



Exploration Evolution of the Offshore Acreage in Jamaica

**Ministry of Science, Energy,
Telecommunications and Transport**

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Presentation Outline



Introduction & Licensing Status

Seismic Acquisition and Data Driven Exploration

New Geological interpretations Onshore and Offshore

Identified Drill Ready Prospects

Why Jamaica?

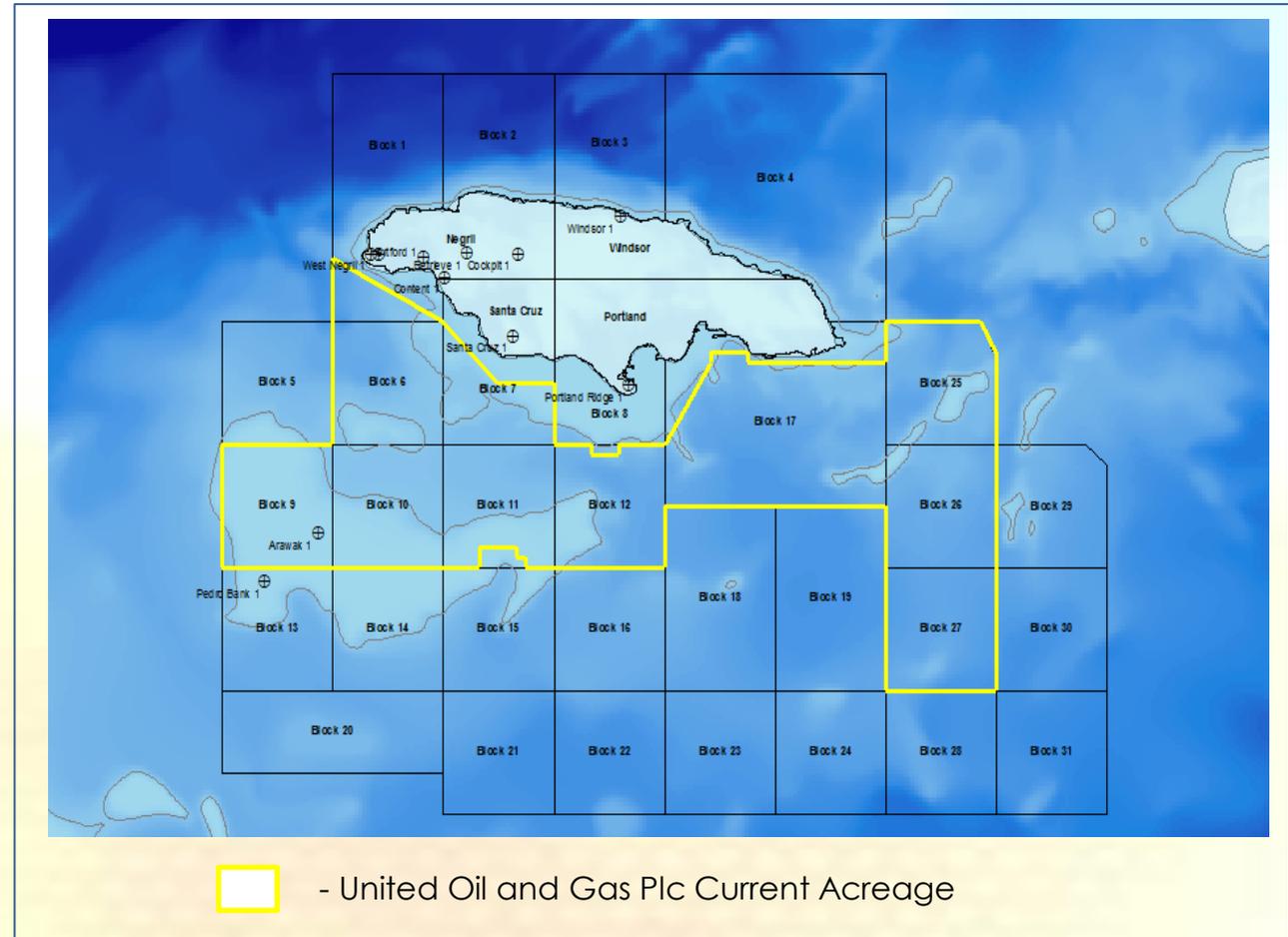
Introduction

- Jamaica, located in the Caribbean is within close proximity to the Gulf of Mexico.
- While no commercial accumulation has been identified, it is evident that a working petroleum system exists onshore and offshore.
- In the offshore, multiple play opening and exciting opportunities exist for operators to diversify their portfolios.
- This presentation shows how exploration has evolved with new technology and how new in-depth interpretations have been made.



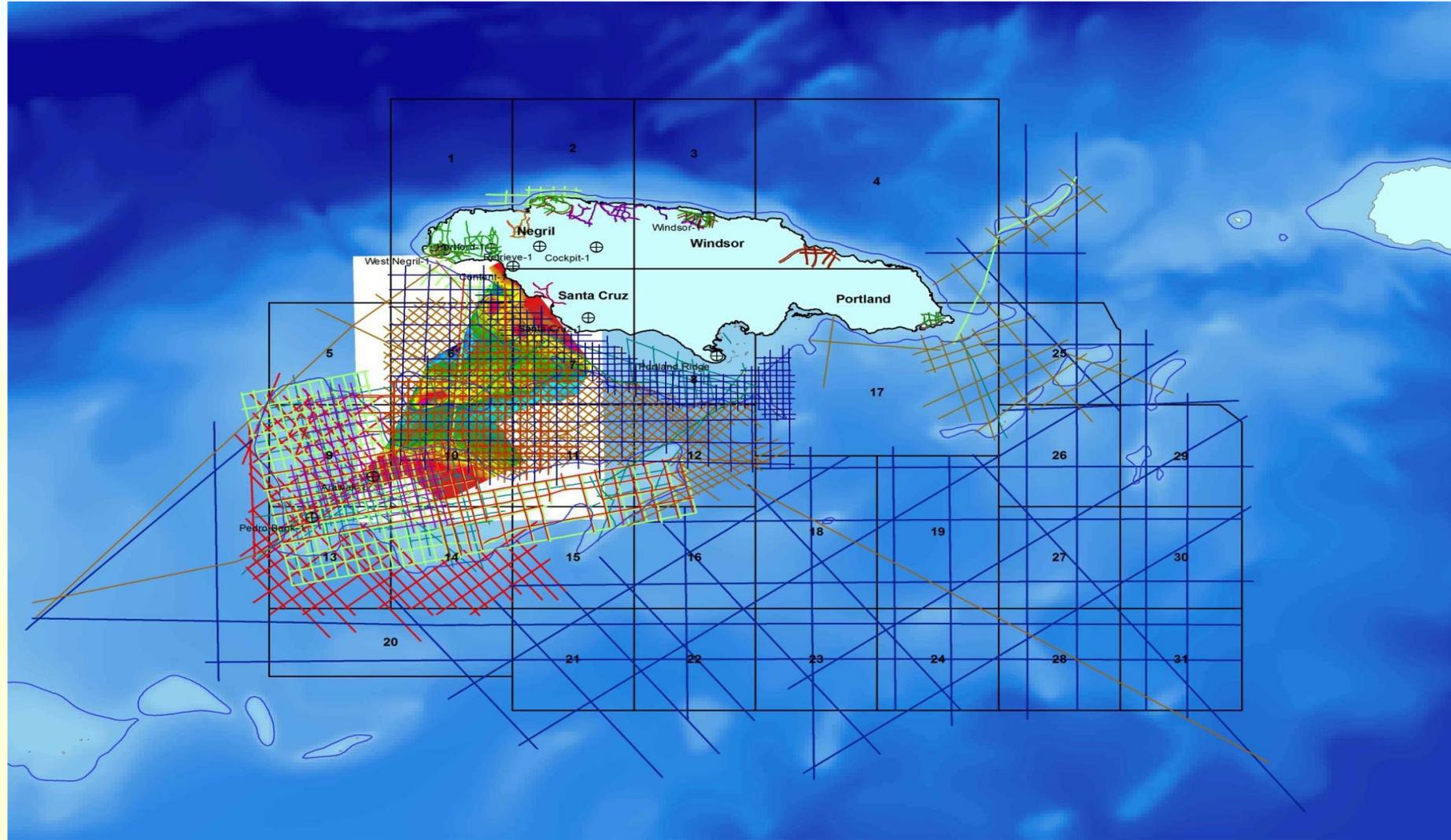
Licensing Status

- Production Sharing Agreement signed with Tullow Jamaica Limited in 2014 for 10 of 31 blocks offshore.
- In 2020, United Oil and Gas took over 100% of the acreage and are looking for partners to drill.
- Blocks to the **South and South East** are currently available with favorable terms.
- The 4 onshore blocks are available with detailed well, seep & geological reports (1D Modelling).



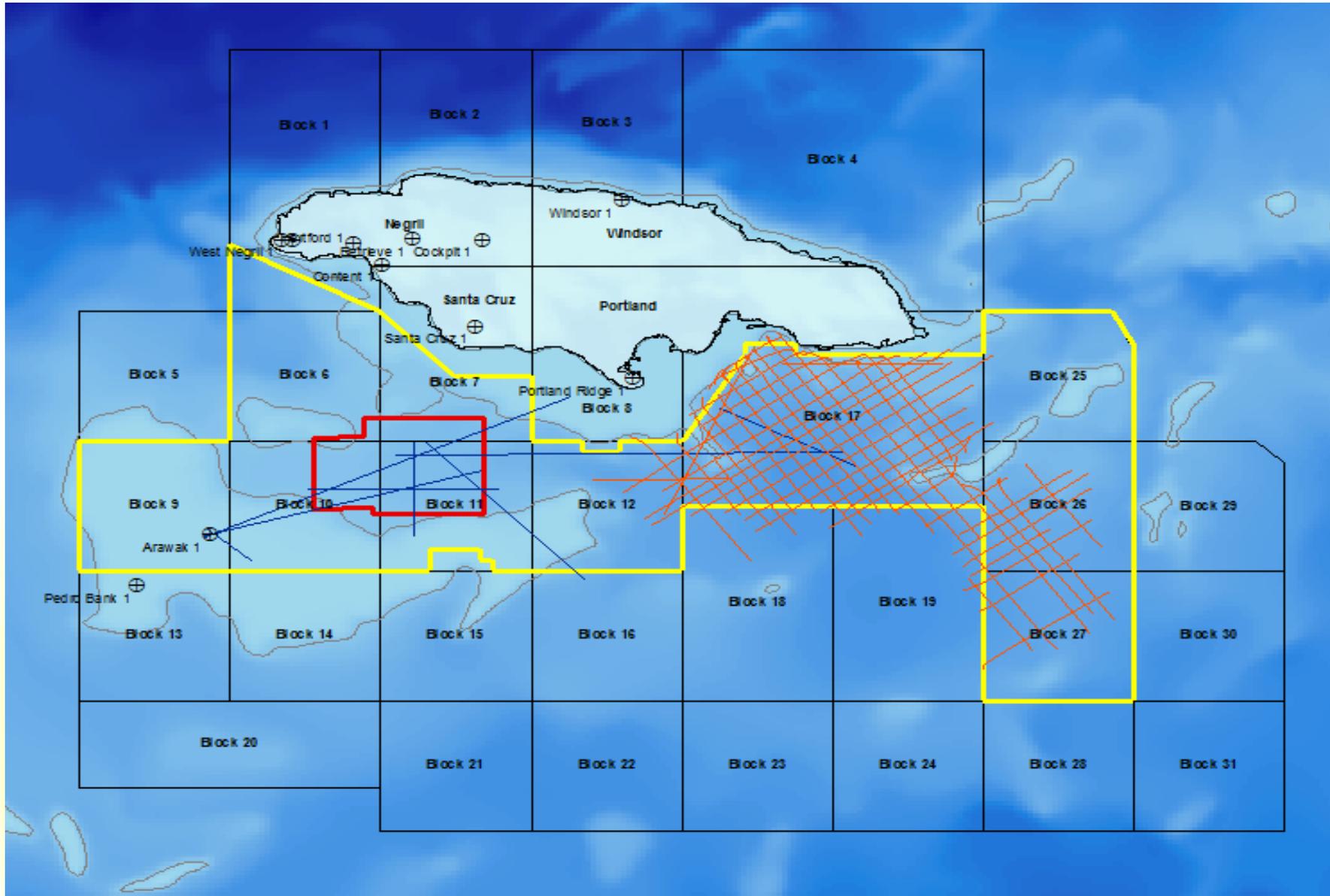
Seismic Acquisition and Data Driven Exploration

Seismic Acquisition and Data Driven Exploration



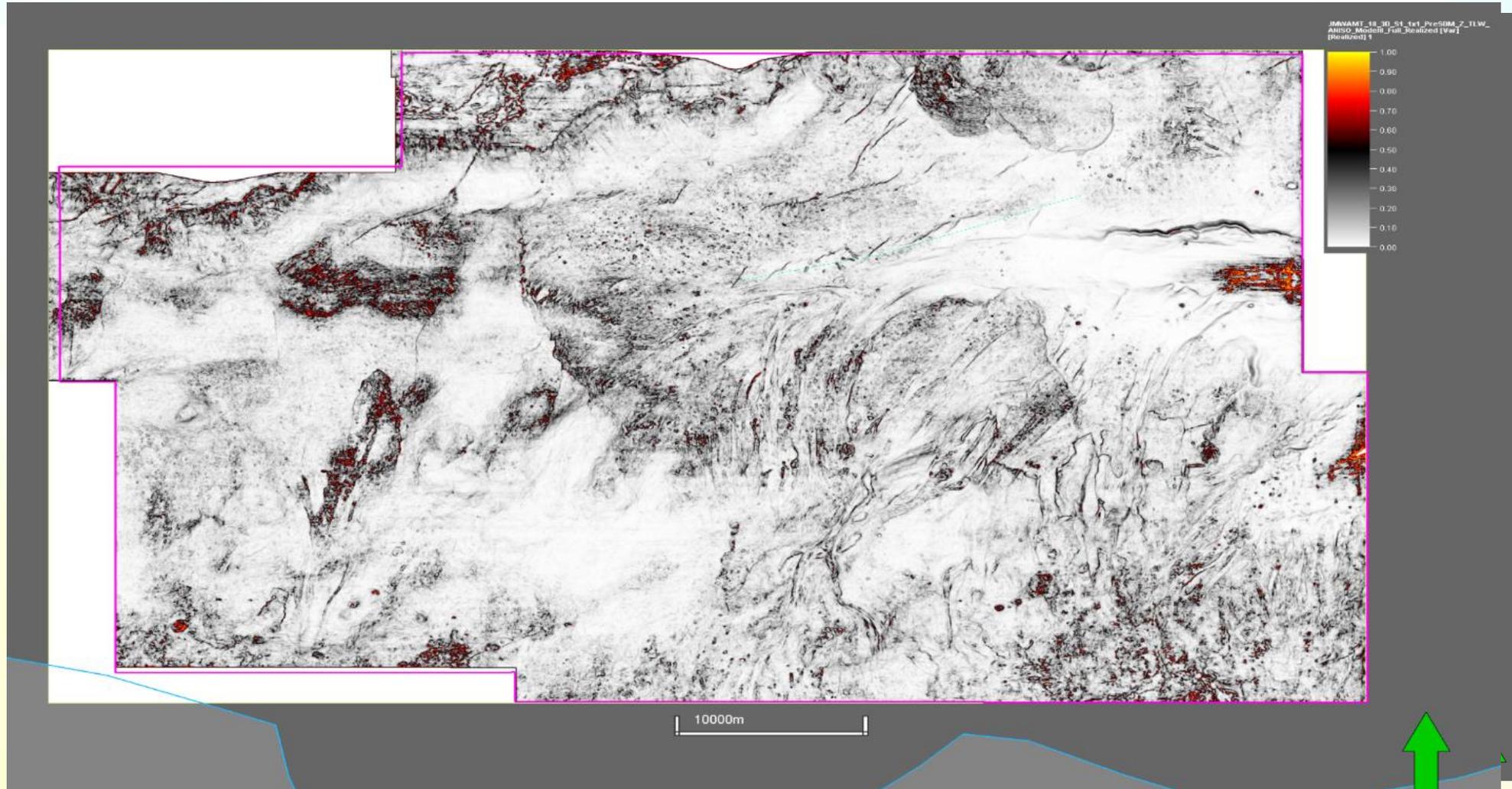
Oil and Gas Data set as at 2015 held by the then PCJ

Seismic Acquisition and Data Driven Exploration



- 2016/2017 2D seismic high graded leads and justified a 3D Survey in 2018.
- Jamaica's first every 3D survey shot in April to May 2018.
- Processing completed April 2019.
- The 3D Survey highlighted that a new view is required of preexisting data sets in order to unlock oil and gas potential in the offshore.

Seismic Acquisition and Data Driven Exploration

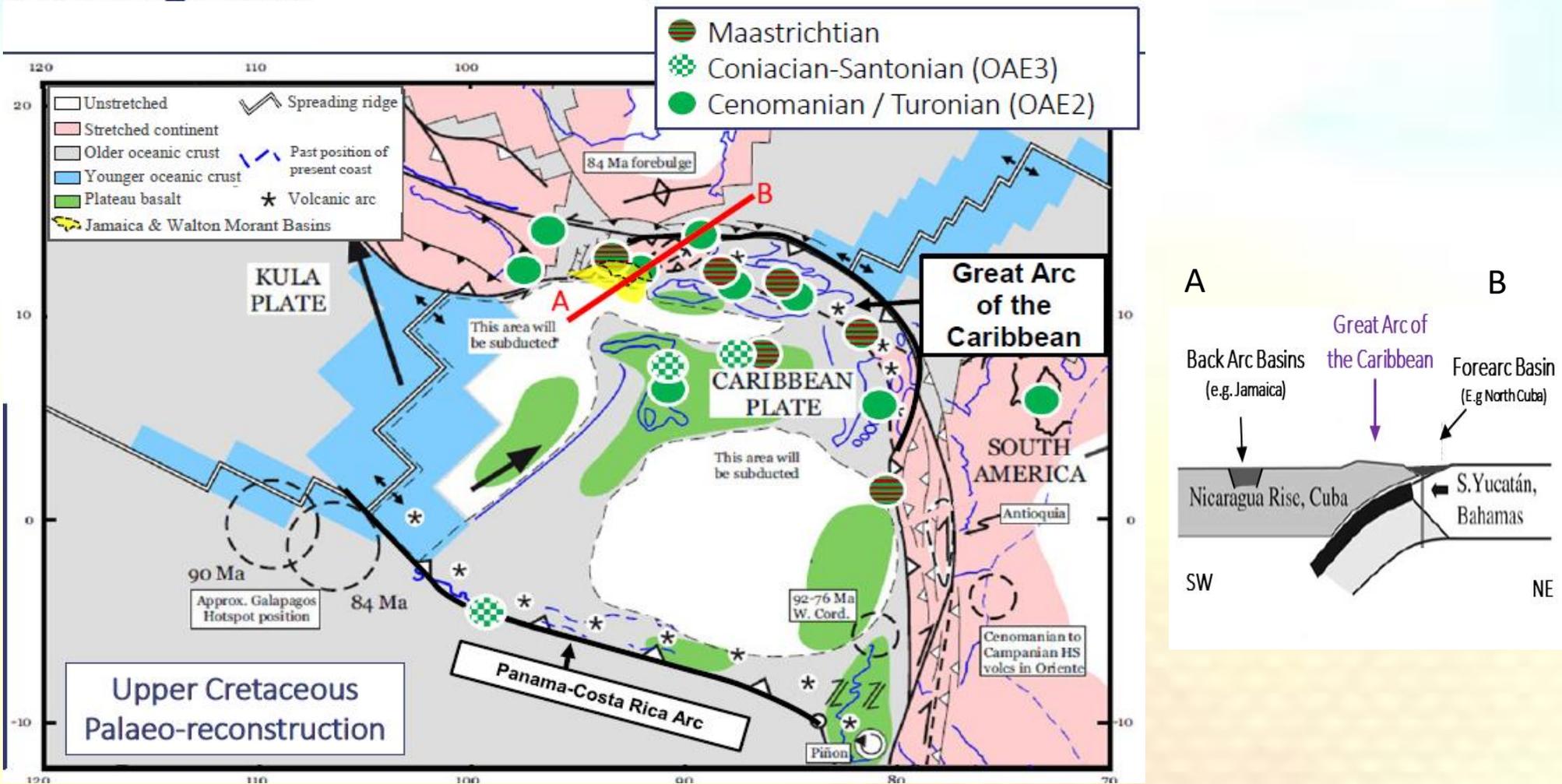


Variance Cube of Finalized Anisotropic PSDM Volume at 1000m, 2000m & 3000m

Image courtesy of UOG

New Geological Interpretations Onshore and Offshore

New Geological Interpretations Onshore and Offshore



- New Interpretations of the paleoenvironments during the Upper Cretaceous has led to numerous restricted basins. This suggests greater source rock potential in Jamaica and corresponds to cores.
- The exact location of Jamaica during the mid to Upper Cretaceous is imperative to O&G exploration.

Image courtesy of UOG

New Geological Interpretations Onshore and Offshore

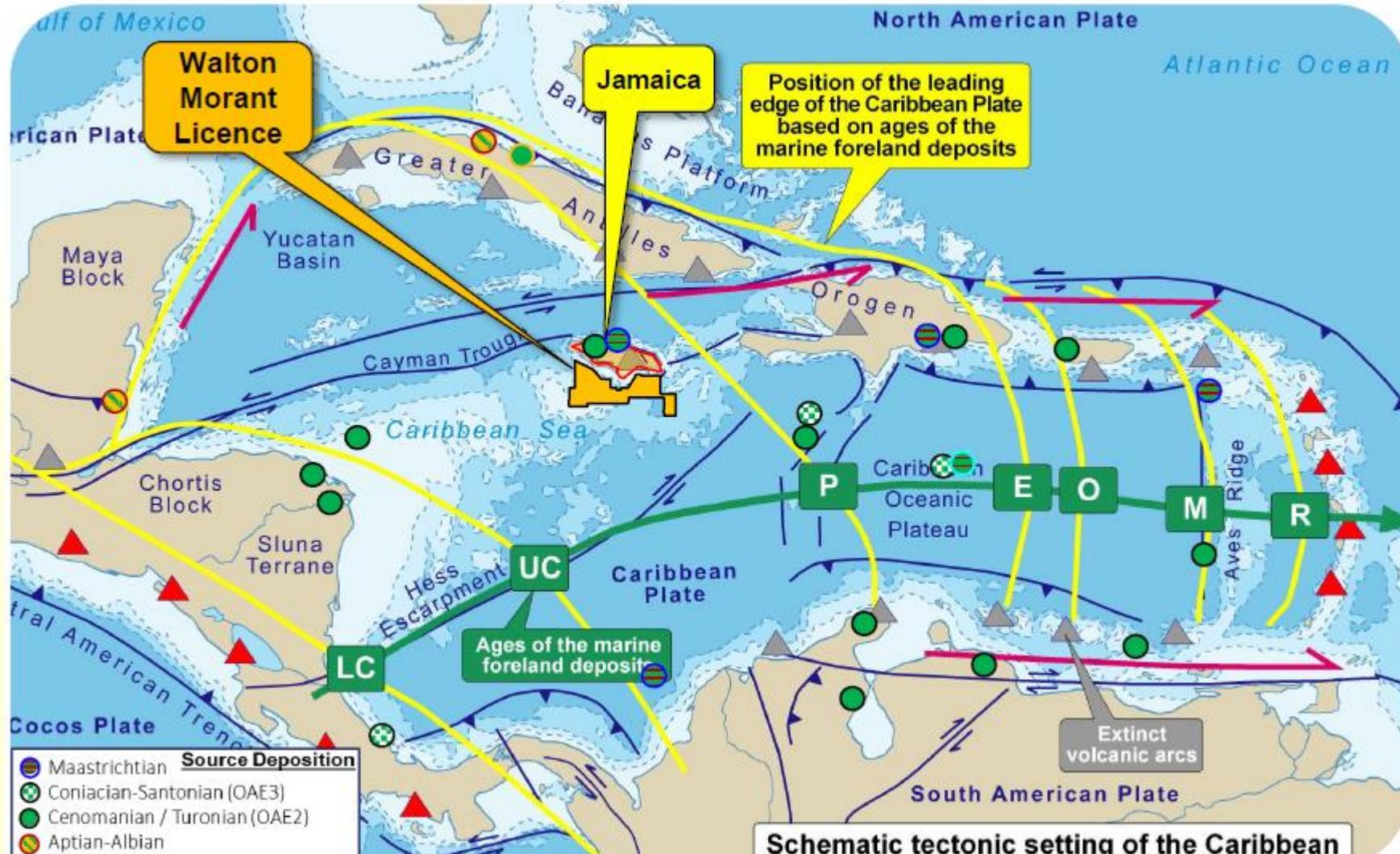


Image courtesy of UOG

New Geological Interpretations Onshore and Offshore

Outcrop data & Onshore Seeps

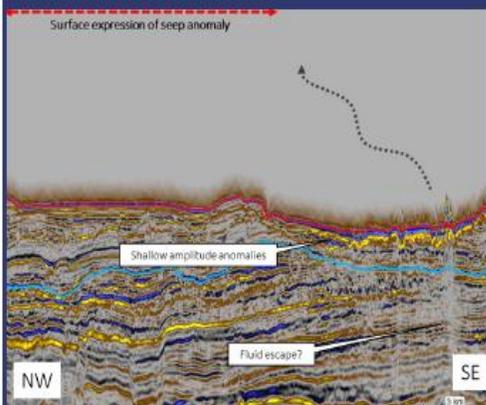


Geochemical sampling of source rock & fluids proves presence of Cenozoic, Cretaceous & Jurassic source rocks

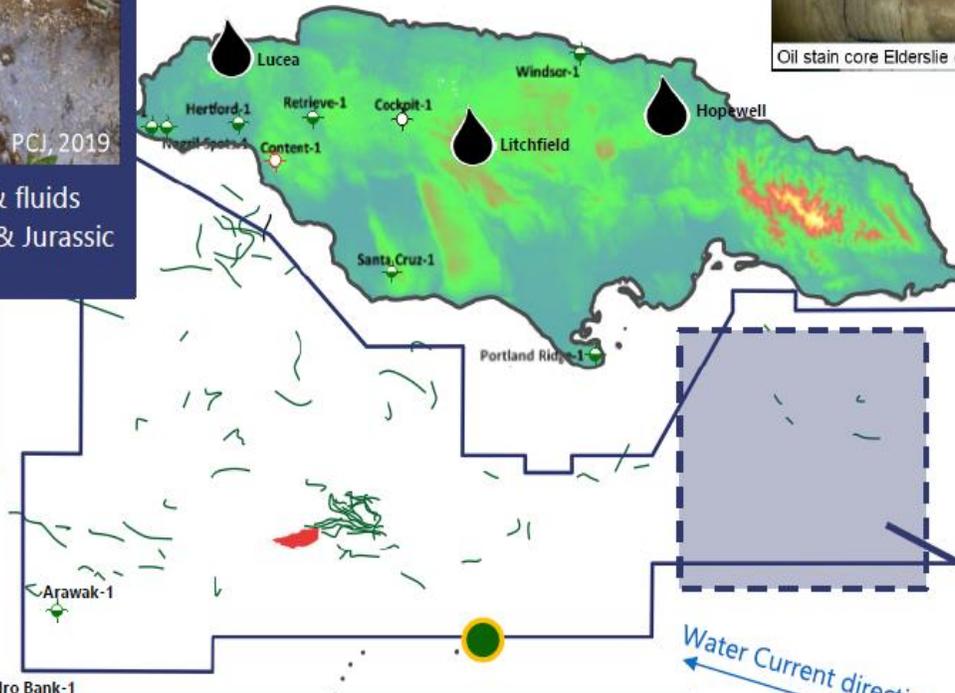
Satellite Seep Data

299 scenes, 5 areas with repeated seep activity

Evidence from 3D seismic

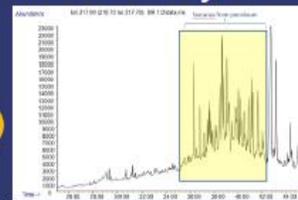


- Colibri Prospect
- 2002-2020 Satellite Seep Data
- Onshore live oil seep



Offshore Geochemical Analysis

Previously sampled offshore thermogenic seeps (Blower Rock)

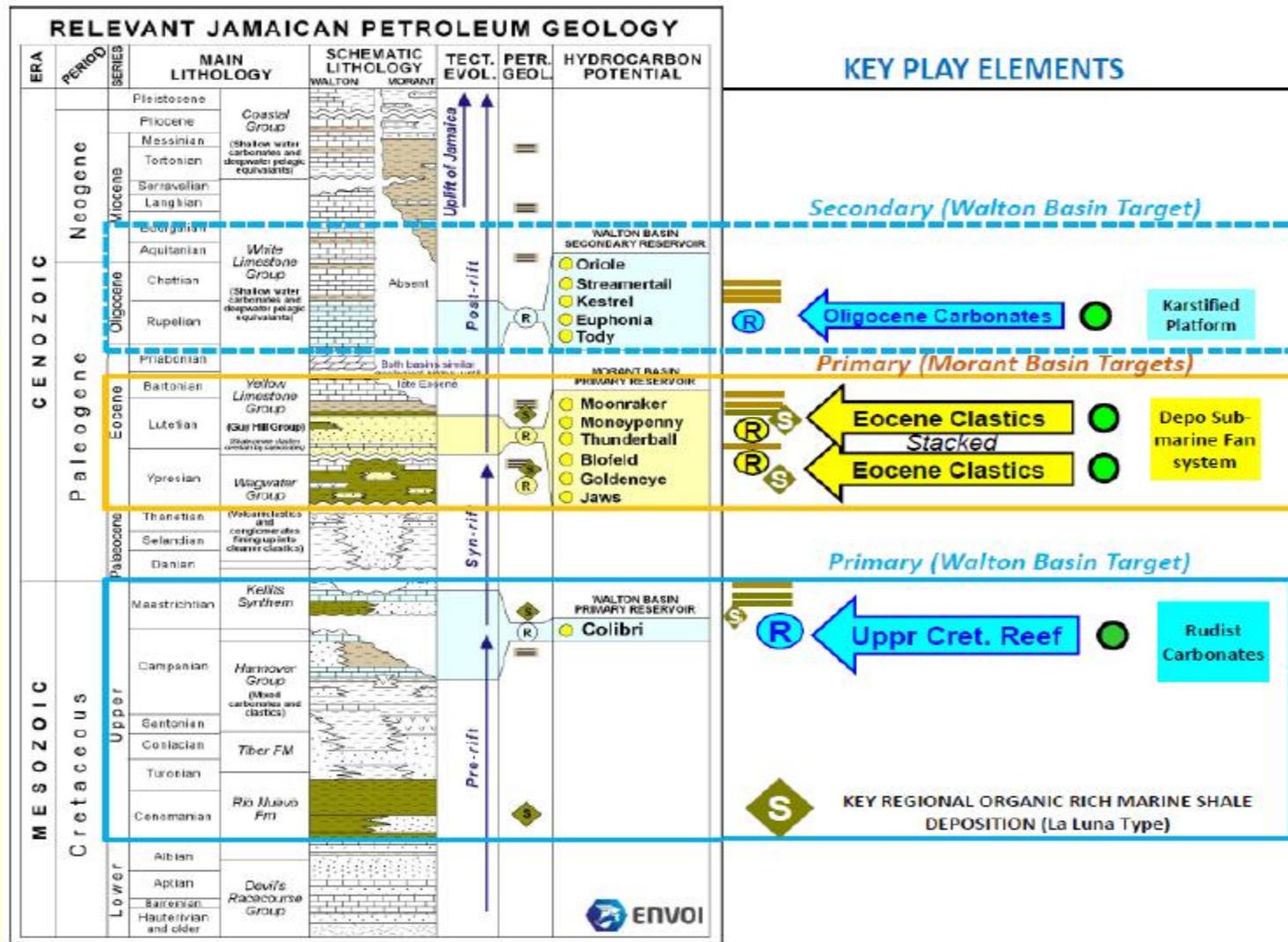


10 / 11 wells with hydrocarbon shows

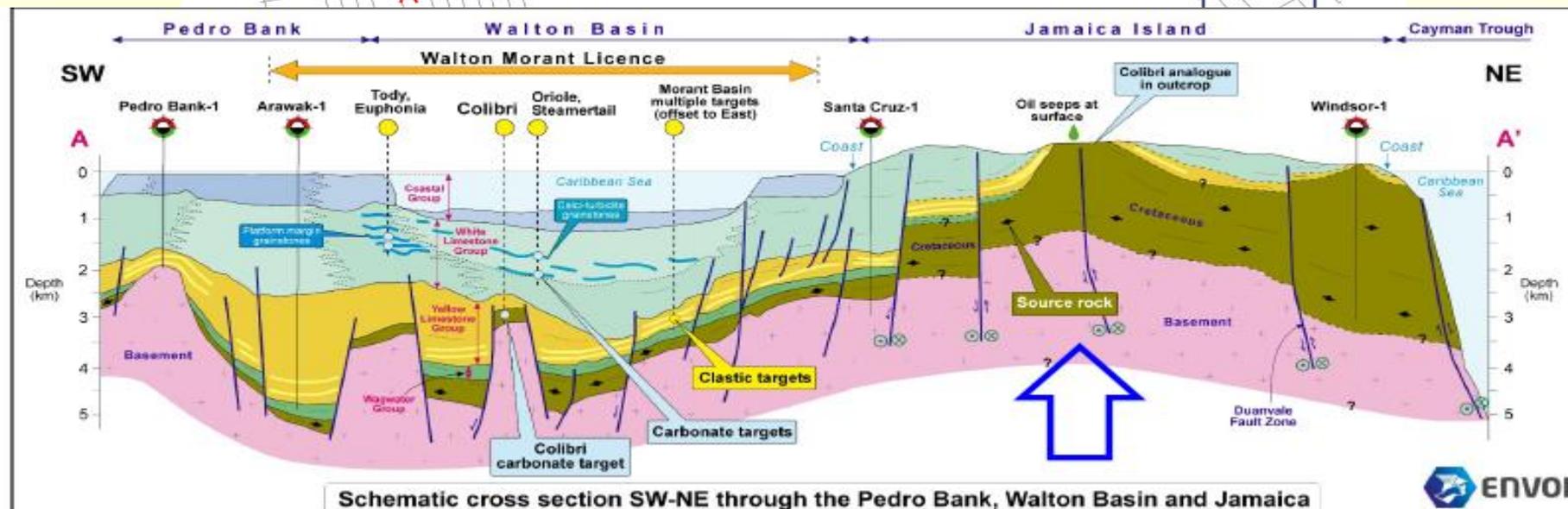
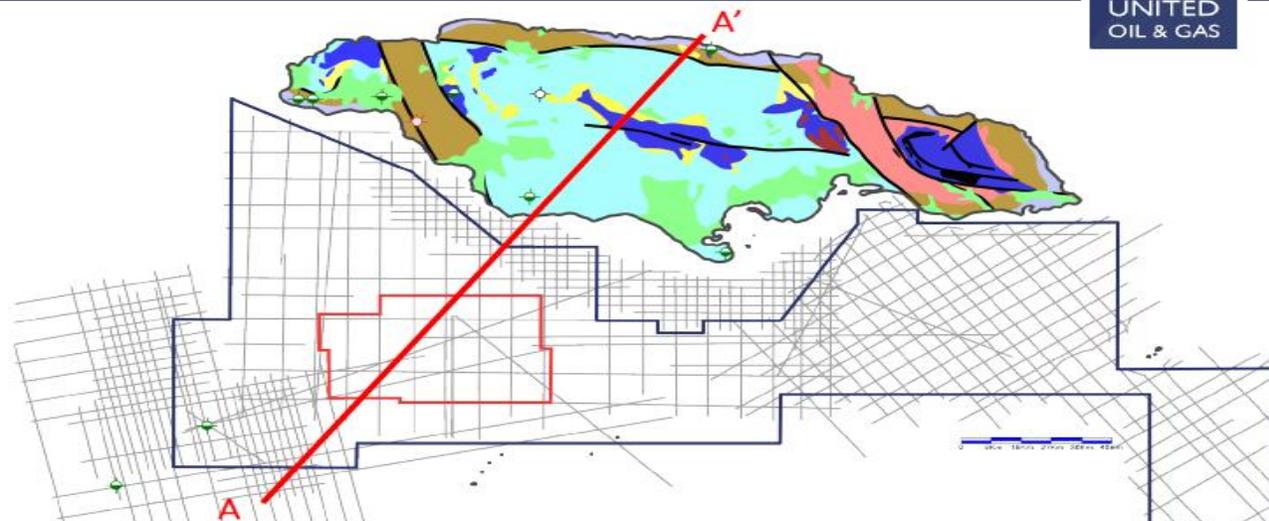
Basin modelling



New Geological Interpretations Onshore and Offshore



New Geological Interpretations Onshore and Offshore



Schematic cross section SW-NE through the Pedro Bank, Walton Basin and Jamaica

Image courtesy of UOG/Simon Mitchell

Identified Drill Ready Prospects

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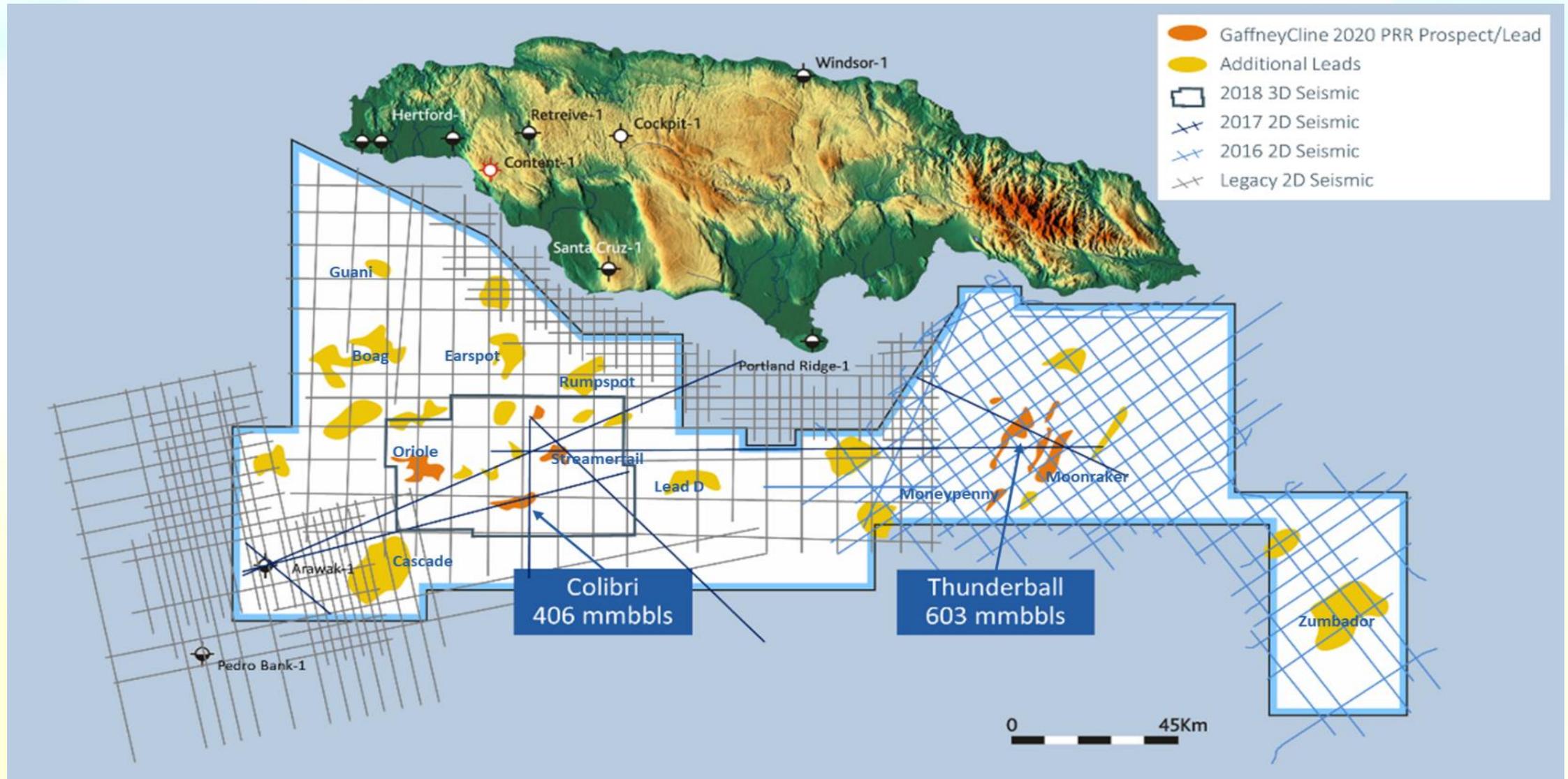
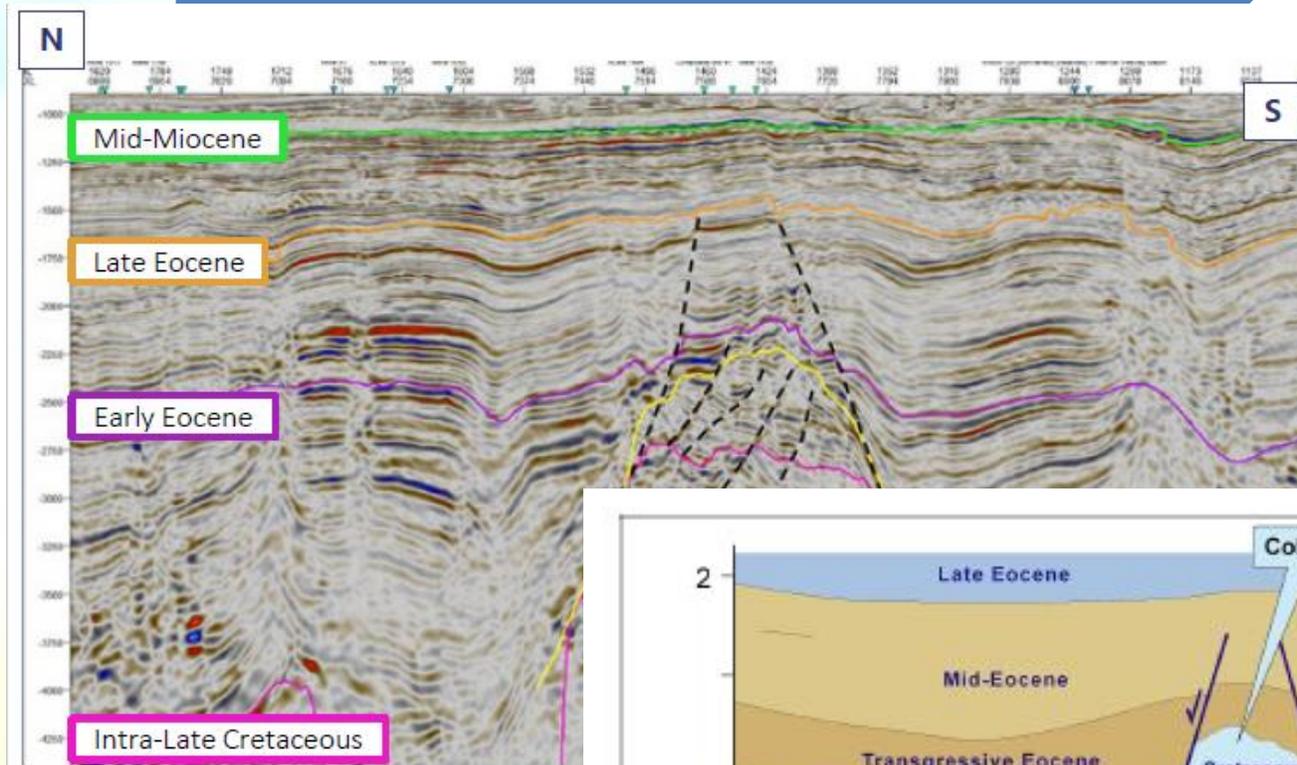


Image courtesy of Gaffney Cline/UOG

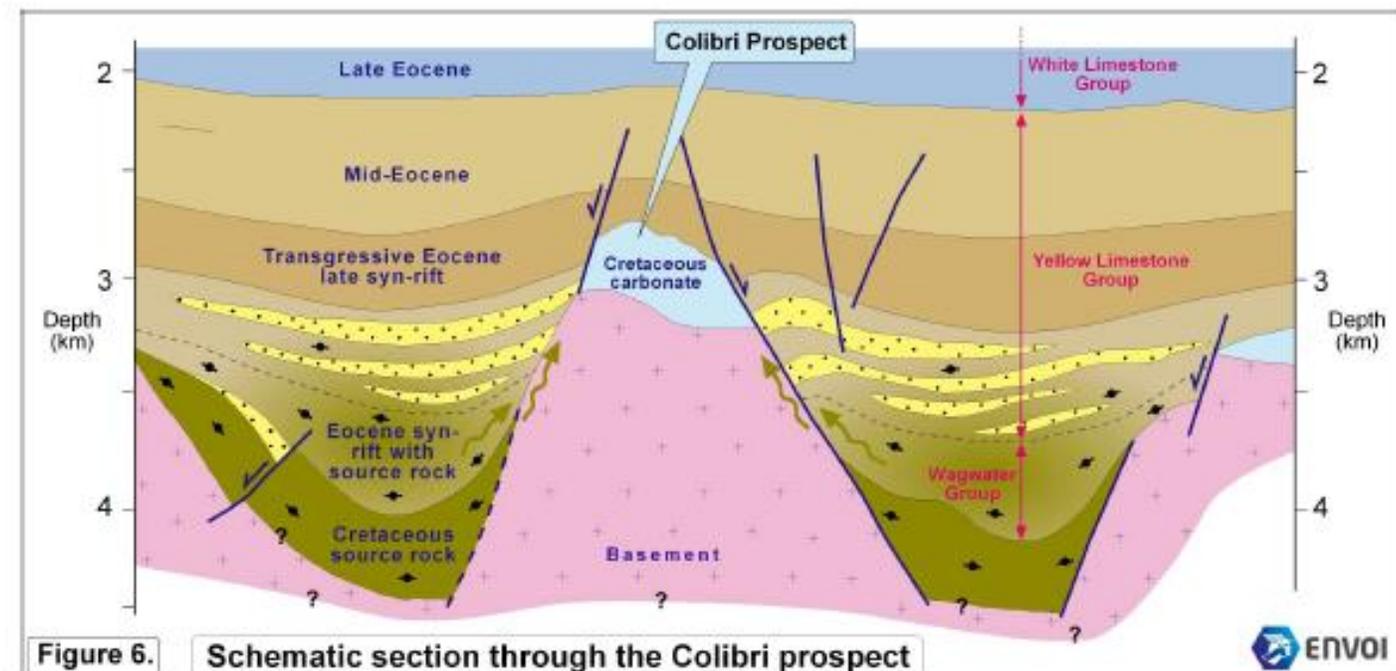
Identified Drill Ready Prospects



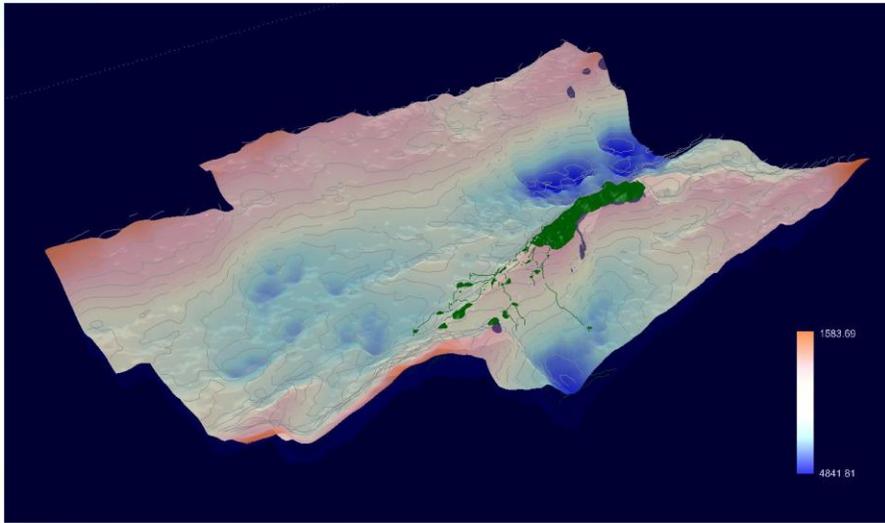
- **Source Rock and Charge:** Late Cretaceous kitchens to the north and south of the prospect.

Colibri Prospect

- **Reservoir:** Large syn-rift horst of porous (fractured and or karstified) platform Carbonate.
- **Trap & Seal:** deepwater marine shales.



Identified Drill Ready Prospects



- Modelling of source rock kitchens and identification of migration pathways has enhanced the prospect of Colibri.
- This prospect is one of a kind in the acreage and has the potential to be a major find for Jamaica.
- The estimated recoverable resources is about 400 MMSTB.

Colibri Prospect

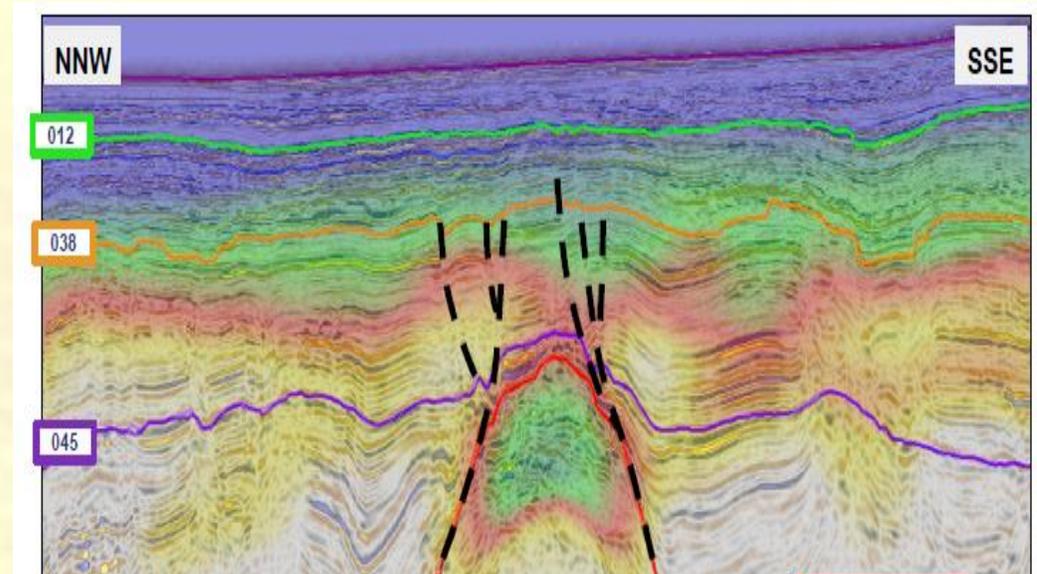
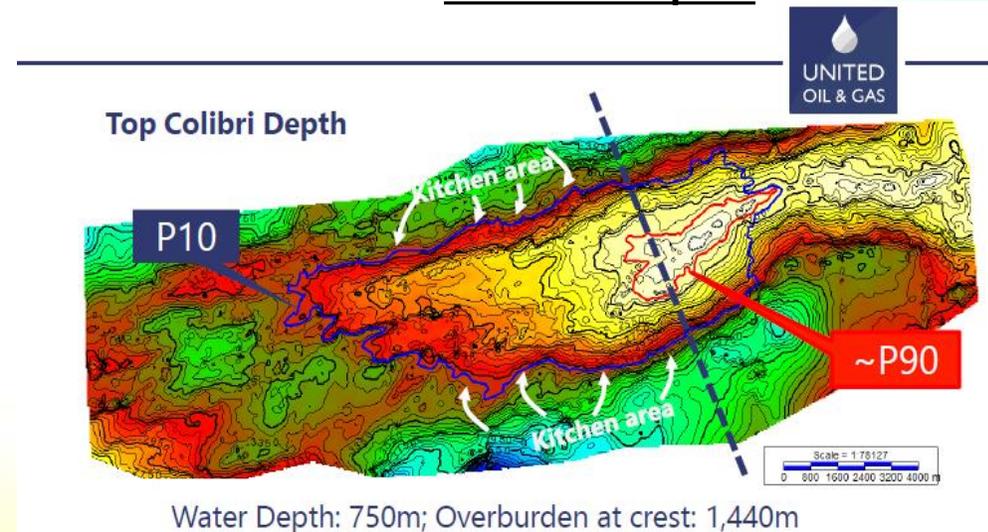
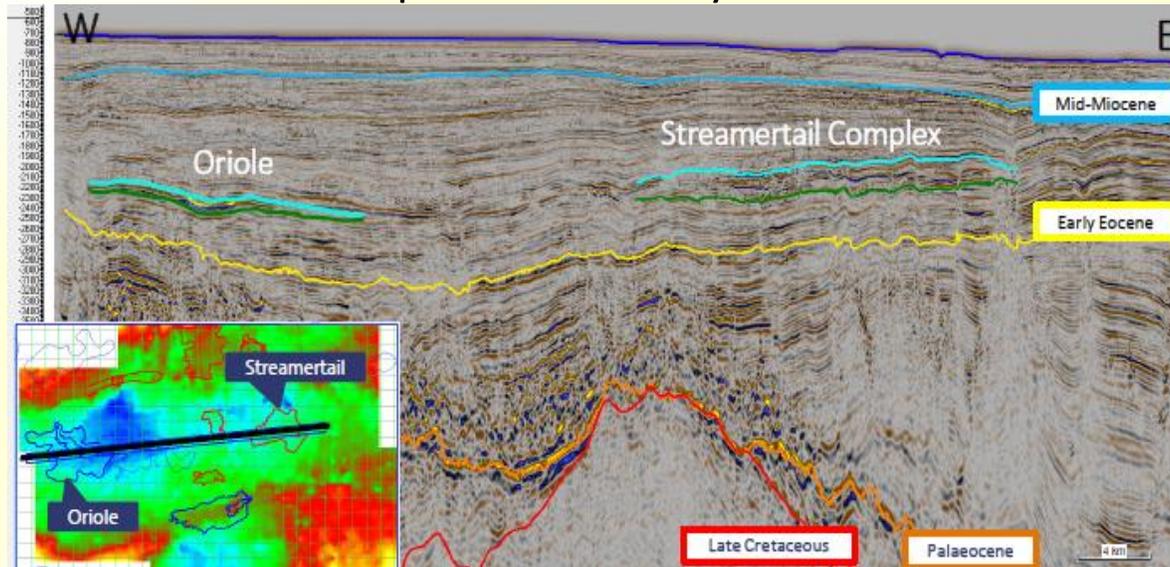


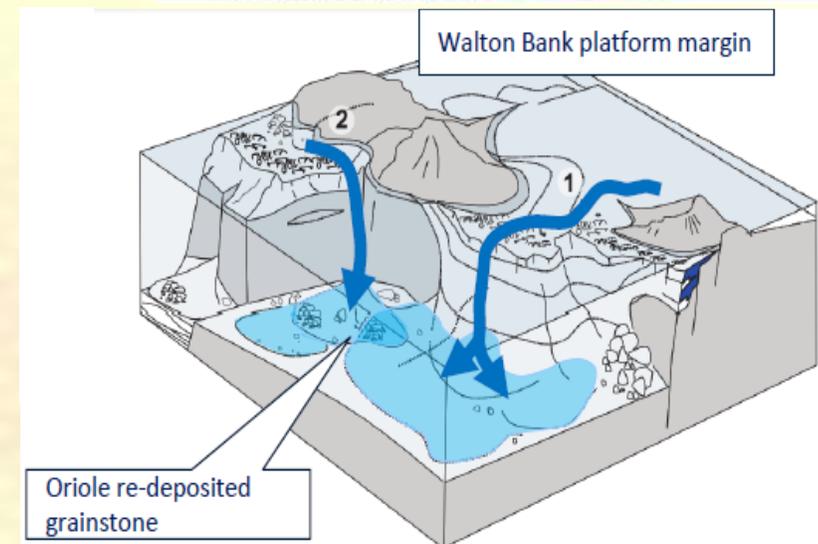
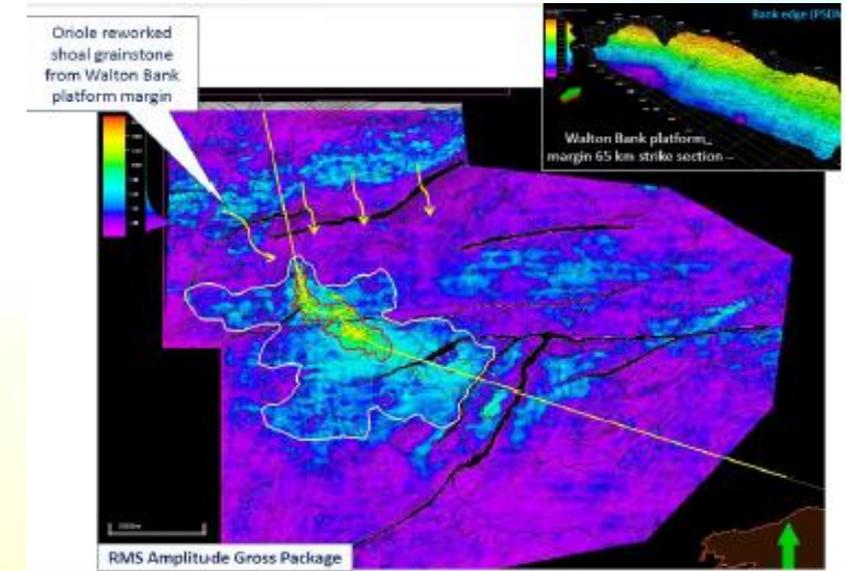
Image courtesy of UOG

Identified Drill Ready Prospects

- **Reservoir:** shallow water platform grainstones, redeposited in calciturbidite fans on the deeper water platform slope.
- **Trap & Seal:** stratigraphic traps that are fault bounded.
- **Source Rock & Charge:** prospect lie above source rock kitchen and are charged by vertical migration.
- This lead is an amplitude anomaly.



Oriole Prospect



Identified Drill Ready Prospects

Name	Assignment	Location	Volume (mmbbls / mmboe)
Colibri	Prospect	Walton Basin	406
Oriole	Prospect	Walton Basin	220
Streamertail	Prospect	Walton Basin	221
Tody	Prospect	Walton Bank	53
Euphonia	Prospect	Walton Bank	38
Thunderball	Lead	Morant Basin	603
Moonraker	Lead	Morant Basin	323
Moneypenny	Lead	Morant Basin	173
Blofeld	Lead	Morant Basin	171
Goldeneye	Lead	Morant Basin	174
Jaws	Lead	Morant Basin	39
Rumpspot	Lead	Walton Bank	85
Earspot	Lead	Walton Bank	145
Lead D	Lead	Walton Basin	382
Mango	Lead	Walton Basin	53
Guani	Lead	Walton Bank	53
Booby	Lead	Walton Basin	34
Boag	Lead	Walton Bank	219
Cascade Central	Lead	Pedro Bank	275
Cascade East	Lead	Pedro Bank	86
Cascade South	Lead	Pedro Bank	101
Squire	Lead	Walton Basin	139
Bluefields	Lead	Walton Bank	56.95
Lead 6G	Lead	Walton Bank	38
Lead 6H	Lead	Walton Bank	120
Lead 6I	Lead	Walton Bank	205
Lead6Q	Lead	Walton Bank	101
Lead 7P	Lead	Walton Bank	76
Lead 7N	Lead	Walton Bank	70
Lead 7R	Lead	Walton Bank	28
Lead 7S	Lead	Walton Bank	28
Lead 7T	Lead	Walton Bank	60
Lead 10B	Lead	Walton Basin	32
Lead 10K	Lead	Walton Basin	70
Lead 11F	Lead	Walton Basin	1126
Lead 12L	Lead	Walton Basin	70
Lead 12M	Lead	Walton Basin	133
Lead 12V	Lead	Walton Basin	111
Lead 12U	Lead	Walton Basin	41
Zumbador	Lead	Morant Basin	925

Colibri Analogue
Play Leads

Gaffney Cline

11 High-graded prospects & leads included in
Gaffney Cline & Associates Prospective
Resources Audit (2020)

TOTAL: 2.4 BBO Mean Rec.

Additional leads identified on 2016 PSTM
and legacy 2D PSTM seismic data

TOTAL: 4.8 BBO Mid case Rec.

Identified Drill Ready Prospects

- While Jamaica is identified as a frontier hydrocarbon prospect, key play types have been identified throughout the stratigraphic column in Jamaica.
- A variety of play types with regional source rocks in the C-T.
- Onshore has shown that hydrocarbons have been generated and expelled but a lack of trap and/or seal was in place.
- Offshore has good hydrocarbon prospects with good evidence of all the requirements of a petroleum system especially migrating fluids.

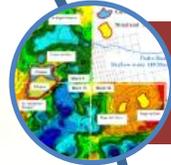
Why Jamaica?

Production Sharing Agreements

MSETT is seeking partnerships to drive offshore exploration



Flexible PSA Terms



5-10 year Exploration



15-20 years Production



Tax Incentives Available



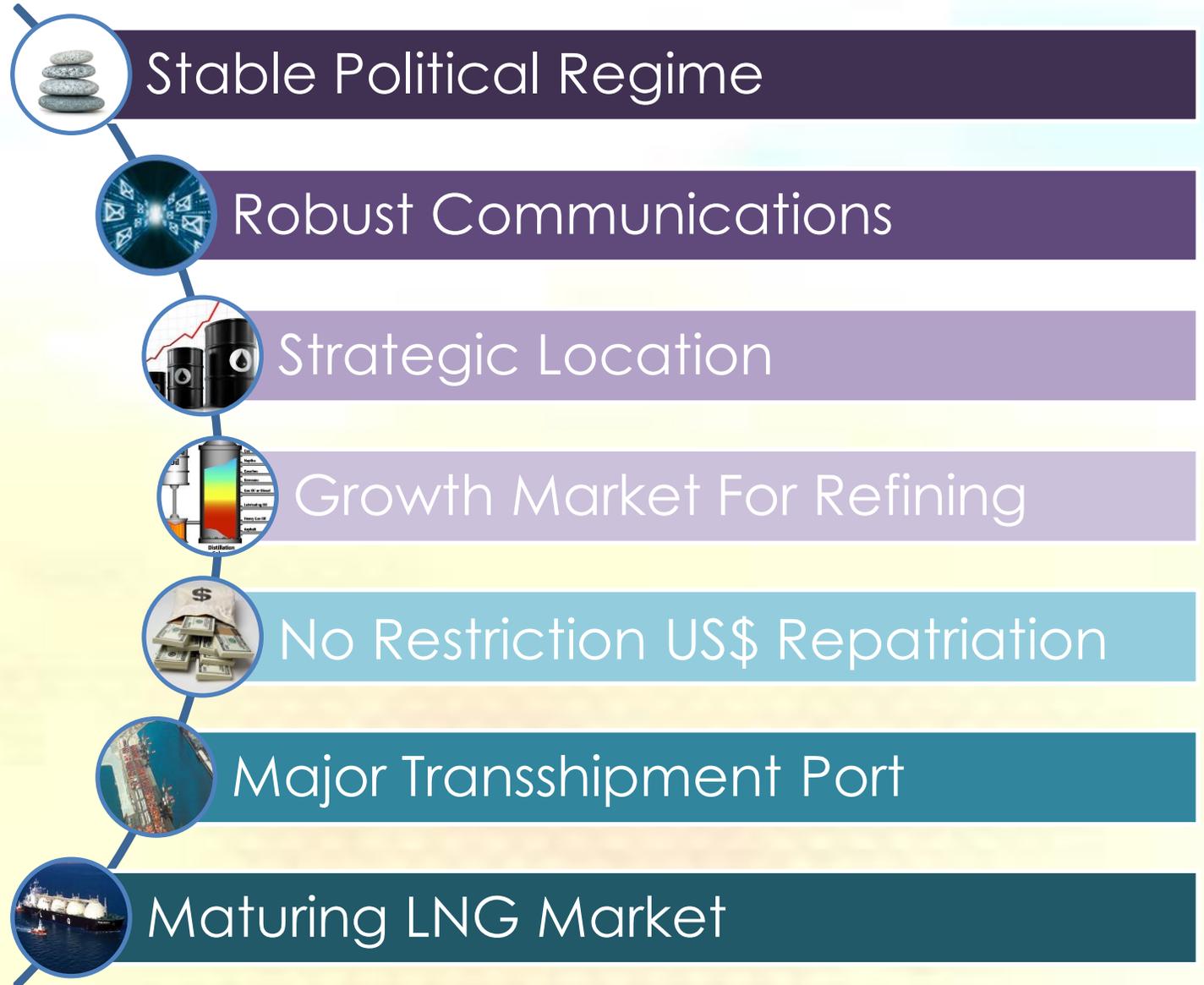
Fixed Royalty



UP to 75% Cost Recovery

Investment Conditions

Jamaica is Open
for Business



THANK YOU!!

Please visit booth 449 for additional information