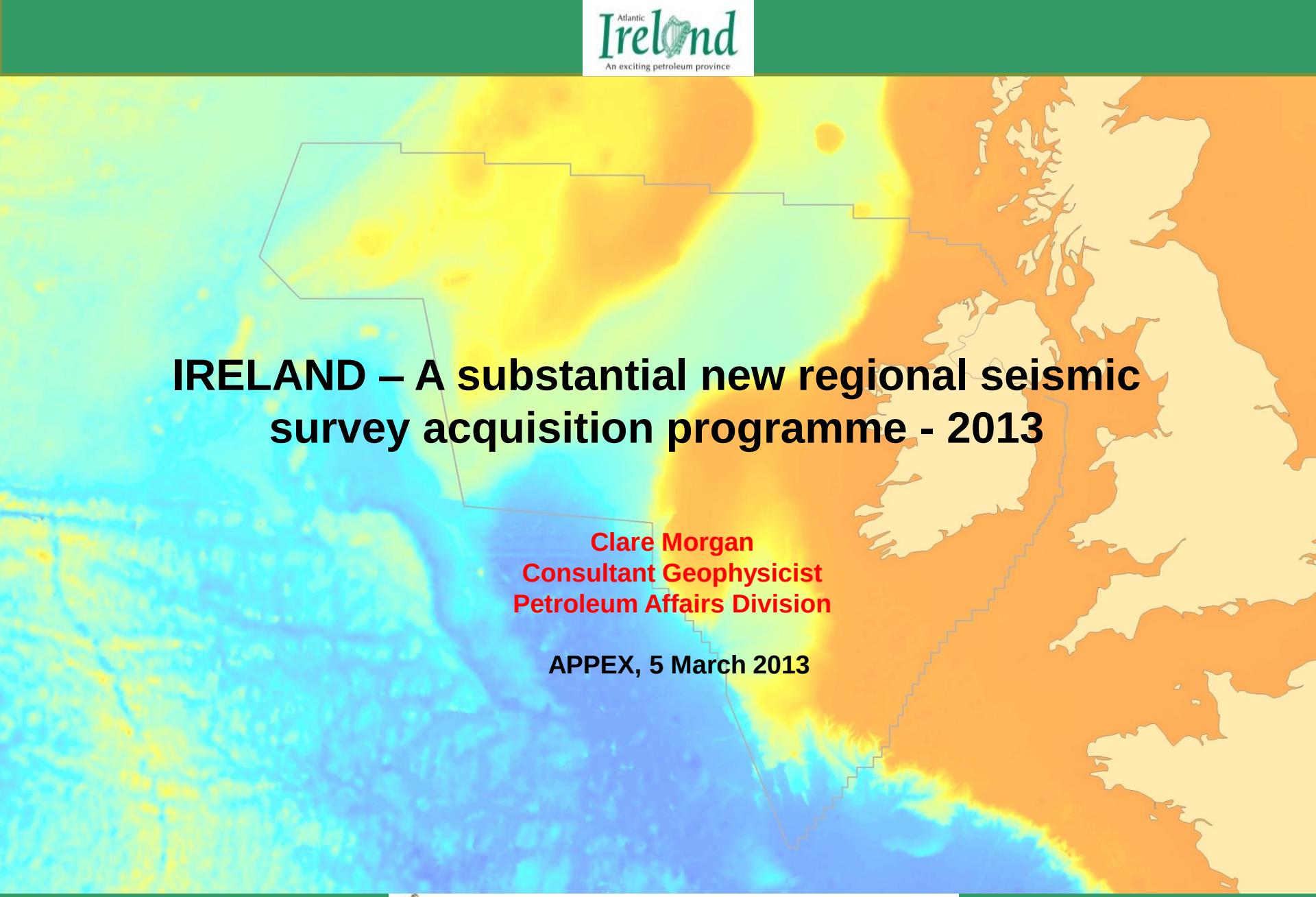

IRELAND – A substantial new regional seismic survey acquisition programme - 2013

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APPEX, 5 March 2013

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A substantial new regional seismic acquisition programme offshore Ireland

Presentation outline:

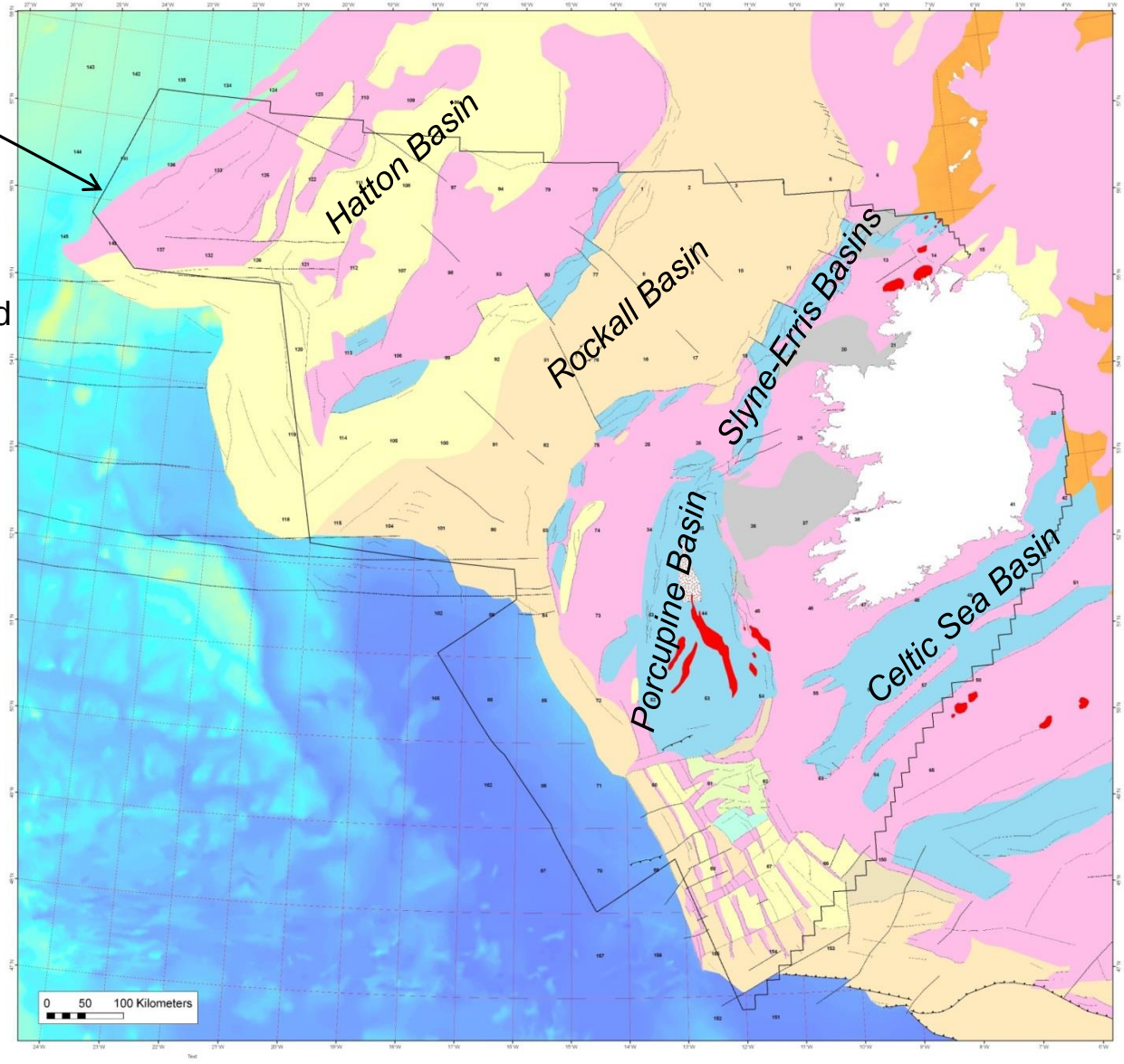
- Regional Seismic Acquisition 2013
  - Justification – current seismic database
  - Objectives
  - Line layout considerations
  - Final seismic layout design
  - Acquisition parameters
  - Timeline
- Summary

A substantial new regional seismic acquisition programme offshore Ireland

Size of Ireland's Designated Area is approximately 700,000 sq km.

It is under-explored

Justification



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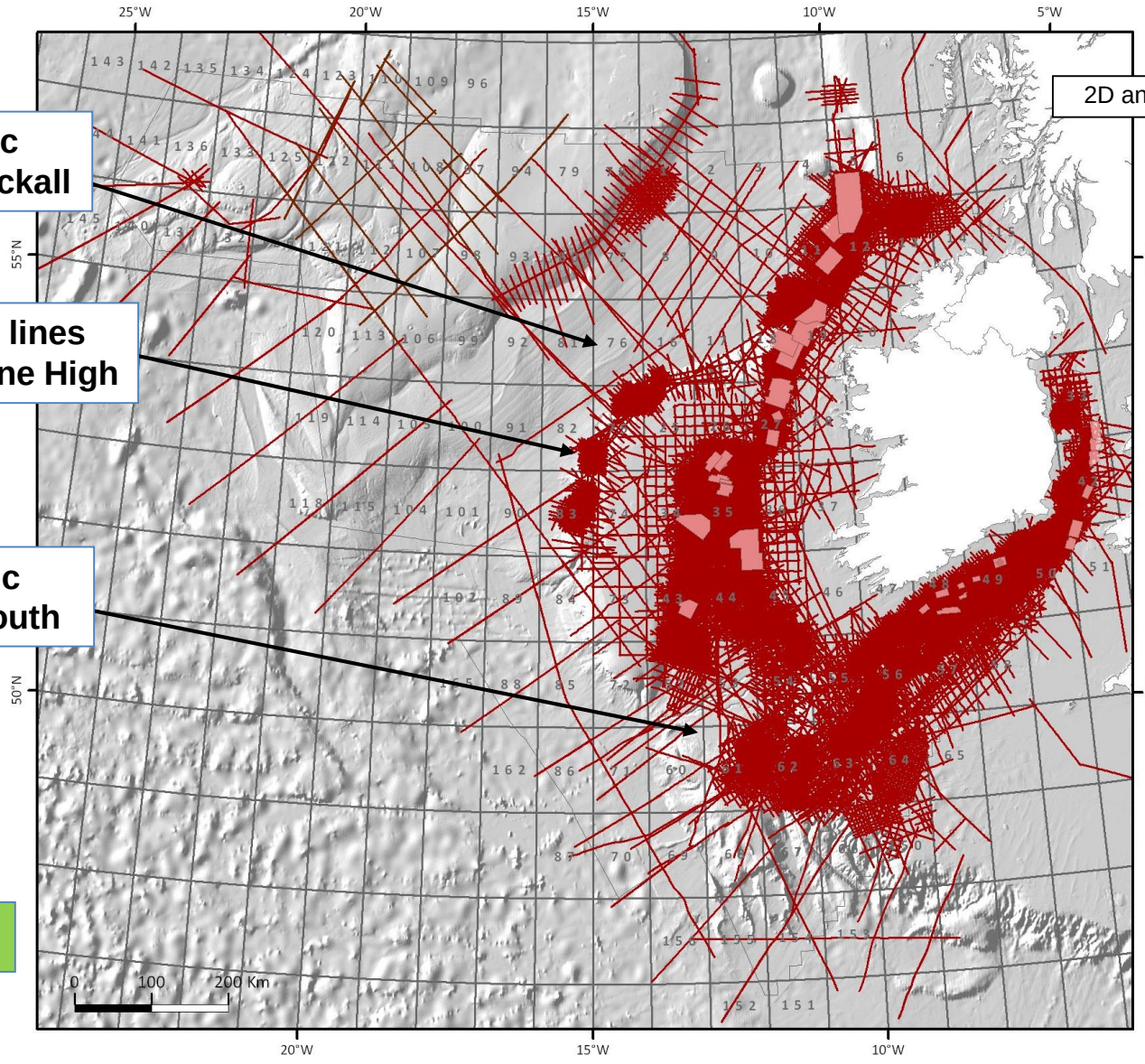

Poor seismic coverage in Rockall Basin

Short seismic lines west of Porcupine High

Poor seismic coverage in South Porcupine

2D and 3D seismic surveys

Justification

66% of 2D seismic surveys acquired offshore Ireland are pre-1990

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Overall Objective

The survey is aimed at providing a regional grid of high quality seismic data over the Atlantic Ireland frontier basins, to allow imaging of the subsurface geology and to ultimately result in a greater understanding of the prospectivity offshore Ireland.

Goals and Objectives:

- To provide **new subsurface 2D regional seismic images**
- **Tie** existing key wells and complement existing surveys
- To provide a dataset to **underpin research**
- To result in a **greater understanding of basin architecture**
- To **enhance knowledge of basin prospectivity,** petroleum system analogues, generate new exploration plays
- To provide **a contiguous consistent seismic dataset** and regional velocity model over a vast area
- To provide a **framework for future exploration** activity

Proprietary option selected to provide DCENR control over data use and for research capacity

Utilising high end & appropriate acquisition technology

Dataset will be processed to minimum PreSTM level

Priority is to get data acquired in 2013 time frame to assist in timing and location of future licensing rounds.

Objective

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Technical considerations for line layout:

Existing database - seismic (3D, 2D (particularly LO), non industry, refraction)
- wells (industry, shallow boreholes, ODP/DSDP)

Data gaps - poor seismic coverage areas

Improve geological understanding – large area coverage

Structural elements – structurally complex areas, avoid basalt areas

Sediment thickness

Gravity

Magnetic

Research interest

Prospective areas

Current areas of interest

Line Layout Considerations

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Survey layout:

50 profiles - 2D lines, average line length 365km, average grid spacing 60km
Total survey length up to 18,000 line km
All lines outside 12nm limit (+ 10km)
No line will cross a Special Area of Conservation
Water depths from 100m to 4000m

22 wells direct tie
4 shallow boreholes direct tie & ODP tie
Direct ties to all 6 Long Offset seismic surveys acquired to date

18 3D seismic surveys tied; all refraction profiles west 12nm tied
All Atlantic basins (and highs) west of Ireland traversed
All Licence Options west of Ireland (as at 1 March 2013) traversed
Portions of lines pass across Exploration Licences

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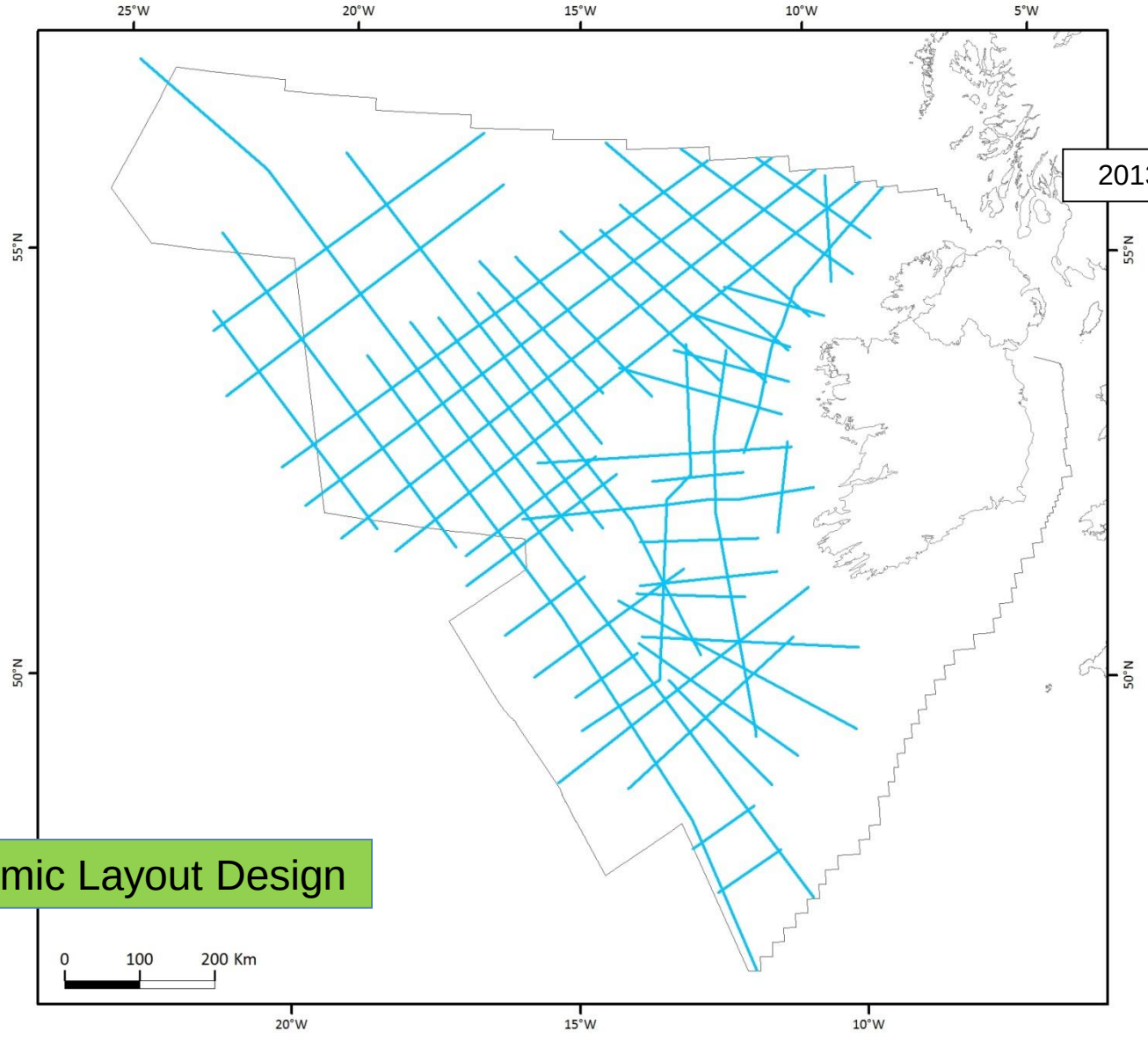

2013 line layout

Final Seismic Layout Design

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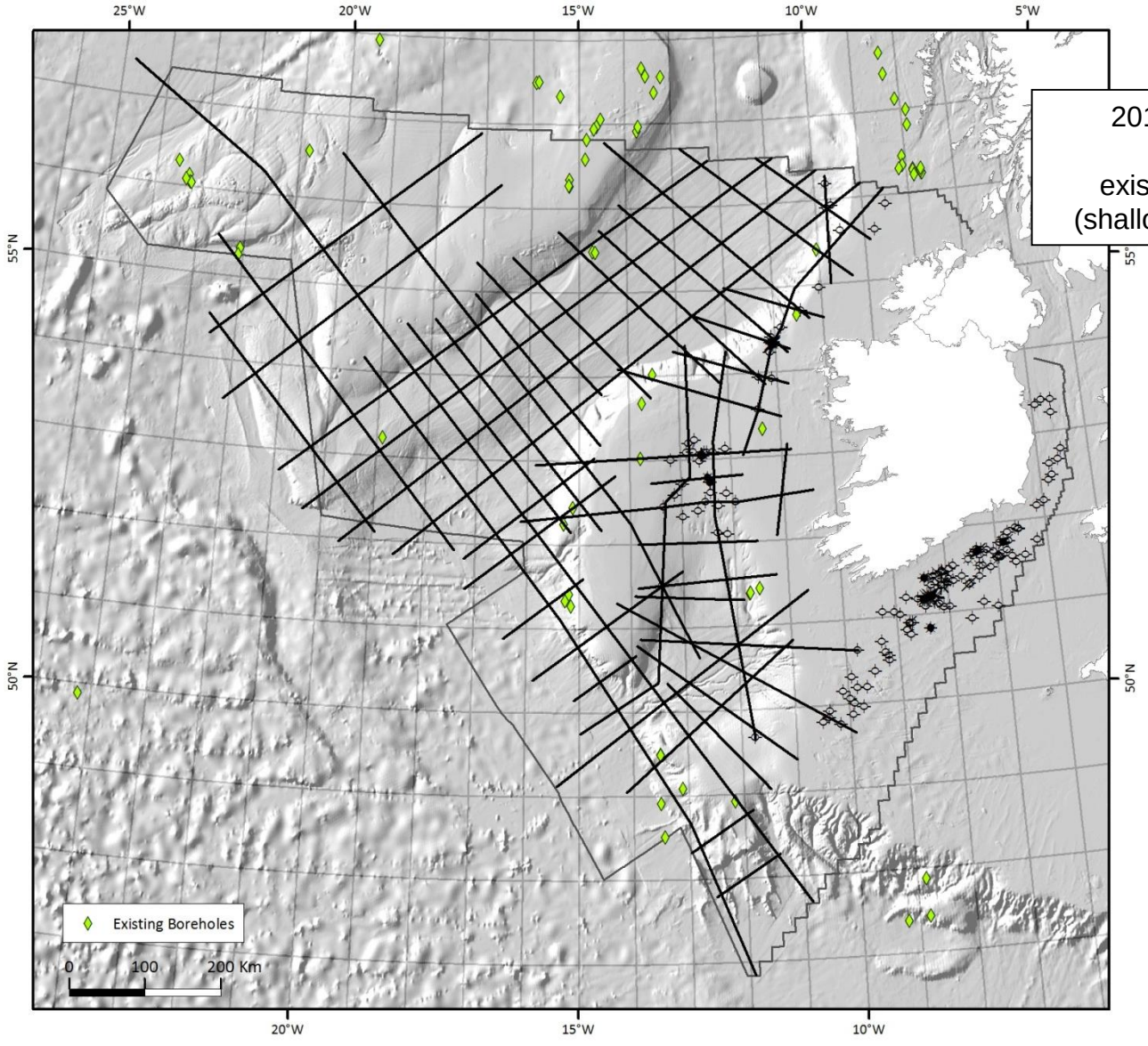

2013 line layout;
all wells,
existing boreholes
(shallow, ODP, DSDP)

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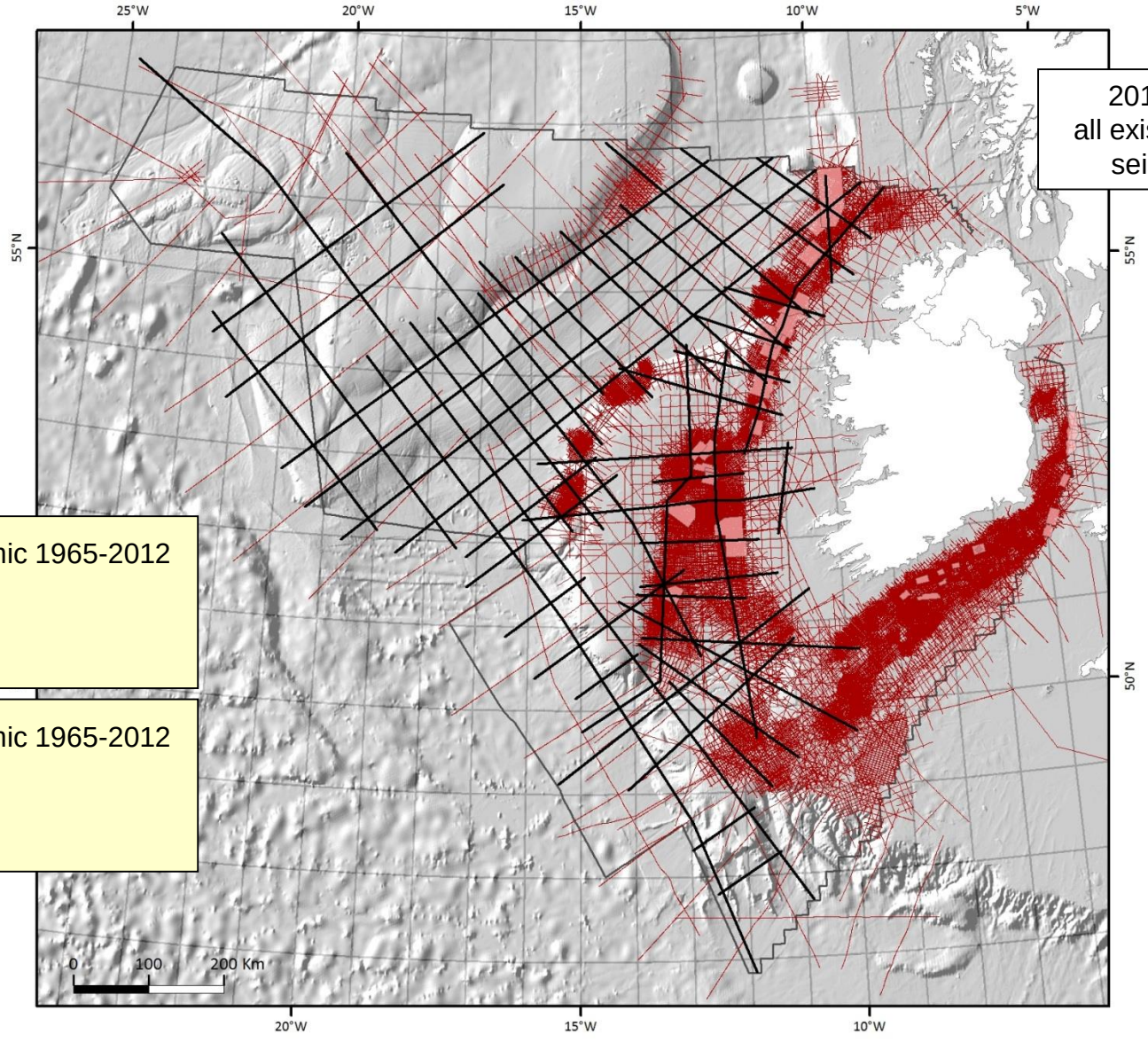

2013 line layout;
all existing 2D and 3D seismic surveys

Offshore 2D seismic 1965-2012

404 surveys

371,930 km

Offshore 3D seismic 1965-2012

36 surveys

14,210 sq km

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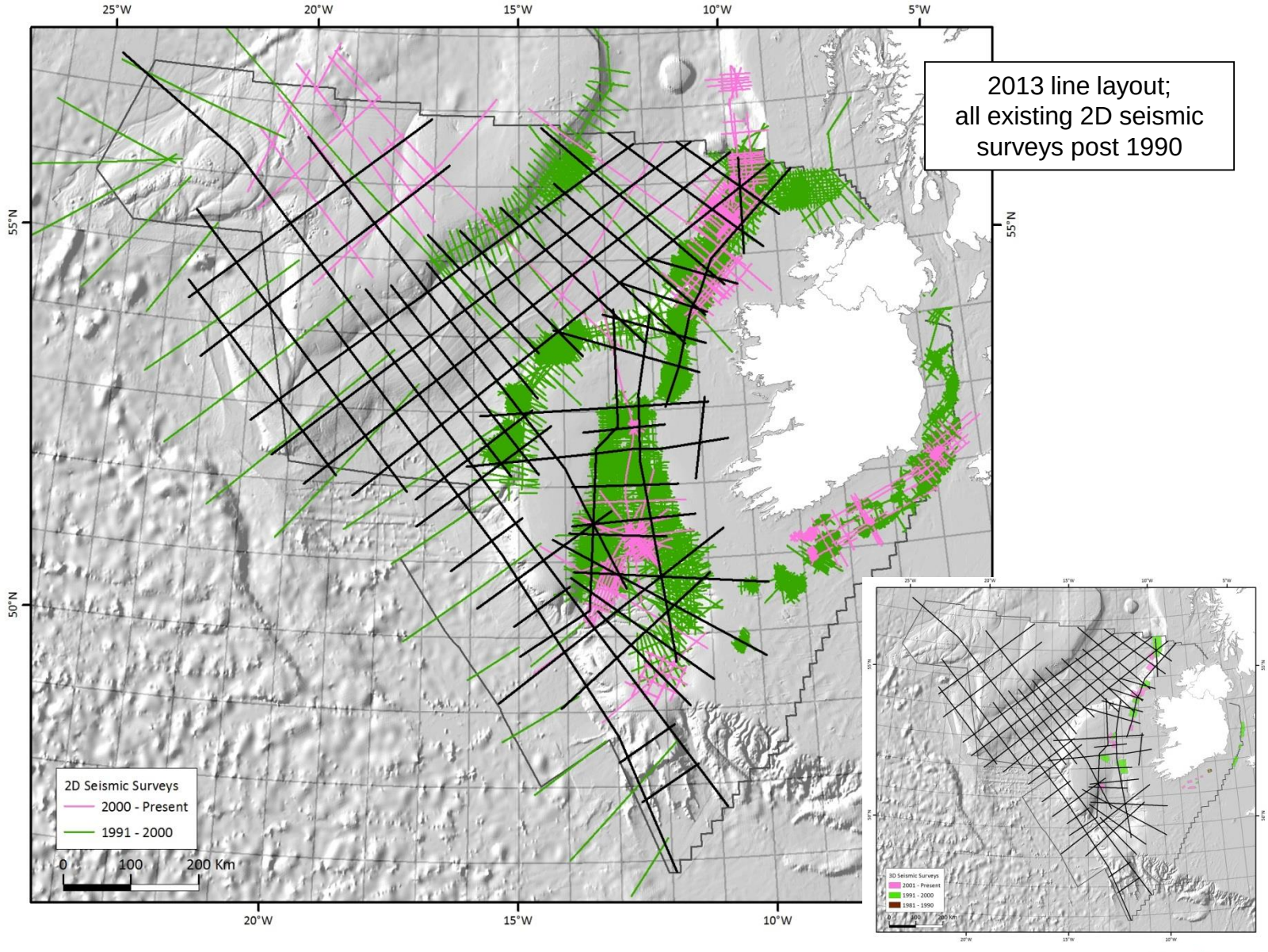

2013 line layout;
all existing 2D seismic surveys post 1990

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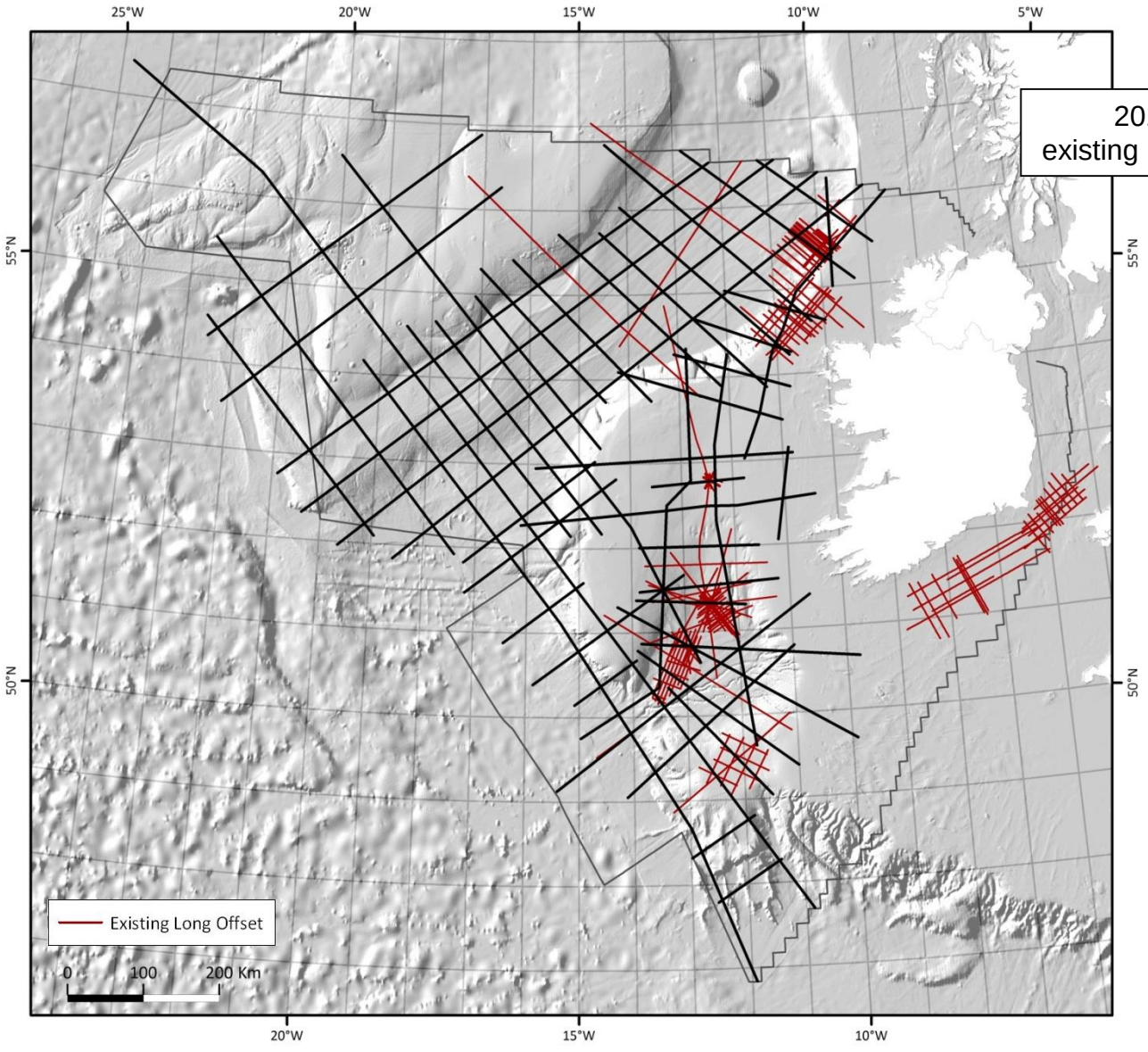

2013 line layout;
existing LO seismic surveys

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The Department of Communications, Energy and Natural Resources (DCENR), in conjunction with Eni, will conduct a 2D seismic survey in the Atlantic Offshore, West of Ireland. The survey will be operated by Eni on behalf of the Department.

Up to 18,000 km of full fold 2D seismic data will be recorded in 2013 within a mid-March to mid-October weather window.

The survey vessel will tow a 10km single solid streamer and a source array of approximately 5000-5200 cubic inch, operating at least at 2000psi. The source frequency range will be 2-250 Hz. The vessel will be travelling at 4-5 knots and the streamer will be located 5-20m below the surface.

Acquisition Parameters

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Regional 2D seismic programme offshore Ireland

2012 **2013** **2014**

Tender Q4 **Contract Award Q1**

Survey Design | **Data Acquisition** | **Data Processing** | **Data Available**

Timeline

A substantial new regional seismic acquisition programme offshore Ireland

Ireland's Designated Area covers a vast area, with basins. It is under-explored

The 2013 regional 2D long offset seismic programme will be the largest seismic survey acquired to date offshore Ireland

The new seismic survey is justified and has many objectives that will benefit: exploration companies, seismic contractors, researchers and the Department of Natural Resources / Ireland Inc.

It is hoped that a long term seismic investment strategy can bring new exploration opportunities to E&P companies that will stimulate exploration activity offshore Ireland and will result in attracting new players. The survey will also be a valuable dataset for those already with Irish acreage

Summary

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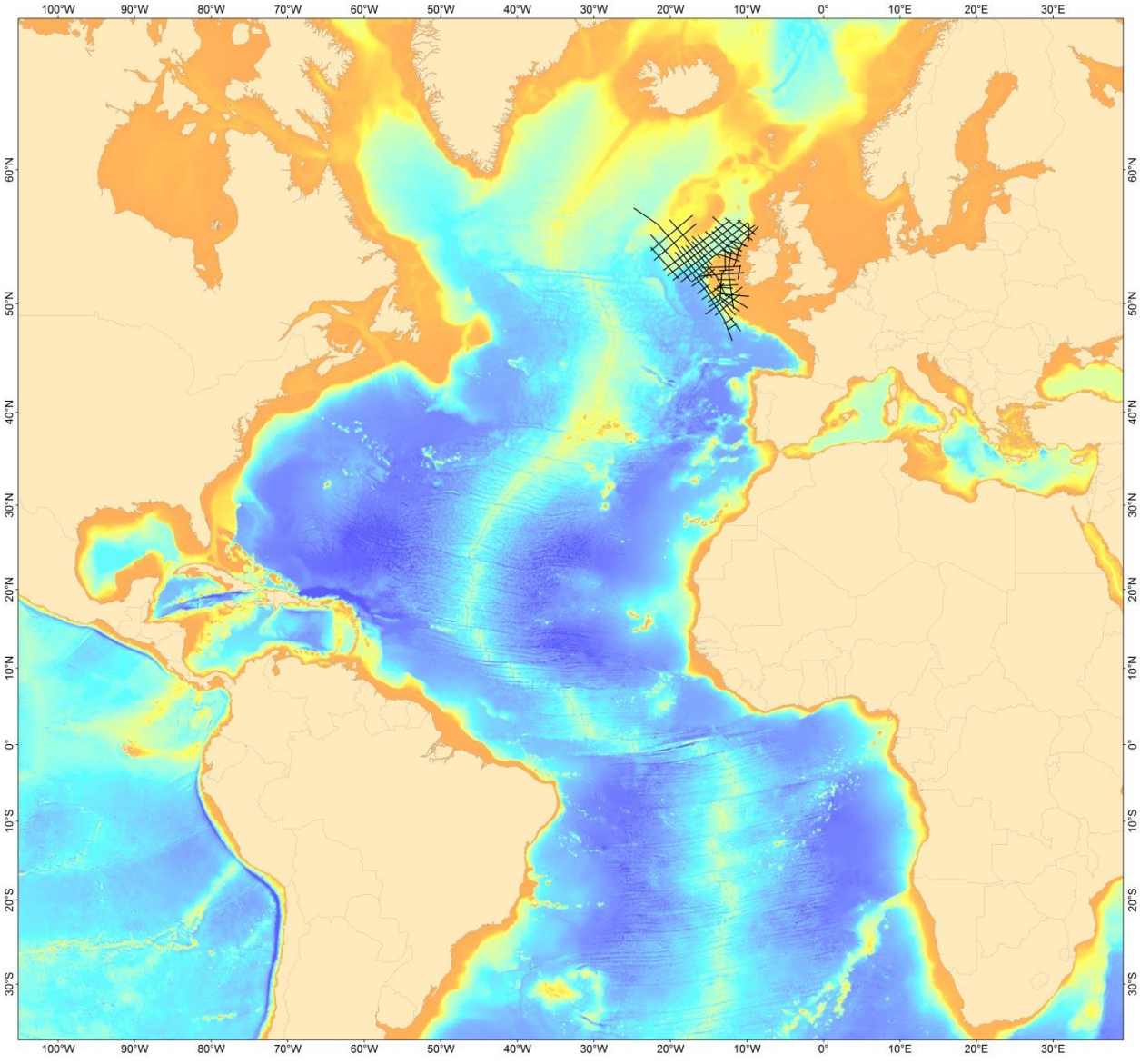

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