

ICELAND

Offshore Exploration

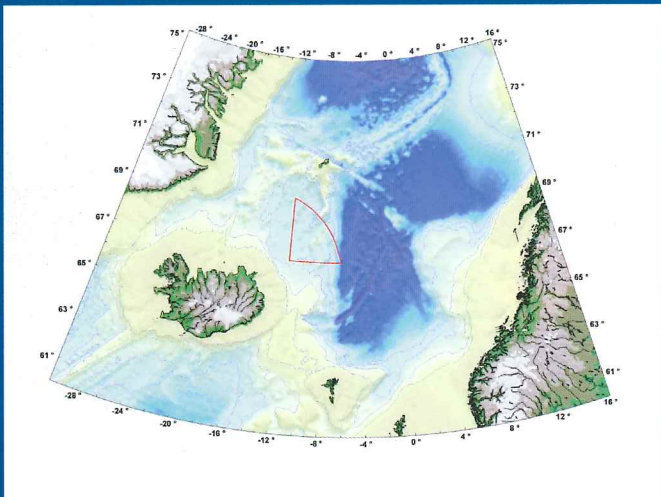


Iceland: beginning Arctic exploration

- Geology similar to other areas on the North Atlantic Margin.
- Significant amount of geophysical data available.
- Indications for potential existence of oil and gas accumulations.
- Surface geochemistry survey planned for 2010.

Second licensing round

- Starting date **1 August 2011**.
- Deadline for licence applications **1 December 2011**.

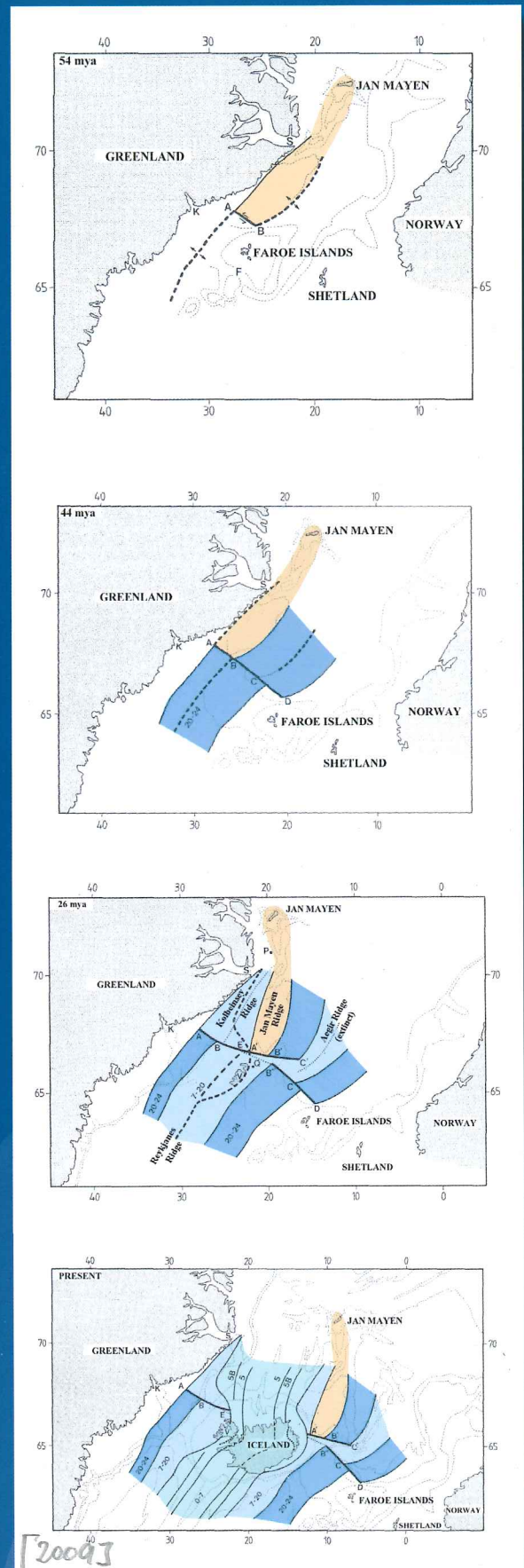


Location

- The northern part of the Dreki area covers 42,700 sq. km.
- Located from 67°N to 68°30'N and 6°20'W to 11°30'W.
- Water depth is 1,000 to 2,000 m in 80% of the area.

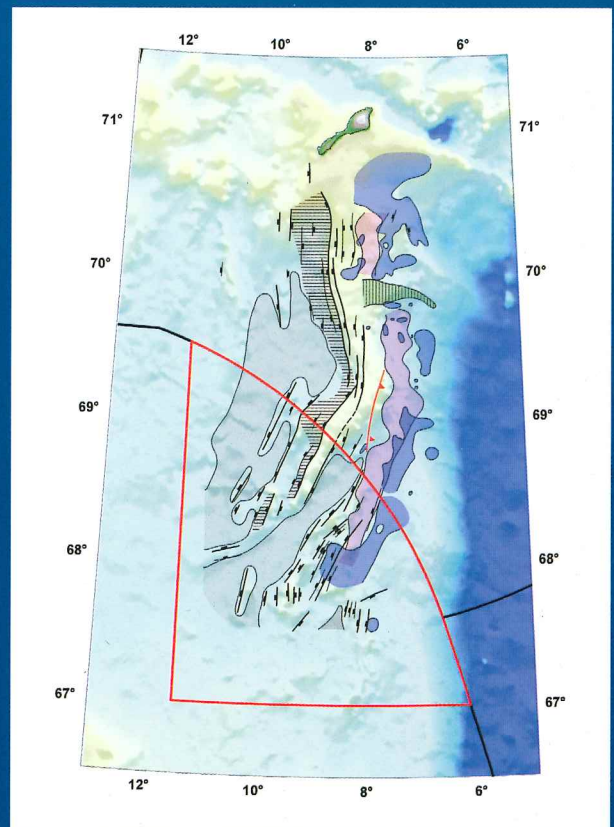
Seafloor Spreading

The Jan Mayen Ridge (light brown) was separated from the continental shelves of Greenland and Norway by plate tectonic movements and creation of new ocean floor (blue) concurrently with the gradual emerge of Iceland (Bott, 1985).

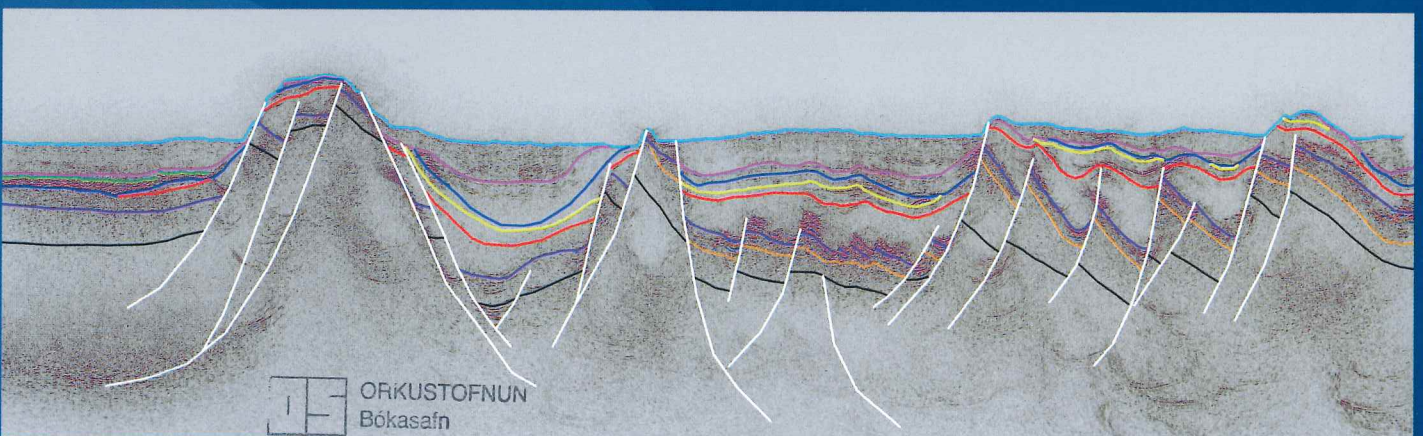
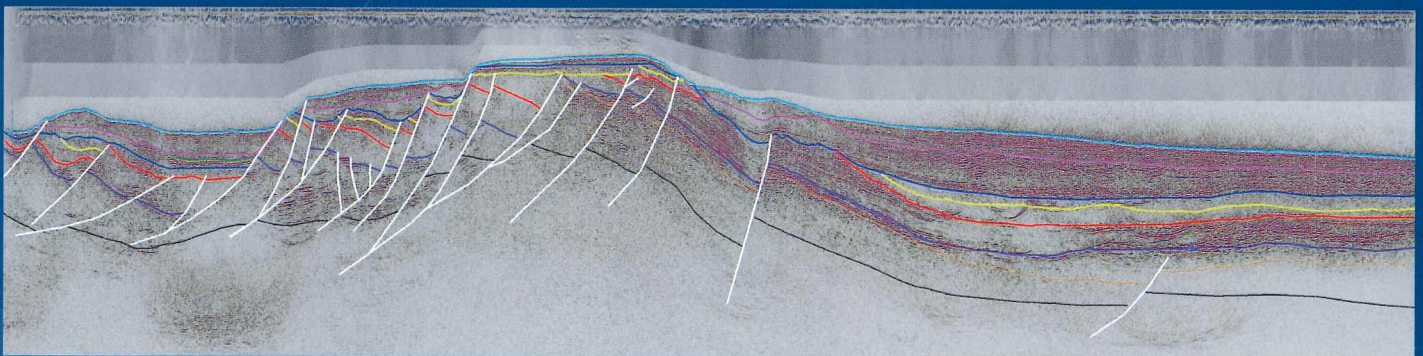


Hydrocarbon Potential

- The Jan Mayen Ridge is a sliver of a continental crust on the Atlantic Margin.
- Sedimentary rocks are of sufficient thickness and age.
- Indications of sedimentary strata pre-dating the opening of the Norwegian-Greenland sea.
- Potential source rocks similar to East Greenland.
- Potential reservoir rocks, including submarine fans.
- Potential traps present, both structural and stratigraphic.
- Seismic anomalies and surface pockmarks indicating that hydrocarbons may be present.

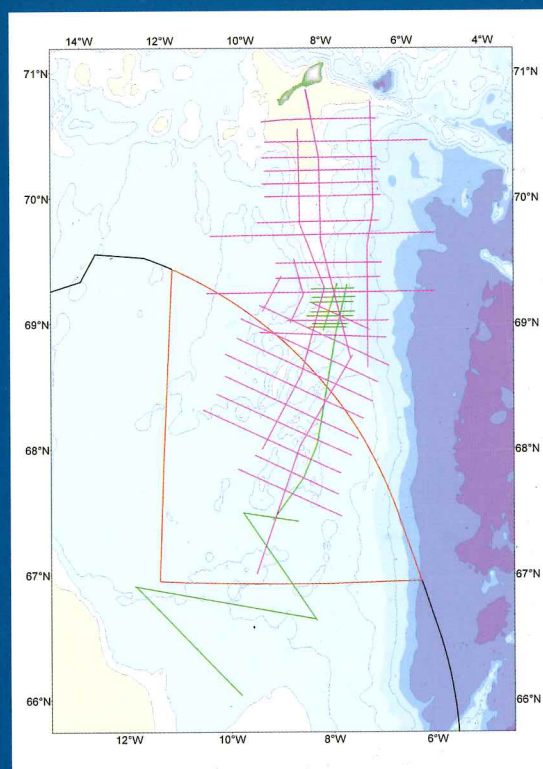


Legend

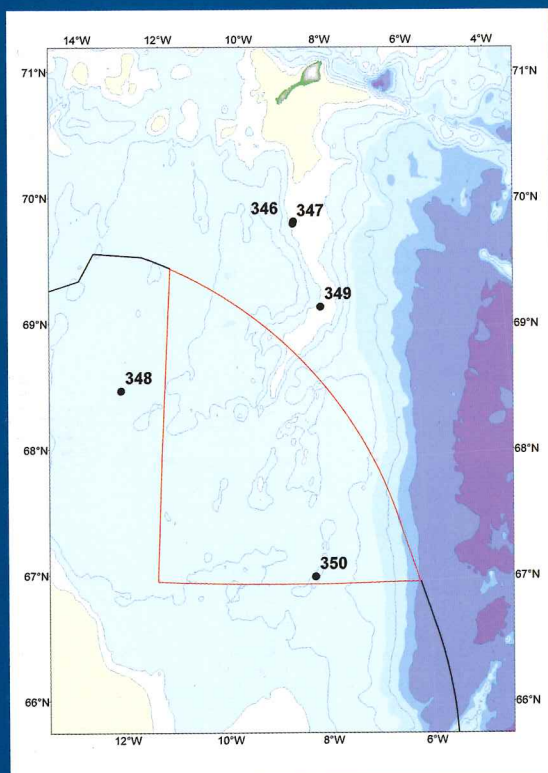


Geophysical Data

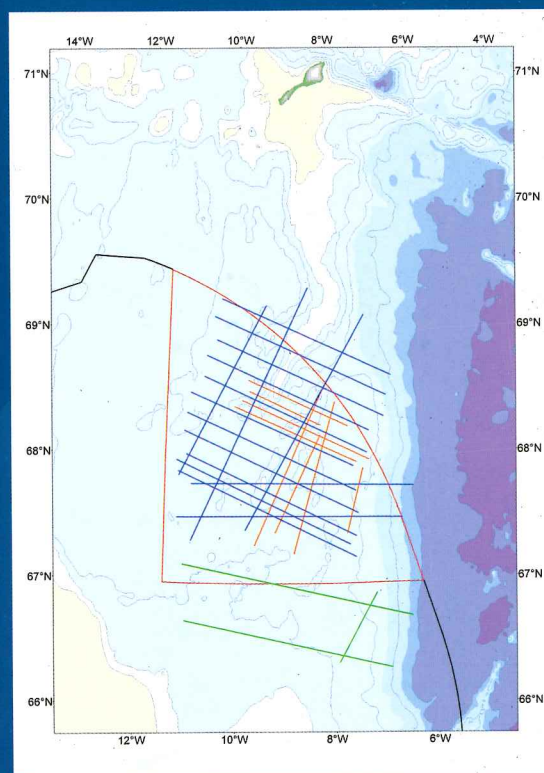
- Locations and metadata shown in the Icelandic Continental Shelf portal: www.landgrunnsvefsja.is.
- Major sources for 2D seismic reflection data:
 - Norwegian- Icelandic governmental surveys 1985 and 1988, available at copy-cost through NPD in Norway.
 - Spectrum has reprocessed the data from the 1985 and 1988 surveys, available for sale through Spectrum.
 - Wavefield InSeis non-exclusive, prospecting surveys of 2001 and 2008, available through Wavefield InSeis.
 - TGS-NOPEC non-exclusive, prospecting survey in 2002, available through TGS-NOPEC.
- Five shallow boreholes from the Deep Sea Drilling Project.



Approximately 5200 km of seismic reflection lines acquired by Iceland and Norway in **1985** and **1988**. Reprocessed data available from Spectrum.



Location of shallow boreholes drilled during DSDP Leg 38 in 1974.

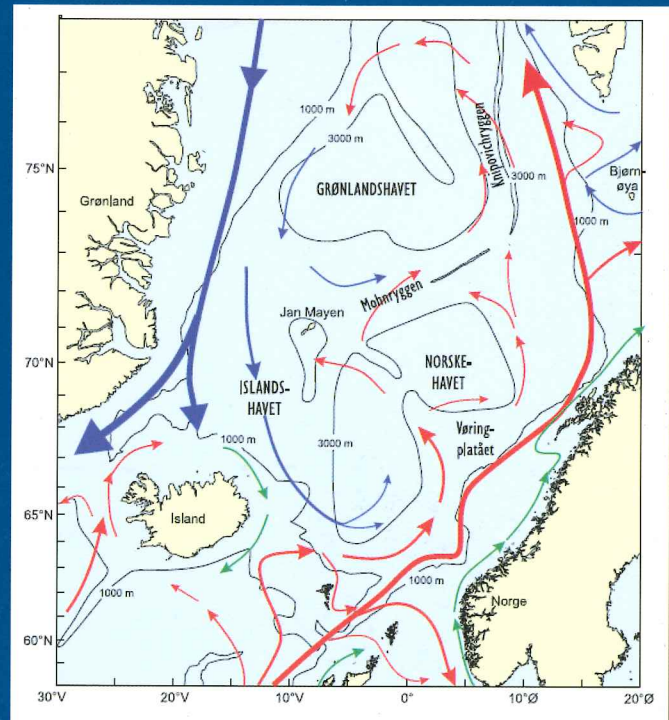


3600 km of seismic reflection lines acquired in **2001** and **2008** by Wavefield InSeis. 800 km acquired by TGS-NOPEC in **2002**.



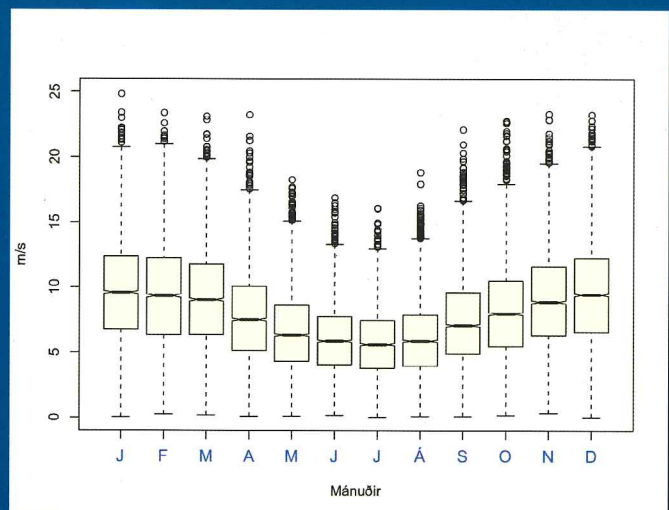
Environmental conditions

- Mean summer temperatures 5 to 8°C, winter temperatures -2 to 0°C.
- Yearly precipitation about 700 mm, winter lows with up to 25 to 30 cm daily snow.
- Mean summer wind speed ca 6 m/s, winter wind speed ca 10 m/s.
- Frequent fogs during summer.
- Some occurrences of icing in the winter months.
- No danger of sea ice under present climate conditions.
- Wave heights lower than at the west-coast of Norway, 100 year wave height about 12 m.
- Buoy for meteorology and wave conditions was operated for one year.
- Mooring with ADCP and traditional current meters for oceanography was operated for one year.
- Occasional catches of pelagic fish stocks (capelin, herring) in the area.
- No known demersal catches.
- Only relatively common species of whales and sea birds.
- Bathymetry and benthic fauna were investigated in summer 2008.



Currents

The area is within a cell of anticlockwise flowing, relatively weak branches from the cold and warm main ocean currents in the north and south.

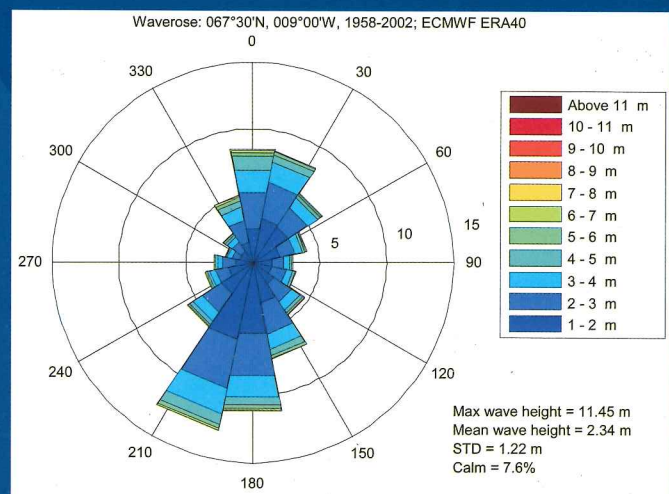


Wind speed

Distribution of wind speed in the Dreki area is shown for each month. Half of the observations are within the box, the median is shown with a horizontal mark.

Wave heights

Wave heights in the Dreki area are lower than at the west-coast of Norway, 100 year wave height is about 12 m. The main wave direction is from the SSW and S. Outliers are indicated by circles.

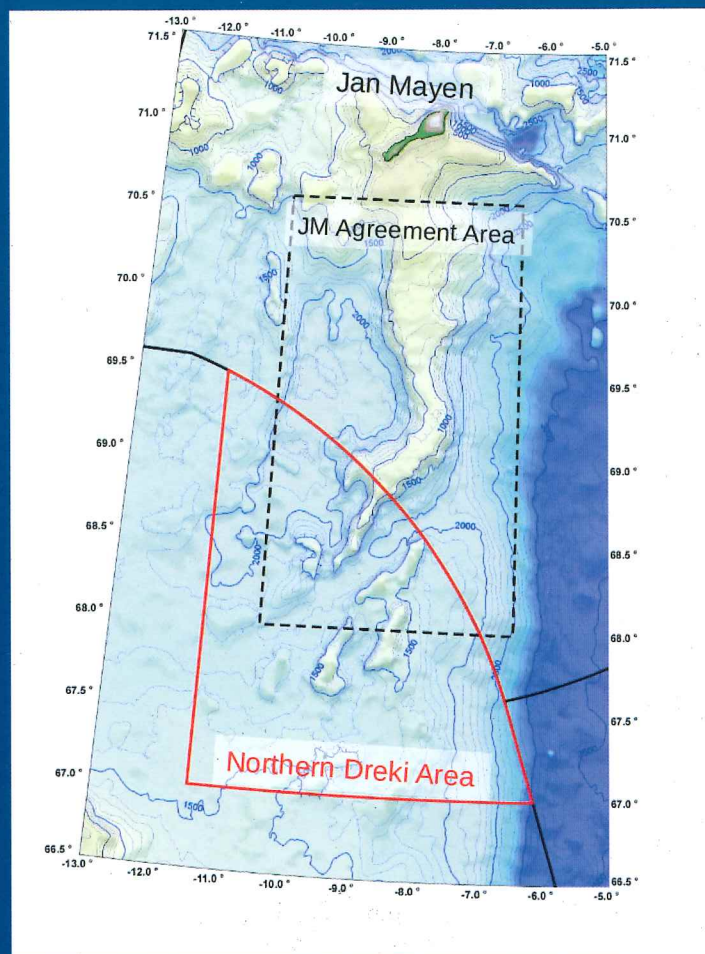


Licensing for Hydrocarbons

- Exclusive licenses for the exploration and production of hydrocarbons in the Dreki area are on offer in licensing rounds.
- Out-of-round applications may be taken into consideration according to article 8 (5) of the Hydrocarbons Act and Article 3 (3) of EU Directive 94 / 22/ EC.
- Applications for prospecting licenses (e.g. for speculative surveys) accepted at any time.

Licensing Terms

- Duration of exploration licenses up to 12 years, may be prolonged to a maximum of 16 years.
- Following a successful exploration, a priority for a production license for up to 30 years.
- Group applications (joint ventures) are welcome.
- Transferable licenses, subject to official permission.
- Phased work programme possible, each phase with separate specification of rights and obligations.
- Annual contribution to an education and research fund.
- Treaty with Norway on the northernmost 30% of the area (12,720 sq. km).
- Norway may participate with up to 25% share in exclusive licenses within the treaty area.



Bathymetric map of the northern Dreki area

Water depths in the area mostly range from 1500 to 2000 m. Limits of the Exclusive Economic Zones of Iceland and Norway shown by solid, black line, and of the Jan Mayen Agreement Area by dashed, black line. According to the agreement either country is entitled to a minimum of 75% of any oil or gas resources within its own part of the Agreement Area as well as a stake of up to 25% in any hydrocarbon activities in the other country's part of the area.



Tax Environment

- An Act was passed by parliament on 22 December 2008 on the taxation of hydrocarbon extraction in Icelandic Waters.
- The general corporate income tax in Iceland is 18%.
- An extraction levy, dependent on the annual petroleum production from a resource and taking into the price of petroleum on the world market, will be taken while gains are below 20% of total costs.
- As special hydrocarbon tax replaces the extraction levy tax when the gains reach 20% of total costs.



Legal framework

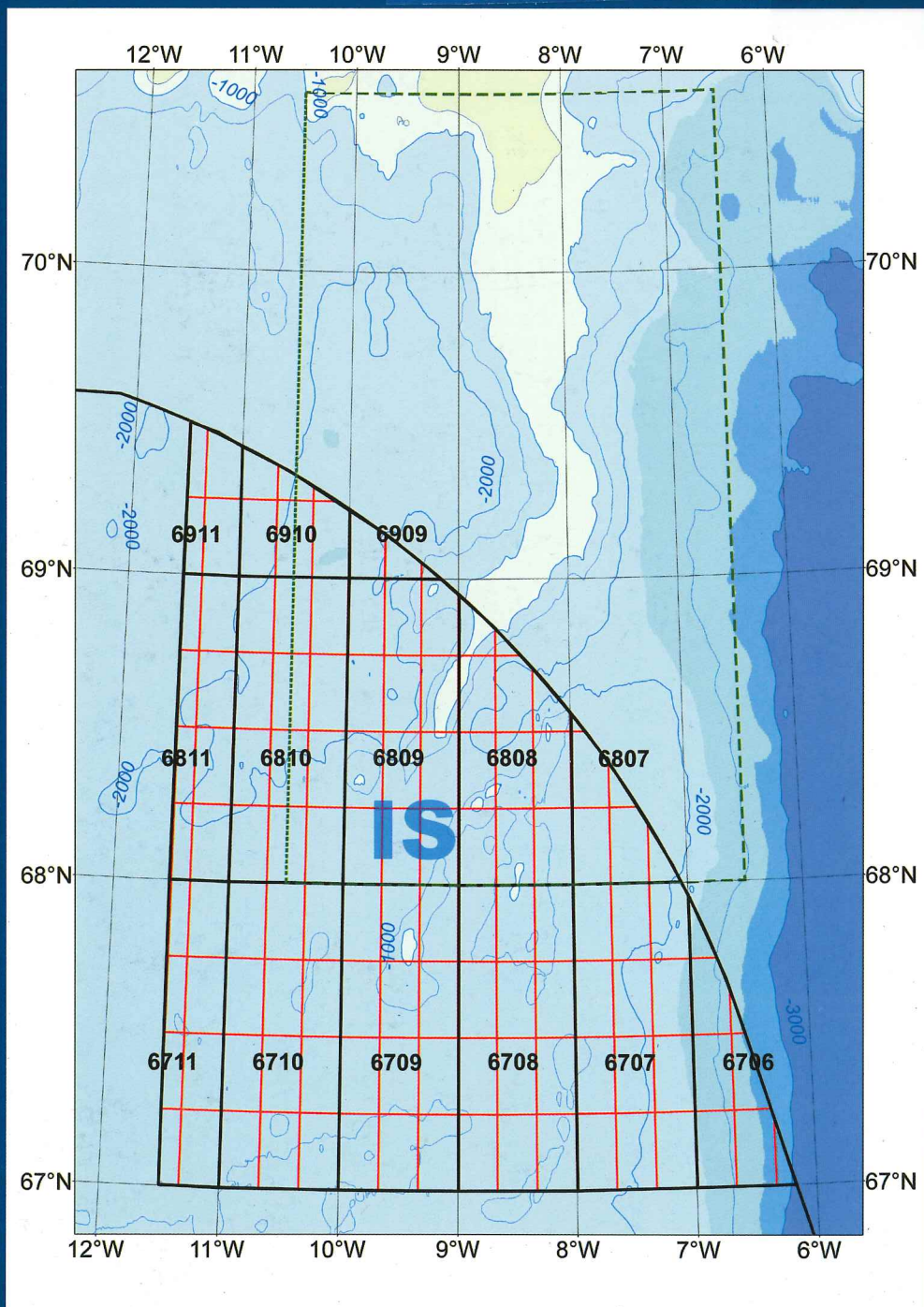
- EU legislation has been transposed in many important areas into Icelandic law, as Iceland belongs, with Norway, Liechtenstein and the EU countries, to the European Economic Area (EEA).
- Icelandic Parliamentary Act No.13, 2001, on Prospecting, Exploration and Production of Hydrocarbons applies to petroleum activities.
 - Transposes into Icelandic law EU directive 94/22/EC on the conditions for granting and using authorizations for the prospection, exploration and production of hydrocarbons.
- Other relevant EU legislation, including issues of health, safety and environment (HSE), has been transposed into Icelandic law.
- Iceland has ratified the OSPAR convention on the protection of the marine environment of the North-East Atlantic as well as the international MARPOL protocol for the prevention of pollution from ships.



Facts about Iceland

- Republic with 300,000 inhabitants.
- Member of the Schengen Area and Cooperation by a special agreement with the EU.
- Member of NATO, strong ties with North-Atlantic neighbours and other Nordic countries.





Northern Dreki Area on the Icelandic Continental Shelf between Iceland and Jan Mayen. The boundary of the Agreement Area from 1981 between Iceland and Norway shown by green, dotted line.



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