

AAPG ACE 2012
Long Beach, California

Offshore Ireland

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Petroleum Affairs Division (PAD)

24 April, 2012



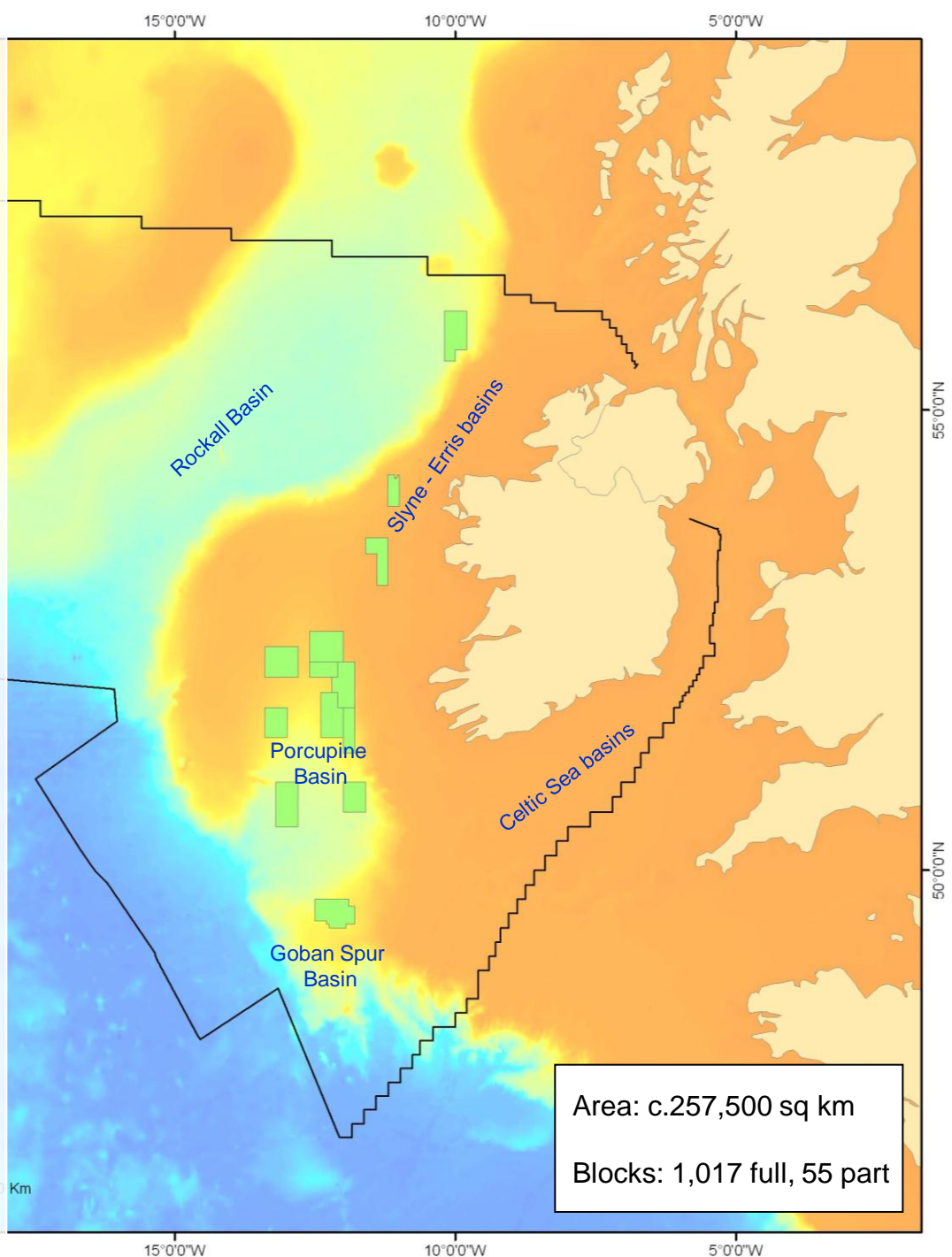
Department of Communications, Energy and Natural Resources
Roinn Cumarsáide, Fuinnimh agus Acmhainní Nádurtha
www.pad.ie

Atlantic
Ireland
An exciting petroleum province

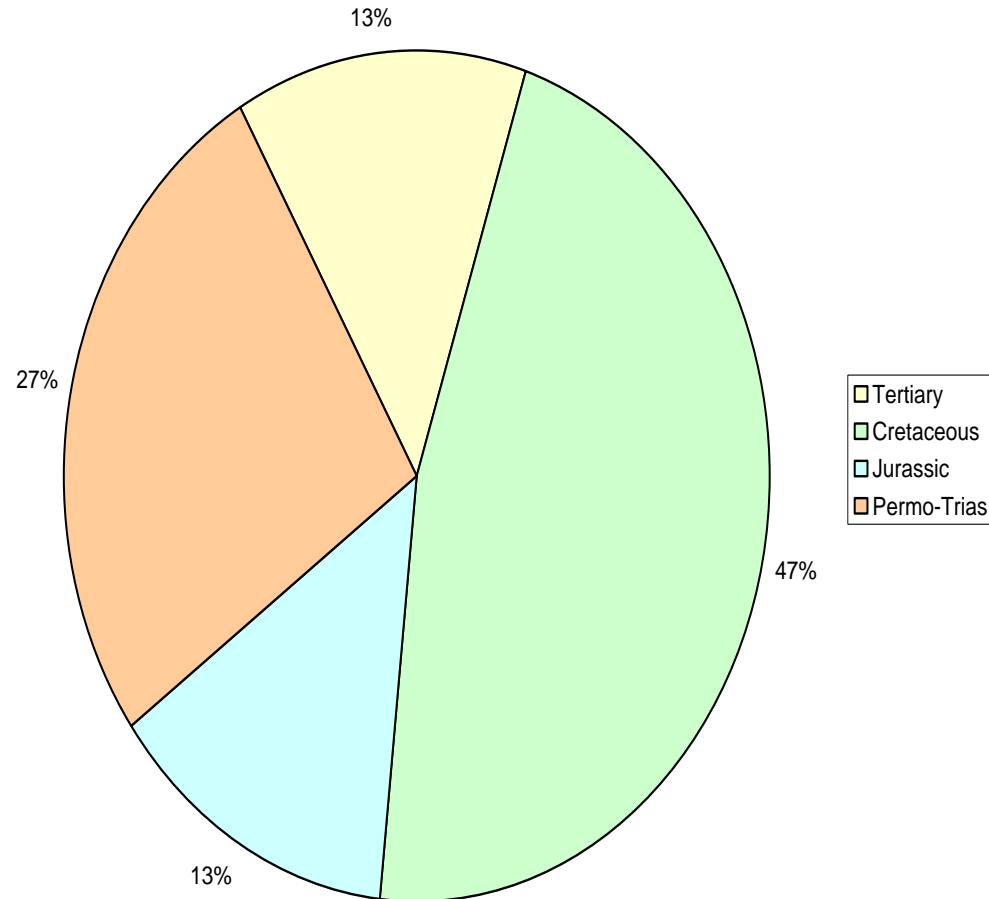
2011 ATLANTIC MARGIN ROUND

Closed 31 May; Awards 1 November

- From 15 valid applications, 13 2-year Licensing Options awarded to 12 companies
- 5 companies already active in Ireland: Chrysaor, Providence, San Leon, Serica and Sosina
- 7 were new entrants: Antrim, Bluestack, Europa, First Oil, Petrel, Repsol and Two Seas
- Typical work programmes focus on seismic reprocessing, well/seismic survey design; prospectivity and pre development studies
- Up to 75% of an Option area may be converted into a 15-year Frontier Exploration Licence
- Wide variety of exploration targets recognised from Tertiary to Permo-Trias; from non-marine fluvial & aeolian to basin-floor fans
- A very significant proportion of the applications have Cretaceous deep marine sandstone objectives...

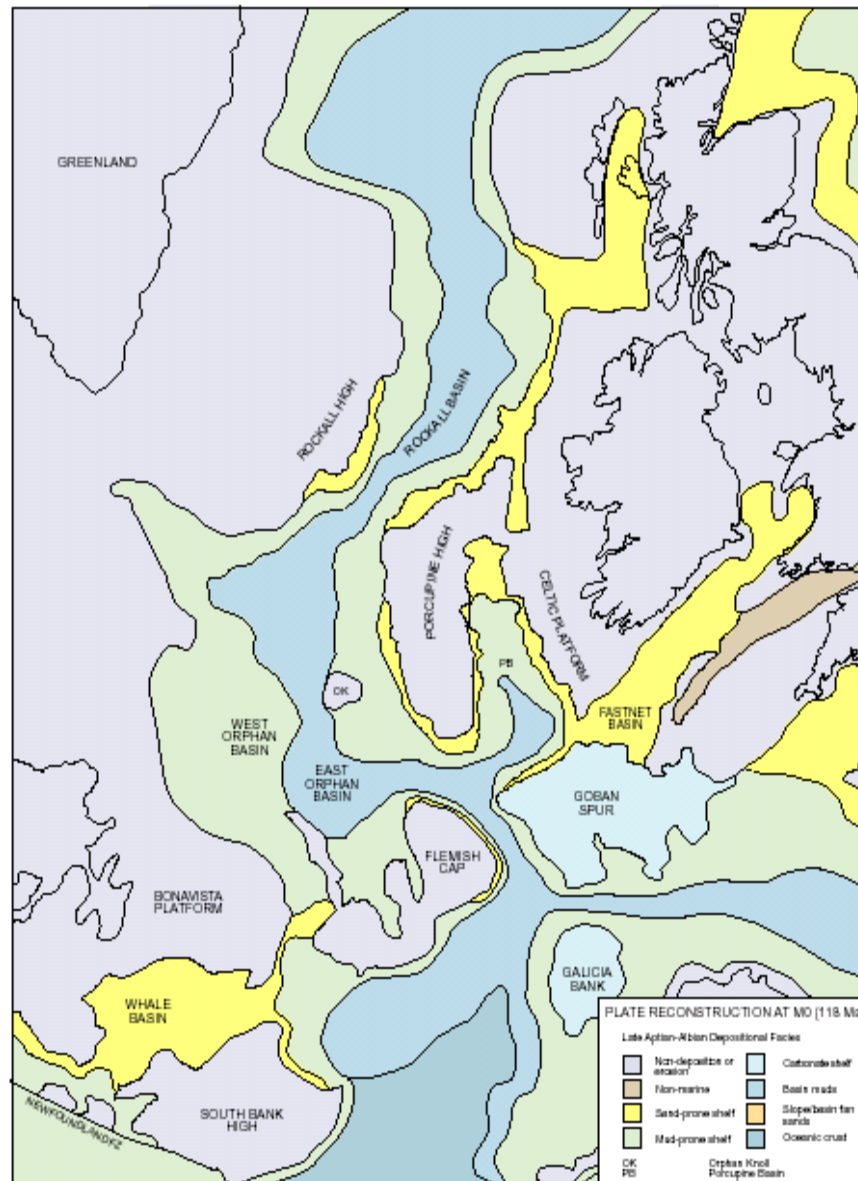


**Applications received under 2011 Atlantic Margin Licensing Round
- Primary Plays by Age**



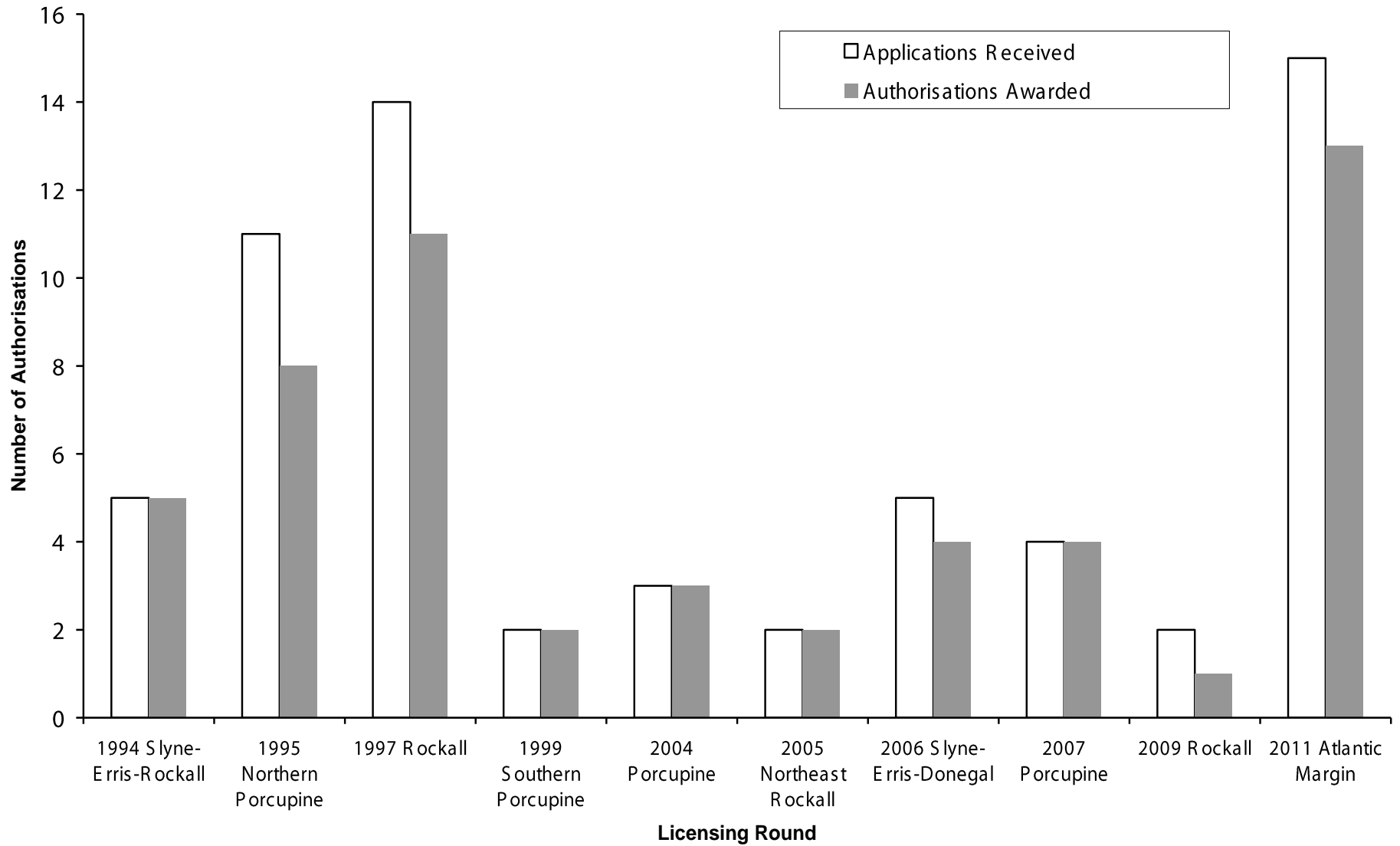
The Cretaceous is underexplored along the Irish Atlantic Margin, although productive in eastern Canada and the focus of several recent discoveries offshore West Africa and South America.

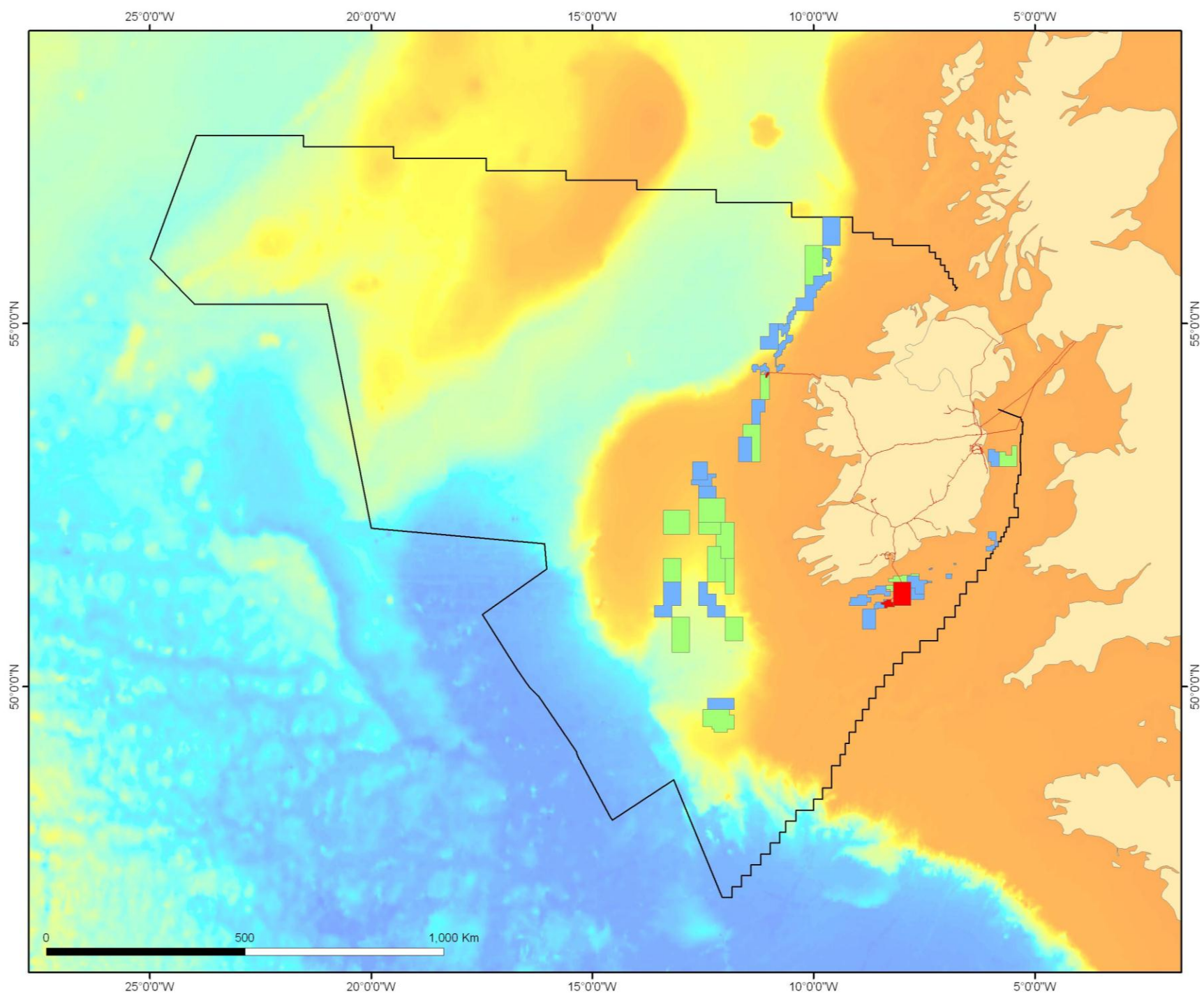
CRETACEOUS PALAEOGEOGRAPHY



Lower Cretaceous (Aptian)

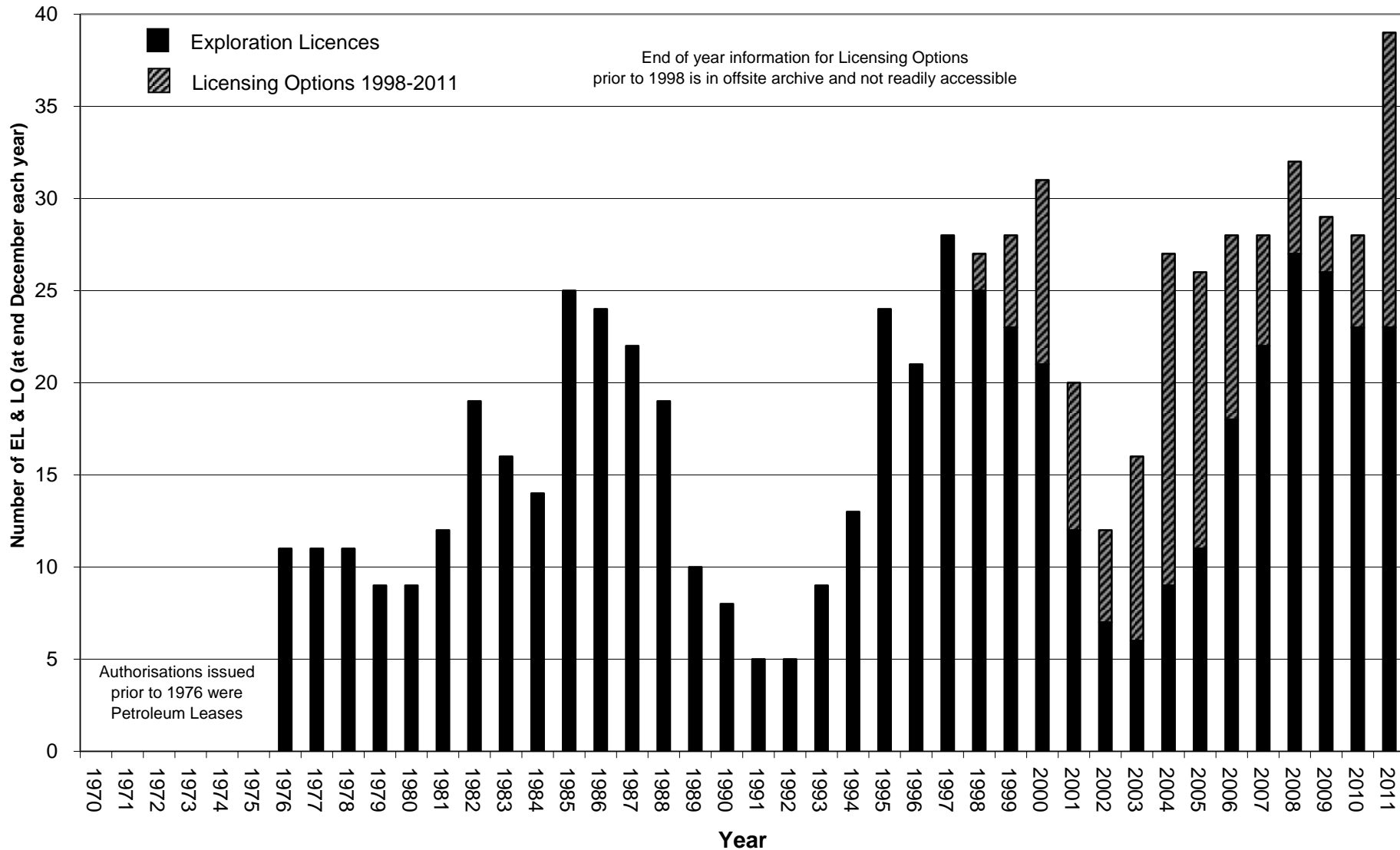
LICENSING ROUNDS





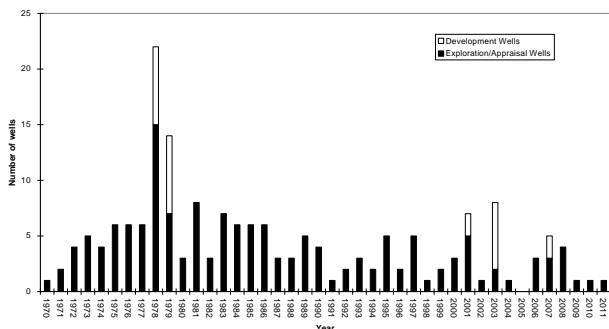
LICENCES AND LICENSING OPTIONS

Number of Offshore Exploration Licences and Licensing Options at end December each year (1970 - November 2011)

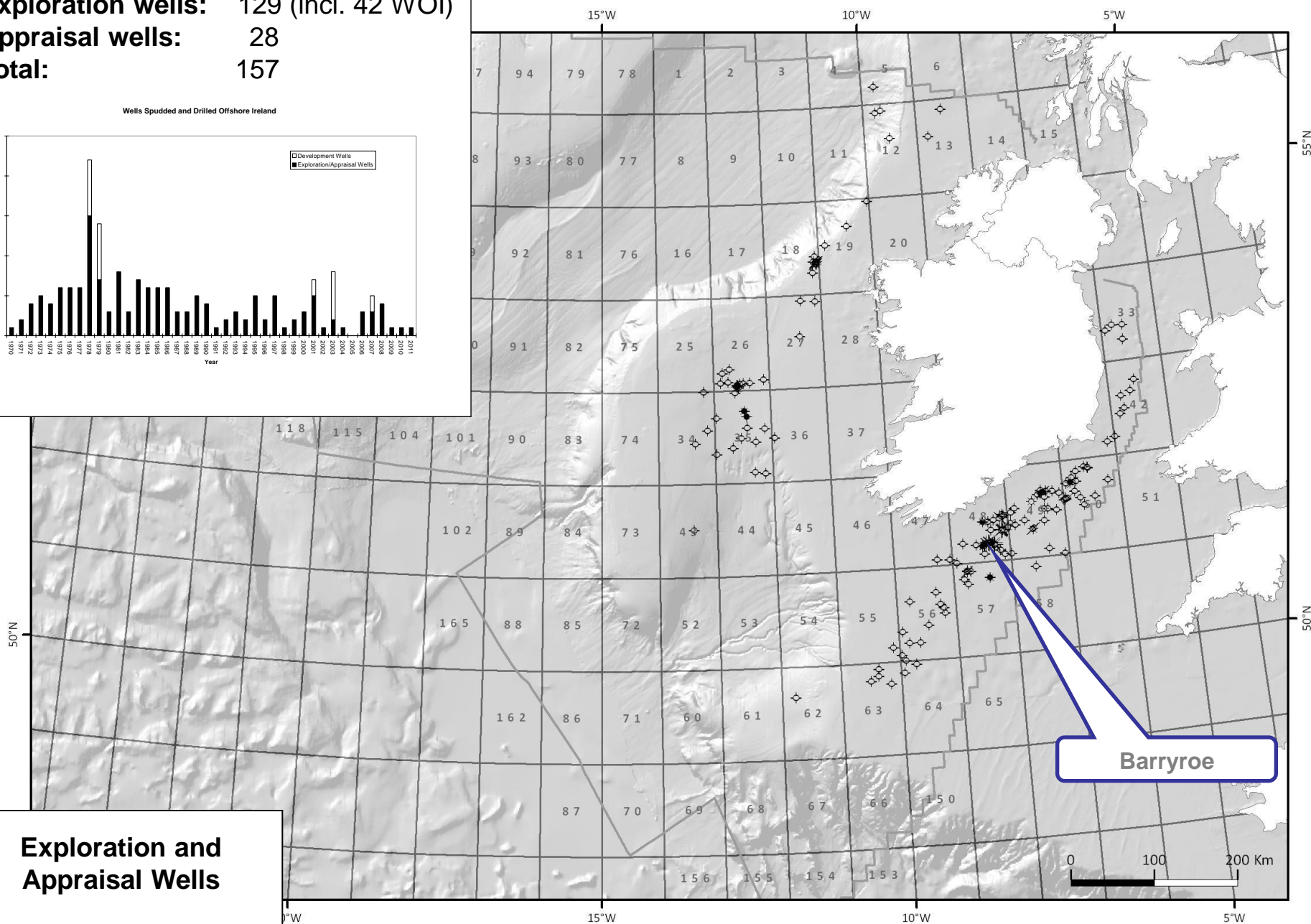


Exploration wells: 129 (incl. 42 WOI)
Appraisal wells: 28
Total: 157

Wells Spudded and Drilled Offshore Ireland



WELLS



**Exploration and
Appraisal Wells**

(1970 – March 2012)

Barryroe Appraisal Well 48/24-10z

(Licence SEL 1/11 held by Providence (OP) & Lansdowne)

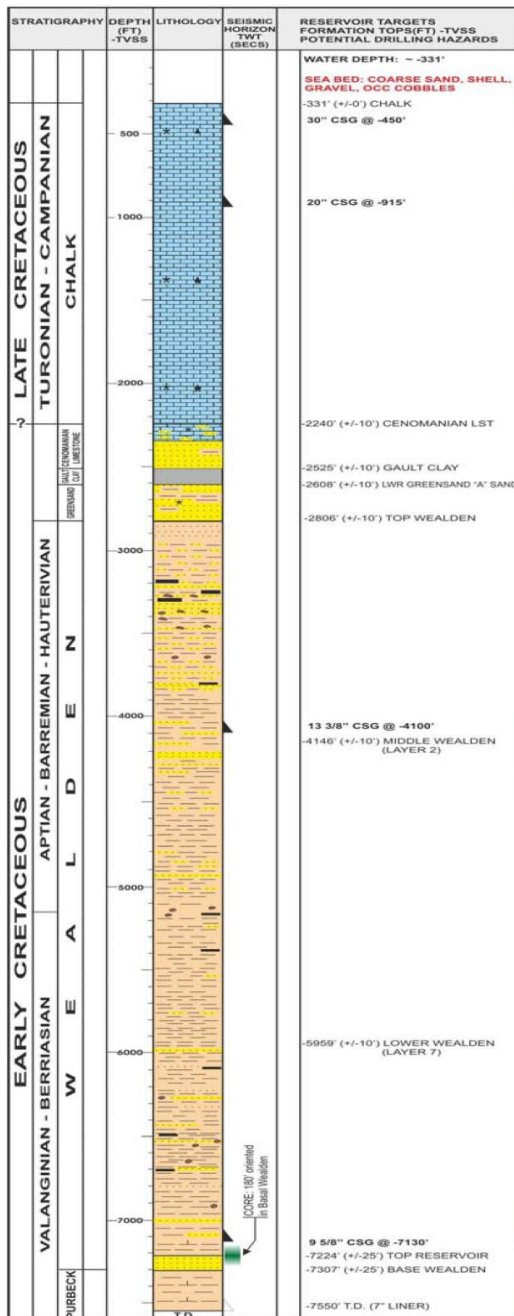
Spudded/rig left: 20 November 2011; 24 March 2012

TD: 7,550 ft tvdss

Objective: to appraise Marathon's 1990 48/24-3 well which tested 1619 bopd waxy oil from Lower Cretaceous, basal Wealden sandstones, using latest logging & VIT testing techniques. Only 2,600 ft VIT available (7,400 ft string).

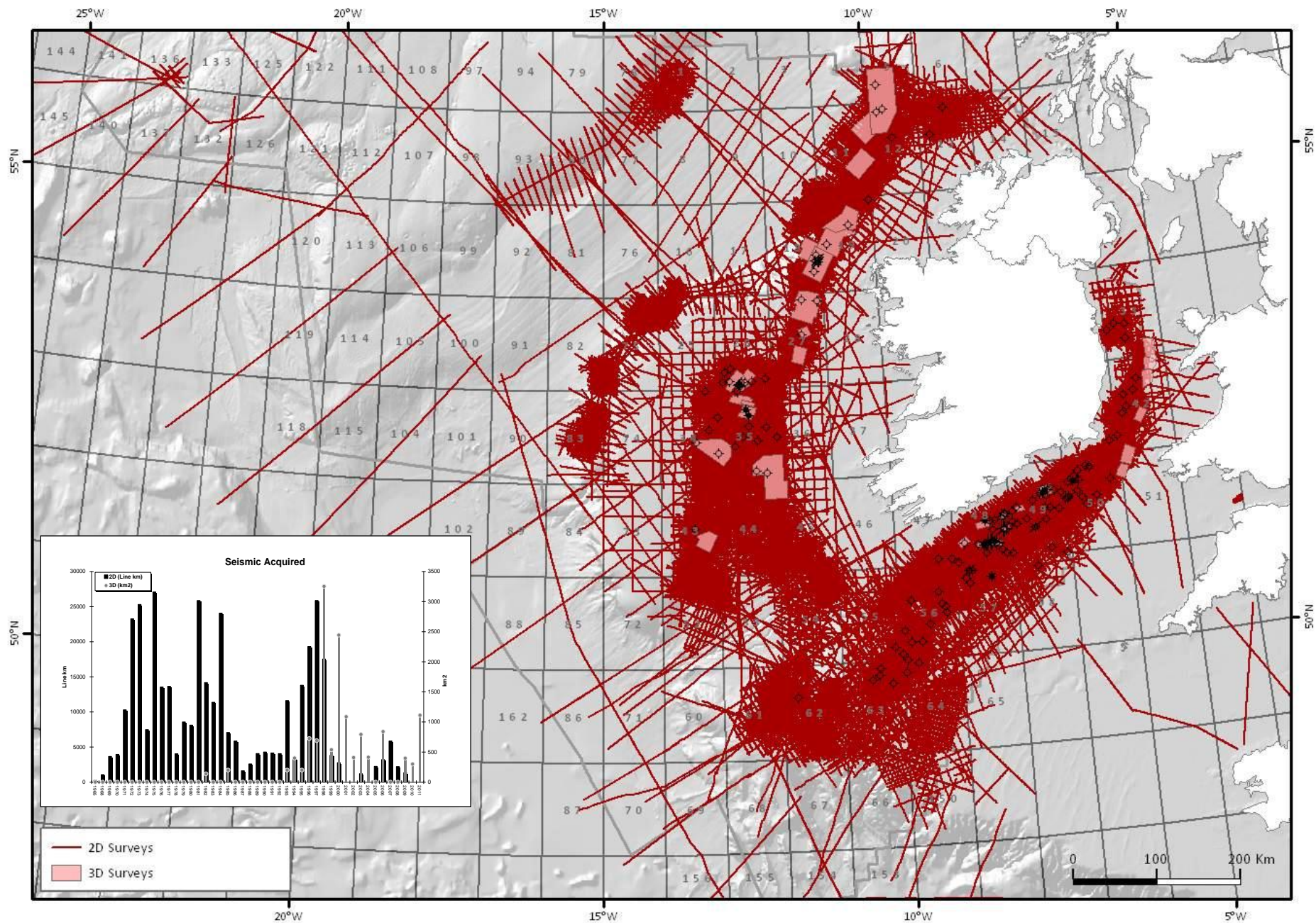
Well confirmed 41 ft of Net Pay (Av Por: 15%; Av Shc: 87%). DSTs flowed 3,514 BOPD (42 deg API; 20% wax) & 2.93 MMSCFGD - on a 68/64" choke; WHP 517 psia - from a 24 ft net oil pay zone; and equipment constrained comingled rates of c.7 MMSCFGD & 1,352 BOPD – on a 34/64" choke; WHP 1,700 psig - when a shallower 17 ft net gas zone was perfed. No fluid contacts detected.

Next steps: complete test analysis and integrate well data with 3D seismic shot in 2011 for mapping, volumetrics and further well planning for 2013.

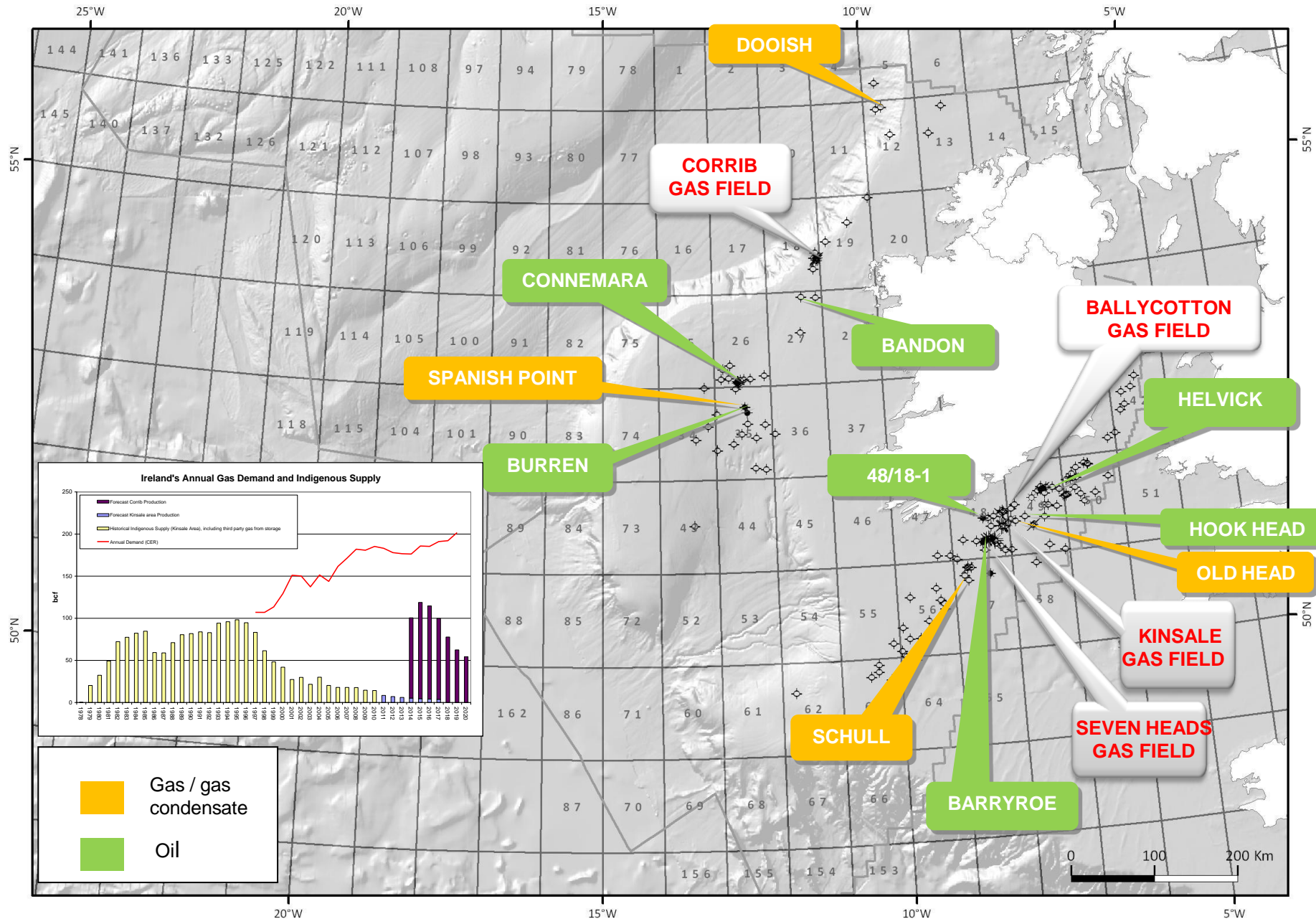


WELL	OPERATOR	YEAR	OIL RATE	FORMATION
48/24-1	Esso-Marathon	1974	1,268 bopd	KL, Middle Wealden
48/28-1	Esso-Marathon	1974	1,527 bopd	KL, Middle Wealden
48/24-3	Marathon	1990	1,619 bopd	KL, Basal Wealden
48/24-10z	Providence	2012	3,514 bopd	KL, Basal Wealden

SEISMIC



DISCOVERIES & FIELDS



PERSPECTIVES

SINCE 2000, ONLY 14 EXPLORATION WELLS WERE DRILLED OFFSHORE IRELAND

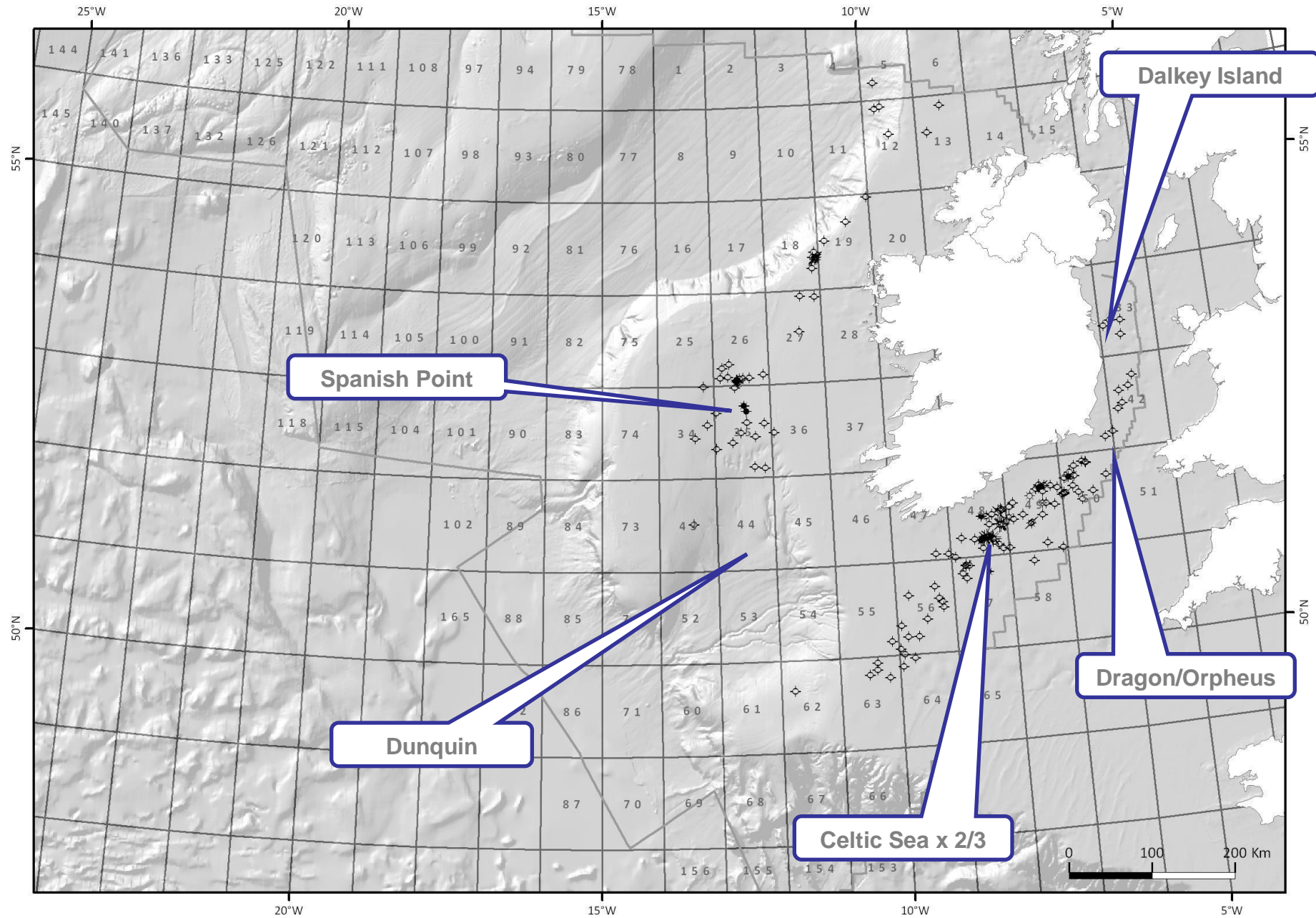
YET, 4 SIGNIFICANT DISCOVERIES WERE MADE (NOT COUNTING BARRYROE):

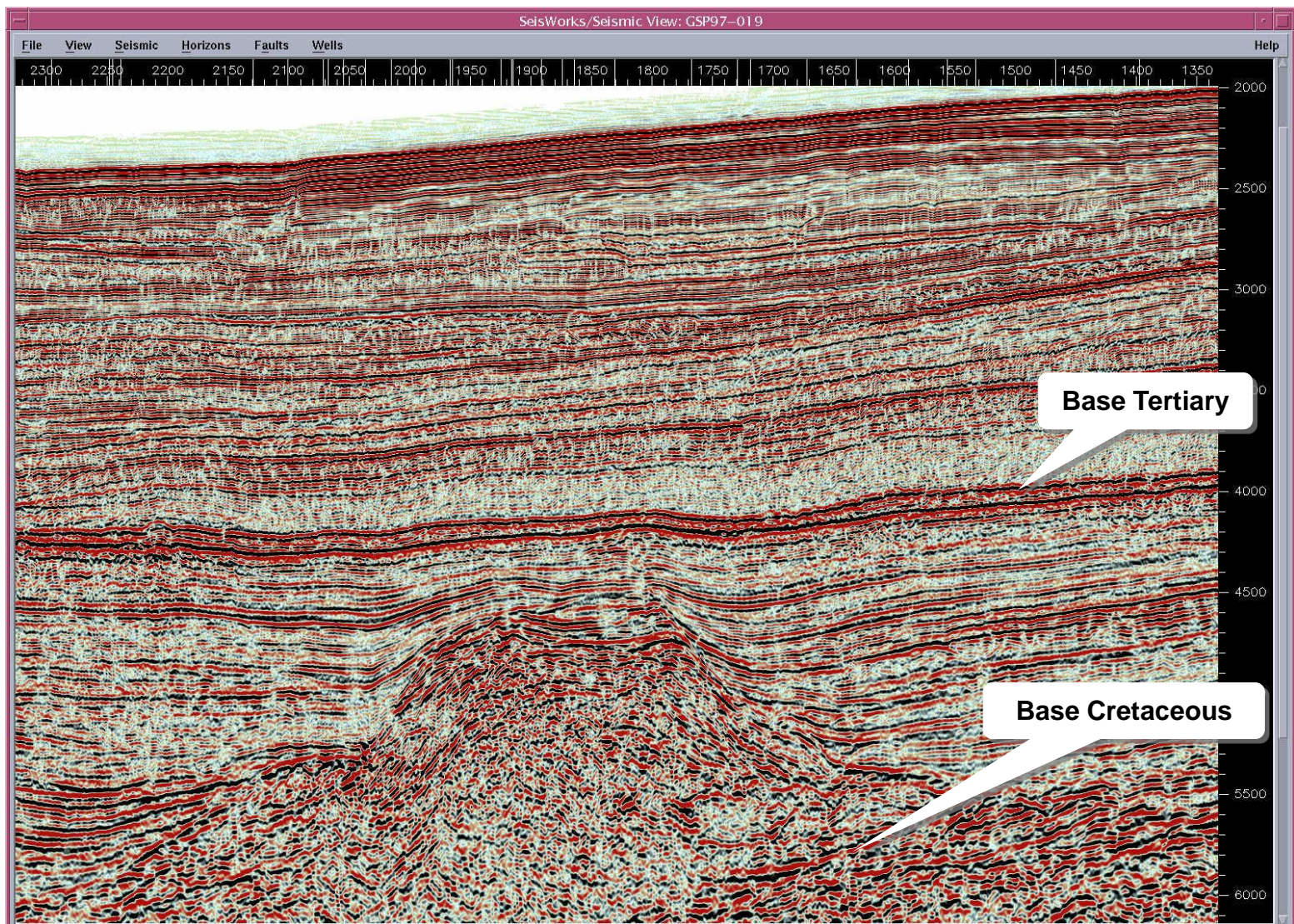
- DOOISH (gas condensate) - ROCKALL BASIN
- BANDON (oil) - SLYNE BASIN
- OLD HEAD (gas) - N. CELTIC SEA BASIN
- SCHULL (gas) - N. CELTIC SEA BASIN

SINCE 2005, ONLY 1 WELL WAS DRILLED IN THE ROCKALL BASIN

SINCE 2005, NO DRILLING TOOK PLACE IN THE PORCUPINE BASIN

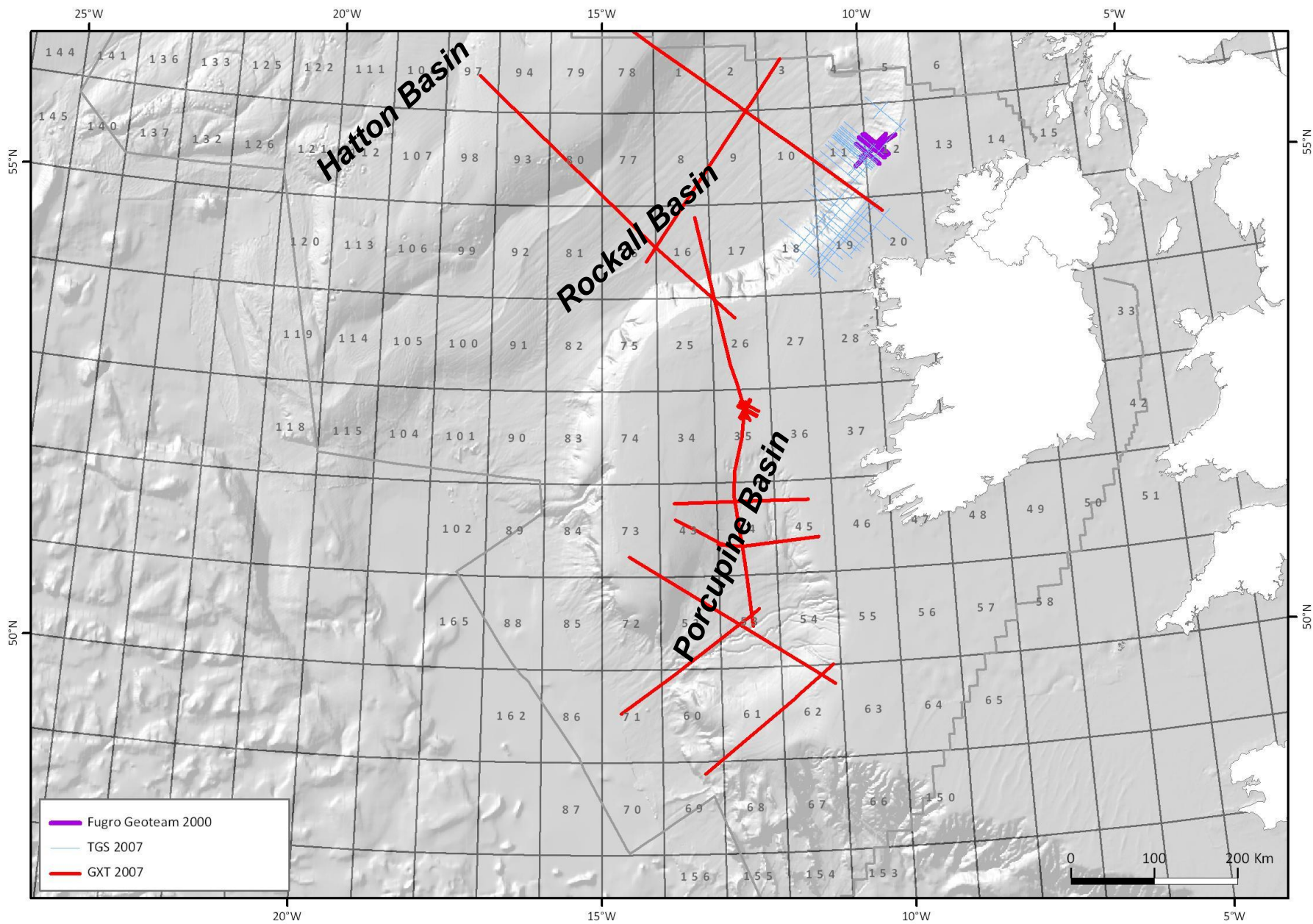
DRILLING PLANS

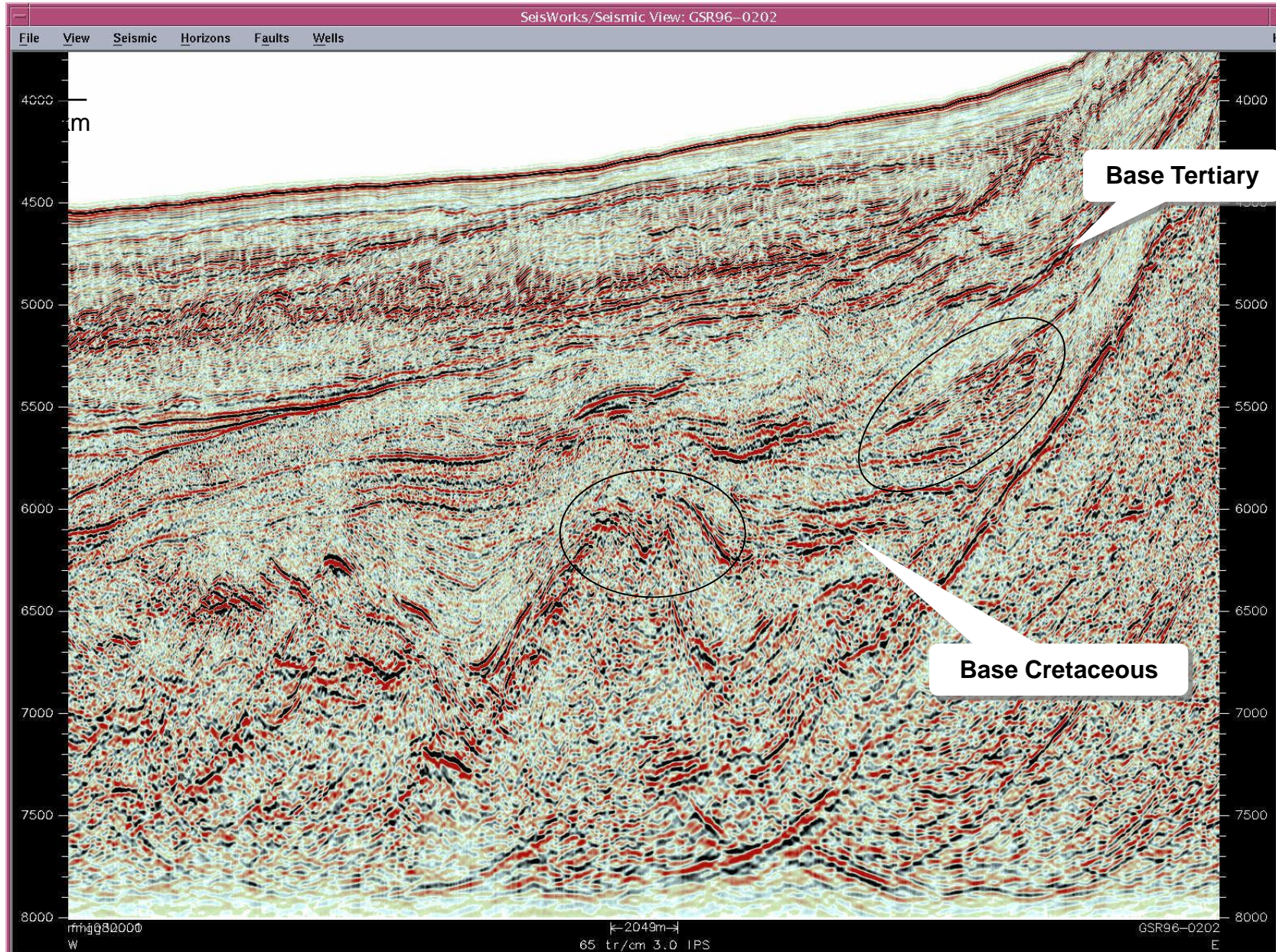




Dunquin

Central Porcupine





Prospective Tertiary (fans), Cretaceous (fans & syn-rift clastics) and Pre-Cretaceous (tilted fault blocks). GSR96-0202

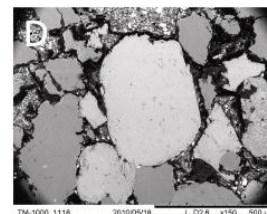
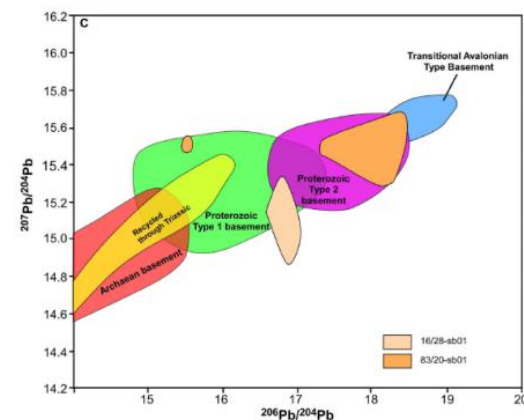
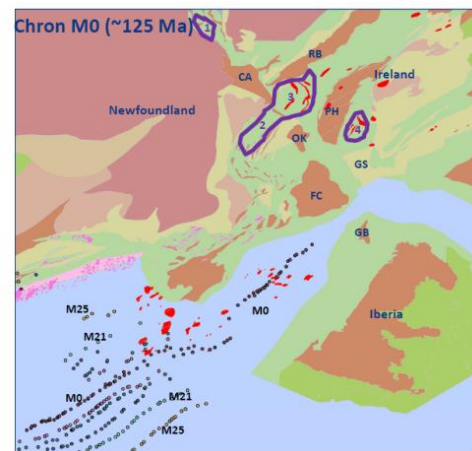
Southeast Rockall

Possible Cretaceous prograding sequence and fans, west of the Porcupine High and South Brona Basin.

REGIONAL EXPLORATION

Ireland is sponsoring several petroleum research projects

- A new kinematic plate reconstruction for the North Atlantic between Ireland & Canada is on track to deliver August 2012;
- Technical inputs provided for a major new Long-Offset seismic acquisition project west of Ireland in 2012-2013;
- Provenance studies of Jurassic-Cretaceous sandstones in Mesozoic basins on the North Atlantic margin – new insights into reservoir distribution – ongoing;
- Oil characterisation and source rock studies for Irish and Canadian conjugate margin basins ongoing;
- New transAtlantic petroleum systems and hydrocarbon resource potential assessment being designed...



TIMELINES

2011

2012

2013

2014

research conferences – workshops – steering meetings

Atlantic
Ireland
2011

Conjugate
Margins
2012

Atlantic
Ireland
2012

Atlantic
Ireland
2013

basin evolution – palaeogeography/bathymetry

Plate Reconstruction

source rock modeling – reservoir prediction – petroleum systems

Existing Studies

Ongoing Studies

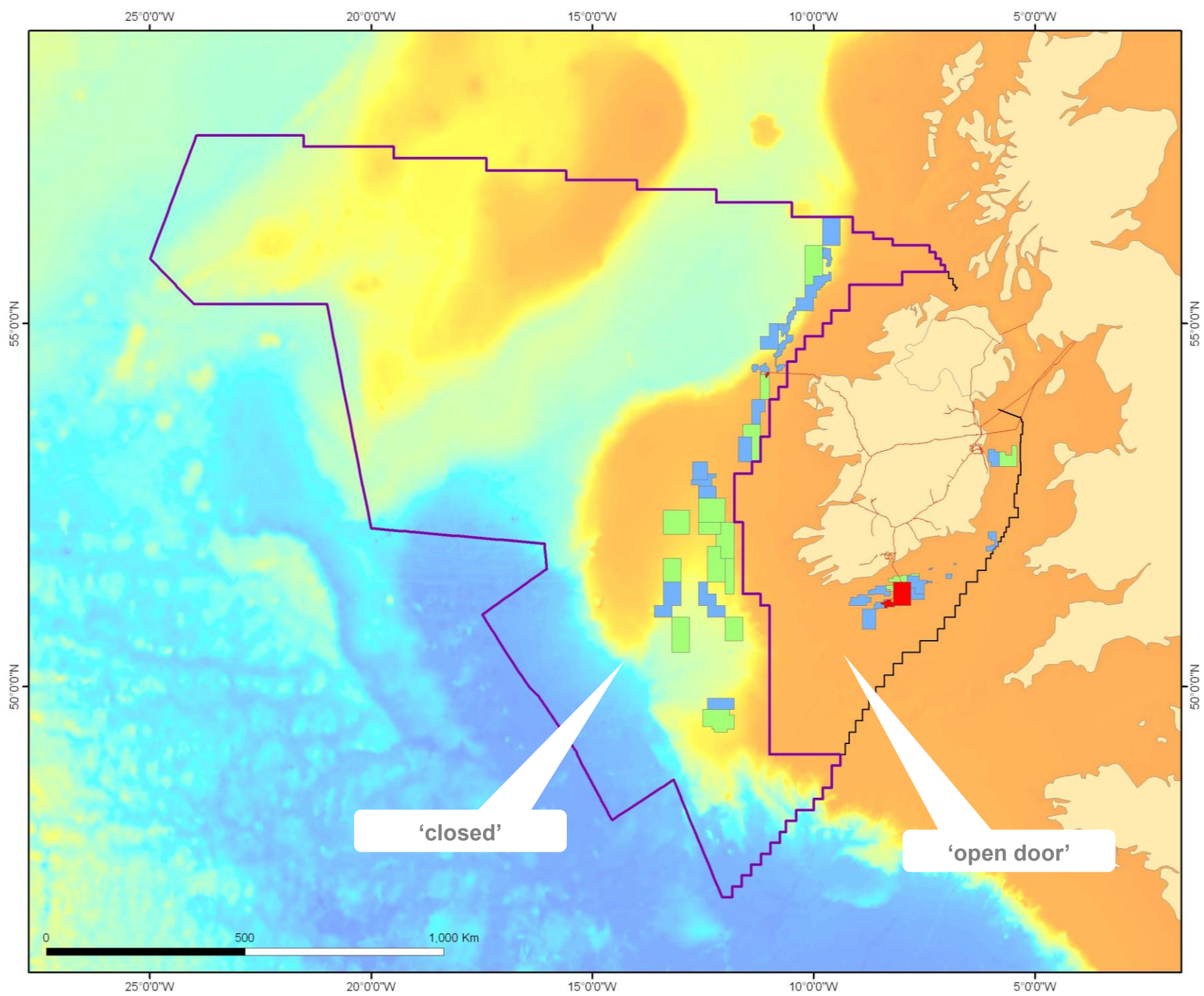
Planned Studies

data for research & exploration

LO Seismic Acquisition

integration

Resource Potential



CONCLUSIONS

Ireland's exploration sector is rapidly expanding as evidenced by the results of the 2011 round and the number of applications being received for open door areas.

Very few wells are being drilled offshore Ireland which means that the multiple undrilled structures and plays already identified are not being tested. However, despite this, a modest level of exploration success is being achieved.

Next year should see a significant increase in drilling activity.

International collaboration on petroleum research is making a substantial contribution to the exploration promotion.

Planning for a major new LO seismic survey is at an advanced stage and an announcement can be expected during Q2.

Active consideration is being given to the next licensing round and details will be signalled as soon as possible. In the meantime there are many opportunities to become involved in Ireland.

DATES FOR YOUR DIARY

CONJUGATE MARGINS CONFERENCE, Dublin 21-24 August, 2012

ATLANTIC IRELAND CONFERENCE, Dublin 12 November, 2012

