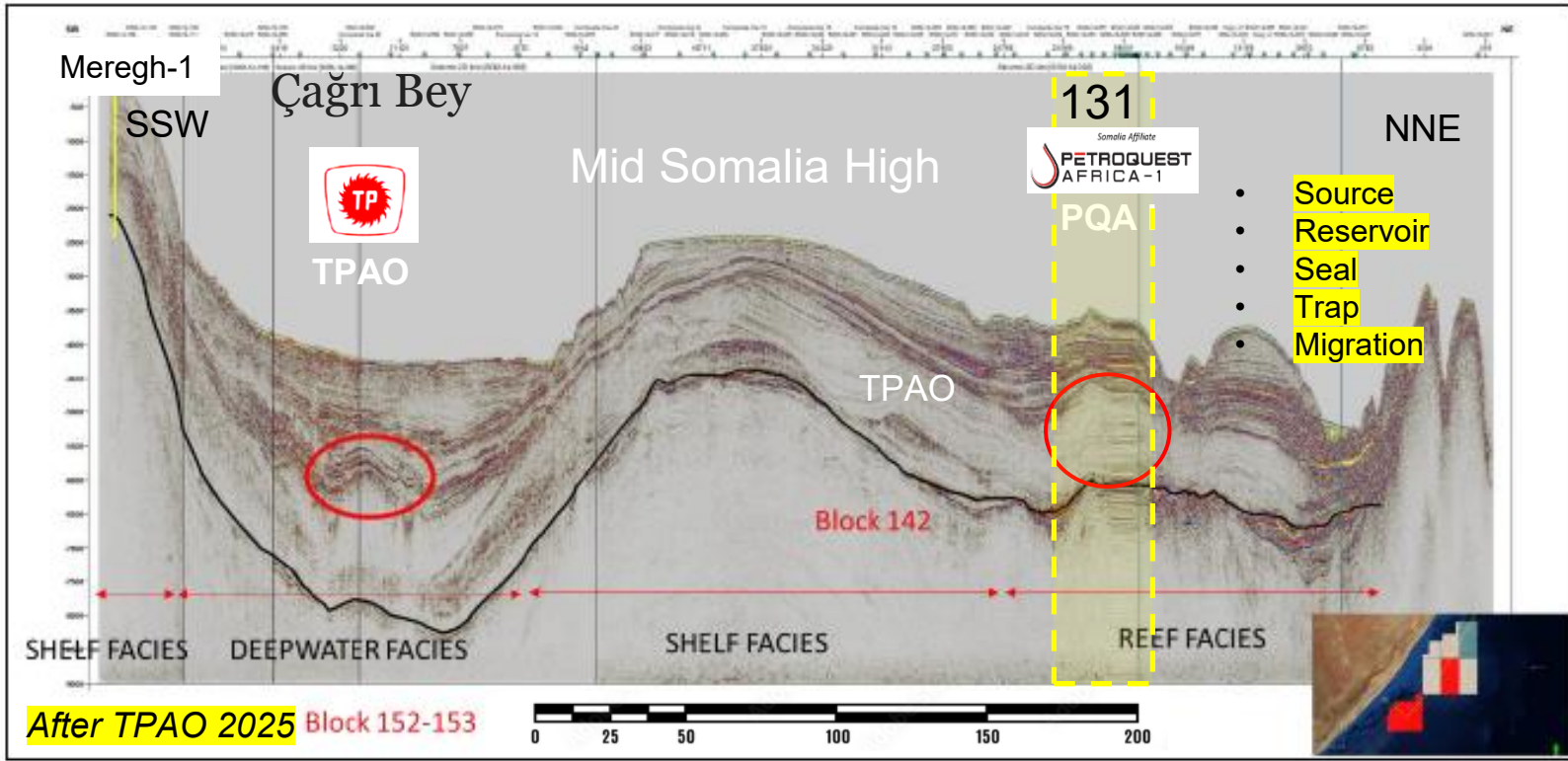


A published schematic showing the distribution of offshore Somali Basins indicates that Block 131 lies within the region denoted as the Mid Somalia High. The nearest well with Jurassic and Cretaceous oil shows, Gira-1 is highlighted

The Mid Somalia High and the Onshore Obbia Embayment have expression on Gravity Data. A gravity re-entrant (Magenta box) marks the transition from the Onshore Obbia Embayment to the Offshore Obbia Basin

Obbia Basin: (TPAO Seismic Line Shows Thinned Cretaceous) Brings Permo-Triassic and Jurassic aged source rocks into oil window

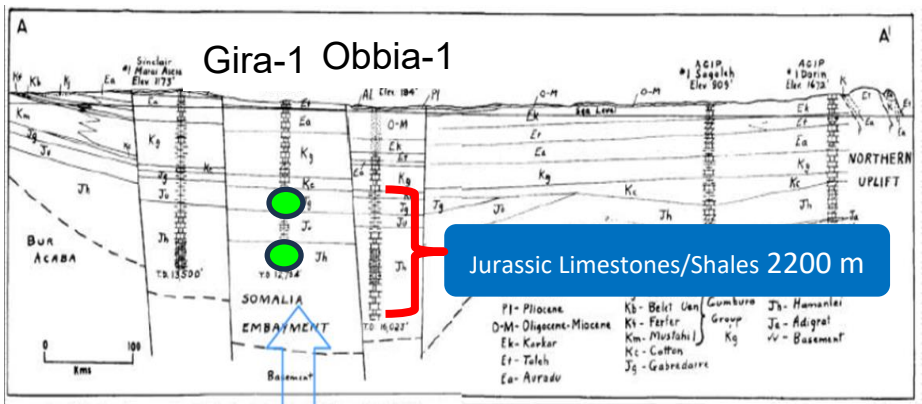
- We've focused on the Obbia Basin due to the geospatial confluence of Petroleum System elements, which set it apart from all other areas.
- Crucially we see a thinned overburden which brings the two key Somali Basin oil source rocks into the oil window, as evidenced by oil shows in nearby wells onshore e.g., Gira-1.
- Obbia-1 records >2000 m of Jurassic aged shallow water carbonates and intercalated shales, suggesting that the Obbia Embayment may have an Arabian affinity (Yemen/Persian Gulf).
- TPAO and PQA1 agree that a general shoaling of Jurassic carbonate facies is observed on the seismic from the SW to the NE, with a shallow carbonate bank interpreted over block 131



After TPAO 2025 Block 152-153

Mogadishu Basin (MB)

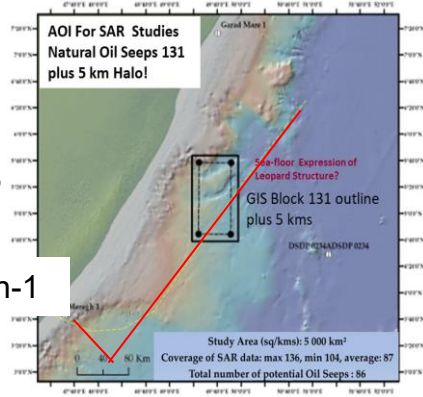
Offshore Somali Obbia Basin (OB)



Curad Prospect

Tertiary & Cretaceous Basin.
Jurassic out of drill reach
K in Oil Window but Reservoir?

Meregh-1

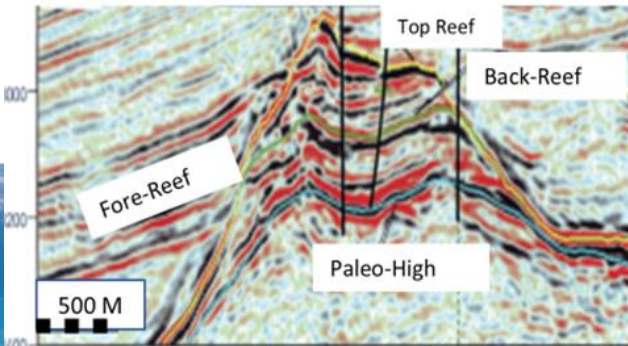
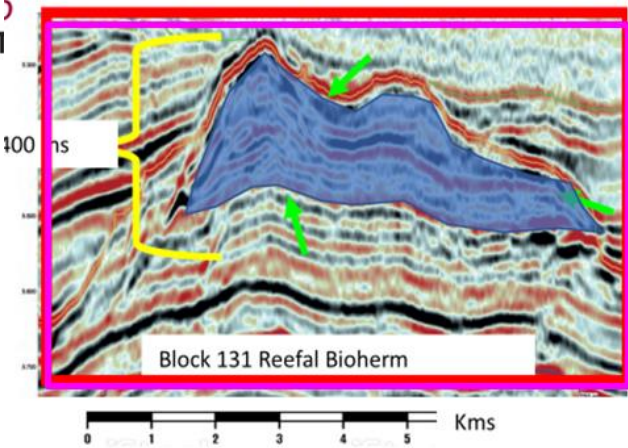
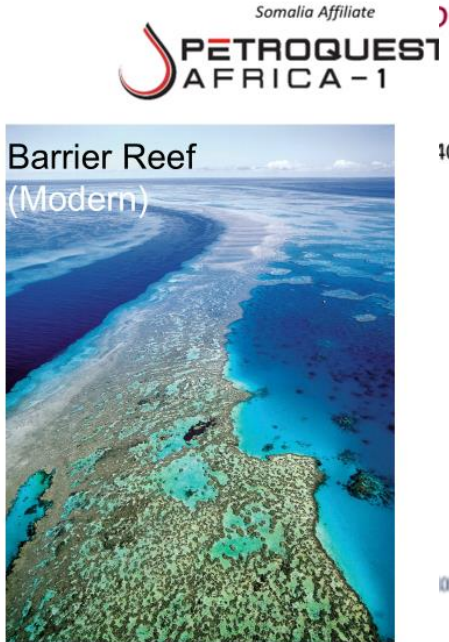
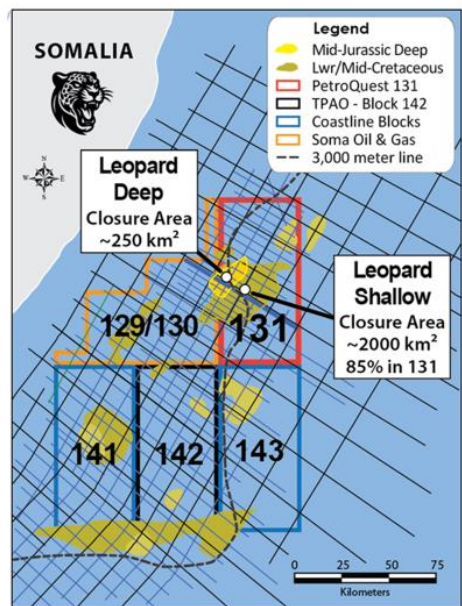


Leopard Prospect

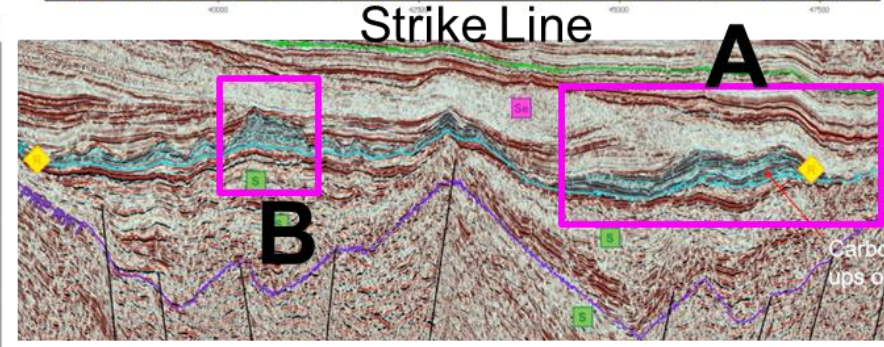
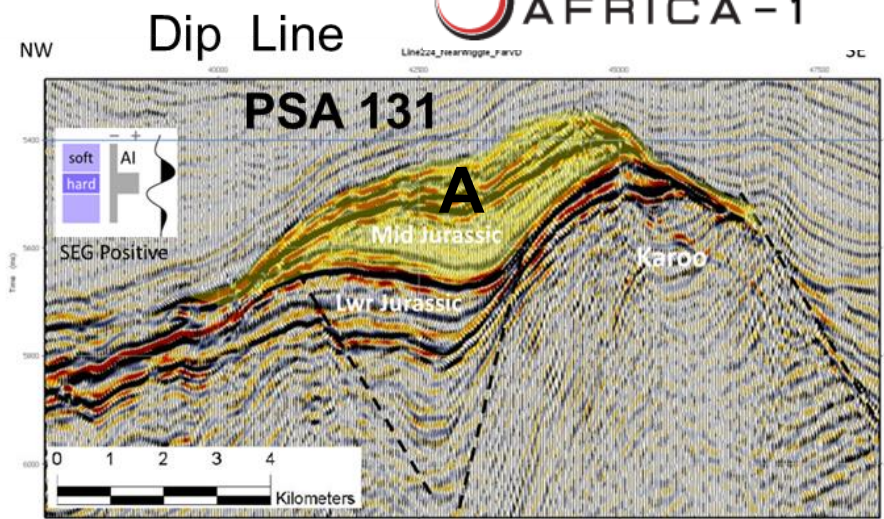


Lwr Cretaceous - Early Jurassic Basin
Jurassic In Oil Window

A Neo-Tethys Carbonate Bank is Interpreted Over Block 131



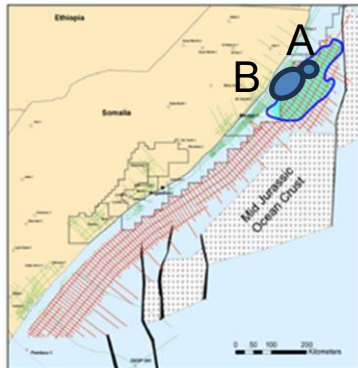
Analogue Malampaya Hydrocarbon Field (Philippines)



Linear Barrier Reef Systems in Middle Jurassic – Block 131

The Obbia Basin and it's connected onshore embayment was located adjacent to Arabia and the Paleo-Persian Gulf in Mesozoic times, sharing common Tethyan Realm source rocks, reservoirs and seals (i.e. the Petroleum System).

Seismic evidence for 'Rudistid' reef frame work-builders is present across the MSH, as are 'Cretaceous aged' regressive and transgressive shorelines that appear as seismic anomalies on the flanks of emergent highs. These likely comprise the most effective reservoirs in the form of reefal and oolitic limestones



Is Block 131 & Leopard Gas or Oil Charged?

An Important Question to Answer!

After Pereira et al 2013 and Matchette-Downes 2004

Oil-soaked reservoir sand, Wingayongo oil seep, Rufiji Trough, August 2004



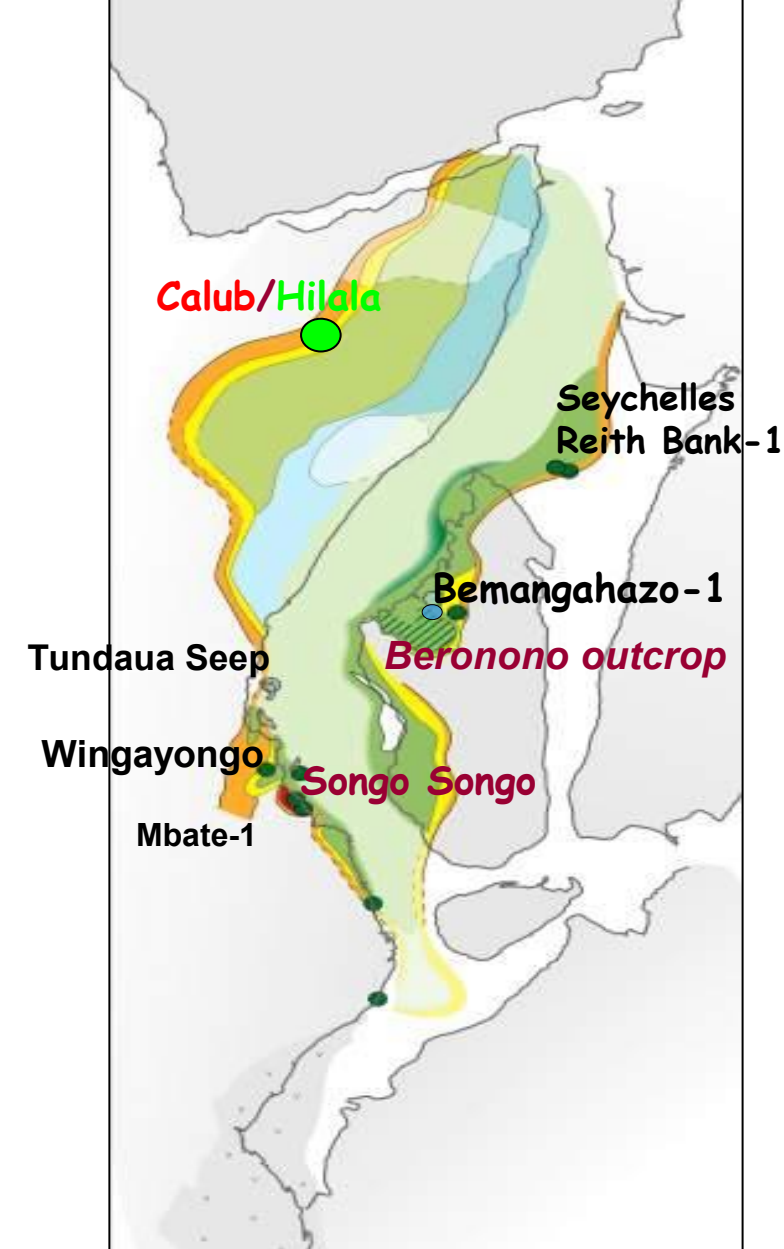
Oil soaked sand, Tundaua oil seep, western Pemba Island, August 2003



Tarballs from foreshore of Nyuni, and Okuza Islands, June 2003.



Ntorya-1 flaring gas with condensate at sunset, Ruvuma Basin, Southern Tanzania, June 2012



LOWER JURASSIC
Sinemurian-Aalenian paleogeography
oil families and source facies

- In the period 2000-2024, PQA1 collaborated with East African geochemists to unravel the complex oil story for the East African Passive Margin and the Somali Basin in particular.
- We've come to rely on the geochemical typing of source rock extracts to: migrant oil stains, tar balls and produced liquids to unravel charge complexity and type.
- GCMS & Carbon Isotope work has been used to build a catalogue of five oil families across; Somali Ogaden (Ethiopia), Somalia, Seychelles, and Madagascar to help answer the question.
- The map to the right suggests the likely charge from our key Liassic source rock is oil

Source Rock Typing via GCMS & Carbon Isotope Analyses

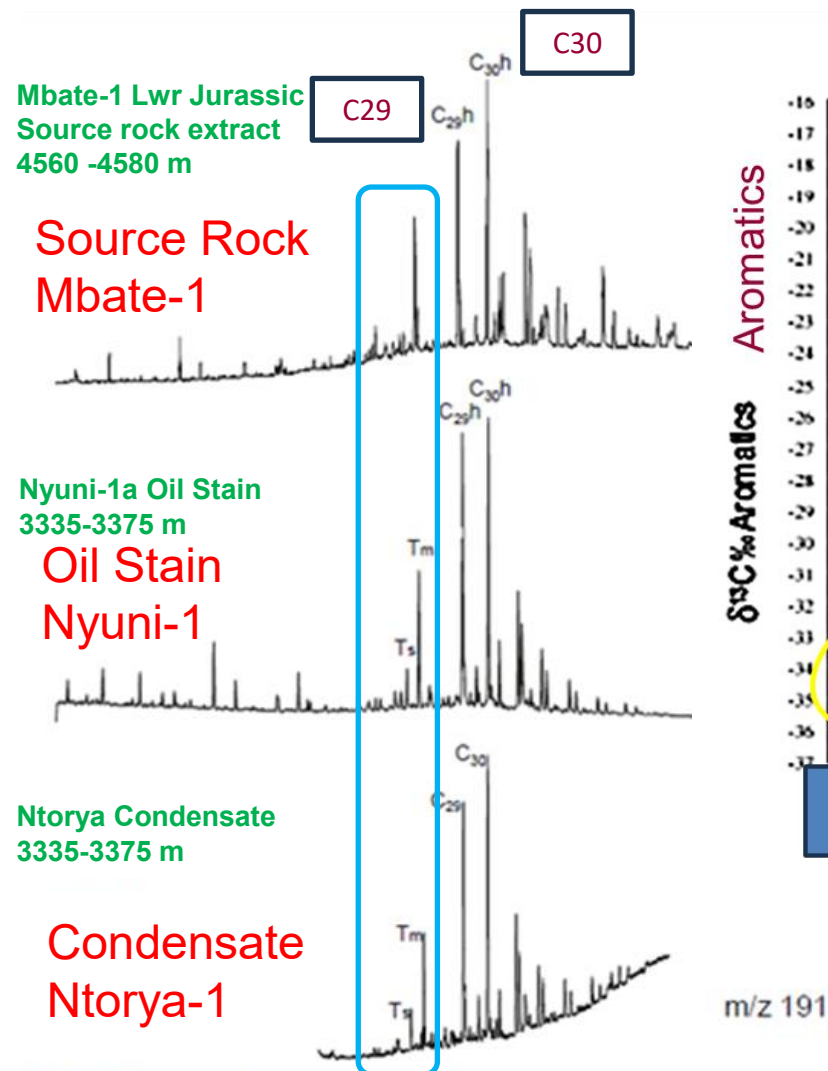
GCMS Source Rock Extracts vs Oil Shows vs Condensate Samples

Example GCMS Source Rock Typing

- Regional GCMS correlations of Lwr Jurassic source rock extracts (Mabate-1) match with migrant oils sampled from shows (Nyuni-1) in wells, that also match produced condensate (Ntorya-1).
- The biomarkers Tm and Ts (Tm>Ts) as well as peaks at Norhopane (C29) and hopane (C30) (C29<C30) show similar signatures and a likely common carbonate derived source.

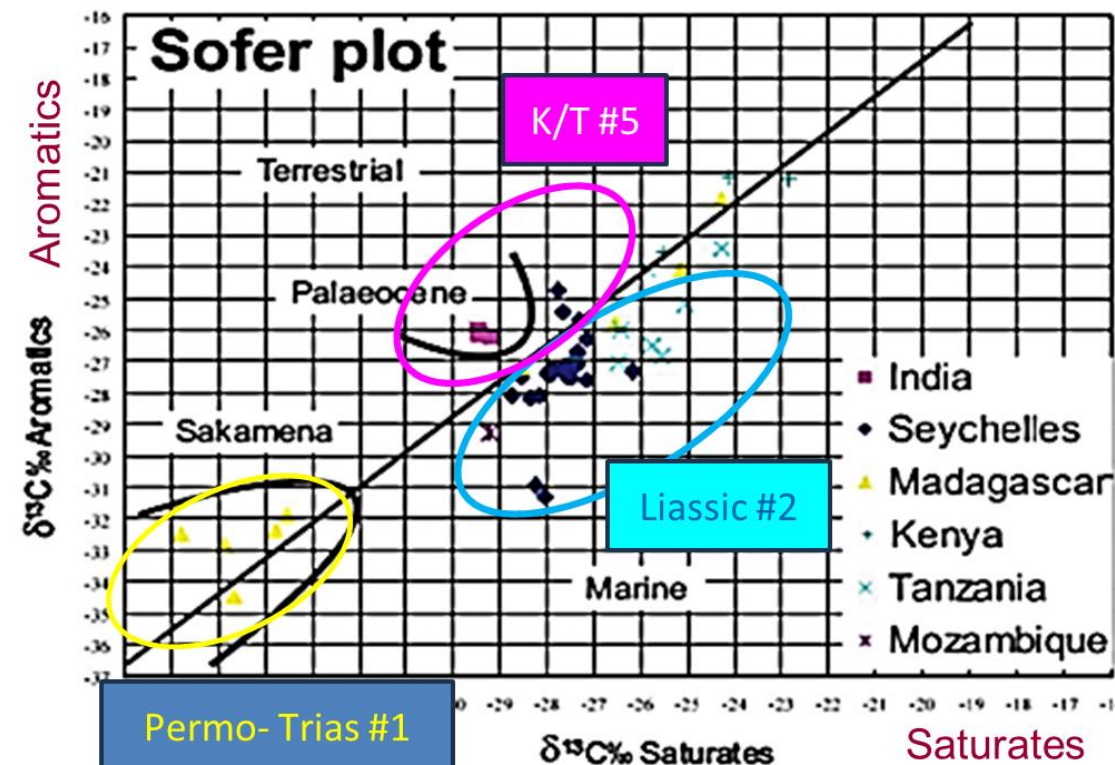
Example Carbon Isotopes

- Carbon Isotope Ratios have been used to separate out source rock type in the Somali Basin and regionally within EA.
- The heaviest isotopic ratios define the oldest source rocks and a gradual lighting of the ratios is observed through time.
- Three regional source rocks emerge from the Somali Basin data 1) Permo/Triassic Lacustrine source rocks 2) Lower-Middle Jurassic source rock with carbonate biomarkers and 3) K/T Terrestrial Source
- We've used Carbon isotopes to define our oil families



GCMS correlation of Lower Jurassic source (Mbate-1), Nyuni-1 subsurface oil shows, and Ntorya-1 condensate sample, coastal Tanzania.

Carbon Isotope Data



Two Key Oil Source Rocks SB

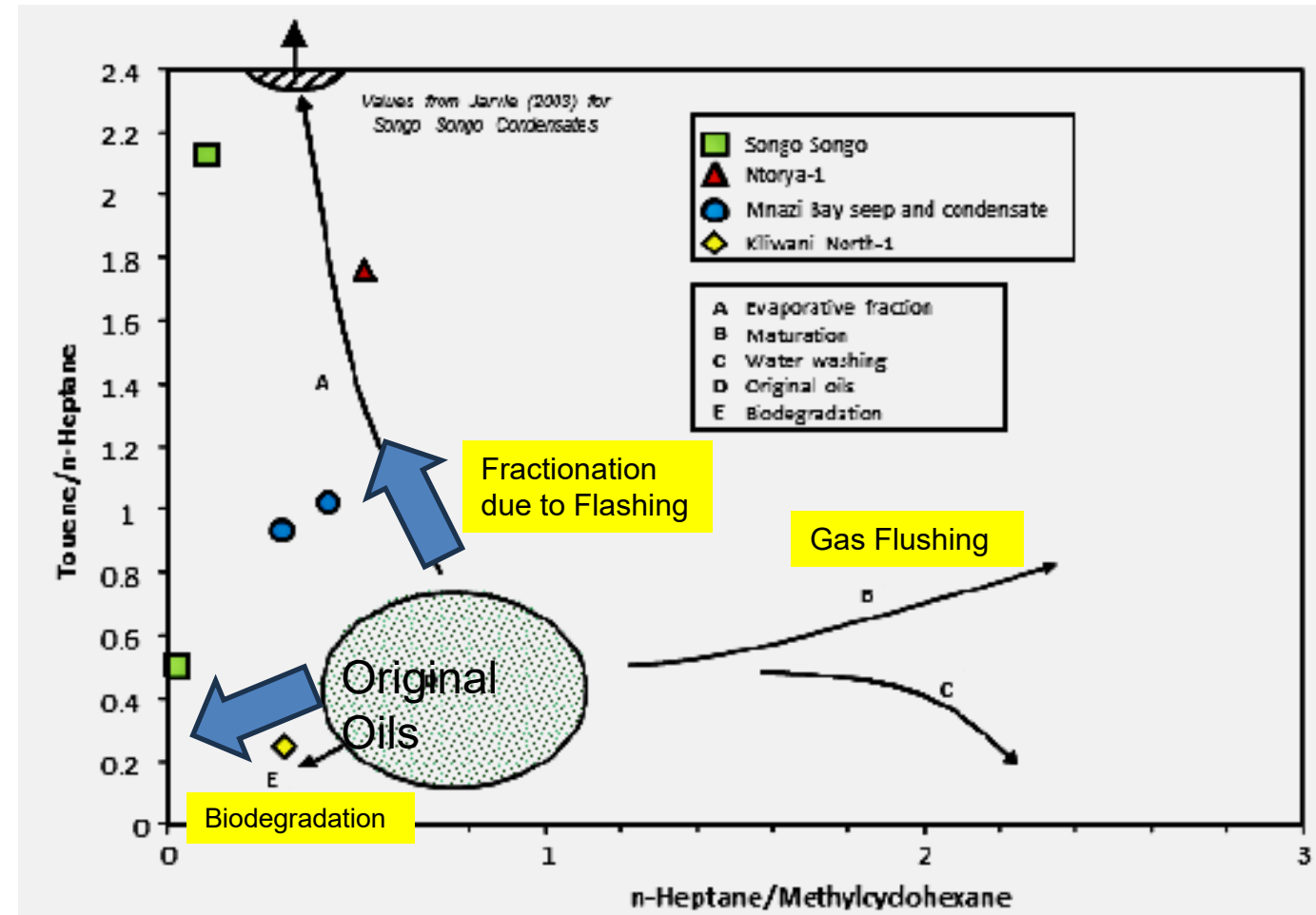
- Lacustrine Oil Source Permo-Trias
- Liassic Oil Source (Marine Carbonate)

Oil Fractionation Studies Can Reveal Charge Type

Evidence for Oil Flashing to Gas Offshore Tanzania & Mozambique

Mozambique/Tanzanian condensates show marked evidence of fractionation (oil flashing)

- 1) A cross-plot of Methylcyclohexane vs Toluene Heptane ratios reveals some sampled condensates have ratios > 1 and others < 1 , indicating fractionation and biodegradation pathways respectively.
- 2) Condensates from, Songo Songo-1, Ntorya-1 and Mnazi Bay, all display evidence for evaporative fractionation, due to depressurization- *Oil Flashing*.
- 3) These 'Pressure Reduction' mechanisms, are likely associated with Pliocene inversion, along both the Mozambique Channel and the Rovuma Basin and potentially explain why so much gas is seen in these areas. This inversion was caused by Pliocene tilting associated with thermal doming along the EARV



Cross Plot Methylcyclohexane vs Toluene.

Note From basic Physical Chemistry (Kinetics); high pressures that form during subsidence and increasing burial will actively restrict gas generation.

A Novel Model For Oil Charge in the Somali Basin

Also Explains Gas Charge to the South!

Presented at IMAGE (SEG) August 2024

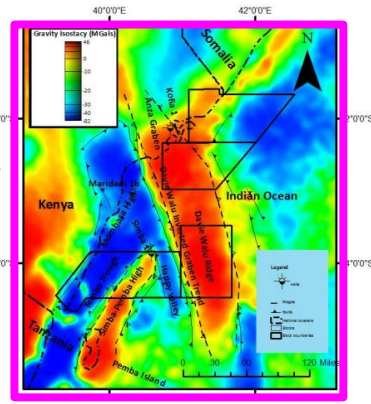
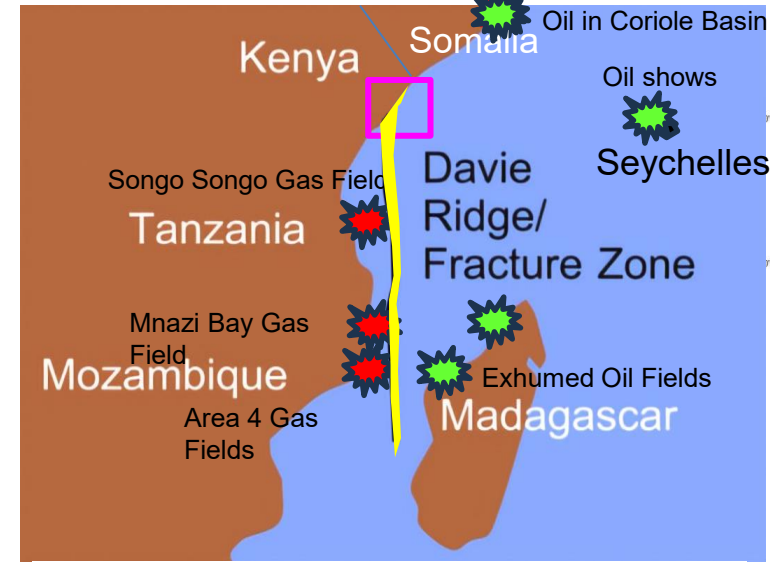


West and South of the DWFZ all of the recent multi-Tcf gas discoveries, offshore **Rovuma & Mozambique Channel**, lie in an area where **flashing** processes were 'in play' across the Pliocene due to tilting associated with domal uplift in the EARV

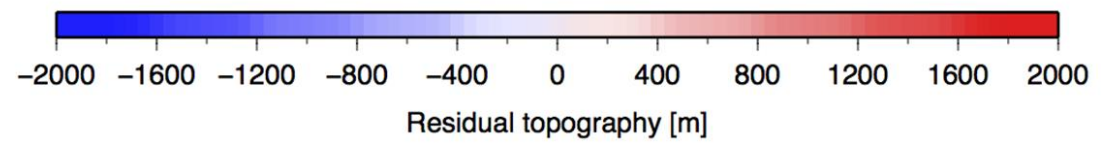
East of the **Davie Walu Fracture Zone (DWFZ)**, on the conjugate margin of the Somali Basin we see strong evidence for oil not gas charge, ie Seychelles, Madagascar and onshore Somalia. This area did not experience the oil loss to gas via fractionation.

Our model suggest that present day Mantle residual topography can be used as a proxy for recent uplift and that uplift causes depressurization and the flashing of oil to gas. Local variations can be explained by maturity levels where charge type will be determined by depth of burial.

The images below show negative mantle topography for the offshore Somali Basin and positive mantle topography where we see a dominant gas phase ie Mozambique, Tanzania and Ethiopia.

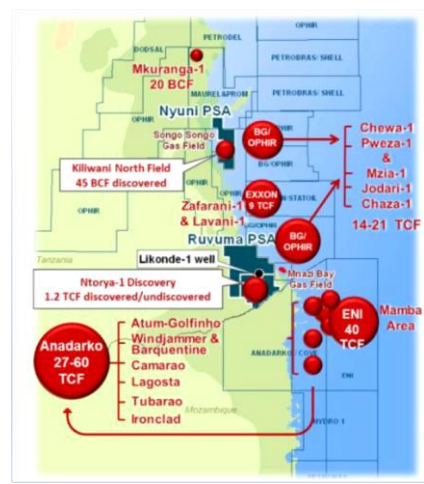
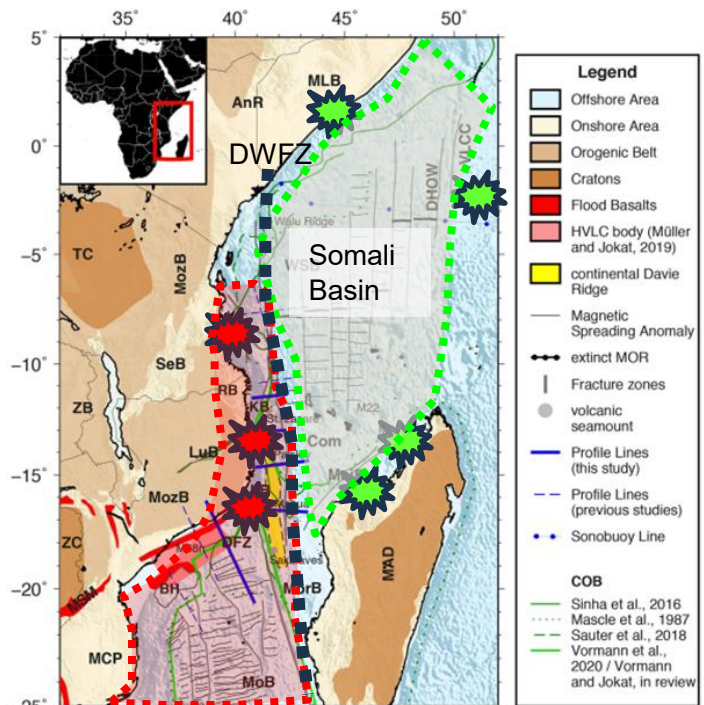
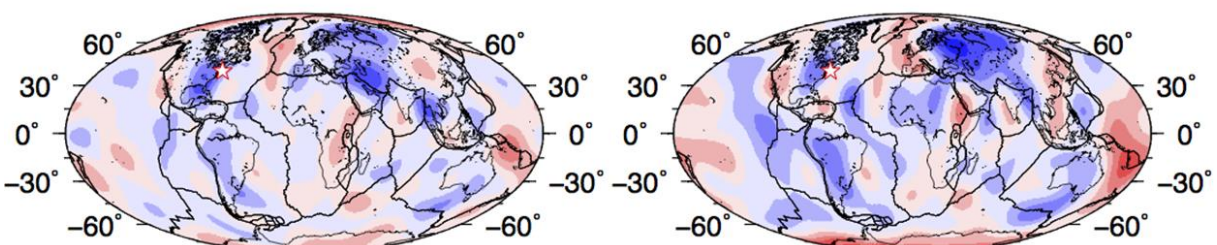


Davie Walu Fracture Zone Gravity High



C. Panasyuk and Hager (2000)

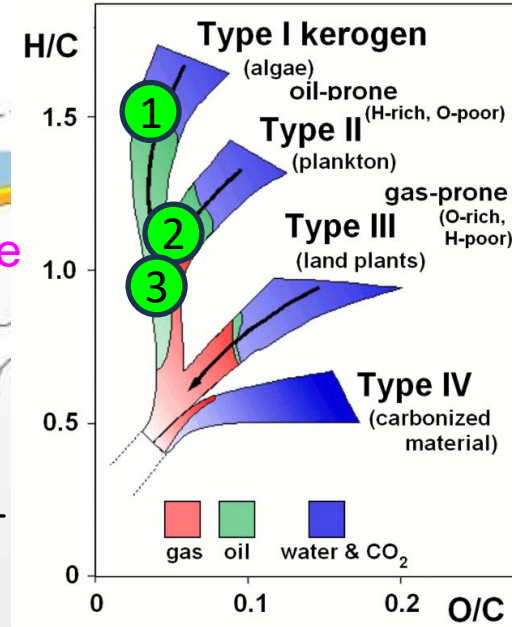
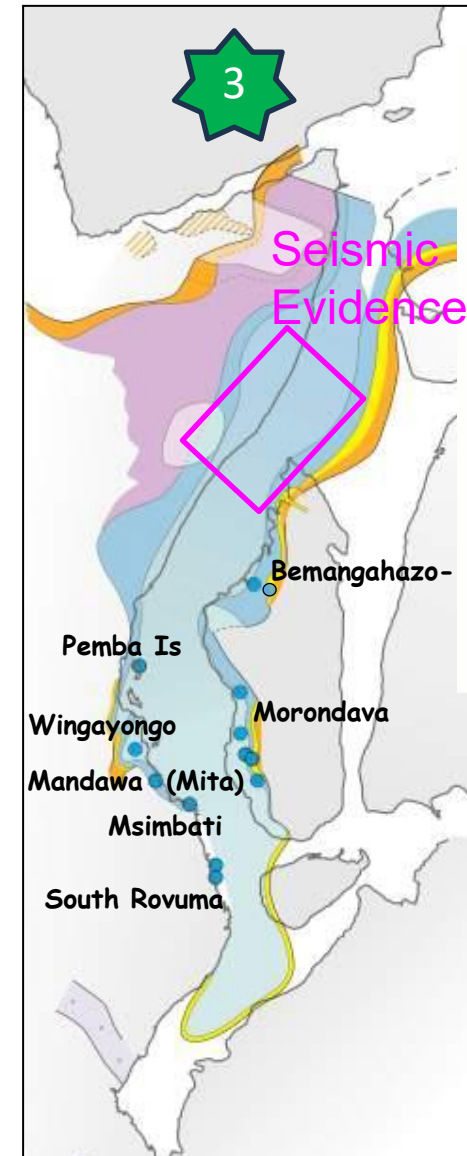
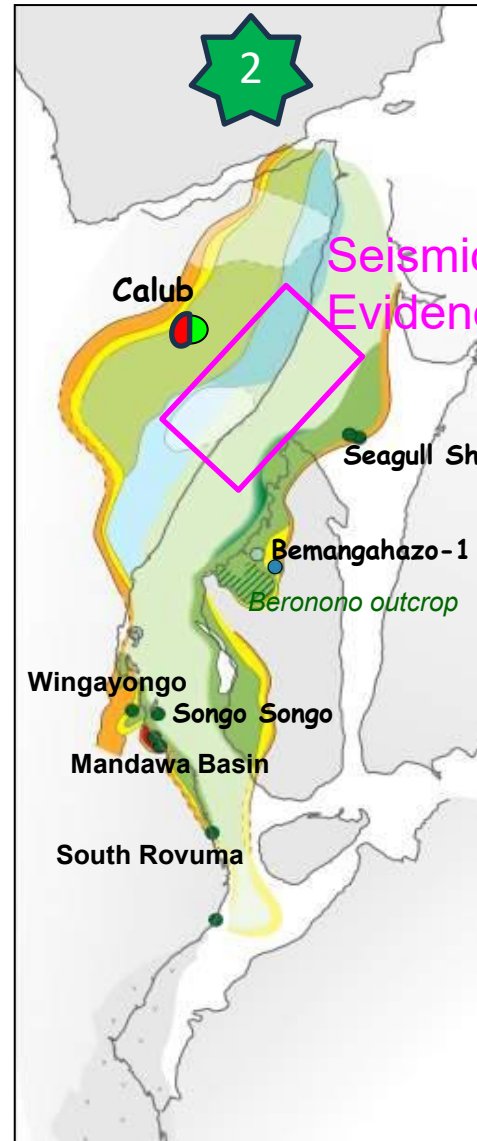
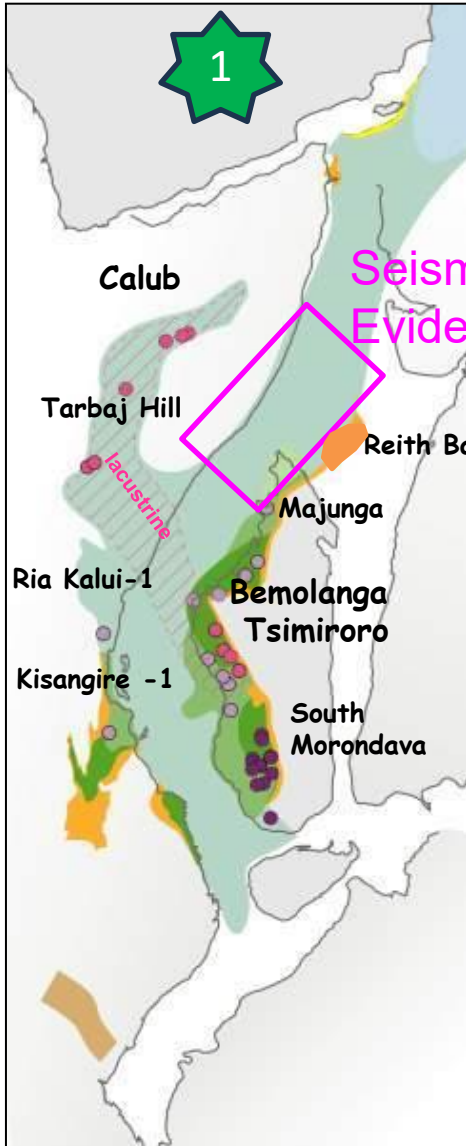
D. Kaban et al. (2003)



After Vormann & Jokat 2021

Distribution of Key Offshore Somali Oil Families

After Boote & Matchette-Downes 2009



Oil Families 1,2 & 3
 Source Rock Quality
 Moves from Type 1 to Type 2
 Kerogen as rift evolves -
 Lacustrine to more Marine
 influence

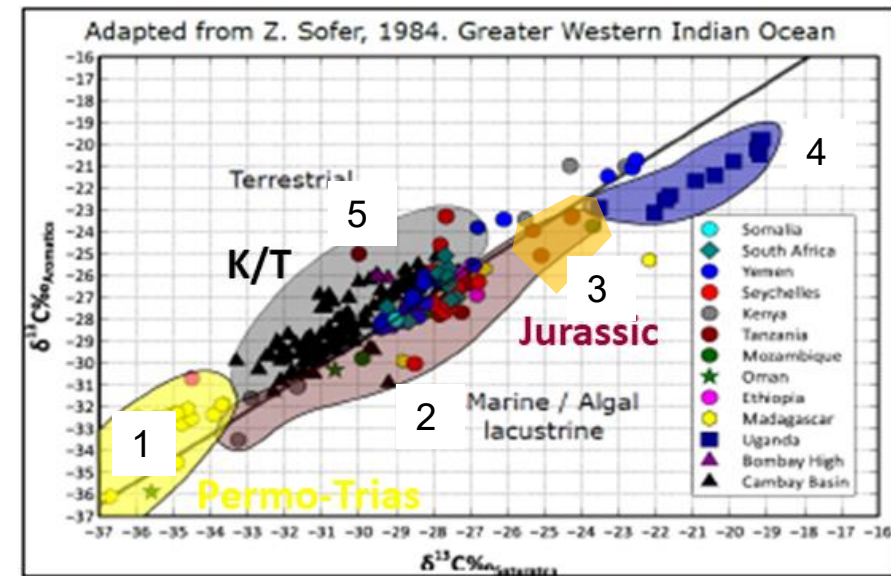
PERMO-TRIASSIC
 Changhaingian-Induan Paleogeography
 Source facies and associated oil & gas

LOWER JURASSIC
 Sinemurian-Aalenian paleogeography
 oil families and source facies

MIDDLE JURASSIC
 Bathonian-Callovian paleogeography
 oil families and source facies

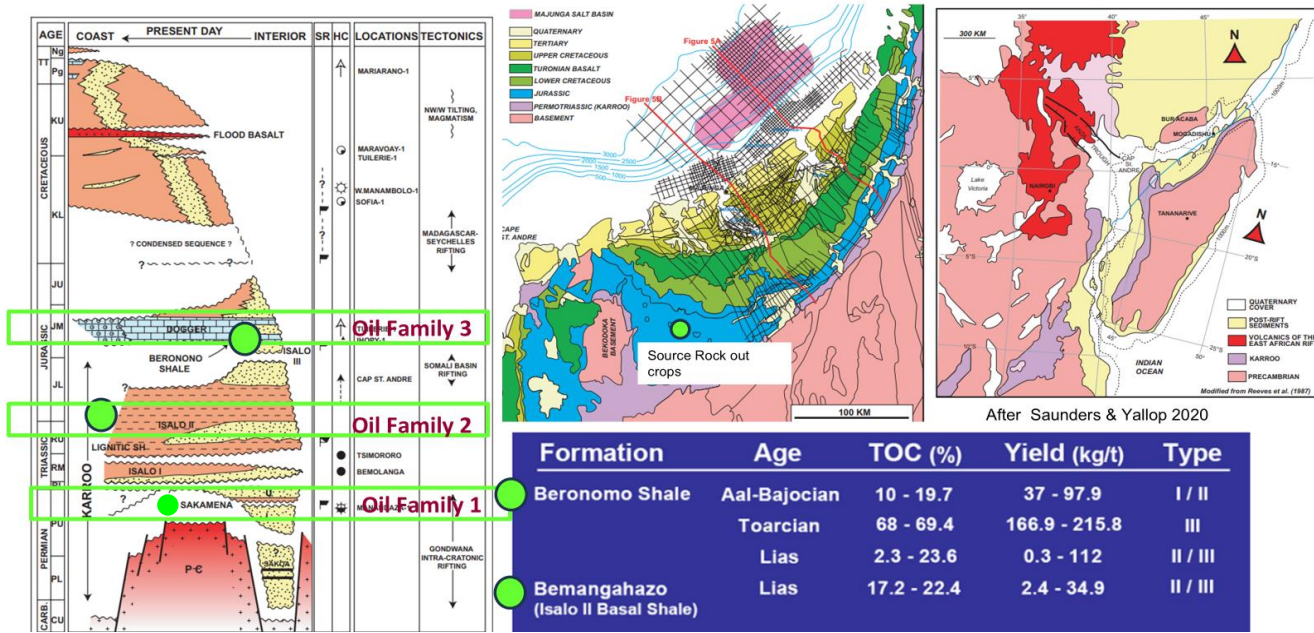
We Observe Five Oil Families

Somali Basin



Carbon Isotopic Abundances and Ratios of oil samples East Africa.

Madagascar: Permo-Trias & Jurassic Oil Source Rocks Oil Families 1-3 Sakamena Fm, Isalo Shales & Beronono Shale

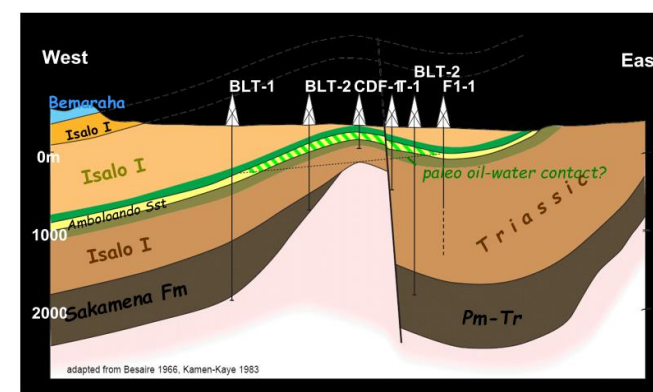


Onshore Madagascar: Bemolanga & Tsimiroro 29 BBOIP Paleo-Oil Fields Morondava Basin (Oil Charge- Family 1)

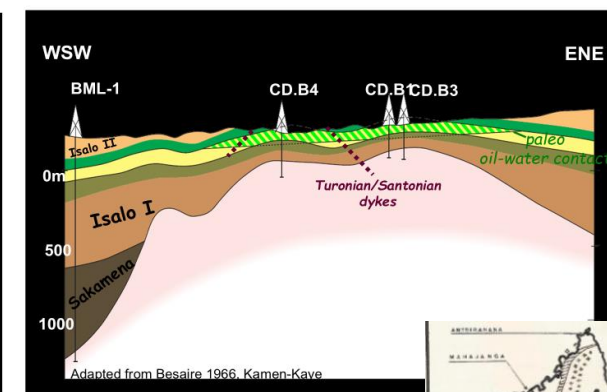


Summary Table of Five East African Oil families

Oil Family #	Geographical Extent
Permo-Triassic A (1)	Madagascar/ Somalia Ogaden
Liassic B (2)	Seychelles/ Madagascar/Somalia
Jurassic (Mid) C (3)	Madagascar/Seychelles
Jurassic (Upr) (4)	Yemen/Somalia?
Upper K/T (5)	Seychelles/India/Somalia?



- **Bemolanga**
- Exhumed oil-field 8-13 API oil
- 21 billion barrels of OIP
- Source rock Sakamena Shale (Karoo)
- Total E&P farm-in in 2008
- 130 core wells with \$200 MM investment
- 125,000 barrels/day start-up 2018
- EUR 2.5 billion barrels



- **Tsimiroro**
- Exhumed oil-field 14-16 API oil
- 8.0 billion barrels of OIP
- Source rock Sakamena Shale (Karoo)
- Isalo Fm has additional potential
- EUR 0.8 billion barrels
- Steam flood - pilot 2000 bls oil/day.



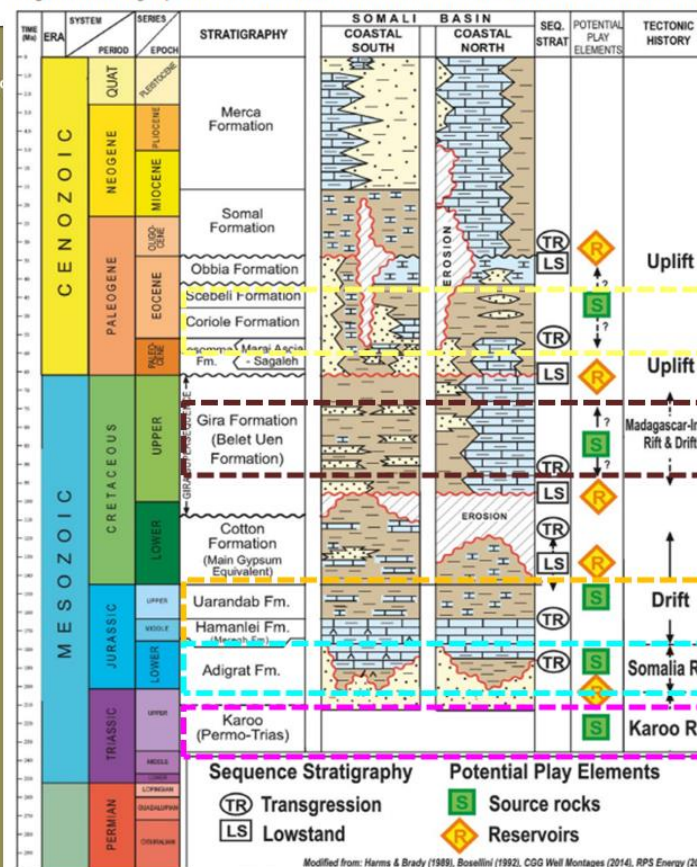
How Much Oil Could Be Generated in the Obbia Basin?

Sniff Test Yields 56 Bbls From 3,375 km³ Source Rock!

Oil Family Distribution as a Function of Latitude East Africa – Somalia Looms Large!

Somali Stratigraphy (Source) (After Harmes & Brady)

Regional stratigraphic column for the onshore and shallow offshore Somalia Basin



'Oil Sniff Test' - Somali Basin has no charge limitations

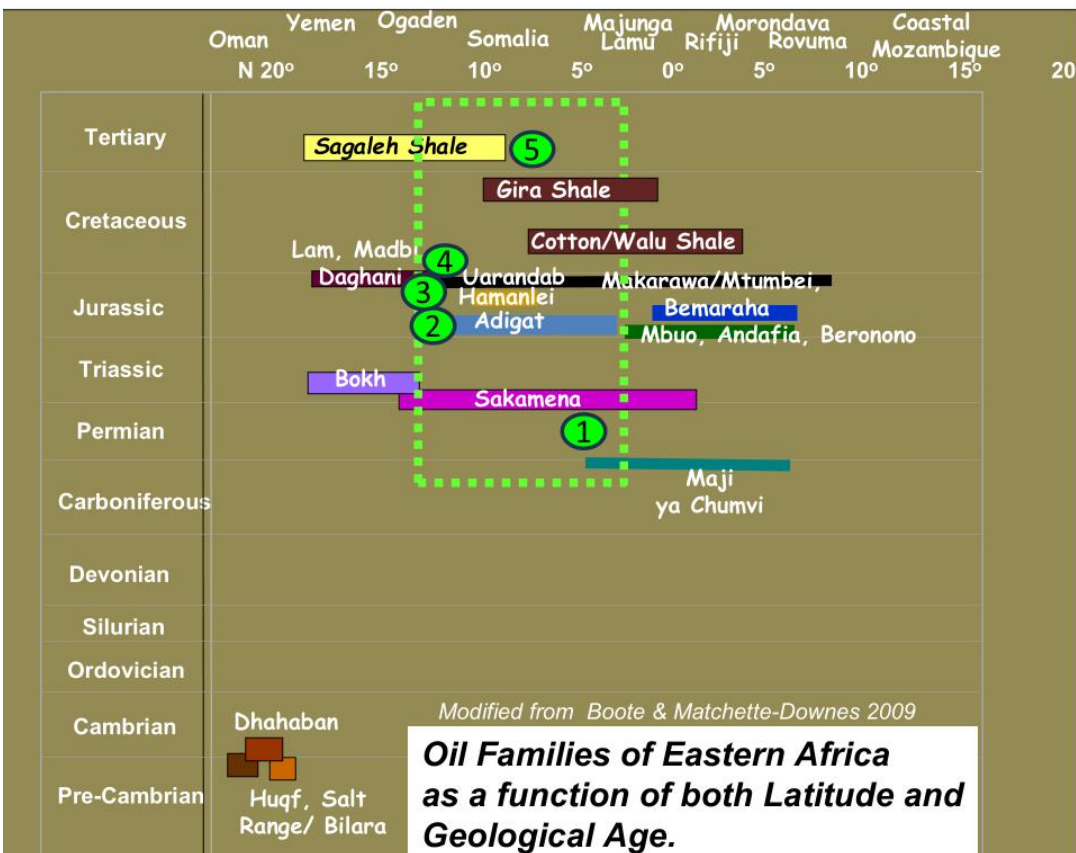
Formation	Age	TOC (%)	Yield (kg/t)	Type
Beronomo Shale	Aal-Bajocian	10 - 19.7	37 - 97.9	I / II
	Toarcian	68 - 69.4	166.9 - 215.8	III
	Lias	2.3 - 23.6	0.3 - 112	II / III
Bemangahazo (Isalo II Basal Shale)	Lias	17.2 - 22.4	2.4 - 34.9	II / III

Source Rock Sniff Test (Jurassic)

- Basinal area of 900 x 250 km = 225,000 km²;
- 75 % of the area hosts source rocks = 168,750 km².
- Average net thickness of 20 m.
- Net source rock volume = 3,375 km³
- Yield (S2)=10 kg/tonne (TOC=2%, HI=500)
- 70 % transformation at maturity of 1 % R0
- Expulsion to trap efficiency = 10 %

56 billion Barrels Possible!

56 Bbls Potential (Just 1 Source rock) and there are potentially three widely extant and vertically stacked oil families!)

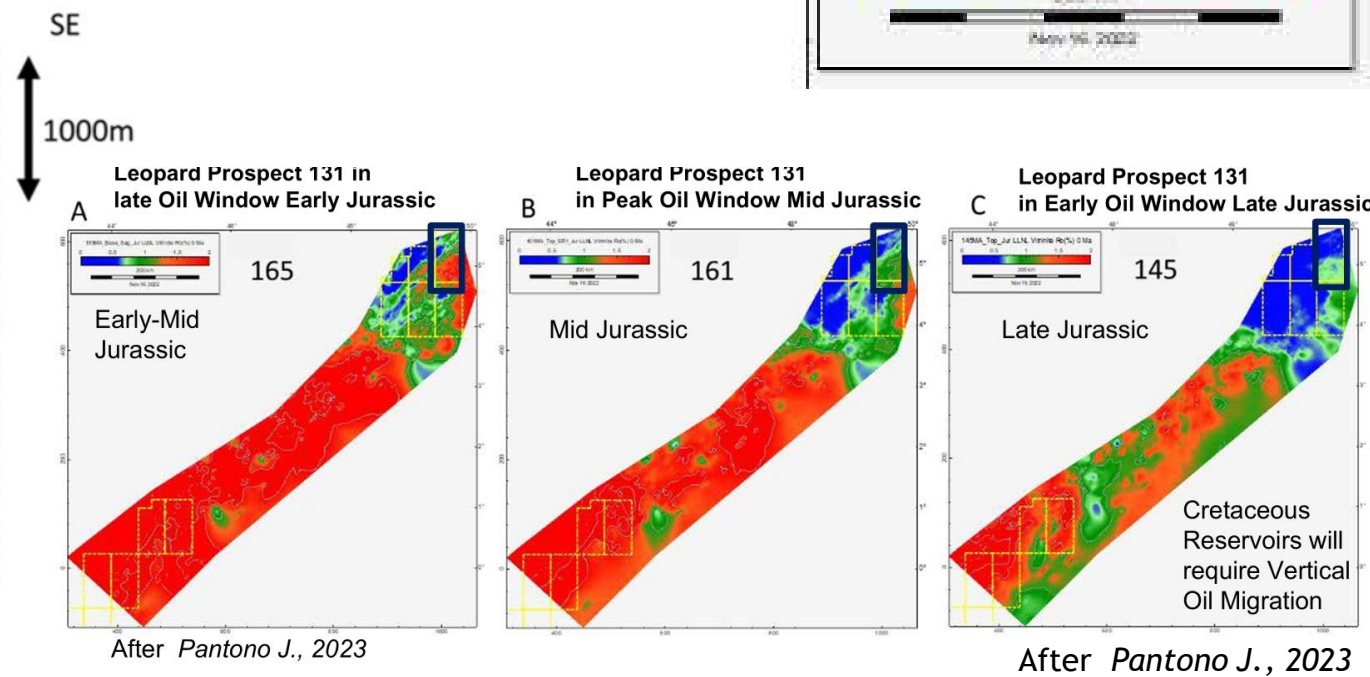
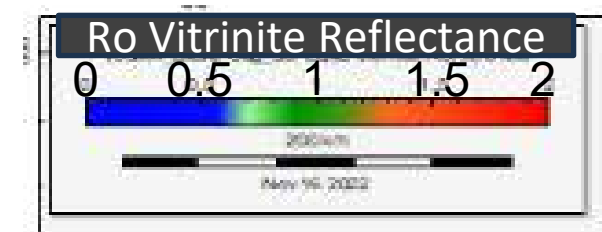
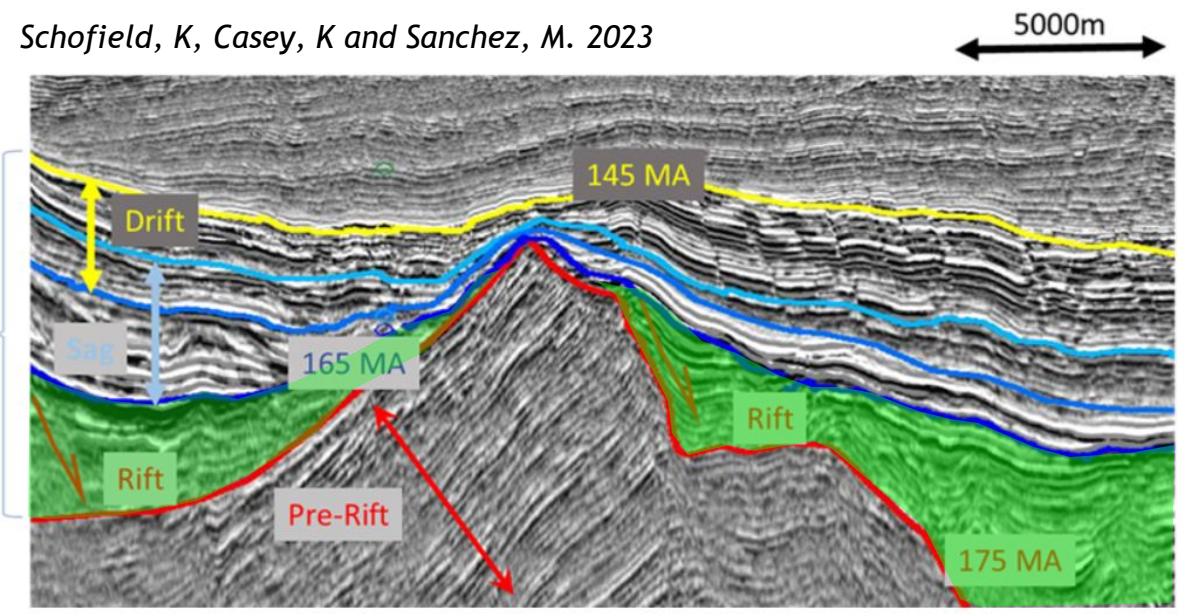


Modified from Boote & Matchette-Downes 2009
Oil Families of Eastern Africa as a function of both Latitude and Geological Age.

Source Rock Distribution & Maturity Over the MSH (Modelling)

2D Seismic Line Mid Somalia High & Maturity Modelling (Block 131 Shown)

Schofield, K, Casey, K and Sanchez, M. 2023

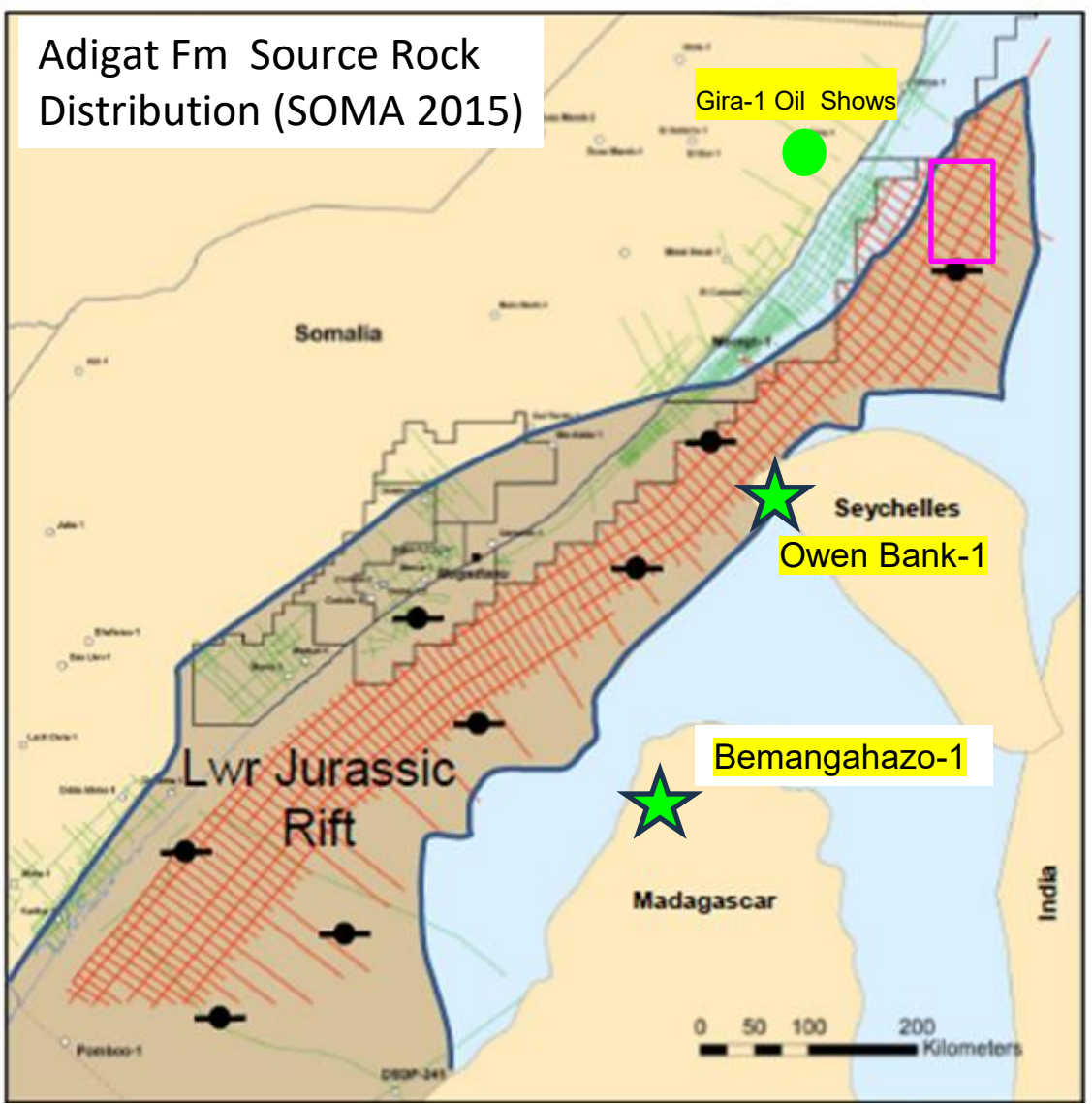


An extensive Jurassic source interval was mapped around the Mid-Somalia High using geophysical attributes including spectral decomposition. The morphology of seismic packages conforms to the classical Rift, Sag and Drift geometries as observed in rift basins globally.

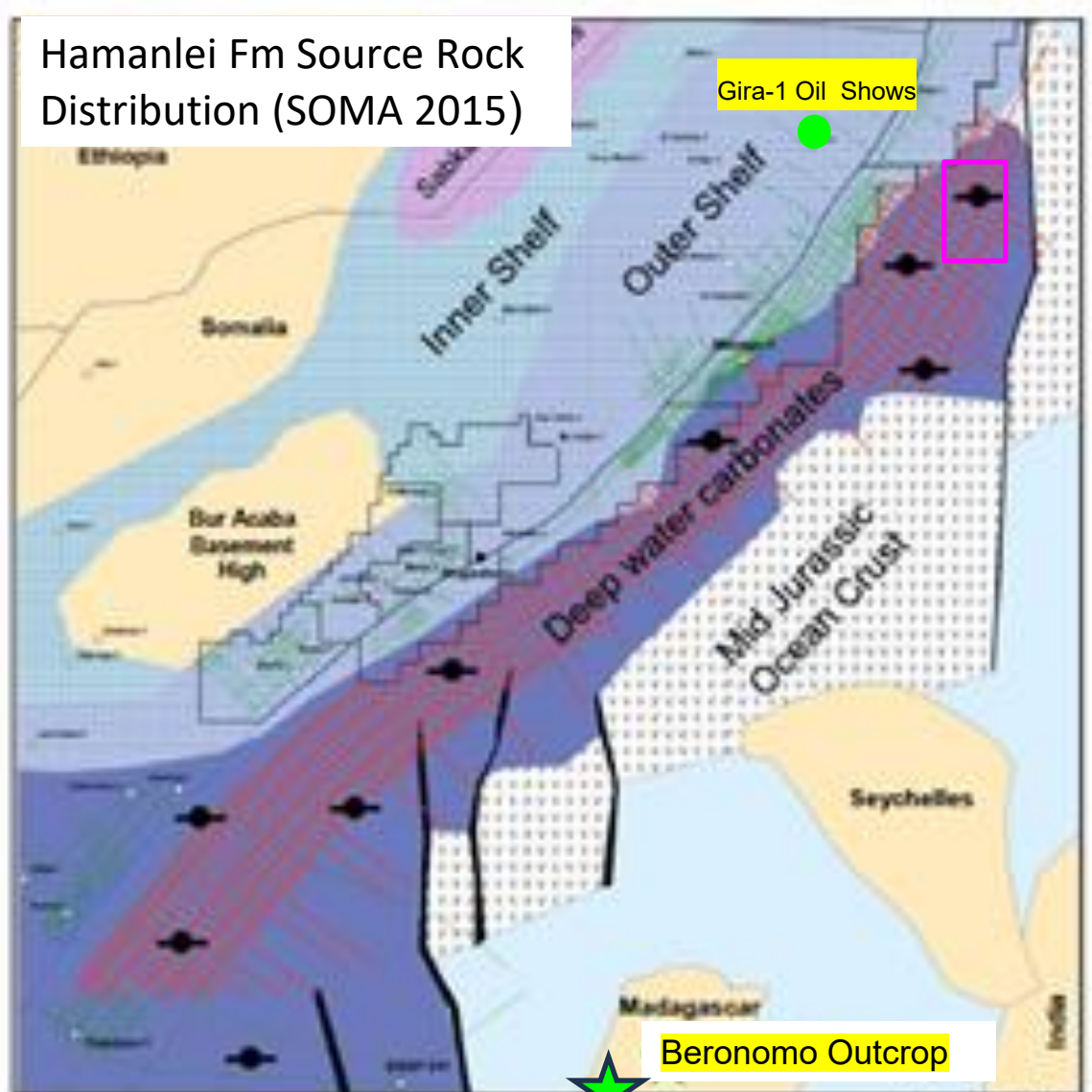
Published maturity modelling suggests that Block 131 is mature for oil across all Jurassic aged source rocks. Elsewhere based on depth of burial for the Jurassic it all looks gas prone.

Lwr-Early-Mid Jurassic Source Rock Distribution

SOMA Oil & Gas Published Source Rock Distribution Maps For Offshore Somalia



From Public Domain SOMA Presentation 2015



From Public Domain SOMA Presentation 2015

A Novel Model For Oil Preservation - Somali Basin

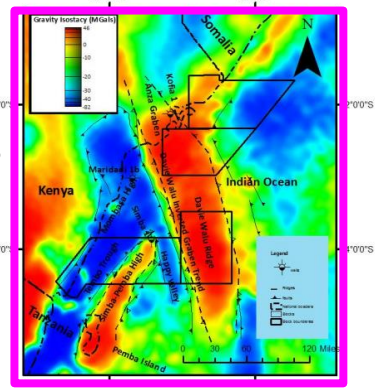
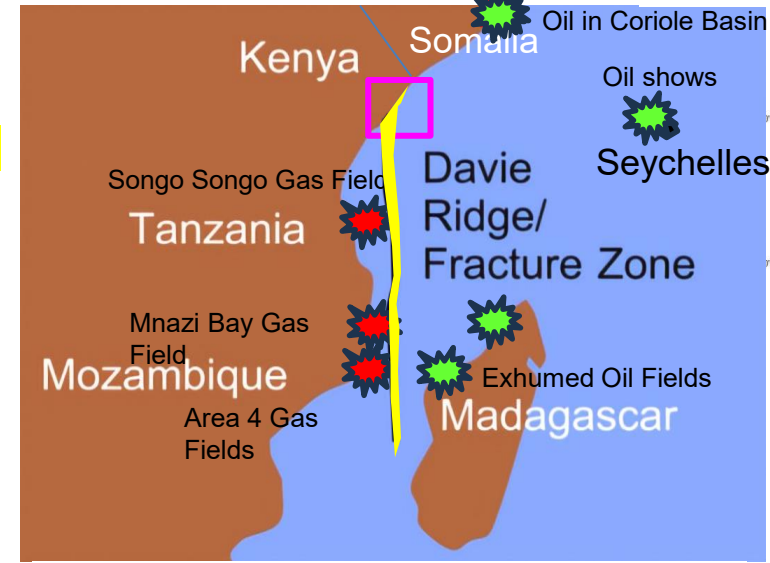
Somali Basin Looks Oil Prone & Explains Gas Charge to the south!

Presented at IMAGE (SEG) August 2024



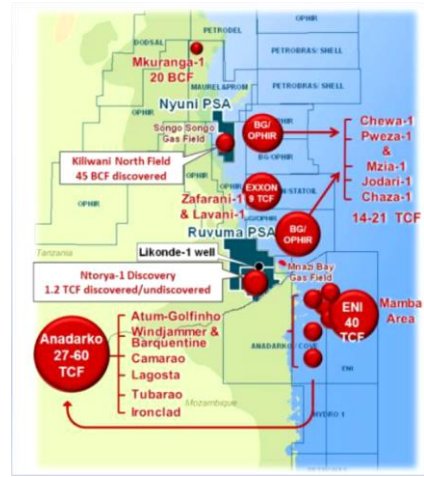
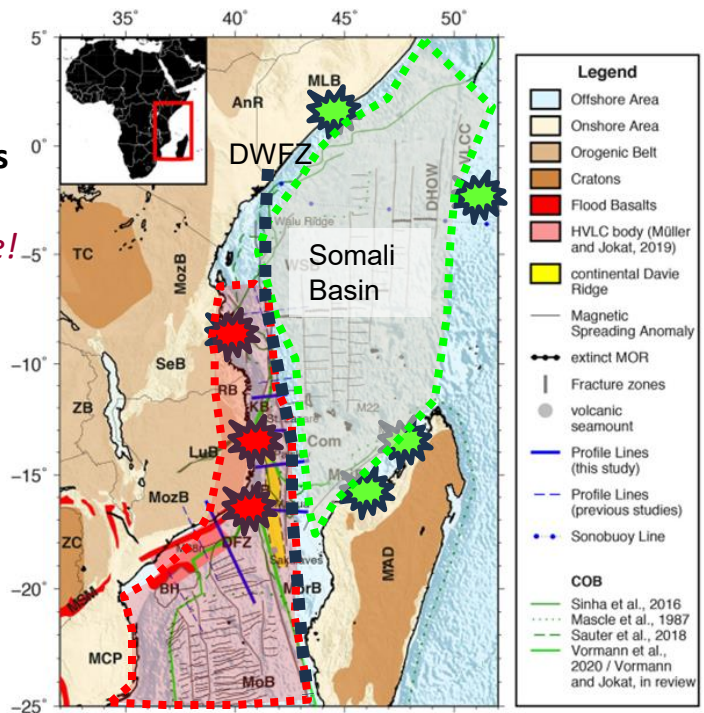
West and South of the DWFZ all of the recent multi-Tcf gas discoveries, offshore **Rovuma & Mozambique Channel**, lie in an area where **flashing** processes were 'in play' across the Pliocene due to tilting/uplift associated with the EARV

East of the **Davie Walu Fracture Zone (DWFZ)**, on the conjugate margin of the Somali Basin we see strong evidence for oil not gas, ie Seychelles, Madagascar and onshore Somalia . This area did not see the oil loss to gas via fractionation



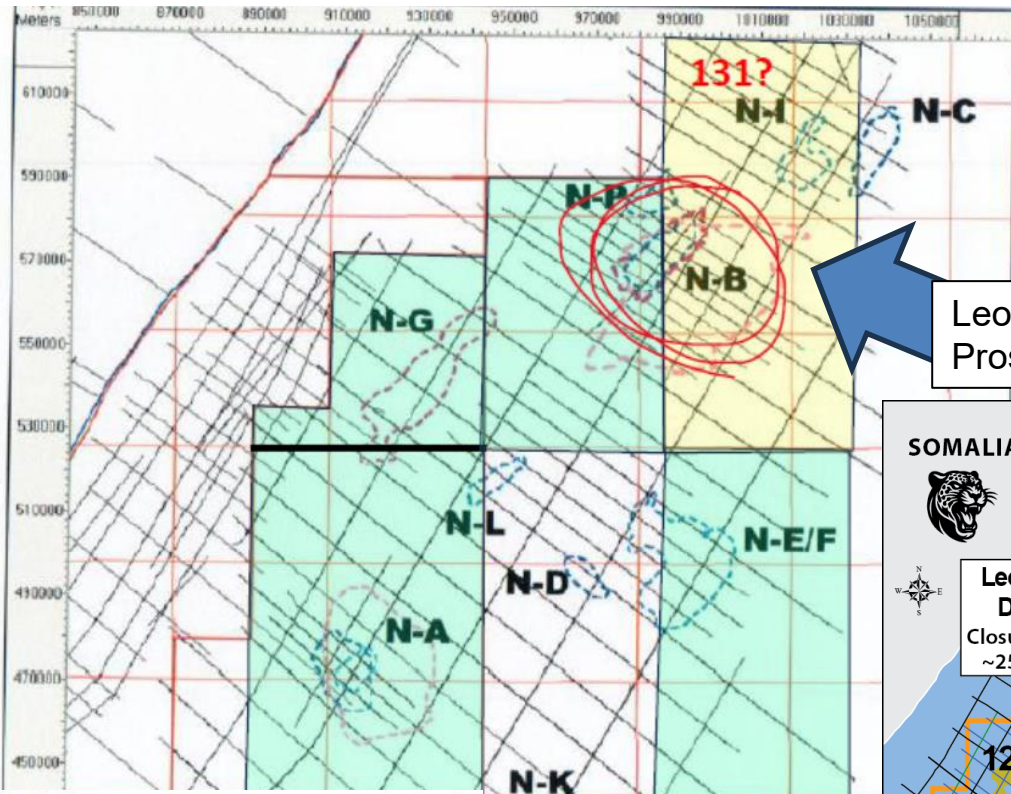
Davie Walu Ridge Gravity High

- **Why is there so much gas charge offshore Tanzania/Mozambique?**
High Maturity levels and 'Flashing' of oils to gas.
- **What is the source rock for all this gas (> 60 Tcf)?**
Oil Families 1-4 (Permo-Trias to Late Jurassic).
- **What is the source rock for oil seeps onshore Tanzania?**
Oil Families (OAE0) 4 and 5 (K/T)
- **Why do we see Tar Balls washed up along the beaches of East Africa and what does this say about charge?**
Oil charge is extant across the Somali Basin & oils have a Jurassic carbonate signature!
- **What emphasis should we place on repeatable SAR based oil slick observations offshore East Africa?**
Its compelling evidence for oil charge, oil maturity and migration!
- **Is the Somali Basin Oil or Gas Prone?**
36 API Oil (Family 5 (K/T) has been produced onshore Somalia in Afgoi-1. Our new model suggests the Somali Basin is oil prone as it hasn't been uplifted avoiding the flashing of oil to gas via depressurization



After Vormann & Jokal 2021

RPS/SOMA Published Leopard Prospect Maps (2015)

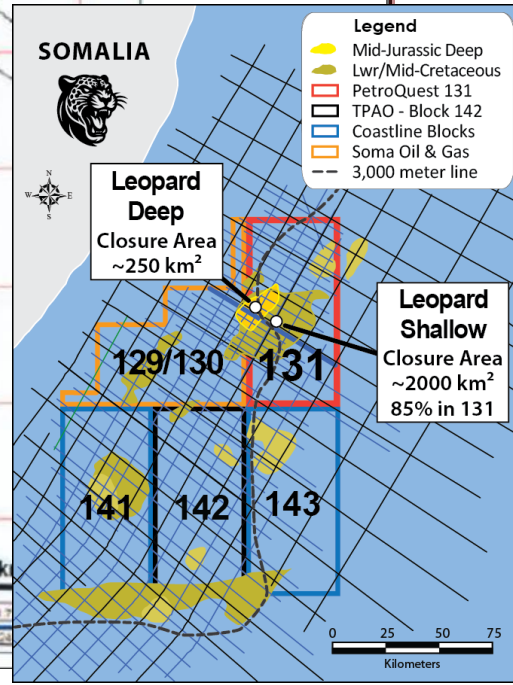


North Area

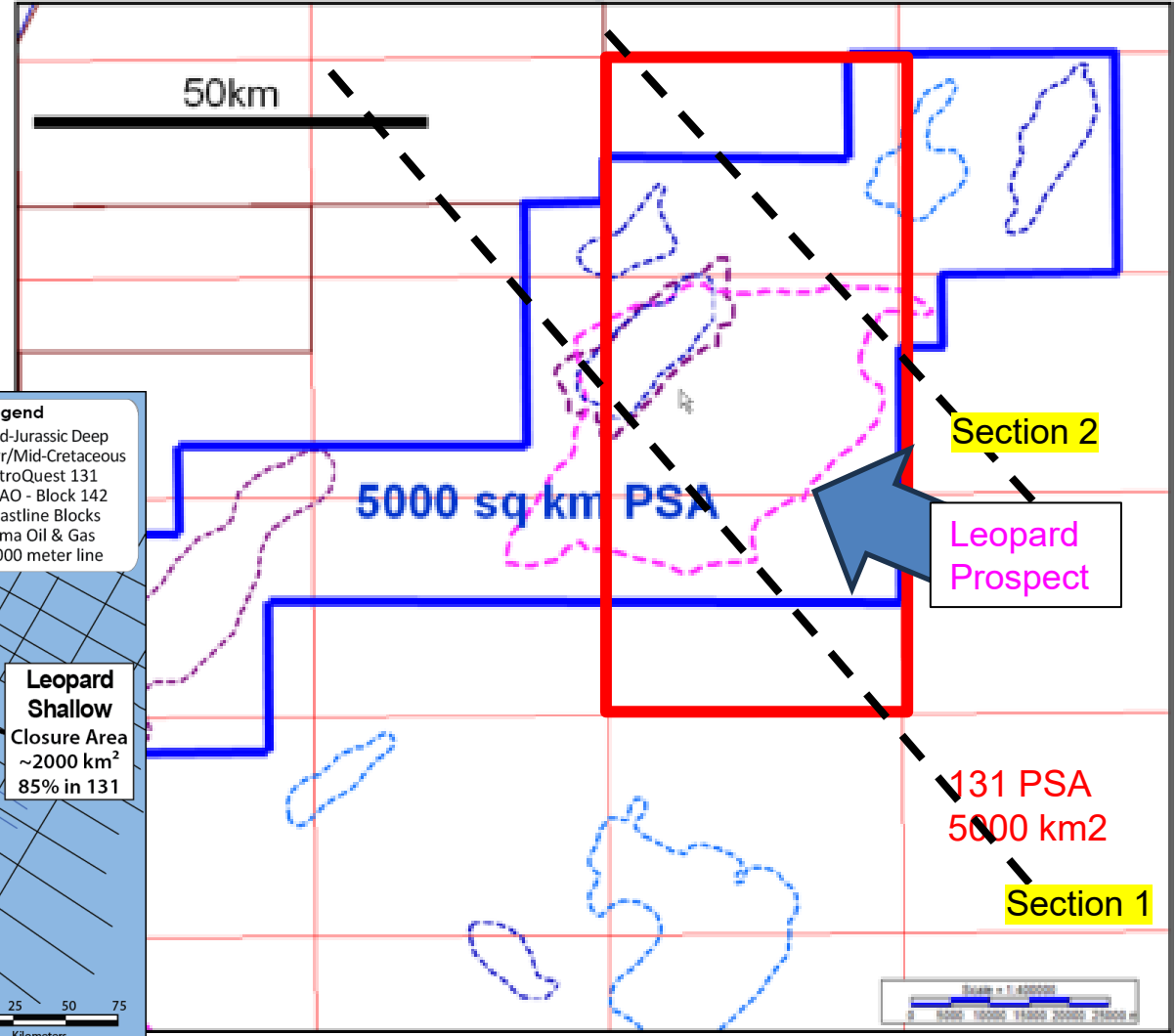
- 22 mapped Prospects & Leads
- Mainly large simple structures at Cretaceous and Jurassic horizons
- U. Cretaceous and Mid Jurassic carbonate reef reservoir predicted from seismic
- Reservoir presence at other levels is more speculative
- Lower Jurassic source rocks relatively shallow – could be hydrocarbon mature at present day

Red	N6.5	Upper Cretaceous
Pink	N7	Mid Cretaceous Unc
Dk Blue	N7.5	Upper Jurassic Unc
Purple	N8.6	Mid Jurassic carbonate
Blue	N9	Base Mid Jurassic Unc

RPS Report 2015



After SOMA Oil & Gas 2015



Magenta Cretaceous (Leopard Shallow)
 Dark Blue Upper Jurassic
 Purple Middle Jurassic (Leopard Deep)
 Light Blue Lower Jurassic Unconformity

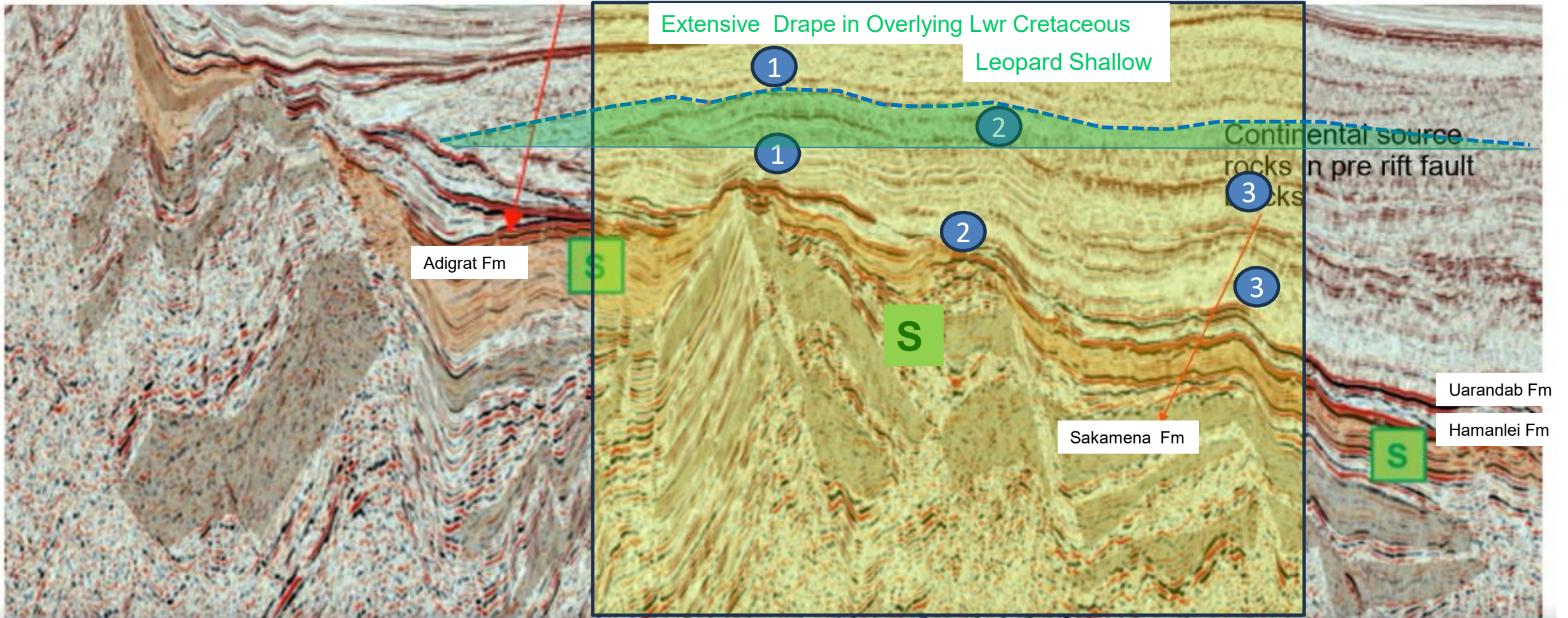
MC2D Seismic Data: Three Fault Block & Drape Structures

Post Rift-Drift Lwr-Mid Cretaceous Carbonates in Drape Rollovers

NW

Shallow marine/restricted marine shales predicted in syn-rift half grabens

SE



Section 2

Transect through Block 131



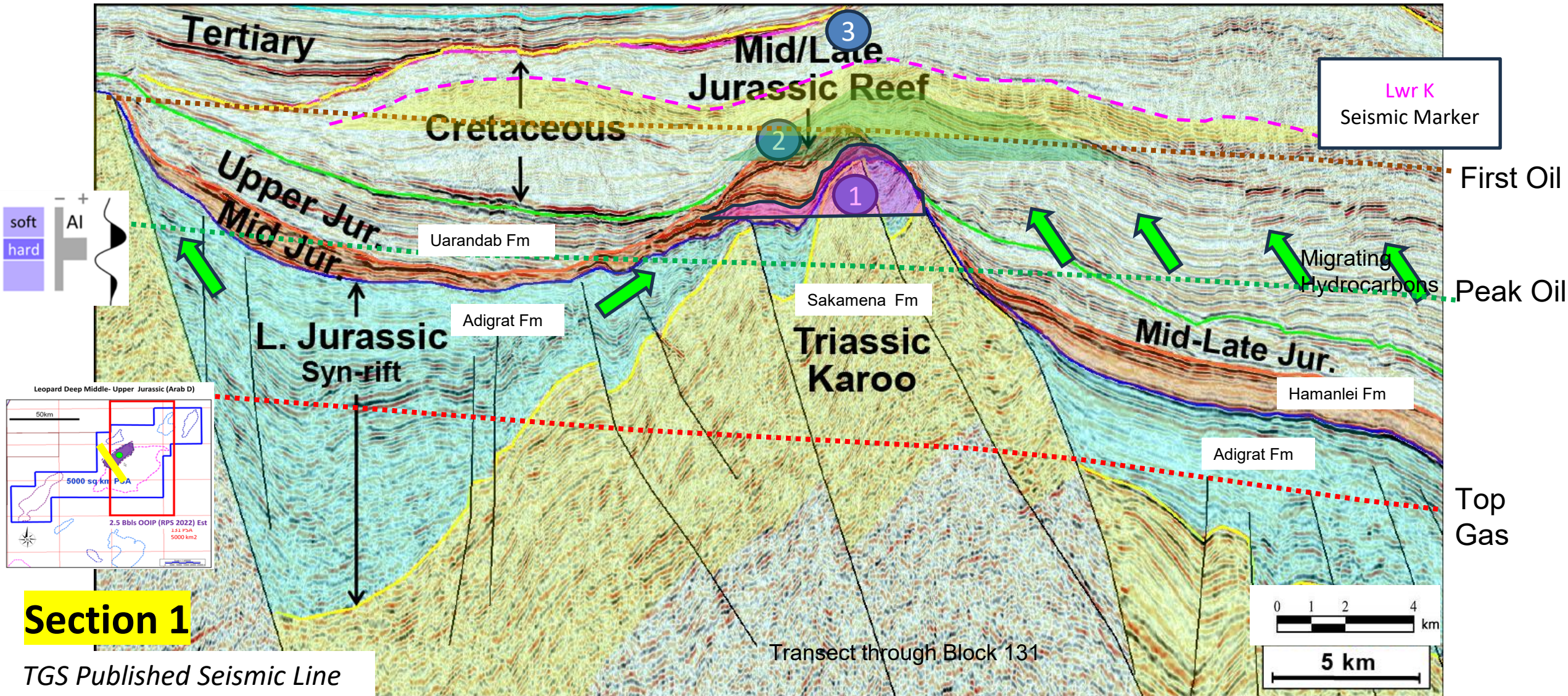
Leopard Structure (PSA 131) Vertically Stacked Oil Potential

Jurassic to Lwr Cretaceous Drape Developed over a Karoo Horst Structure

NW

Note: Leopard Prospect is present at Play Levels 1, 2 and 3

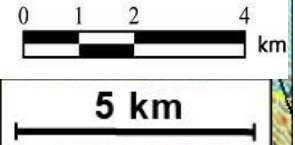
SE



Section 1

TGS Published Seismic Line

Transect through Block 131



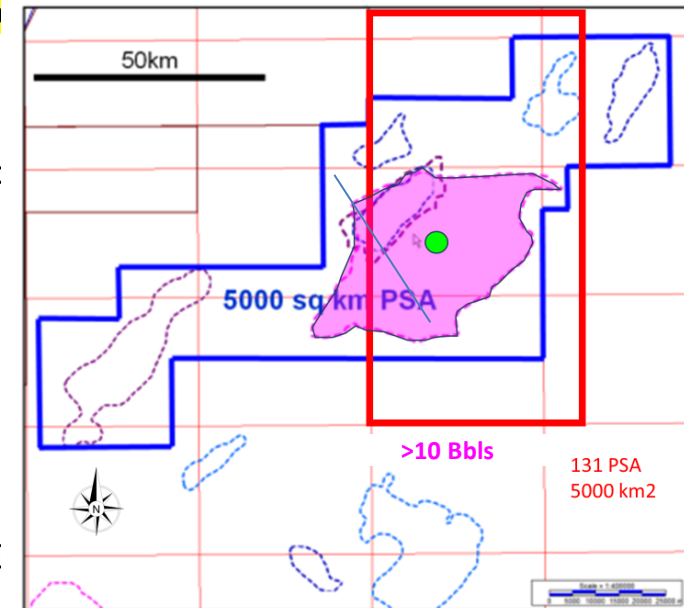
Leopard Prospect: 2015 RPS and SOMA MC2D Mapping Results

RPS Polygon Area
2000 km² Leopard
Shallow

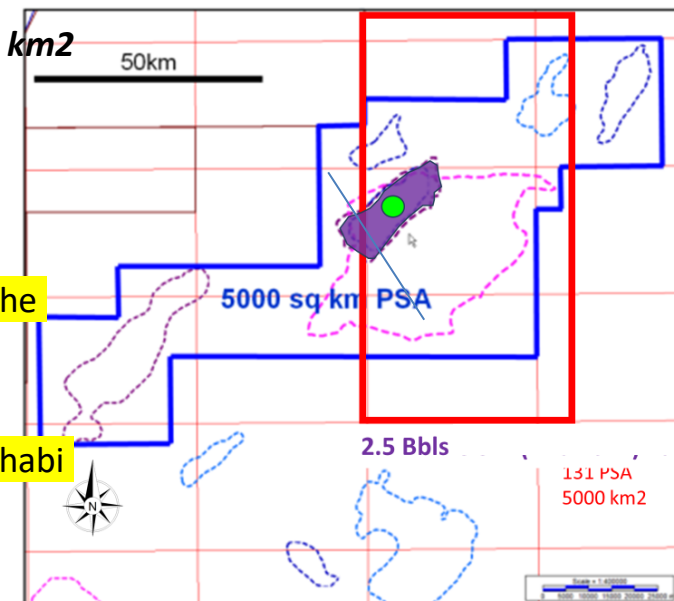


RPS Polygon 300 km²
Leopard Deep

Leopard Shallow Lwr-Mid Cretaceous (Thamama Grp)



Leopard Deep Middle- Upper Jurassic (Arab D)



▶ Relatively un-faulted four-way dip closure is mapped at the level of the top syn-rift, post-rift 1 (Jurassic) and drift (Lower- Cretaceous).

▶ Oil Mature Sources rocks are evoked within the late syn-rift sag phase (Early Jurassic (Adigrat Fm) and early post rift phase Middle Jurassic (Hamanlei Fm) and Upper Jura (Uarandab Fm)

▶ Potential Reservoirs lie within mapped Middle Jurassic bioherm systems, and Lower Cretaceous Carbonate retrograding shoal systems.

▶ Thick effective seal and reservoir units have been penetrated onshore Obbia-1 and C (Sinclair) with oil shows across both the Jurassic and Lower Cretaceous.

▶ Area of closure for Leopard 'deep' is **300 km²** at Middle Jurassic level and over **2000 km²** at Leopard 'Shallow'

▶ RPS (2015) suggest **2.5-billion-barrel (un-risked) recoverable oil** at 'Leopard Deep'

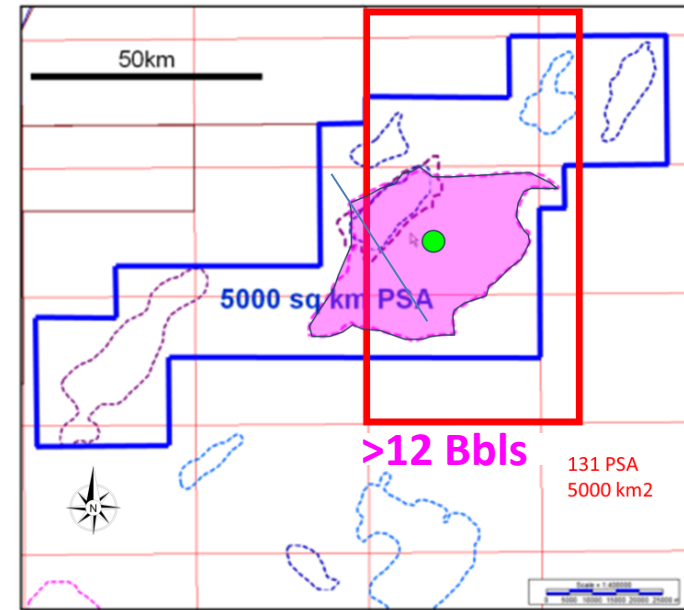
▶ RPS lack resource numbers for Leopard Shallow, perhaps they didn't fully recognize the drape potential. However, my un-risked numbers suggest > 10 Bbls recoverable!

▶ An excellent producing analogue exists for Leopard Shallow in the Zakum field Abu Dhabi (UAE) with recoverable oil reserves in excess of **18 Bbls!**

Leopard Prospect: Mapping Results & Screening Oil Volumes

- ▶ Relatively un-faulted four-way dip closure is mapped at the level of the top syn-rift, early post-rift 1 (Jurassic) and drift (Lower- Cretaceous).
- ▶ Oil mature source rocks are evoked within the late syn-rift sag phase (Early Jurassic (Adigrat Fm) and early post rift phase Middle Jurassic (Hamanlei Fm) and Upper Jurassic (Uarandab Fm)
- ▶ Potential Reservoirs lie within mapped Middle Jurassic bioherm systems, and Lower Cretaceous Carbonate retrograding shoal systems.
- ▶ Thick effective seal and reservoir units have been penetrated onshore Obbia-1 and Gira-1 (Sinclair) with oil shows across both the Jurassic and Lower Cretaceous.

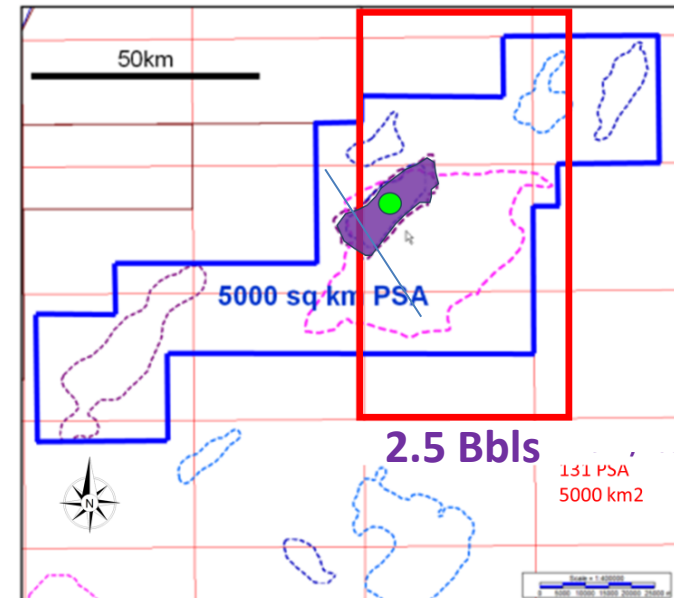
Leopard Shallow Lwr-Mid Cretaceous (Thamama Grp)



RPS Polygon Area
 2000 km2 Leopard
 Shallow



Leopard Deep Middle- Upper Jurassic (Arab D)



RPS Polygon 300 km2
 Leopard Deep

Note :Screening Volumetrics Only! Oil Only Cases

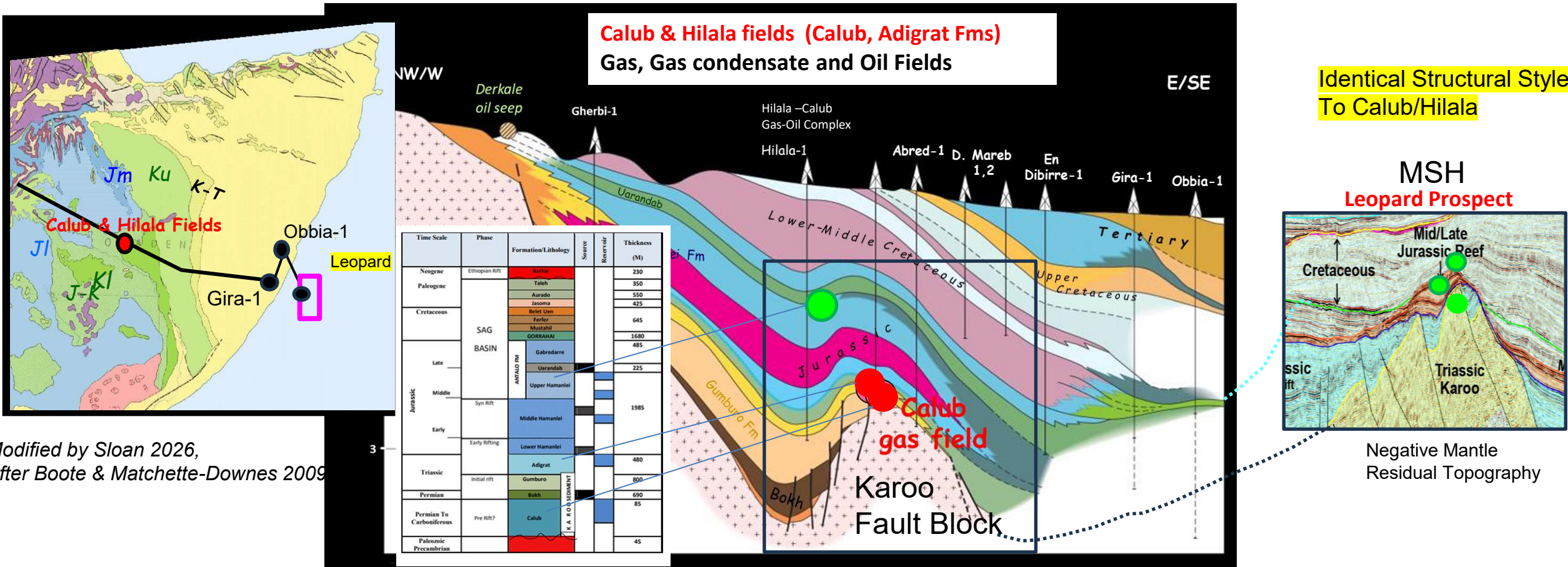
Type	Leopard Shallow Entire	Leopard Shallow 131 85:15 131/130	Leopard Deep Entire	Leopard Deep 131 50/50 split 130/131
STOOIP	32.6878 Bbls	27.78463 Bbls	12.4846 Bbls	6.2423 Bbls
Reserves	09.8063 Bbls	8.335389 Bbls	03.7454 Bbls 2.5 Bbls RPS	1.8727 Bbls
Risked Reserves	0.88257 Bbls	0.750185 Bbls	0.63671 Bbls	0.3183 Bbls

Cross-section Schematic Linking Onshore Somalia to Offshore

Schematic Showing Genetic Relationships at Calub/Hilala and the Leopard Prospect



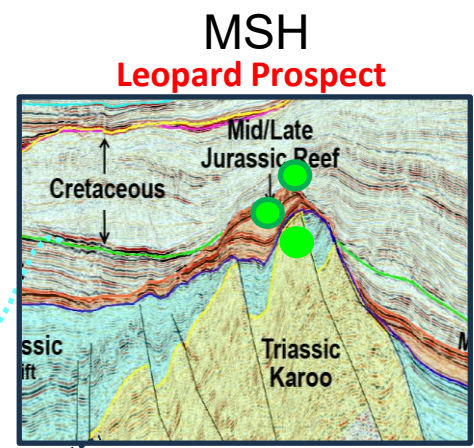
(2022) 7 Tcf (11.4 Bboe) in the El Kuran/ Dohr /Hilala/Calub Gas, Gas Condensate and Oil fields)



Modified by Sloan 2026,
 After Boote & Matchette-Downes 2009

Positive Mantle
 Residual Topography

Identical Structural Style
 To Calub/Hilala



Negative Mantle
 Residual Topography

Ethiopia's Prime Minister Abiy Ahmed said in statement on X dated Oct. 2 2025 that GCL is working on constructing the new Gode oil refinery a 70,000 b/d facility that will process domestic crude.

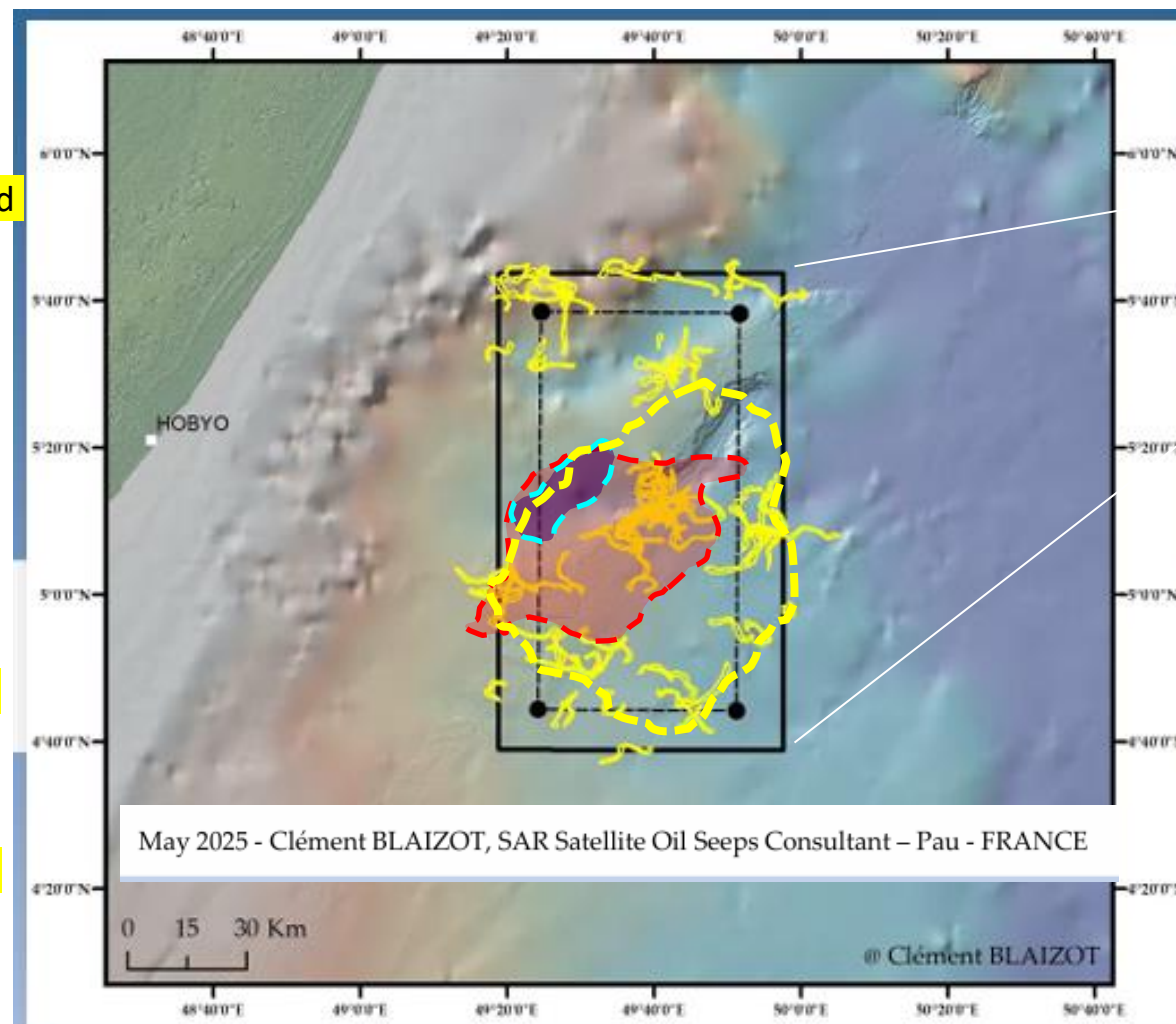
All Super Giant Oil Fields Leak! Is Leopard Prospect Leaking??

SAR Natural Oil Seep Analyses

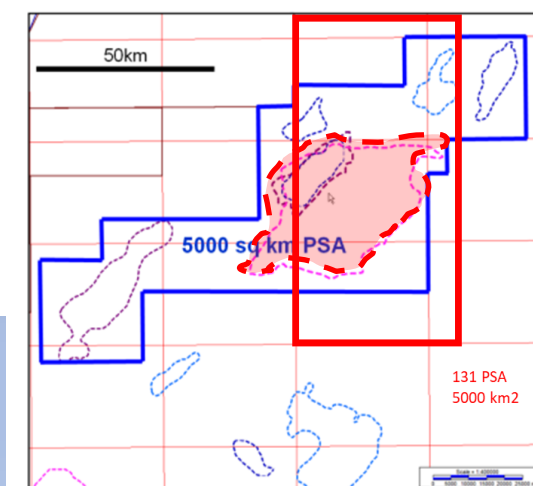
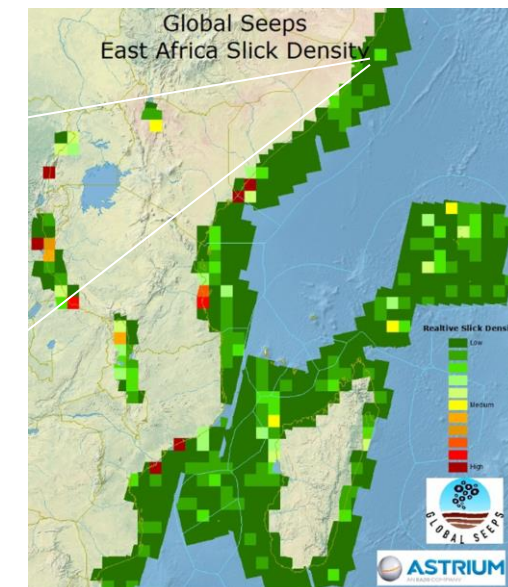
Somalia Affiliate



- With such large oil volumes evoked for Leopard we might expect the structure to be leaking! So, we commissioned a SAR seep analyses study using a global authority on such matters (Clement Blaizot).
- Clement mapped 86 separate repeatable oil seeps over Block 131.
- Many seeps appear to be co-located with the RPS 2015 mapped closure of **Leopard Shallow**.
- The repeatability of many oil seeps suggests that Block 131 has a pervasive naturally occurring oil seep system. Thus, validating our novel oil charge model!

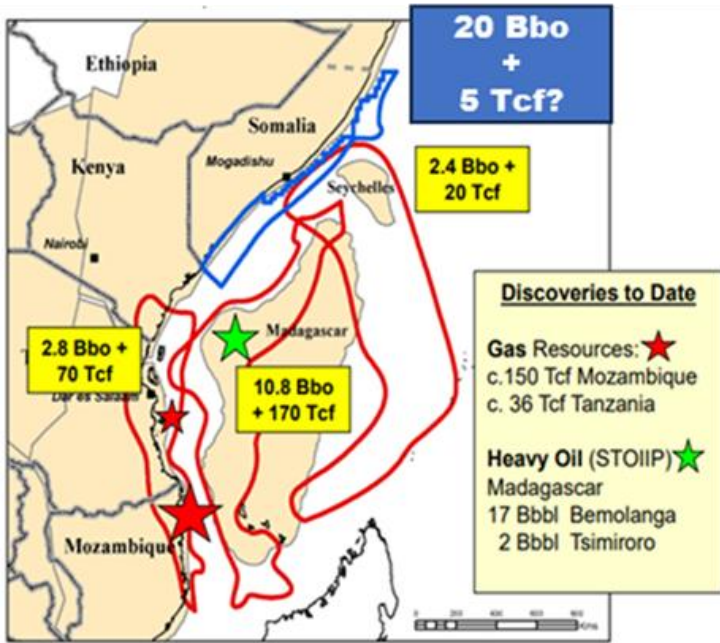


Study Area (sq/kms): 5 000 km²
Coverage of SAR data: max 136, min 104, average: 87
Total number of potential Oil Seeps : 86

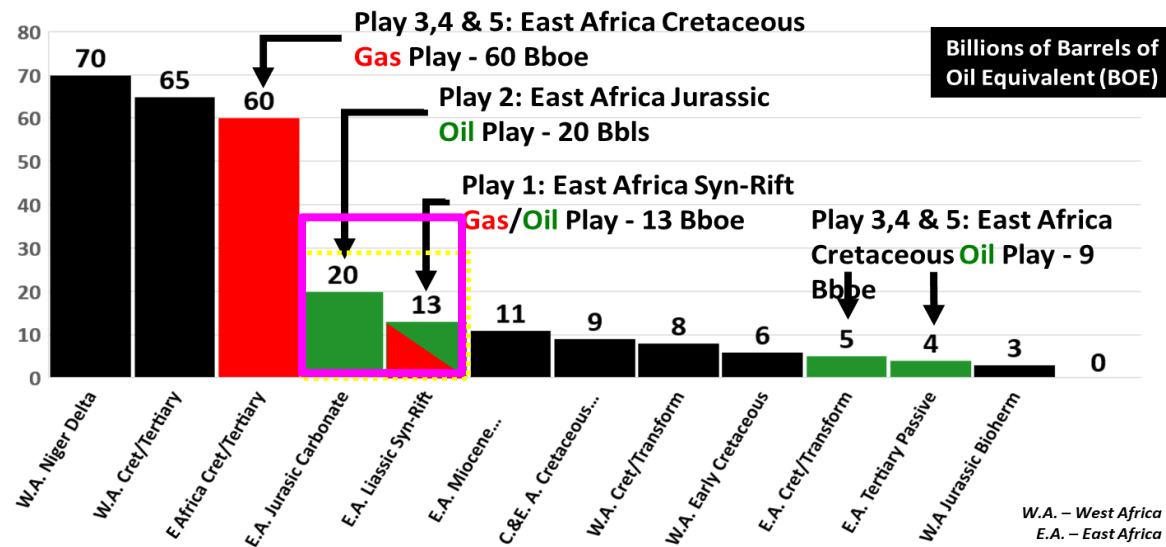


The Leopard Prospect: A Summary

Ground-Floor, Multi-Billion Barrel, Frontier Oil Opportunity!



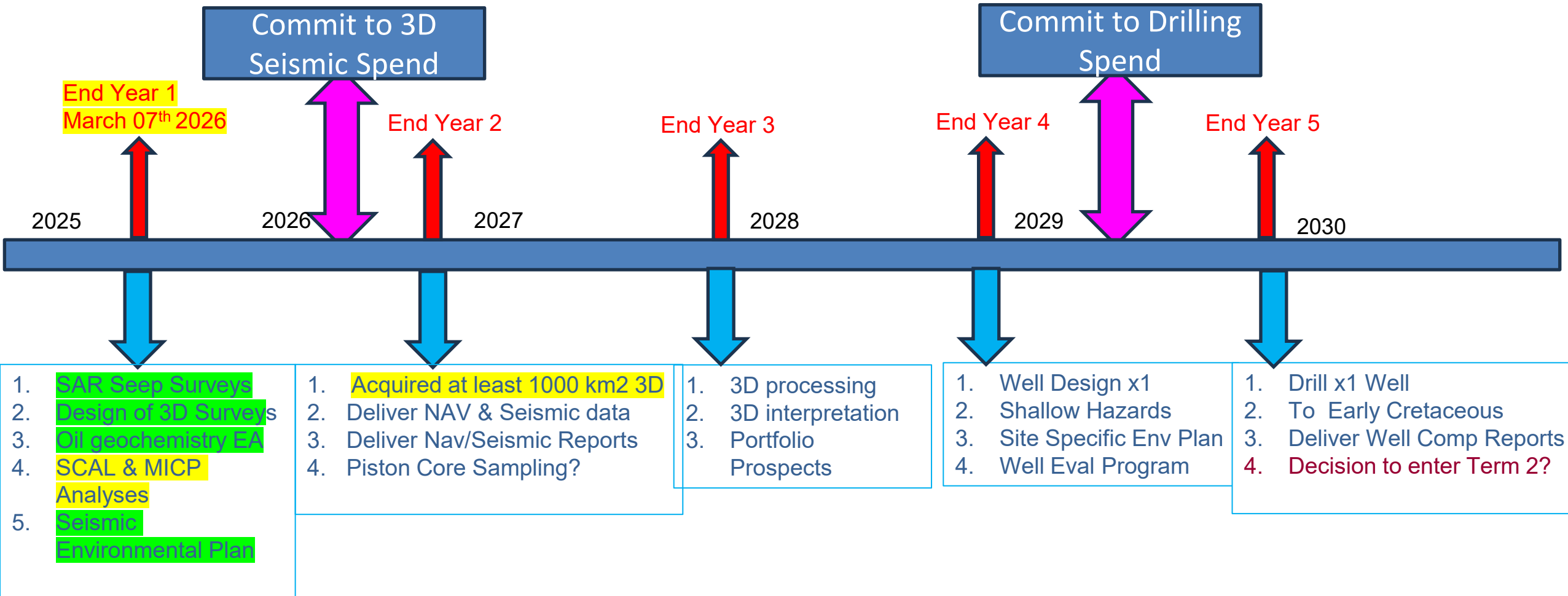
- ▶ Detailed Geochem analyses shows offshore Somalia has an 'Oil Story' linked to opening of the Somali Basin
- ▶ Three oil families generate Bbls of oil across the Somali Basin including **24 Bbls exhumed** in Madagascar alone
- ▶ Seismic & regional well data suggests 3 oil families in Block 131, all are oil mature at the Leopard Prospect
- ▶ The Leopard prospect was identified by PQA1 during a screening view of the MC2D data in 2015
- ▶ Leopard has been mapped **independently** by Soma Oil and Gas and RPS Energy who had access to all the MC2D
- ▶ RPS Energy assigned 2.5 Bbls of recoverable oil in Leopard Deep and 10 Bbls recoverable in surrounding blocks
- ▶ Leopard has stacked petroleum systems and plays with oil prone ; source, reservoir, trap and seal combos
- ▶ Repeatable oil seeps mapped independently on SAR data over Leopard confirm our novel Oil Charge model
- ▶ The SAR analyses suggest that Leopard is leaking and may be filled to spill and that is possibly Bbls of oil!



USGS puts 33 Bboe in the Jurassic oil play offshore East Africa

Exploration Work Program Time Line - 'Idealised'

Work Program Summary Years 1-5 (After Yr1 2014 Clock Reset to Q1 2025)



- a) 3D seismic decision points by August 2026 commit to 3D seismic spend
- b) Drilling decision point August 2029

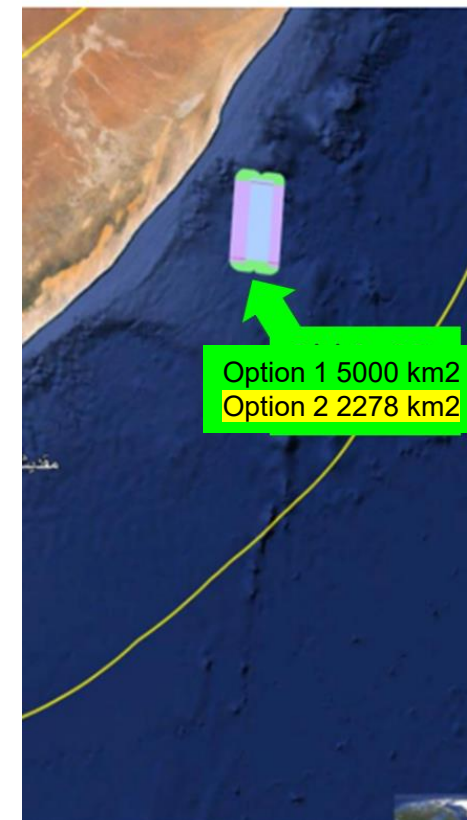
Derisking Leopard Prospect: Acquire, Process & Interpret 3D

De-risking Strategy

- The legacy MC2D data is single sensor and is likely **acquisition constrained (over 10 years old)**
- If we mature Leopard to drill status, rig underwriters will require a detailed 3D shallow hazards survey be performed and this can be provided by the 3D survey (I've done this before).
- As the target zones are likely carbonates, 3D seismic is required to optimise the well location, vis a vis the targeting of reservoir 'sweet-spots' and complex depth closures.
- In 2024 OPCOM SPA (Regulator) agreed to substitute our commitment to purchase the MC2D across 131 (2770 CDP line kilometres) for new 3D acquisition in Block 131.
- In 2025 we completed our Environmental Audit for block 131 and have a permit to acquire 3D seismic, in hand.
- With the appropriate vessel we will acquire a 'state of the art' high quality 3D seismic survey either 1) Over the entire 131 PSC (5000 km²) or 2) more likely a 2278 km² sub-set thereof.
- The 3D will be likely acquired by TGS who are keen to work with us and we've basically nussed out most of the contractual terms and we have a number of budgetary costs (**21 mm USD**)
- The data will likely be processed using Full Elastic MP-FWI, velocity modelling and depth imaging. This will allow Vp and Vs and density volumes to be output allowing DHI interpretation.
- It will be interpreted using **3D Canvas** and **Geoteric Software** and will include advanced QI processing for Recon AVO and Spectral Analyses via **Sharp Reflections** and **Apex Spectral Technology** respectively.

Cost Element	Option 2 Cost	Obbia
Mobilisation (Fixed) (30 day steam)		06.000 mm USD
Deployment 7 days (12x 10,000m)		Included in Mob
Production Shooting includes 5% infill		10.511mm USD
Infill Plus = 5% of 2278 =114 km² x 4614 (Optional contingency)		<0.5255 mm USD>
Client Standby W/C/F/ELC (5% of total time)		0.9583 mm USD
Extended Line Change Standby 15% of LC (contingency)		<0.3984 mm USD>
Gear Pick-up 7 days		Included in demob
Demob		02.500 mm USD
Total (Acquisition Cost not AFE Cost)		20.89 mm USD

6.0 mm USD mob
 4614 USD /km² Prime
 4614 USD /km² Infill
 17,360 /hr standby charge
 2.5 mm USD Demob



Maturing Leopard Requires 3D (Dual Sensor) Seismic Ahead of Drilling

Obbia 3D (2278 Km²): Triple Source 12 x 8 km streamers (150m streamer separation)

6.0 mm USD mob
 4614 USD /km² Prime
 4614 USD /km² Infill
 17,360 /hr standby charge
 2.5 mm USD Demob
 Mob/Demob = 8.5 mm USD

2278 x 4614 = 10.51 mm USD 2278 km² Production Shooting
 5% infill = 5% of 2278 km² 115 km² x 4614 = 0.5255 mm USD
 Lay-out 7 days
 Pick-up 7 days
 Weather Downtime – Waves/Swell/Storms/Currents/Fishing Gear 5% of 46 days = 2.3 days x 24 = 55.2 hrs of downtime x
 17,360 = 0.9583 mm USD
 # line changes = 50
 4 hours 06 min in line change time 15 % of line changes have extended line change > 4 hours 06 mins so that is 7.62 turns have
 plus 3 hour extended line change = 23 hours x standby rate = 0.3984 mm

3D survey size "2,278 FF sq km – with an efficient N/S 0/180 degrees sail line azimuth



Cost Element	Obbia
Mobilisation (Fixed) (30 day steam)	06.000 mm USD
Deployment 7 days (12x 10,000m)	Included in Mob
Production Shooting includes 5% infill	10.511mm USD
Infill Plus = 5% of 2278 =114 km² x 4614 (Optional contingency)	<0.5255 mm USD>
Client Standby W/C/F/ELC (5% of total time)	0.9583 mm USD
Extended Line Change Standby 15% of LC (contingency)	<0.3984 mm USD>
Gear Pick-up 7 days	Included in demob
Demob	02.500 mm USD
Total (Acquisition Cost not AFE Cost)	20.89 mm USD



TGS Ramform Sovereign
 Option 2: 2278 km²
 Triple Source & 12 x 8 km

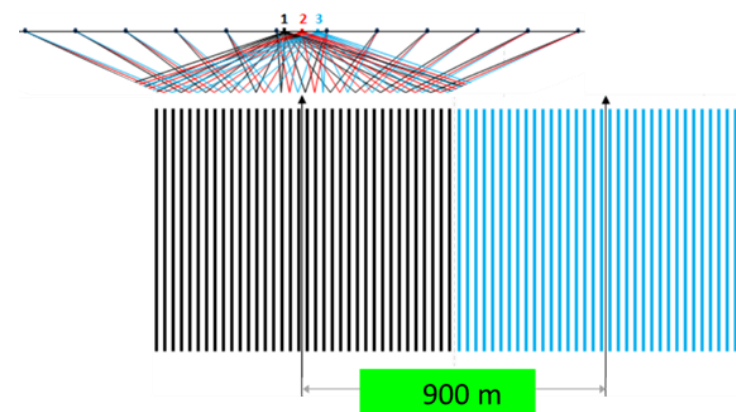
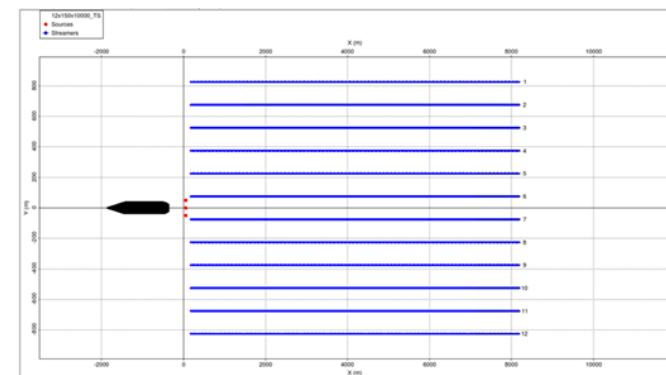
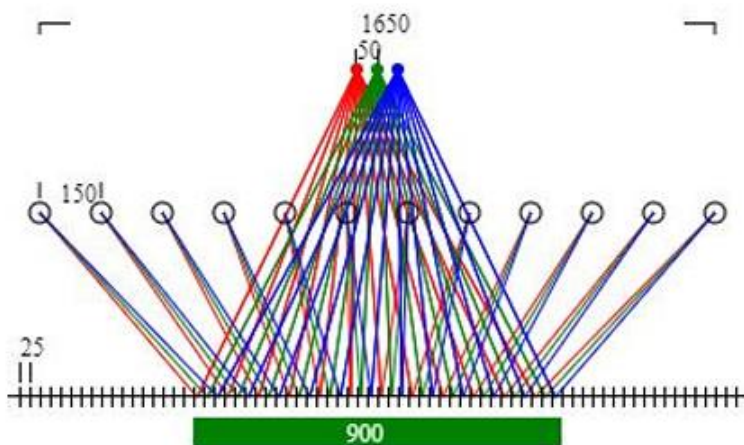
Sense Check 2278 km² = 20.89 million USD = 9170 USD/km²)

Seismic Acquisition Parameters

Somalia Affiliate



Acquisition Configuration



Streamer type	GeoStreamer – Dual sensor	
Number of streamers	12	
Length of streamers [m]	8,025	
Separation of streamers [m]	150	
Depth of streamers [m]	20	
Nominal Fold	100	
Acquisition bin size [m]	in-line 6.25	x-line 25

Source		
Source type	Bolt 1900 LLXT	
Number of sources	3	
Air pressure [psi]	2,000	
Volume [cu in]	3,800	
Source separation [m]	50	
Number of sub-arrays (per source)	2	
Sub array separation [m]	10	
Source depth [m]	8 - to be confirmed from pre-survey modelling	
Shot point interval [m]	16.667	

Data Recording

Record length [s]	15s (Continuous Recording) Clean Record length : TBC
Sample rate [ms]	2
High cut filter, all	214 Hz @ 341 dB/octave
Low cut filter, hydrophone	'Off' (equivalent with 2Hz @ dB/octave)
Low cut filter, raw geosensor	matched to hydrophone
Low cut filter, matched geosensor	3.04Hz @ 7.5 dB/octave
Gain setting hydrophone	0
Gain setting geosensor	18

Option 2a : AFE Costs: Obbia 3D (2278 Km2)

AFE Cost includes overall 8% contingency



- 1) Cap total possibly standby costs to 5% or some other agreed number (Manages Current, Storm, Fishing Issues)
- 2) Bunkering Costs to be responsibility of TGS (although the cost per tonne of MGO/HLSHFO to be bracketed)
- 3) Cap Infill costs to 5% or some other agreed number (Manges Current issues)
- 4) Cap extended line change time by raising extended line change time to 4.5 hours and capping ELC
- 5) PGS state they will pay no VAT as per binding quote
- 6) Need to tie TGS down to binding Insurance and Security Costs

Acquisition Cost AFE +G&G + 8% over-run
Processing Cost AFE + G&G +8% over-run
Interpretation Costs +G&G

Company QC = (Mark Sloan /Simon O'Toole) + Nav QC
 Processing QC = Mark Sloan or Another
 Interpreter = Mark Sloan or Another

Cost Element (# of days)	Contractor Cost (USD) MM	Company G&G Costs (USD) MM
Acquisition 2300km2 (131)	20.89 mm x 8% = 20.89 +1.6712 = 22.5612 mm	0.190 Company Men + Nav QC
Insurance (time dependant)	0.65700 mm/month x 1.5333 months (1.0074 mm)	-
Security & Vessel Hardening	0.81 mm/month x 1.533 months (1.24173 mm)	-
Processing 150 days	1.241522 mm x 8% = 1.30844 mm	0.230 Processing QC (10 months)
Interpretation 180 days	0.098 mm (Petrosys + 3D Canvas)	0.130 Interpreter (6 months)
Consultants	0.800	
Total	27.219 mm USD (27.769 mm USD)	0.55 mm USD

Summary 3D Seismic Cost Table

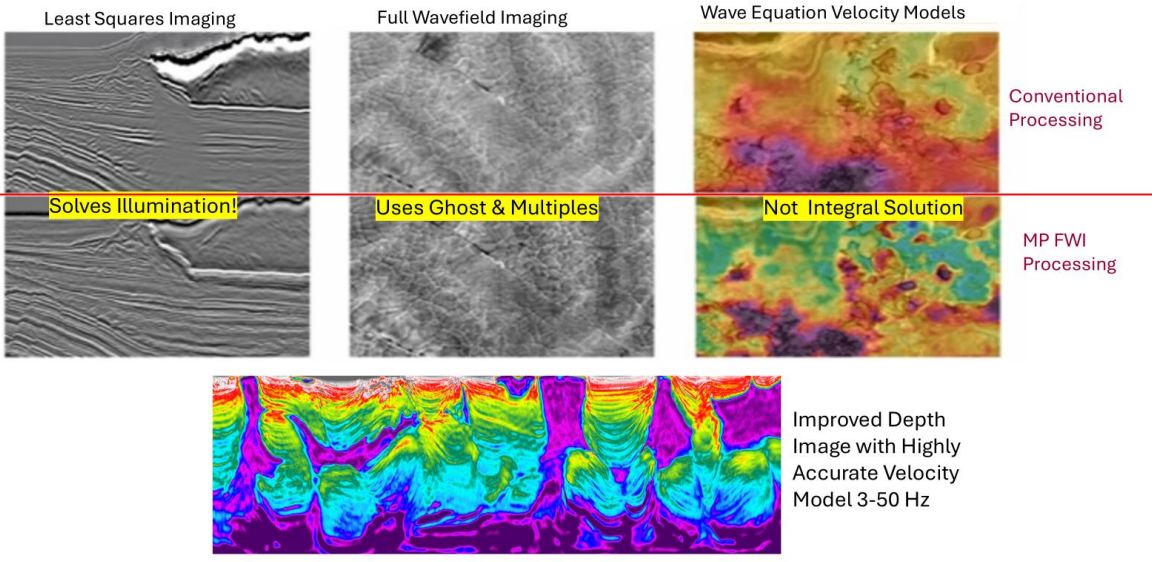
Survey Size	Acq Cost	Acq /Km2	Total AFE Cost	Cost/km2	Budgetary Date
5000 km2 Option 1	25.89 mm USD	5178 USD/Km2	34.000 mm USD	6800 USD/Km2	13/06/2025
5000 km2 WHT 5%	27.18 mm USD	5436 USD/Km2	35.500 mm USD	7100 USD/Km2	Internal LPC
2278 km2 Option2a	20.89 mm USD	9170 USD/Km2	27.219 mm USD	12190 USD/Km2	21/10/2025
1794 km2 Option 2b	19.48 mm USD	10858 USD/Km2	25.797 mm USD	14380 USD/Km2	21/10/2025
1777 km2 Option 2c	19.46 mm USD	10951 USD/Km2	25.777 mm USD	14506 USD/Km2	28/10/2025

- Acquiring a permit-wide 3D survey (Option 1) is the most cost-effective 3D option.
- Option 1 was quoted excluding 5% WHT so I've added that in to get an apples vs apples comparison with Options 2a and 2b.
- Option 2b is over double the cost of Option 1 with WHT included on a total cost/km2 basis.

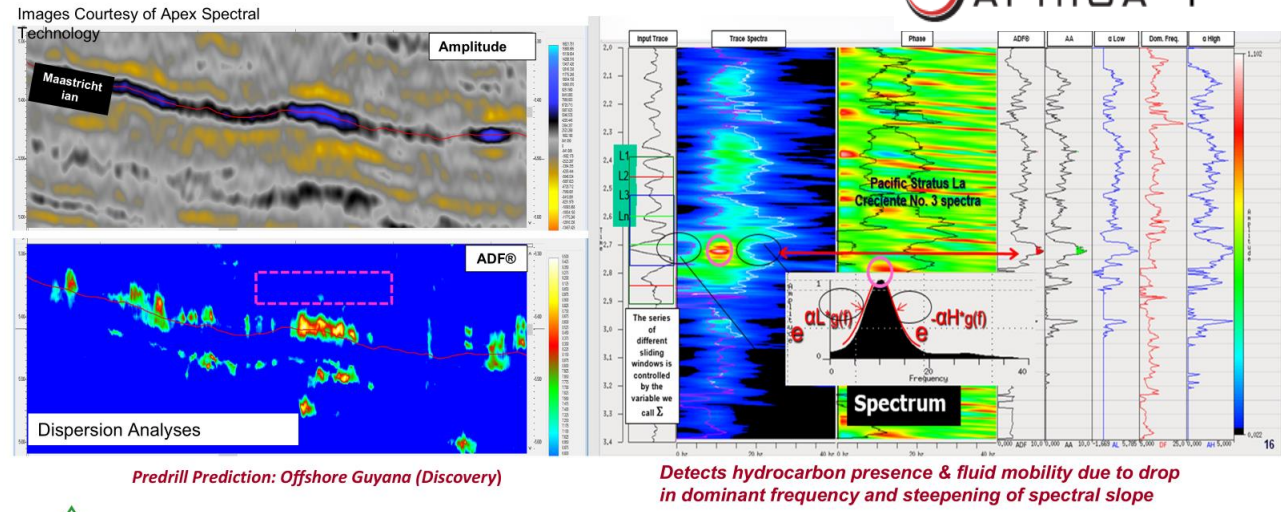
We would not acquire a survey parallel (Option 2b) to the coast due to oceanic boundary current issues and a potential blow out of infill due to Recommended targeted Obbia 3D survey is Option 2a at a total cost of 27.769 mm USD

- **The cheapest option is Option 2c which is 27.22 mm USD all up cost**
- **Note Total AFE Costs is all the costs you listed to me Lane, it's the closest to your desire for a turnkey cost.**
- **During formal negotiations I am confident we can knock 2 mm USD off the cost of Mob/Demob and am working on that.**

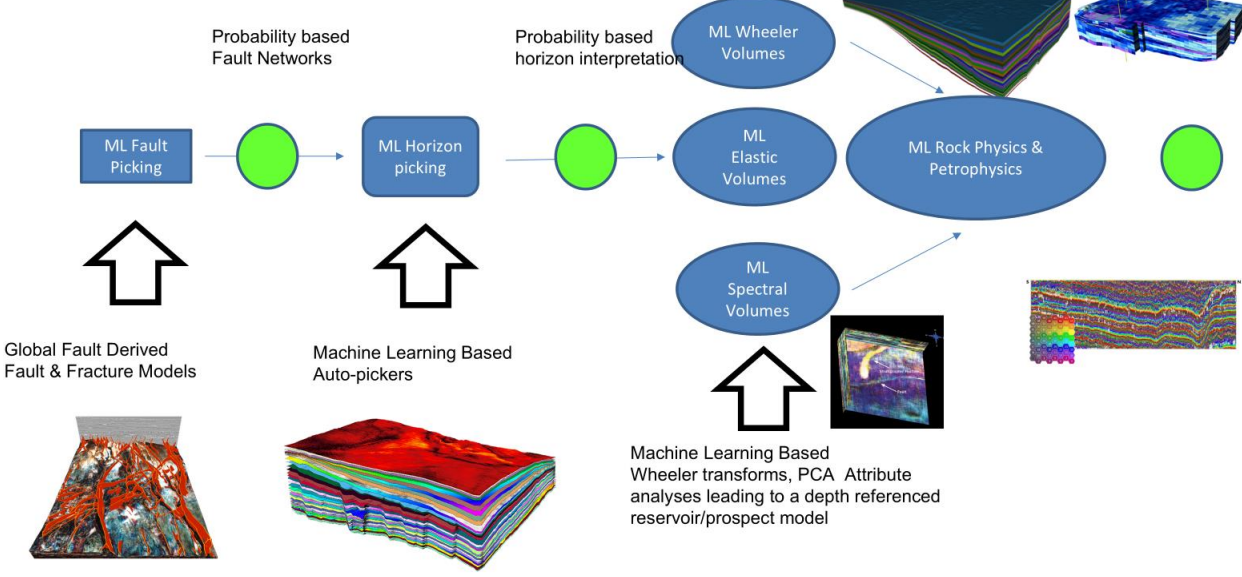
Full Elastic MPFWI Processing Vp/Vs Imaging



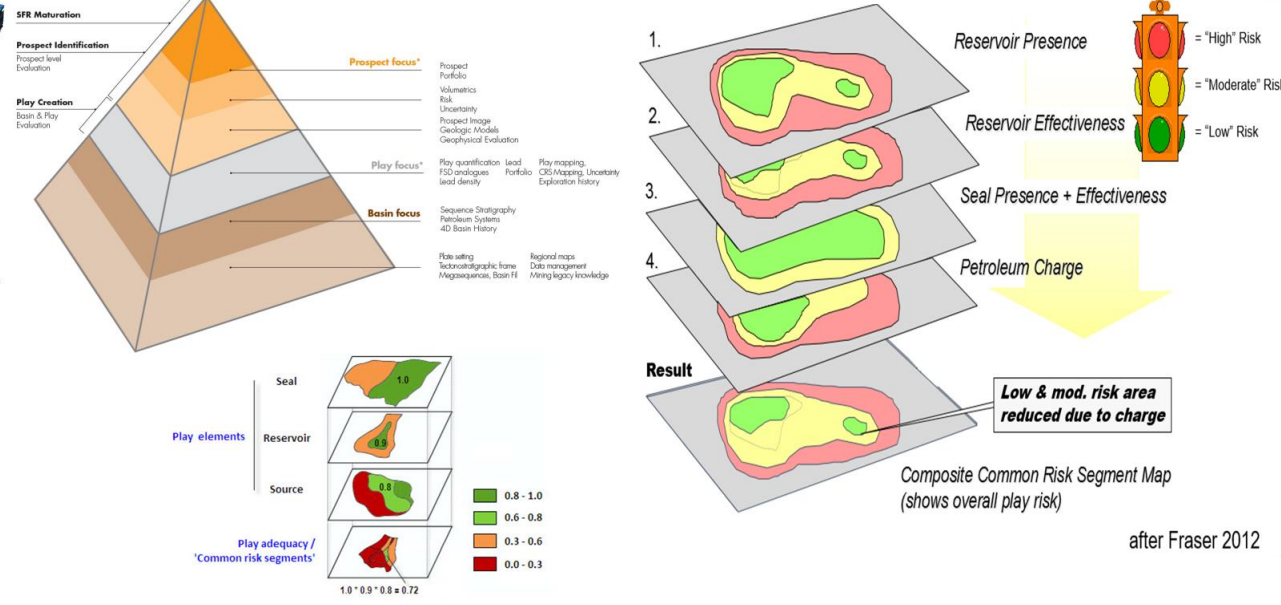
Spectral Dispersion Work Flows



Interpretation Work Flows



Play Based Exploration

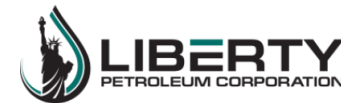


Thank You For Your Attention!

Q&A – Next Steps Discussion

Executive Team

Technical Team (Consultants)



Track Record of Success

Since 1997:

- Acquired 18 Exploration blocks world-wide
- \$2.0 B spent by Operators on LPC sourced projects.
- Four Major Discoveries
- A team of Proven NV Explorers and 'Oil Finders'

Liberty Petroleum Corporation & Affiliates

PETROQUEST AUSTRALIA

LIBERTY PETROLEUM CORPORATION

Somalia Affiliate

PETROQUEST AFRICA-1

PETROQUEST SEYCHELLES

PETROQUEST LIBERIA DEEP WATER LLC

Corporate Contact

Liberty Petroleum Corporation
10851 North Black Canyon Highway, Suite 540 e
Phoenix, Arizona 85029 USA

Lane Franks, President
E: lane@libertypetroleumcorporation.com
P: +001.602.995.7194
LibertyPetroleumCorp.com

Trent Franks (Chairman)

Lane Franks (President)

Travis Franks (Partner)

- Based on screening type volumetrics Block 131 is a strategic 'Frontier Oil Exploration Asset' (Prospective Resources (un-risked) in excess of 10 Bbls of Recoverable Oil).
- The Leopard Prospect is supported by both local, Ethiopian (Hilala) and Arabian (Zakum) oil analogues (Zakum 18 Bbls of Recoverable Oil)
- Block 131 can be de-risked, in whole or part, by acquiring a state-of-the art 3D seismic survey (The Obbia 3D) which was designed, planned and budgeted in 2025. A government approved environmental permit to acquire was received by PQA1 in 2025.
- TGS are willing to acquire the Obbia 3D survey in the next available weather window (Q4 2026) and as of last week, has boat availability. Most of the contractual terms are already agreed between PQA1 and TGS.
- Should Chevron see the same oil potential, we would be willing to sign an initial MOU to explore the block with Chevron potentially taking over operatorship, under mutual agreement.

Author	
<p>Mark Sloan MSc. BA. Manager Global Geoscience PetroQuest Africa</p>	<p>Simon O'Toole BSc. MBA Consultant Africa Operations PetroQuest Africa</p>
<p>Duncan Nuttall MSc., BSc. Drilling & Petroleum Engineering)</p>	<p>Dr Afif Arbi (PhD., BSc.) Chief Technology Officer Liberty Petroleum Corporation</p>
<p>Dr Stuart Lake PhD, BSc Ex; Shell NV, Shell VP, and Hess VP and former CEO.</p>	<p>Viktoria Ratushnyak BSc MBA Geophysical Engineer</p>
<p>Chris Matchette-Downes MSc BSc C.Geol Director AEL, CaribX & Helium Resources Ltd</p>	<p>Dr Andrew Long Ex Chief Scientist PGS & Honory ASEG Life Member</p>

Back-up

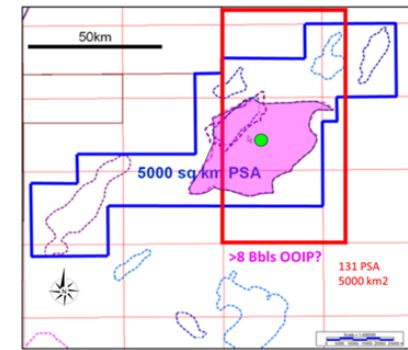
Comparison Of Screening Volumetrics Resources

Leopard Prospect Entire & 131 Only

Note :Screening Volumetrics Only! Oil Only Cases

Type	Leopard Shallow Entire	Leopard Shallow 131 85:15 131/130	Leopard Deep Entire	Leopard Deep 131 50/50 split 130/131
STOOIP	32.6878 Bbls	27.78463 Bbls	12.4846 Bbls	6.2423 Bbls
Reserves	09.8063 Bbls	8.335389 Bbls	03.7454 Bbls 2.5 Bbls (RPS 2015)	1.8727 Bbls
Risked Reserves	0.88257 Bbls	0.750185 Bbls	0.63671 Bbls	0.3183 Bbls

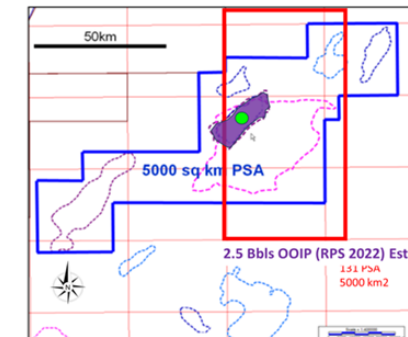
Leopard Shallow Lwr-Mid Cretaceous (Thamama Grp)



Leopard Shallow



Leopard Deep Middle- Upper Jurassic (Arab D)



Leopard Deep

RPS and Soma 2015 Mapping

- ▶ RPS (2015) suggest **2.5-billion-barrel (un-risked) recoverable oil** at 'Leopard Deep'
- ▶ RPS lack resource numbers for Leopard Shallow, perhaps they didn't fully recognize the drape potential. However, my un-risked numbers suggest **> 10 Bbls recoverable!**
- ▶ An excellent producing analogue exists for Leopard Shallow in the Zakum field Abu Dhabi (UAE) with recoverable **oil reserves** in excess of **18 Bbls!**