

Atlantic Ireland 2012

Prospects 2 Go

Mullen prospect, LO 11/7

Hugh Mackay

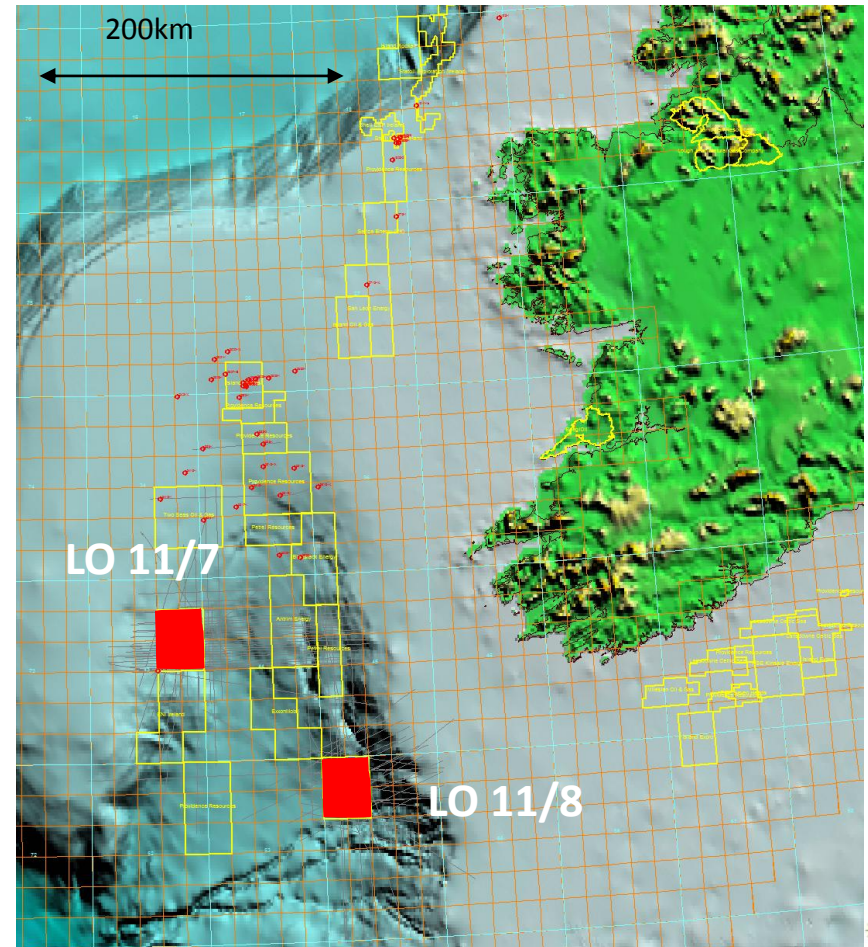
Europa Oil & Gas

12 November 2012

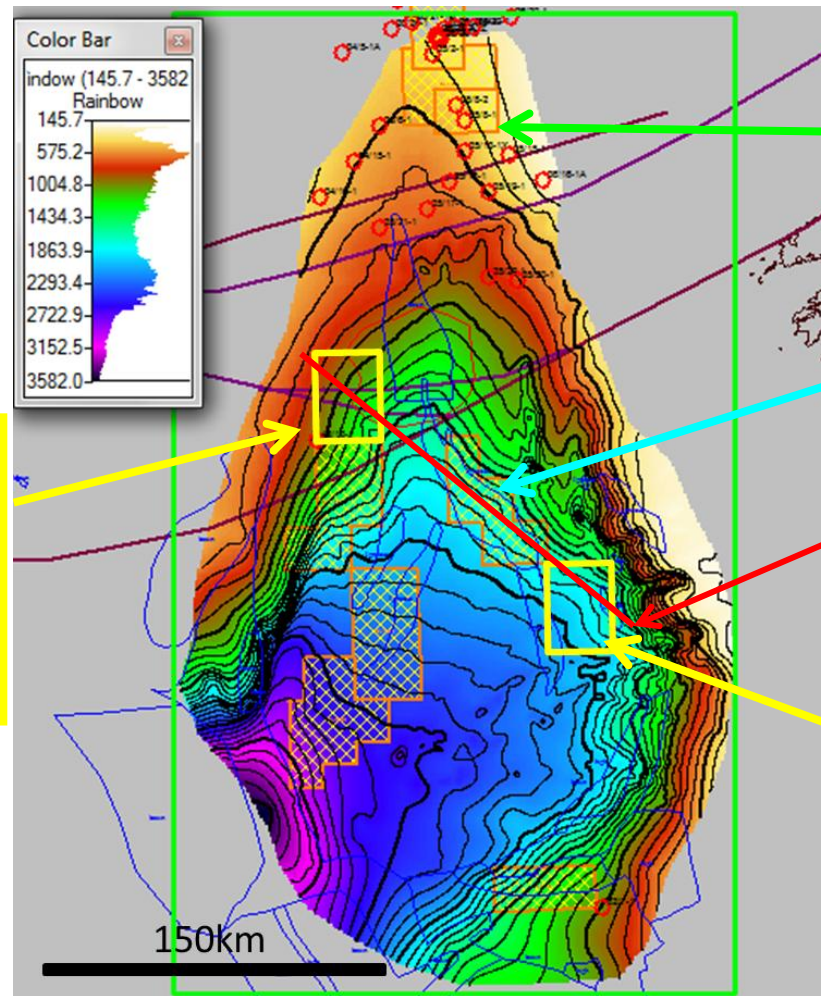


Location and licence details

- LO 11/7 & LO 11/8,
- ~ 1000 km² each
- 100% Europa
- License Option
 - 1 Nov 11 – 31 Oct 13
- Apply for Frontier Exploration Licence
 - Relinquish minimum 25%
 - 15 years, 4 phases
 - seismic and well commitments



Porcupine Basin Water Depth (m)



Burren lower
Cretaceous oil
discovery ~700 bopd

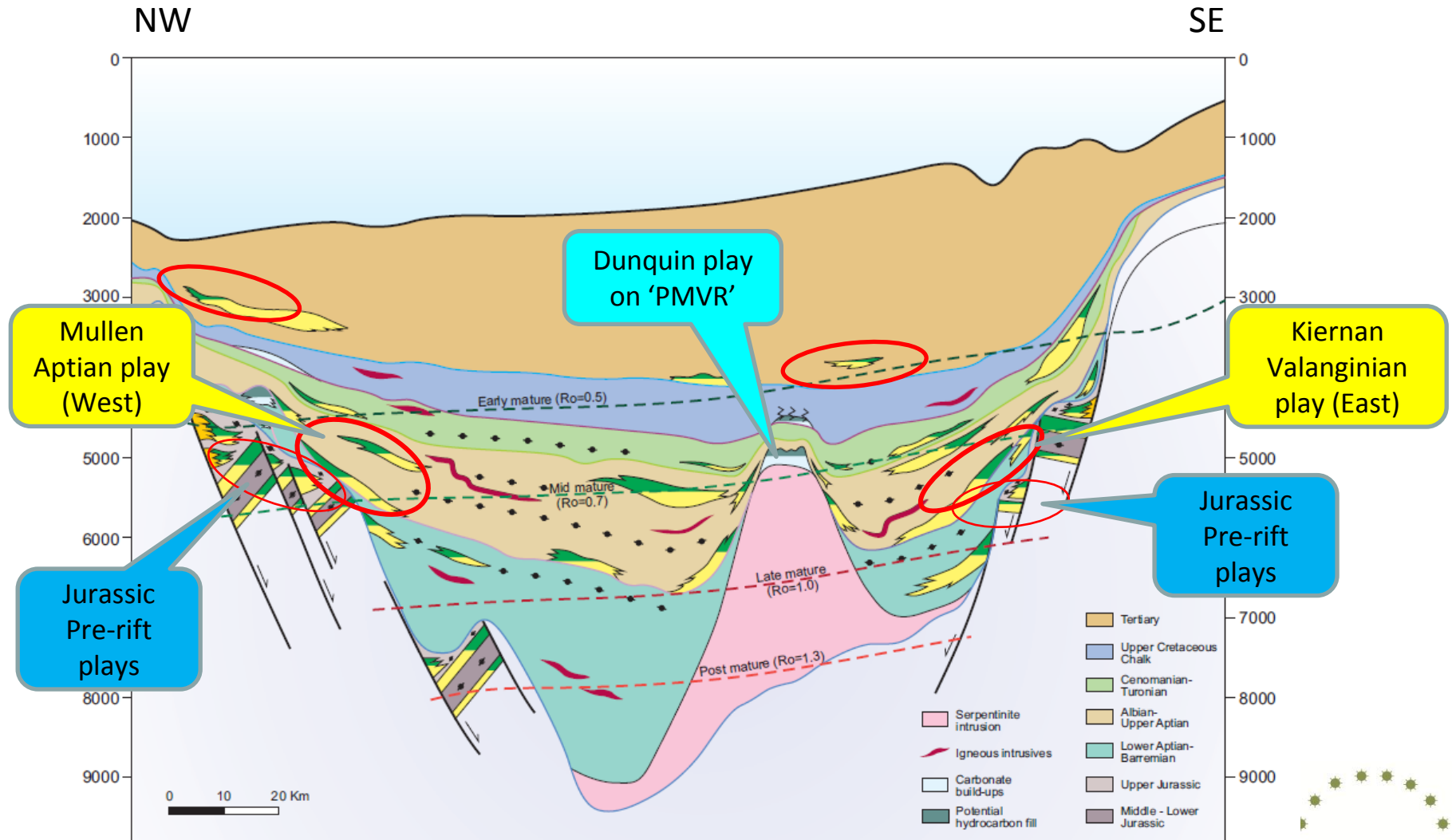
Dunquin Middle
Cretaceous Carbonate
prospect drill Q1 2013

Line of section

LO 11/8 Kiernan
Lower Cretaceous play
1400-2000m water
depth, most likely
suited to FPS

LO 11/7 Mullen
Lower Cretaceous play
800m-1400m water
depth, limit of fixed
platform

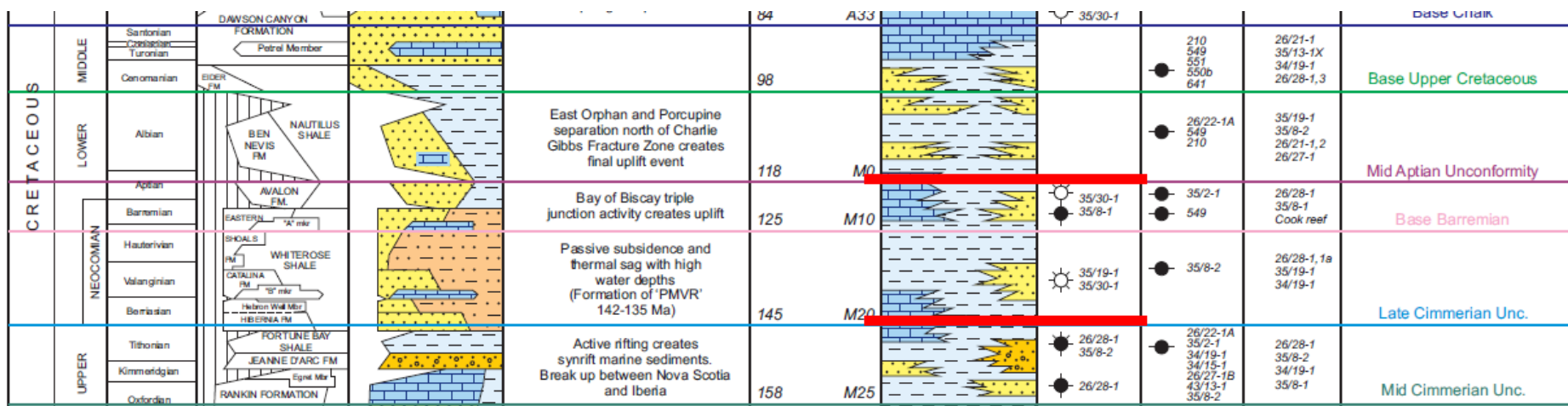
South Porcupine Basin Cross Section



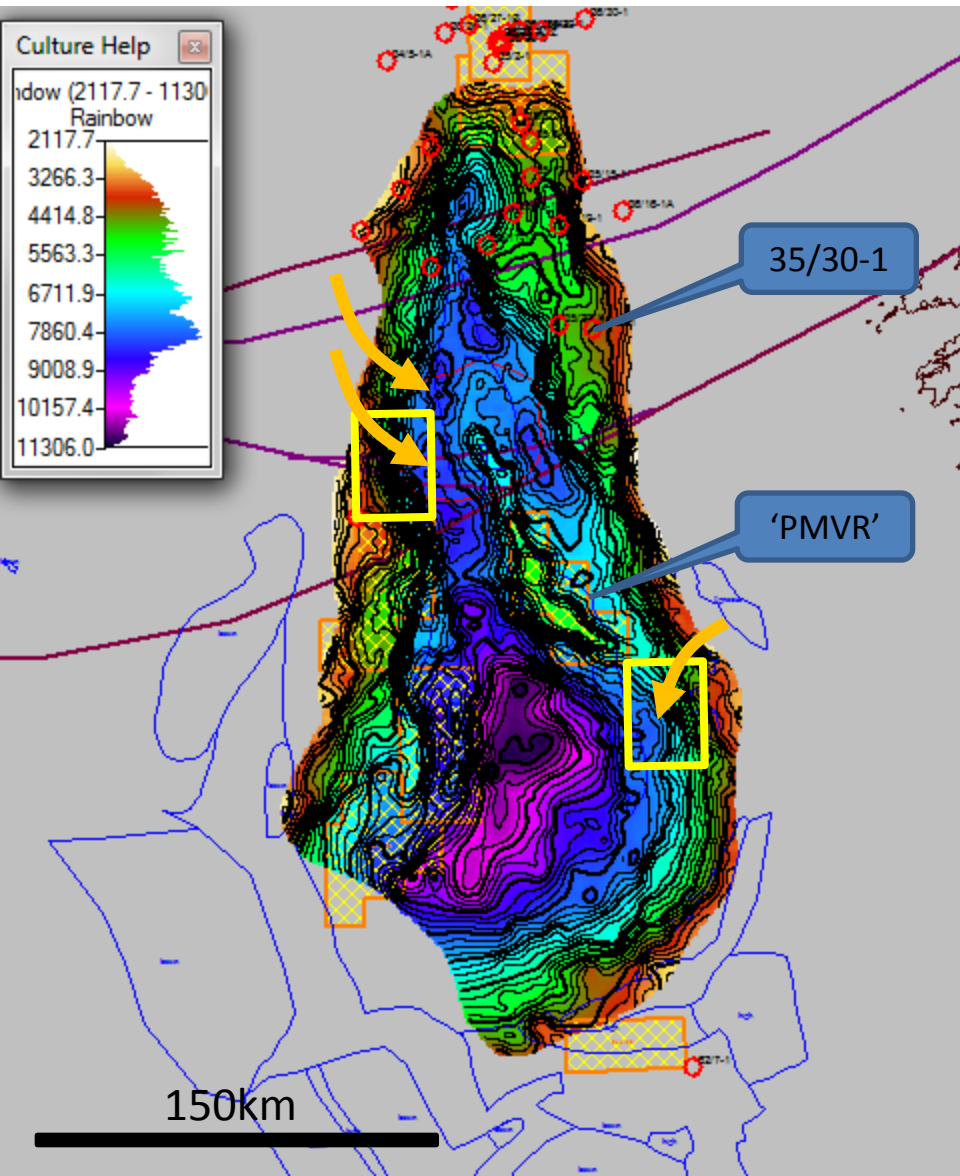
PMVR: Porcupine Median Volcanic Ridge
Cross-section courtesy of PhysicalGeo Limited

Reservoir

- Lower Cretaceous sands of the Mullen (West) and Kiernan (East) prospects are deposited as deepwater turbidite channels
- Coincident with local uplift events on the basin margins
 - Mullen (West) is fed by an Aptian channel, immediately above the Mid Aptian Unconformity (118my, Chron M0)
 - Kiernan (East) is fed by a Valanginian channel, immediately above the Base Cretaceous Unconformity (145my, Chron M20)



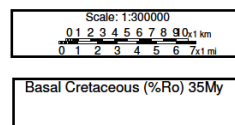
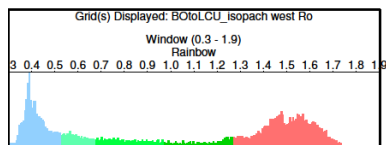
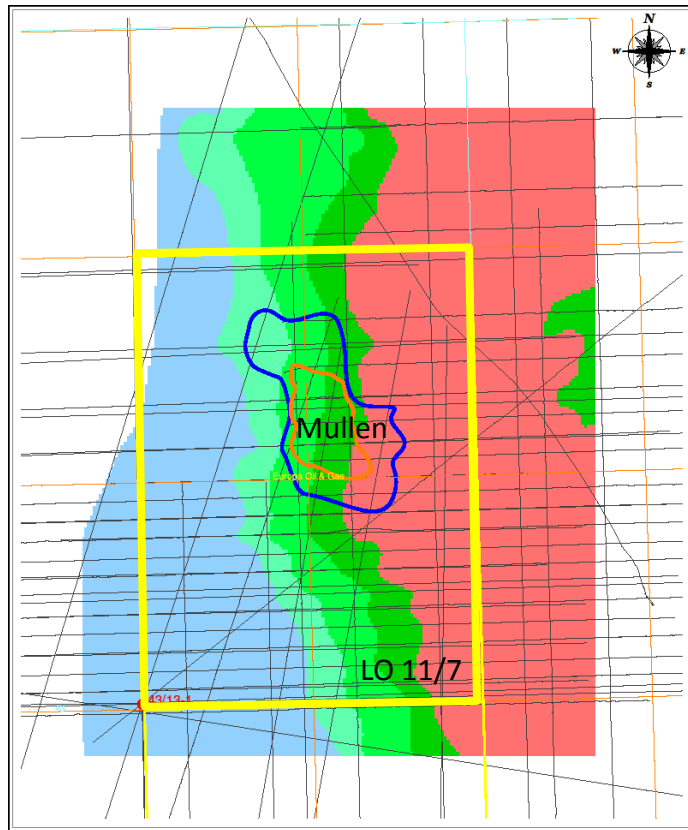
Base Cretaceous Depth map (m)



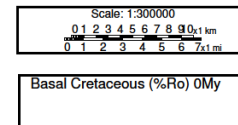
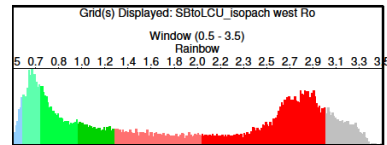
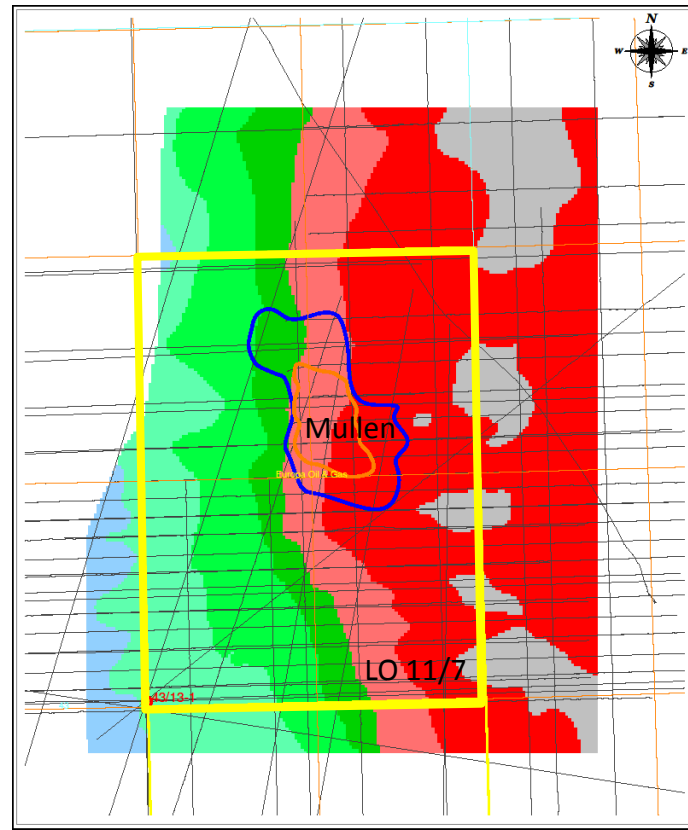
- Combined map of Late Cimmerian Unc. and PMVR structure.
- Arrows indicate possible Lower Cretaceous sand provenance directions
 - From Porcupine High in West
 - From Munster basin (ORS) in East

Mullen – Jurassic source maturity

Top Jurassic maturity 35 My

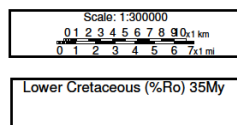
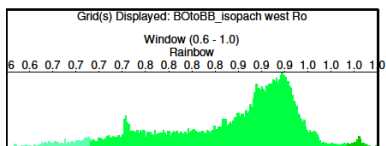
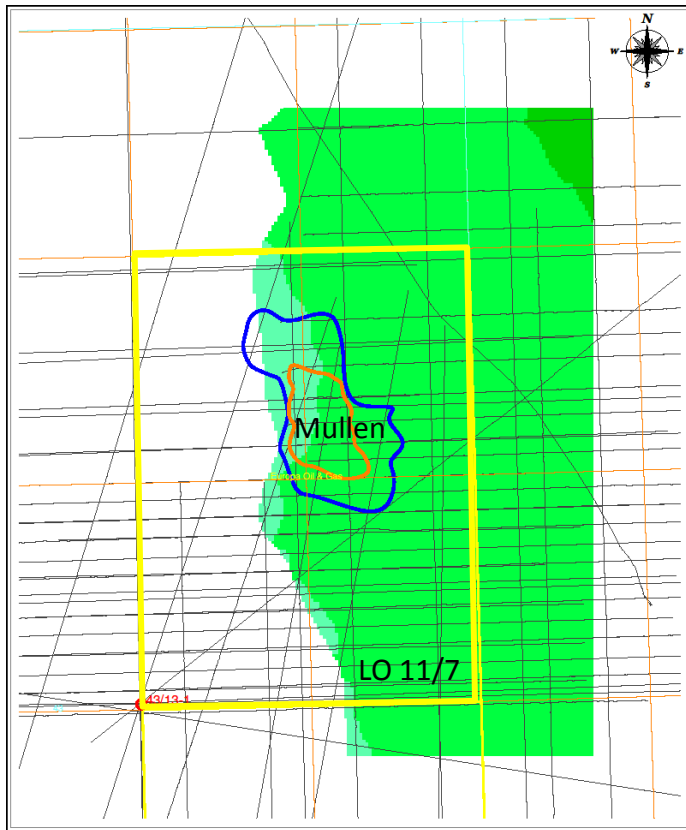


Top Jurassic maturity 0 My

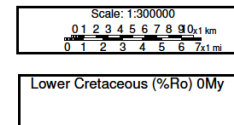
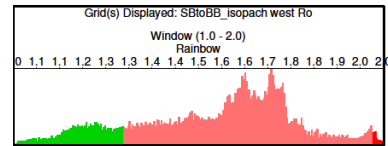
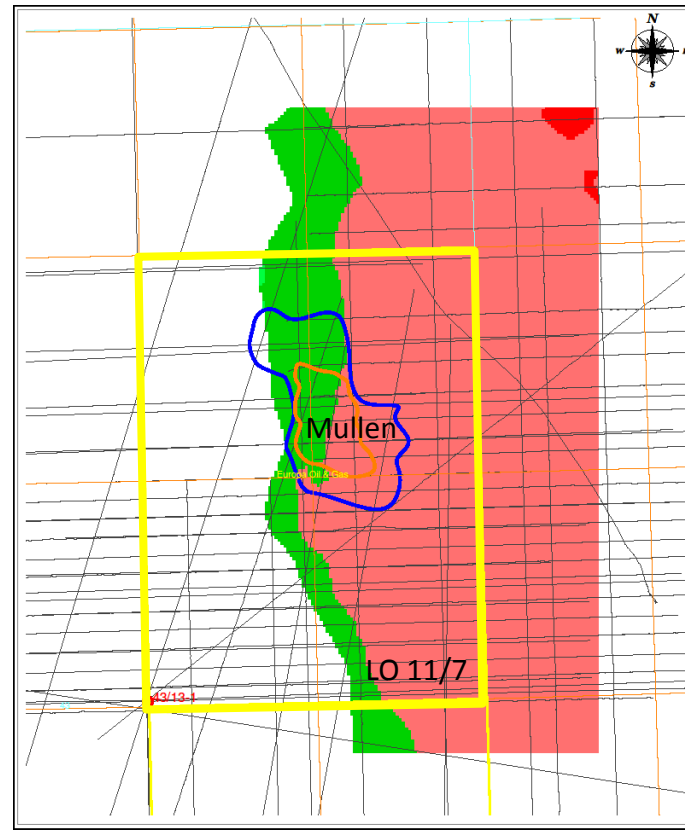


Mullen – Cretaceous source maturity

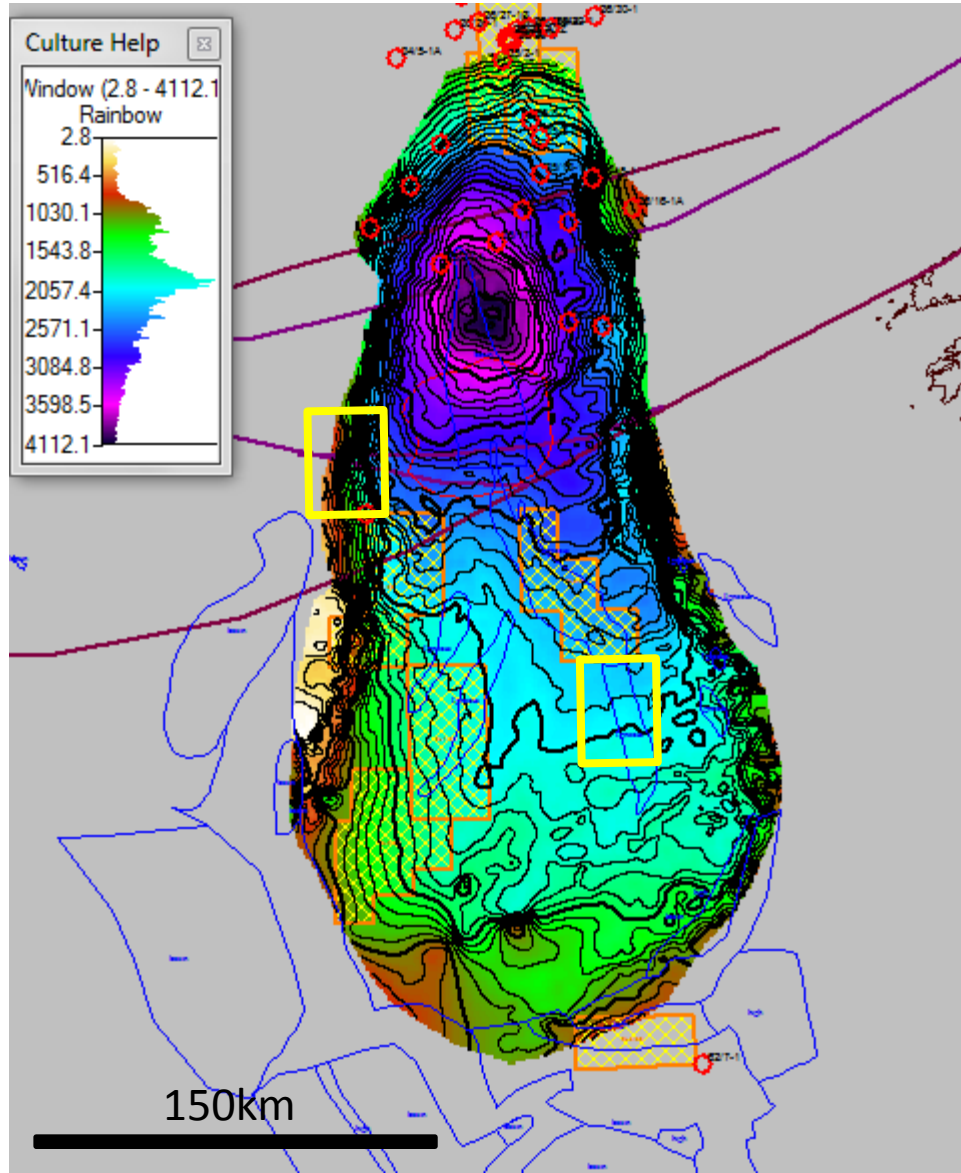
Lower Cretaceous maturity 35 My



Lower Cretaceous maturity 0 My

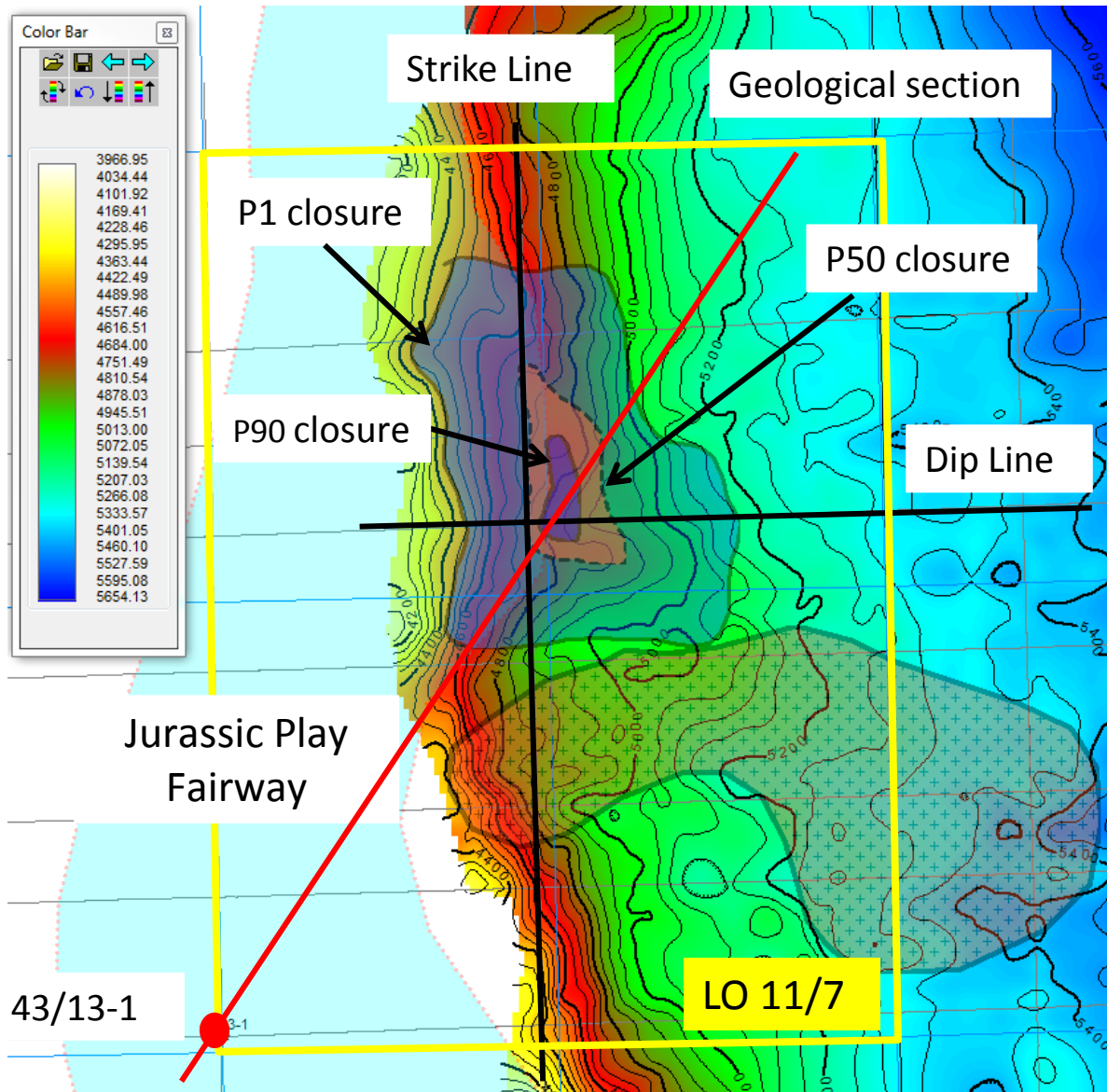


Sea Bed - Base Tertiary isopach (m)

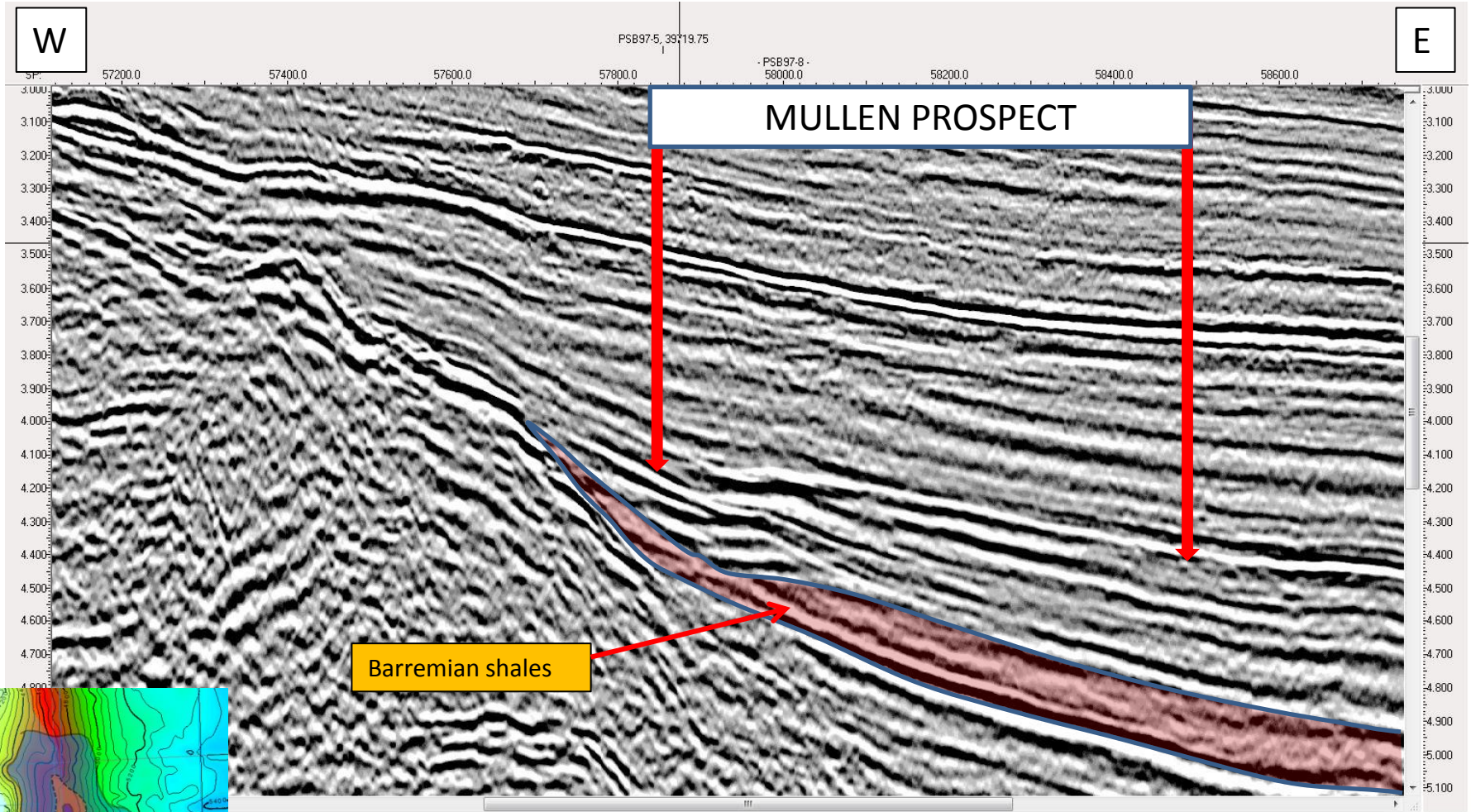


- Tertiary isopach illustrates variable thickness of overburden between the north and south
 - 2000m in South Porcupine vs up to 4000m in the North Porcupine
 - As a consequence source rocks will be less buried and may spend longer in potential maturation window depths in the south

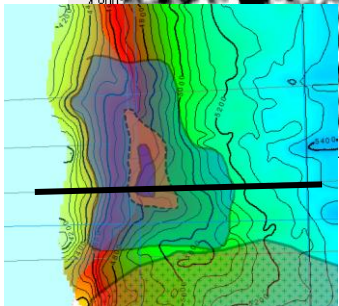
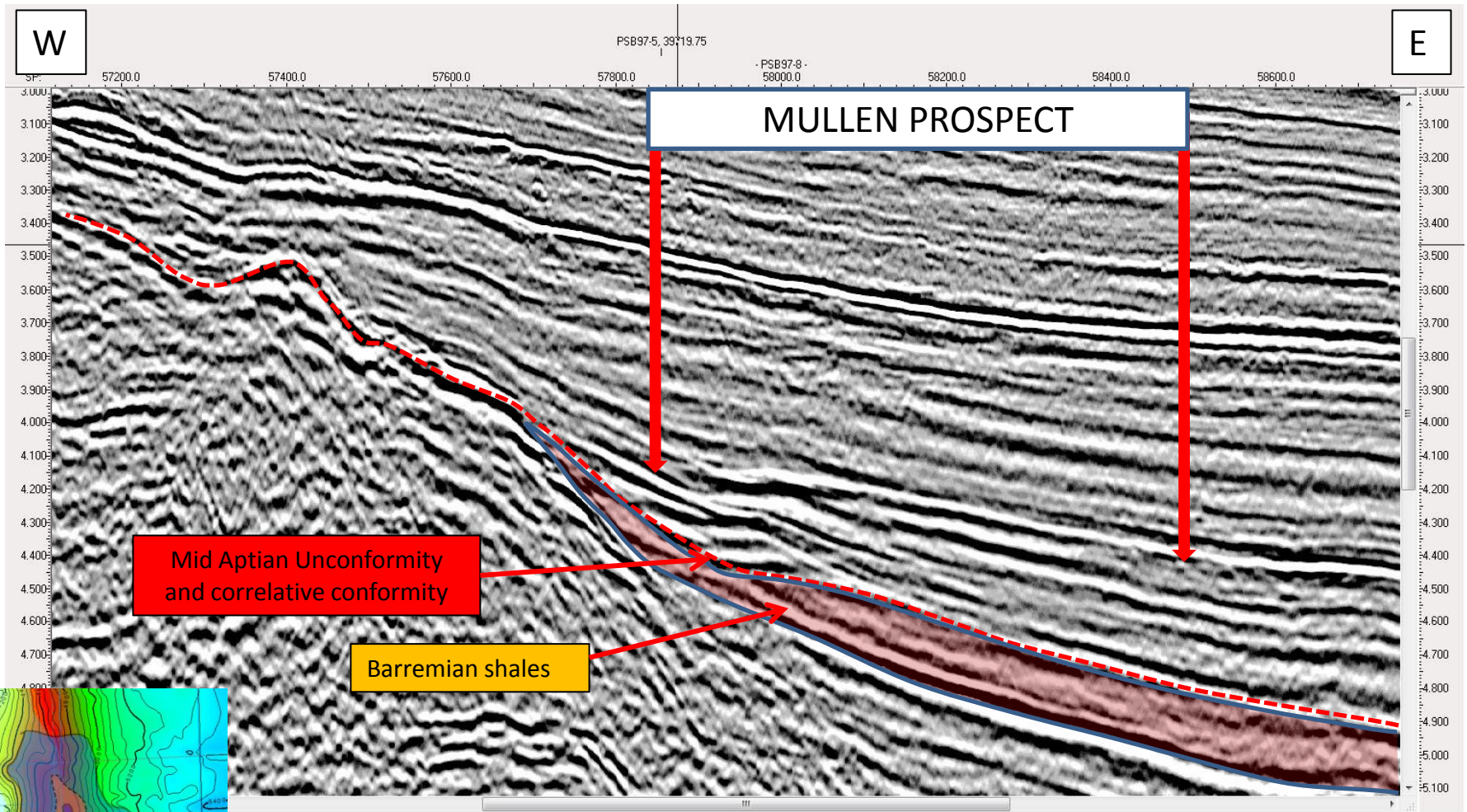
Mullen Aptian Depth Map (m)



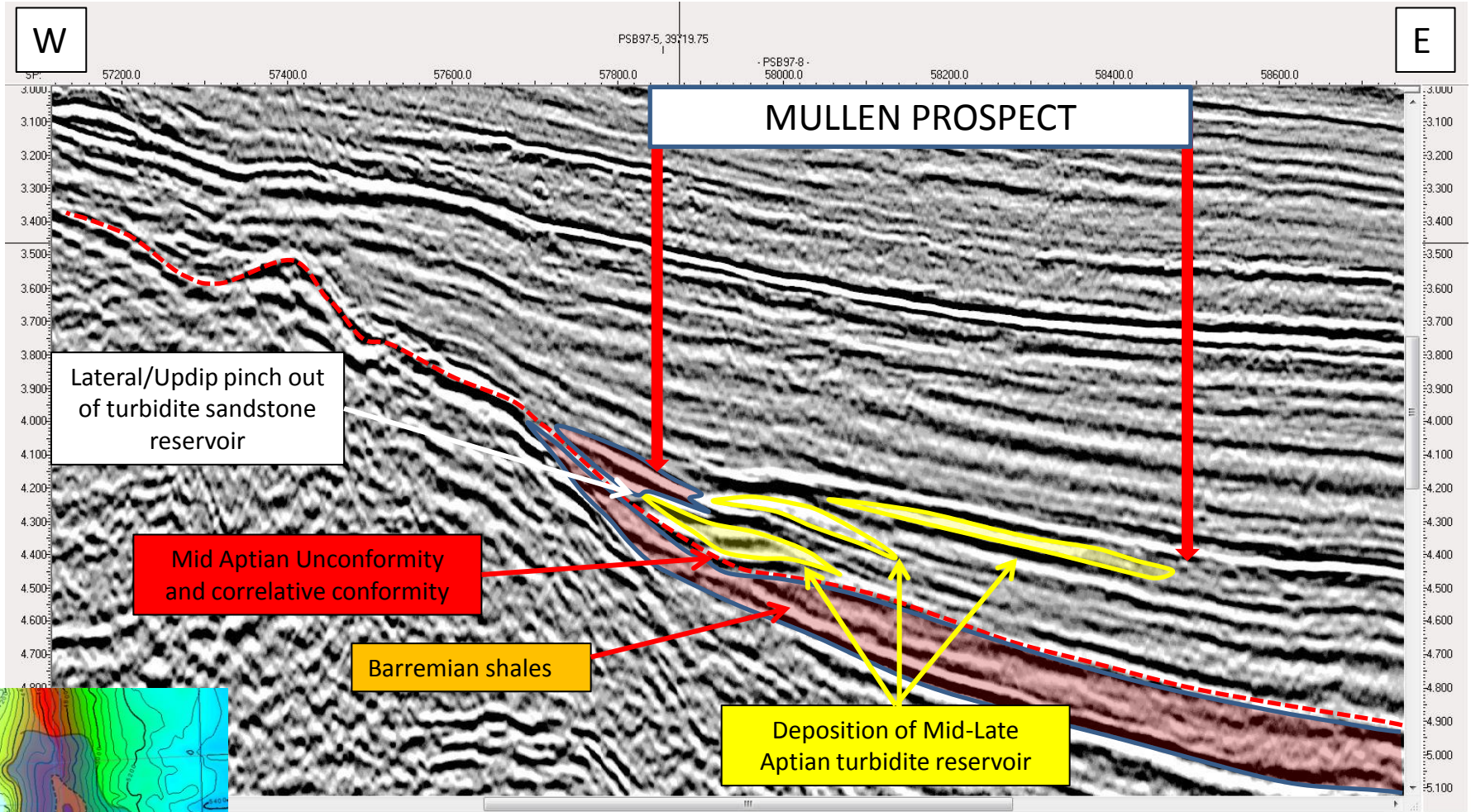
Geoseismic Sections: Mullen Dip Line



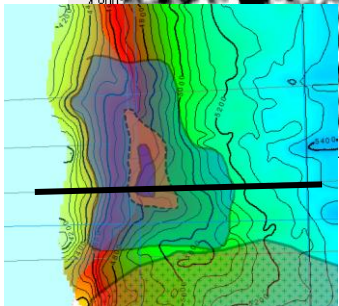
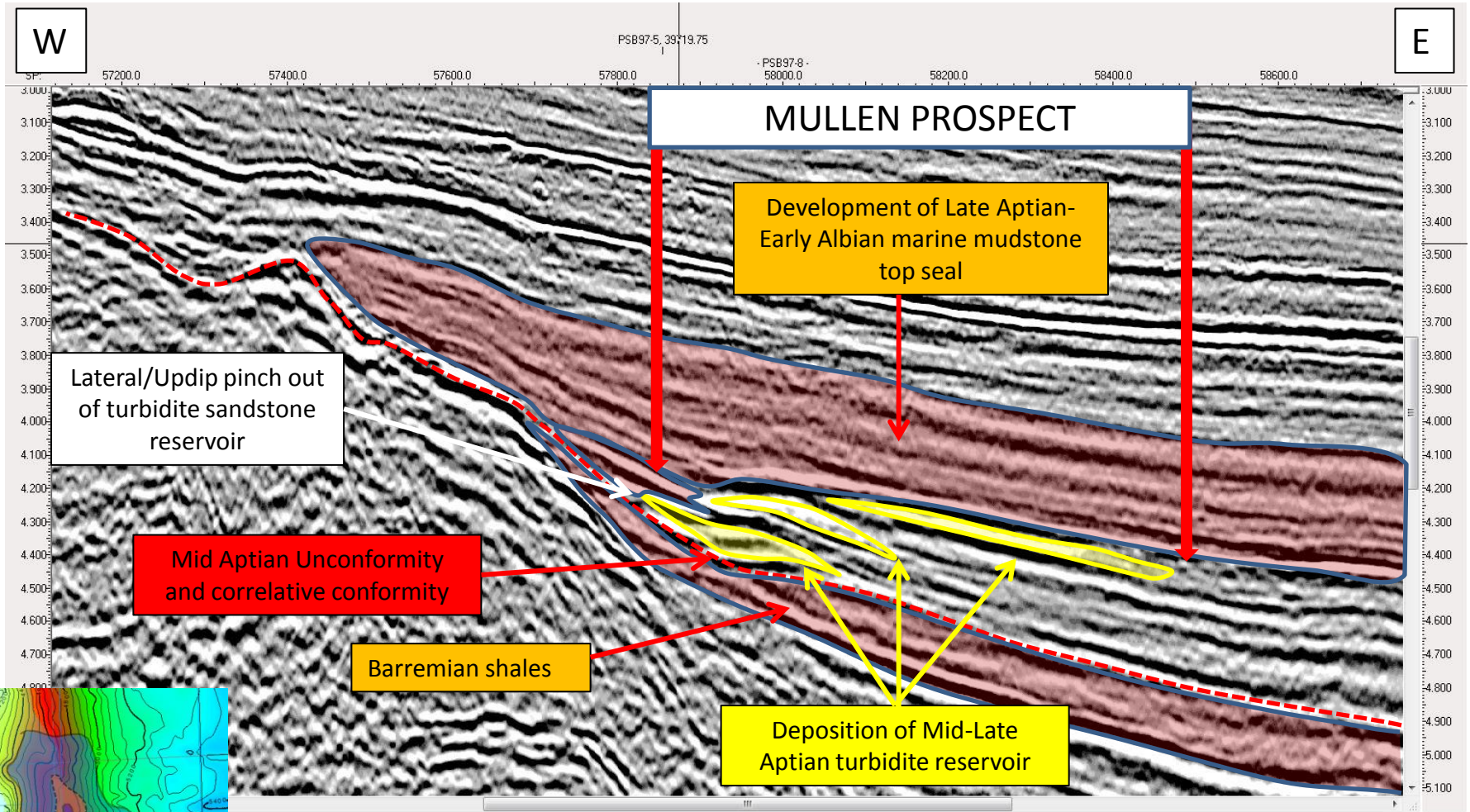
Geoseismic Section: Mullen Dip Line



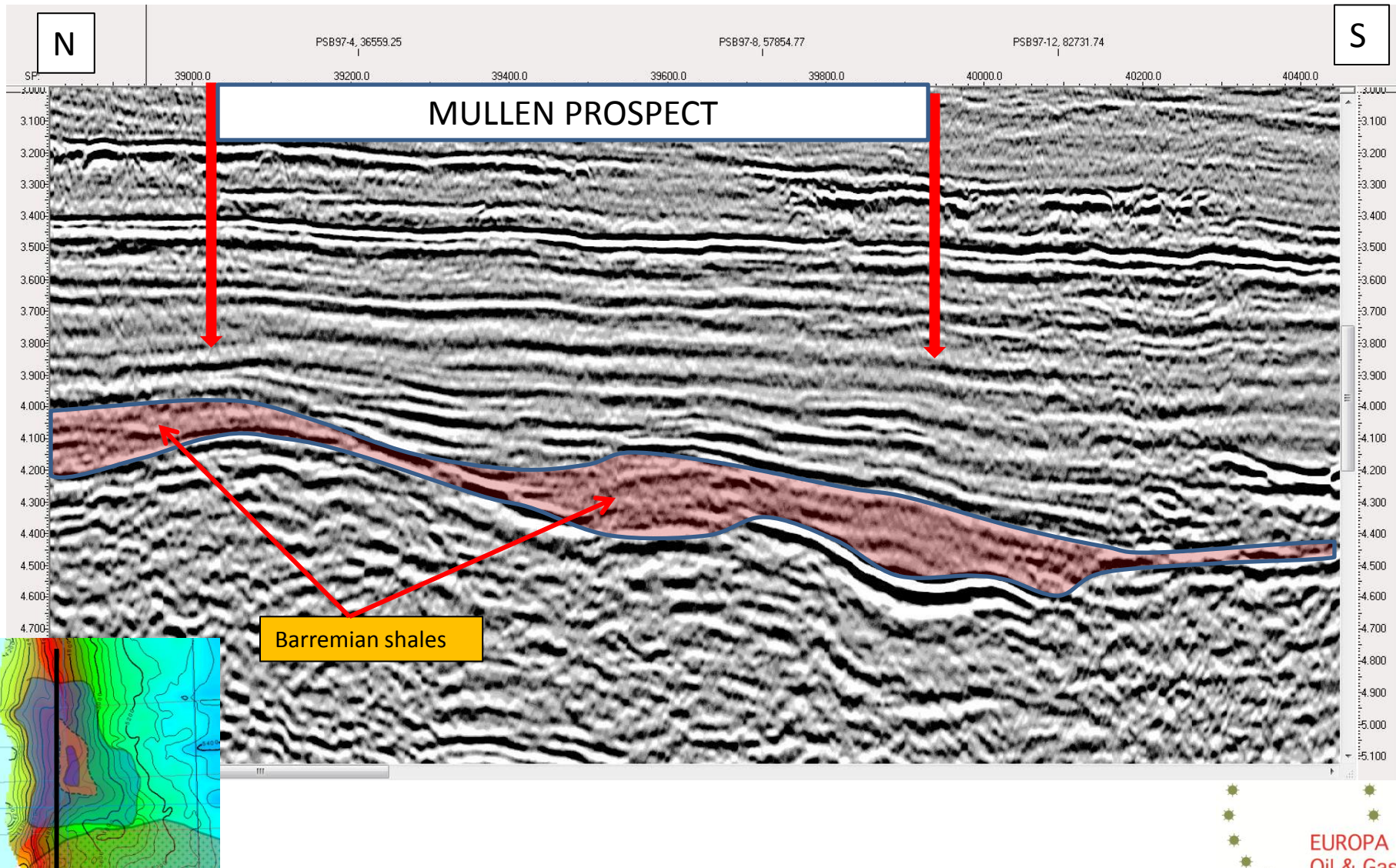
Geoseismic Section: Mullen Dip Line



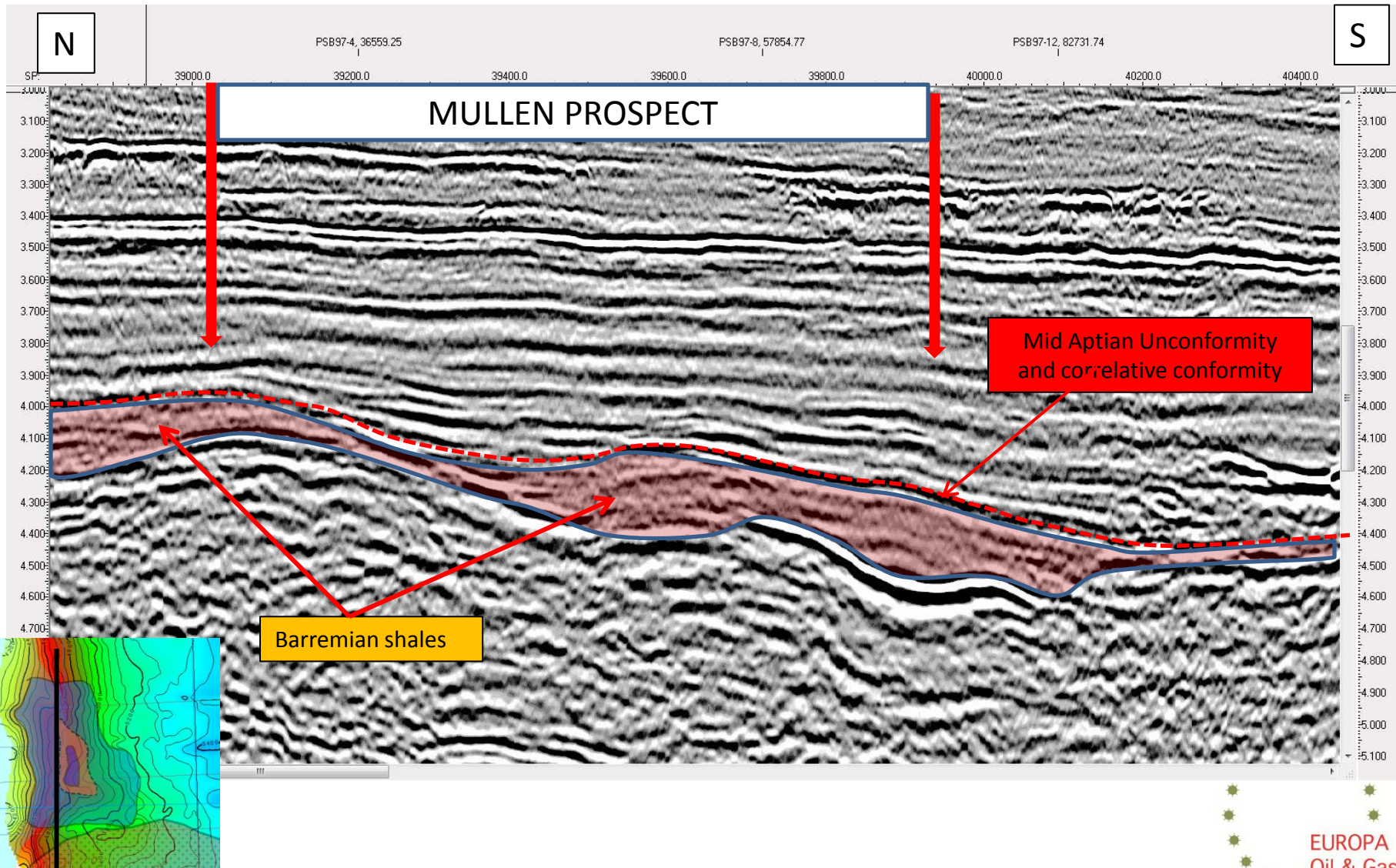
Geoseismic Section: Mullen Dip Line



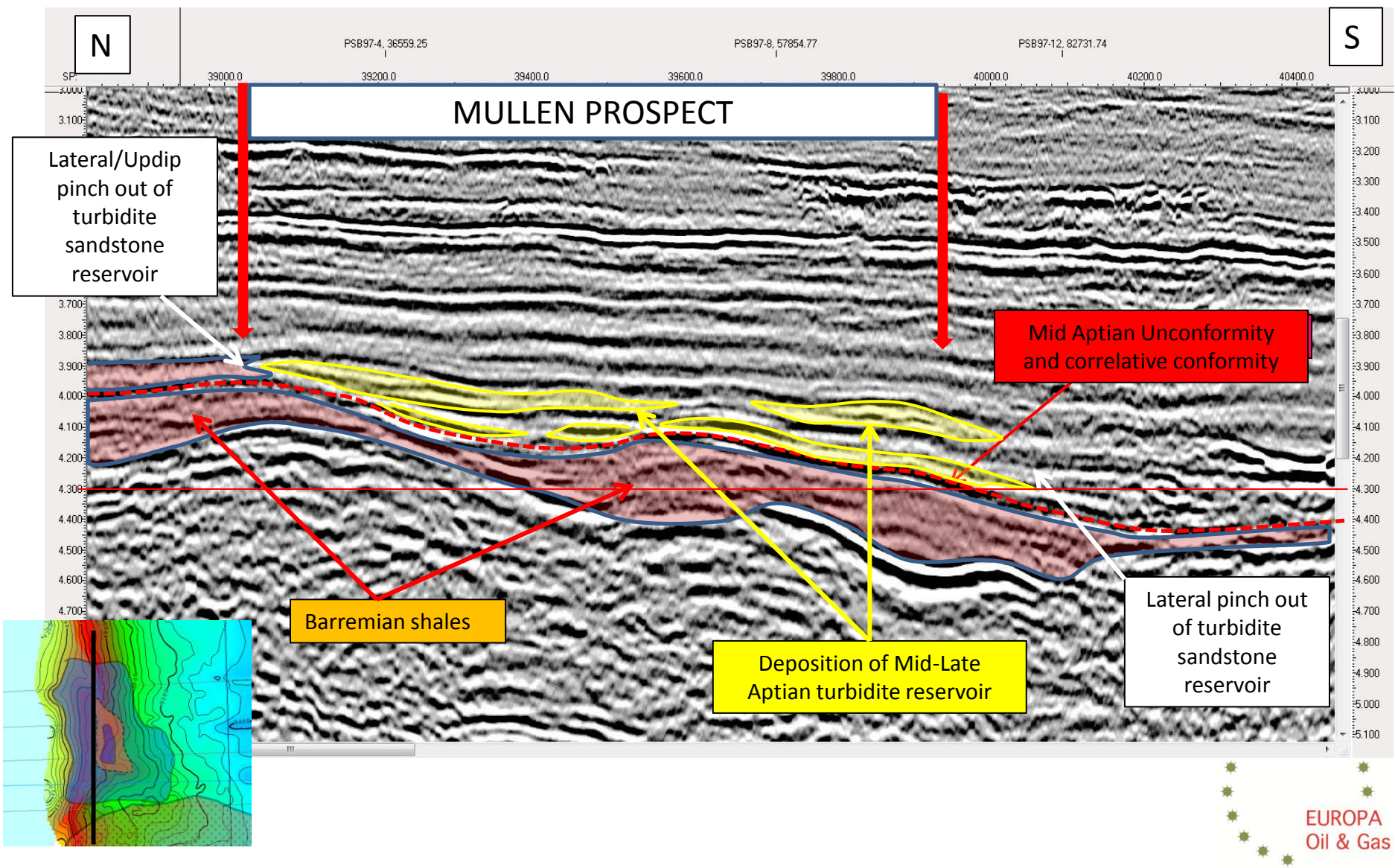
Geoseismic Section: Mullen Strike Line



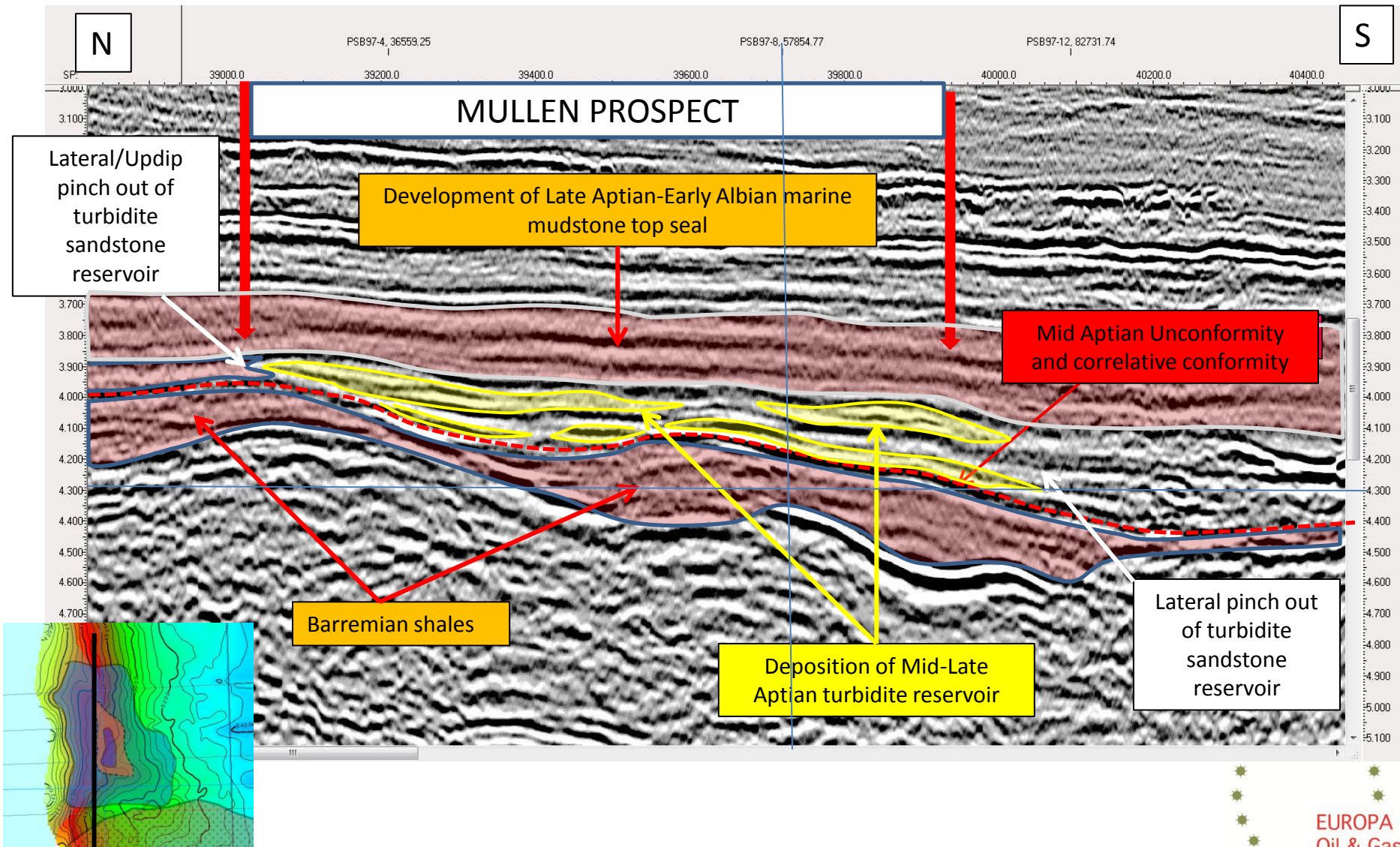
Geoseismic Section: Mullen Strike Line



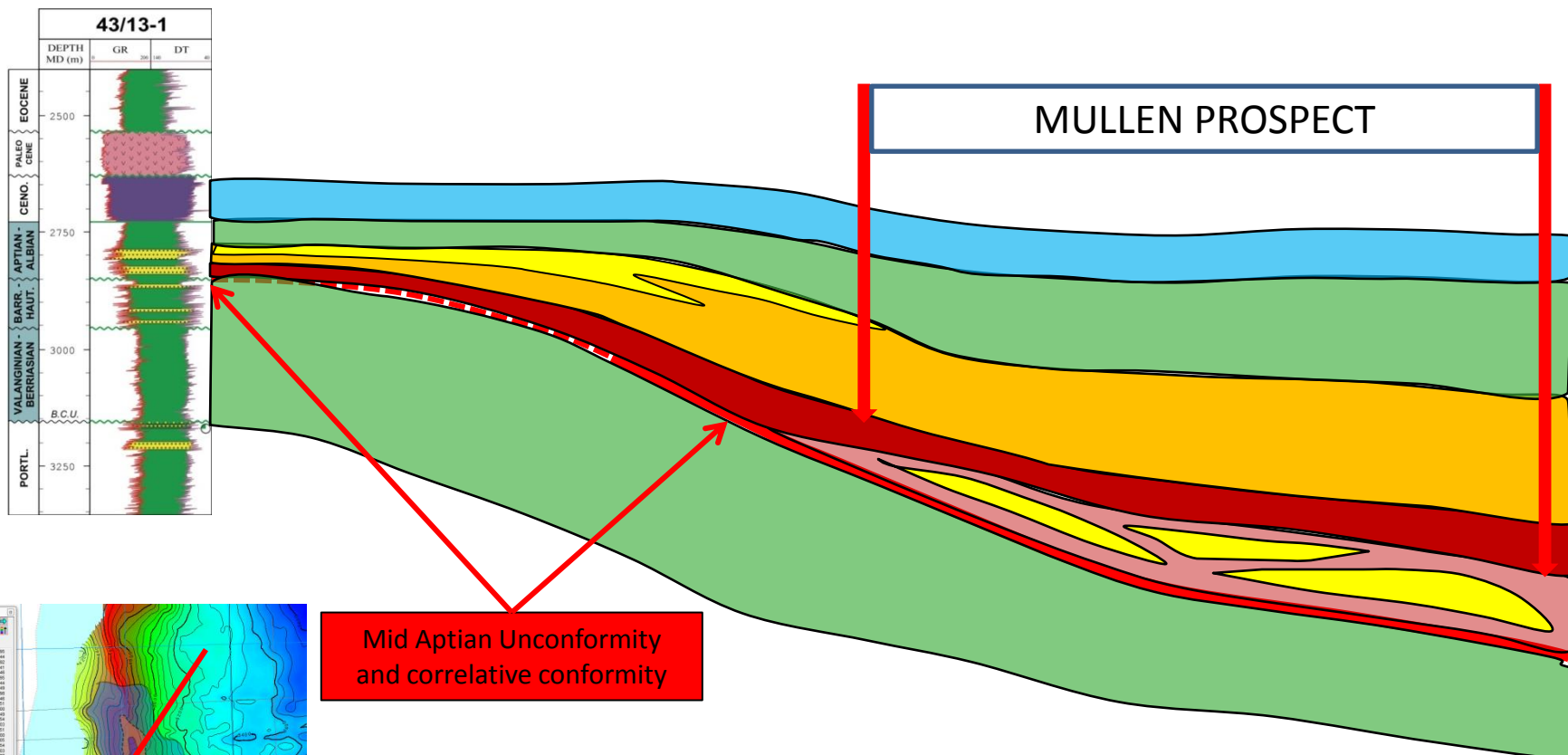
Geoseismic Section: Mullen Strike Line



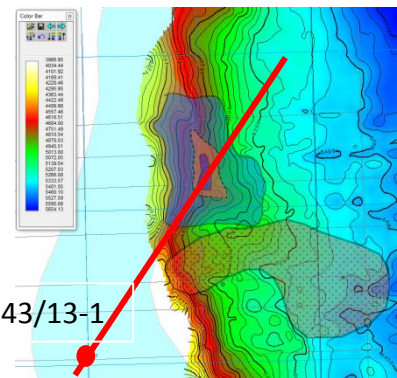
Geoseismic Section: Mullen Strike Line



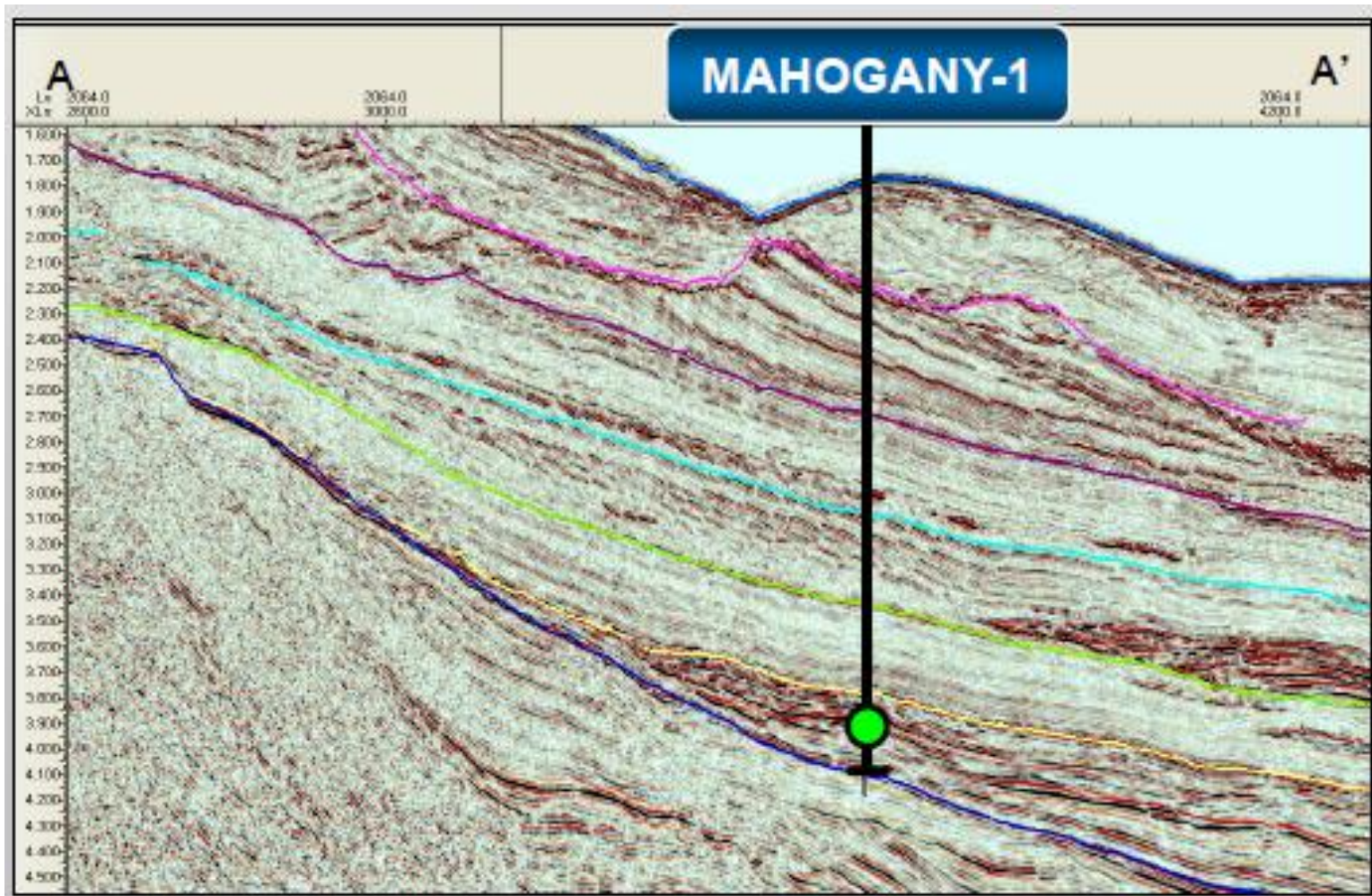
Geoseismic Section



Mid Aptian Unconformity
and correlative conformity

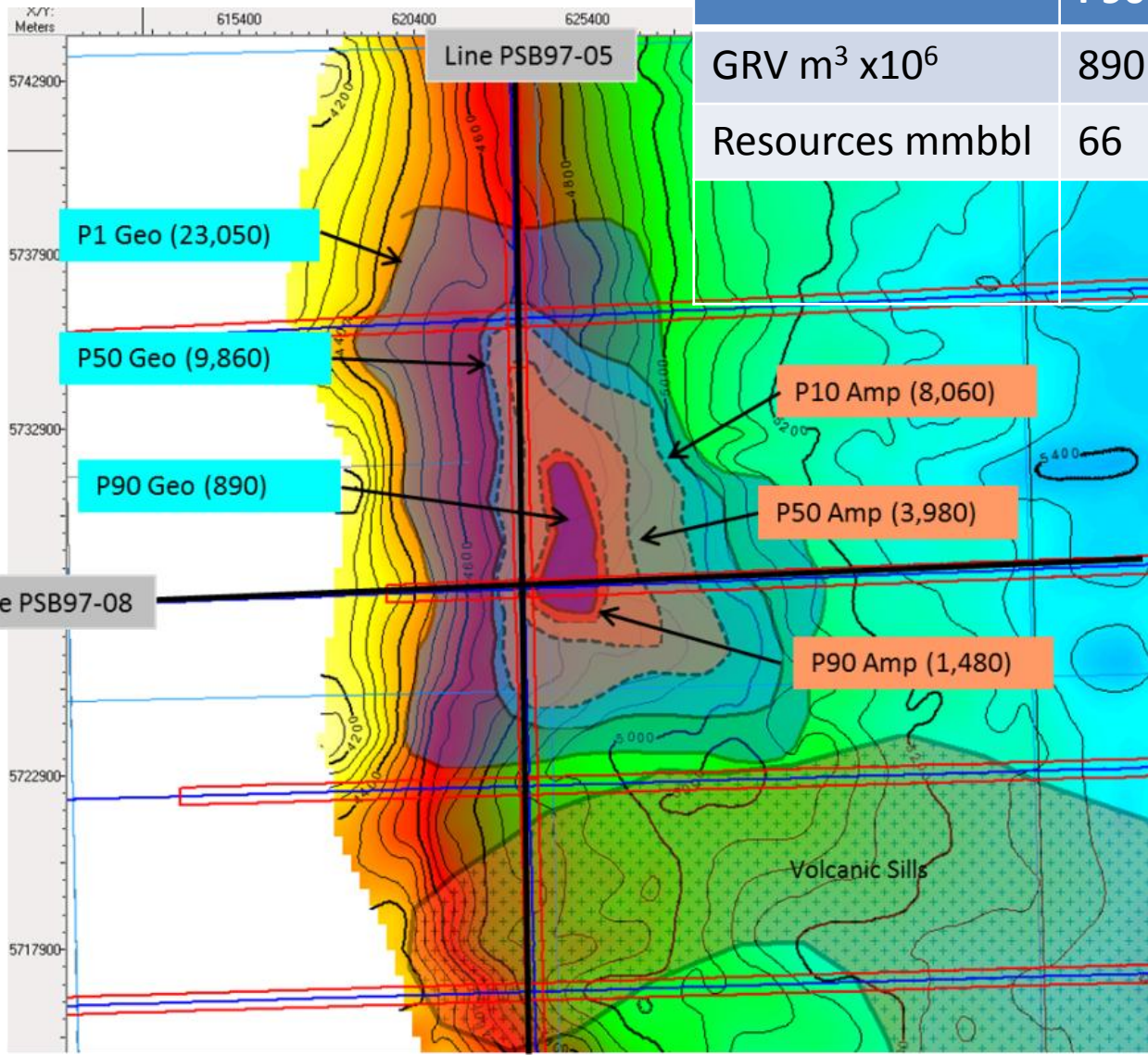


Analogues- African transform margin



Cretaceous turbidite sandstones in stratigraphic traps

Mullen Volumetrics and Resources

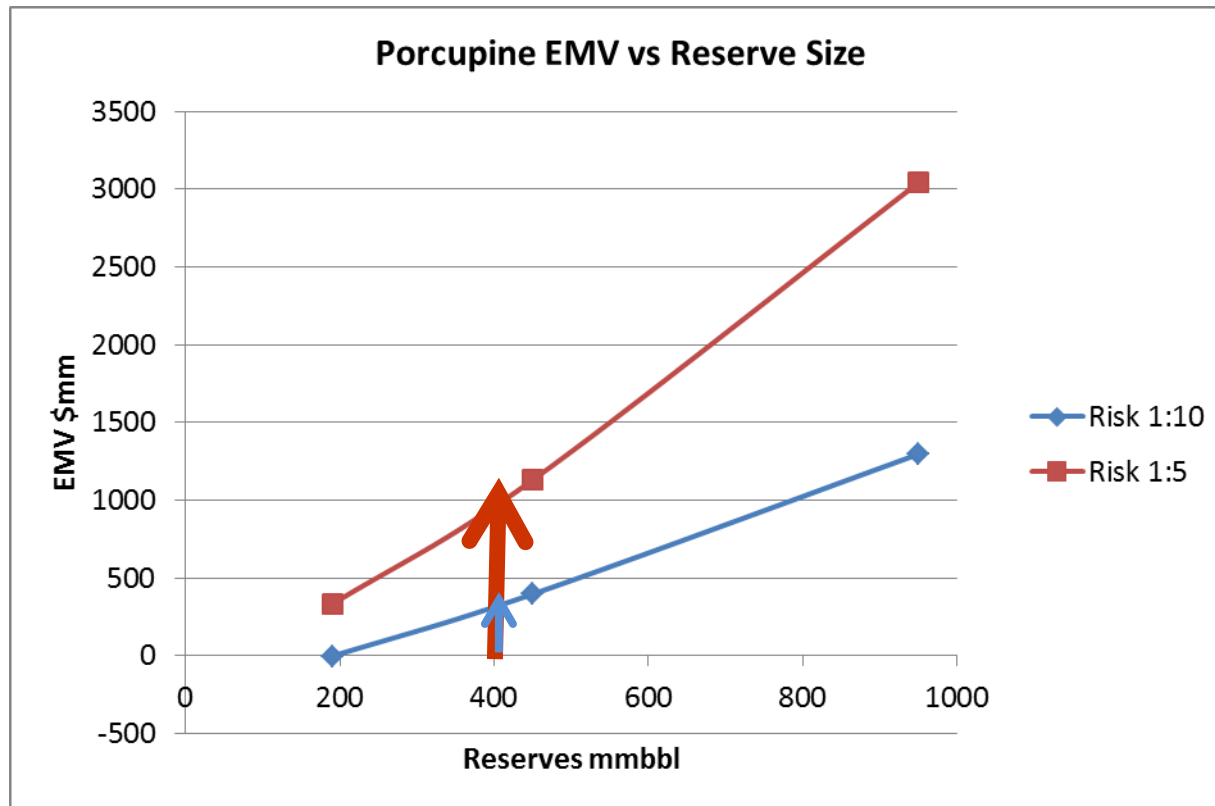


	P90 Geo	P50 amp	P10 Geo
GRV m ³ x10 ⁶	890	3,980	11,099
Resources mmbbl	66	318	1,092
Mean resources 482 mmbbl			

Closure defined by structural and stratigraphic mapping

Amplitude supported closures

Prospect Reserve Size Cut-off for Porcupine Basin

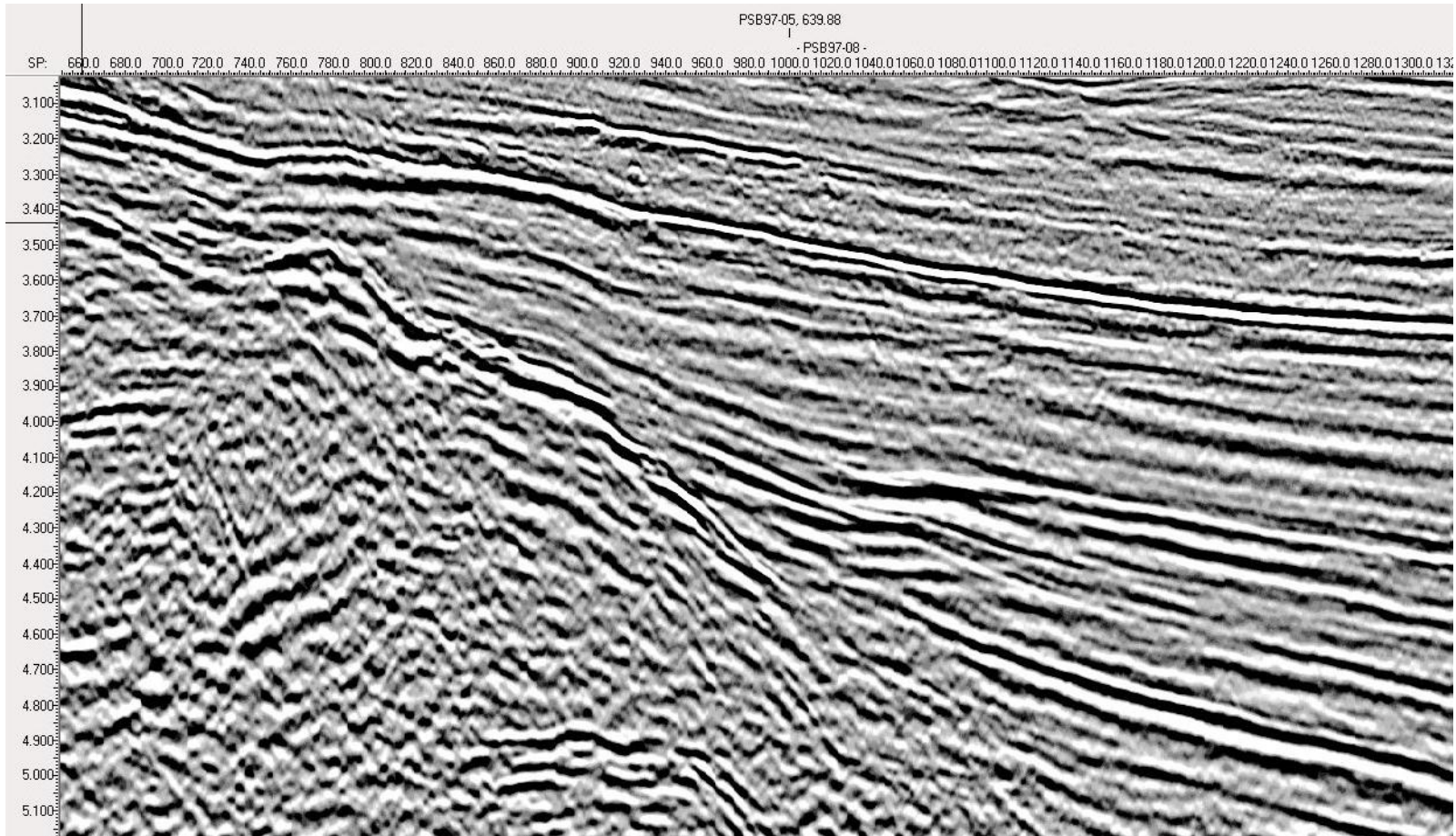


Basin immaturity (and risks) suggests minimum drillable prospect size is around 200 mmbbl despite lenient fiscal regime

De-risking

- Objective – mature prospect to drillable status
- Current work integrate 2D reprocessed data
- Further work:
 - Undertake more reprocessing to support geophysical studies
 - Rock physics and AVO studies
 - Build business case for 3D survey
 - Aim to de-risk prospect through conformance, flat events and AVO.
- Other sources
 - Technical success at Dunquin may help de-risk source rock elements
 - Drilling of Cretaceous stratigraphic traps elsewhere in the Atlantic region may contribute new insights

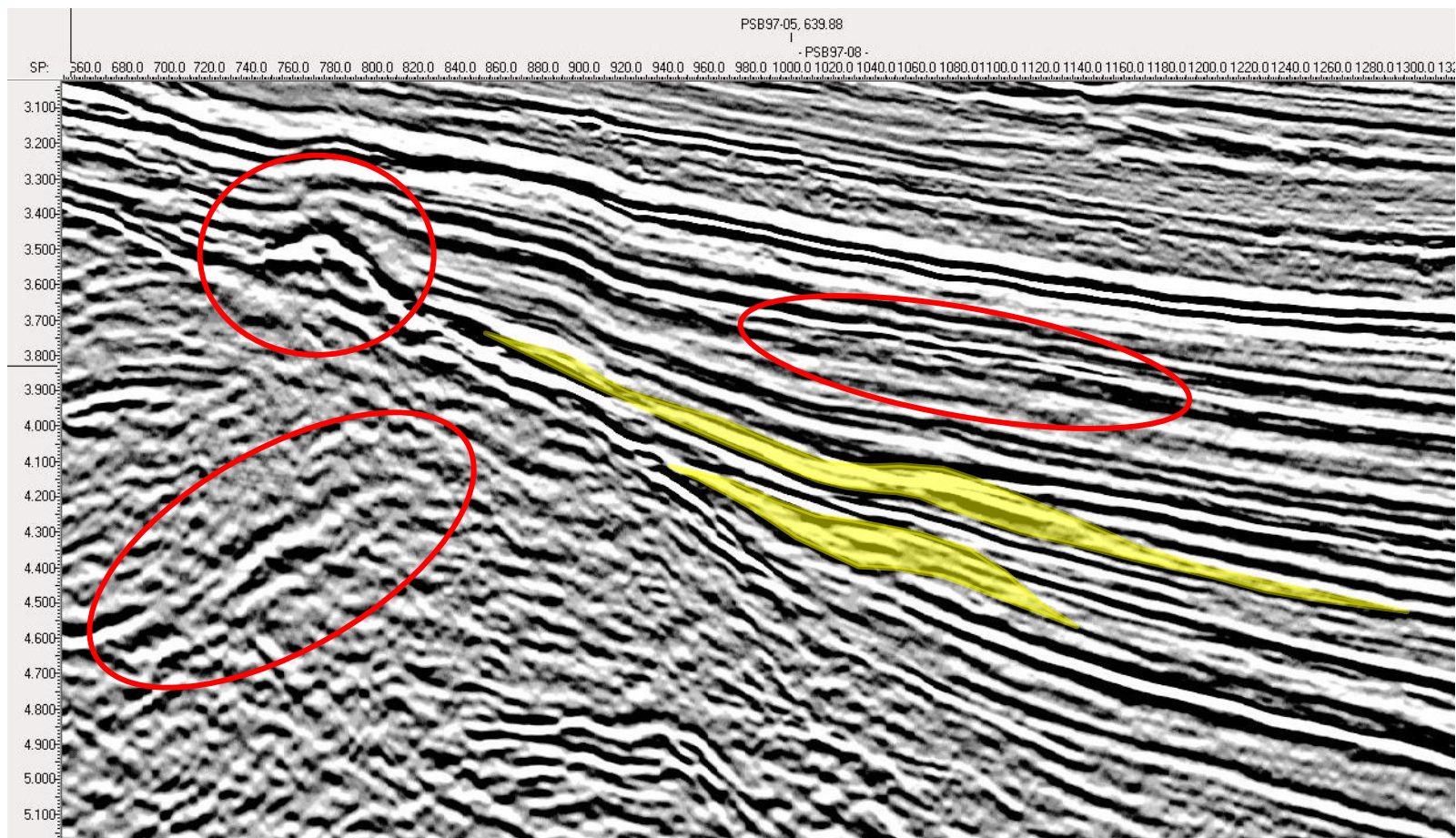
Western 1997 survey (PSB97)



Original 1997 processing

TGS WesternGeco 2012 Reprocessing

Provisional



Improved S/N, resolution and continuity of events

Uplift in Cretaceous stratigraphic detail, and Jurassic pre rift structure

Data shown courtesy of TGS and WesternGeco

Farmout

- Europa has 100% equity in L0 11/7 and 11/8
- Objective is to accelerate exploration in both licences
- Seeking a joint venture partner to share seismic acquisition and (if justified) drilling

For further information contact:

**Europa Oil & Gas (Holdings) PLC
6 Porter Street
London
W1U 6DD
UK**

Telephone +44 20 7224 3770

**mail@europaoil.com
www.europaoil.com**

