

# Commission on the Limits of the Continental Shelf

RECOMMENDATIONS OF THE COMMISSION ON THE LIMITS OF THE CONTINENTAL SHELF IN REGARD TO THE PARTIAL SUBMISSION MADE BY THE GOVERNMENT OF THE KINGDOM OF DENMARK TOGETHER WITH THE GOVERNMENT OF THE FAROES IN RESPECT OF THE CONTINENTAL SHELF NORTH OF THE FAROE ISLANDS ON 29 APRIL 2009

Recommendations prepared by the Subcommission established for the consideration of the Partial Submission made by the Government of the Kingdom of Denmark together with the Government of the Faroes

Adopted by the Subcommission on 30 October 2013

Adopted by the Commission, with amendments, on 12 March 2014

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## **GLOSSARY OF TERMS**

	<del></del>
60 M formula line	The line delineated by reference to fixed points determined at a distance of 60 nautical miles from the foot of the continental slope
200 M limit	The line at a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured
2500 m isobath	A line connecting the depth of 2,500 metres.
Article 76	Article 76 of the Convention
Commission	The Commission on the Limits of the Continental Shelf
Convention	The United Nations Convention on the Law of the Sea of 10 December 1982
Depth constraint	The constraint line constructed at a distance of 100 M from the 2500 m isobath
Distance constraint	The constraint line constructed at a distance of 350 M from the baselines from which the breadth of the territorial sea is measured
DOALOS	Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs
FOS	Foot of the continental slope
FOS points	Foot of the continental slope points
Guidelines	The Scientific and Technical Guidelines of the Commission (CLCS/11 and CLCS/11/Add.1)
M	Nautical mile
Rules of Procedure	The Rules of Procedure of the Commission (CLCS/40/Rev.1)
Secretary-General	The Secretary-General of the United Nations
Sediment thickness formula line	The line delineated by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope

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#### I. INTRODUCTION

- On 29 April 2009, the Government of the Kingdom of Denmark together with the Government of the Faroes (hereafter referred to as Denmark) submitted to the Commission on the Limits of the Continental Shelf, through the Secretary-General of the United Nations, information on the outer limits of the continental shelf beyond 200 M from the baselines from which the breadth of the territorial sea is measured, in accordance with article 76, paragraph 8, of the Convention.
- 2 The Convention entered into force for the Kingdom of Denmark on 16 December 2004.
- The Submission addressed the Continental Shelf North of the Faroe Islands and is the first of several partial submissions of Denmark.
- On 30 April 2009, the Secretary-General issued Continental Shelf Notification CLCS.28.2009.LOS giving due publicity to the Executive Summary of the Submission in accordance with rule 50 of the Rules of Procedure of the Commission. Pursuant to rule 51 of the Rules of Procedure, the consideration of the Submission was included in the agenda of the twenty-fourth session of the Commission.
- In accordance with rule 52 and paragraph 15.1(a) of Annex III of the Rules of Procedure, a presentation on the Submission was made to the plenary of the twenty-fourth session of the Commission on 27 August 2009, by Mr. Bjørn Kunoy, Legal Advisor in the Foreign Affairs Department of the Faroese Prime Minister's Office, Head of Delegation, and Mr. Martin Vang Heinesen, Article 76 Project Manager in the Faroese Earth and Energy Directorate. The Delegation of Denmark (the "Delegation") also included a number of scientific, legal and technical advisers. In addition to elaborating on substantive points of the Submission, Mr. Kunoy indicated that no member of the Commission had assisted Denmark by providing scientific and technical advice with respect to the Submission<sup>2</sup>.
- The Commission addressed the modalities for the consideration of the Submission. It decided that, as provided for in article 5 of Annex II to the Convention and in rule 42 of the Rules of Procedure, the Submission would be addressed through the establishment of a Subcommission to be established in accordance with rule 51, paragraph 4 ter, of the Rules of Procedure, at a future session. The Subcommission was subsequently established during the thirtieth session of the Commission on 2 August 2012.
- The following members of the Commission were appointed as members of the Subcommission for consideration of the Submission made by Denmark in the Area North of the Faroe Islands: Messrs. Charles, Glumov, Haworth, Kalngui, Lu and Rajan, with another member to be appointed later. The Subcommission elected Mr. Rajan as its Chairperson, and Mr. Haworth and Mr. Kalngui as its Vice-Chairpersons.
- Regarding the membership of the Subcommission, on 19 December 2012, at a Special Meeting of States Parties to the Convention Mr. Szymon Uścinowicz was elected as the twenty-first member of the current Commission. In light of the

<sup>&</sup>lt;sup>1</sup> See Continental Shelf Notification CLCS.28.2009.LOS at http://www.un.org/depts/los/clcs\_new/submissions\_files/dnk28\_09/dnk\_clcs28\_2009e.pdf.

<sup>&</sup>lt;sup>2</sup> See CLCS/64, paragraphs 82 to 86

- vacancy in the Subcommission established to consider the Submission made by Denmark, the Commission appointed Mr. Uścinowicz to the Subcommission on 28 January 2013.
- The Commission received and took note of the contents of the following notes verbales transmitted to the Commission in relation to the Submission: note verbale No.FNY09060014/97.B.512 from the Permanent Mission of Iceland to the United Nations dated 15 June 2009; and note verbale 09-01669 from the Permanent Mission of Norway to the United Nations dated 7 July 2009 (see Annex 5 to the Recommendations)<sup>3</sup>. These notes did not contain any objection to the Commission's consideration of the Submission.
- Following its establishment, the Subcommission met without delay to conduct a preliminary examination of the Submission and the data accompanying it. It was determined that, given the volume and nature of the data contained in the Submission, the Subcommission would require additional time for the consideration of the Submission.
- 11 The Subcommission also prepared a set of procedures for the conduct of meetings with the Delegation. During its preliminary examination of the Submission, held on 10 August 2012, the Subcommission began an analysis of the data and other material. On the basis of that analysis, the Subcommission decided to continue its work during the thirtieth session.
- By a letter dated 4 December 2012, the Permanent Representative of Denmark to the United Nations requested the Commission to provide it with an opportunity to make a second presentation of its Submission in view of the significant number of members newly elected by the twenty-second Meeting of States Parties in June 2012, and the establishment of the relevant Subcommission. The second presentation was made on 31 January 2013 during the thirty-first session of the Commission by Mr. Bjørn Kunoy, Legal Adviser in the Foreign Affairs Department of the Faroese Prime Minister's Office and Head of Delegation and Mr. Finn Mørk, geologist, Faroese Earth and Energy Directorate. The delegation of Denmark also included other advisors. In addition to elaborating on substantive points of the Submission, Mr. Kunoy informed the Commission that two of its current members, Messrs. Heinesen and Roest had given advice in respect of the preparation of the Submission<sup>4</sup>.
- The Subcommission continued its examination of the Submission during the thirty-first and thirty-second sessions. During these sessions the Subcommission held eight meetings with the Delegation in which it posed two sets of questions in writing and presented three preliminary considerations involving documents and presentations. During the course of the examination of the Submission by the Subcommission, the Delegation provided responses to the questions posed in both writing and as presentations, and provided additional material. During the examination of the Submission, the Subcommission requested and received

<sup>&</sup>lt;sup>3</sup> The notes verbales from the Permanent Mission of Iceland to the United Nations and the Permanent Mission of Norway to the United Nations are available online, respectively, at

http://www.un.org/depts/los/clcs\_new/submissions\_files/dnk28\_09/isl\_15jun09.pdf and http://www.un.org/depts/los/clcs\_new/submissions\_files/dnk28\_09/nor\_7jul09.pdf.

<sup>&</sup>lt;sup>4</sup> See CLCS/78, paragraphs 29-33

<sup>&</sup>lt;sup>5</sup> All material supplied to the Delegation by the Subcommission – questions, and list of documents and presentations is contained in Annex 4 to the Recommendations

<sup>&</sup>lt;sup>6</sup> A list of additional material submitted to the Commission by the Government of the Kingdom of Denmark together with the Government of the Faroes is contained in Annex 3 to the Recommendations.

- support from the Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs.
- During the plenary meetings of the thirty-second session, the Subcommission met and elected Mr. Haworth as its Chairperson and Mr. Glumov as a Vice-Chairperson.
- The Subcommission continued its examination during the thirty-third session. During this session, the consideration of the Submission was at an advanced stage and during a meeting with the Delegation the Subcommission provided to the Delegation a comprehensive presentation of its views and general conclusions arising from the examination of the submission pursuant to annex III, paragraph 10(3) of the Rules of Procedure. The Delegation provided responses for consideration in support of the proposed Recommendations.
- The Subcommission adopted its Recommendations on 30 October 2013, and submitted them to the Commission on 30 October 2013 for consideration and approval.
- 17 The Commission prepared these Recommendations, which were adopted on 12 March 2014, taking into consideration article 6 of Annex II to the Convention and the internal procedures and the methodology outlined in the following documents of the Commission: the Rules of Procedure and the Scientific and Technical Guidelines.
- 18 The Commission makes these Recommendations to Denmark in fulfillment of its mandate as contained in article 76, paragraph 8, and articles 3 and 5 of Annex II to the Convention.
- 19 A Summary of the Recommendations is included as Annex 6 of this document in conformity with paragraph 11.3 of Annex III to the Rules of Procedure.
- The Commission makes these Recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf in accordance with article 76, paragraph 8, of the Convention. The limits of the shelf established by a coastal State on the basis of these Recommendations shall be final and binding.

### **II. CONTENTS OF THE SUBMISSION**

## A. Original Submission

21 The original Submission received on 29 April 2009 contained: an Executive Summary; a Main Body which is the analytical and descriptive part; and Scientific and Technical Data.<sup>7</sup>

#### B. Communications and additional material

In the course of the examination of the Submission by the Subcommission, the Delegation submitted additional material, including responses to questions, requests for clarification and written preliminary considerations by the Subcommission.<sup>8</sup>

<sup>&</sup>lt;sup>7</sup> A list of the material included in the original Submission received on 29 April 2009 is contained in Annex 2 to these Recommendations.

Elists of both the additional material submitted by Denmark and the communications of the Subcommission are included as, respectively, Annexes 3 and 4 to these Recommendations.

#### III. EXAMINATION OF THE SUBMISSION BY THE SUBCOMMISSION

### A. Examination of the format and completeness of the Submission

23 Pursuant to paragraph 3 of Annex III to the Rules of Procedure, the Subcommission examined and verified the format and completeness of the Submission.

### B. Preliminary analysis of the Submission

- 24 Pursuant to paragraph 5 of Annex III to the Rules of Procedure, the Subcommission undertook a preliminary analysis of the Submission, in accordance with article 76 of the Convention and the Guidelines and concluded as follows:
  - (i) The outer edge of the continental margin, established from the FOS of the region by applying the provisions of article 76, paragraph 4, of the Convention, extends beyond the 200 M limit of Denmark North of the Faroe Islands. Therefore, Denmark is entitled to delineate the outer limits of its continental shelf beyond its 200 M limit in this region (Figure 1) (i.e. the test of appurtenance for the region was satisfied by Denmark);
  - (ii) The notes verbales submitted by States relevant to the region (see Section I(9)) did not restrain the Subcommission from preparing Recommendations.
  - (iii) The proposed outer limits of the continental shelf beyond 200 M of the Kingdom of Denmark North of the Faroe Islands consist of a combination of sediment thickness formula points and the applicable distance constraint;
  - (iv) The construction of the outer limits of the continental shelf contains straight line segments not exceeding 60 M in length;
  - (v) The advice of a specialist from the Commission was not required; and
  - (vi) Additional time would be required to review all data and to prepare the recommendations during future sessions of the Commission.

### C. Main scientific and technical examination of the Submission

- 25 The Subcommission examined the Submission through the following processes:
  - (i) Detailed examination of the data and information supporting every FOS point selected for the establishment of the outer edge of the continental margin and for the delineation of the proposed outer limits of the continental shelf following consideration of the applicable constraint;
  - (ii) Seeking clarifications, where necessary, through exchanges between the Delegation and the Subcommission;
  - (iii) Presenting preliminary views and conclusions to the Delegation;
  - (iv) Making a comprehensive presentation of the views and general conclusions of the Subcommission to the Delegation, at an advanced stage of the examination of the Submission
  - (v) Preparing Recommendations to be submitted to the Commission in accordance with Annex III of the Rules of Procedure<sup>9</sup>.

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<sup>9</sup> See CLCS/40/Rev.1

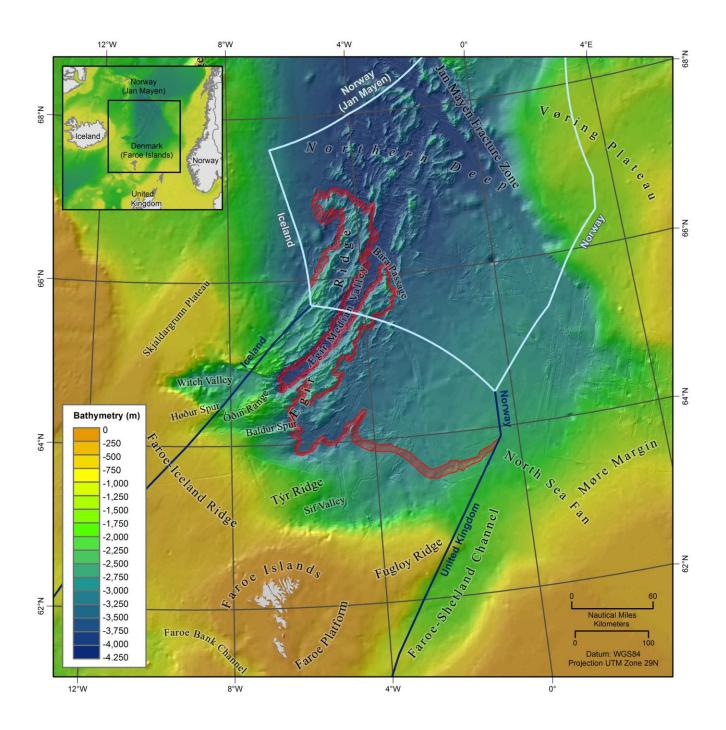


Figure 1: Physiographic overview map of the area relevant to this Submission.

The extent of the base of slope zone (the red ribbon) beyond the 200 M limit demonstrates that the test of appurtenance is satisfied.

### IV. PROVISIONS OF THE CONVENTION ON WHICH THESE RECOMMENDATIONS ARE BASED

The Recommendations of the Commission are based on the scientific and technical data and other material provided by Denmark in relation to the implementation of article 76. The Recommendations of the Commission only deal with issues related to article 76 and Annex II to the Convention and shall not prejudice matters relating to delimitation of boundaries between States with opposite or adjacent coasts, or application of other parts of the Convention or any other treaties.

# V. RECOMMENDATIONS OF THE COMMISSION WITH RESPECT TO THE CONTINENTAL SHELF NORTH OF THE FAROE ISLANDS

### A. The Continental Shelf North of the Faroe Islands

### 1. Geographical description of the region

- The continental margin of Denmark North of the Faroe Islands is part of the North-East Atlantic Margin that extends from the Rockall and Hatton Banks in the south-west to the Møre and Vøring margins in the north-east. Towards the north-west, the continental margin extends along the Faroe-Iceland Ridge onto the Ægir Ridge. The Faroe Islands are part of the North Atlantic Igneous Province and were formed by extrusive and intrusive volcanic activity during the breakup of the super-continent Pangea and the opening of the North Atlantic Ocean in early Tertiary times, approximately 55 million years ago (Figure 2). The Ægir Ridge comprises an extinct part of the spreading ridge system that created oceanic seafloor beneath the Northern Deep as well as the Faroe-Iceland Ridge. The active spreading ridge today is located beyond the continental margin of the Faroe Islands.
- The margin North of the Faroe Islands is characterised by a number of elevated seafloor highs that extend from the shelf and slope region into the Northern Deep. The most pronounced of these seafloor highs are the Faroe-Iceland Ridge and the Ægir Ridge which, in its southern part, merges with the northern slope of the Faroe-Iceland Ridge. The northern part of the Ægir Ridge protrudes well beyond 200 M North of the Faroe Islands (see Figure 1). Ocean currents, glacial periods and mass wasting events along the southern and eastern margins of the Northern Deep have resulted in large scale sediment transport from the shelf and slope regions to the basin floor. Consequently, the basin floor of the Northern Deep beyond the base of the continental slope can be characterised as a classical continental rise.
- The continental shelf North of the Faroe Islands is made up of three distinct geographic regions: the North Sea Fan region; the Týr Ridge and Faroe-Iceland Ridge region; and the Ægir Ridge region. The base of the slope region can be traced within and between each of these regions, as described in the next section.

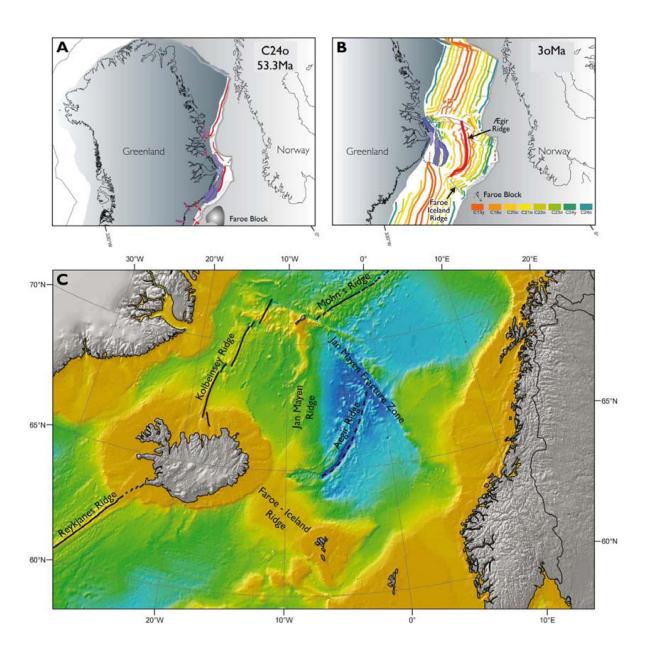


Figure 2: Plate kinematic reconstruction of the northeast Atlantic Margin; (A) at the time of breakup (~ 55 Ma); (B) at the time that Ægir Ridge became extinct (~30 Ma); and (C) the present day configuration ((A) and (B), see Gaina, C., Gernigon, L. & Ball, P.J. 2009: Paleocene-Recent Plate Boundaries in the NE Atlantic and the formation of the Jan Mayen microcontinent: Journal of the Geological Society, 166, 601-616, doi: 10.1144/0016-76492008-112)

### 2. The determination of the foot of the continental slope (article 76, paragraph 4(b))

- The FOS should be established in accordance with article 76, paragraph 4(b), of the Convention subject to the provisions of article 76, paragraph 3, namely that the margin comprises the submerged prolongation of the land mass of the coastal State; consists of the seabed and subsoil of the shelf, the slope and the rise; and does not include the deep ocean floor with its oceanic ridges or the subsoil thereof. For the continental margin North of the Faroe Islands, the Northern Deep can be characterised as a classical continental rise.
- The North Sea Fan region has a distinct north-west facing front that defines the base of the continental slope region defined by multibeam data (Figure 3). The base of the continental slope region continues along the base of the Baldur Spur to the Óδin Range, the latter forming the southern termination of the eastern shoulder of the Ægir Ridge. The base of the slope region in this area was further refined by additional multibeam data provided during the examination of the Submission. In its original Submission, Denmark submitted the results of a highly detailed multibeam bathymetric survey of the Ægir Ridge to demonstrate the continuity of the base of slope region along the eastern flank of the Ægir Ridge as far north as the Bára Passage, a morphological discontinuity in the eastern flank, through which the sediments of the Northern Deep flow into the central valley of the Ægir Ridge. The base of the continental slope then follows the base of the western side of the eastern flank of the Ægir Ridge to its southern end before turning north again along the base of the eastern side of the western flank of the Ægir Ridge. North of the latitude of the Bára Passage, the western flank becomes fragmented, so that the base of slope zone turns west at the first break in continuity at approximately 67°N (see Figure 1).
- Denmark determined seven FOS points within the continuous base of slope region to be applied in the process of establishing the outer edge of the continental margin.

### 2.1 Considerations

- Seven FOS points generate formula points beyond the 200 M limits of Denmark North of the Faroe Islands. Two of these are associated with the North Sea Fan region and five are associated with the Ægir Ridge (Figure 4).
- The most significant morphological feature of the continental margin North of the Faroe Islands is the Ægir Ridge. Denmark notes<sup>10</sup> that a "seafloor high that is a natural component needs to be geologically linked to the continental margin in its entirety to be classified as a submarine elevation. In contrast, submarine ridges are seafloor highs that are morphologically an integral part of the continental margin, but may be geologically different along parts or the entire length of the ridge from the landmass of the coastal State from which the margin extends." Denmark therefore concludes that since the Ægir Ridge is morphologically continuous with the continental margin north of the Faroe Islands and falls within a common envelope of the foot of the continental slope, yet is an extinct seafloor spreading ridge that is geologically different from the landmass of the Faroe Islands, it is a submarine ridge in the meaning of article 76, paragraph 6, of the Convention. The Subcommission agrees with this view.

<sup>&</sup>lt;sup>10</sup> Page 9 of the Main Body of the Submission

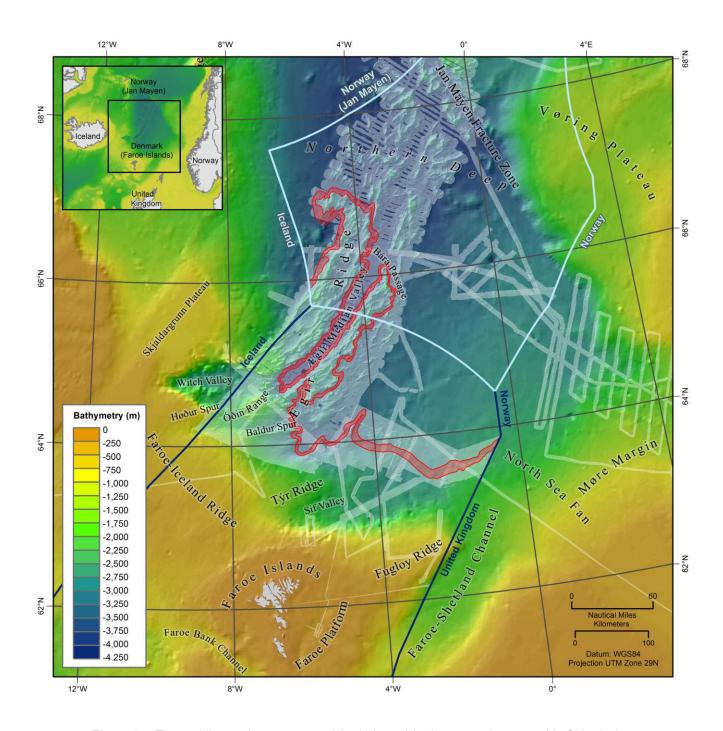


Figure 3: The multibeam data coverage (shaded grey) in the area relevant to this Submission (after Figure 2.1 of the Main Body of the Submission)

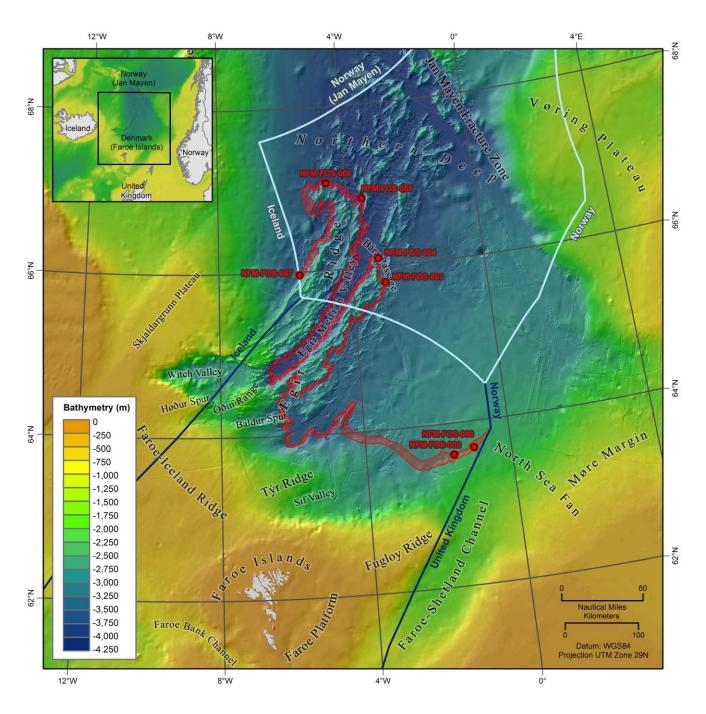


Figure 4: Map illustrating the locations of the seven FOS points (red circles) within the BOS envelope (red ribbon)

- The Subcommission examined the continuity of the base of slope zone along the eastern side of the eastern flank of the Ægir Ridge. Following a series of presentations by both the Subcommission and the Delegation<sup>11</sup> the Subcommission accepted the continuity of the base of slope zone throughout the Ægir Ridge region as defined by Denmark<sup>12</sup>. As a consequence of this, the Subcommission reviewed all of the data associated with the five FOS points proposed by Denmark in the vicinity of the Ægir Ridge and agreed with their location.
- The Subcommission also examined the location that Denmark had proposed for NFM-FOS-001 in the North Sea Fan region. Denmark explained that NFM-FOS-001 lies on the same north-west facing front of a depositional lobe of the North Sea Fan on which NFM-FOS-002 is located. However, the Subcommission believed that the lobe front did not extend as far as NFM-FOS-001. Again, after a series of presentations by both the Subcommission and the Delegation 13, the Delegation proposed that NFM-FOS-001 be replaced by NFM-FOS-00814, whose location was agreed to by the Subcommission.
- Accordingly, the Subcommission agreed with the base of the continental slope envelope established by Denmark for the continental margin North of the Faroe Islands; in particular, it agreed with the locations of six of the seven FOS points (NFM-FOS-002 to NFM-FOS-007) originally submitted, and with the location of NFM-FOS-008, replacing the originally submitted NFM-FOS-001.

### 2.2 Recommendations

Based on its consideration of the technical and scientific documentation contained in the partial Submission by Denmark, and the additional information referred to in paragraphs 35 and 36 above, the Commission concludes that, in the continental margin North of the Faroe Islands, the FOS points listed in Table 1 of Annex 1 fulfill the requirements of article 76 and Chapter 5 of the Guidelines. The Commission recommends that these FOS points form the basis for the establishment of the outer edge of the continental margin North of the Faroe Islands.

### 3. The establishment of the outer edge of the continental margin (article 76, para 4(a))

The outer edge of the continental margin of Denmark North of the Faroe Islands should, for the purposes of the Convention, be established in accordance with article 76, paragraphs 4 and 7, of the Convention.

### 3.1 The application of the 60 M distance formula (article 76, paragraph 4(a)(ii))

North of the Faroe Islands, parts of the outer edge of the continental margin are based on fixed points derived using the 60 M distance formula, utilising four FOS points on the continental margin North of the Faroe Islands in accordance with the provision contained in article 76, paragraph 4(a)(ii) of the Convention. The points are: NFM-FOS-002, NFM-FOS-008 (replacing NFM-FOS-001), NFM-FOS-006 and NFM-FOS-007 (Figures 4 & 6; Table 1, Annex 1).

<sup>&</sup>lt;sup>11</sup> 2013 02 06 SC PRE\_DNK\_004; NFM-PRE-014\_06-03-2013; NFM-PRE-015\_06-03-2013.

<sup>&</sup>lt;sup>12</sup> Letter 2013\_05\_14\_SC\_LET\_DNK\_07 dated 14 May 2013.

<sup>&</sup>lt;sup>13</sup> 2013 02 06 SC PRE DNK 005; NFM-PRE-003 06-02-2013

<sup>&</sup>lt;sup>14</sup> Letter 2013\_06\_18\_DNK\_LET\_SC\_14\_13-02077 dated 18 June 2013.

- Each of the fixed points from the 60M distance formula identified by Denmark as contributing to the definition of the outer edge of the continental margin North of the Faroe Islands is a point on, or at intersections between, 60 M arcs from these FOS points, but all such points lie within the 200 M limits of Norway, Jan Mayen (Norway) and Iceland (Figure 6; Table 1, Annex 1).
- The Commission agrees with the way these points have been established by Denmark in the region North of the Faroe Islands.

### 3.2 The application of the 1% sediment thickness formula (article 76, paragraph 4(a)(i))

- North of the Faroe Islands, Denmark submitted seven fixed points based on the sediment thickness provision of article 76, paragraph 4 (a)(i), of the Convention utilizing four FOS points on the continental margin, (Figure 5). Denmark established these sediment thickness points (NFM-GAR-001, NFM-GAR-002, NFM-GAR 003, NFM-GAR-004, NFM-GAR-005, NFM-GAR-006 and NFM-GAR-007) located on the seismic lines NPD-LOS-99-002, NPD-LOS-08-004, NPD-LOS-00-21, NPD-LOS-00-21, NPD-LOS-00-21, NPD-LOS-00-21, respectively.
- Although the Subcommission agreed with the procedure applied by Denmark to establish the sediment thickness points utilizing FOS points on the continental margin North of the Faroe Islands, it disagreed with the methodology in which Denmark demonstrated sedimentary continuity. After a series of presentations by both the Subcommission and the Delegation, and the submission by Denmark of several additional seismic lines and an annotated sediment thickness map<sup>15</sup>, the Subcommission agreed that it had the information it sought to illustrate sediment continuity between each Gardiner Point and the relevant FOS point from which it was derived<sup>16</sup>.
- Minor errors in the Submission, noted by the Subcommission during its consideration of the Submission, were brought to the attention of the Delegation and, in each case, appropriate corrections were submitted by Denmark to the Subcommission<sup>17</sup>.
- 46 Consequently, the Commission agrees with the procedure applied by Denmark to establish the sediment thickness points utilizing FOS points on the continental margin North of the Faroe Islands, as contained in Table 1, Annex 1, including the data provided, the seismic interpretation, the methods of depth conversion, and the distance calculations.

<sup>&</sup>lt;sup>15</sup> NFM-PRE-016\_29-07-2013 (Sediment thickness map annotated with seismic lines and their identifiers)

<sup>&</sup>lt;sup>16</sup> 2013 02 06 SC PRE DNK 006

<sup>&</sup>lt;sup>17</sup> Data File 2013\_01\_29\_velocities; Data File 2013\_05\_29\_data; Data File 2013\_07\_30\_data

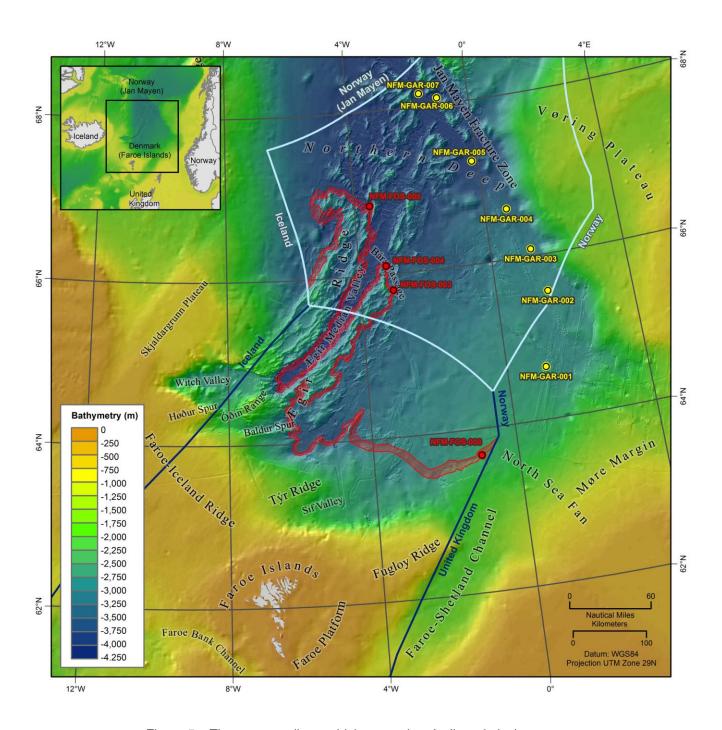


Figure 5: The seven sediment thickness points (yellow circles) and the four FOS points (red circles) from which they were derived.

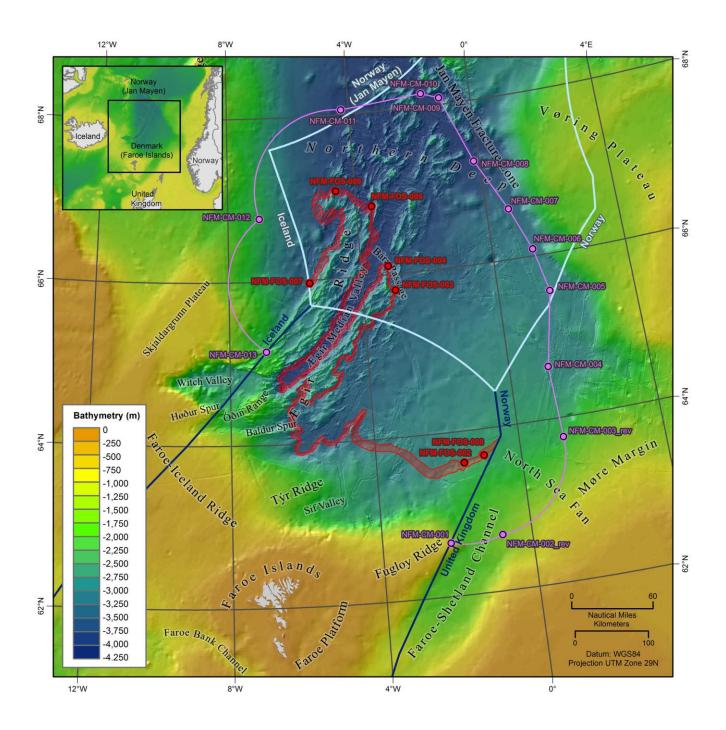


Figure 6: The outer edge of the continental margin North of the Faroe Islands delineated with reference to the fixed points (purple circles) (modified from Figure 8.1 of the Submission due to the replacement of NFM-FOS-001 by NFM-FOS 008)

## 3.3 Configuration of the Outer Edge of the Continental Margin

47 The outer edge of the continental margin in the region North of the Faroe Islands extends in a generally northwestward direction from a point on the 200 M limit of mainland Norway to a point on the 200 M limit of Jan Mayen (Norway) (Figure 6).

### 3.4 Recommendations

The outer edge of the continental margin beyond 200 M in the region North of the Faroe Islands is based on 60 M arcs and sediment thickness formula points as described in sections 3.1 and 3.2, in accordance with article 76, paragraph 7, of the Convention (Figure 6). The Commission recommends that these arcs and points are used as the basis for delineating the outer limits of the continental shelf in this region.

# 4. The application of the constraint criteria (article 76, paragraphs 5 & 6)

- The outer limits of the continental shelf should be based on the established outer edge of the continental margin, taking into consideration the constraints contained in article 76, paragraphs 5 and 6, of the Convention.
- The outer limits of the continental shelf cannot extend beyond the constraints in accordance with the provisions contained in article 76, paragraph 5, of the Convention. Accordingly, since the Commission accepts Denmark's position that the Ægir Ridge is a submarine ridge, the provision that the fixed points comprising the line of outer limits of the continental shelf may not exceed 350 M from the baselines from which the breadth of the territorial sea is measured (the "distance constraint") applies.
- In the region North of the Faroe Islands, consideration of the outer limits of the continental shelf only involves an examination of the construction of the distance constraint line.

### 4.1 The construction of the distance constraint line

The distance constraint line submitted by Denmark is constructed by arcs at 350 M distance from the baselines from which the breadth of the territorial sea of the Faroe Islands is measured (Figure 7). Three base points (13, 14 and 15) on the north-eastern portion of the baseline of the Faroe Islands 18 contribute to the determination of this constraint line. The Commission agrees with the procedure and methods applied by Denmark in the construction of this constraint line.

### 4.2 The construction of the combined constraints line

The outer limit of the constraints in the region North of the Faroe Islands, as constructed by Denmark, is only defined by the distance constraint line. The Commission agrees with this approach.

### 5. The outer limits of the continental shelf (article 76, paragraph 7)

The outer limits of the continental shelf result from the application of the combined constraints line determined according to paragraph 53, above. In the region North of the Faroe Islands, as contained in the partial Submission of Denmark dated 29 April 2009, the outer limit consists of fixed points connected by straight lines not exceeding 60 M in length. The fixed points, listed in Table 2 Annex 1, are established in accordance with article 76 of the Convention, and includes points located on the 200 M limit lines of the mainland of Norway and Jan Mayen (Norway) (Figure 8).

Executive Order No. 306 of 16 May 2002 at www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/dnk\_2002\_order\_and\_decrees.pdf

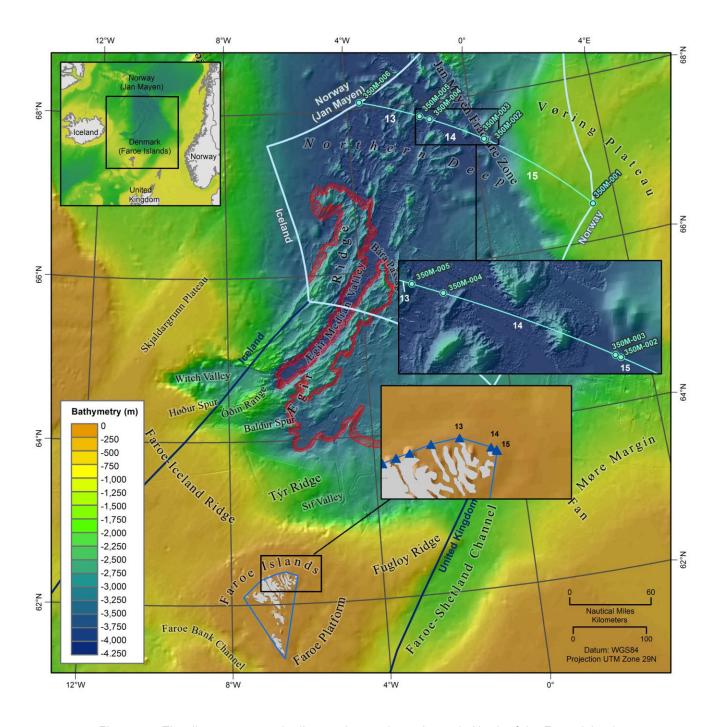


Figure 7: The distance constraint line on the continental margin North of the Faroe Islands

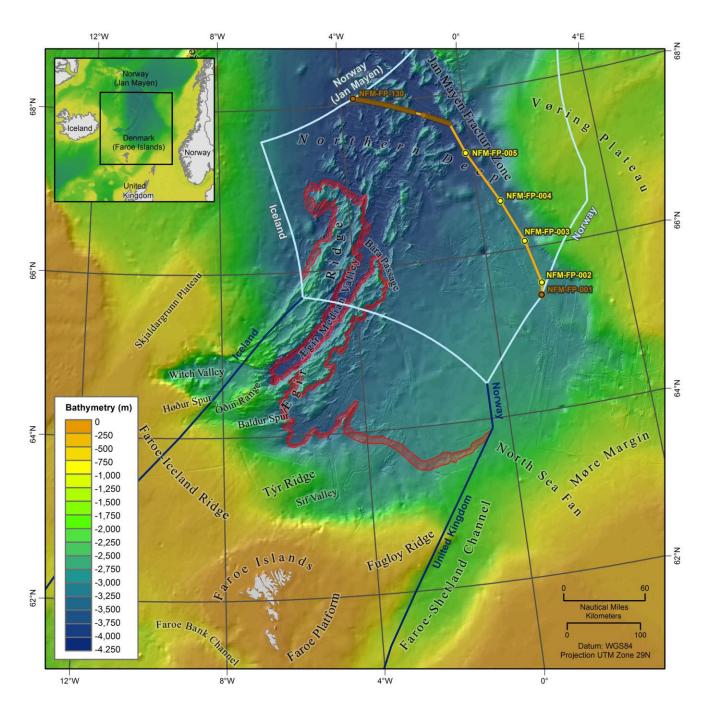


Figure 8: The outer limits of the continental shelf North of the Faroe Islands

# 6. Recommendations for the outer limit of the continental shelf North of the Faroe Islands (article 76 para 8)

The Commission agrees with the determination of the fixed points listed in Table 2 Annex 1, establishing the outer limits of the continental shelf of Denmark North of the Faroe Islands. The Commission recommends that the delineation of the outer limits of the continental shelf of Denmark North of the Faroe Islands be conducted in accordance with article 76, paragraph 7, of the Convention by straight lines not exceeding 60 M in length, connecting fixed points, defined by coordinates of latitude and longitude. Further, the Commission agrees with the principles applied in delineating the outer limits of the continental shelf of Denmark North of the Faroe Islands, including the determination of the fixed points listed in Annex 1, and the construction of the straight lines connecting those points. The Commission recommends that Denmark proceeds to establish the outer limits of the continental shelf on the basis of these recommendations.

### **ANNEX 1**

TABLE 1 - TABLE OF GEOGRAPHIC COORDINATES OF THE FOOT OF CONTINENTAL SLOPE POINTS BASED ON THE SUBMISSION BY THE GOVERNMENT OF THE KINGDOM OF DENMARK TOGETHER WITH THE GOVERNMENT OF THE FAROES UNDER LETTER DATED 29 APRIL 2009

FOS point	Latitude	Longitude	Water depth	Art.76 provision
NFM-FOS-008	63.67670580N	1.0218057W	2423.23	4 (b)
NFM-FOS-002	63.6149316N	1.5843021W	2602.2	4 (b)
NFM-FOS-003	65.8014593N	3.0234045W	3331.8	4 (b)
NFM-FOS-004	66.1046243N	3.1750613W	3585.3	4 (b)
NFM-FOS-005	66.8513219N	3.5248113W	3627.3	4 (b)
NFM-FOS-006	67.0691918N	4.6007221W	3664.5	4 (b)
NFM-FOS-007	65.9641600N	5.5724534W	3323	4 (b)

TABLE 2 - TABLE OF GEOGRAPHIC COORDINATES OF THE OUTER LIMITS OF THE CONTINENTAL SHELF BEYOND 200 M AS RECOMMENDED BY THE COMMISSION, BASED ON THE SUBMISSION BY THE GOVERNMENT OF THE KINGDOM OF DENMARK TOGETHER WITH THE GOVERNMENT OF THE FAROES UNDER LETTER DATED 29 APRIL 2009

Outer Limit Fixed Point	Latitude	Longitude	Method	Distance to Next	Article 76 Provision
TIACU T OIIIC				Point (m)	invoked
			Fixed point on 200 M from Norway's (Mainland) baseline at intersection with the		
NFM-FP-001	65.4036065N	1.4454007E	line between NFM-GAR-001 and NFM-GAR-002	16,826	76(4)(a)(i)
NFM-FP-002	65.5518850N	1.5129250E	Fixed point from sediment thickness formula	61,232	76(4)(a)(i)
NFM-FP-003	66.0869890N	1.2120790E	Fixed point from sediment thickness formula	63,567	76(4)(a)(i)
NFM-FP-004	66.6150550N	0.6774170E	Fixed point from sediment thickness formula	80,769	76(4)(a)(i)
NFM-FP-005	67.2574920N	0.1753560W	Fixed point from sediment thickness formula	45,950	76(4)(a)(i)
NFM-FP-006	67.6419657N	0.5610891W	Fixed point on 350 M constraint	1,056	76(5)
NFM-FP-007	67.6463014N	0.5831902W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-008	67.6503854N	0.6041136W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-009	67.6544545N	0.6250607W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-010	67.6585087N	0.6460313W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-011	67.6625479N	0.6670257W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-012	67.6665722N	0.6880433W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-013	67.6705815N	0.7090843W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-014	67.6745757N	0.7301487W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-015	67.6785549N	0.7512362W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-016	67.6825190N	0.7723469W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-017	67.6864681N	0.7934808W	Fixed point on 350 M constraint	998	76(5)

NFM-FP-018	67.6904022N	0.8146376W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-019	67.6943211N	0.8358173W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-020	67.6982249N	0.8570199W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-021	67.7021136N	0.8782451W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-022	67.7059872N	0.8994931W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-023	67.7098455N	0.9207638W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-024	67.7136887N	0.9420570W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-025	67.7175167N	0.9633727W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-026	67.7213295N	0.9847106W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-027	67.7251271N	1.0060711W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-028	67.7289094N	1.0274536W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-029	67.7326764N	1.0488583W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-030	67.7364282N	1.0702851W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-031	67.7401647N	1.0917339W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-032	67.7438858N	1.1132045W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-033	67.7475916N	1.1346971W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-034	67.7512822N	1.1562114W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-035	67.7549573N	1.1777473W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-036	67.7586170N	1.1993048W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-037	67.7622614N	1.2208839W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-038	67.7658904N	1.2424844W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-039	67.7695039N	1.2641062W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-040	67.7731020N	1.2857492W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-041	67.7766847N	1.3074135W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-042	67.7802518N	1.3290989W	Fixed point on 350 M constraint	956	76(5)
NFM-FP-043	67.7836516N	1.3498746W	Fixed point on 350 M constraint	14,159	76(5)
NFM-FP-044	67.8336478N	1.6585219W	Fixed point on 350 M constraint	431	76(5)
NFM-FP-045	67.8351614N	1.6679488W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-046	67.8386523N	1.6897750W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-047	67.8421276N	1.7116219W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-048	67.8455874N	1.7334894W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-049	67.8490315N	1.7553775W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-050	67.8524601N	1.7772859W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-051	67.8558730N	1.7992147W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-052	67.8592703N	1.8211637W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-053	67.8626519N	1.8431329W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-054	67.8660179N	1.8651221W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-055	67.8693681N	1.8871314W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-056	67.8727027N	1.9091606W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-057	67.8760216N	1.9312097W	Fixed point on 350 M constraint	998	76(5)

NFM-FP-058	67.8793247N	1.9532785W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-059	67.8826121N	1.9753668W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-060	67.8858837N	1.9974748W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-061	67.8891396N	2.0196024W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-062	67.8923796N	2.0417492W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-063	67.8956039N	2.0639154W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-064	67.8988123N	2.0861009W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-065	67.9020049N	2.1083054W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-066	67.9051817N	2.1305291W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-067	67.9083426N	2.1527717W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-068	67.9114876N	2.1750332W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-069	67.9146168N	2.1973136W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-070	67.9177300N	2.2196125W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-071	67.9208274N	2.2419302W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-072	67.9239088N	2.2642663W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-073	67.9269742N	2.2866209W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-074	67.9300237N	2.3089938W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-075	67.9330573N	2.3313850W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-076	67.9360749N	2.3537945W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-077	67.9390764N	2.3762220W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-078	67.9420620N	2.3986675W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-079	67.9450315N	2.4211308W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-080	67.9479850N	2.4436120W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-081	67.9509225N	2.4661110W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-082	67.9538439N	2.4886276W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-083	67.9567492N	2.5111618W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-084	67.9596384N	2.5337134W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-085	67.9625116N	2.5562824W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-086	67.9653686N	2.5788687W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-087	67.9682094N	2.6014720W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-088	67.9710342N	2.6240926W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-089	67.9738428N	2.6467302W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-090	67.9766353N	2.6693847W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-091	67.9794115N	2.6920561W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-092	67.9821716N	2.7147440W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-093	67.9849155N	2.7374487W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-094	67.9876432N	2.7601700W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-095	67.9903546N	2.7829077W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-096	67.9930498N	2.8056617W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-097	67.9957288N	2.8284321W	Fixed point on 350 M constraint	998	76(5)

NFM-FP-098	67.9983915N	2.8512186W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-099	68.0010379N	2.8740212W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-100	68.0036680N	2.8968397W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-101	68.0062818N	2.9196743W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-102	68.0088794N	2.9425246W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-103	68.0114606N	2.9653907W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-104	68.0140255N	2.9882722W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-105	68.0165740N	3.0111694W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-106	68.0191062N	3.0340820W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-107	68.0216220N	3.0570100W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-108	68.0241214N	3.0799532W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-109	68.0266045N	3.1029115W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-110	68.0290712N	3.1258849W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-111	68.0315214N	3.1488732W	Fixed point on 350 M constraint	998	76(5)
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NFM-FP-113	68.0363726N	3.1948943W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-114	68.0387736N	3.2179270W	Fixed point on 350 M constraint	998	76(5)
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NFM-FP-116	68.0435261N	3.2640360W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-117	68.0458776N	3.2871121W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-118	68.0482127N	3.3102024W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-119	68.0505313N	3.3333070W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-120	68.0528333N	3.3564257W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-121	68.0551188N	3.3795584W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-122	68.0573879N	3.4027050W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-123	68.0596404N	3.4258654W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-124	68.0618763N	3.4490396W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-125	68.0640957N	3.4722272W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-126	68.0662984N	3.4954284W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-127	68.0684847N	3.5186432W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-128	68.0706543N	3.5418711W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-129	68.0728074N	3.5651123W	Fixed point on 350 M constraint	497	76(5)
NFM-FP-130	68.0738718N	3.5766983W	Fixed point on 200 M from Norway's		76(5)
			(Jan Mayen) baseline at intersection		
			between 350 M arc from point 13		
			on Faroes baseline		



# Commission on the Limits of the Continental Shelf

SUMMARY OF RECOMMENDATIONS OF THE COMMISSION ON THE LIMITS OF THE CONTINENTAL SHELF IN REGARD TO THE PARTIAL SUBMISSION MADE BY THE GOVERNMENT OF THE KINGDOM OF DENMARK TOGETHER WITH THE GOVERNMENT OF THE FAROES IN RESPECT OF THE CONTINENTAL SHELF NORTH OF THE FAROE ISLANDS

ON 29 APRIL 2009<sup>1</sup>

Recommendations prepared by the Subcommission established for the consideration of the Partial Submission made by the Government of the Kingdom of Denmark together with the Government of the Faroes

Adopted by the Subcommission on 30 October 2013

Adopted by the Commission, with amendments, on 12 March 2014

<sup>&</sup>lt;sup>1</sup> The aim of this Summary is to provide information which is not of confidential or proprietary nature in order to facilitate the function of the Secretary-General in accordance with Rule 11.3 of Annex III to the Rules of Procedure of the Commission(CLCS/40/Rev.1). This Summary is based on excerpts of the Recommendations and may refer to material not necessarily included either in the full Recommendations or this Summary.

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# **GLOSSARY OF TERMS**

60 M formula line	The line delineated by reference to fixed points determined at a distance of 60 nautical miles from the foot of the continental slope
200 M limit	The line at a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured
2500 m isobath	A line connecting the depth of 2,500 metres.
Article 76	Article 76 of the Convention
Commission	The Commission on the Limits of the Continental Shelf
Convention	The United Nations Convention on the Law of the Sea of 10 December 1982
Depth constraint	The constraint line constructed at a distance of 100 M from the 2500 m isobath
Distance constraint	The constraint line constructed at a distance of 350 M from the baselines from which the breadth of the territorial sea is measured
DOALOS	Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs
FOS	Foot of the continental slope
FOS points	Foot of the continental slope points
Guidelines	The Scientific and Technical Guidelines of the Commission (CLCS/11 and CLCS/11/Add.1)
М	Nautical mile
Rules of Procedure	The Rules of Procedure of the Commission (CLCS/40/Rev.1)
Secretary-General	The Secretary-General of the United Nations
Sediment thickness formula line	The line delineated by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope

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#### I. INTRODUCTION

- 1. On 29 April 2009, the Government of the Kingdom of Denmark together with the Government of the Faroes (hereafter referred to as Denmark) submitted to the Commission on the Limits of the Continental Shelf, through the Secretary-General of the United Nations, information on the outer limits of the continental shelf beyond 200 M from the baselines from which the breadth of the territorial sea is measured, in accordance with article 76, paragraph 8, of the Convention.
- 2. The Convention entered into force for the Kingdom of Denmark on 16 December 2004.
- 3. The Commission received and took note of the contents of the following notes verbales transmitted to the Commission in relation to the Submission: note verbale No.FNY09060014/97.B.512 from the Permanent Mission of Iceland to the United Nations dated 15 June 2009; and the note verbale from the Permanent Mission of Norway to the United Nations dated 7 July 2009 (see Annex 5 to the Recommendations)<sup>1</sup>. These notes did not contain any objection to the Commission's consideration of the Submission.
- 4. The Commission makes these Recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf in accordance with article 76, paragraph 8, of the Convention. The limits of the shelf established by a coastal State on the basis of these Recommendations shall be final and binding.

### II. PROVISIONS OF THE CONVENTION ON WHICH THESE RECOMMENDATIONS ARE BASED

5. The Recommendations of the Commission are based on the scientific and technical data and other material provided by Denmark in relation to the implementation of article 76. The Recommendations of the Commission only deal with issues related to article 76 and Annex II to the Convention and shall not prejudice matters relating to delimitation of boundaries between States with opposite or adjacent coasts, or application of other parts of the Convention or any other treaties.

# III. RECOMMENDATIONS OF THE COMMISSION WITH RESPECT TO THE CONTINENTAL SHELF NORTH OF THE FAROE ISLANDS

### A. The Continental Shelf North of the Faroe Islands

# 1. Geographical region description

6. The continental margin of Denmark North of the Faroe Islands is part of the North-East Atlantic Margin that extends from the Rockall and Hatton Banks in the south-west to the Møre and Vøring margins in the north-east. Towards the north-west, the continental margin extends along the Faroe-Iceland Ridge onto the Ægir Ridge. The Faroe Islands are part of the North Atlantic Igneous Province and were formed by extrusive and intrusive volcanic activity during the breakup of the super-continent Pangea and the opening of the North Atlantic Ocean in early Tertiary times, approximately 55 million years ago (Figure 1). The Ægir Ridge comprises

<sup>&</sup>lt;sup>1</sup> The notes verbales from the Permanent Mission of Iceland to the United Nations and the Permanent Mission of Norway to the United Nations are available online, respectively, at

http://www.un.org/depts/los/clcs\_new/submissions\_files/dnk28\_09/isl\_15jun09.pdf and http://www.un.org/depts/los/clcs\_new/submissions\_files/dnk28\_09/nor\_7jul09.pdf.

- an extinct part of the spreading ridge system that created oceanic seafloor beneath the Northern Deep as well as the Faroe-Iceland Ridge. The active spreading ridge today is located beyond the continental margin of the Faroe Islands.
- 7. The margin North of the Faroe Islands is characterised by a number of elevated seafloor highs that extend from the shelf and slope region into the Northern Deep. The most pronounced of these seafloor highs are the Faroe-Iceland Ridge and the Ægir Ridge which, in its southern part, merges with the northern slope of the Faroe-Iceland Ridge. The northern part of the Ægir Ridge protrudes well beyond 200 M North of the Faroe Islands (see Figure 2). Ocean currents, glacial periods and mass wasting events along the southern and eastern margins of the Northern Deep have resulted in large scale sediment transport from the shelf and slope regions to the basin floor. Consequently, the basin floor of the Northern Deep beyond the base of the continental slope can be characterised as a classical continental rise.
- 8. The continental shelf North of the Faroe Islands is made up of three distinct geographic regions: the North Sea Fan region; the Týr Ridge and Faroe-Iceland Ridge region; and the Ægir Ridge region. The base of the slope region can be traced within and between each of these regions, as described in the next section.
- 9. The outer edge of the continental margin, established from the FOS of the region by applying the provisions of article 76, paragraph 4, of the Convention, extends beyond the 200 M limit of Denmark North of the Faroe Islands to delineate the outer limits of its continental shelf beyond its 200 M limit in this region (Figure 2) (i.e. the test of appurtenance for the region was satisfied by Denmark);

### 2. The determination of the foot of the continental slope (article 76, paragraph 4(b))

- 10. The FOS should be established in accordance with article 76, paragraph 4(b), of the Convention subject to the provisions of article 76, paragraph 3, namely that the margin comprises the submerged prolongation of the land mass of the coastal State; consists of the seabed and subsoil of the shelf, the slope and the rise; and does not include the deep ocean floor with its oceanic ridges or the subsoil thereof. For the continental margin North of the Faroe Islands, the Northern Deep can be characterised as a classical continental rise.
- 11. The North Sea Fan region has a distinct north-west facing front that defines the base of the continental slope region defined by multibeam data (Figure 3). The base of the continental slope region continues along the base of the Baldur Spur to the Óδin Range, the latter forming the southern termination of the eastern shoulder of the Ægir Ridge. The base of the slope region in this area was further refined by additional multibeam data provided during the examination of the Submission. In its original Submission, Denmark submitted the results of a highly detailed multibeam bathymetric survey of the Ægir Ridge to demonstrate the continuity of the base of slope region along the eastern flank of the Ægir Ridge as far north as the Bára Passage, a morphological discontinuity in the eastern flank, through which the sediments of the Northern Deep flow into the central valley of the Ægir Ridge. The base of the continental slope then follows the base of the western side of the eastern flank of the Ægir Ridge to its southern end before turning north again along the base of the eastern side of the western flank of the Ægir Ridge. North of the latitude of the Bára Passage, the western flank becomes fragmented, so that the base of slope zone turns west at the first break in continuity at approximately 67°N (see Figure 2).

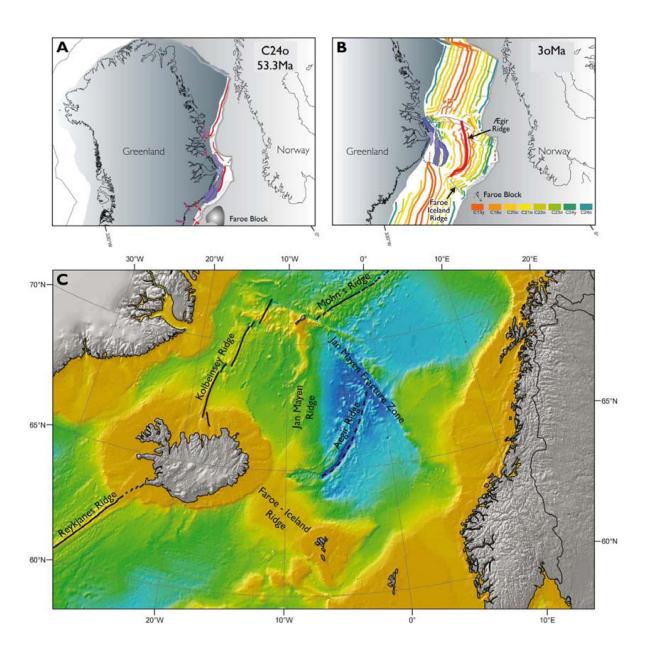


Figure 1: Plate kinematic reconstruction of the northeast Atlantic Margin; (A) at the time of breakup (~ 55 Ma); (B) at the time that Ægir Ridge became extinct (~30 Ma); and (C) the present day configuration ((A) and (B), see Gaina, C., Gernigon, L. & Ball, P.J. 2009: Paleocene-Recent Plate Boundaries in the NE Atlantic and the formation of the Jan Mayen microcontinent: Journal of the Geological Society, 166, 601-616, doi: 10.1144/0016-76492008-112)

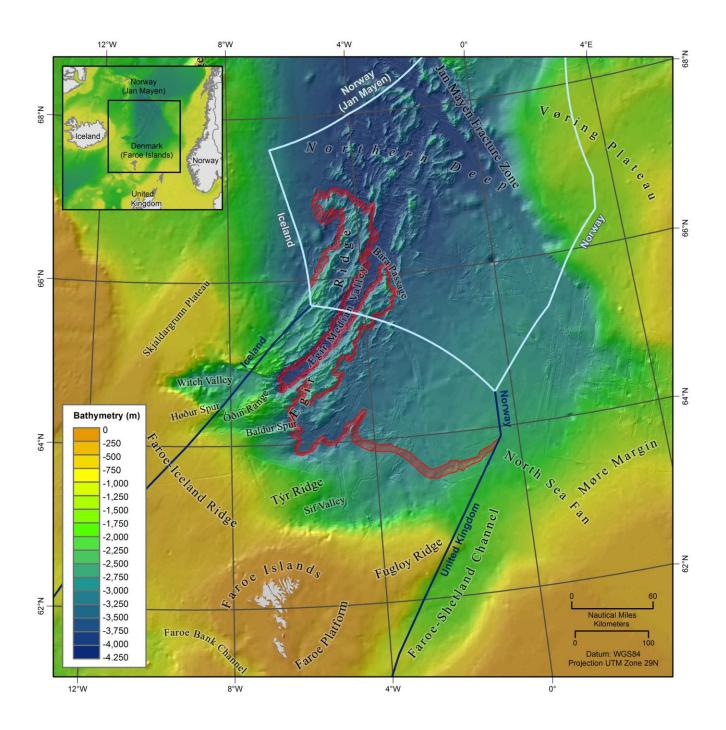


Figure 2: Physiographic overview map of the area relevant to this Submission.

The extent of the base of slope zone (the red ribbon) beyond the 200 M limit demonstrates that the test of appurtenance is satisfied.

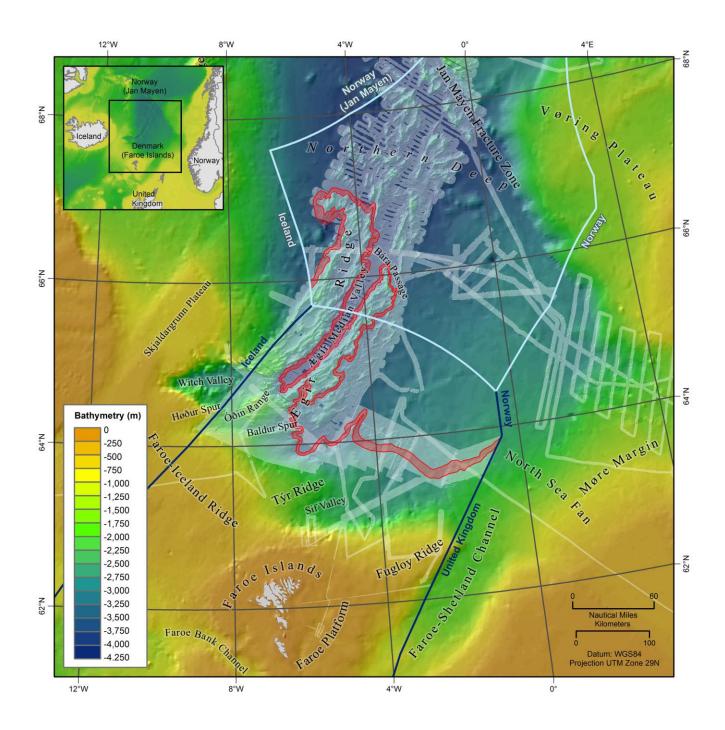


Figure 3: The multibeam data coverage (shaded grey) in the area relevant to this Submission (after Figure 2.1 of the Main Body of the Submission)

12. Denmark determined seven FOS points within the continuous base of slope region to be applied in the process of establishing the outer edge of the continental margin.

### 2.1 Considerations

- 13. Seven FOS points generate formula points beyond the 200 M limits of Denmark North of the Faroe Islands. Two of these are associated with the North Sea Fan region and five are associated with the Ægir Ridge (Figure 4).
- 14. The most significant morphological feature of the continental margin North of the Faroe Islands is the Ægir Ridge. Denmark notes<sup>2</sup> that a "seafloor high that is a natural component needs to be geologically linked to the continental margin in its entirety to be classified as a submarine elevation. In contrast, submarine ridges are seafloor highs that are morphologically an integral part of the continental margin, but may be geologically different along parts or the entire length of the ridge from the landmass of the coastal State from which the margin extends." Denmark therefore concludes that since the Ægir Ridge is continuous with the continental margin north of the Faroe Islands and falls within a common envelope of the foot of the continental slope, yet is an extinct seafloor spreading ridge that is geologically different from the landmass of the Faroe Islands, it is a submarine ridge in the meaning of article 76, paragraph 6, of the Convention. The Subcommission agrees with this view.
- 15. The Subcommission examined the continuity of the base of slope zone along the eastern side of the eastern flank of the Ægir Ridge. Following a series of presentations by both the Subcommission and the Delegation<sup>3</sup> the Subcommission accepted the continuity of the base of slope zone throughout the Ægir Ridge region as defined by Denmark<sup>4</sup>. As a consequence of this, the Subcommission reviewed all of the data associated with the five FOS points proposed by Denmark in the vicinity of the Ægir Ridge and agreed with their location.
- 16. The Subcommission also examined the location that Denmark had proposed for NFM-FOS-001 in the North Sea Fan region. Denmark explained that NFM-FOS-001 lies on the same north-west facing front of a depositional lobe of the North Sea Fan on which NFM-FOS-002 is located. However, the Subcommission believed that the lobe front did not extend as far as NFM-FOS-001. Again, after a series of presentations by both the Subcommission and the Delegation<sup>5</sup>, the Delegation proposed that NFM-FOS-001 be replaced by NFM-FOS-008<sup>6</sup>, whose location was agreed to by the Subcommission.
- 17. Accordingly, the Subcommission agreed with the base of the continental slope envelope established by Denmark for the continental margin North of the Faroe Islands; in particular, it agreed with the locations of six of the seven FOS points (NFM-FOS-002 to NFM-FOS-007) originally submitted, and with the location of NFM-FOS-008, replacing the originally submitted NFM-FOS-001.

<sup>&</sup>lt;sup>2</sup> Page 9 of the Main Body of the Submission

<sup>&</sup>lt;sup>3</sup> 2013 02 06 SC PRE DNK 004; NFM-PRE-014 06-03-2013; NFM-PRE-015 06-03-2013.

<sup>&</sup>lt;sup>4</sup> Letter 2013\_05\_14\_SC\_LET\_DNK\_07 dated 14 May 2013.

<sup>&</sup>lt;sup>5</sup> 2013 02 06 SC PRE DNK 005; NFM-PRE-003 06-02-2013

<sup>&</sup>lt;sup>6</sup> Letter 2013\_06\_18\_DNK\_LET\_SC\_14\_13-02077 dated 18 June 2013.

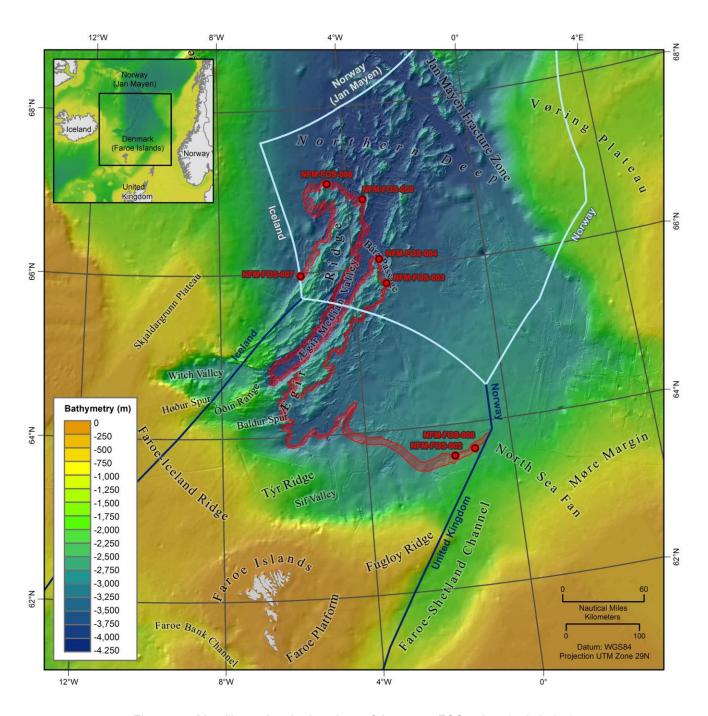


Figure 4: Map illustrating the locations of the seven FOS points (red circles) within the BOS envelope (red ribbon)

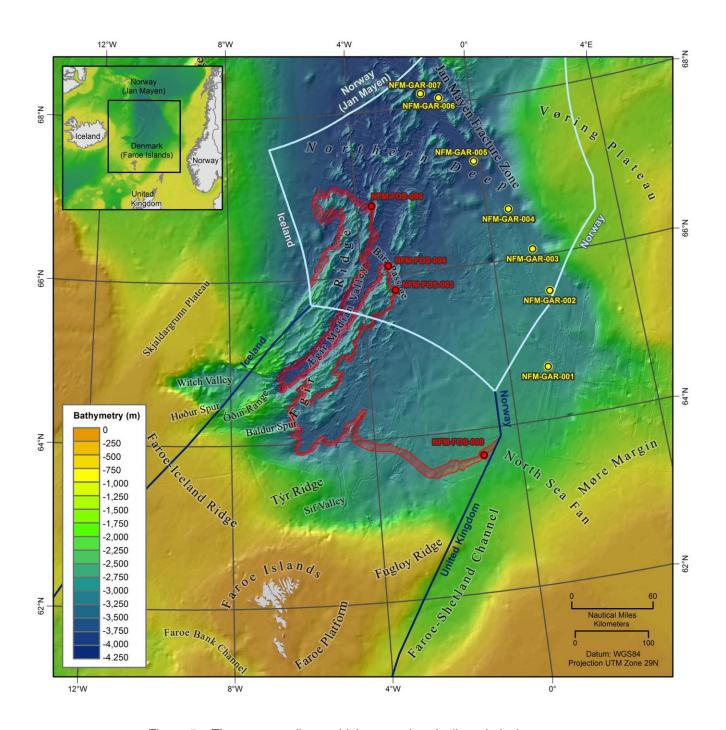


Figure 5: The seven sediment thickness points (yellow circles) and the four FOS points (red circles) from which they were derived.

### 2.2 Recommendations

18. Based on its consideration of the technical and scientific documentation contained in the partial Submission by Denmark, and the additional information referred to in paragraphs 35 and 36 above, the Commission concludes that, in the continental margin North of the Faroe Islands, the FOS points listed in Table 1 of Annex 1 fulfill the requirements of article 76 and Chapter 5 of the Guidelines. The Commission recommends that these FOS points form the basis for the establishment of the outer edge of the continental margin North of the Faroe Islands.

### 3. The establishment of the outer edge of the continental margin (article 76, para 4(a))

19. The outer edge of the continental margin of Denmark North of the Faroe Islands should, for the purposes of the Convention, be established in accordance with article 76, paragraphs 4 and 7, of the Convention.

### 3.1 The application of the 60 M distance formula (article 76, paragraph 4(a)(ii))

- 20. North of the Faroe Islands, parts of the outer edge of the continental margin is based on fixed points derived using the 60 M distance formula, utilising four FOS points on the continental margin North of the Faroe Islands in accordance with the provision contained in article 76, paragraph 4(a)(ii) of the Convention. The points are: NFM-FOS-002, NFM-FOS-008 (replacing NFM-FOS-001), NFM-FOS-006 and NFM-FOS-007 (Figures 4 & 6; Table 1, Annex 1).
- 21. Each of the fixed points from the distance formula identified by Denmark as contributing to the definition of the outer edge of the continental margin North of the Faroe Islands is a point on, or at intersections between, 60 M arcs from these FOS points, but all such points lie within the 200 M limits of Norway, Jan Mayen (Norway) and Iceland (Figure 6; Table 1, Annex 1).
- 22. The Commission agrees with the way these points have been established by Denmark in the region North of the Faroe Islands.

### 3.2 The application of the 1% sediment thickness formula (article 76, paragraph 4(a)(i))

- 23. North of the Faroe Islands, Denmark submitted seven fixed points based on the sediment thickness provision of article 76, paragraph 4 (a)(i), of the Convention utilizing four FOS points on the continental margin, (Figure 5). Denmark established these sediment thickness points (NFM-GAR-001, NFM-GAR-002, NFM-GAR-003, NFM-GAR-004, NFM-GAR-005, NFM-GAR-006 and NFM-GAR-007) located on the seismic lines NPD-LOS-99-002, NPD-LOS-08-004, NPD-LOS-00-21, NPD-LOS-00-21, NPD-LOS-00-21, NPD-LOS-00-21, respectively.
- 24. Although the Subcommission agreed with the procedure applied by Denmark to establish the sediment thickness points utilizing FOS points on the continental margin North of the Faroe Islands, it disagreed with the methodology in which Denmark demonstrated sedimentary continuity. After a series of presentations by both the Subcommission and the Delegation, and the submission by Denmark of several additional seismic lines and an annotated sediment thickness map<sup>7</sup>, the Subcommission agreed that it had

<sup>&</sup>lt;sup>7</sup> NFM-PRE-016\_29-07-2013 (Sediment thickness map annotated with seismic lines and their identifiers)

- the information it sought to illustrate sediment continuity between each Gardiner Point and the relevant FOS point from which it was derived<sup>8</sup>.
- 25. Minor errors in the Submission, noted by the Subcommission during its consideration of the Submission, were brought to the attention of the Delegation and, in each case, appropriate corrections were submitted by Denmark to the Subcommission<sup>9</sup>.
- 26. Consequently, the Commission agrees with the procedure applied by Denmark to establish the sediment thickness points utilizing FOS points on the continental margin North of the Faroe Islands, as contained in Table 1, Annex 1, including the data provided, the seismic interpretation, the methods of depth conversion, and the distance calculations.

### 3.3 Configuration of the Outer Edge of the Continental Margin

27. In the region North of the Faroe Islands, the outer edge of the continental margin extends in a generally northwestward direction from a point on the 200 M limit of mainland Norway to a point on the 200 M limit of Jan Mayen (Norway) (Figure 6).

### 3.4 Recommendations

28. The outer edge of the continental margin beyond 200 M in the region North of the Faroe Islands is based on 60 M arcs and sediment thickness formula points as described in sections 3.1 and 3.2, in accordance with article 76, paragraph 7, of the Convention (Figure 6). The Commission recommends that these arcs and points are used as the basis for delineating the outer limits of the continental shelf in this region.

### 4. The application of the constraint criteria (article 76, paragraphs 5 & 6)

- 29. The outer limits of the continental shelf should be based on the established outer edge of the continental margin, taking into consideration the constraints contained in article 76, paragraphs 5 and 6, of the Convention.
- 30. The outer limits of the continental shelf cannot extend beyond the constraints in accordance with the provisions contained in article 76, paragraph 5, of the Convention. Accordingly, since the Commission accepts Denmark's position that the Ægir Ridge is a submarine ridge, the provision that the fixed points comprising the line of outer limits of the continental shelf may not exceed 350 M from the baselines from which the breadth of the territorial sea is measured (the "distance constraint") applies.
- 31. In the region North of the Faroe Islands, consideration of the outer limits of the continental shelf only involves an examination of the construction of the distance constraint line.

<sup>8 2013 02 06</sup> SC PRE DNK 006

<sup>&</sup>lt;sup>9</sup> Data File 2013\_01\_29\_velocities; Data File 2013\_05\_29\_data; Data File 2013\_07\_30\_data

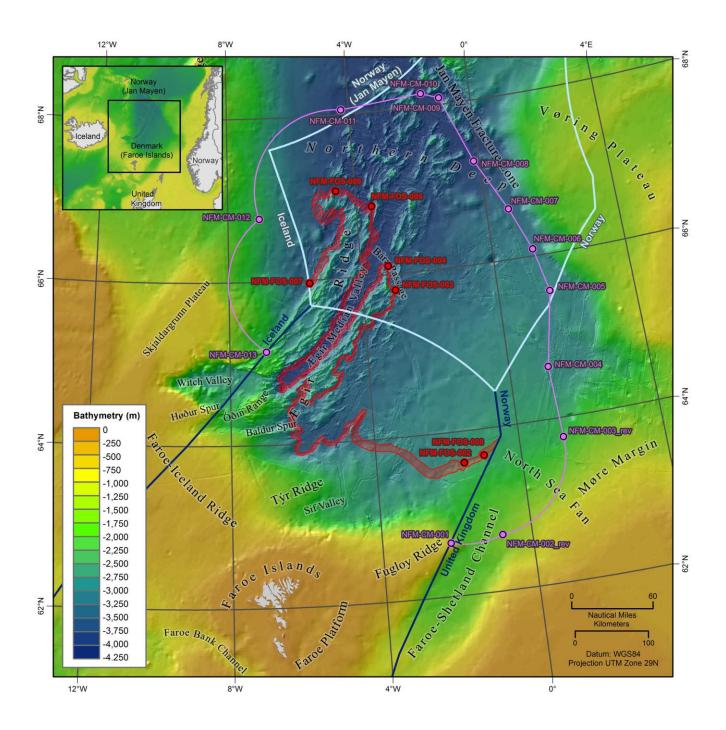


Figure 6: The outer edge of the continental margin North of the Faroe Islands delineated with reference to the fixed points (purple circles) (modified from Figure 8.1 of the Submission due to the replacement of NFM-FOS-001 by NFM-FOS 008)

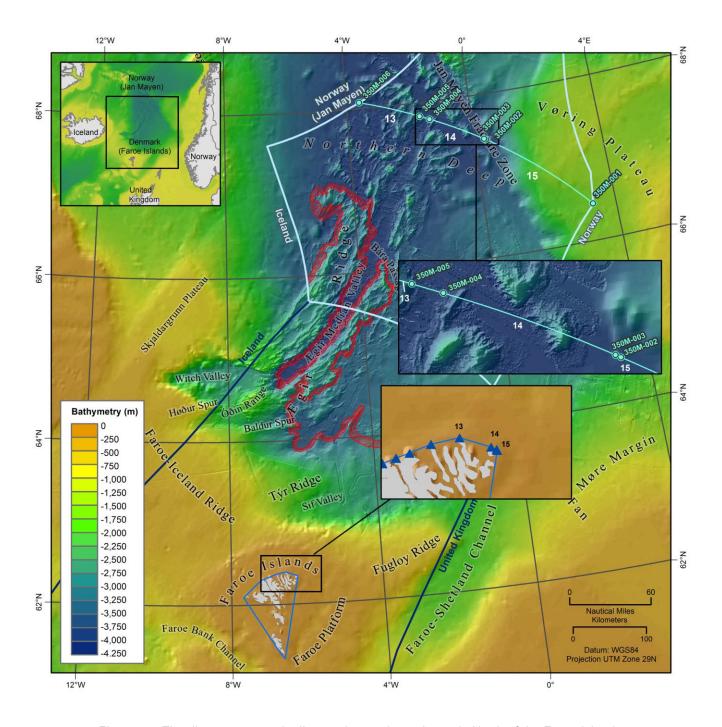


Figure 7: The distance constraint line on the continental margin North of the Faroe Islands

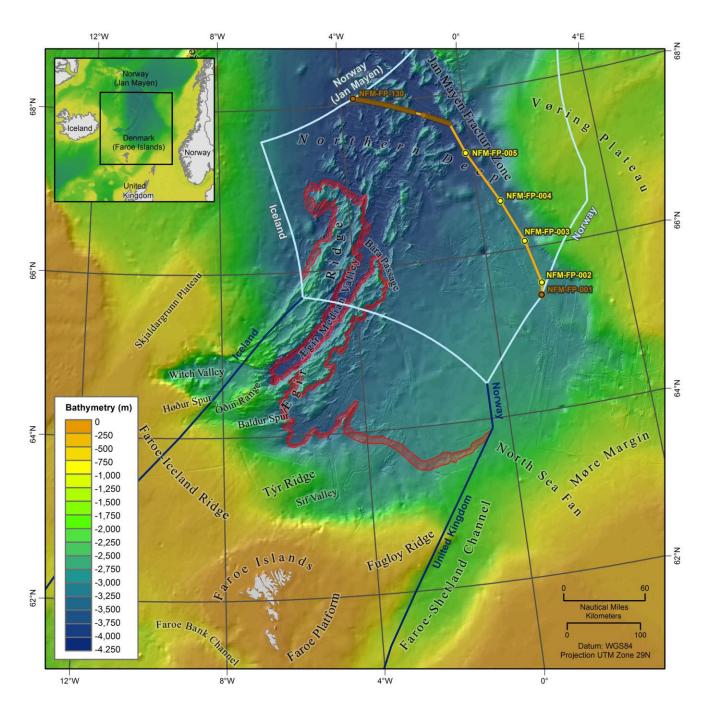


Figure 8: The outer limits of the continental shelf North of the Faroe Islands

### 4.1 The construction of the distance constraint line

32. The distance constraint line submitted by Denmark is constructed by arcs at 350 M distance from the baselines from which the breadth of the territorial sea of the Faroe Islands is measured (Figure 7). Three base points (13, 14 and 15) on the north-eastern portion of the baseline of the Faroe Islands 10 contribute to the determination of the constraint line. The Commission agrees with the procedure and methods applied by Denmark in the construction of this constraint line.

## 4.2 The construction of the combined constraints line

33. The outer limit of the constraints in the region North of the Faroe Islands, as constructed by Denmark, is only defined by the distance constraint line. The Commission agrees with this approach.

### 5. The outer limits of the continental shelf (article 76, paragraph 7)

34. The outer limits of the continental shelf result from the application of the distance constraint line determined according to paragraph 32, above. In the region North of the Faroe Islands, as contained in the partial Submission of Denmark dated 29 April 2009, the outer limit consists of fixed points connected by straight lines not exceeding 60 M in length. The fixed points, listed in Table 2 of Annex 1, are established in accordance with article 76 of the Convention, including points located on the 200 M limit lines of the mainland of Norway and Jan Mayen (Norway) (Figure 8).

# 6. Recommendations for the outer limit of the continental shelf North of the Faroe Islands (article 76 para 8)

35. The Commission agrees with the determination of the fixed points listed in Annex 1, establishing the outer limits of the continental margin of Denmark North of the Faroe Islands. The Commission recommends that the delineation of the outer limits of the continental shelf of Denmark North of the Faroe Islands be conducted in accordance with article 76, paragraph 7, of the Convention by straight lines not exceeding 60 M in length, connecting fixed points, defined by coordinates of latitude and longitude. Further, the Commission agrees with the principles applied in delineating the outer limits of the continental shelf of Denmark North of the Faroe Islands, including the determination of the fixed points listed in Table 2 of Annex 1, and the construction of the straight lines connecting those points. The Commission recommends that Denmark proceeds to establish the outer limits of the continental shelf on the basis of these recommendations.

Executive Order No. 306 of 16 May 2002 at www.un.org/Depts/los/LEGISLATIONANDTREATIES/PDFFILES/dnk\_2002\_order\_and\_decrees.pdf

### **ANNEX 1**

TABLE 1 - TABLE OF GEOGRAPHIC COORDINATES OF THE FOOT OF CONTINENTAL SLOPE POINTS BASED ON THE SUBMISSION BY THE GOVERNMENT OF THE KINGDOM OF DENMARK TOGETHER WITH THE GOVERNMENT OF THE FAROES UNDER LETTER DATED 29 APRIL 2009

FOS point	Latitude	Longitude	Water depth	Art.76 provision
NFM-FOS-008	63.67670580N	1.0218057W	2423.23	4 (b)
NFM-FOS-002	63.6149316N	1.5843021W	2602.2	4 (b)
NFM-FOS-003	65.8014593N	3.0234045W	3331.8	4 (b)
NFM-FOS-004	66.1046243N	3.1750613W	3585.3	4 (b)
NFM-FOS-005	66.8513219N	3.5248113W	3627.3	4 (b)
NFM-FOS-006	67.0691918N	4.6007221W	3664.5	4 (b)
NFM-FOS-007	65.9641600N	5.5724534W	3323	4 (b)

TABLE 2 - TABLE OF GEOGRAPHIC COORDINATES OF THE OUTER LIMITS OF THE CONTINENTAL SHELF BEYOND 200 M AS RECOMMENDED BY THE COMMISSION, BASED ON THE SUBMISSION BY THE GOVERNMENT OF THE KINGDOM OF DENMARK TOGETHER WITH THE GOVERNMENT OF THE FAROES UNDER LETTER DATED 29 APRIL 2009

Outer Limit Fixed Point	Latitude	Longitude	Method	Distance to Next	Article 76 Provision
			Fixed resign are 200 M from Names de	Point (m)	invoked
			Fixed point on 200 M from Norway's (Mainland) baseline at intersection with the		
NFM-FP-001	65.4036065N	1.4454007E	line between NFM-GAR-001 and NFM-GAR-002	16,826	76(4)(a)(i)
NFM-FP-002	65.5518850N	1.5129250E	Fixed point from sediment thickness formula	61,232	76(4)(a)(i)
NFM-FP-003	66.0869890N	1.2120790E	Fixed point from sediment thickness formula	63,567	76(4)(a)(i)
NFM-FP-004	66.6150550N	0.6774170E	Fixed point from sediment thickness formula	80,769	76(4)(a)(i)
NFM-FP-005	67.2574920N	0.1753560W	Fixed point from sediment thickness formula	45,950	76(4)(a)(i)
NFM-FP-005	67.6419657N	0.5610891W	•	1,056	
			Fixed point on 350 M constraint	-	76(5)
NFM-FP-007	67.6463014N	0.5831902W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-008	67.6503854N	0.6041136W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-009	67.6544545N	0.6250607W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-010	67.6585087N	0.6460313W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-011	67.6625479N	0.6670257W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-012	67.6665722N	0.6880433W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-013	67.6705815N	0.7090843W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-014	67.6745757N	0.7301487W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-015	67.6785549N	0.7512362W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-016	67.6825190N	0.7723469W	Fixed point on 350 M constraint	998	76(5)

NFM-FP-017	67.6864681N	0.7934808W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-018	67.6904022N	0.8146376W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-019	67.6943211N	0.8358173W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-020	67.6982249N	0.8570199W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-021	67.7021136N	0.8782451W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-022	67.7059872N	0.8994931W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-023	67.7098455N	0.9207638W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-024	67.7136887N	0.9420570W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-025	67.7175167N	0.9633727W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-026	67.7213295N	0.9847106W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-027	67.7251271N	1.0060711W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-028	67.7289094N	1.0274536W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-029	67.7326764N	1.0488583W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-030	67.7364282N	1.0702851W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-031	67.7401647N	1.0917339W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-032	67.7438858N	1.1132045W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-033	67.7475916N	1.1346971W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-034	67.7512822N	1.1562114W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-035	67.7549573N	1.1777473W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-036	67.7586170N	1.1993048W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-037	67.7622614N	1.2208839W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-038	67.7658904N	1.2424844W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-039	67.7695039N	1.2641062W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-040	67.7731020N	1.2857492W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-041	67.7766847N	1.3074135W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-042	67.7802518N	1.3290989W	Fixed point on 350 M constraint	956	76(5)
NFM-FP-043	67.7836516N	1.3498746W	Fixed point on 350 M constraint	14,159	76(5)
NFM-FP-044	67.8336478N	1.6585219W	Fixed point on 350 M constraint	431	76(5)
NFM-FP-045	67.8351614N	1.6679488W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-046	67.8386523N	1.6897750W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-047	67.8421276N	1.7116219W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-048	67.8455874N	1.7334894W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-049	67.8490315N	1.7553775W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-050	67.8524601N	1.7772859W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-051	67.8558730N	1.7992147W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-052	67.8592703N	1.8211637W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-053	67.8626519N	1.8431329W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-054	67.8660179N	1.8651221W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-055	67.8693681N	1.8871314W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-056	67.8727027N	1.9091606W	Fixed point on 350 M constraint	998	76(5)

NFM-FP-057	67.8760216N	1.9312097W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-058	67.8793247N	1.9532785W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-059	67.8826121N	1.9753668W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-060	67.8858837N	1.9974748W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-061	67.8891396N	2.0196024W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-062	67.8923796N	2.0417492W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-063	67.8956039N	2.0639154W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-064	67.8988123N	2.0861009W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-065	67.9020049N	2.1083054W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-066	67.9051817N	2.1305291W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-067	67.9083426N	2.1527717W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-068	67.9114876N	2.1750332W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-069	67.9146168N	2.1973136W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-070	67.9177300N	2.2196125W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-071	67.9208274N	2.2419302W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-072	67.9239088N	2.2642663W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-073	67.9269742N	2.2866209W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-074	67.9300237N	2.3089938W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-075	67.9330573N	2.3313850W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-076	67.9360749N	2.3537945W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-077	67.9390764N	2.3762220W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-078	67.9420620N	2.3986675W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-079	67.9450315N	2.4211308W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-080	67.9479850N	2.4436120W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-081	67.9509225N	2.4661110W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-082	67.9538439N	2.4886276W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-083	67.9567492N	2.5111618W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-084	67.9596384N	2.5337134W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-085	67.9625116N	2.5562824W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-086	67.9653686N	2.5788687W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-087	67.9682094N	2.6014720W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-088	67.9710342N	2.6240926W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-089	67.9738428N	2.6467302W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-090	67.9766353N	2.6693847W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-091	67.9794115N	2.6920561W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-092	67.9821716N	2.7147440W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-093	67.9849155N	2.7374487W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-094	67.9876432N	2.7601700W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-095	67.9903546N	2.7829077W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-096	67.9930498N	2.8056617W	Fixed point on 350 M constraint	998	76(5)

NFM-FP-097	67.9957288N	2.8284321W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-098	67.9983915N	2.8512186W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-099	68.0010379N	2.8740212W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-100	68.0036680N	2.8968397W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-101	68.0062818N	2.9196743W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-102	68.0088794N	2.9425246W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-103	68.0114606N	2.9653907W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-104	68.0140255N	2.9882722W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-105	68.0165740N	3.0111694W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-106	68.0191062N	3.0340820W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-107	68.0216220N	3.0570100W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-108	68.0241214N	3.0799532W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-109	68.0266045N	3.1029115W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-110	68.0290712N	3.1258849W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-111	68.0315214N	3.1488732W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-112	68.0339553N	3.1718764W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-113	68.0363726N	3.1948943W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-114	68.0387736N	3.2179270W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-115	68.0411581N	3.2409743W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-116	68.0435261N	3.2640360W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-117	68.0458776N	3.2871121W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-118	68.0482127N	3.3102024W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-119	68.0505313N	3.3333070W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-120	68.0528333N	3.3564257W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-121	68.0551188N	3.3795584W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-122	68.0573879N	3.4027050W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-123	68.0596404N	3.4258654W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-124	68.0618763N	3.4490396W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-125	68.0640957N	3.4722272W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-126	68.0662984N	3.4954284W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-127	68.0684847N	3.5186432W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-128	68.0706543N	3.5418711W	Fixed point on 350 M constraint	998	76(5)
NFM-FP-129	68.0728074N	3.5651123W	Fixed point on 350 M constraint	497	76(5)
NFM-FP-130	68.0738718N	3.5766983W	Fixed point on 200 M from Norway's		76(5)
			(Jan Mayen) baseline at intersection		
			between 350 M arc from point 13		
			on Faroes baseline		