



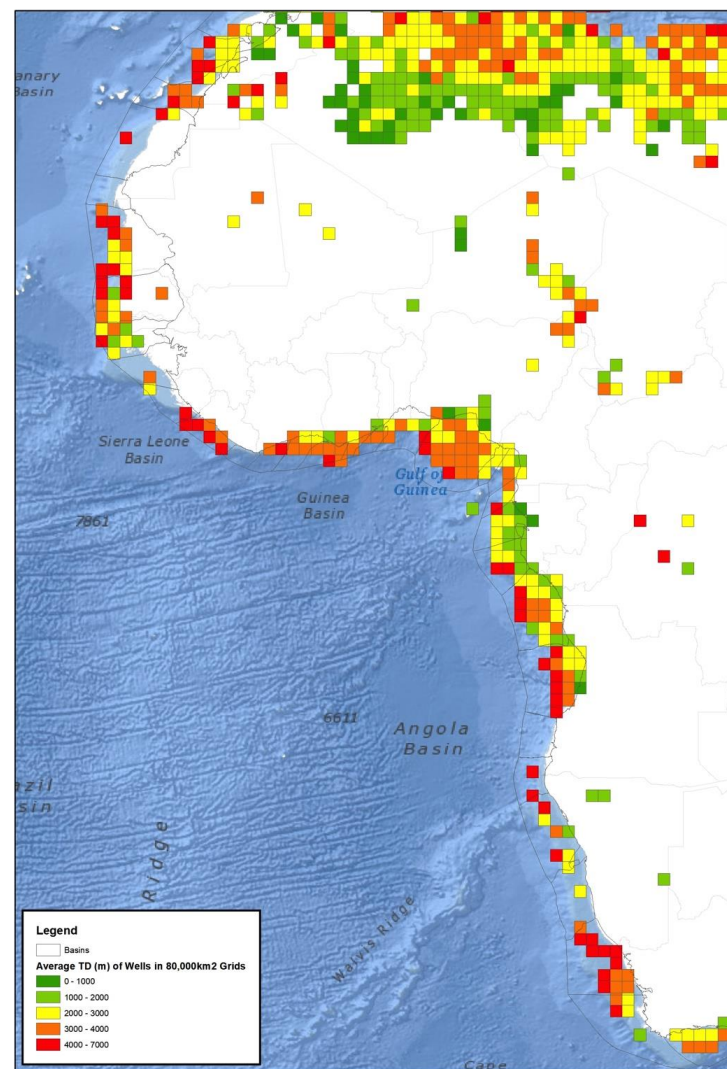
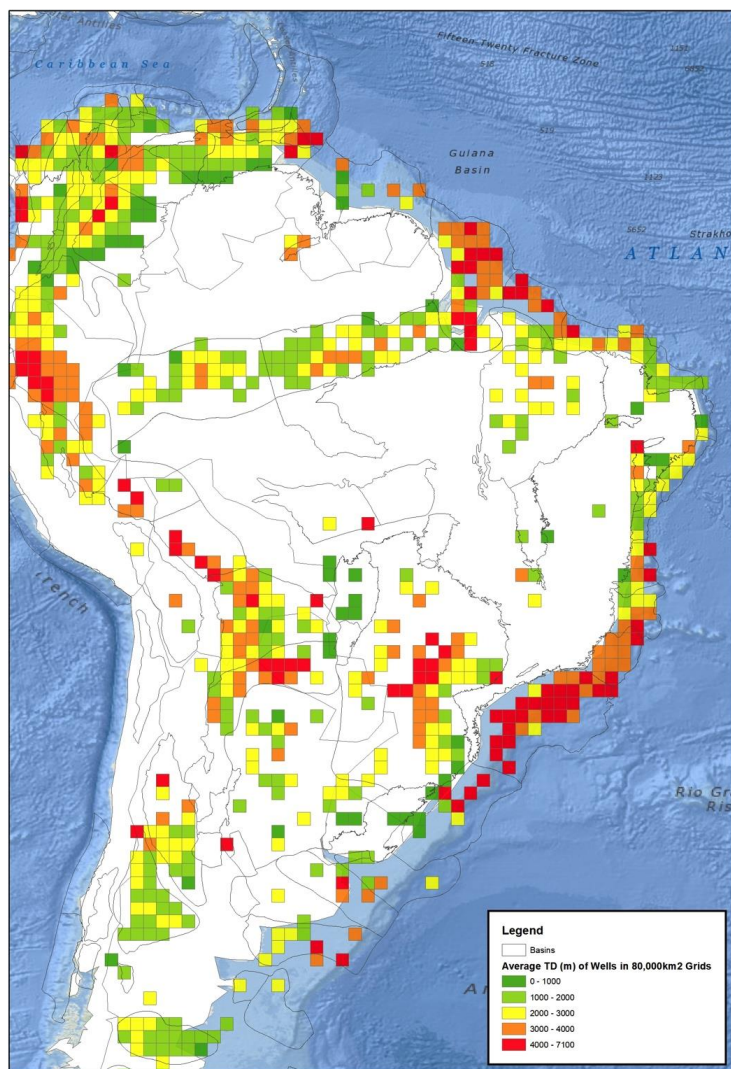
Frontier Deals and Exploration

APPEX Global 2018

Peter Elliott, NVentures

- Frontiers
- Recent frontier deals
- Summary

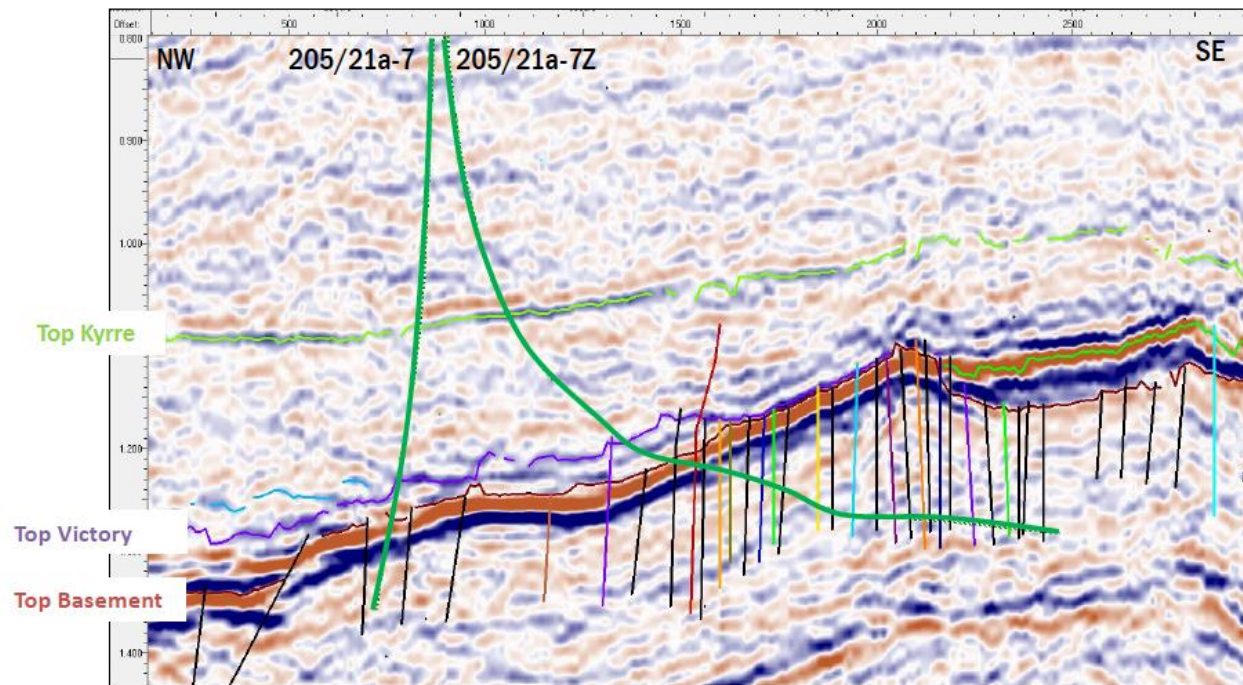
Geographical Frontiers



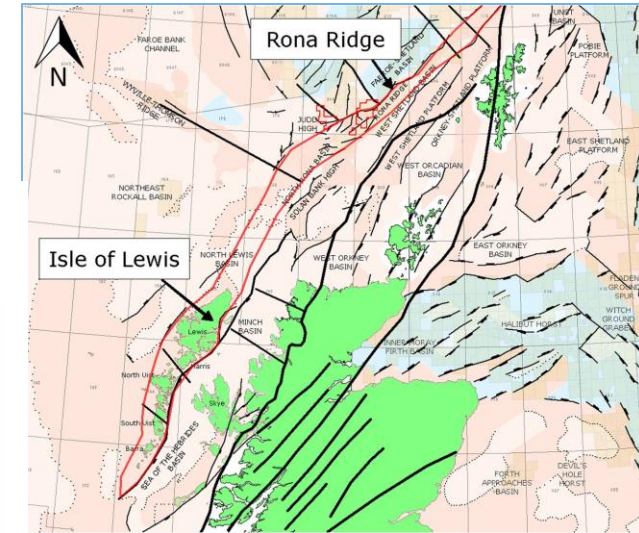
Geographical Frontiers

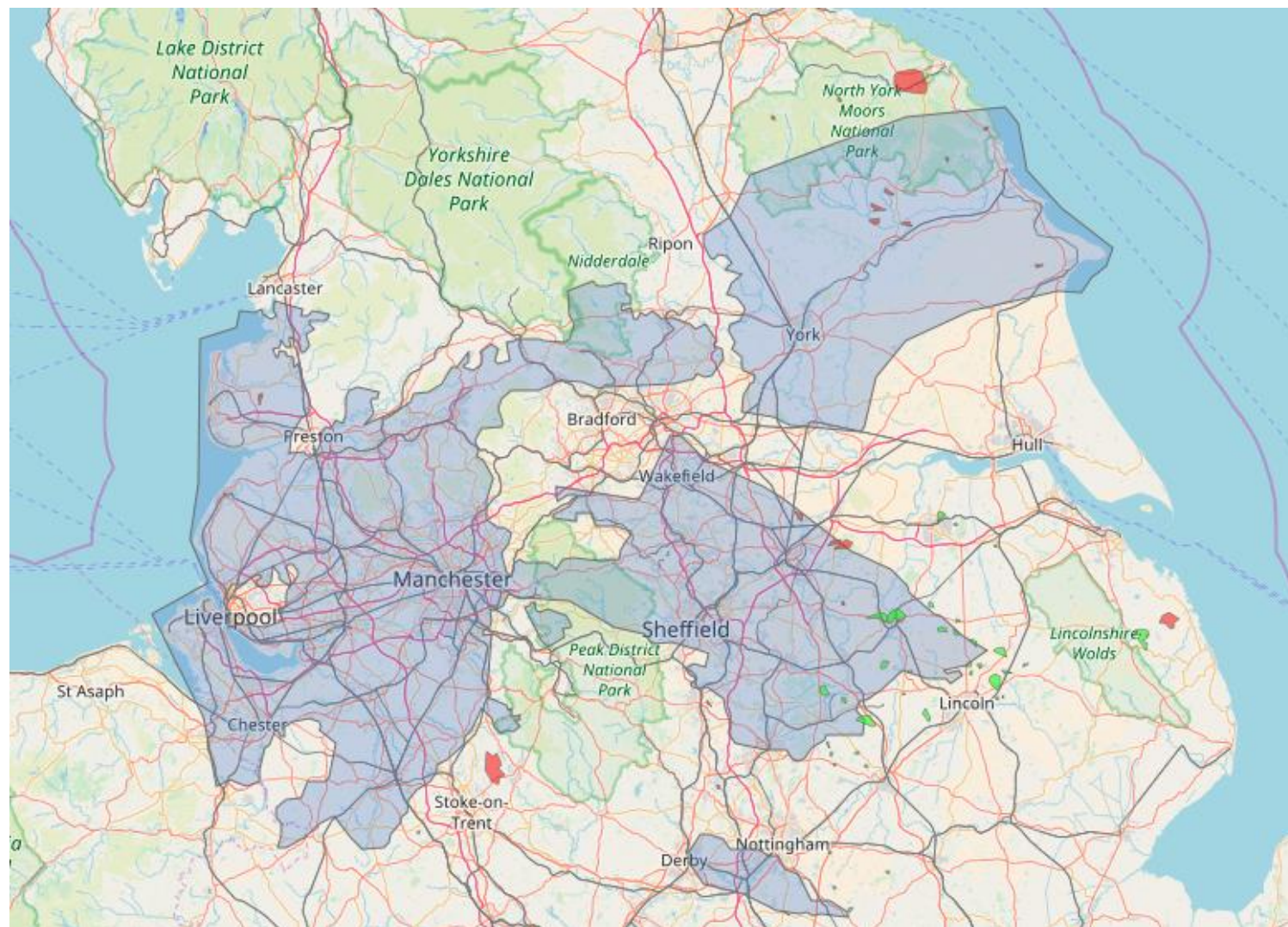


Seismic section through 205/21a-7Z



Hurricane Energy, January 2018, Finding Petroleum website





Shale Prospective Areas, BGS, OGA 2018

- Political
- Technological
- Socio-economic
- Environmental

Aminex chief says North Korea deal 'could be making of us'

Tue, Jan 18, 2005, 00:00

Oil company Aminex is taking a lot of risks to invest in North Korea but says it is a worthwhile bet because the secretive state could be sitting on billions of barrels of oil.

AMINEX CHIEF SAYS NORTH KOREA DEAL 'COULD BE MAKING OF US'

France passes law banning all gas and oil production by 2040

Part of plan to fulfil commitment to Paris climate agreement to curb global warming

and agencies | Wednesday 20 December 2017 10:17 GMT | 1 comment

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Maersk Drilling. Photo: Maersk Drilling

Maersk Drilling has broken the world record for the deepest water depth for an offshore oil rig, after spudding a well located more than two miles below the surface of the ocean.

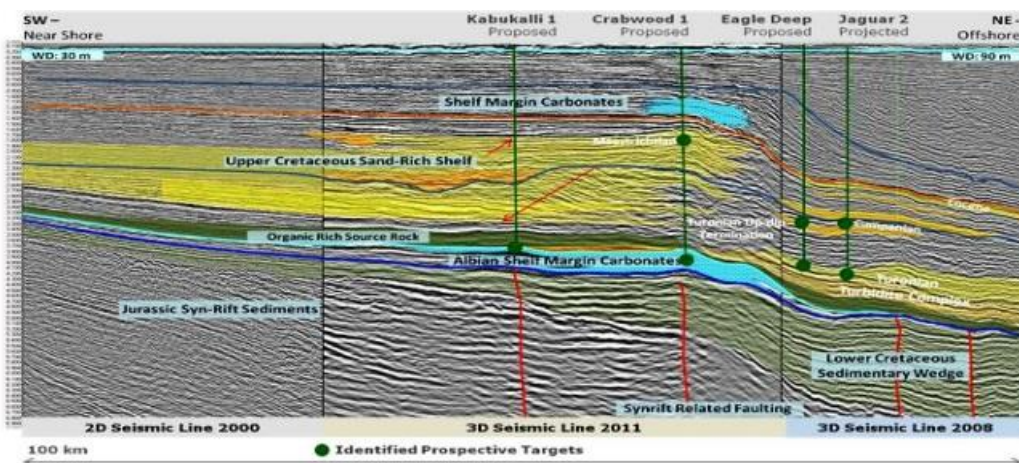
The well, known as the Raye-1 prospect, is being drilled offshore Uruguay in a water depth of 3,400 metres (11,150 feet).



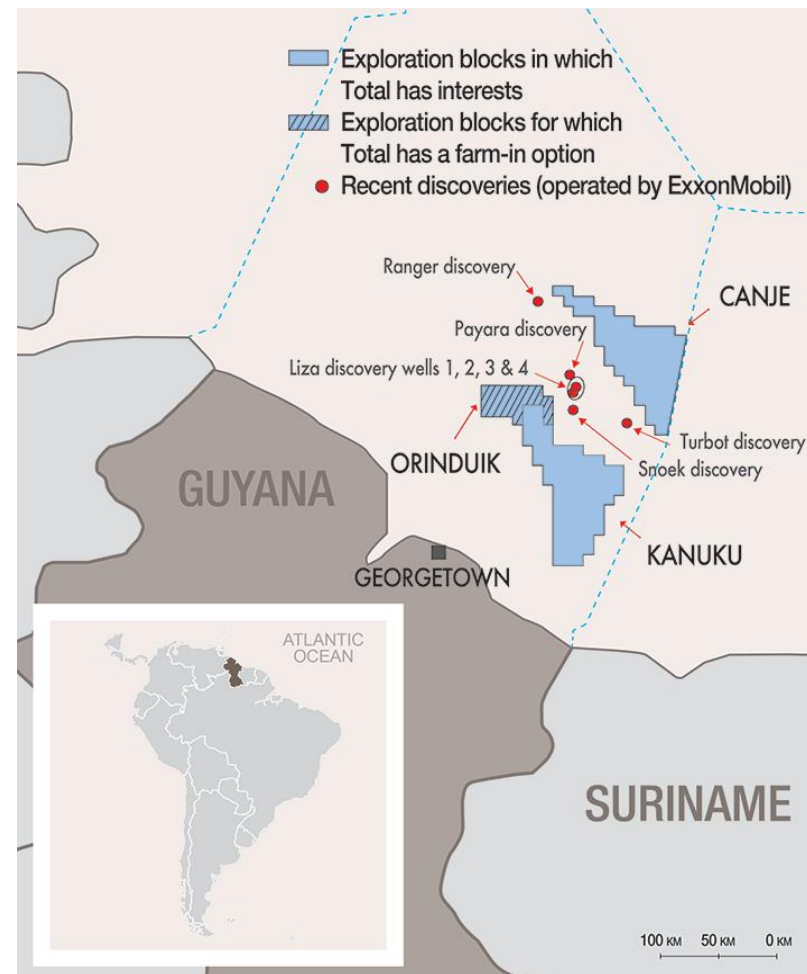
- Frontiers
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Deals – Canje, Kanuku, Orinduik Blocks, Total

Block Name	Canje, Kanuku, Orinduik	
Deal Type	Farm Ins	
	Current	Previous
Operator	Canje: ExxonMobil 35 Kanuku: Repsol 37.5 Orinduik: Tullow 60	Canje: ExxonMobil 35; Kanuku: Repsol 70; Orinduik: Tullow 60
Partners	Canje: Total 35; JHI & Mid-Atlantic 30 Kanuku: Tullow 37.5; Total 25 Orinduik Total 25; Eco Atlantic 15	Canje: JHI & Mid-Atlantic 65; Kanuku: Tullow 30 Orinduik: Eco Atlantic 40
Deal Date	Feb-2018	
Block Expiry	-	
Country	Guyana	
Deal Value	TOTAL farmed into three blocks of over 12,000 sq km both inboard (water depths from 70 to 100m) and outboard (water depths of 1,700 m to 3,000 m) of the recent oil discoveries centered around the Liza complex on the ExxonMobil-operated Stabroek Block.	
Hyperlink	Total Press Release	



Location Map

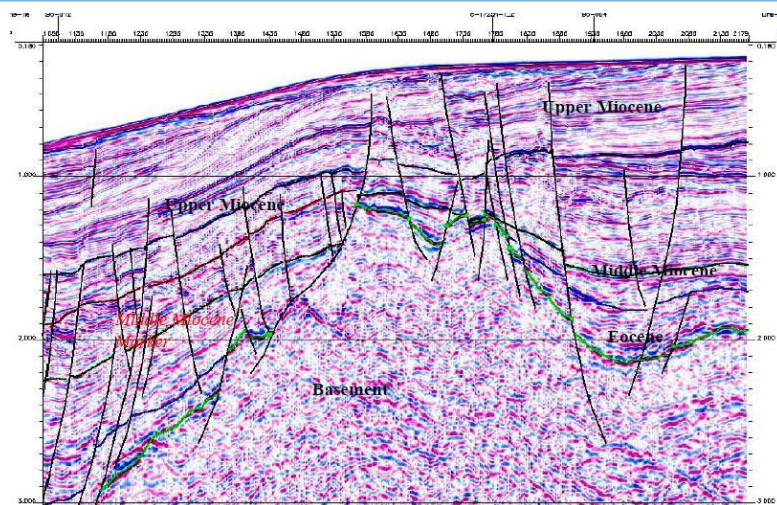


Source: CGX

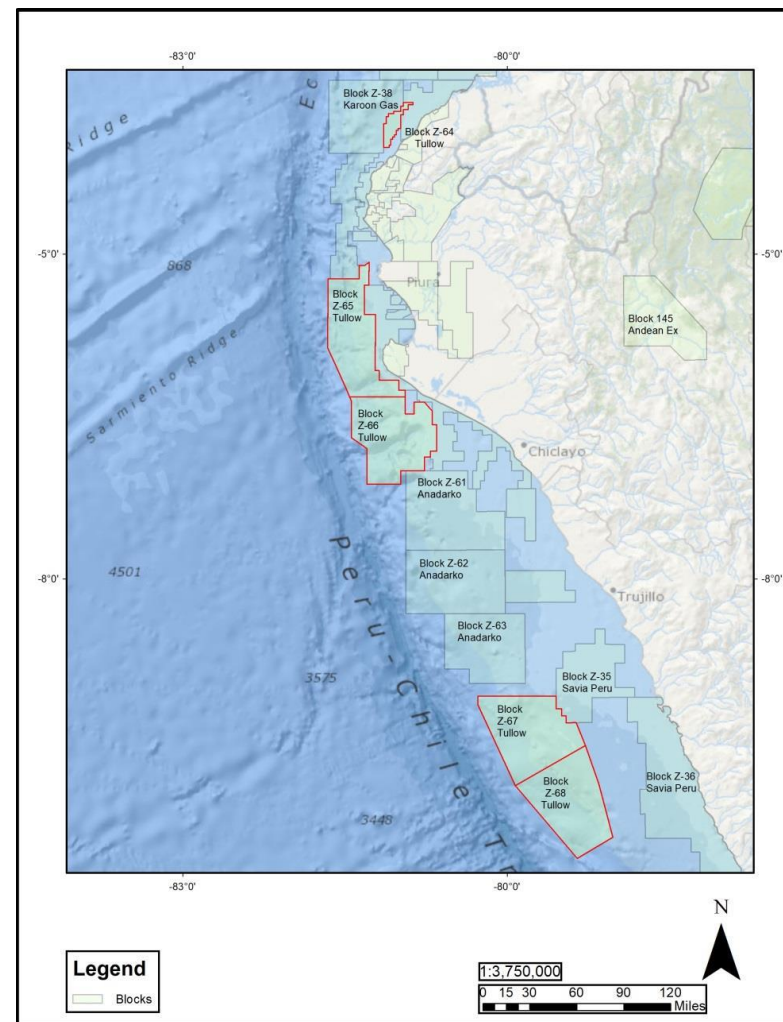
Deal – Z-64, Z-65, Z-66, Z-67 & Z-68, Tullow Oil

Block Name	Z-64, Z-65, Z-66, Z-67 & Z-68	
Deal Type	Direct Negotiation	
Operator	Current Tullow Oil (100%)	Previous Perupetro
Partners	-	-
Deal Date	15th January 2018	
Block Expiry	-	
Country	Peru	
Deal Value	Tullow has concluded negotiations with Perupetro and agreed to acquire a 100% stake in deepwater Talara and Trujillo Basin Blocks Z-64, Z-65, Z-66, Z-67 & Z-68 totaling 28,000 sq km. These blocks are along trend with Anadarko's recent acquisitions.	
Hyperlink	Tullow Oil	

Geological Context

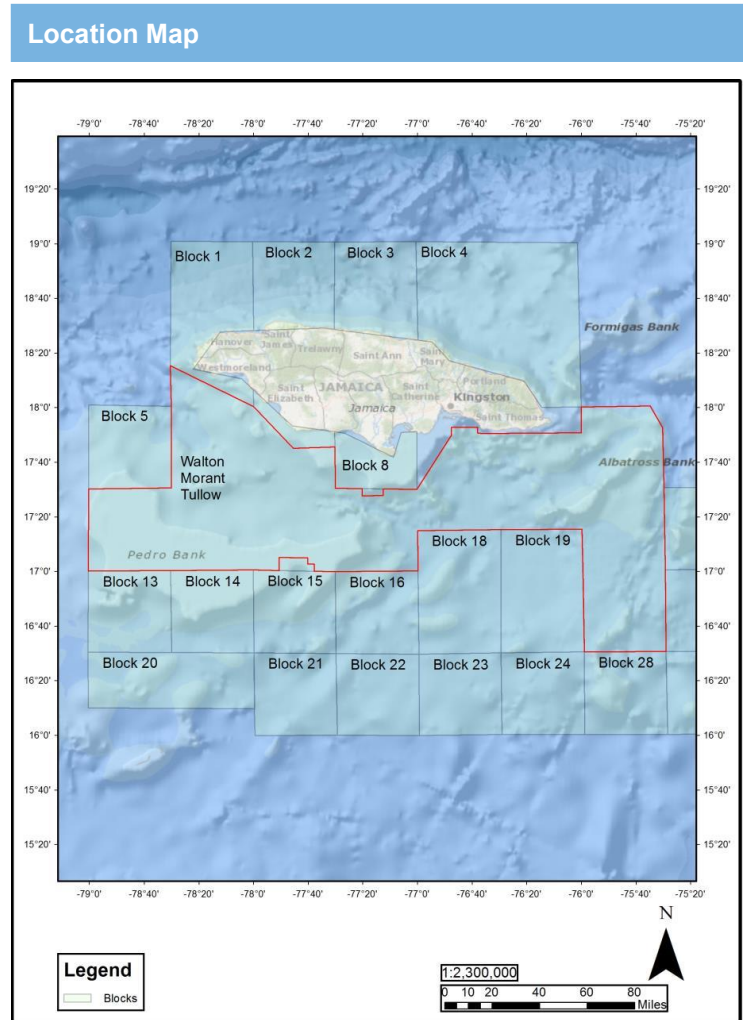
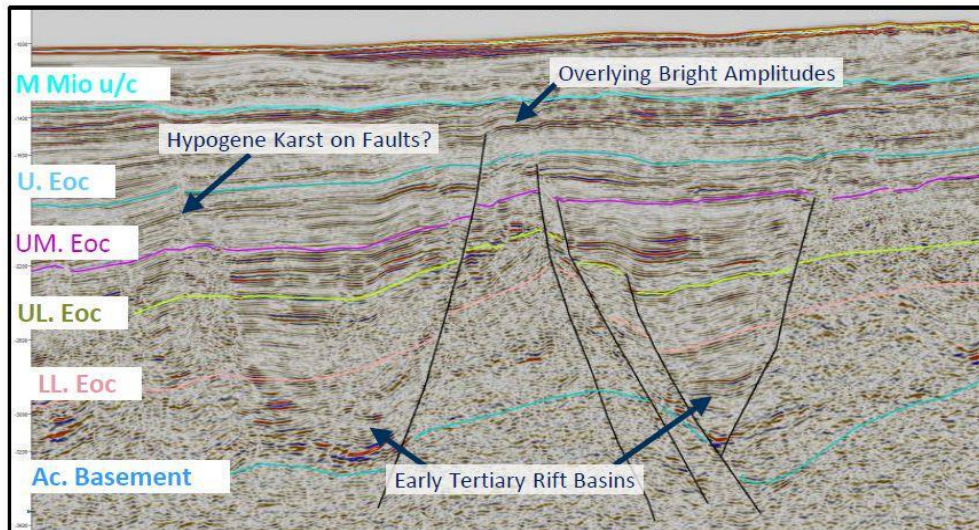


Location Map



Deal - Walton Morant, United

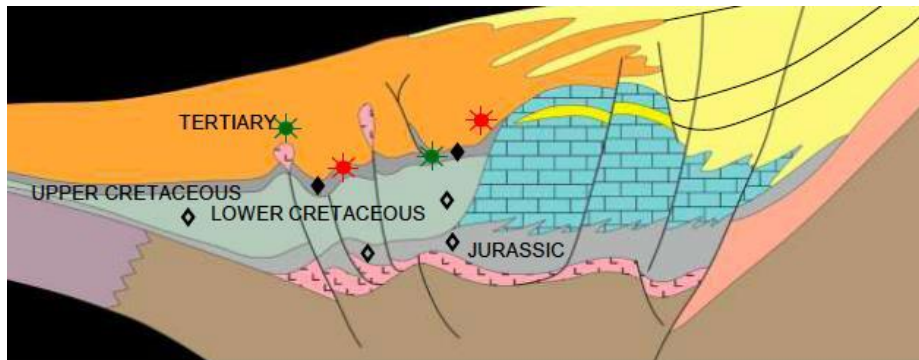
Block Name	Walton Morant	
Deal Type	Farm In	
	Current	Previous
Operator	Tullow 80%	Tullow 100%
Partners	United 20%	-
Deal Date	November 2017	
Block Expiry	-	
Country	Jamaica	
Deal Value	United farmed into Tullow's 32,000 sq km southern offshore Walton-Morant block for 20%, paying 20% of costs going forward from 1st November. Tullow has delineated attractive Cretaceous and Tertiary aged clastic and carbonate reservoir targets intends to conduct a 2,000 sq km 3D survey in the first half of 2018 focusing on the Colibri lead.	
Hyperlink	Latin America Farm In Agreement	



Deal – C-14, C-17 & C-22, ExxonMobil

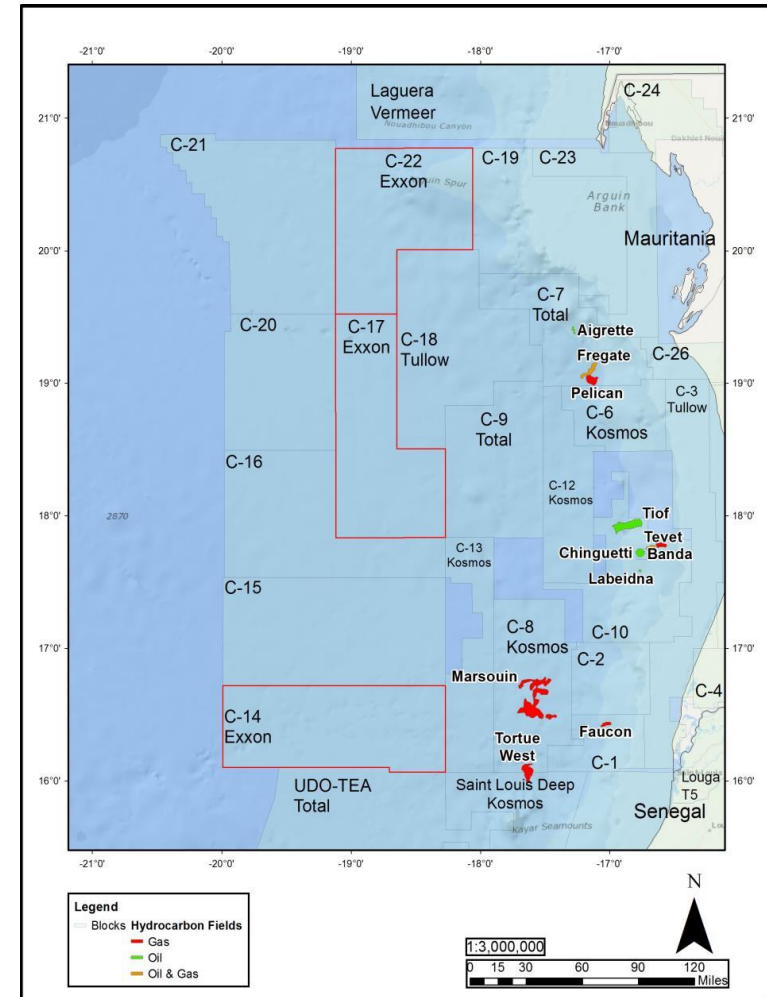
Block Name	C-14, C-17 & C-22	
Deal Type	Award	
	Current	Previous
Operator	ExxonMobil 90%	-
Partners	SMHPM 10%	-
Deal Date	November 2017	
Block Expiry	-	
Country	Mauritania	
Deal Value	Undisclosed. ExxonMobil is likely to have committed 3D seismic in the first exploration phase.	
Hyperlink	XOM	

Geological Section



Source: Chariot investor pack 2014, from Block C19

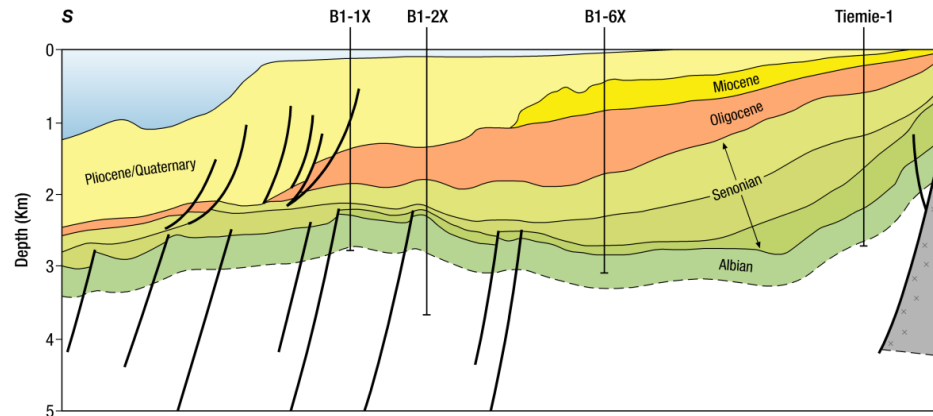
Location Map



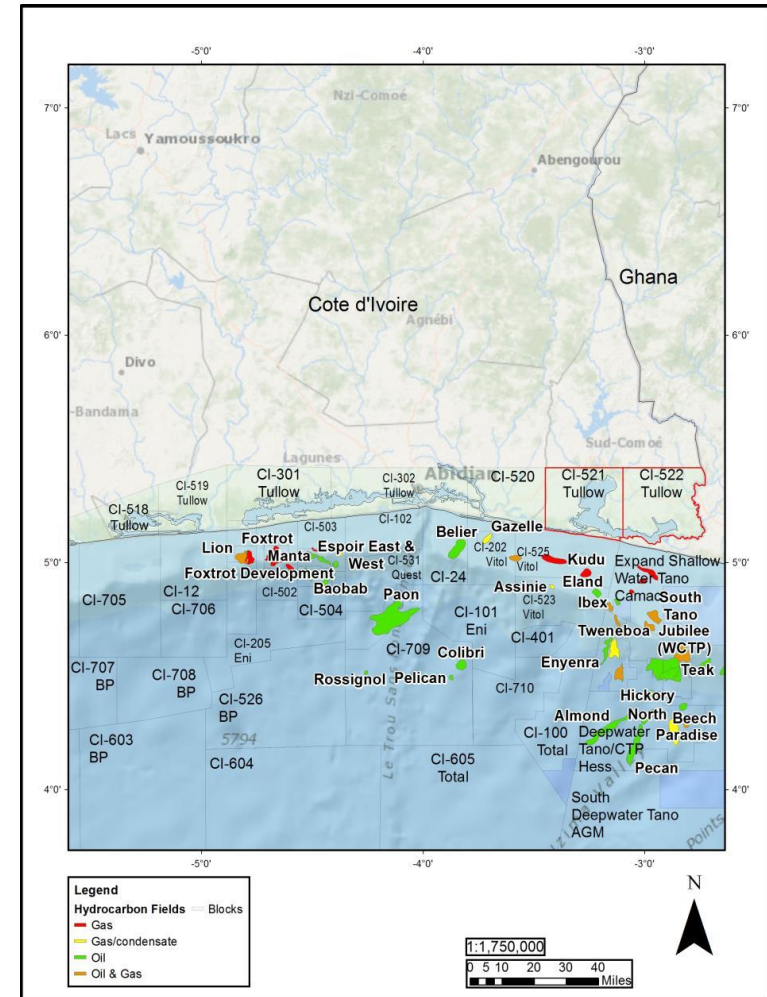
Deal – CI-521 & CI-522, Tullow

Block Name	CI-521 & CI-522	
Deal Type	Award	
	Current	Previous
Operator	Tullow Oil 90%	-
Partners	Petroci 10%	-
Deal Date	December 2017	
Block Expiry	December 2020	
Country	Cote d'Ivoire	
Deal Value	Following a quiet exit from Quest Energy after not being able to find partners, Tullow have taken these two onshore oil blocks.	
Hyperlink	Press	

Geological Section



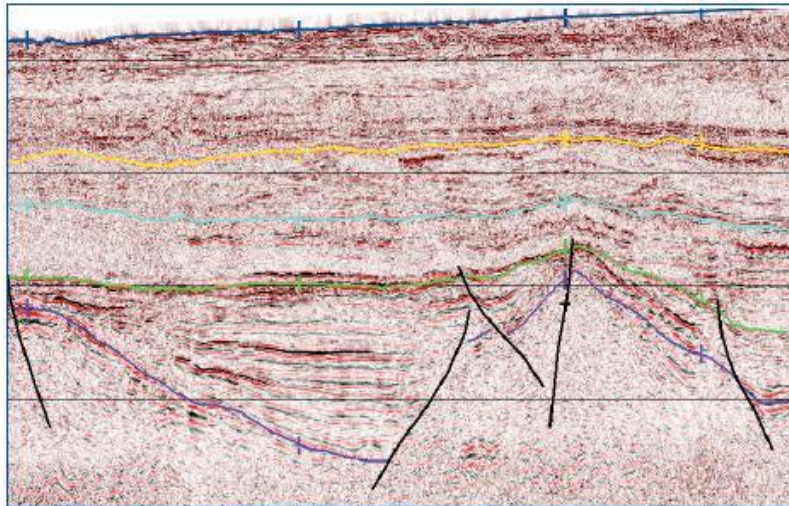
Location Map



Deal – 10 & 13, BP/Kosmos

Block Name	Blocks 10 & 13	
Deal Type	Award	
	Current	Previous
Operator	BP/Kosmos	-
Partners	ANP	-
Deal Date	22nd January 2018	
Block Expiry	-	
Country	Sao Tome and Principe	
Deal Value	Undisclosed. Drilling expected in 2019 based on seismic results.	
Hyperlink	Award News	

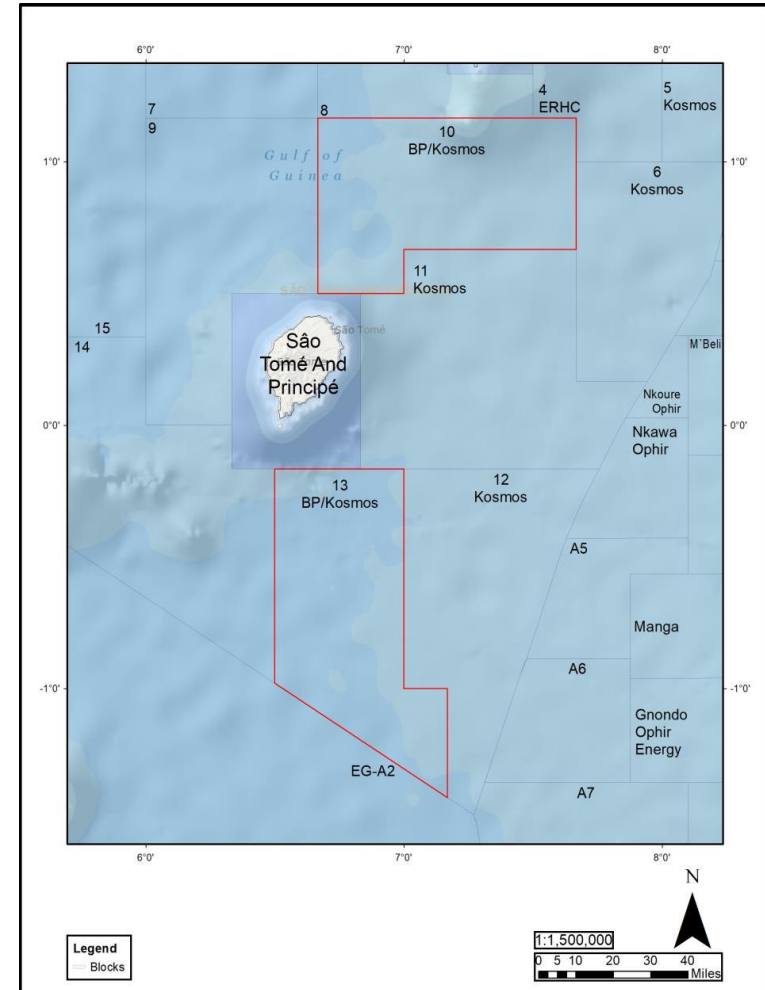
Seismic



2D Seismic shows thick sedimentary section and structuring associated with the Fernando Po Fracture Zone

Source: PGS

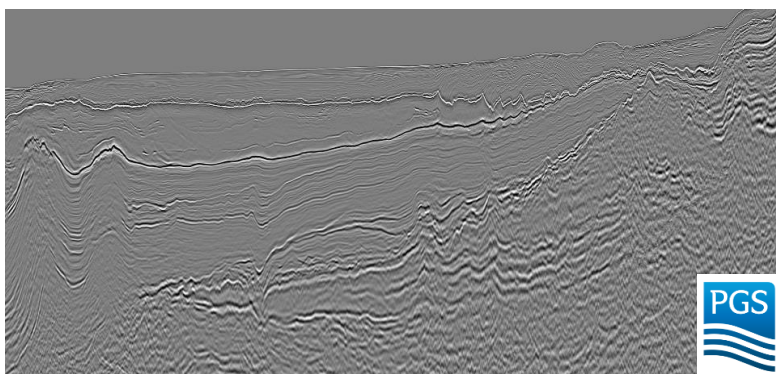
Location Map



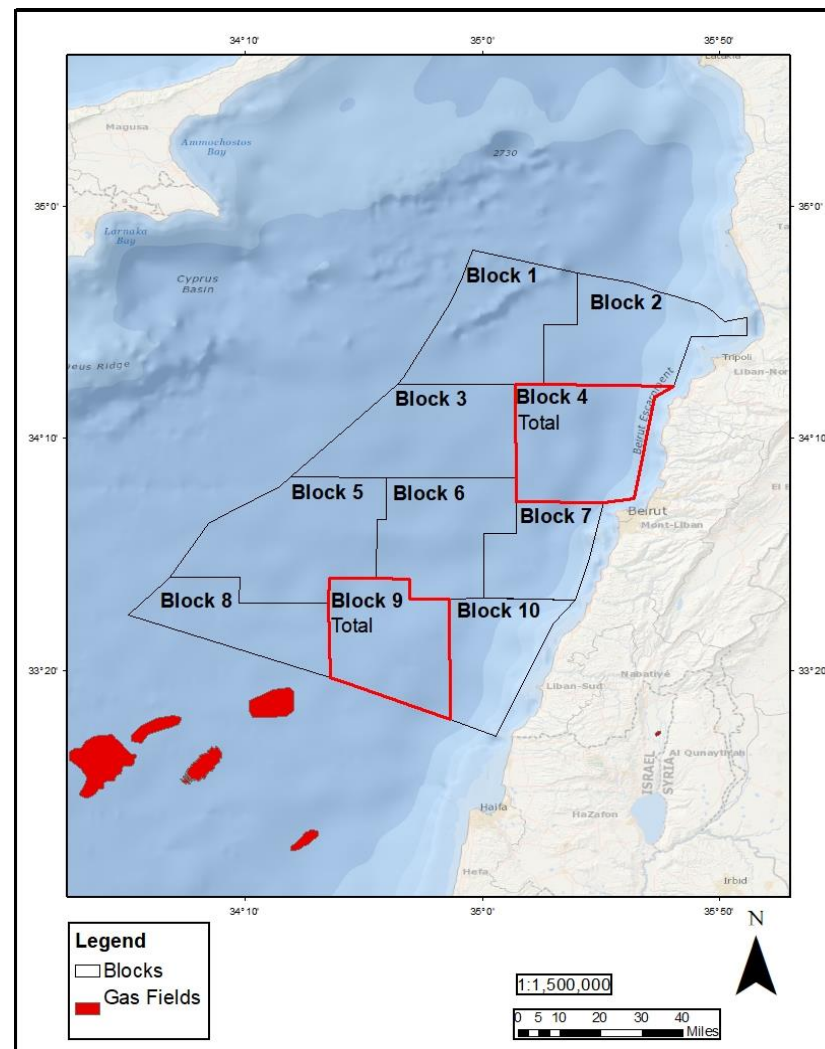
Deal – Lebanon, Total, Eni and NOVATEK

Block Name	4 and 9	
Deal Type	Award	
	Current	Previous
Operator	Total	Government
Partners	Eni International NOVATEK	-
Deal Date	December 2017	
Block Expiry	2021	
Country	Lebanon	
Deal Value	The consortium of Total, ENI & Novatek have been awarded Blocks 4 and 9. Both block 4 (1911km ²) and 9 (1742km ²) are largely covered by PGS and Spectrum speculative 3D surveys which had to be purchased to qualify to bid. The companies are expected to make further studies and surveys throughout 2018 with drilling expected to start in 2019.	
Hyperlink	Awards Approved	

Geological Context



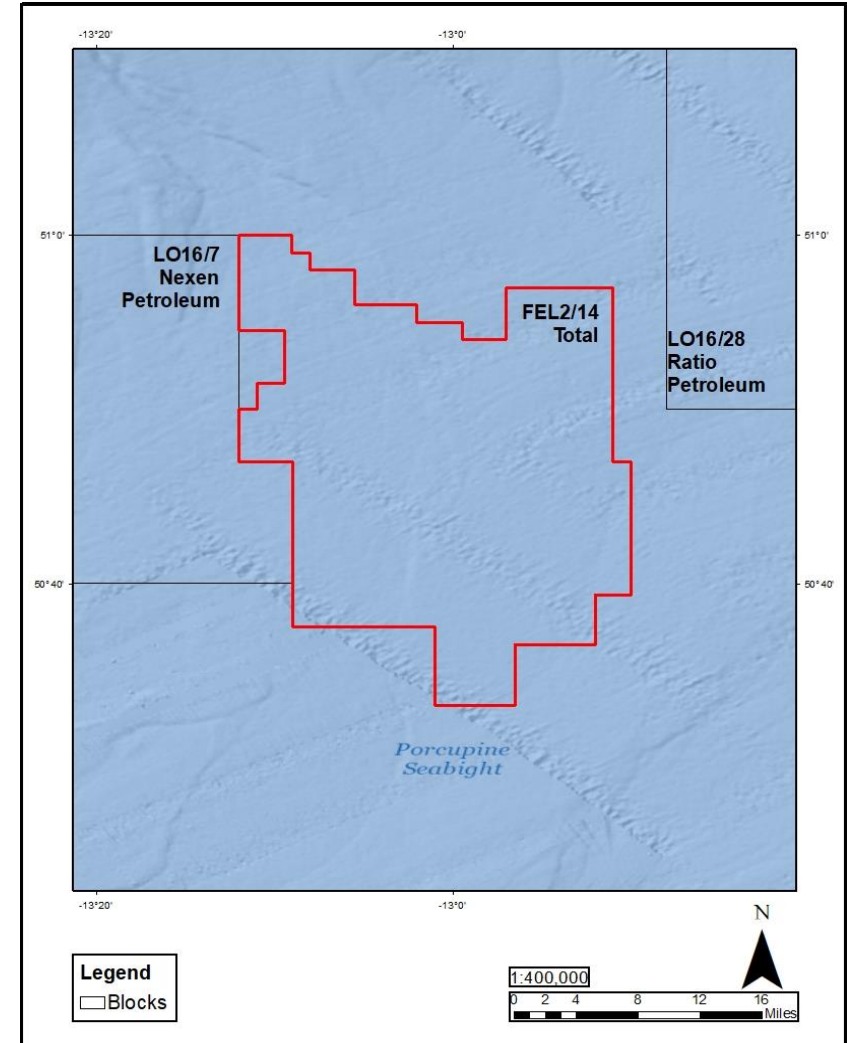
Location Map



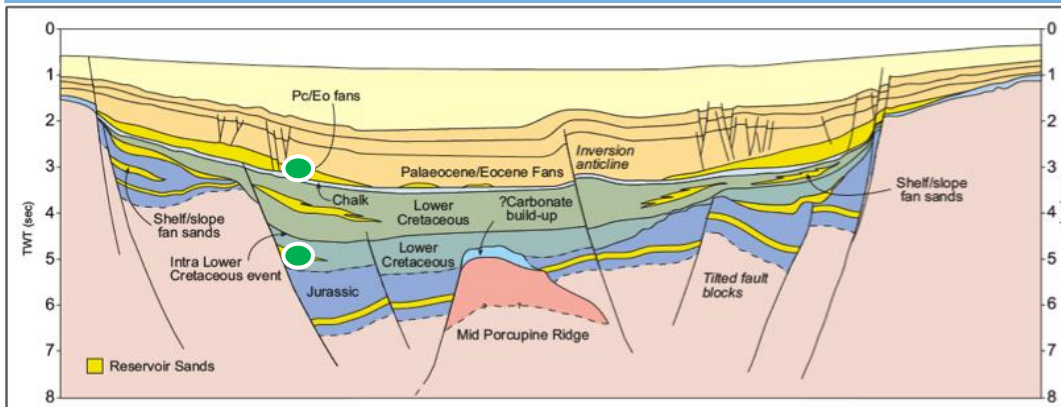
Deal – Ireland, Total and Providence

Block Name	FEL 2/14	
Deal Type	Farm In	
	Current	Previous
Operator	Total 35%	Providence 100%
Partners	Cairn 30% Providence 28% SOSINA 7%	-
Deal Date	December 2017	
Block Expiry	2028	
Country	Ireland	
Deal Value	Total have completed the option to farm-in to FEL2/14 having paid to Providence & SOSINA \$27m, following the completion of well 53/6-A which tested as dry the stacked Druid & Drombeg prospects. Cairn had also farmed in on the well.	
Hyperlink	Press Release	

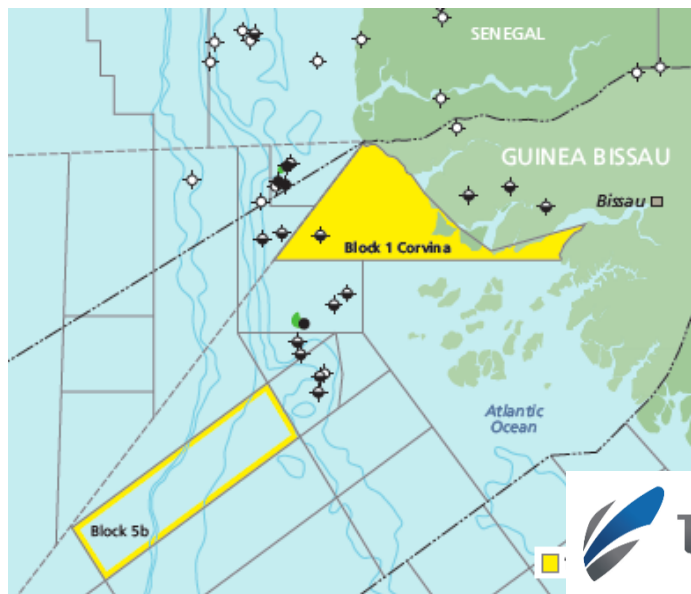
Location Map



Geological Context



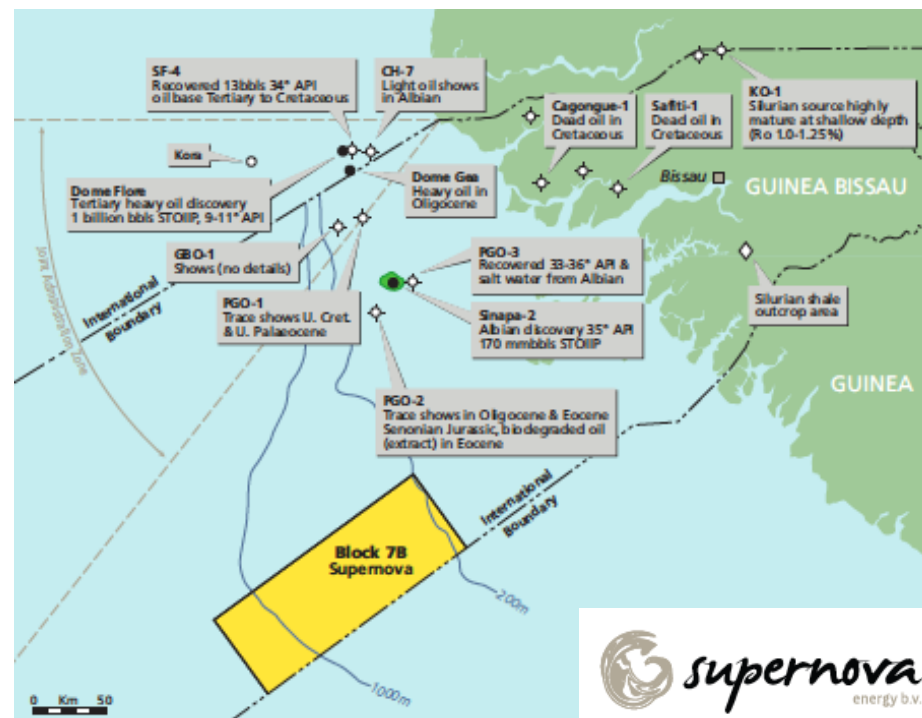
Guinea Bissau



Trace Atlantic Oil Ltd (TAOL), with exploration concessions in West Africa (Guinea Bissau and Senegal) currently operates Block 1 offshore Guinea Bissau (65%).

TAOL has working interest in nearby acreage and is committed to working with JV partners to enhance exploration success; in Guinea Bissau the company operates deepwater Block 5B where they have shot 3700 sq km 3D; in Senegal shallow water the company operates the Djiffere PSC, adjacent to the prolific Sangomar block and the ever growing SNE oilfield trend.

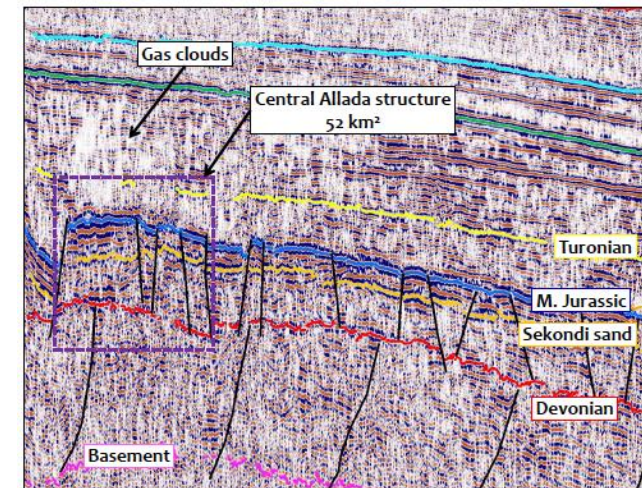
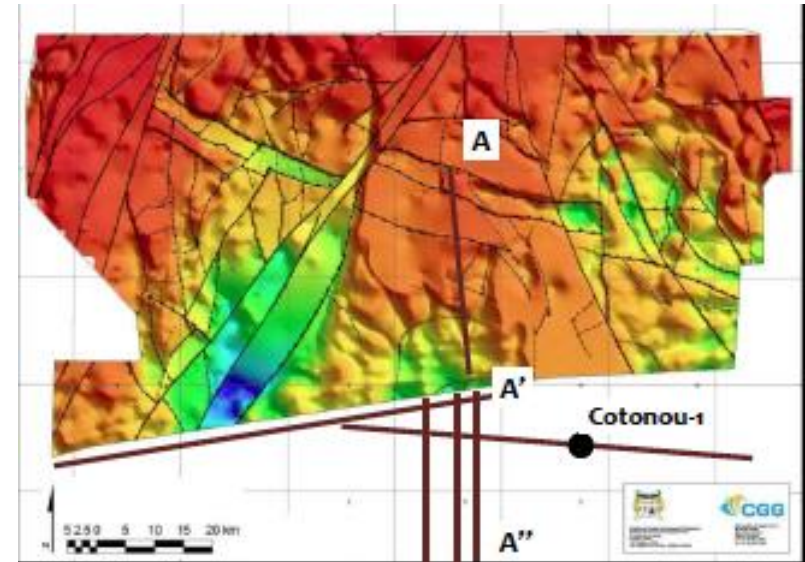
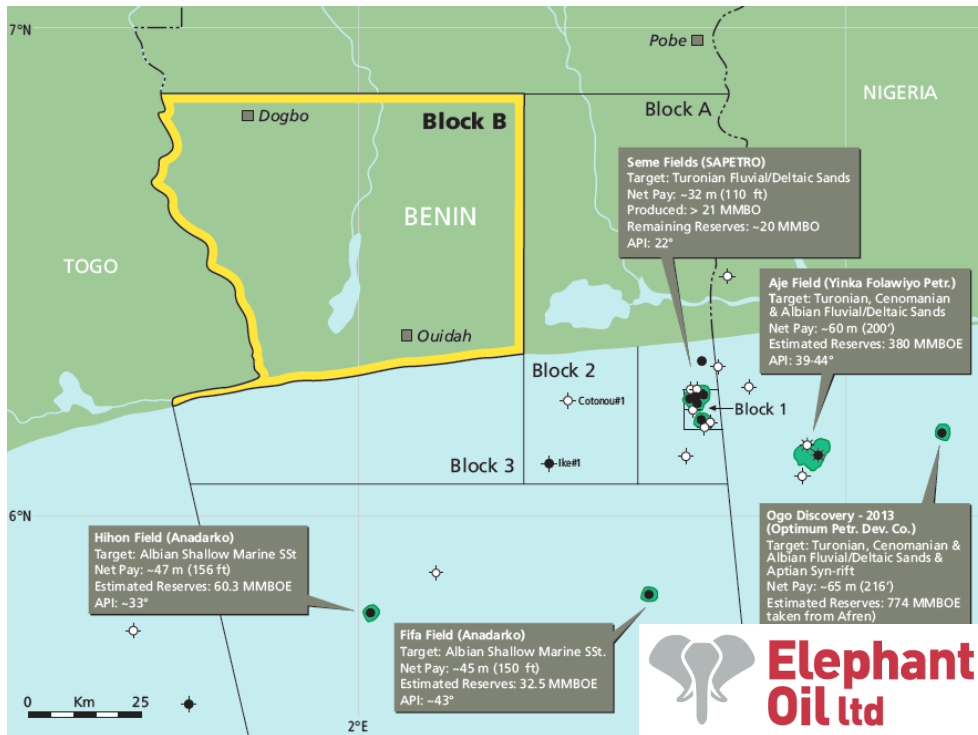
The operator now seeks an industry Joint Venture partner to fund a 3D survey over high-graded areas of the Block 1 Corvina Joint Venture Agreement (JVA).



Supernova Energy B.V. offers the opportunity to suitable Joint Venture partners to farm-in to the prospective offshore exploration Block 7B in Guinea Bissau.

Beagle Geoscience have recently completed a major basin-scale proprietary study over the Block and surrounding acreage.

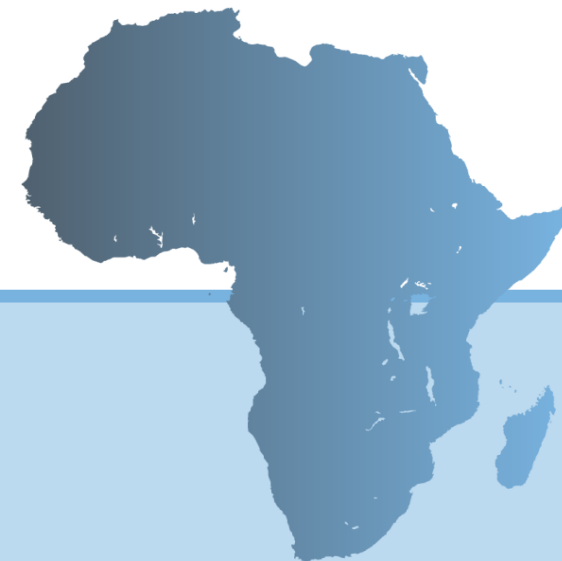
To the north in Senegal Cairn are appraising the FAN and SNE oil discoveries and Kosmos and BP are revealing vast gas reserves in the Cretaceous deepwater play. Guinea Bissau represents the southern extension of this prolific basin.



Elephant Oil are seeking partners to explore the onshore Block B in Benin. The block represents 4,590 km² onshore, located in the Dahomey Embayment. 4,600 km² high resolution airborne AGG Gravity and Magnetic data was acquired in 2013 by Fugro-CGG. The Allada Structure already identified (vintage 2D and modern AGG Gravity) and field Studies in 2014 reveal Coastal Basin petroleum geology, including live seeps, reservoir and source rock outcrop.

- Frontiers
- Recent frontier deals
- Summary

- Many frontiers remain
- Major frontier exploration deals in the last 12 months
- Have the Majors taken the helm from a decade of entrepreneurial pioneers?
- Frontier will always galvanise the industry



Thank you