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Executive Order no. 543 of 22/05/2025 (Applicable)

Executive Order on Submission of Samples and Other Information on Denmark's Subsoil

(Unofficial translation of the Executive Order No. 534 of 22. May 2025. In case of discrepancy, the original Danish text shall prevail.)

Ministry: Ministry of Climate, Energy and Utilities

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Executive Order on Submission of Samples and Other Information on Denmark's Subsoil

Pursuant to Section 25(1), Section 26(1 & 5), Section 34(1) and Section 38(2) of the Act on the Use of Subsoil in Denmark, cf. Consolidating Act No. 1461 of 29 November 2023, the following is determined pursuant to the authorisation pursuant to Section 4(1)(1) of Executive Order No. 259 of 6 March 2025 on the tasks and powers of the Danish Energy Agency:

Submission of physical samples and information

Section 1 The Executive Order applies to the licenseholder's obligation to submit physical samples and other information on Denmark's subsoil which is obtained during the performance of any activity covered by the Subsoil Act, to the Danish Energy Agency and GEUS.

Section 2 The licenseholder shall submit physical samples and information, as stated in Sections 3-15, to the Danish Energy Agency or GEUS free of charge.

(2) All samples and information shall contain information on the applied depth references, geodetic references and, for land data, also the digital elevation model.

(3) Physical samples shall be submitted for deposit at GEUS, cf. however, subsection 4.

(4) The Danish Energy Agency may grant an exemption from the requirement to deposit a physical sample with GEUS if the deposit cannot contribute to the development of the data bank administered by GEUS regarding Denmark's subsoil.

General information on geophysical surveys

Section 3 For work approved pursuant to Section 28(1 & 3) of the Subsoil Act, the licenseholder shall during the period of acquisition submit progress reports to the Danish Energy Agency and GEUS no later than every 7 days containing information on:

1) The planned scope of the survey, including planned lines (km) or areas (km^2).
2) Number of km or square km surveyed in the previous week.
3) The total number of km or square km surveyed during the acquisition at the time of submission.

Section 4 The licenseholder shall submit interpretation reports and analysis results on geophysical surveys to the Danish Energy Agency and GEUS no later than 8 weeks after these have been prepared.

Section 5 The licenseholder shall submit information about subsequent processing in the form of, for example, special processing or reprocessing of data to GEUS no later than 8 weeks after these have been conducted.

Seismic surveys

Section 6 For seismic surveys, the licenseholder shall, in addition to information covered by Sections 3-5, submit the following information to GEUS:

1) Field data and associated raw and processed navigation data.
2) Shot point map.
3) Observer's log.
4) Data acquisition reports.
5) For distributed Acoustic Sensing and micro-seismic surveys, the interpretation of first arrivals and amplitudes.
6) Processed data, including seismic velocity models and check shot data.
7) Processing reports.

(2) Information according to no. 1-4 shall be submitted no later than 6 months after acquisition. Information pursuant to no. 5-7 shall be submitted no later than 1 year after acquisition.

Gravimetric surveys

Section 7 For gravimetric surveys, in addition to information covered by Sections 3-5, the licenseholder shall submit the following information to GEUS no later than 6 months after acquisition:

1) Raw data, including measurement points, measurement parameters and line header information.
2) Processed data, including base station correction, terrain correction, and noise filtering.
3) Data collection and processing reports, including visualisation of Free Air and Bouguer anomalies.

Magnetic surveys

Section 8 For magnetic surveys, in addition to information covered by Sections 3-5, the licenseholder shall submit the following information to GEUS no later than 6 months after acquisition:

1) Raw data, including measurement points, measurement parameters and line header information.
2) Processed data, including base station correction, noise filtering, total grid, residual grid and, in the case of a gradiometric setup, also analytical grid data.
3) Data collection and processing report.

Acoustic surveys

Section 9 For acoustic surveys, in addition to information covered by Sections 3-5, the licenseholder shall submit the following information to GEUS no later than 6 months after acquisition:

1) Raw data and associated navigation data including tracklines and navigation files.
2) Processed data, including motion and tidal corrected, georeferenced and de-spiked data.
3) Data collection and processing reports.

Electromagnetic surveys

Section 10 For geoelectric surveys, in addition to information covered by Sections 3-5, the licenseholder shall submit the following information to GEUS no later than 6 months after acquisition:

1) Raw data.
2) Processed data.
3) 2D tracklines or 3D grid.
4) Resistivity model (numerical inversion).
5) Data collection and processing reports.

Other surveys

Geotechnical surveys

Section 11 For geotechnical surveys, the licenseholder shall no later than 6 months after acquisition submit the following to GEUS:

1) Cone Penetration Test data.
2) Cores.
3) Soil samples.
4) Data collection and interpretation reports.

Geochemical surveys

Section 12 For geochemical surveys, the licenseholder shall submit the following information to GEUS no later than 6 months after acquisition:

1) A set of all collected samples along with a summary of samples, including the coordinates of the borehole or sampling site, depth of sampling, and date of sampling.
2) All analysis data with a description of analysis methods and standards, including applied reference standards.

3) All reports and other presentations of data of geochemical relevance.

Drilling operations

Section 13 For drilling operations approved in accordance with Section 28(1 & 3) of the Subsoil Act, the licenseholder shall submit samples and information on measurements and investigations carried out during drilling or monitoring.

(2) During drilling operations, the licenseholder shall submit daily reports containing information on the last 24 hours of work, which must be received by the Danish Energy Agency and GEUS no later than 11:00 a.m. The reports shall contain the information specified in Annex 1.

Section 14 For drilling operation approved in accordance with Section 28(1 & 3) of the Subsoil Act, the licenseholder shall submit the following information to the Danish Energy Agency and GEUS no later than 6 months after acquisition:

1) Deviation survey.
2) Final Well Report with, as a minimum, the information specified in Annex 2.

(2) After data acquisition, and no later than 8 weeks after the assessments have been prepared, the licenseholder shall submit interpretation reports and analysis results to the Danish Energy Agency and GEUS.

Section 15 For drilling operations approved in accordance with Section 28(1 & 3) of the Subsoil Act, the licenseholder shall submit the following information to GEUS no later than 6 months after acquisition:

1) Performed measurements in the borehole in the form of petrophysical logs and caliper logs.
2) Visual measurements in the form of image logs.
3) Seismic measurements in the borehole in the form of Vertical Seismic Profile and the like.
4) Formation strength measurements.
5) Temperature measurements.
6) Pressure and flow measurements.
7) Data and results of all analyses performed, including analyses onformation fluid samples.
8) Survey and data acquisition reports, etc., including production test reports.

(2) For drilling operation pursuant to Section 28(1 & 3) of the Subsoil Act, the licenseholder shall submit the following samples to GEUS no later than 1 year from acquisition:

1) Cuttings.A set of washed and dried samples as well a set of wet samples. These samples shall be taken at the same intervals as the samples collected for the licenseholder's own use.
2) Drilling fluid in the form of samples taken for at least every 300 metres drilled.
3) Sidewall cores.
4) Formation fluid samples from unknown reservoirs.
5) Cores and core samples as well as core descriptions and core photos.
6) Biostratigraphic samples, including paleontological and palynological slides.
7) Thin sections.

Penal provisions

Section 16 A fine shall be imposed on anyone who violates Section 2(1 & 3).

(2) Companies, etc. (legal persons) may be held criminally liable according to the provisions in Chapter 5 of the Danish Criminal Code.

Entry into force provisions

Section 17 The executive order shall enter into force on 1 July 2025.

(2) Executive Order No. 56 of 4 February 2002 on the submission of samples and other information about Denmark's subsoil is repealed.

Danish Energy Agency, May 22, 2025

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Annex 1

Daily reports related to drilling and other well operations

Daily information during drilling and other well operations shall be provided via reporting geological and drilling-related information either as a comprehensive daily report or divided into a drilling report and geological report, respectively. The daily reports shall contain at least the following:

1. Master data for the report, including date and time of reporting, consecutive report number and reference to number of corresponding daily drilling or geological report.

2. Master data for the borehole, including the borehole name, location in geographic and UTM coordinates with datum, water depth or elevation, operator, permit under the Subsoil Act under which it is carried out, and the type and purpose of the borehole.

3. Summary of the previous 24 hours' progress and activities, including setting depth for new casing pipes with possible backfilling, current hole diameter and depth, and plan for the coming 24 hours' activities.

4. Geological information about the units drilled during the reporting period, including geological descriptions of the units drilled, any core descriptions, the estimated age of the units, geological prognosis in relation to the current drilled stratigraphy, and results from measurements performed. These descriptions shall be related to the current depth interval in the borehole.

5. Summary of measurements and information collected during the reporting period, such as geophysical logs, gas measurements/observations of hydrocarbons or coring.

6. Information related to the drilling operation during the reporting period, including information on the stability of the well, drilling mud used, drill string components, drilling rate in the layers penetrated, latest directional measurements, and any inflow from the well (influx) or major loss of drilling mud to the formation.

7. General observations during the reporting period, including meteorological data, testing of safety-critical equipment and any safety incidents.

Annex 2

Final Well Report

The final report on the drilling performed, including slot recovery and side tracking, as well as permanent completion of exploration and appraisal wells, shall contain the following:

1. Master data for the well, including the well name, location in geographic and UTM coordinates, type and purpose of the well, water depth or elevation, operator, drilling contractor, name of drilling rig, elevation of rig, date of rig arrival, date of rig departure, date of spud, date of completion of the well, and final depth (indicated in vertical depth (TVDRT) and measured depth along the well track (MDRT)) with indication of geological age.

2. Summary of the drilling process, including bits and drilling mud used. In addition, an indication of any technical problems and an assessment thereof per section, including an indication of the time period for the execution of the work, total time spent including an indication of non-productive time, and cost distribution. Time relative to depth curve and time relative to cost curve are to be attached.

3. Summary of geological information obtained during drilling, including summary of data collection for each drilled section, including formation strength tests performed, composite log of results from drilling fluid analyses performed during drilling, lithostratigraphic summary and bio-stratigraphic summary, if these have been performed.

4. Detailed description of the final drilling, including a schematic representation of the drilling status at the completion of the work, an overview of the casing used, any production tubing and cementing, and a schematic representation of the wellhead and X-mas tree. For exploration and appraisal wells that are finally abandoned, plugging with cement and cutting of casing shall also be specified.

5. Diagram of well barriers and verification of each individual barrier element, including placement of cement and assessment of cement quality and top of cement.

6. A composite log of the measurements taken in the well, including core and sample production intervals, casing and their cementation, cement plugs, lithology and primary logs.

7. Directional survey report, including well plots.