

## **ATLANTIC MARGIN CONFERENCE**

**DUBLIN November 12<sup>th</sup> 2012**

**Mizzen and Molly Malone Basins  
An Under-Explored Frontier Area**



**FASTNET**

# Fastnet Oil & Gas plc – Asset Overview

## ➤ Celtic Sea, Offshore Ireland

- Molly Malone & Mizzen licences – Gross Interests 100% Licensing Options 12/2 and 12/3 respectively
- Highly prospective hosting large prospects with well-understood large-field analogues. 3D seismic will significantly de-risk prospects
- 2012 Barryroe commercial oil test has increased the level of interest in the Celtic Sea
- Appropriate opportunities to expand the Celtic Sea portfolio are being pursued.

## ➤ Foum Assaka Permit Offshore Morocco

- Covers approximately 6,500km<sup>2</sup>
- Kosmos operated – partner in Jubilee Field
- Gross Interest 25% (18.75% net) carried through 2,500km 3D seismic acquisition and processing (\$16.2m)
- Offshore Morocco becoming industry “hot spot”
- Multi-billion bbl resources in place in several plays including Jubilee Field, Ghana analogue\*

## ➤ Merada Licence Application, Onshore Morocco

- Exercised Option for 50% ground floor participation – gas play with regional analogues with potential for game changing discovery

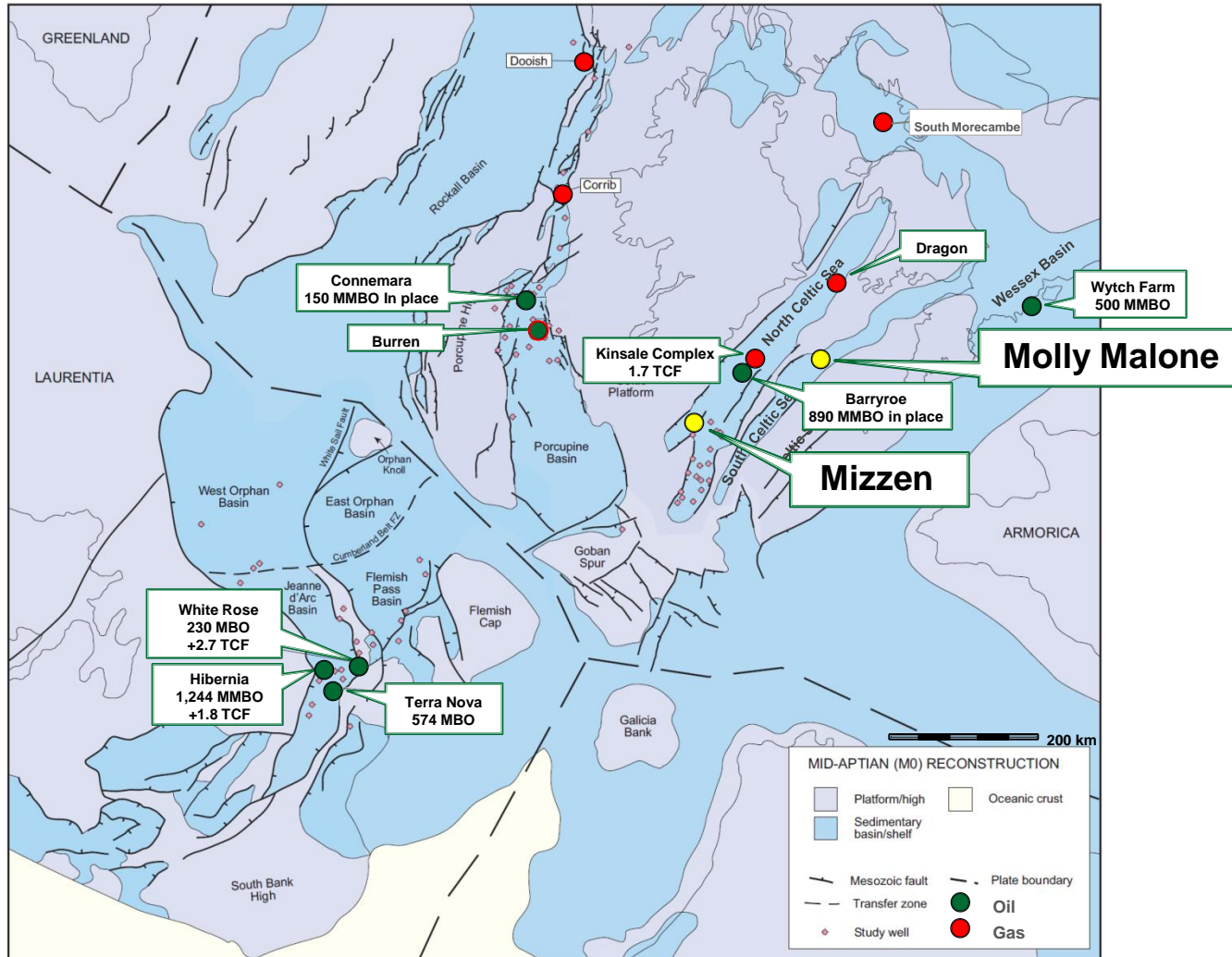


\* Source: SLR Consulting (Ireland) CPR



# Fastnet Assets: Celtic Sea Regional Setting

Pre-Atlantic Opening Tectonic Elements  
Showing Important Discoveries/Fields and Locations of Mizzen and Molly Malone



Map after PAD Ternan Report

- Areas chosen for:
  - Attractive petroleum geology.
  - Major reserves potential.
  - Existing seismic should respond well to modern processing.
  - Fastnet management experience in the specific areas.
  - Regional interest increasing due to recent Barryroe success.
  - Molly licence received June 2012.
  - Mizzen licence received June 2012.
  - 3D Seismic Acquisition being tendered for 2013.

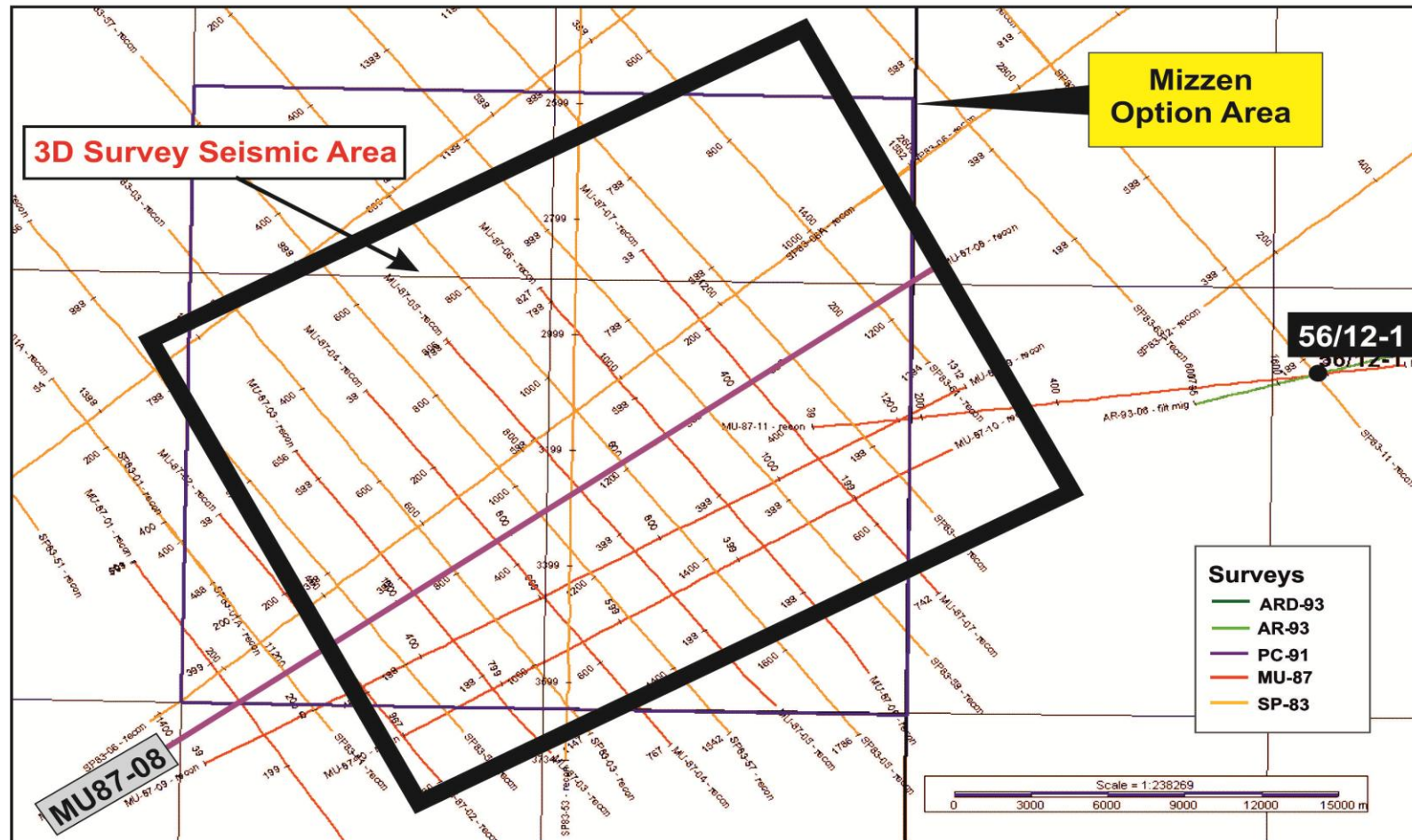
# Reasons why Mizzen Basin has been under-explored

- Only one well drilled – located downdip in the eastern extension of the Basin
- 56/12-1 – Esso-Marathon (1975) - drilled on sparse, poor quality seismic data
- Primary Target was Lower Jurassic & Triassic
- Target not reached – well terminated near base of Cretaceous in what was thought at the time to be economic basement (1987 seismic vintage indicated presence of major fault zone with potential for significant alteration of sediments in footwall & hanging wall)
- Basal Wealden Sands had oil shows but no closure is mapped at the well location
- Basal Wealden proved to be a viable oil play following Marathon's 48/24-3 oil discovery in 1990 (twinned by the Providence Barryroe well 48/24-10z in 2012)
- 1983, 1987, 1991 & 1993 vintages of poor quality seismic – airgun & water gun sources & severe multiple problem
- Low oil prices in 1990's & Corrib Atlantic Margin Discovery 1996 meant that Celtic Sea became unfashionable for oil majors
- Poor seismic data created misconception regarding the thickness of the Mesozoic section in the Mizzen Basin
- Developing Plate Tectonic Reconstruction has re-focussed attention on the potential of Mizzen based on structural & stratigraphic analogies with eastern Canada

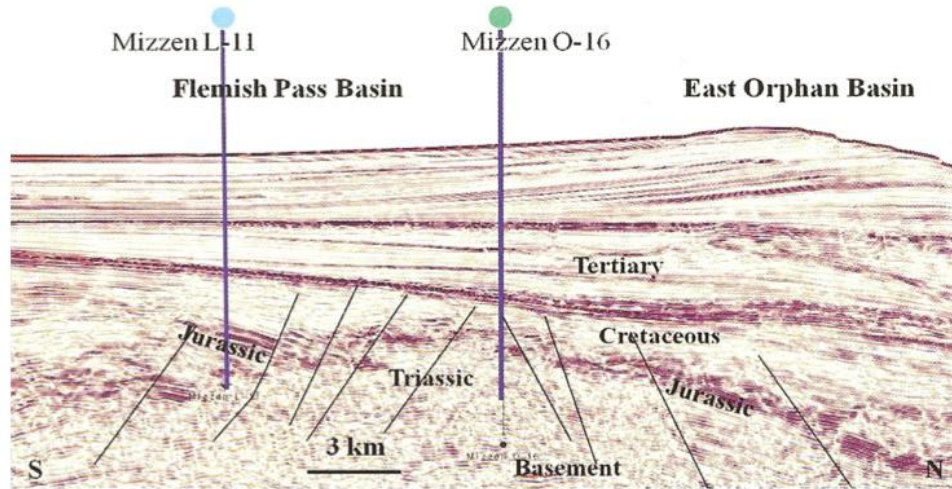


# Mizzen 2D Seismic Base Map

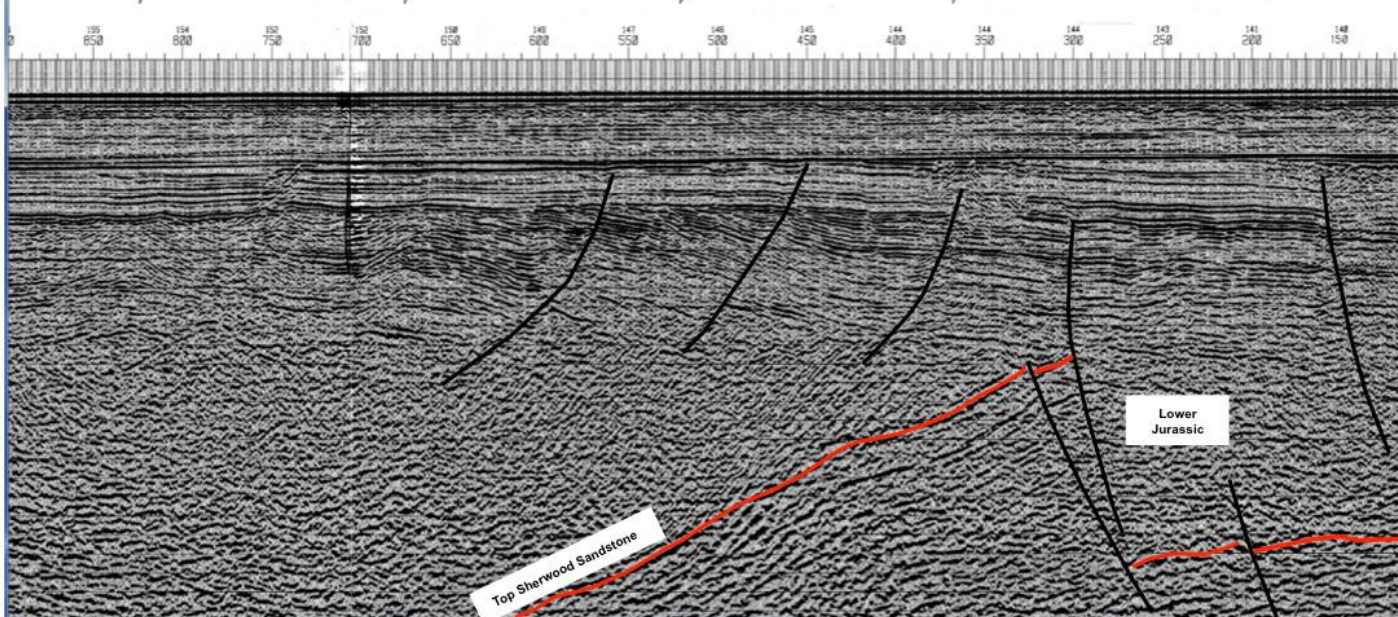
## Mizzen Seismic Basemap - Zoom on Option Area



# MIZZEN BASIN - Eastern Canada Play Analogue Data Quality Comparison



Statoil's 2009 Mizzen  
Oil Discovery – Orphan Basin  
Eastern Canada



MU87-08 Mizzen Basin,  
Ireland Lower Cretaceous  
Prospect Similar seismic  
character/structural  
styles – transfer fault system

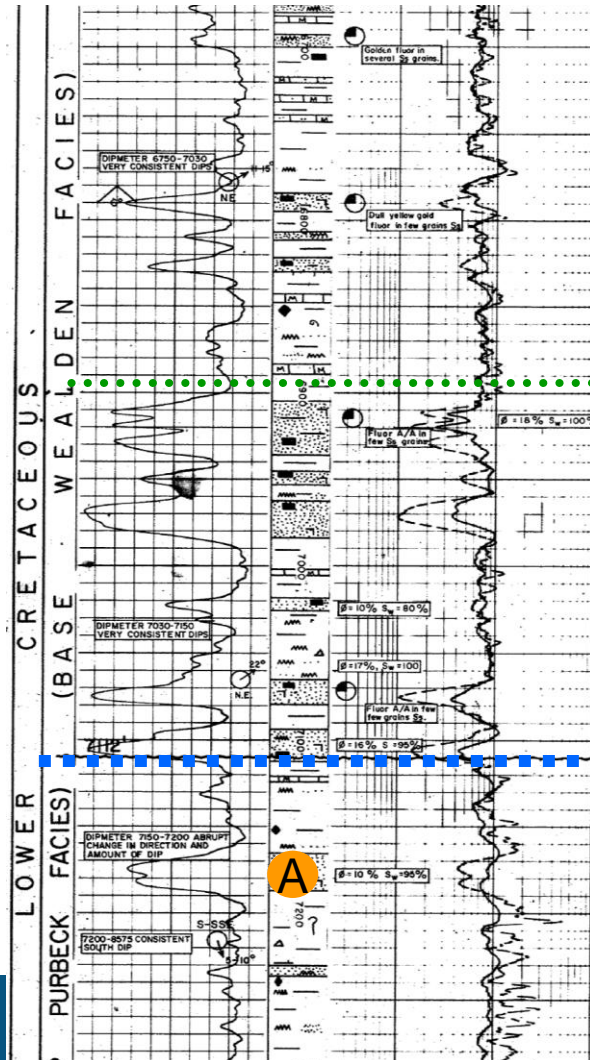
# MIZZEN BASIN - Basal Wealden "Barryroe" Play

**Esso 56/12-1 (1975) !!**  
(Mizzen Basin)

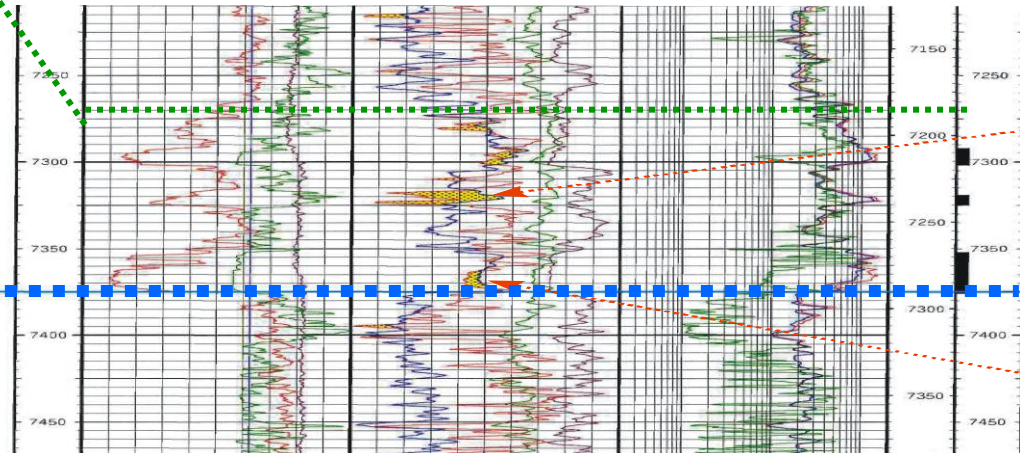
**Marathon 48/24-3 (1990) Seven Heads Oil Well**  
Twinned by Providence's 48/24-10z (2012) Barryroe Well

**120 km!**

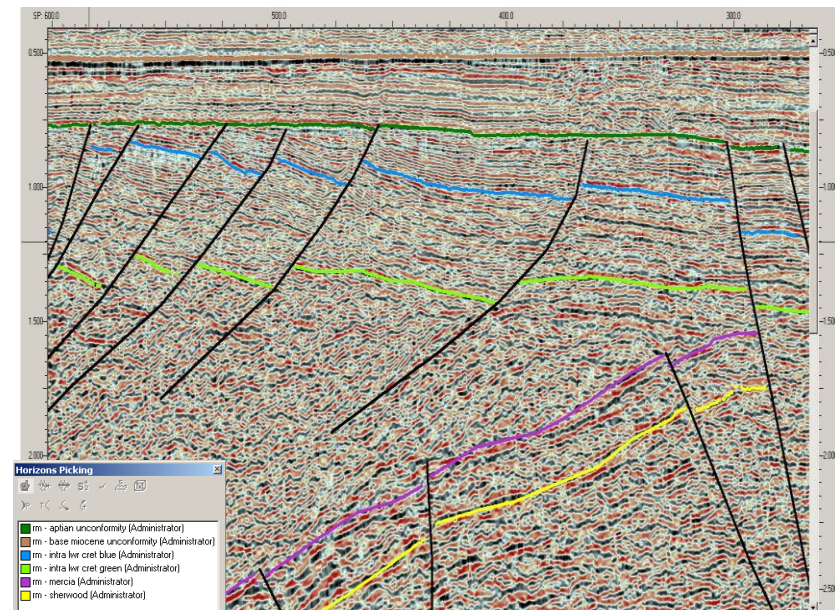
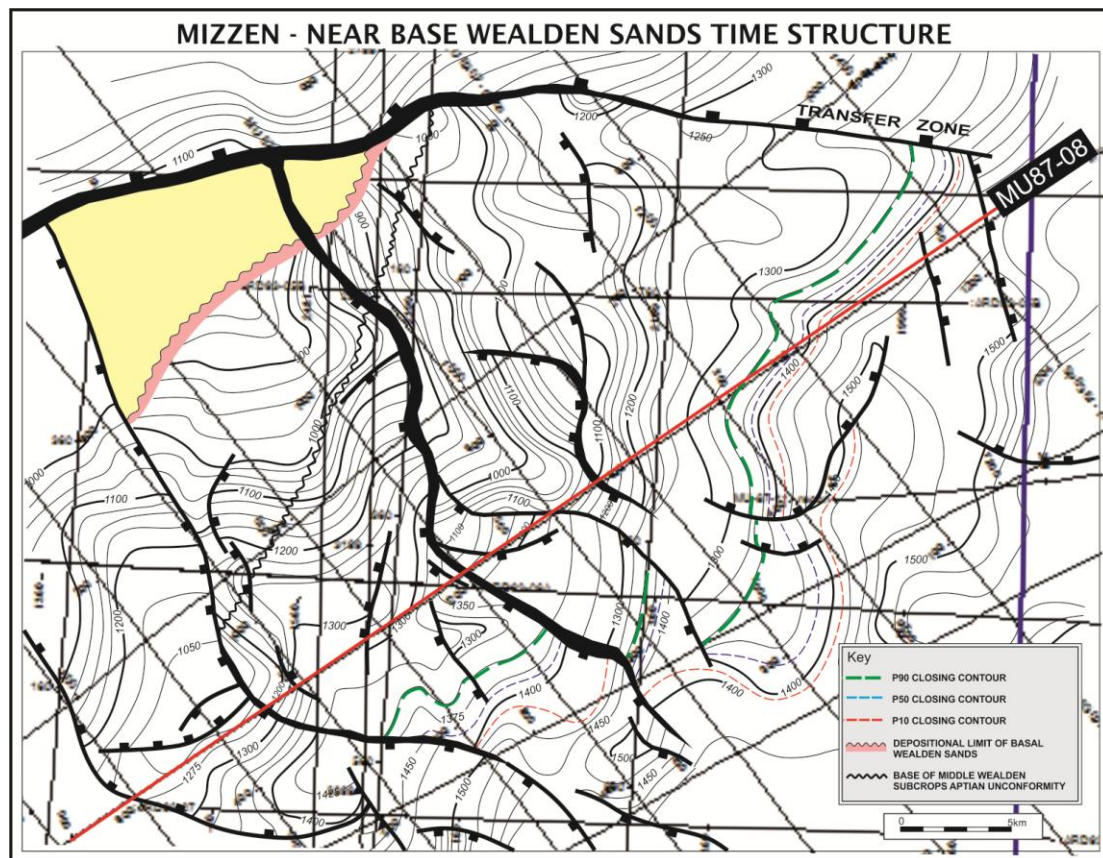
Tested Lower Jurassic/Triassic Structure (not reached)  
(No closure at Base Wealden "Barryroe" target reservoirs)



- 1 Regional seal provided by Wealden Claystones
- 2 Gross Basal Wealden reservoir interval TWICE as thick as in Barryroe – oil shows in 56/12-1 & tested 6,183 BOEPD (modelled from pressure data) in Providence 48/24-10z well
- 3 Basal Wealden regional discordance related to sea level change
- 4 "Purbeck" Facies with thicker reservoir potential in 56/12-1 Relative to Barryroe **A**



# MIZZEN BASIN – Near Base Wealden Sands TWT Structure, MU87-08 Seismic Line

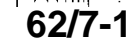


MU87-08 Seismic Line

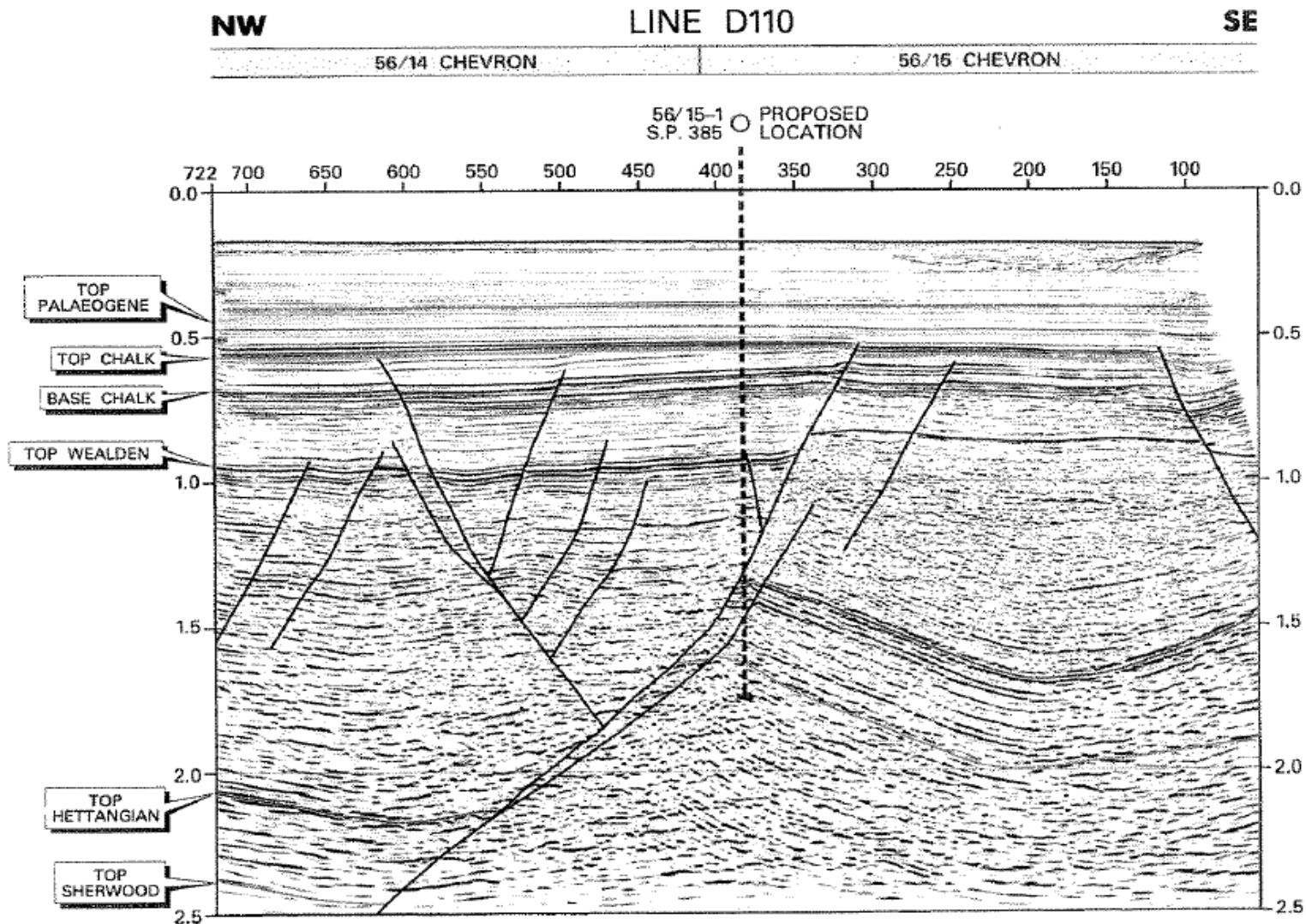




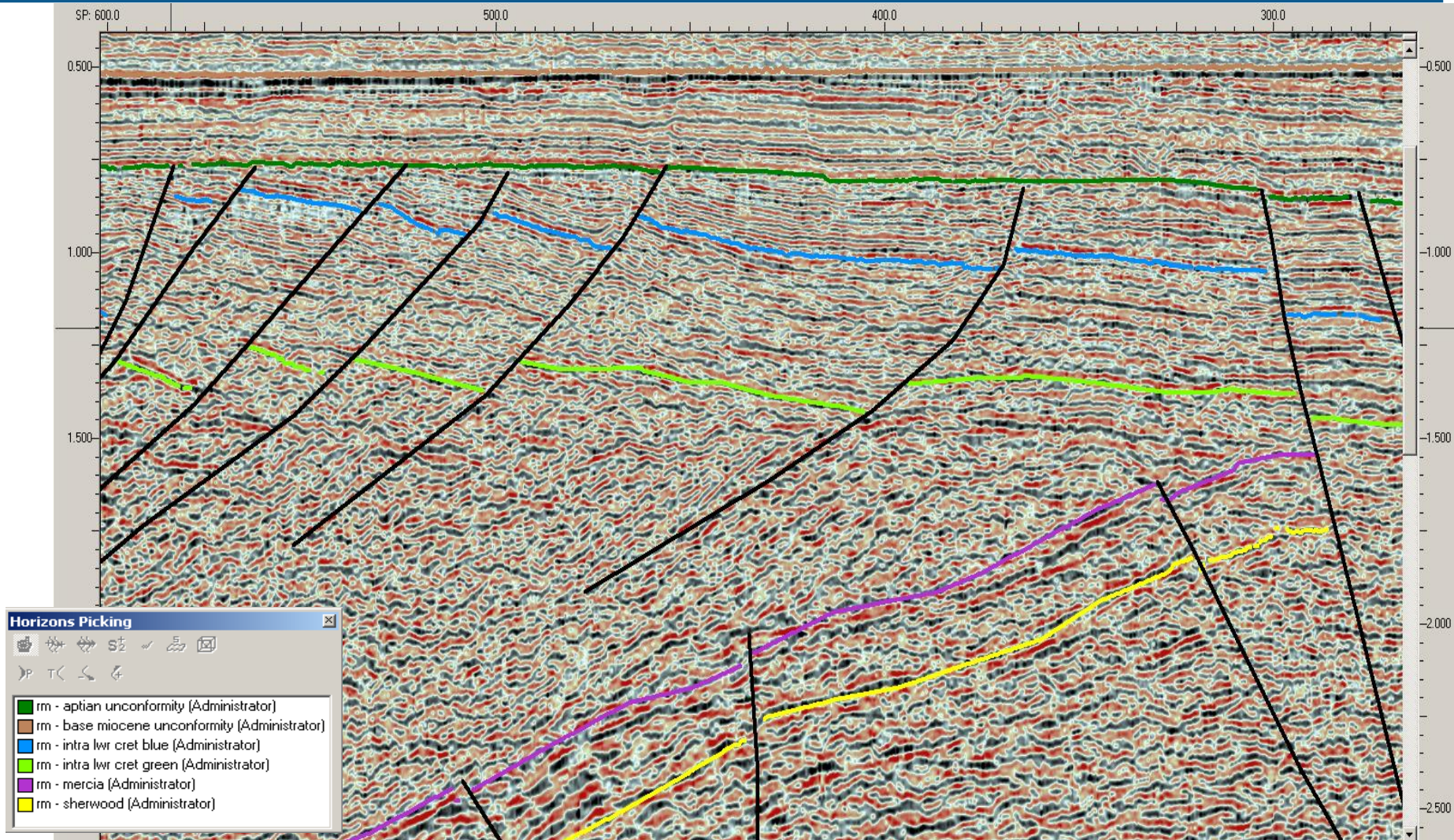
**FASTNET**  
OIL & GAS



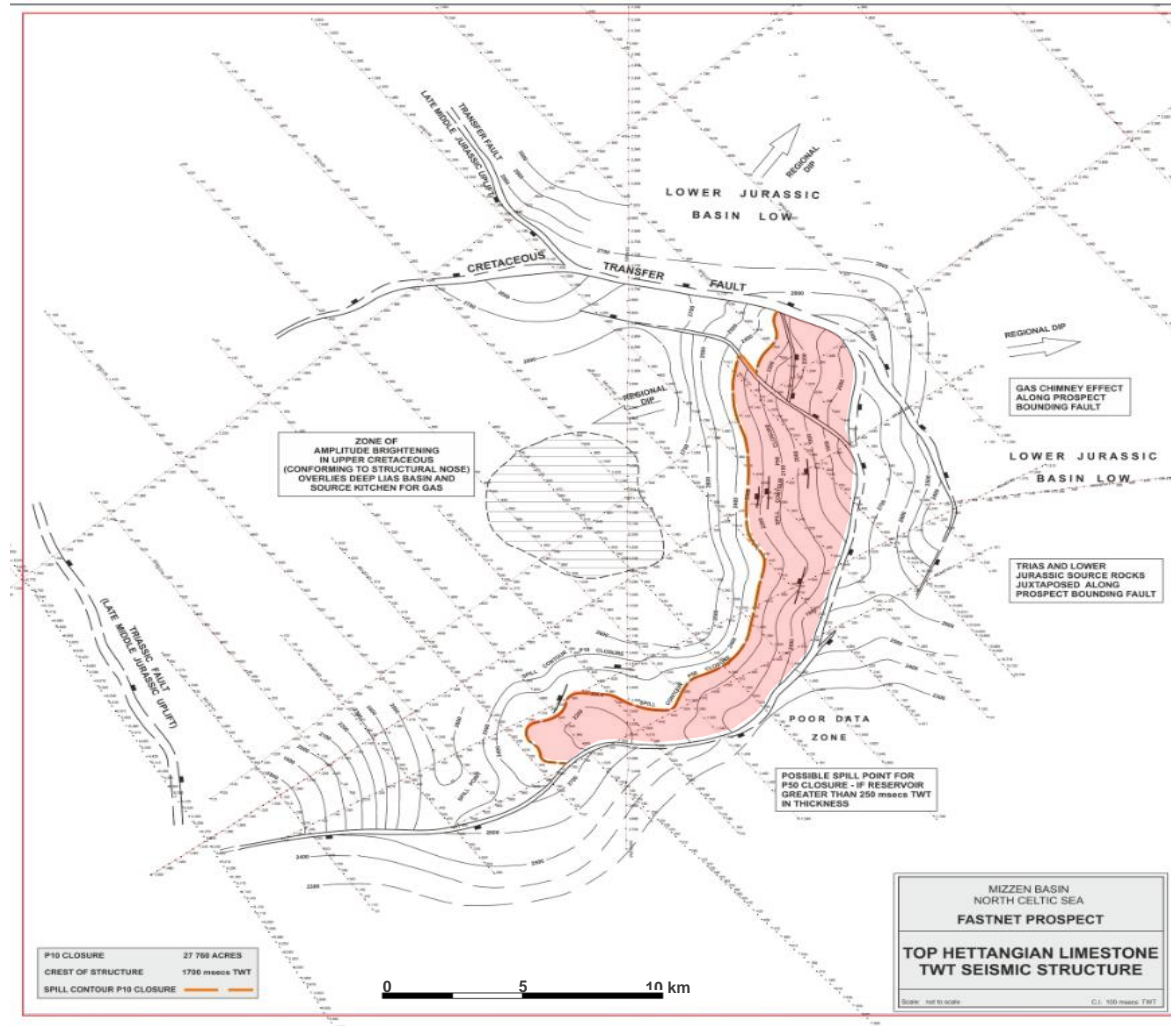
**Line D110 through 56/15-1 Triassic Play Elements. Note possible leak path along fault and through chalk. Bitumen may indicate previous trap?**



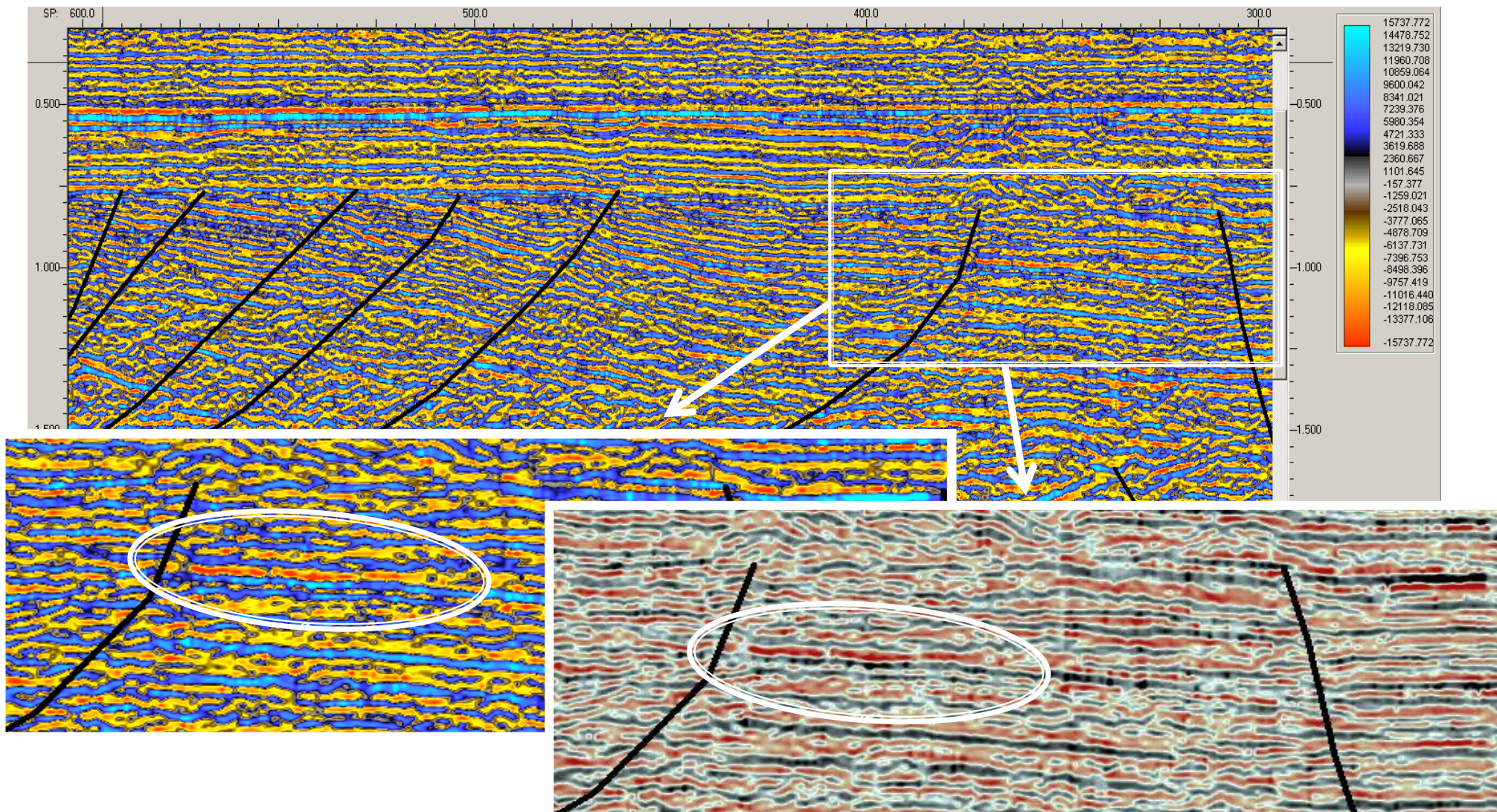
# Mizzen – MU87-08 – Triassic Sherwood Sandstone Prospect



# Near Top Trias TWT Structure



# Mizzen – MU87-08 – RSA Colour Amp (Gas Effects)



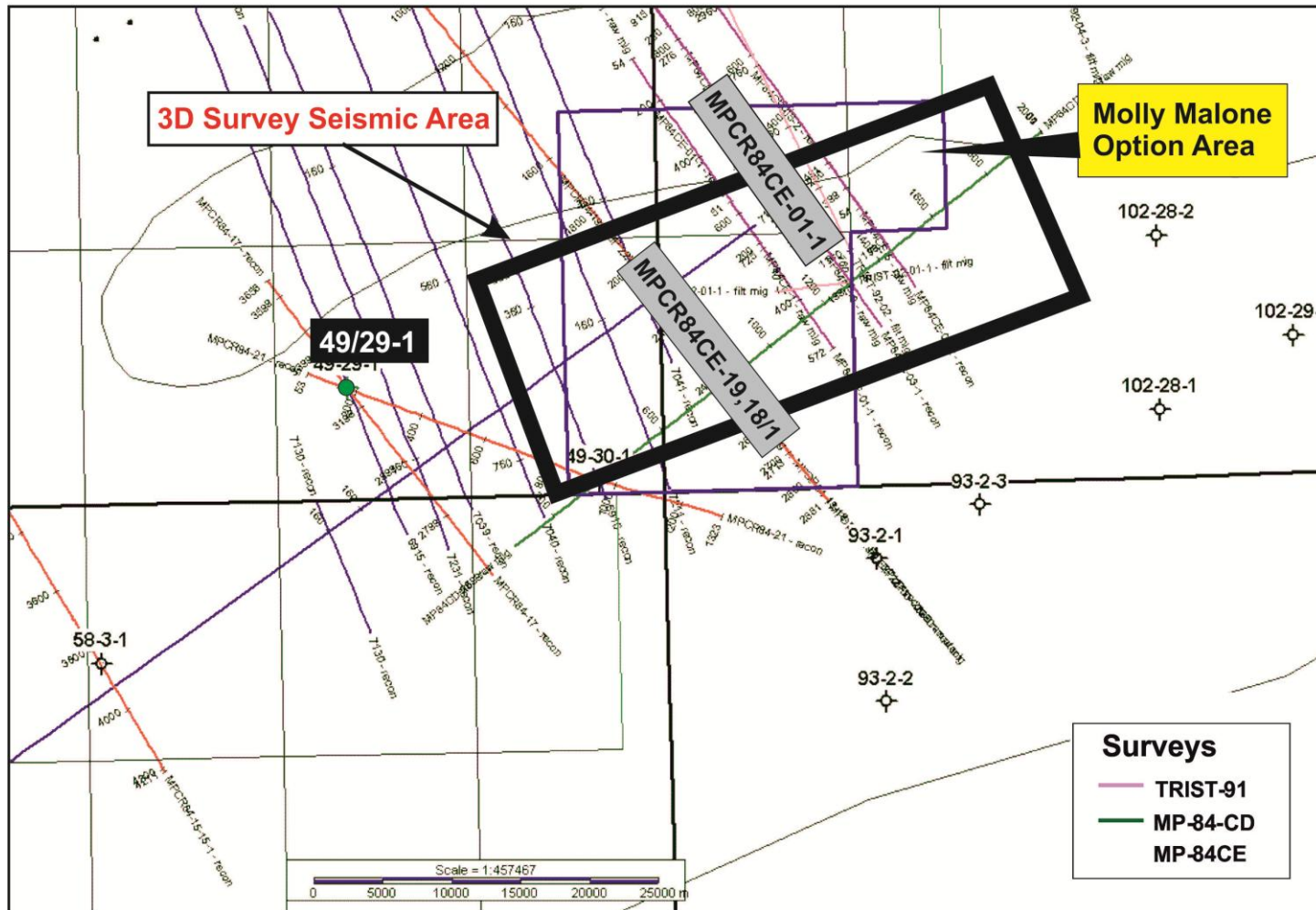
# Reasons why Molly Malone Basin has been under explored

- Three wells drilled by Marathon in Irish waters between 1972 – 1977
- 49/29-1, 49/30-1 and 58/3-1 located in the shallow parts of the Molly Malone Basin to test large anti-clinal traps cored by Triassic salt (following the success of 48/25-2 – the Kinsale gas discovery)
- No valid sub-salt structure was tested – Triassic sands were either not reached or were developed in a distal basin setting. Oil shows were encountered in the Rhaetic-Hettangian interval therefore confirming presence of oil source rock with generative potential
- Drilling in UK waters on the shallow extremities of the Molly Malone Basin by Shell, Conoco & Britoil (1972-1989) proved the existence of Triassic Sherwood reservoirs with a gross thickness of 1,000 ft.
- The above wells targeted down-faulted Jurassic closures & fault-bounded structures where critically juxtaposition of mature Jurassic source rocks & Triassic Sherwood reservoirs was difficult to achieve
- Exploration was then abandoned by the oil majors due to a perceived lack of maturity of Jurassic source rocks
- Critically the deepest part of the Molly Malone Basin as defined by gravity data, where Jurassic source rocks are potentially at optimum maturity for oil generation, remains untested – mainly due to the fact that it straddled for many years the disputed boundary between the UK and Ireland.
- The potential source kitchen covers an area of 300 sq. km. – consistent with the areal extent of the Wytch Farm Jurassic source kitchen



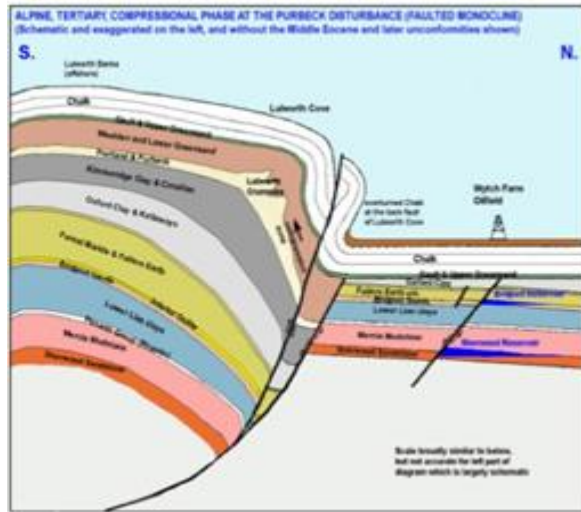
# Molly Malone Seismic and Well Base Map

Molly Malone Seismic and Well Basemap

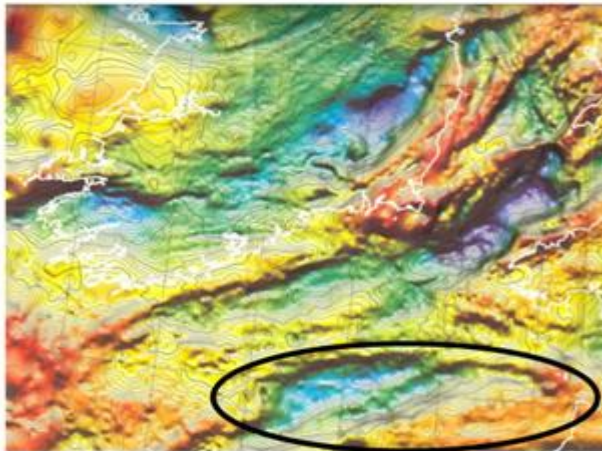


# Molly Malone Basin – Potential for Wytch Farm Analogue

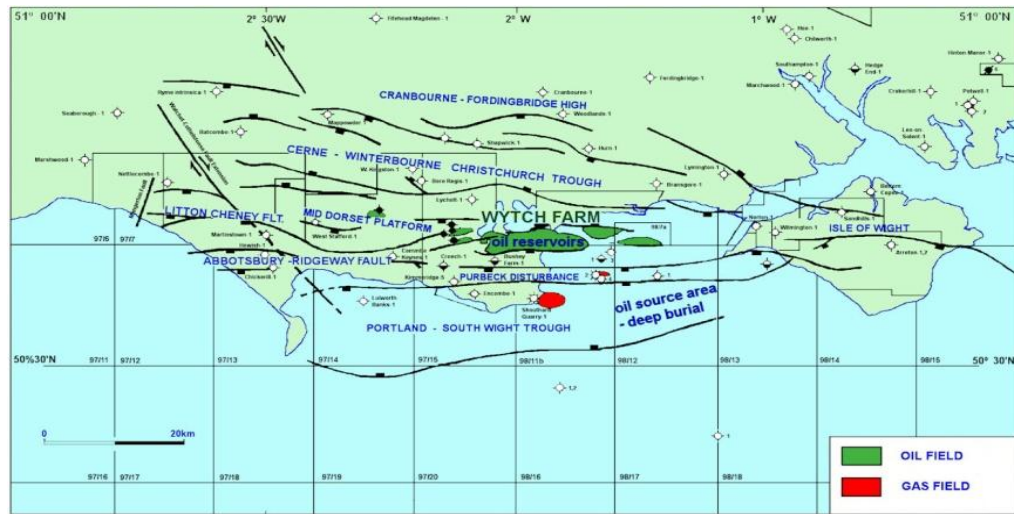
## Triassic Oil Field



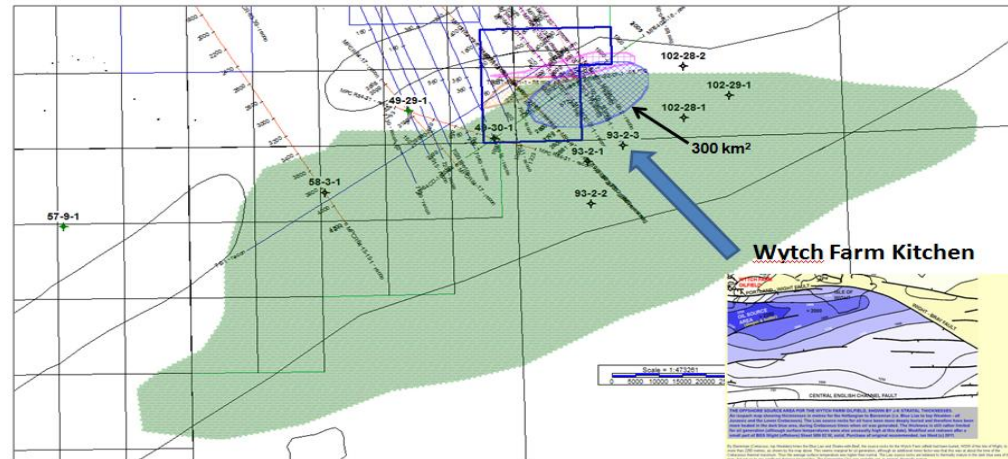
Mid Cimmerian tilted fault blocks



Molly Malone Basin Gravity Low



E-W Structural Trend



Comparison of Nominal 300 km² area to Wytch Farm



# Blue Lias (Latest Trias (Rhaetic), Hettangian and Lower Sinemurian) Pinhay Bay Lyme Regis

*The Blue Lias is the proven source rock for the Wytch Farm oil field*

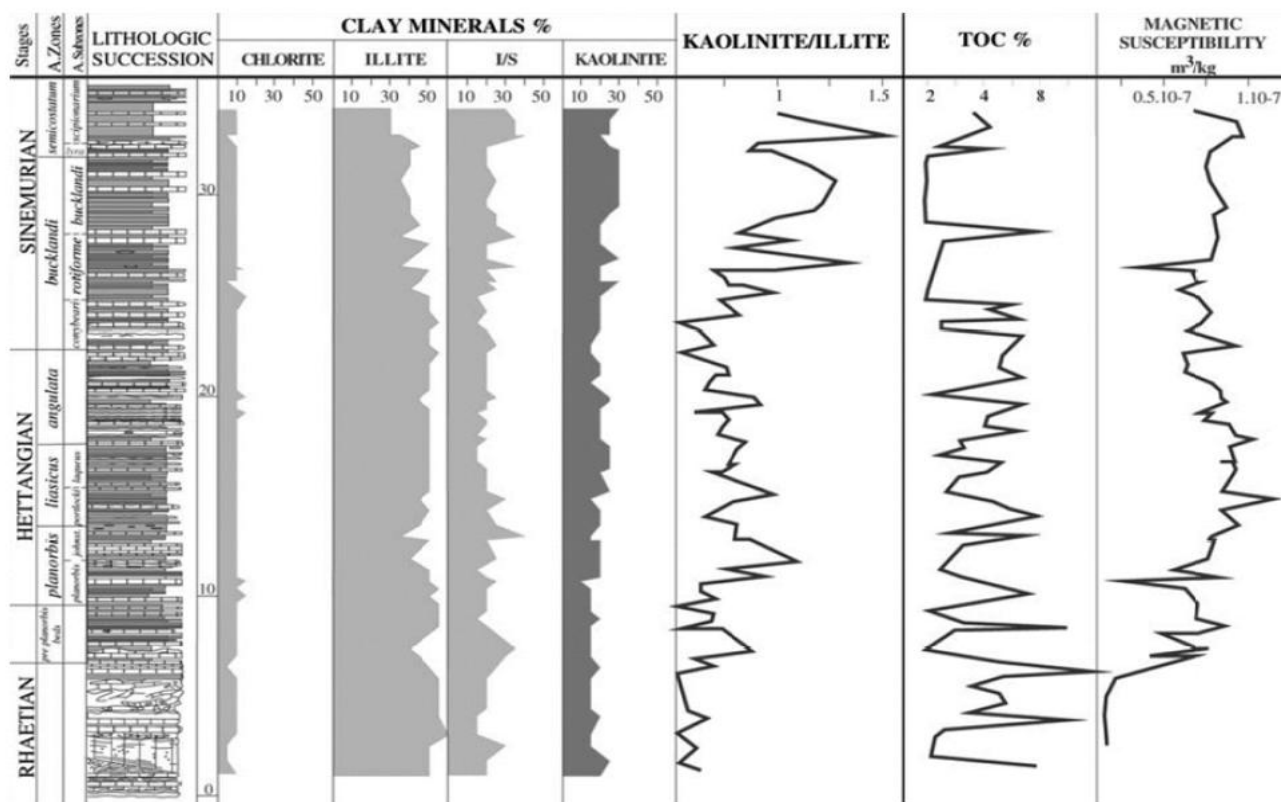


Figure 4: Total organic carbon, clay mineral and magnetic susceptibility data from the Blue Lias Formation, Pinhay Bay, Lyme Regis (from Deconinck et al., 2003).

Source: Conjugate Margins 2012 – Wessex Fieldtrip Guide



Figure 5: Overview of whole thickness of Blue Lias Formation at Pinhay Bay, together with the top few metres of the underlying Lillstock Formation (pale grey limestone) and about 10 m of the overlying Shales-with-Beef Member which forms the lowest unit of the Charmouth Mudstone Formation.



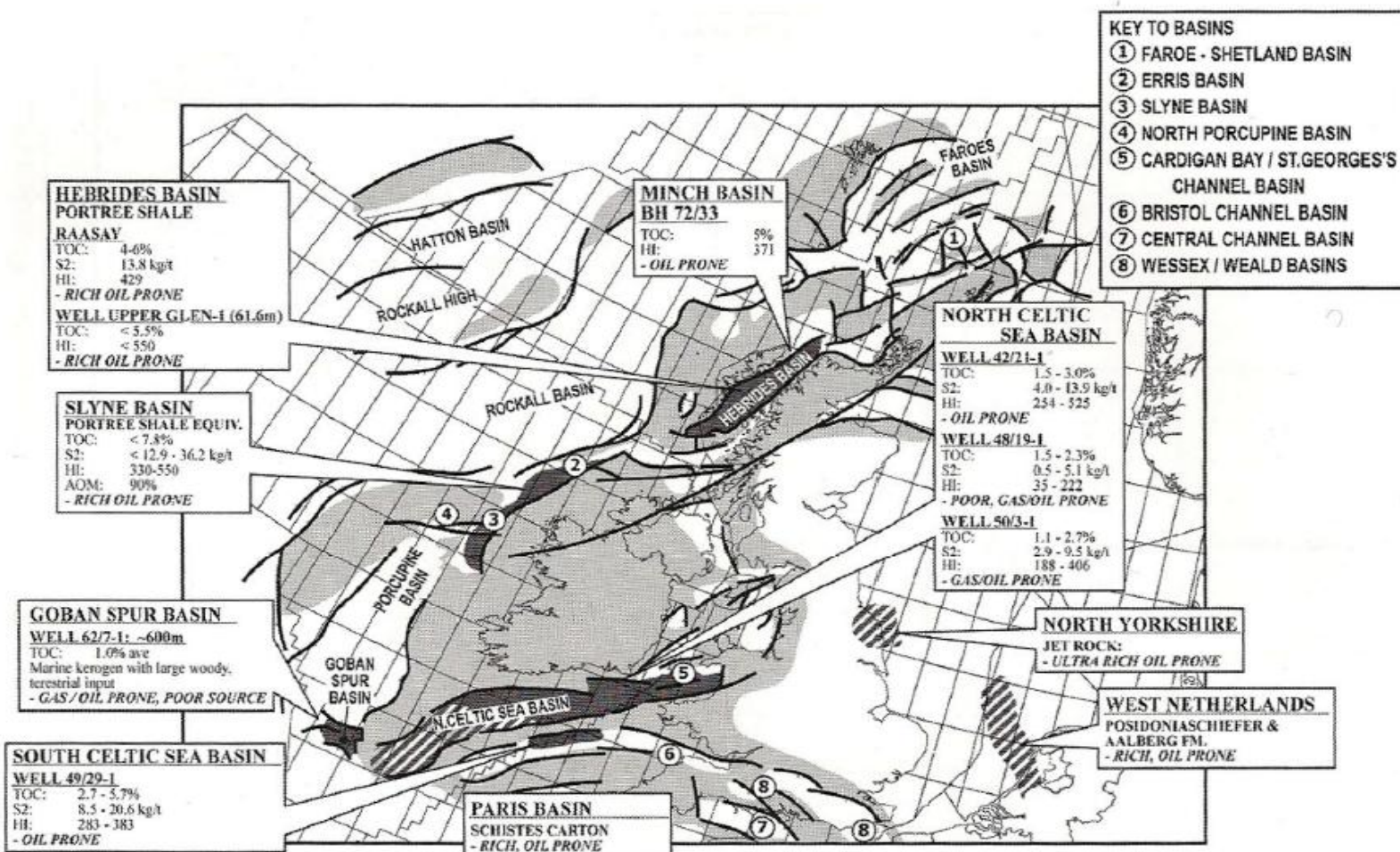
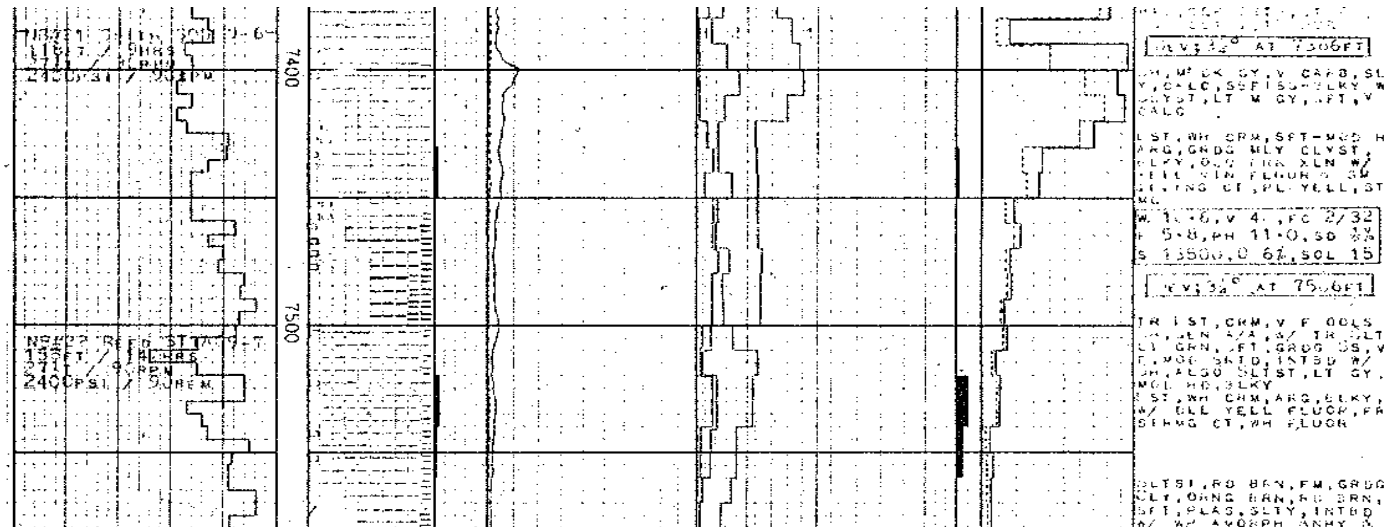


Fig. 14. The distribution of Toarcian source rocks in the Atlantic margin basins of Ireland and the UK.

# 49/29-1 Rhaetic Shows in thin sands between 7430' – 7

NB – streaming white cut fluorescence in Triassic – Jurassic juxtaposition?

Sherwood not reached

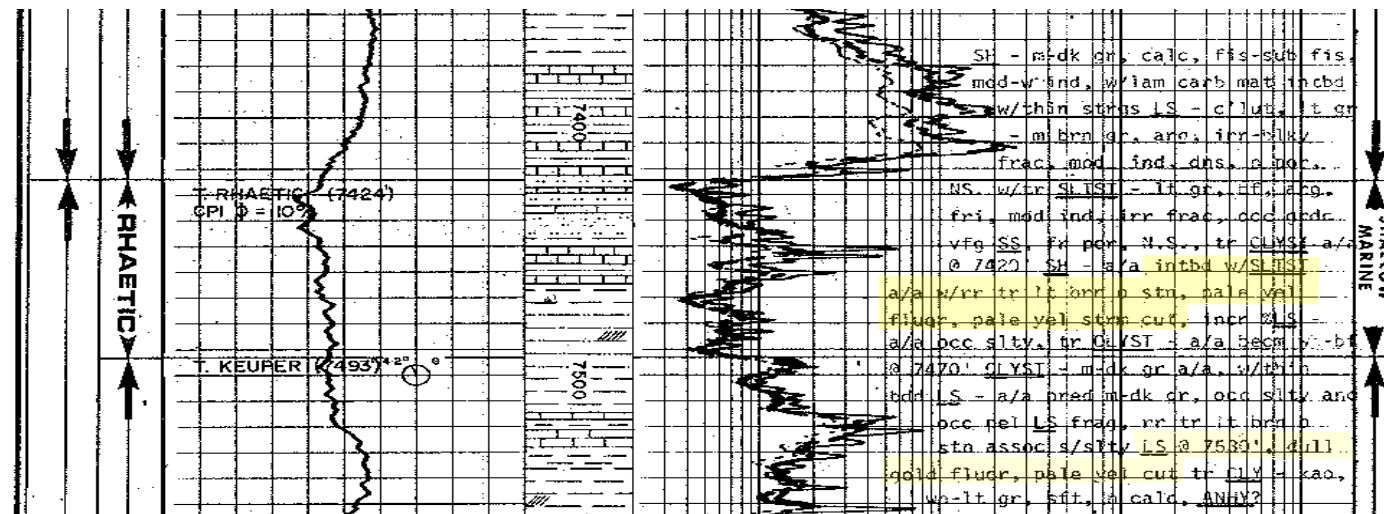


7440' – 7450'

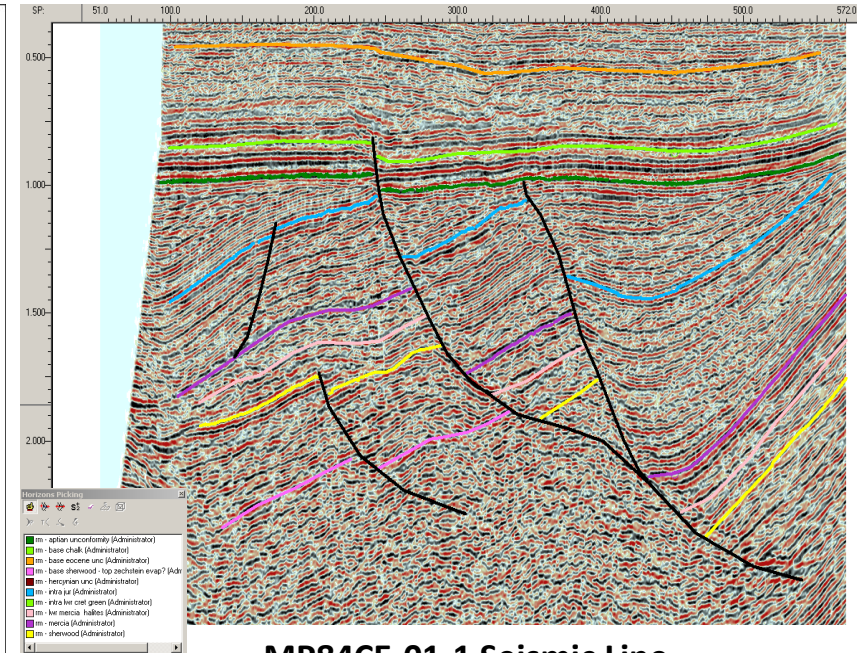
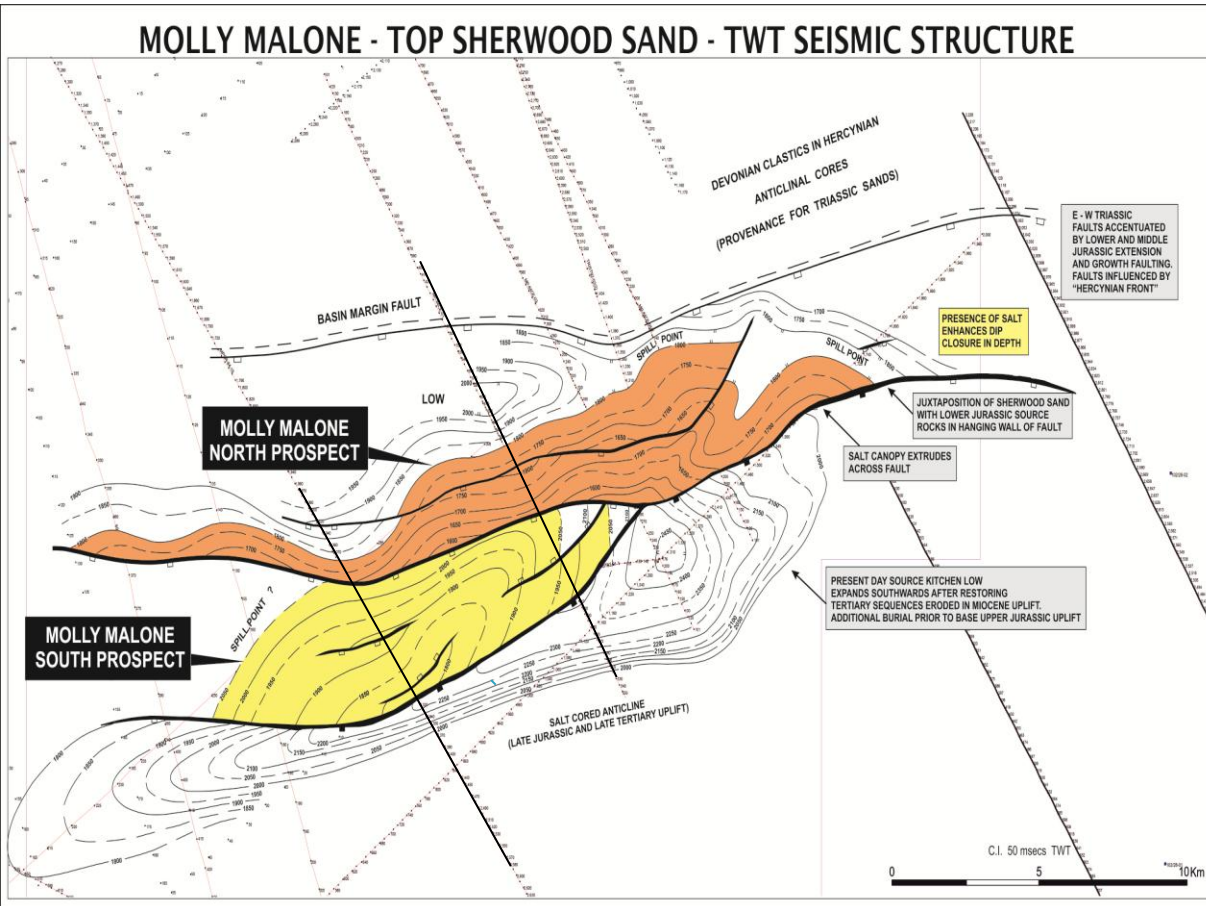
LST, WH GRM, SFT-MOD HL ARG, GRDG MLY CLYST, BLKY, OLC BKN XLN W/ YELL MIN FLUOR & SH STING CT, PL YELL, STH-MG

7520' – 7557'

LST, WH GRM, V F OOLS, GEN A/A, W/ TR SLTST, LI GRN, SFT, GRDG DS, V F, MOD SHD, INTBD W/ SH, ALSO SLTST, LT CY, MOD HD, BLKY, LST, WH GRM, ARG, BLKY, W/ ALL YELL FLUOR, FR SHMG CT, WH FLUOR



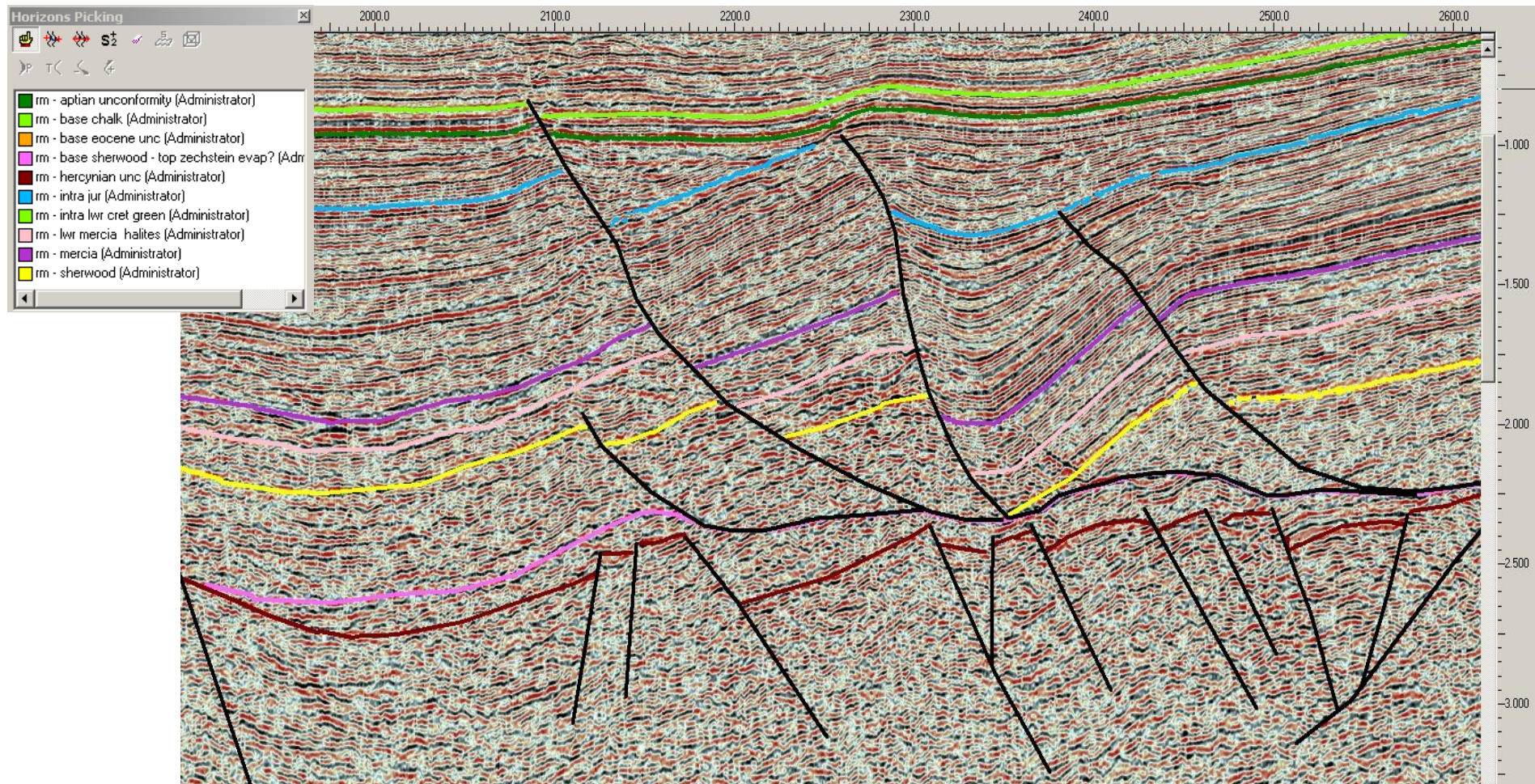
# Molly Malone Basin Prospects – Sherwood Sandstone Structure and MP84CE-01-1 Seismic Line



# Molly Malone Triassic Prospects – MPCR84-19,19/1

NW

SE



# “First Pass” Indicative STOIP and GIIP and Risking

	Best Estimate	High Case	COS	Oil or gas case
<b>MIZZEN BASIN</b>				
Shallow Lower Cretaceous Prospect	2.075 TCF 1.799 BBO	4.724 TCF 3.899 BBO	15% 5%	Gas Oil
Deep Triassic Prospect	3.497 TCF	9.356 TCF	12%	Gas
<b>MOLLY MALONE BASIN</b>				
Triassic Prospect – North	6.677 BBO		7%	Oil
Triassic Prospect –South	5.833 BBO		7%	Oil

Source: Verified by SLR Independent Technical Report















# Fastnet Seeking Industry Partner to Unlock Huge Potential



- Fastnet is seeking an industry partner to join us in 2013 for the largest 3D Seismic Programme ever to be acquired in the Celtic Sea
- Potential partner should have the financial resources and technical capability to join with us in our proposed 2014 drilling programme to unlock the potential of this frontier area located on an under-explored Atlantic Conjugate Margin



# Defined path to create shareholder value

Prospect	Activity	2012	2013				2014	
		Q4	Q1	Q2	Q3	Q4	Q1	Q2
FOUM ASSAKA (Offshore Morocco)	Purchase of Long lead drilling inventory approved	✓						
	Final Approvals for Well			✓				
	Drilling Preparation EIS Study							
	Farm-out Activity							
	Farm-out Completion				✓			
	Drill 1 <sup>st</sup> Well							
MERADA (Onshore Morocco)	Licence Award Anticipated	✓						
	Licence Ratification		✓					
	Drilling Preparation EIS Study							
	Rig Tendering							
	Drill 1 <sup>st</sup> Well							
CELTIC SEA (Offshore Ireland )	2 New Licence Awards Anticipated	✓						
	Mizzen 3D Seismic Acquired							
	Mizzen 3D Processing							
	Mizzen 3D Interpretation							
	Rig Tendering							
	Contingent Well							