



Atlantic Ireland Porcupine Basin

Frontier Licence Option 11/5



**EXPLORING FOR MULTI-HORIZON
CRETACEOUS SAND TARGETS IN
AN EMERGING EXPLORATION
FAIRWAY**

NOV 12, 2012, DUBLIN

Forward Looking Statements



Forward-looking statements, which are subject to various risks, uncertainties and other factors, could cause actual events or results to differ materially from those anticipated in such forward-looking statements. Such risks, uncertainties and other factors include the uncertainties inherent in oil and gas exploration and development activities, the effect of actions by third parties, fluctuations in world oil prices and other risks detailed in the company's annual information form and other filings on SEDAR. The company cannot give assurance that the results anticipated herein will be attained. No responsibility or liability whatsoever is accepted for any loss howsoever arising from any use of, or in connection with, this presentation. The company further assumes no obligation to update forward-looking statements should circumstances or management's estimates change. Statements relating to "resources" are deemed to be forward-looking statements, as they involve the implied assessment based on certain estimates and assumptions, that the reserves described can be profitably produced in the future. The estimates of remaining recoverable prospective resources are either unrisks (as noted) for chance of discovery and chance of development, or have been risks (as noted) for chance of discovery, but have not been risks for chance of development. If a discovery is made, there is no certainty that it will be developed or, if it is developed, there is no certainty as to the timing of such development.

Presentation Outline



- 1. Introduction to Antrim Energy Inc.**
- 2. Licence Option location**
- 3. Exploration drivers**
- 4. Source Kitchens**
- 5. Cretaceous Sand Fairways**
- 6. Antrim's pre-Licence Work Programme**
- 7. What's next?**
- 8. Acknowledgements**

1) Introduction to Antrim Energy Inc.

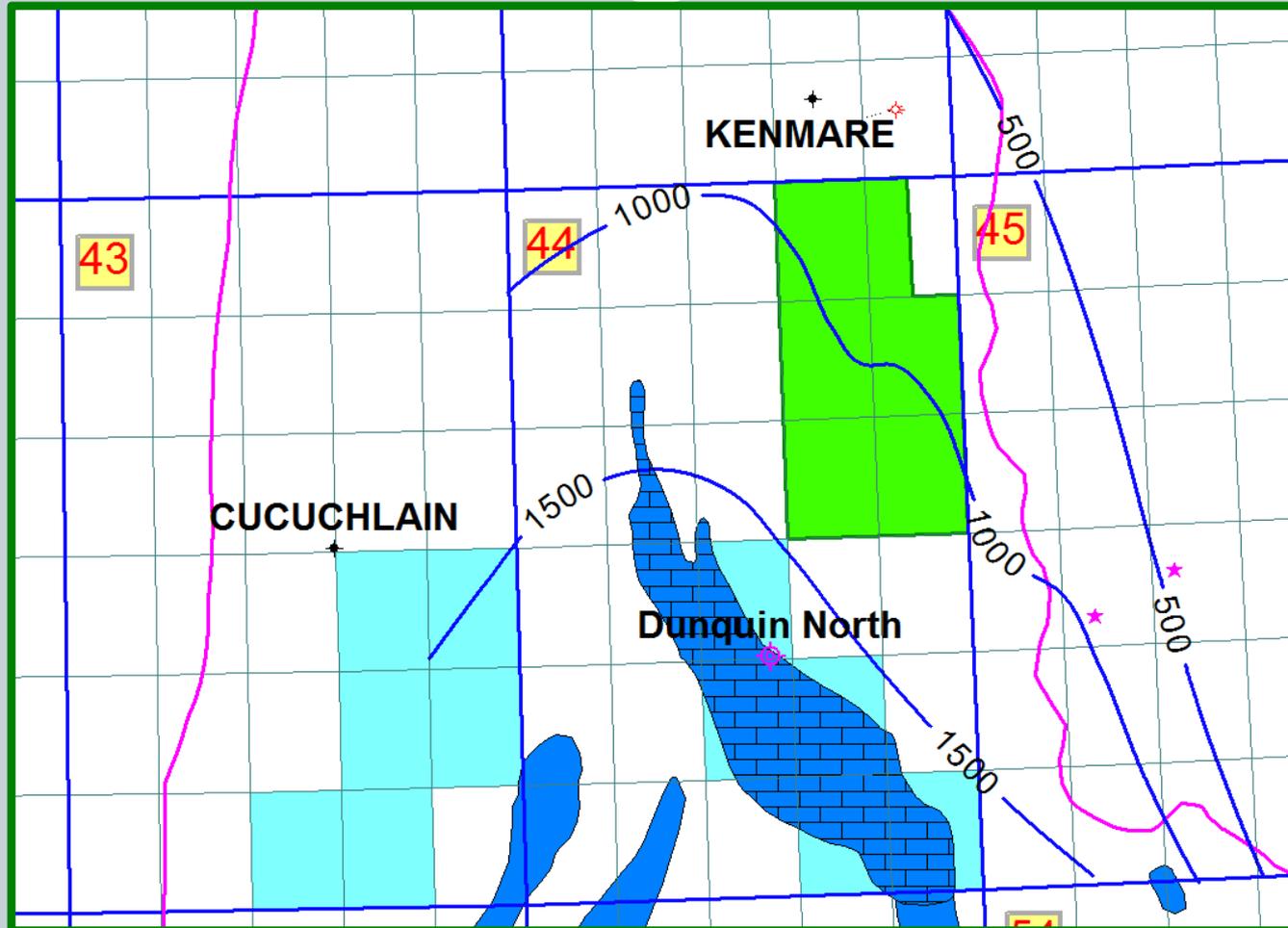


ANTRIM ENERGY INC. is a Canadian based oil and gas exploration & production company active in the UK North Sea, Ireland and Tanzania.

- Antrim's operated wells in the UKNS have established > 30 million barrels of oil (2P gross).
- Antrim's non operated production from the UKNS Causeway Field is expected to commence in November 2012 .
- Antrim has built a large and focussed licence position in the Central North Sea adjacent to the 100% Antrim-owned Fyne Field and has mapped several prospects and leads with a similar play concept to the recent Catcher discovery, 35 km. to the south.
- Antrim's current Q4 2012 exploration drilling programme includes an oil discovery ("Contender") drilled offsetting the North Cormorant Field in the Northern North Sea and a well ("Cyclone") to be drilled for an Eocene target in the Central North Sea.

In addition to the UKNS, Antrim has been making significant investments in frontier areas such as Ireland and East Africa (Tanzania), now one of the most promising new hydrocarbon provinces on the globe.

2) Licence Option 11/5 Location



3) EXPLORATION DRIVERS



Prospectivity:

- Numerous Cretaceous pinchout features with amplitude effects (syn-rift).
- Large tilted Jurassic fault block features (pre-rift).

Scale:

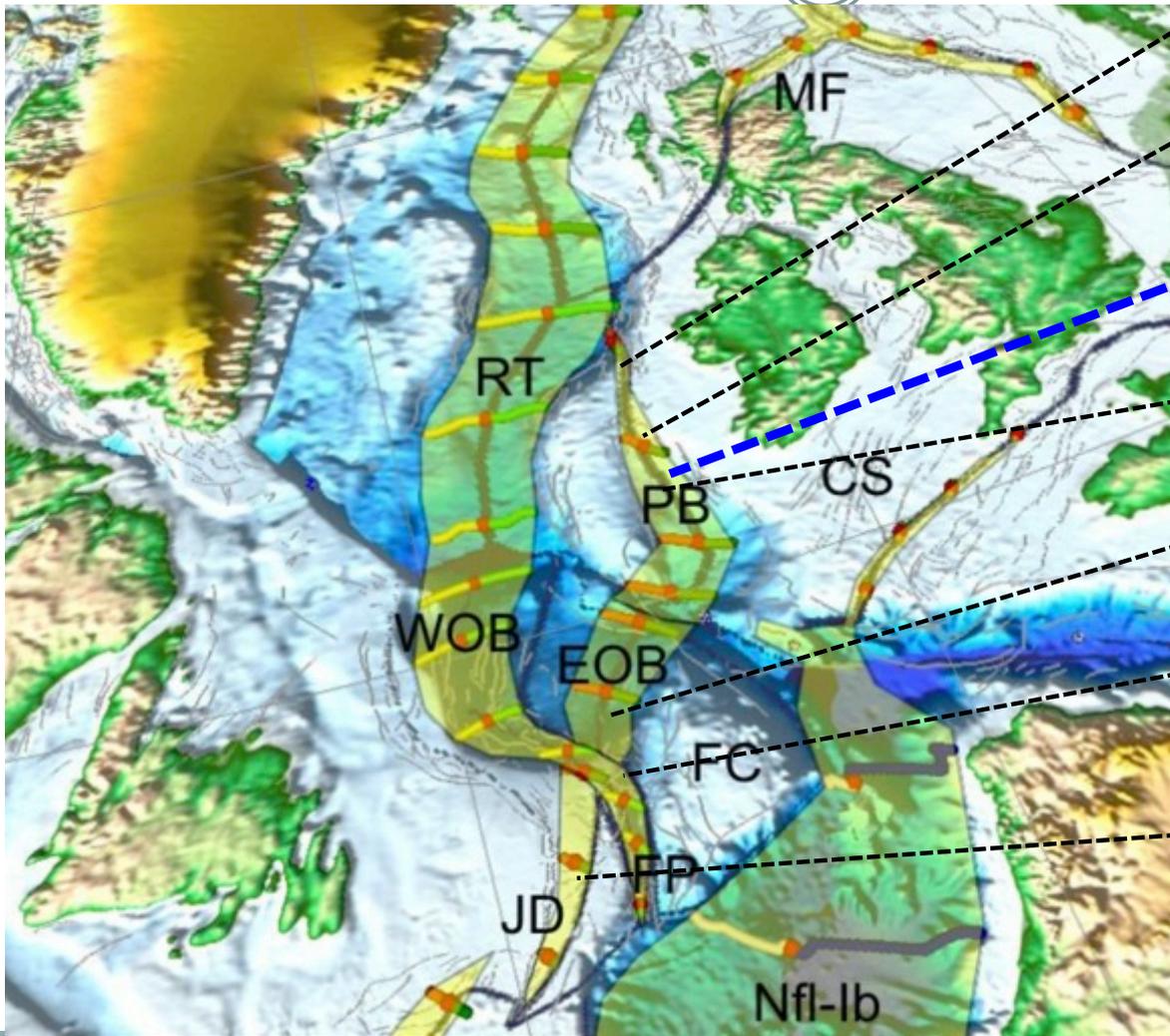
- Ghana margin type Cretaceous stratigraphic pinchout (West African Atlantic Margin)
- Voring basin analogs (Norway)
- North Sea type Jurassic Tilted Fault Blocks
- resources potential in the 100s millions of barrels category.

Value Addition:

- High Quality Seismic area conducive to direct hydrocarbon identification (DHI).
- Significant 2D seismic reprocessing uplift expected.
- Ideal acquisition area for 3D seismic.

A proven trans-Atlantic Jurassic oil fairway with a common Jurassic-Lower Cretaceous history

A Jeanne D'Arc (JD) - East Orphan Basin (EOB) - Porcupine Basin (PB) correlation

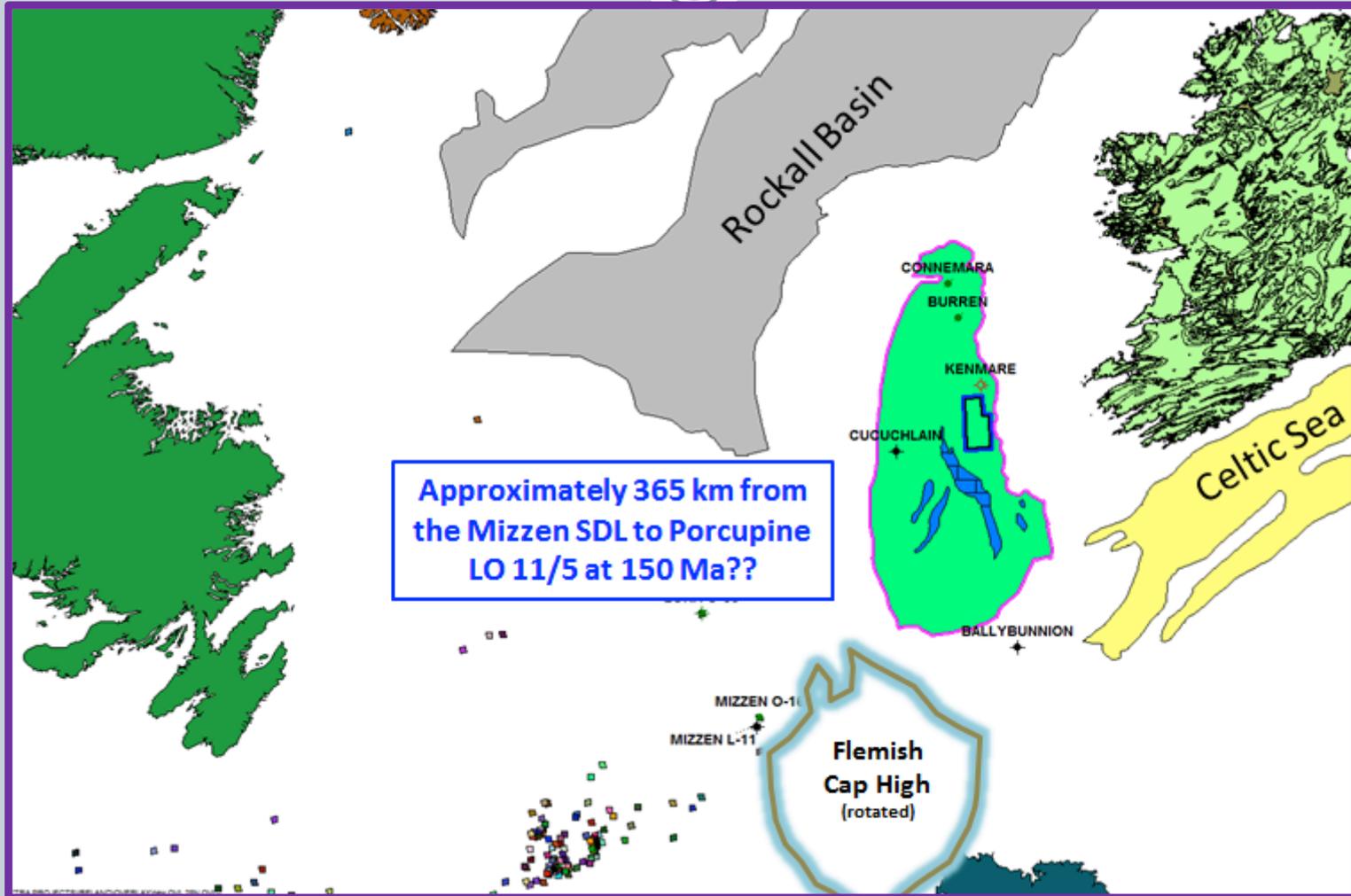


Bandon Discovery 2009
Connemara / Spanish Point 1 appraisal well in 2013
Antrim Energy Cretaceous oil??
ExxonMobil et al Dunquin, drill in Q1 2013
East Orphan Basin 1 new well in 2012
Flemish Pass Basin Mizzen SDL: ~200 MMBO 3 new wells 2012/13
Jeanne D'Arc Basin Hibernia 782 MMBO P1 Terra Nova 363 MMBO P1 White Rose 226 MMBO P1

Reconstruction at 120 MA (mid-Aptian)

After Jakob Skogseid, 2010

THE NORTH TRANS-ATLANTIC CONNECTION

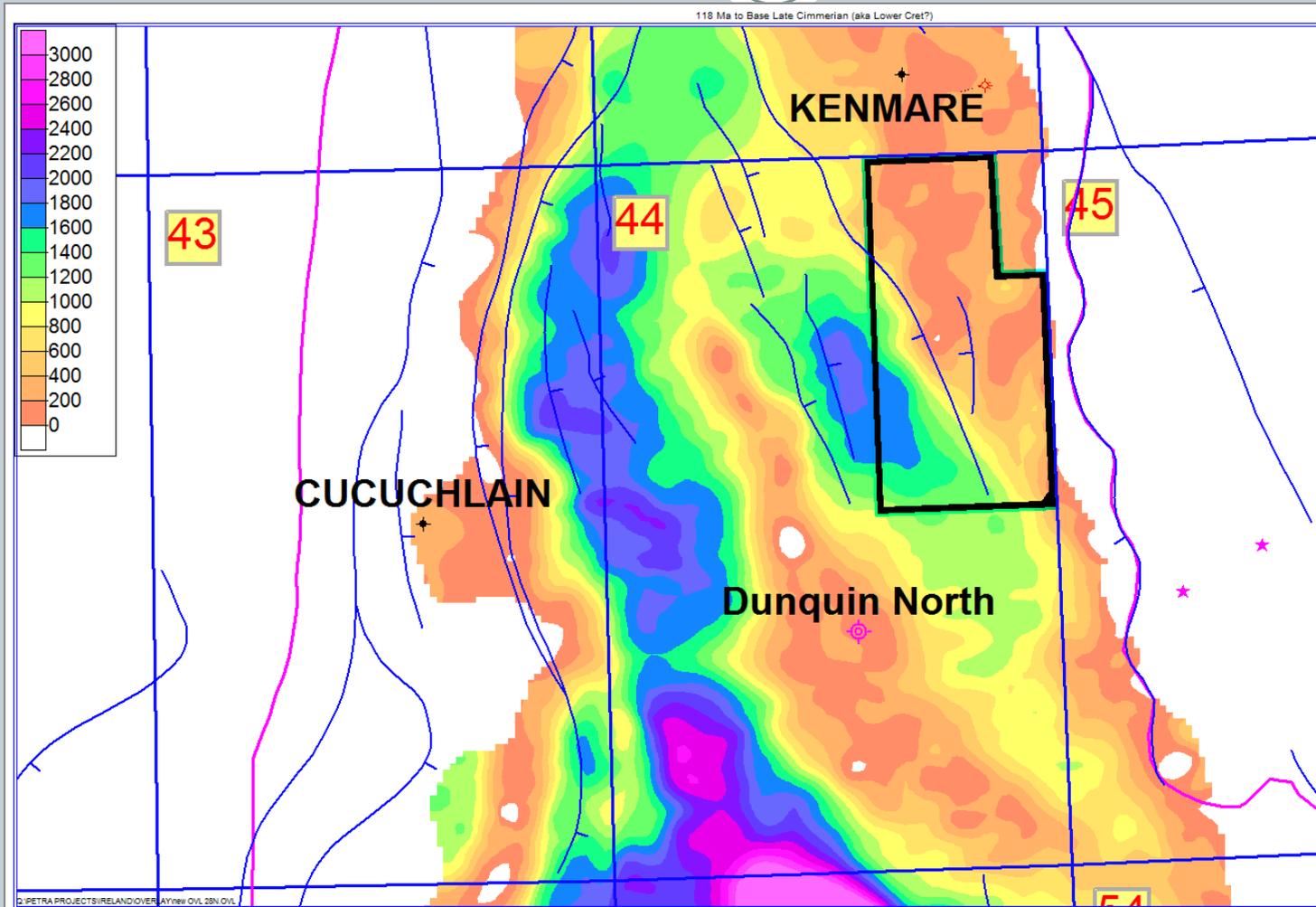


4) Source Kitchens

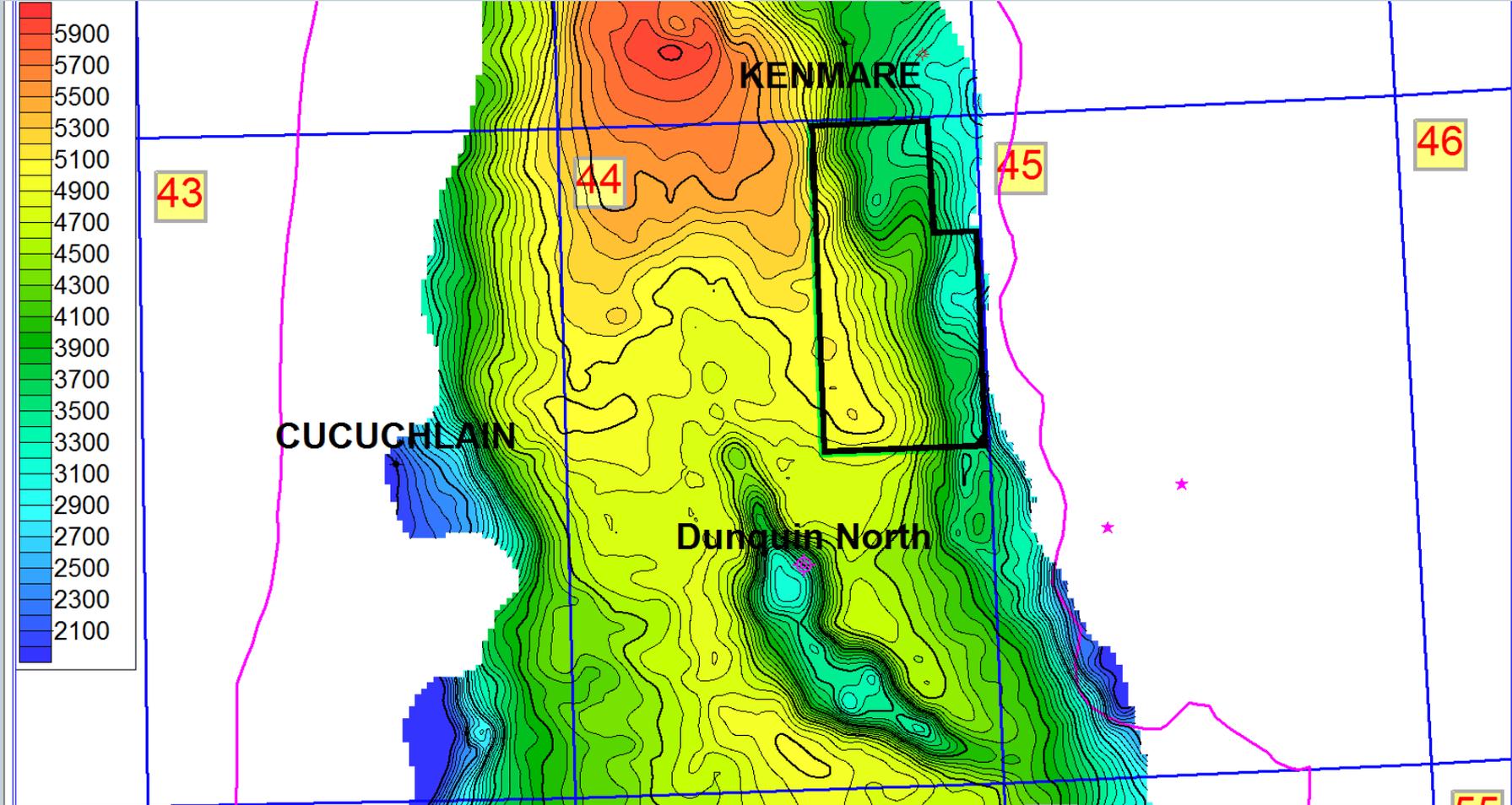


- Antrim's LO 11/5 is well positioned relative to potential oil mature Cretaceous source rock basins and established mature Jurassic source rock basins.
- Referenced organic maturity maps (PhysicalGeo) are based on the application of a depth vs. Ro transform established for 15 Porcupine Basin wells (after Corcoran and Clayton, 2001*).
 - Barremian-Aptian: OIL
 - Top Jurassic: GAS-LATE OIL-PEAK OIL
- Higher estimated relative organic maturity in north/central basin sectors reflects the north to south progradation of Tertiary depocentres.
- *Post Jurassic heat flow might be expected to vary inversely with regard to increased Beta (crustal stretching) factors recognized in the central and southern Porcupine Basin.*
- **Implications:**
 - both Jurassic and Cretaceous source rocks in the South Porcupine basin may have entered the oil window later and may have lower maturity than coeval sediments in the North Porcupine Basin
 - Oil phase hydrocarbons could be locally generated underneath or proximal to Antrim's LO 11/5 from both Jurassic and (unproven) Cretaceous source intervals.
 - Observed amplitude brightening, flat spots, and gas chimneys (see examples) are associated with the interpreted Cretaceous source kitchen area shown

CRETACEOUS SUB-BASINS (MID-APTIAN TO BASE CRETACEOUS ISOPACH)



Variable Tertiary overburden thickness affects organic maturity

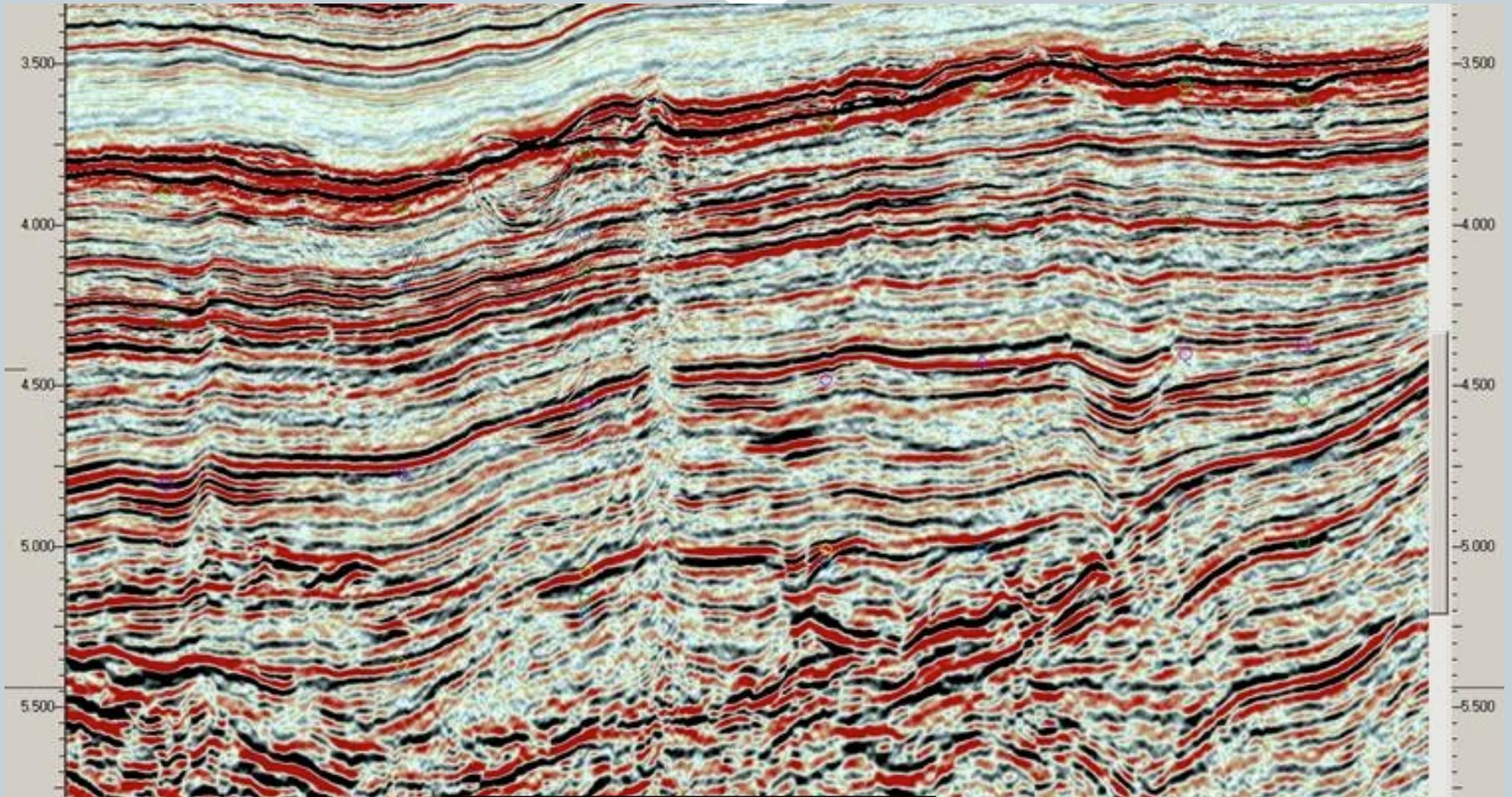


ON BLOCK DHIs



- **Candidate Cretaceous flat-spots**
 - Observed on legacy data at various locations along the eastern (and western) basin margin
 - Preliminary candidates on PSB repro data
- **Fluid (gas?) escape features**
 - Quite noticeable on the repro data vs. the legacy data sets

Fluid (gas?) escape features

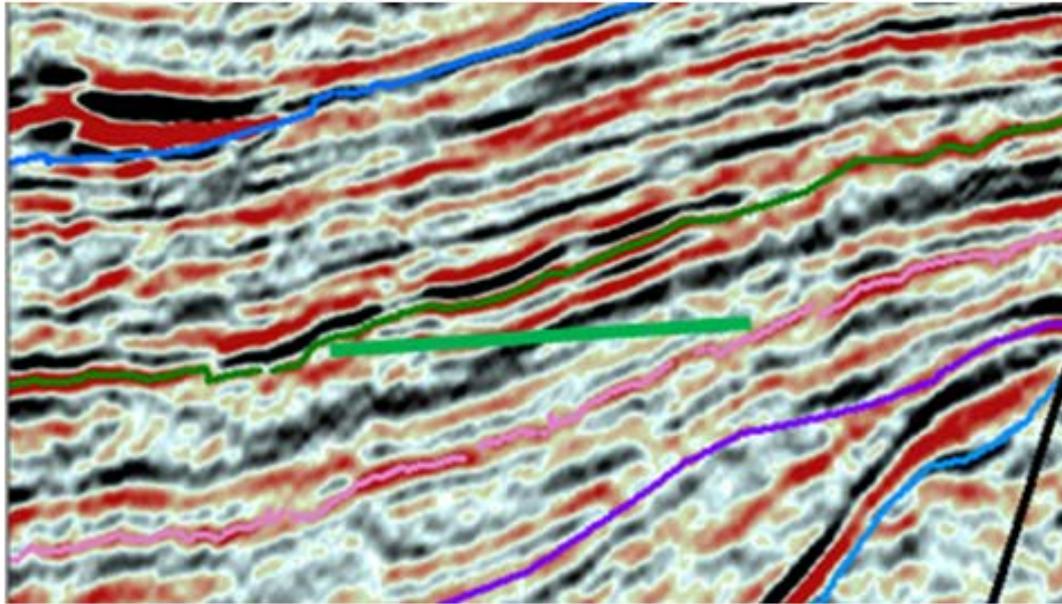


Data courtesy of TGS/Western Geco

Candidate flatspots



Upper Albian high amplitude package



PSB97RE-10 candidate fluid contact

Data courtesy of TGS/Western Geco

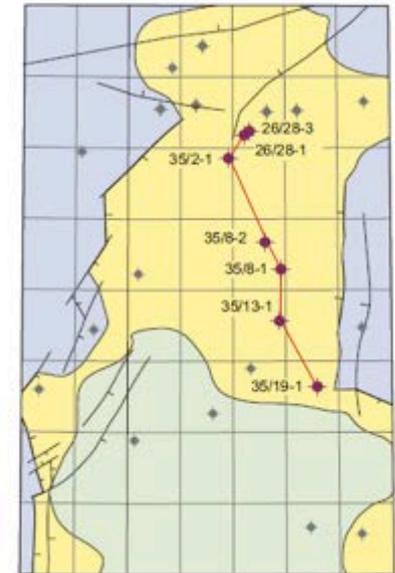
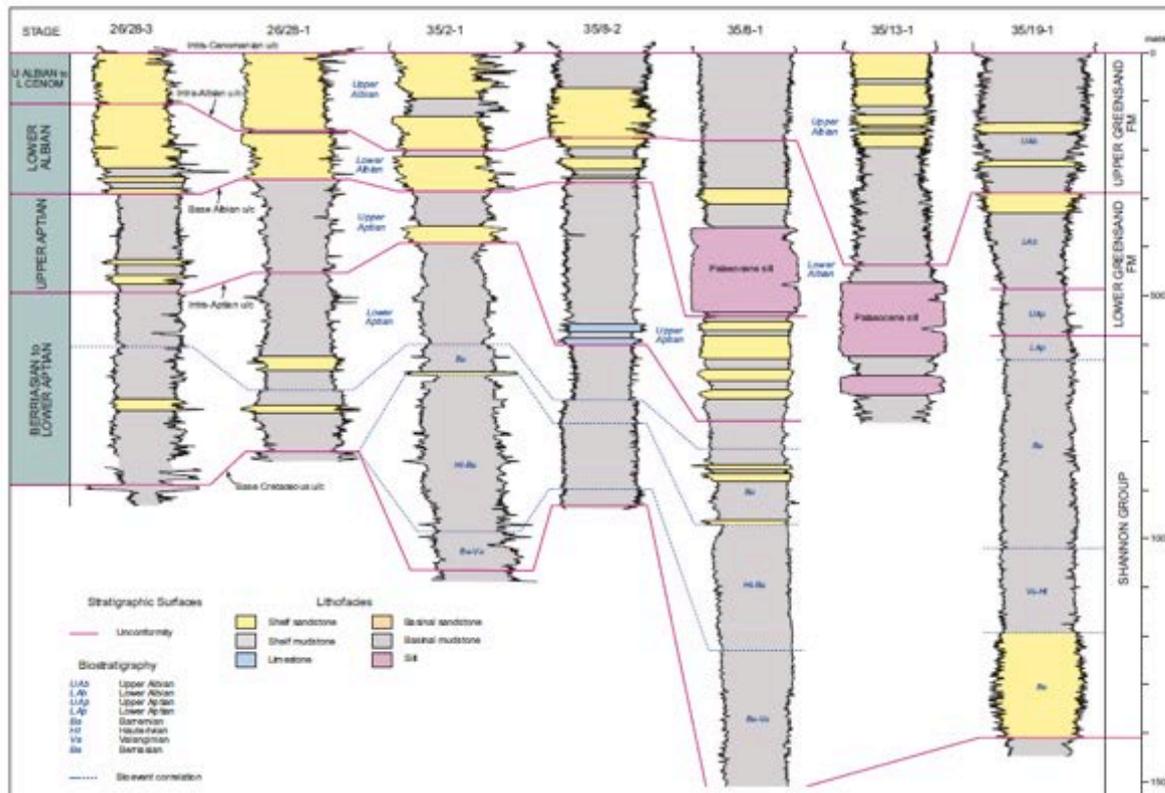
5) Cretaceous Sand Fairways



- Traditional Porcupine Basin exploration has targeted Jurassic fault block highs
- The Lower Cretaceous interval is therefore under-sampled in the Porcupine Basin.
- Given the possibility of a Cretaceous source basin, apparent associated DHIs, and proven analogue Canadian Lower Cretaceous sandstone reservoirs.....
- The Cretaceous system warrants exploration in the Porcupine Basin

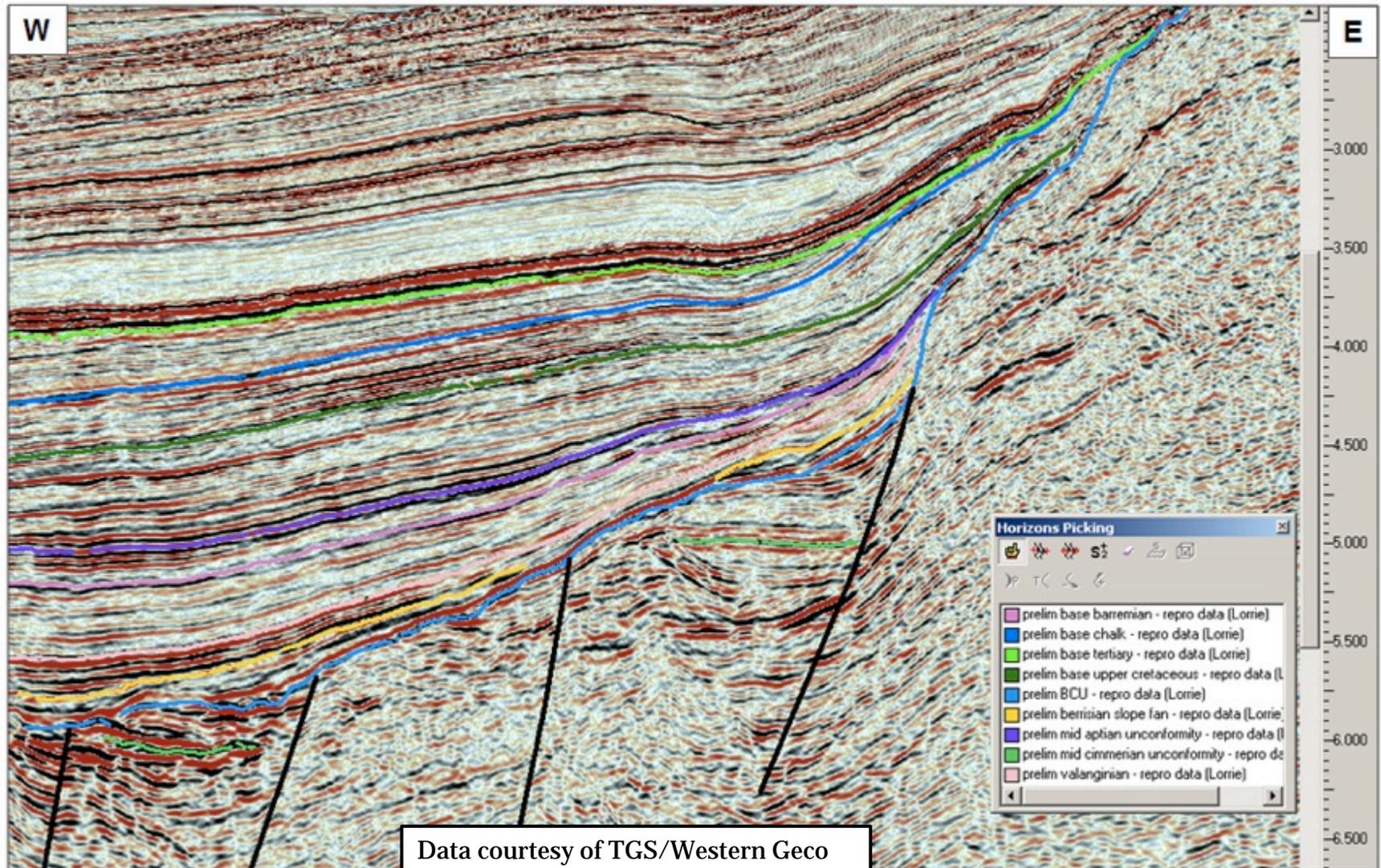
Lower Cretaceous sands in the Porcupine Basin

Lower Cretaceous Well Correlation, Porcupine Basin



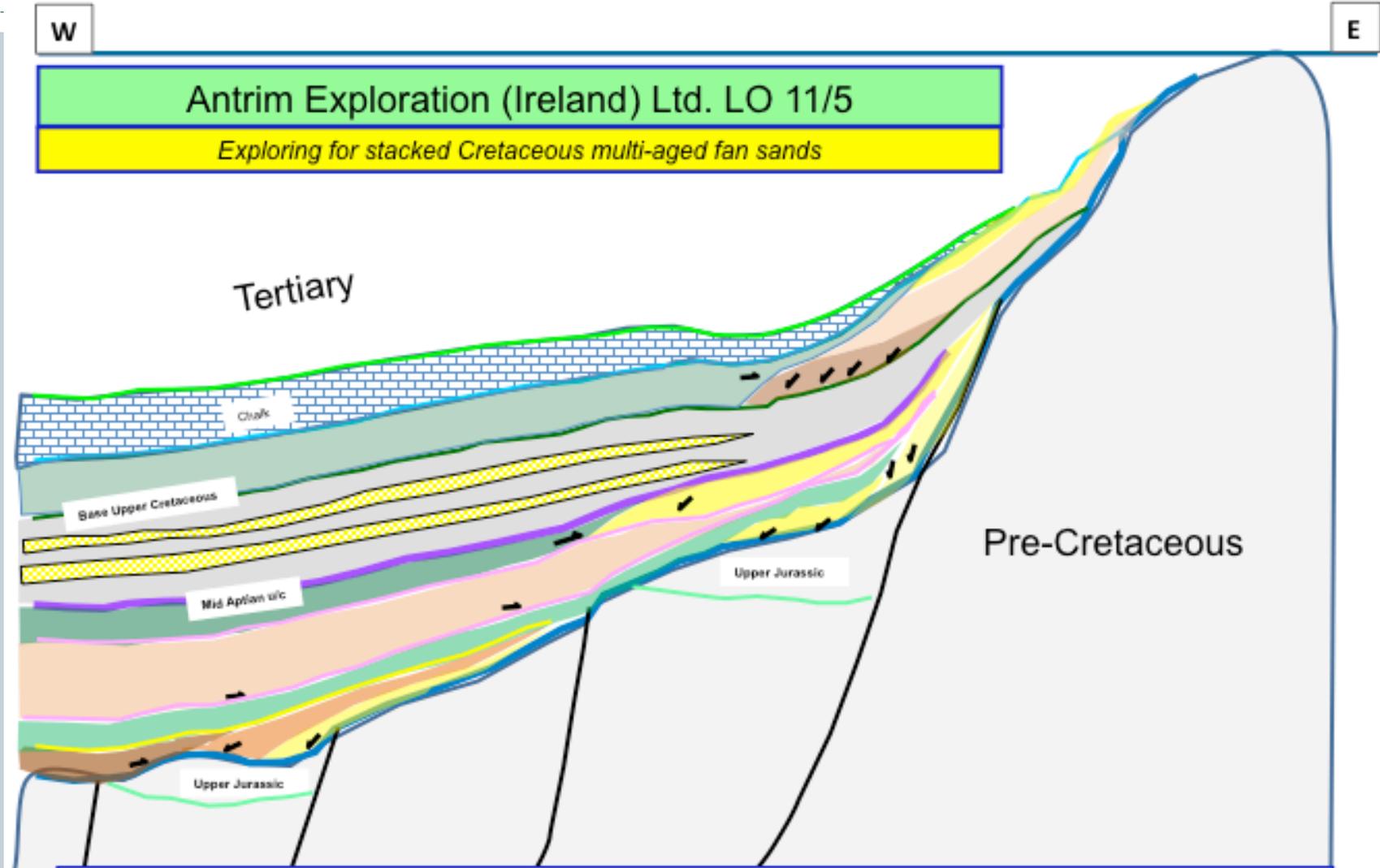
NEW PROCESSING!

SPB97RE12-18



Data courtesy of TGS/Western Geco

Cretaceous basin margin sands (concept developed on legacy data)



Antrim Exploration (Ireland) Ltd. LO 11/5
Exploring for stacked Cretaceous multi-aged fan sands

Schematic preliminary geological interpretation based on PSB97RE12-18

Canadian Lower Cretaceous Analogues



- **East Orphan Basin**
 - Great Barrasway
 - Lona O-35 (released 2012)
- **Flemish Pass Basin**
 - Mizzen L-11
 - Mizzen O-16 (released 2012)
 - Mizzen F-09 (released 2012)

Observations

from newly released Canadian well data



- Final stratigraphic age determinations are not yet available in the public domain however....
- Reservoir quality Lower Cretaceous sands (thought to be of Berriasian age) were encountered in several wells
- Jurassic sands/reservoirs were also documented

Flemish Pass Basin, Eastern Canada

Mizzen L-11 Reservoirs



Depth	Lithology	Age	HC	Reservoir
3345 - 3355	ss	Early Cretaceous Baccalieu I- 78 ss equiv.	OIL 6 m net	Phi = 20% Sw = 25%
3410 - 3430	ss	Late Jurassic Kimmeridge	No / wet Enachescu, NL DNR 2010	Phi = 20%
3740 - 3770	ss	Late Jurassic Tithonian	No / wet	Phi = 20%

6) ANTRIM'S PRE-LICENCE WORK PROGRAMME



- **Reprocess TGS/Western Geco PSB97 2D seismic**
 - The original 1997 PSB regional 4968 line-km survey processing did not preserve amplitude
 - The current exploration focus now includes stratigraphic traps
 - Antrim funded 2484 line-km of reprocessing
- **Post stack inversion**
- **Pre-stack AVO**
- **Porosity wedge modeling**
- **Design of a comprehensive technical work program**

WHAT's next?



- Next phase of seismic processing work underway
 - AVO
 - Wedge Modeling
- Initiate reinterpretation of and re-mapping of all mega-sequence boundaries and seismic facies
- Integrate analogue Canadian well log data
- Attract a technical partner with an appetite for exploring Cretaceous Atlantic Margin style sand fairways in an emerging exploration fairway on Europe's doorstep

Acknowledgements



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 - Rob Murphy

Come visit Antrim's Booth



THANK YOU!