ANNEX II
SUMMARY OF RECOMMENDATIONS OF THE COMMISSION

United Nations Convention on the Law of the Sea

Commission on the Limits of the Continental Shelf

RECOMMENDATIONS OF THE COMMISSION ON THE LIMITS OF THE CONTINENTAL SHELF IN REGARD TO THE PARTIAL REVISED SUBMISSION MADE BY THE RUSSIAN FEDERATION IN RESPECT OF THE ARCTIC OCEAN ON 3 AUGUST 2015 WITH ADDENDA SUBMITTED ON 31 MARCH 2021[1]

Recommendations prepared by the Subcommission established for the consideration of the Submission made by the Russian Federation

Approved by the Subcommission on 20 October 2022

Approved by the Commission, with amendments, on 6 February 2023

[1] 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 paragraph 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
60 M formula point	Fixed point determined at a distance of 60 nautical miles from the foot of the continental slope
200 M line	The line at a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured
2,500 m isobath	A line connecting the depth of 2,500 metres
article 76	Article 76 of the Convention
baselines	The baselines from which the breadth of the territorial sea is measured
BOS	The base of the continental slope
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 determined at a distance of 100 M from the 2,500 m isobath
distance constraint	The constraint line determined at a distance of 350 M from the baselines
DOALOS	Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations
FOS	Foot of the continental slope
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 FOS
sediment thickness formula point	Fixed point at which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from that point to the FOS

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I. INTRODUCTION

1. On 3 August 2015, the Russian Federation submitted to the Commission, through the Secretary-General,[1] information on the limits of the continental shelf beyond 200 M from the baselines in respect of the Arctic Ocean, in accordance with article 76, paragraph 8, of the Convention.

2. The Convention entered into force for the Russian Federation on 11 April 1997.

3. It is recalled that, on 20 December 2001, the Russian Federation had made a Submission to the Commission, which covered the following regions: Barents Sea, Bering Sea, Sea of Okhotsk and Central Arctic Ocean. On 27 June 2002, the Commission approved the "Recommendations of the Commission on the Limits of the Continental Shelf in regard to the Submission made by the Russian Federation on 20 December 2001." In those Recommendations, inter alia, the Commission recommended that (i) "[…] the Russian Federation make a revised submission in respect of its extended continental shelf in the Central Arctic Ocean based on the findings contained in these recommendations"; (ii) "[…] the Russian Federation follow the scientific and technical advice contained in its Scientific and Technical Guidelines, and as indicated in the various sections of these Recommendations of the Commission"; (iii) "[…] according to the materials provided in the submission, the Lomonosov Ridge cannot be considered a submarine elevation under the Convention"; and (iv) "[…] according to the current state of scientific knowledge, the Alpha-Mendeleev Ridge Complex cannot be considered a submarine elevation under the Convention."[2]

4. The partial revised Submission (the Submission) in respect of the Arctic Ocean was made pursuant to those Recommendations.

5. With regard to disputes, the Russian Federation requested the Commission "... to consider these and other materials to this partial revised Submission of the Russian Federation for the establishment of the [outer limits of the continental shelf] in the Arctic Ocean relating to the extended continental shelf in the Arctic Ocean and to make recommendations thereon without prejudice to any subsequent transfer of data and other materials of the Russian Federation, the Kingdom of Denmark, Canada, the Kingdom of Norway, and the United States, or to the delimitation of the continental shelf between the Russian Federation, the Kingdom of Denmark, Canada, and the United States of America. Final delimitation of the continental shelf of the Russian Federation in the Arctic Ocean with the Kingdom of Denmark, Canada, the Kingdom of Norway, and the United States shall be carried out in accordance with the provisions of Article 83 of the Convention (after the adoption of Commission recommendations on the Submission of the Russian Federation for establishment of the outer limits of the continental shelf in the Arctic Ocean)."[3]

6. On 4 August 2015, the Secretary-General issued Continental Shelf Notification CLCS.1.Rev.2015.LOS giving due publicity to the Executive Summary of the Submission in accordance with rule 50 of the rules of procedure. Pursuant to rule 51 of the rules of procedure, the consideration of the Submission was included in

[1] On whose behalf the Submission was received by DOALOS.

[2] Section 6.11 of the *Recommendations of the Commission on the Limits of the Continental Shelf in regard to the Submission made by the Russian Federation on 20 December 2001*.

[3] Executive summary, pp. 11-12, 2015.

the agenda of the fortieth session of the Commission held from 1 February to 18 March 2016.

7. Pursuant to section 2 of annex III to the rules of procedure, a presentation of the Submission was made to the plenary of the fortieth session of the Commission on 9 February 2016, by the Head of Delegation, Sergei E. Donskoi, Minister of Natural Resources and Environment. The Delegation of the Russian Federation (the Delegation) also included a number of advisers. In addition to elaborating on substantive points of the Submission, Mr. Donskoi indicated that Ivan F. Glumov, member of the Commission, had assisted the Russian Federation by providing scientific and technical advice with respect to the Submission. Mr. Donskoi elaborated in detail on issues of maritime delimitation in the area covered by the Submission. In particular, recalling the notes verbales from the Kingdom of Denmark, dated 7 October 2015, the United States of America, dated 30 October 2015, and Canada, dated 30 November 2015, Mr. Donskoi noted that these States did not object to the consideration of the Submission by the Commission.

8. In note verbale 2015-14962, dated 7 October 2015, the Government of the Kingdom of Denmark informed the Secretary-General about “the potential overlap of the continental shelf of the Kingdom of Denmark referred to in the partial submission of the Government of the Kingdom of Denmark together with the Government of Greenland (CLCS.76.2014.LOS (Continental Shelf Submission)) and that of the Russian Federation in the area referred to in the Russian submission. In accordance with the agreement of 27 March 2014 between the Kingdom of Denmark, together with the Government of Greenland, and the Russian Federation as referred to in part 7 of the executive summary of the Kingdom of Denmark's partial submission, the Kingdom of Denmark does not object to the Commission on the Limits of the Continental Shelf considering or making recommendations on the Russian submission. Such recommendations made by the Commission as regards the Russian submission are without prejudice to the rights of the Kingdom of Denmark during the consideration of the Kingdom of Denmark's submission by the Commission.”

9. In a note verbale dated 30 October 2015, the Government of the United States of America informed the Secretary-General that it had “taken note of the reference in the Executive Summary of the partial revised submission regarding the "Agreement between the USSR and the USA of June 1, 1990, [in which] the Parties delimited the territorial sea, economic zones, and continental shelf in the Chukchi and Bering seas, as well as in the Arctic and Pacific oceans." The United States confirms that the Agreement's provisions, including with respect to the boundary line, have been provisionally applied by agreement of both governments since June 15, 1990, pursuant to an exchange of notes dated June 1, 1990. Pursuant to that exchange of notes, the two governments continue to abide by the terms of the 1990 Agreement. With reference to the Executive Summary of the partial revised submission, the Government of the United States confirms that it does not object to the request made by the Russian Federation that the Commission consider the data and other material in the partial revised submission and make its recommendation on the basis of this information, to the extent that such recommendations are without prejudice to the establishment of the outer limits of the continental shelf by the United States of America, or to the delimitation of the continental shelf between the Russian Federation and the United States of America.”

10. In note verbale 2328, dated 30 November 2015, the Government of Canada informed the Secretary-General that it had "taken note of the potential overlap in [the Arctic Ocean] of the continental shelves of Canada and the Russian Federation [and that] the United Nations Convention on the Law of the Sea, to which both the Russian Federation and Canada are Parties, including its Annex II, and the rules of procedure of the Commission on the Limits of the Continental Shelf, in particular its Annex I, provide that the actions of the Commission shall not prejudice matters relating to the delimitation of the continental shelf between states with opposite or adjacent coasts. Referring to Part 5 of the Executive Summary of the aforementioned submission, […] Canada […] does not object to the consideration of the submission by the Commission and notes that the recommendations made by the Commission in respect of the submission are without prejudice both to the consideration by the Commission of any future submission by Canada and to matters relating to the delimitation of the continental shelf between Canada and the Russian Federation."

11. The Commission received and took note of the contents of the above-mentioned notes verbales transmitted to the Commission in regard to the Submission.

12. The Commission addressed the modalities for the consideration of the Submission. Recalling the decision taken at its twenty-sixth session whereby revised submissions would be considered on a priority basis notwithstanding the queue, the Commission assigned the examination of the Submission to the Subcommission established to consider the Submission made by the Russian Federation on 20 December 2001. It noted that, pursuant to rule 42, paragraph 2, of the rules of procedure, the members of the Subcommission were Lawrence Folajimi Awosika, Galo Carrera (Chair), Mazlan Bin Madon, Jair Alberto Ribas Marques, Yong-Ahn Park (Vice-Chair), Walter R. Roest (Vice-Chair), and Szymon Uścinowicz. The Commission decided that the Subcommission would commence its work during the forty-first session, from 8 to 12 August 2016.

13. The term of the 21 members of the Commission elected in 2012 expired on 15 June 2017. On 14 June 2017, during the twenty-seventh Meeting of States Parties to the United Nations Convention on the Law of the Sea, 20 members of the Commission were elected for a term of five years (SPLOS/316, paragraphs 77-86). At the forty-fourth session, following consultations and taking into account the partial change in membership of the Commission after the elections, the Commission appointed Aldino Campos, Marcin Mazurowski, and Clodette Raharimananirina to fill the three vacancies resulting from the elections. The membership of the Subcommission became as follows: Messrs. Awosika, Campos, Madon, Marques, Mazurowski and Park, and Ms. Raharimananirina. The Subcommission elected Mr. Madon as Chair and Messrs. Awosika and Marques as Vice-Chairs. At the fifty-third session, held from 6 October to 23 November 2021, Mr. Park was elected to fill the Vice-Chair position formerly held by Mr. Marques, who passed in July 2021.

14. On 8 December 2021, the thirty-first Meeting of States Parties was resumed for the purposes of conducting a by-election to fill the vacancy resulting from the passing of Mr. Marques. The States Parties elected Antonio Fernando Garcez Faria as a member of the Commission. At its fifty-fourth session, held from 21 February to 11 March 2022, the Commission appointed Mr. Garcez as a member of the Subcommission.

15. The Subcommission examined the Submission from the forty-first to the fifty-sixth session. During these sessions, the Subcommission held 34 meetings with the

Delegation, posed questions in writing and presented 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 and provided additional material.

16. At the fifty-second session, held from 27 January to 13 March 2020, the Delegation submitted additional data and information concerning new outer limit points in the Amundsen and Canada basins that resulted in a significant change in the outer limits initially proposed in the Submission of 2015. Recalling the practice of the Commission following the *Legal opinion* contained in document CLCS/46,[4] the Subcommission invited the Russian Federation to submit a revised Executive Summary reflecting the amended outer limits of the continental shelf of the Russian Federation in the Arctic Ocean to be transmitted to the Commission through the Secretary-General.

17. On 31 March 2021, the Russian Federation submitted two addenda to the executive summary of the Submission, concerning (i) Gakkel Ridge, Nansen and Amundsen basins (Addendum 1), and (ii) Lomonosov Ridge, Alpha Ridge, Mendeleev Rise, Amundsen and Makarov basins, and the Canada Basin (Addendum 2). On 1 April 2021, the Secretary-General issued Continental Shelf Notification CLCS.1.Rev.2015.LOS.Add1 giving due publicity to these addenda.

18. Subsequently, the United States of America transmitted a note verbale dated 21 August 2021 according to which "[t]he United States takes note of the reference in the Executive Summary of the partial revised submission of the Russian Federation regarding the "Agreement between the USSR and the USA of June 1, 1990, [in which] the Parties delimited the territorial sea, economic zones, and continental shelf in the Chukchi and Bering seas, as well as in the Arctic and Pacific oceans." In the Arctic Ocean, the boundary established by the Agreement delimits the continental shelf of the United States and the Russian Federation up to the northernmost location where both countries have continental shelf jurisdiction under international law. The United States confirms that the Agreement's provisions, including with respect to the boundary line, have been provisionally applied by agreement of both governments since June 15, 1990, pursuant to an exchange of notes dated June 1, 1990. Pursuant to that exchange of notes, the two governments continue to abide by the terms of the 1990 Agreement. The United States takes note further of the statement in the Addendum that "[t]his Addendum and its consideration by the Commission are without prejudice to the question of maritime delimitation." With reference to the Addendum, the Government of the United States confirms that it does not object to the request made by the Russian Federation that the Commission consider and make recommendations relating to the information contained in the Addendum, to the extent that such recommendations are without prejudice to the establishment of the outer limits of the continental shelf by the United States of America, or to the delimitation of the continental shelf between the Russian Federation and the United States of America."

[4] *Legal opinion on whether it is permissible, under the United Nations Convention on the Law of the Sea and the rules of procedure of the Commission, for a coastal State, which has made a submission to the Commission in accordance with article 76 of the Convention, to provide to the Commission in the course of the examination by it of the submission, additional material and information relating to the limits of its continental shelf or substantial part thereof, which constitute a significant departure from the original limits and formulae lines that were given due publicity by the Secretary-General of the United Nations in accordance with rule 50 of the rules of procedure of the Commission* (CLCS/46; see also CLCS/48, paragraphs 18-19).

19. Throughout its consideration, the Subcommission conducted its interactions with the Delegation according to the rules of procedure and practice of the Commission outlined in a presentation delivered to the Delegation at the first meeting, held on 9 August 2016.

20. At the forty-first session, the Subcommission met from 8 to 12 August 2016 to commence its consideration of the Submission and to conduct a preliminary analysis thereof pursuant to paragraph 5.1 of annex III to the rules of procedure.

21. At the forty-second session, the Subcommission began the main scientific and technical examination of the Submission pursuant to section IV of annex III to the rules of procedure.

22. The main scientific and technical examination continued until the fifty-fifth session when, on 11 July 2022, the Subcommission provided a comprehensive presentation of its views and general conclusions arising from the examination of the Submission in accordance with paragraph 10.3 of annex III to the rules of procedure.

23. Subsequently, the Delegation transmitted a letter dated 12 July 2022 to inform the Subcommission that (i) the Delegation agreed with the views and general conclusions of the Subcommission; (ii) the letter constituted a formal response pursuant to paragraph 10.4 of annex III to the rules of procedure; and, therefore, (iii) there was no need for a separate meeting with the Subcommission for the purpose of delivering a presentation to that effect.

24. The Subcommission adopted its Recommendations on 20 October 2022 and submitted them to the Commission on 21 October 2022 for consideration and approval.

25. The Subcommission made a presentation to the Commission on the substance of and rationale for its Recommendations on 31 January 2023. The Delegation subsequently made a presentation to the Commission on the same day, in accordance with paragraph 15.1 bis of annex III to the rules of procedure.

26. The Commission prepared these Recommendations, which were approved on 6 February 2023, taking into consideration article 76 and annex II to the Convention, the Guidelines and the rules of procedure.

27. The Recommendations of the Commission are based on the scientific and technical data and other material provided by the Delegation in relation to the implementation of article 76. The Commission makes these Recommendations to the Russian Federation in fulfilment of its mandate as contained in article 76 and in articles 3 and 5 of annex II to the Convention.

28. 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 prejudice the position of States which are parties to a land or maritime dispute, or the application of other parts of the Convention or any other treaties.

29. The Commission makes 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. Pursuant to this provision, the limits of the continental shelf established by a coastal State on the basis of these Recommendations shall be final and binding. A summary of the Recommendations

is included as annex II to this document in conformity with paragraph 11.3 of annex III to the rules of procedure.

30. Throughout the examination of the Submission, the Subcommission requested and received support from DOALOS.

II. CONTENTS OF THE SUBMISSION

A. Original Submission

31. The Submission received on 3 August 2015 contained three parts: an Executive Summary; a Main Body which is the analytical and descriptive part; and Scientific and Technical Data. Figure 1 shows the outer limits of the continental shelf submitted by the Russian Federation.

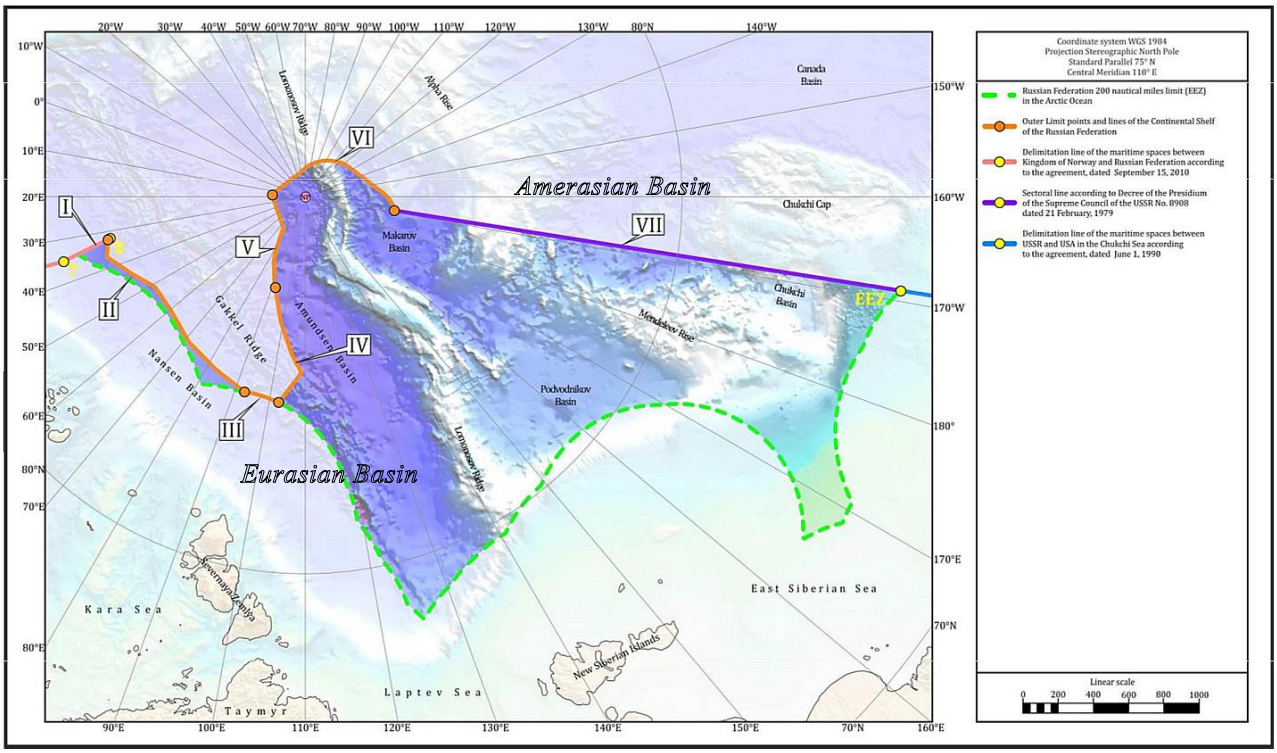
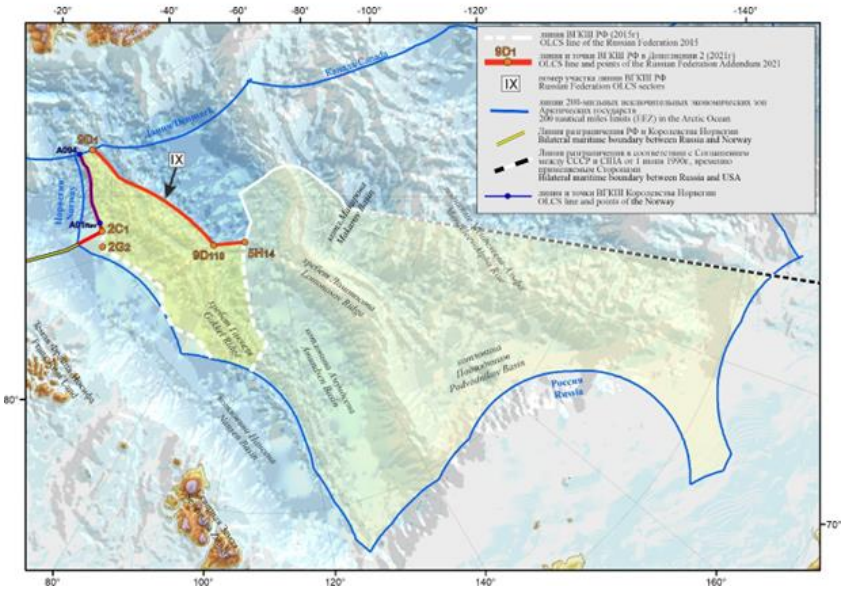


Figure 1. The outer limits of the continental shelf submitted by the Russian Federation on 3 August 2015.

B. Communications and additional material

32. In the course of the examination of the Submission by the Subcommission, the Delegation submitted additional material, including responses to questions and requests for clarifications by the Subcommission as well as the two Addenda (see above paragraphs 16 and 17) concerning the revised outer limits of the continental shelf, as illustrated in Figure 2.

Addendum 1



Addendum 2

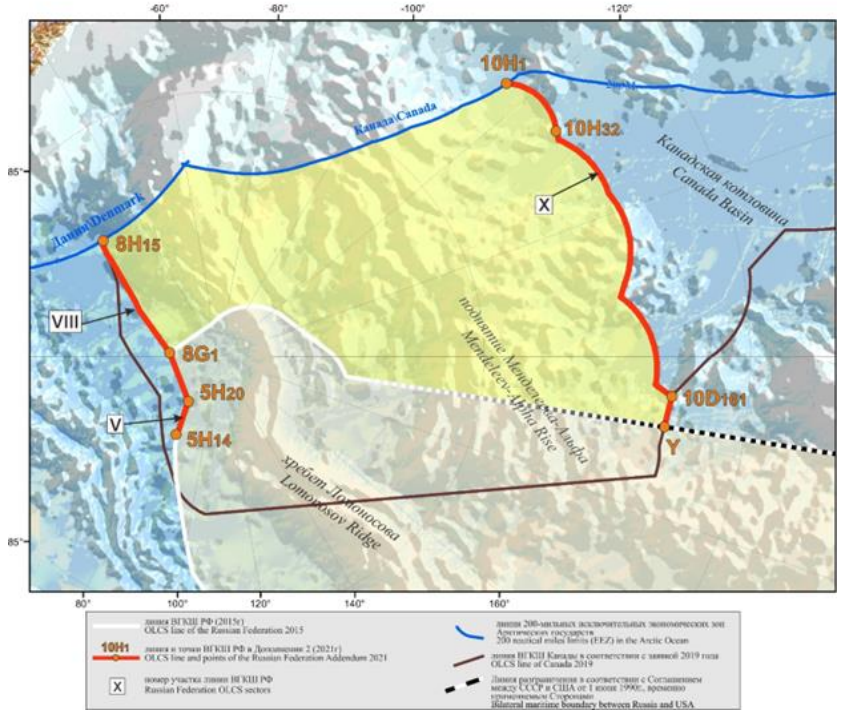


Figure 2. Revised outer limits of the continental shelf as contained in Addendum 1 and Addendum 2 submitted on 31 March 2021. Addendum 1 covers the Gakkel Ridge, Nansen and Amundsen basins. Addendum 2 covers Lomonosov Ridge, Alpha Ridge, Mendeleev Rise, Amundsen Basin, Makarov Basin, and Canada Basin.

III. EXAMINATION OF THE SUBMISSION BY THE SUBCOMMISSION

A. Examination of the format and completeness of the Submission

33. Pursuant to paragraph 3 of annex III to the rules of procedure, the Subcommission verified the format and completeness of the Submission.

B. Preliminary analysis of the Submission

34. 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 determined that:

    (a) The outer edge of the continental margin, established from the FOS by applying the provisions of article 76, paragraph 4, of the Convention, extends beyond the 200 M line of the Russian Federation. On this basis, the test of appurtenance was satisfied by the Russian Federation in the Arctic Ocean;

    (b) The proposed outer limits of the continental shelf of the Russian Federation beyond 200 M in the Arctic Ocean (Figure 1) consist of sediment thickness formula points, 60 M formula points and the applicable distance and depth constraints. The Subcommission decided that the question of whether appropriate combinations of FOS points and constraint lines had been used by the coastal State would be addressed in the context of the main scientific and technical examination of the Submission;

    (c) The constructed outer limits contain straight line segments not exceeding 60 M in length;

    (d) The cooperation of relevant international organizations, in accordance with rule 56 of the rules of procedure, or the advice of a specialist in accordance with rule 57 and/or of any other member of the Commission would not be sought; and

    (e) Additional time would be required to review all the data and information, and to prepare its Recommendations during future sessions of the Commission.

C. Main scientific and technical examination of the Submission

35. Pursuant to paragraph 9 of annex III to the rules of procedure, the Subcommission conducted an examination of the Submission according to article 76 and the Guidelines, and evaluated the following:

    (a) The data and methodology employed to determine the location of the BOS and FOS;

    (b) The methodology employed to determine the formula line at a distance of 60 M from the FOS;

    (c) The data and methodology employed to determine the sediment thickness formula line;

    (d) The data and methodology employed in the determination of the 2,500 m isobath;

    (e) The methodology employed to determine the depth constraint line;

(f) The data and methodology employed to determine the distance constraint line;

(g) The construction of the formulae line as the outer envelope of the two formulae;

(h) The construction of the constraint line as the outer envelope of the two constraints;

(i) The construction of the inner envelope of the formulae and constraint lines;

(j) The delineation of the outer limit of the continental shelf by straight lines not exceeding 60 M in length with a view to ensuring that only the portions/areas of the seabed that satisfy article 76 of the Convention are enclosed;

(k) The estimates of the uncertainties in the methods applied, with a view to identifying the main source(s) of such uncertainties and their effect on the Submission; and

(l) Whether the data submitted are sufficient in terms of quantity and quality to justify the proposed limits.

36. In conducting its examination of the Submission, the Subcommission:

(a) Proceeded with a detailed examination of the data and information supporting every FOS point selected for the establishment of the outer edge of the continental margin;

(b) Sought clarifications and additional data and information from the Delegation, as necessary, through exchanges with the Delegation;

(c) Presented preliminary views and conclusions to the Delegation; and

(d) Made a comprehensive presentation of its views and general conclusions to the Delegation at an advanced stage of the examination of the Submission, as provided for in paragraph 10.3 of annex III to the rules of procedure.

IV. RECOMMENDATIONS OF THE COMMISSION ON THE PARTIAL REVISED SUBMISSION OF THE RUSSIAN FEDERATION IN RESPECT OF THE ARCTIC OCEAN

1. Geographical and geological description of the region

37. The Submission relates to the seabed and subsoil of the Amerasian and Eurasian basins of the Arctic Ocean. Amerasian Basin extends from the Canadian shelf to the East Siberian shelf of the Russian Federation, and from the shelf of Alaska to Lomonosov Ridge. The basin can be further subdivided based on bathymetric features. These include Canada Basin, Makarov Basin, Podvodnikov Basin, Alpha Ridge, Mendeleev Rise, Chukchi Basin and Chukchi Plateau. Eurasian Basin may be considered as an extension of the North Atlantic Basin through Fram Strait. It is bounded by the Greenland shelf, Lomonosov Ridge, and the shelves of the Laptev Sea, the Kara Sea and the Barents Sea. Eurasian Basin is split by the mid-oceanic Gakkel Ridge into Nansen Basin and Amundsen Basin (Figures 1 and 3).

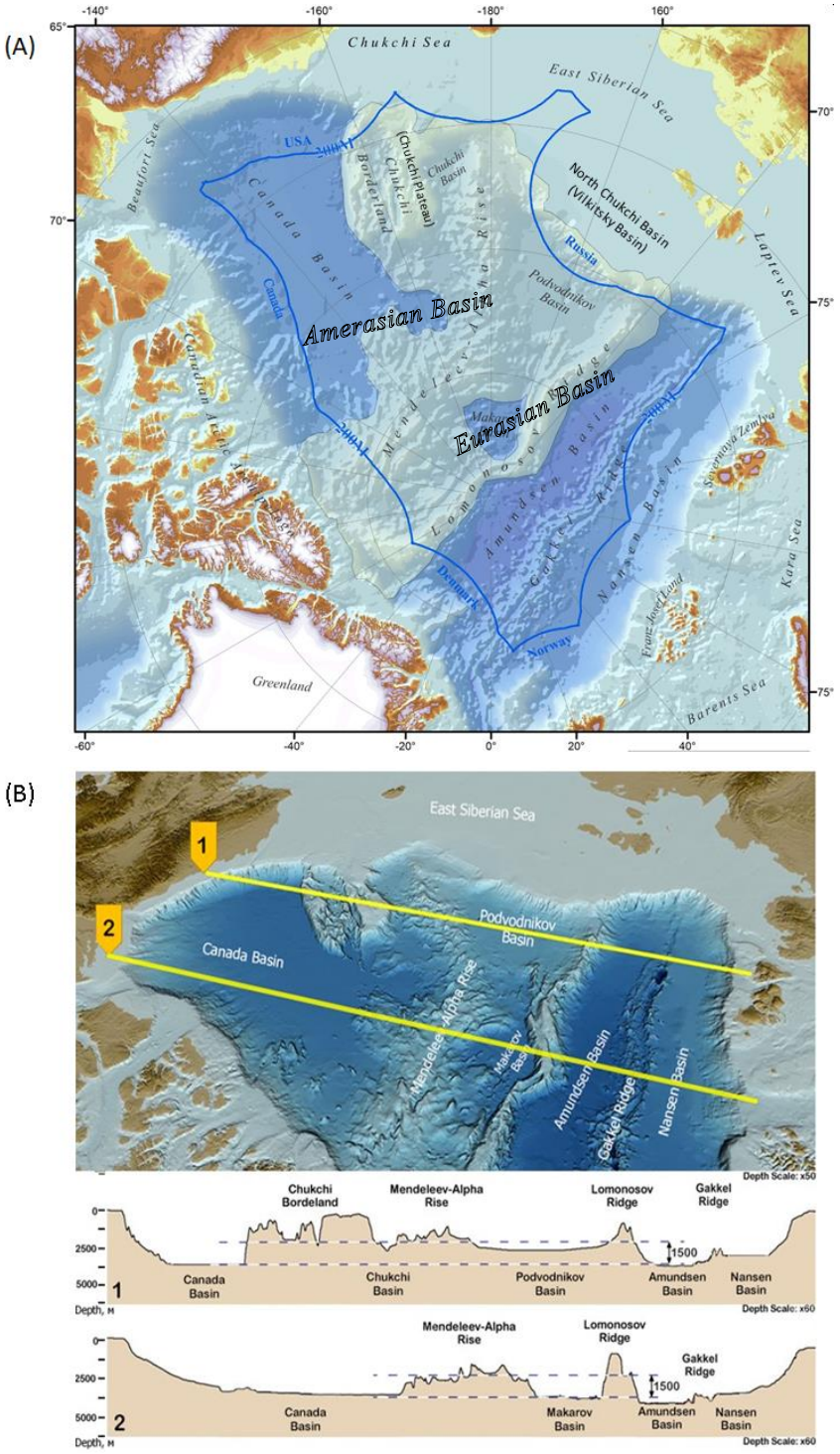


Figure 3. Map depicting the main physiographic features in the region of the Submission. (A) General physiographic map with the main morphological elements. (B) Regional cross-sections across the Arctic Ocean (yellow lines) depicting the main morphological elements.

38. Lomonosov Ridge is a continental fragment of the Barents-Kara Sea passive continental margin, from which it separated as a result of the opening of Eurasian Basin along the Gakkel Ridge axial spreading centre. It is a narrow (100-200 km) and long (circa 1,500 km) submerged microcontinent detached from the Barents-Kara Sea continental margin at circa 56 million years ago (Ma). The total thickness of the Earth crust beneath the Lomonosov Ridge is 20-24 km and its sedimentation history is closely correlated with the opening of Eurasian Basin (Jokat et al., 1992; Gaina et al., 2015; Nikishin et al., 2018).

39. Podvodnikov Basin, located between Lomonosov Ridge and Mendeleev Rise, is a bathymetric depression lying south of 85º N, bordered on the north with the deepwater Makarov Basin.

40. Chukchi Plateau is a subsea feature extending north from the Alaskan margin into the Arctic Ocean. It is part of Chukchi Borderland.

41. Mendeleev Rise is a seafloor high that extends from the Siberian margin towards the center of the Arctic Ocean where it merges with a similar feature, the Alpha Ridge, which extends from the opposite side of the ocean basin. The merged feature is referred to hereinafter as Mendeleev-Alpha Rise, in accordance with the terminology used in the Submission. Mendeleev-Alpha Rise extends from the shelf off Ellesmere Island of the Canadian Arctic Archipelago to the Eurasian continental shelf east of De Long Island, with a width of about 450 km, and a length of about 1,000 km.

42. Makarov Basin is a small basin bounded by Lomonosov Ridge, Mendeleev-Alpha Rise, and Podvodnikov Basin. The abyssal plain of the basin lies at a depth of 3,800-4,000 m.

43. Canada Basin stretches for nearly 1,600 km from Alaska northwards to Alpha Ridge, and 1,000 km from Chukchi Borderland to the Canadian Arctic Archipelago. The abyssal plain of the basin is at a depth of about 3,800 m.

44. Gakkel Ridge is presumed to be a northern extension of the Mid-Atlantic Ridge system. In places, the ridge rises to about 1,000 m below sea level. Within its axial part, the rift troughs occur at depths down to about 5,500 m.

45. The main physiographic features included in the Submission are Canada Basin, Chukchi Plateau, Chukchi Basin, Mendeleev-Alpha Rise, Podvodnikov Basin, Makarov Basin, Lomonosov Ridge, Amundsen Basin, Nansen Basin, and Gakkel Ridge.

2. The determination of the FOS (article 76, paragraph 4(b))

46. The FOS shall be established in accordance with article 76, paragraph 4(b), of the Convention.

2.1 Considerations

47. The Russian Federation determined the location of the FOS based on morphological and bathymetric data, supported with geological and geophysical evidence.

48. The Subcommission first considered the location of the submitted BOS identified by the regional change in gradient as shown in the morpho-structure map of the Arctic Ocean provided in the Submission (Figure 4).

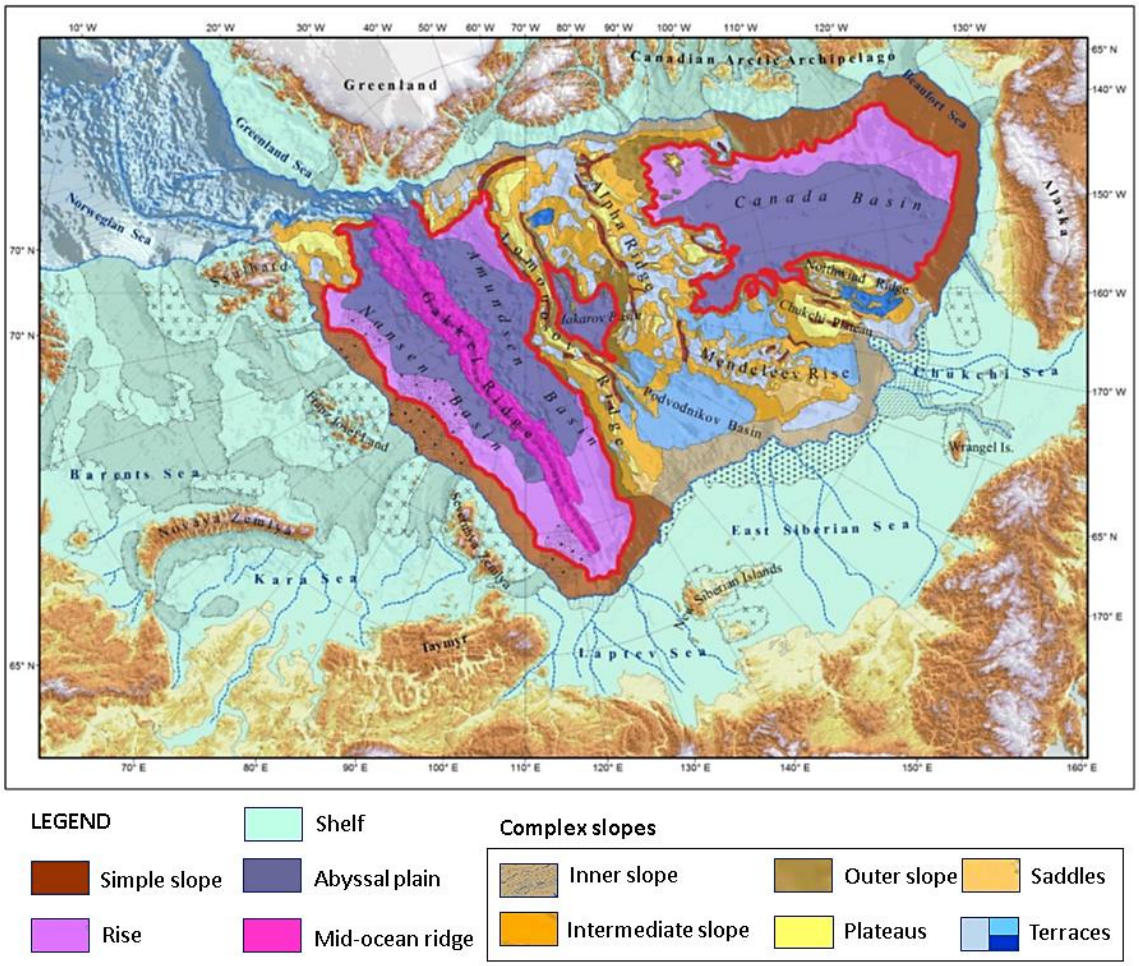


Figure 4*. Morpho-structure map of the Arctic Ocean showing the general location of the BOS (red bold lines) in the major oceanic basins, namely Nansen, Amundsen, Makarov and Canada basins. Map from the Main Body modified with a simplified legend by the Subcommission.

49. The Subcommission analyzed the submitted data and information, including gradient band analysis (Figure 5), and confirmed the morphological continuity of the Lomonosov Ridge and the Mendeleev-Alpha Rise from the East Siberian Shelf to the deep ocean floor of the Amundsen and Makarov basins (Figures 6 and 7).

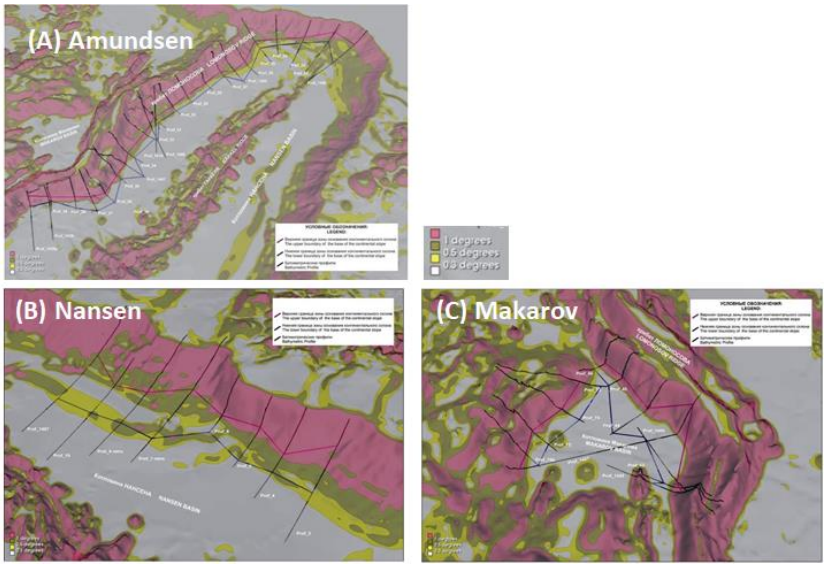


Figure 5. Gradient band analysis, showing that the gradients within the BOS zone range from 0.5° to 1°. (A) Amundsen Basin. (B) Nansen Basin. (C) Makarov Basin.

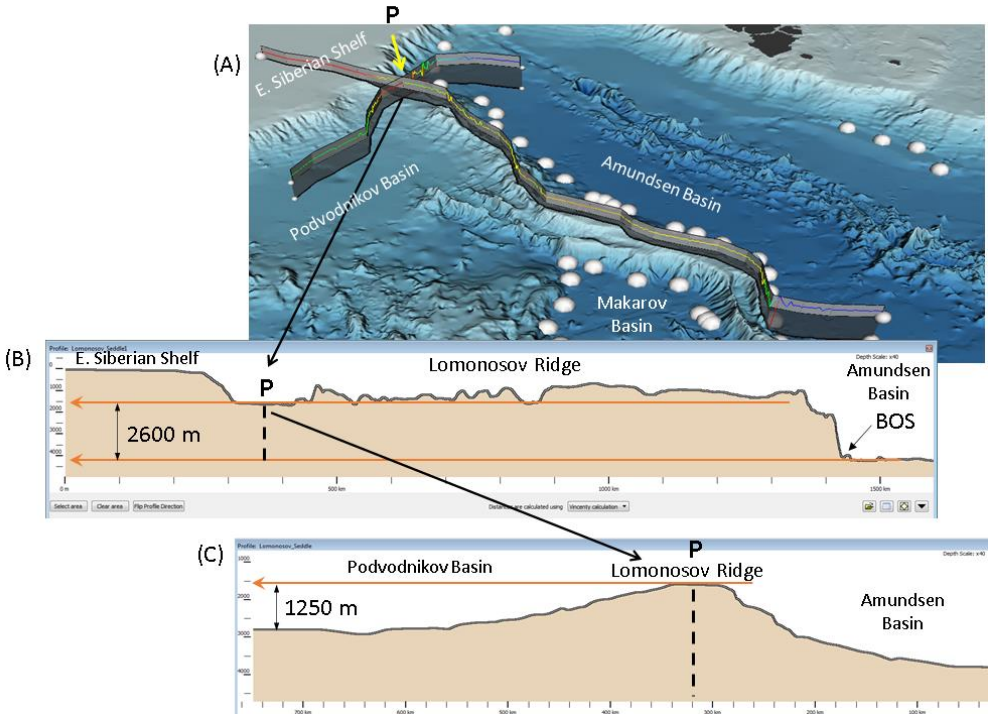


Figure 6*. Morphological analysis of the Lomonosov Ridge by the Subcommission. (A) Location of dip and strike profiles intersecting at point P. (B) Dip profile along Lomonosov Ridge from East Siberian shelf to Amundsen Basin. (C) Strike profile across Lomonosov Ridge showing its elevation above Podvodnikov Basin at the intersection point P.

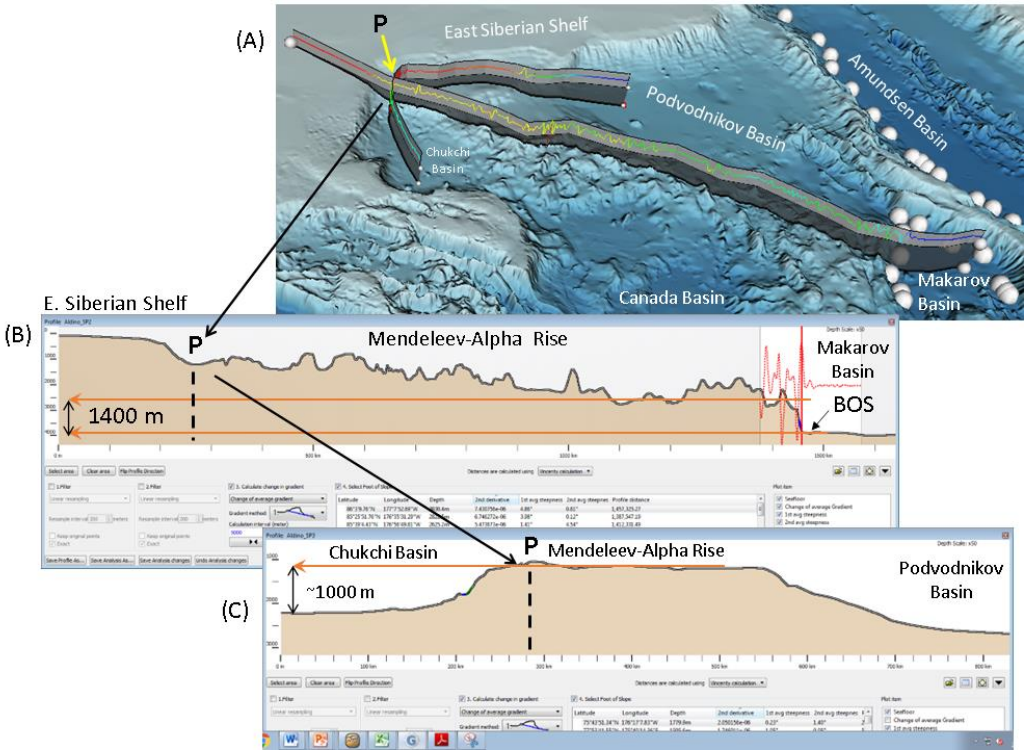


Figure 7*. Morphological analysis of the Mendeleev-Alpha Rise by the Subcommission. (A) Location of dip and strike profiles intersecting at point P. (B) Dip profile along Mendeleev-Alpha Rise from East Siberian shelf to Makarov Basin. (C) Strike profile across Mendeleev-Alpha Rise at intersection point P, showing its elevation above Chukchi Basin.

50. Morphological analysis by the Subcommission indicated that the seabed of Podvodnikov Basin is elevated to about 1,250-1,500 m above the proposed BOS in Makarov Basin (Figure 8). However, due to the low gradients of the sea floor in Podvodnikov Basin, the Subcommission deemed it necessary to examine the submitted geological and geophysical evidence to determine if Podvodnikov Basin is part of the continental margin (see chapter 4). Based on that examination, the Subcommision agreed that the BOS lies in Makarov Basin and that Podvodnikov Basin is part of the continental slope.

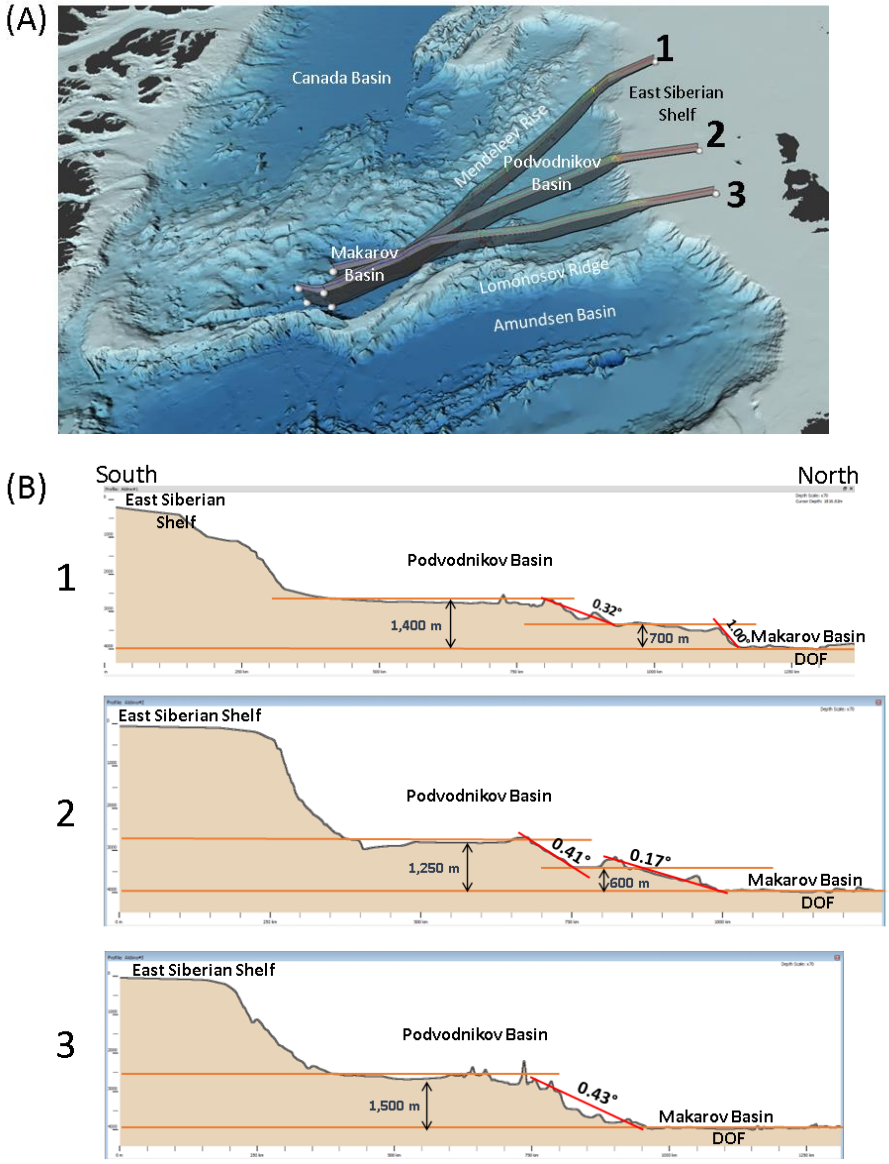


Figure 8*. (A) Morphological analysis by the Subcommission along three dip profiles (1, 2, 3) from south to north across Podvodnikov Basin. (B) Morphological continuity from East Siberian Shelf into Makarov Basin via a terraced continental slope. The Podvodnikov Basin floor is elevated to about 1,250-1,500 m above the deep ocean floor (DOF).

51. The Subcommission agreed with the general location of the submitted BOS (Figure 4) and proceeded to verify the FOS points.

52. At the forty-eighth session, all the proposed FOS points in Nansen, Amundsen and Makarov basins were accepted by the Subcommission (Figure 9).

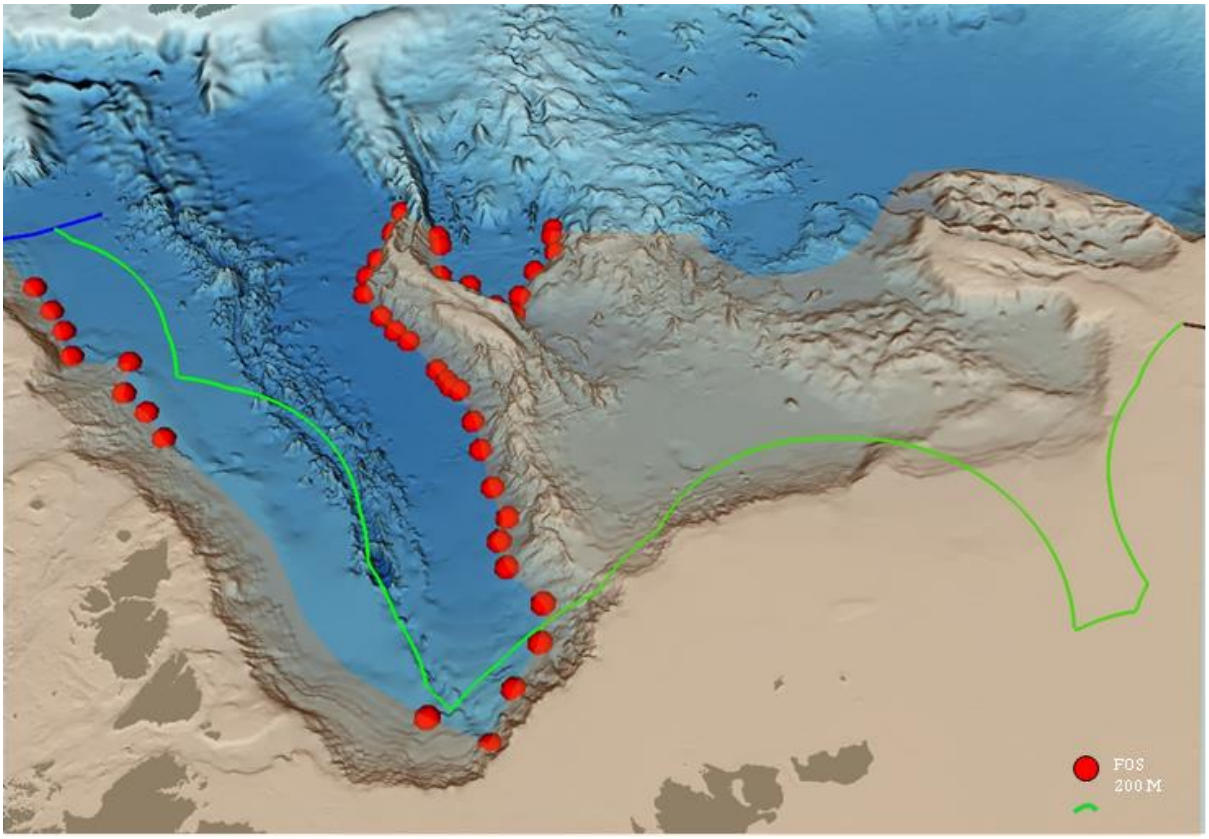


Figure 9*. FOS points accepted by the Subcommission at the forty-eighth session.

53. Initially, the Russian Federation did not include any FOS points in Canada Basin in the Submission, since the BOS in that basin is located seaward of Section VII Line, which is constructed along the projected maritime boundary between the Russian Federation and the United States of America according to the agreement referred to in paragraph 9 of these Recommendations (Figure 1). However, the Subcommission requested the Delegation to provide FOS points and related information to verify that the outer edge of the continental margin and the applicable constraints in that region lie beyond that line.

54. In Addendum 2, the Russian Federation submitted FOS points in Canada Basin as well as additional FOS points related to Lomonosov Ridge, Mendeleev-Alpha Rise, and Makarov Basin.

55. At the end of its consideration, a total of 69 FOS points were accepted by the Subcommission (Table 1 of annex I; Figures 10 and 11). These include seven FOS points that were revised by the Delegation based on the interactions with the Subcommission: FOS_7_recom; FOS_1439A_Recom; FOS_LA-01_Rev; FOS_LA-05_Rev; FOS_CAN-01_Rev; FOS_CAN-08_Rev; and FOS_CHU-11_Rev.

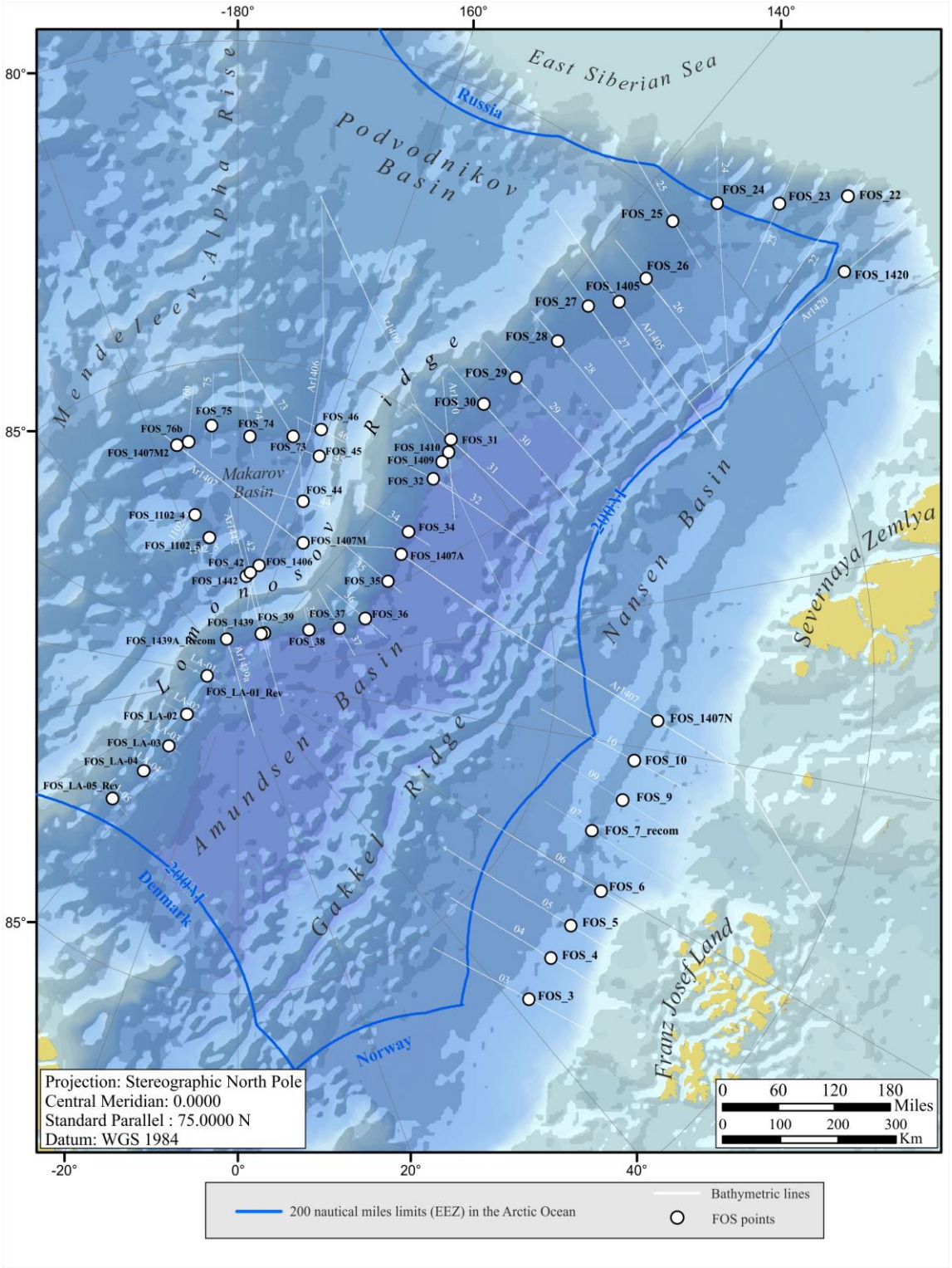


Figure 10. FOS points in Amundsen, Nansen and Makarov basins.

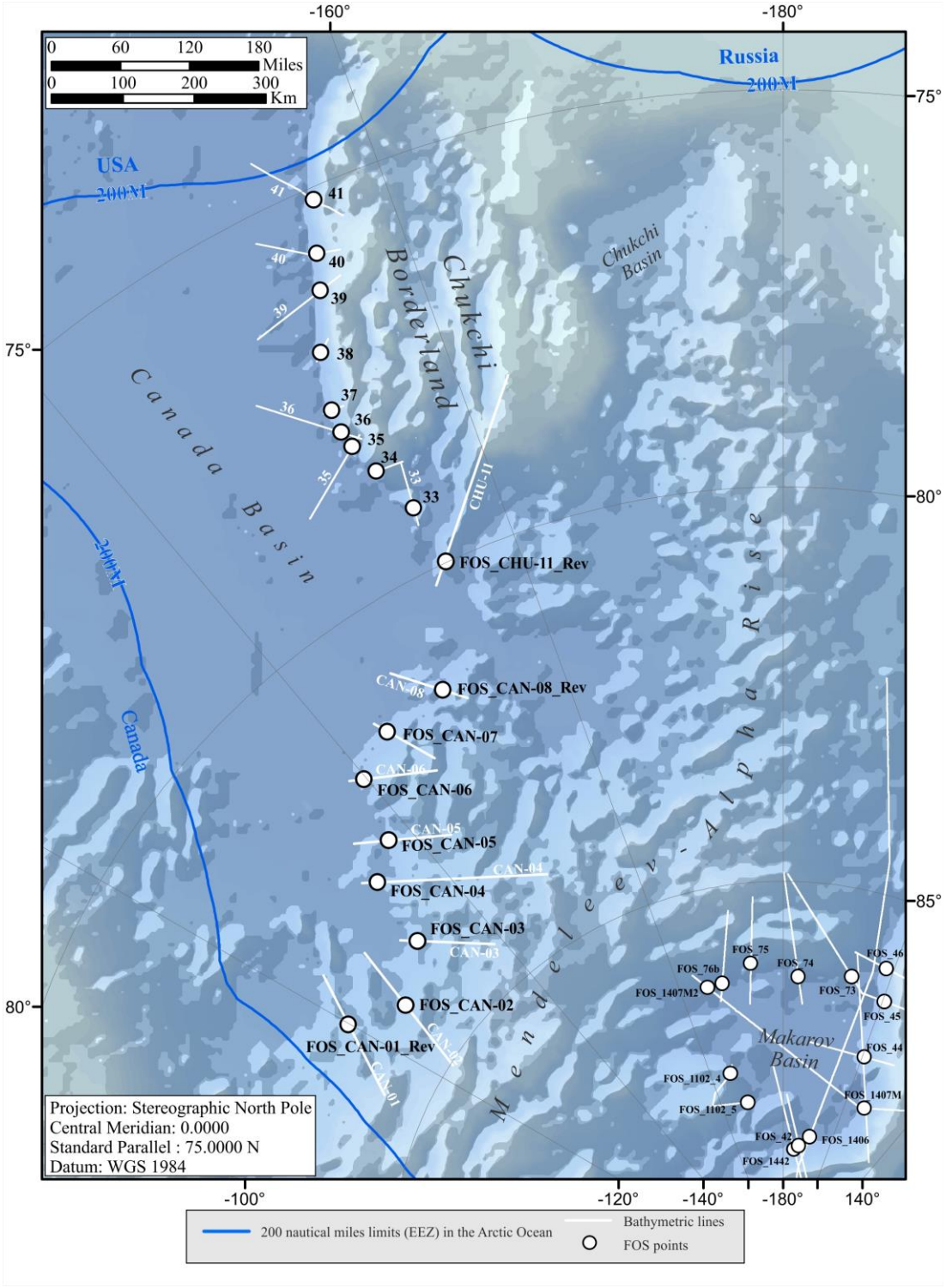


Figure 11. FOS points in Canada and Makarov basins.

56. Thirty-two out of the 69 accepted FOS points are considered critical as they generate formula points beyond the 200 M limits of the Russian Federation in the Arctic Ocean and therefore contribute to the establishment of the outer edge of the continental margin.

57. In Nansen Basin, seven out of eight FOS points are critical for the establishment of the outer edge of the continental margin (Figure 12).

58. In Amundsen Basin, nine out of 29 FOS points are critical for the establishment of the outer edge of the continental margin (Figure 12).

59. In Makarov Basin, none of the 14 FOS points are critical for the establishment of the outer edge of the continental margin but they were used to demonstrate that there is a complete overlap of the margin defined by the 60 M formula lines generated from these FOS points such that the basin becomes part of the continental margin in accordance with article 76 (Figures 12 and 13).

60. In Canada Basin, 16 out of 18 FOS points are critical for the establishment of the outer edge of the continental margin (Figure 13).

2.2 Recommendations

61. Based on the consideration of the data and information provided in the Submission, the Commission concludes that the FOS points illustrated in Figures 10 to 13 and listed in Table 1 of annex I fulfill the requirements of article 76 and the Guidelines. The Commission recommends that these FOS points should form the basis for the establishment of the outer edge of the continental margin of the Russian Federation in the Arctic Ocean.

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

62. The outer edge of the continental margin of the Russian Federation in the Arctic Ocean shall be established in accordance with article 76, paragraph 4(a), of the Convention.

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

63. In Amundsen Basin, the outer edge of the continental margin is based on fixed points not more than 60 M from 6 FOS points, in accordance with article 76: FOS_36, FOS_37, FOS_38, FOS_LA-03, FOS_LA-04, FOS_LA-05_Rev (Figure 12).

64. In Amerasian Basin, the Russian Federation delineated the outer limit of the continental shelf beyond 200 M along Section VII Line (Figures 1 and 2). In order for the area landward of Section VII line to be part of the continental margin of the Russian Federation under article 76, the Subcommission needed to ascertain the location of the outer edge of the continental margin in Canada Basin. Based on the data and information provided by the Delegation, which included FOS points and their corresponding 60 M formula line, the Subcommission concluded that the outer edge of the continental margin in Canada Basin lies beyond Section VII Line.

65. Therefore, the outer edge of the continental margin in the Canada Basin is based on fixed points not more than 60 M from 16 FOS points, in accordance with article 76: FOS_CAN-01_Rev, FOS_CAN-04, FOS_CAN-05, FOS_CAN-06, FOS_CAN-07, FOS_CAN-08_Rev, FOS_CHU-11_Rev, 33, 34, 35, 36, 37, 38, 39, 40, and 41 (Figure 13).

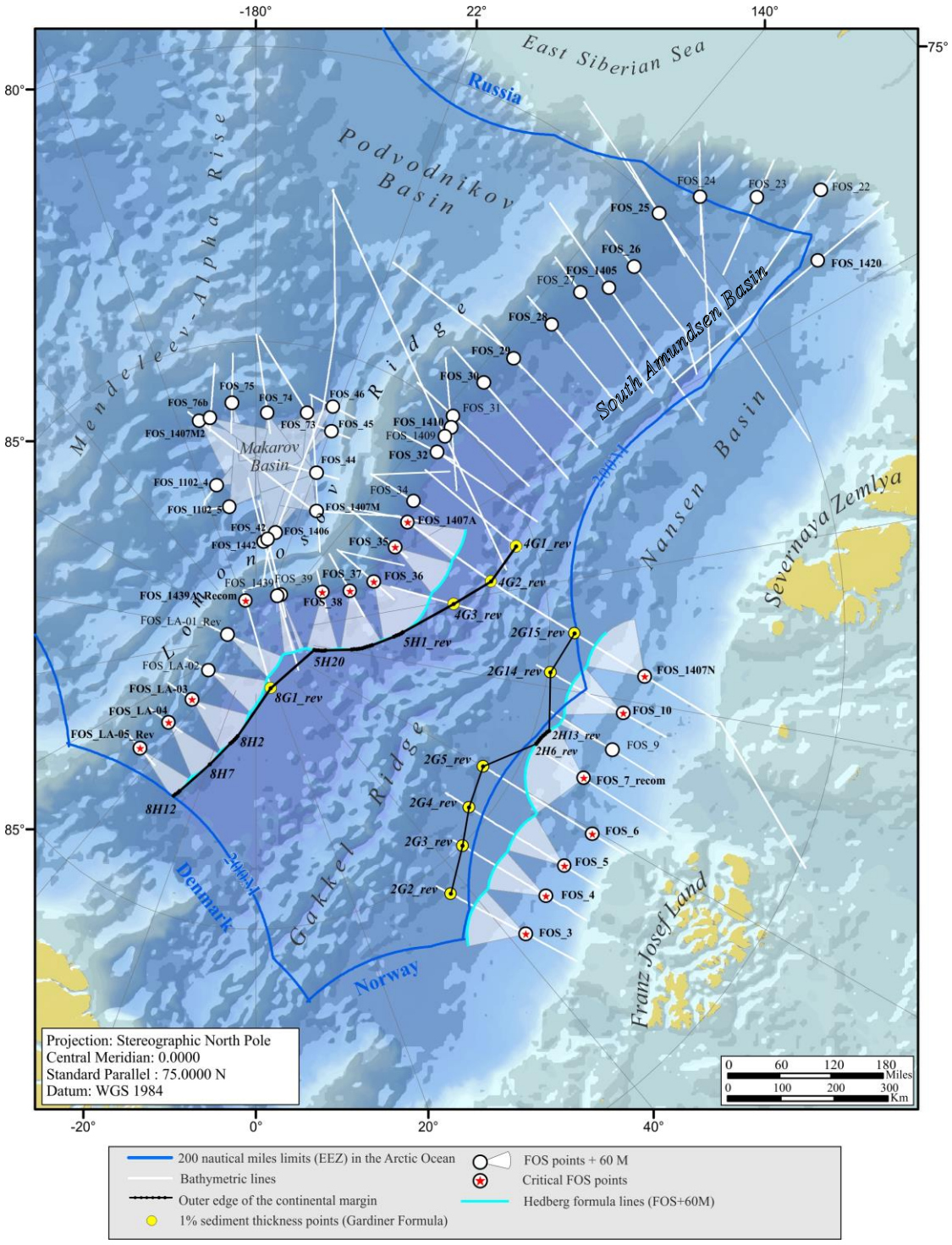


Figure 12. Outer edge of the continental margin in Amundsen and Nansen basins based on the 60 M formula from critical FOS points and one percent sediment thickness formula points.

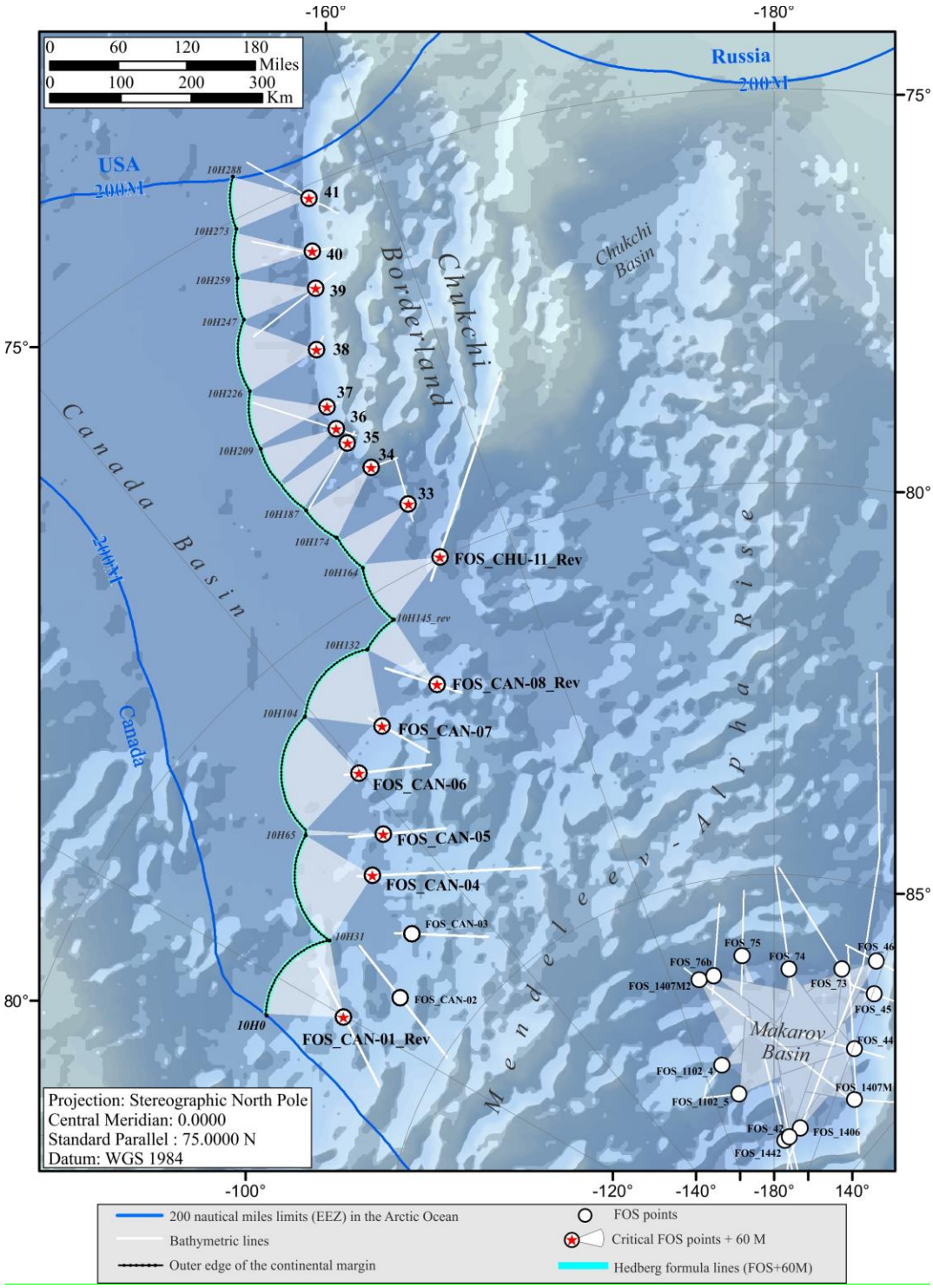


Figure 13. Outer edge of the continental margin in Canada Basin based on the 60 M formula from critical FOS points.

66. The Subcommission agreed with the methodology by which the Russian Federation established the twenty-two 60 M formula points (Table 2 of annex I) in Amundsen and Canada basins.

3.2 The application of the one percent sediment thickness formula (article 76, paragraph 4(a)(i))

67. In Nansen and Amundsen basins, the Russian Federation initially submitted 17 sediment thickness fixed points, based on article 76, paragraph 4 (a)(i), of the Convention. Subsequently, one additional sediment thickness fixed point (2G15_Rev) was submitted.

68. The Subcommission accepted 10 of the submitted sediment thickness fixed points after considering the data and information provided, the seismic interpretation, the methods of depth conversion, the distance calculations, as well as the demonstration of sediment continuity in accordance with paragraph 8.5.3 of the Guidelines. These points were used to delineate the outer edge of the continental margin (Figure 14).

69. Southwards from the accepted fixed point 4G1_rev towards the Laptev Sea, eight sediment thickness formula points were submitted by the Russian Federation to establish the outer edge of the continental margin in the south Amundsen Basin (Figure 14). At the forty-ninth session, the Subcommission requested further clarification from the Delegation regarding the data and methodology used in determining these sediment thickness formula points. No further information had been received from the Delegation on these points, and therefore, they were not accepted for use in establishing the outer edge of the continental margin.

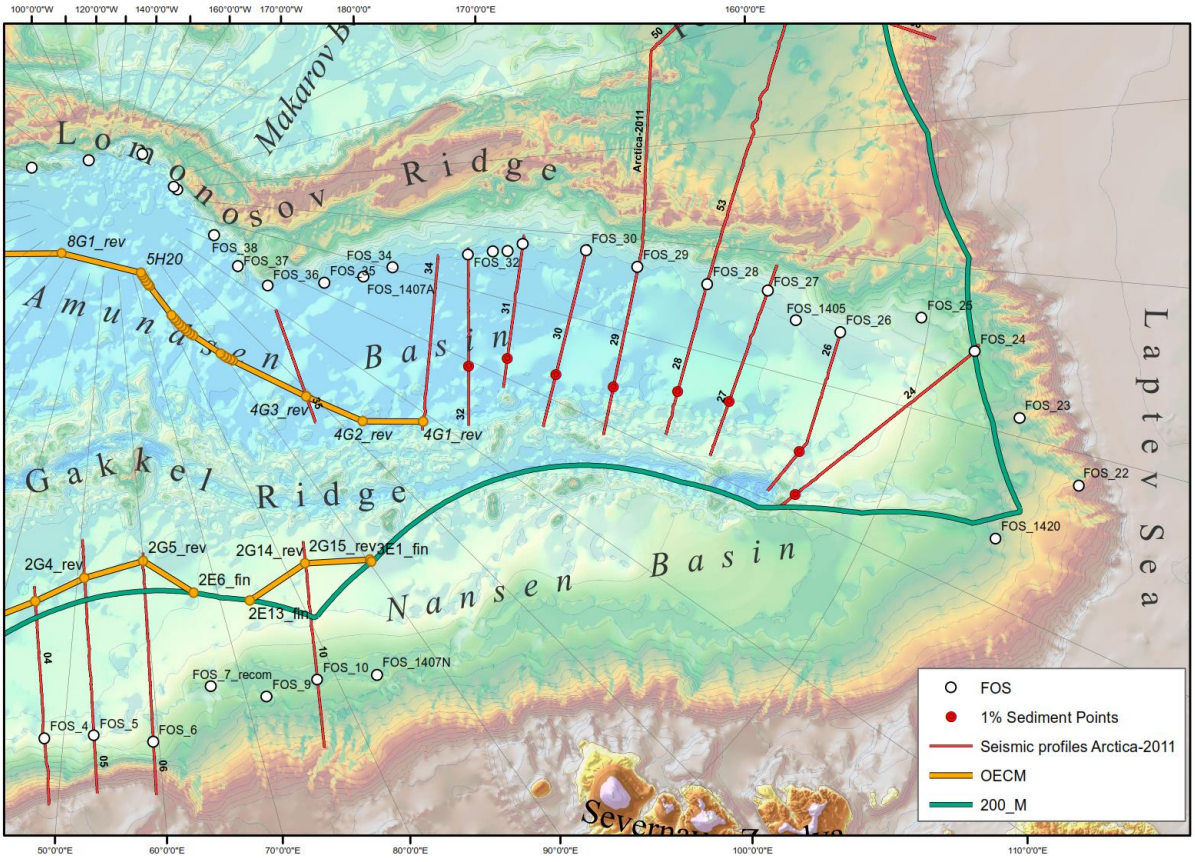


Figure 14*. Outer edge of the continental margin (OECM) in Amundsen and Nansen basins. In Amundsen Basin, accepted 1% sediment thickness points define the OECM up to point 4G1_rev. Beyond this point towards the Laptev Sea, eight submitted sediment thickness points (red points) determined on seismic profiles (red lines) through FOS points along Lomonosov Ridge (white points) were not accepted.

70. From the fiftieth through to the fifty-second sessions, the Subcommission received additional data and information for alternative proposals for the outer edge of the continental margin in south Amundsen Basin. These included alternative sediment thickness points, new sediment thickness points along the Gakkel Ridge axial valley, new FOS points based on a re-interpretation of the continent-ocean boundary, as well as the results of gravity modelling and an integrated seismic-gravity method to estimate sediment thickness. None of these proposals were accepted by the Subcommission.

71. At the fifty-first session, the Subcommission also examined newly submitted BOS and FOS points in south Nansen Basin, determined based on the presence of mass transport deposits (MTD). However, the Subcommission found that the data and information provided did not support the presence of MTD. The proposed BOS and FOS points were not accepted. It is the view of the Subcommission that the BOS in south Nansen Basin should be in the region where there is a clear

morphological change in gradient and that the FOS points should be identified within that BOS region.

72. At the fifty-second session, the Delegation submitted a new set of FOS points in south Nansen Basin based on evidence to the contrary rule (article 76, paragraph 4(b)). The Subcommission examined the data and information and concluded that there was insufficient evidence to support the BOS and FOS in the south Nansen Basin based on evidence to the contrary.

73. At the fifty-fourth session, the Delegation submitted data and information to classify Gakkel Ridge as a submarine ridge according to article 76, and therefore part of the continental margin. Based on the submitted data and information, the Subcommission concluded that Gakkel Ridge is not morphologically connected with the Laptev Sea continental slope and, therefore, cannot be classified as a submarine ridge according to article 76.

74. The Subcommission concluded that all the additional data and information referred to in paragraphs 70 to 73 did not support the alternative proposals for the outer edge of the continental margin in south Amundsen and south Nansen basins.

75. Following these exchanges with the Subcommission, the Delegation used the ten accepted fixed points (Figure 12, Table 2 of annex I) to establish the outer edge of the continental margin, as follows:

- Six points in Nansen Basin: 2G2_rev, 2G3_rev, 2G4_rev, 2G5_rev, 2G14_rev, and 2G15_rev; based on FOS points FOS_3, FOS_4, FOS_5, FOS_6, FOS_10, and FOS_1407N, respectively.
- Four points in Amundsen Basin: 4G1_rev, 4G2_rev, 4G3_rev, and 8G1_rev; based on FOS points FOS_1407A, FOS_35, FOS_35, and FOS_1439A_Recom, respectively.

76. The Subcommission agreed with the methodology by which the Russian Federation established these ten sediment thickness fixed points (Table 2, annex I).

3.3 Configuration of the outer edge of the continental margin

77. In Nansen Basin, the outer edge of the continental margin of the Russian Federation extends north of the Barents-Kara Sea shelf from point 2G2_rev to point 2G15_rev and is defined by 14 fixed points (Figure 12).

78. In Amundsen Basin, the outer edge of the continental margin of the Russian Federation extends south of Lomonosov Ridge from point 4G1_rev to point 8H12 and is defined by 35 fixed points (Figure 12).

79. In Canada Basin, the outer edge of the continental margin of the Russian Federation extends south of Mendeleev-Alpha Rise towards Chukchi Borderland from point 10H0 to point 10H288 and is defined by 289 fixed points (Figure 13).

80. In the Arctic Ocean, the outer edge of the continental margin of the Russian Federation beyond 200 M is based on 338 fixed points on the 60 M and the sediment thickness formula lines as described in sections 3.1 and 3.2, in accordance with article 76, paragraph 7, of the Convention. The fixed points are listed in Table 2 of annex I to these Recommendations.

3.4 Recommendations

81. The Commission recommends that the points listed in Table 2 of annex I to these Recommendations be used as the basis for delineating the outer limits of the continental shelf in this region, subject to the application of the relevant constraints (see chapter 4).

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

82. Pursuant to article 76, paragraph 5, the fixed points comprising the line of the outer limits of the continental shelf on the seabed, drawn in accordance with paragraph 4 (a)(i) and (ii), either shall not exceed 350 M from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 M from the 2,500 m isobath, which is a line connecting the depth of 2,500 m. Pursuant to article 76, paragraph 6, notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 M from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs.

4.1 The construction of the distance constraint line

83. The distance constraint line in Nansen and Amundsen basins was constructed by arcs at a distance of 350 M from the baselines of the Russian Federation on the Barents-Kara Sea shelf (Figure 15).

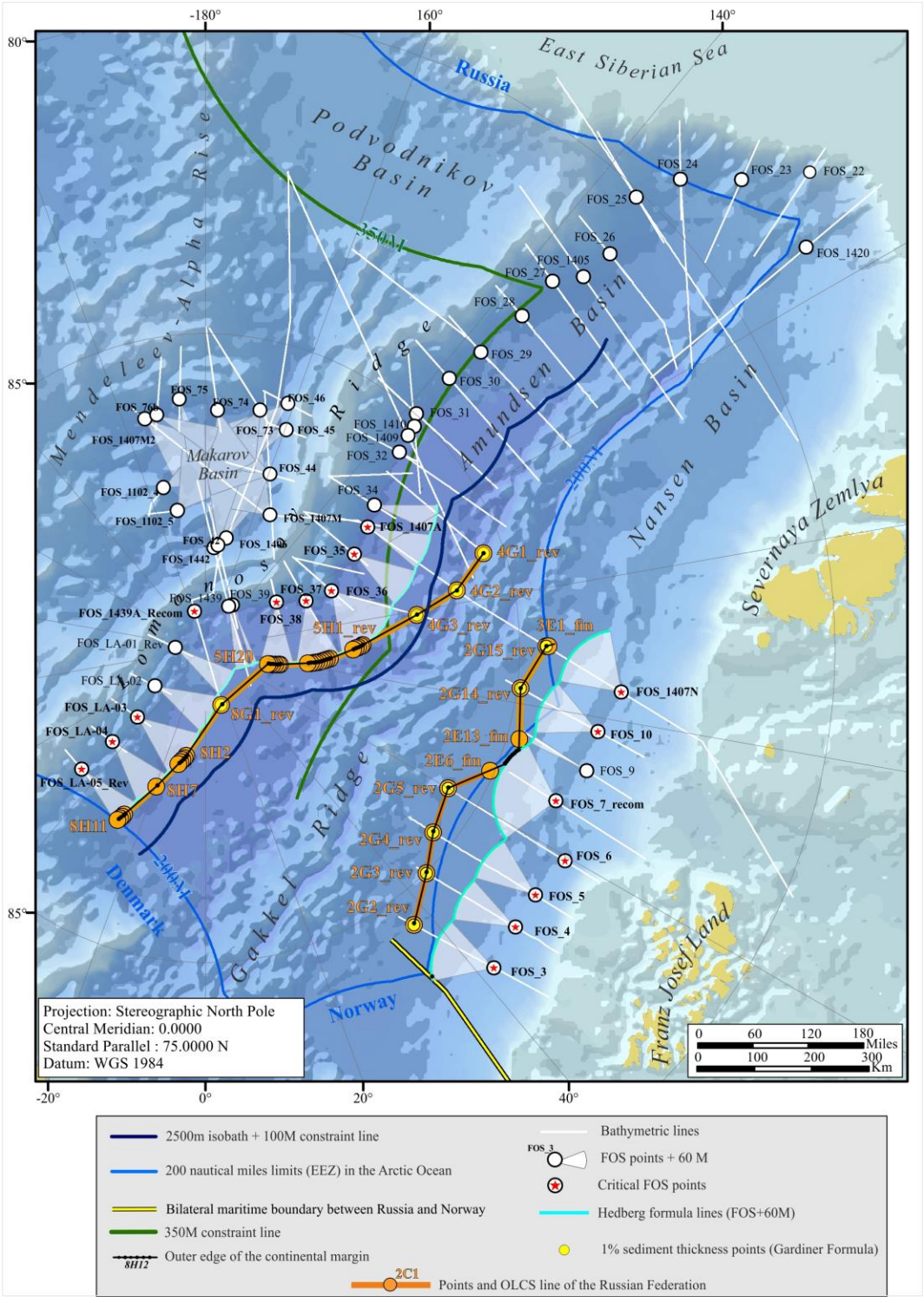


Figure 15. FOS points, the outer edge of the continental margin, depth and distance constraint lines, and the outer limit of the continental shelf in Nansen and Amundsen basins.

84. In Canada Basin, the distance constraint line, constructed by arcs at a distance of 350 M from the baselines on the East Siberian Shelf, is located entirely landward of the outer edge of the continental margin (Figure 16).

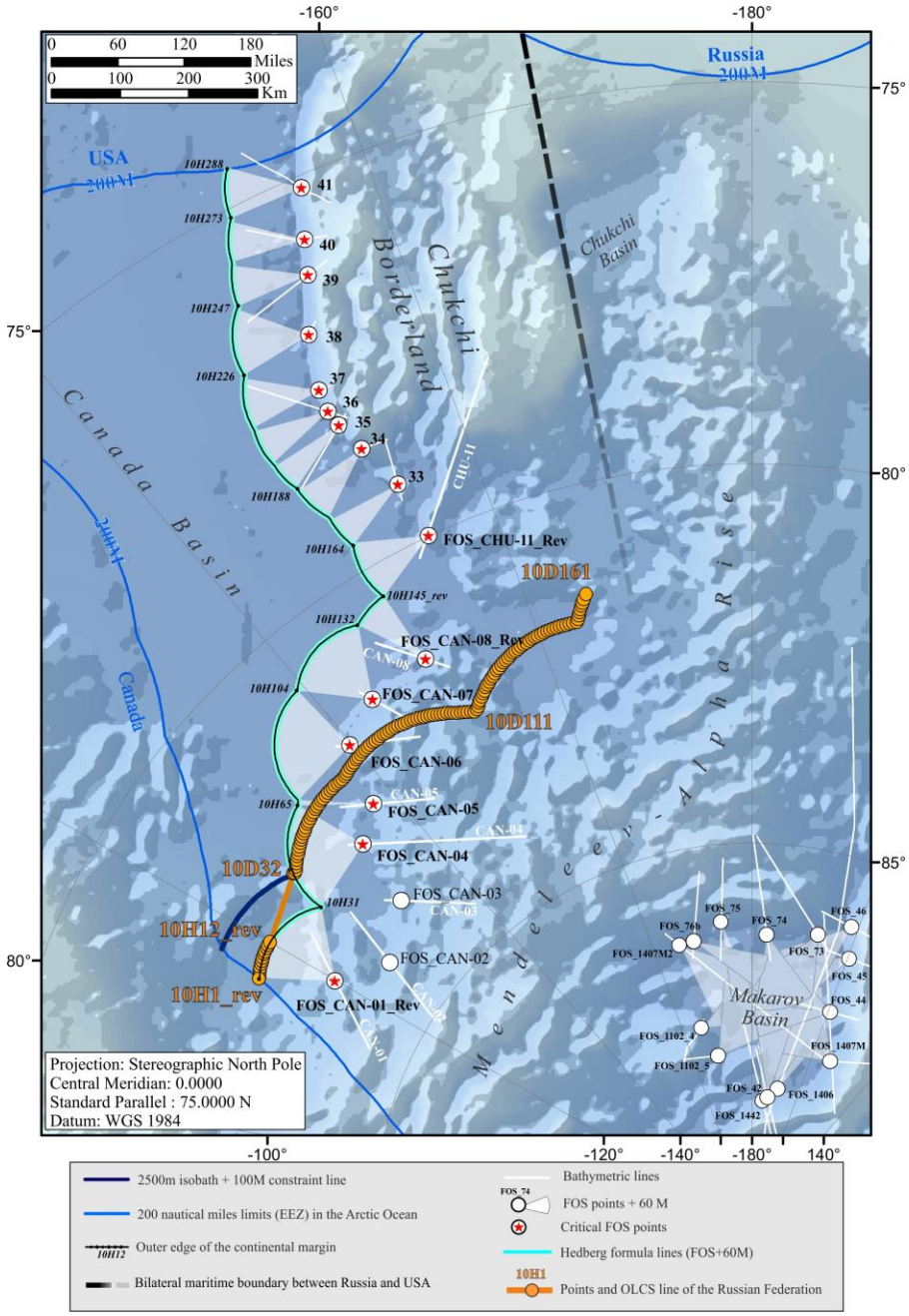


Figure 16. FOS points, outer edge of the continental margin, depth constraint, and outer limit of the continental shelf in Canada Basin. From point 10D32 towards Chukchi Borderland, the outer limits of the continental shelf are delineated by the depth constraint.

85. The Commission agrees with the methodology applied by the Russian Federation in the construction of these distance constraint lines.

4.2 The construction of the depth constraint lines

86. In the Submission, the Russian Federation invoked the depth constraint as it considers Lomonosov Ridge, Mendeleev-Alpha Rise, and the intervening Podvonikov Basin, as submarine elevations that are natural components of the continental margin under article 76, paragraph 6.

87. To determine if the depth constraint is applicable in the establishment of the outer limits of the continental shelf in the Arctic Ocean, the Subcommission examined the submitted data and information regarding the nature of the above-mentioned seafloor highs.

4.2.1 Consideration and classification of seafloor highs

88. The Russian Federation submitted data and information describing the geological evolution and tectonic model for the Arctic Ocean, including the nature of the seafloor highs, stating the following:

- Lomonosov Ridge, Podvodnikov Basin and Mendeleev Rise are morphological components of the continental margin, under article 76, paragraph 6;
- The BOS was determined on the basis of morphological and bathymetric evidence (according to paragraph 5.4.6 of the Guidelines);
- Seismic data showed that Lomonosov Ridge, Mendeleev Rise, Chukchi Plateau, and the intervening Podvodnikov and Chukchi basins form a single consolidated block of continental crust, referred to in the Submission as the “Central Arctic Submarine Elevation Complex”;
- Seismic data also showed the continental nature of Lomonosov Ridge, Podvodnikov Basin, Mendeleev-Alpha Rise, Chukchi Basin and Chukchi Plateau, as well as their natural prolongation from the Eurasian shelf; and
- The continuity of the sedimentary cover and crustal layers from the Eurasian shelf to Makarov and Canada basins, as well as the lack of a transform fault between Lomonosov Ridge and the Eurasian shelf are additional evidence for the natural prolongation of those seafloor highs from the Eurasian shelf.

89. Based on the above, the Russian Federation concluded that Lomonosov Ridge, Mendeleev-Alpha Rise, Chukchi Plateau, as well as Podvodnikov Basin and Chukchi Basin separating them, have a continental origin and are therefore classified, under article 76, paragraph 6, as submarine elevations that are natural components of the continental margin.

90. The Subcommission examined the submitted geological and geophysical evidence, including (i) seismic, gravity and magnetic evidence for the continental nature of the acoustic basement; (ii) the crustal thickness across the margin from the East Siberian Shelf to Canada and Makarov basins; (iii) the location of the continent-ocean transition (COT) zone; (iv) the results of the geological and geochemical

analyses of continental basement rock samples obtained from these seafloor highs; (v) seismic evidence of continuous sedimentary cover indicating geological continuity from the East Siberian Shelf, over Lomonosov Ridge, Podvodnikov Basin and Mendeleev-Alpha Rise, into Makarov and Canada basins; (vi) seismic evidence for a common geological and tectonic history of the entire region since Middle Miocene

4.2.2 Lomonosov Ridge

91. Based on the submitted data and information, Lomonosov Ridge is a continental crustal block that rifted off the Barents-Kara Sea margin due to seafloor spreading along Gakkel Ridge at circa 56 Ma (Jokat et al., 1992; Langinen et al., 2009; Spencer et al., 2011; Grantz et al., 2011; Gaina et al. 2015, Nikishin et al., 2018). This rifted continental block, with a crustal thickness of about 20-24 km, subsided below sea level but remained a seafloor high throughout the evolution of the margin. The crustal thickness map in Figure 17 highlights the areas of thick crust underneath Lomonosov Ridge, Mendeleev-Alpha Rise and Chukchi Plateau.

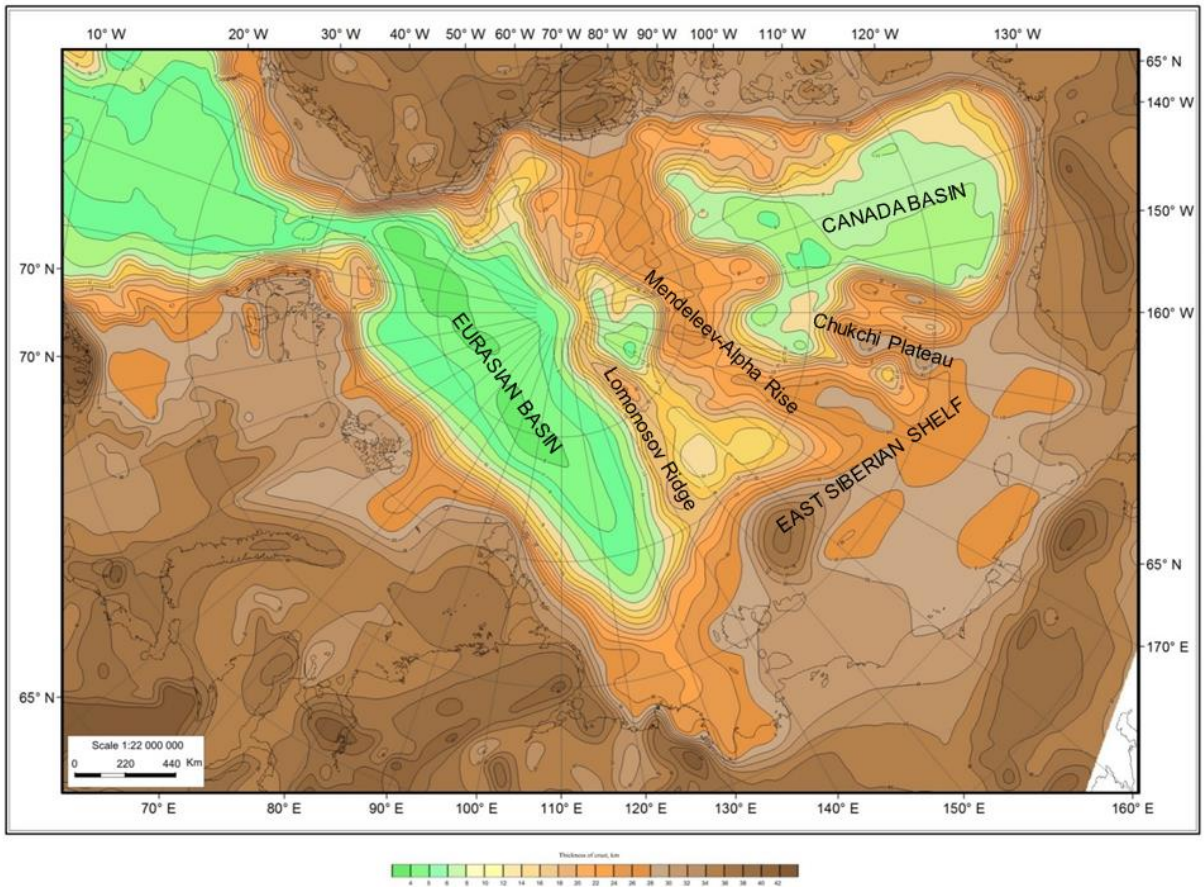


Figure 17. Total Earth crustal thickness map of the Arctic Ocean based on seismic/density modelling.

92. Seismic reflection data provided in the Submission (Figure 18) clearly show a continuous sedimentary cover that extends from the East Siberian Shelf to the Lomonosov Ridge as a single continental margin, since post-Campanian (circa 74 Ma).

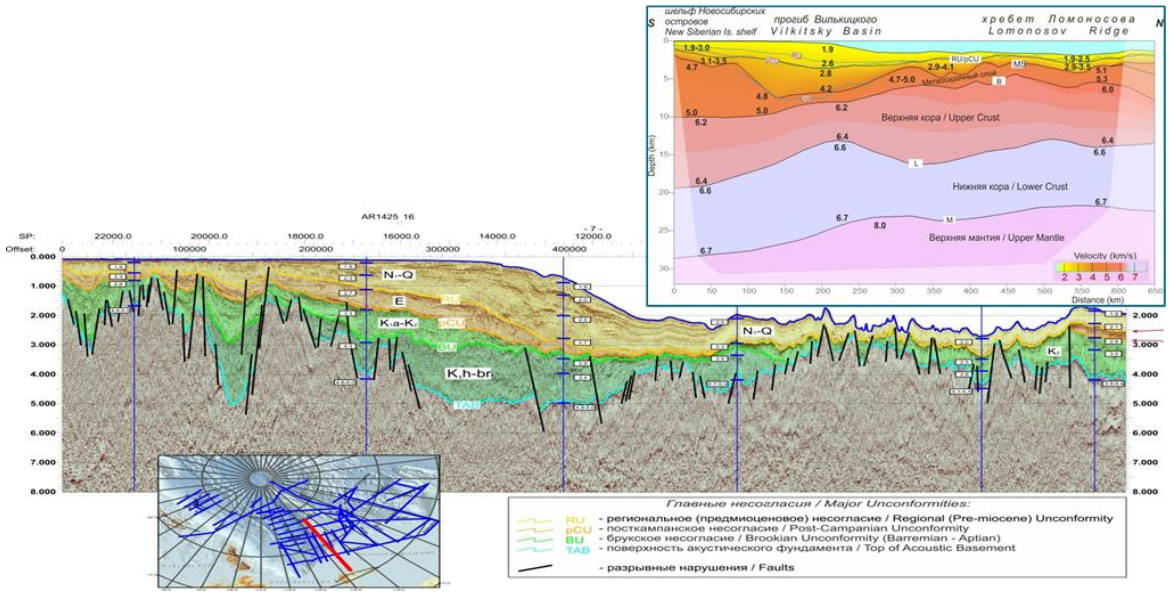


Figure 18. Seismic profiles across East Siberian Shelf to Lomonosov Ridge showing the continuity of sedimentary cover above the continental basement.

93. Based on the above considerations, including the continental crustal origin of Lomonosov Ridge and its common sedimentary history with the East Siberian Shelf, the Subcommission concluded that Lomonosov Ridge is geologically continuous with, and an integral part of, the East Siberian margin. With regard to the presence, or absence, of a transform or strike-slip fault between Lomonosov Ridge and the Eurasian shelf, the Subcommission acknowledged that there may be differences in the interpretation in the international literature. However, based on its consideration of the seismic evidence and related information provided in the Submission, the Subcommission was of the view that the presence of such a fault does not have any impact on the submerged prolongation and geological continuity of the margin from the Eurasian Shelf to Lomonosov Ridge.

94. Hence, the Subcommission considered Lomonosov Ridge as a submarine elevation that is a natural component of the margin in accordance with article 76, paragraph 6.

4.2.3 Mendeleev-Alpha Rise

95. Gravity anomalies and velocity profiles submitted by the Delegation indicate that Mendeleev-Alpha Rise and Chukchi Plateau are also underlain by a relatively thick, extended crust (28-29 km and 33-34 km, respectively; Figures 17 and 19).

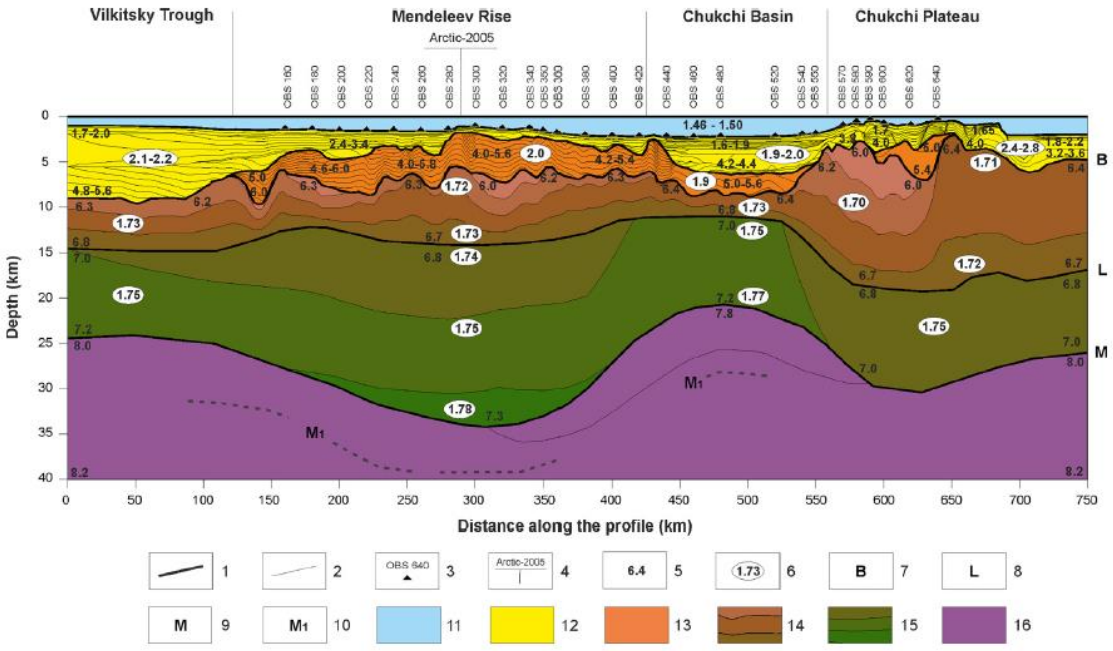


Figure 19. Velocity model of the crust and upper mantle in the deep seismic sounding (DSS) profile Arctic-2012, showing thick crust underneath Mendeleev Rise and Chukchi Plateau.

96. The Subcommission understood that the scientific community is yet to develop consensus on the formation and evolution of Amerasian Basin, and the Mendeleev-Alpha Rise complex in this context (Lawver & Scotese, 1990; Funck et al., 2011; Døssing et al., 2013, 2017; Evangelatos et al. 2017; Kashubin et al., 2018; Jackson & Chian, 2019; Nikishin et al., 2022). Nonetheless, the Subcommission was in agreement with the continental nature of the crust of Mendeleev-Alpha Rise as extending from the east Siberian margin, as demonstrated with geophysical and basement rock sample data.

97. The Subcommission further understood that the continental crust was subsequently intruded by magmatic rocks during High Arctic Large Igneous Province (HALIP) magmatic events at circa 130-120 Ma and circa 100-80 Ma. The geographic extent of the HALIP is indicated by the magnetic anomalies known as the High Arctic Magnetic High (HAMH) (Døssing et al., 2017; Oakey and Saltus, 2016). Due to its relatively thickened crust, Mendeleev-Alpha Rise is a surface geomorphological manifestation of a larger region that was affected by the HALIP magmatism that extends across the Arctic Basin.

98. After circa 80 Ma, the shelf progradation resulted in a continuous sedimentary cover over the entire margin from North Chukchi/Vilkitsky Basin into Mendeleev-Alpha Rise region.

99. The continuous sedimentary cover, which is traceable on seismic data across the East Siberian Shelf and adjacent seafloor highs and basins, indicates that Lomonosov Ridge, Mendeleev-Alpha Rise and Podvodnikov Basin experienced a common sedimentary history since Late Cretaceous (Figure 20).

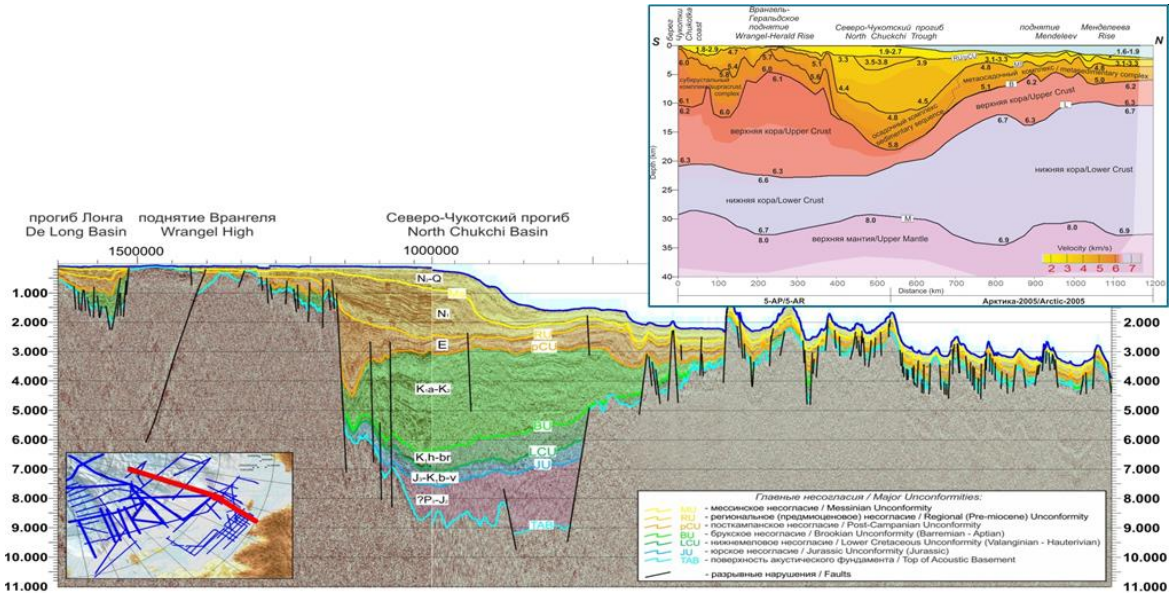


Figure 20. Seismic profiles across the East Siberian Shelf to Mendeleev-Alpha Rise showing the continuity of sedimentary cover above the continental basement.

100. In the view of the Subcommission, the lateral extension of the HAMH/HALIP underneath the East Siberian Shelf is evidence for the geological continuity of this shelf with Mendeleev-Alpha Rise. Therefore, Mendeleev-Alpha Rise and its associated HALIP magmatic rocks constitute essential elements in the development of the continental margin of East Siberia. In addition, Mendeleev-Alpha Rise and Lomonosov Ridge acted as structural barriers on either side of Podvodnikov Basin, resulting in the accumulation of more than 6 km of sediments in this basin.

101. Hence, the Subcommission considered Mendeleev-Alpha Rise as a submarine elevation that is a natural component of the margin in accordance with article 76, paragraph 6.

4.2.4 Podvodnikov Basin

102. A crustal model along the Trans-Arctic transect 1989-1991 from Vilkitsky Basin to Makarov Basin, provided in the Submission, shows thickened crust underneath Podvodnikov Basin (about 20-28 km), which is similar to Lomonosov Ridge and Mendeleev-Alpha Rise (Figure 21).

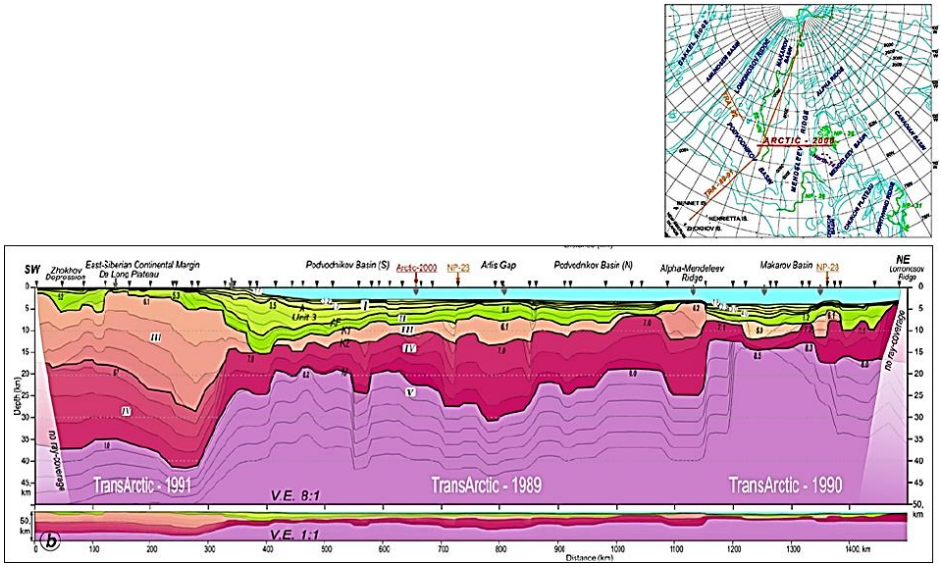


Figure 21. Crustal model along the Trans-Arctic transect 1989-1991 from East Siberian continental margin to Makarov Basin showing the thickened crust (about 20-28 km) underneath Podvodnikov Basin.

103. As mentioned in paragraph 100, Lomonosov Ridge and Mendeleev-Alpha Rise acted as structural barriers that confined the sediment supply and shelf progradation from East Siberia towards Makarov Basin, resulting in a large sediment accumulation in Podvodnikov Basin. Due to its thickened crust and thick sediment cover, the Podvonikov Basin floor is elevated to circa 1,250-1,500 m above the deep ocean floor (Figures 8 and 22).

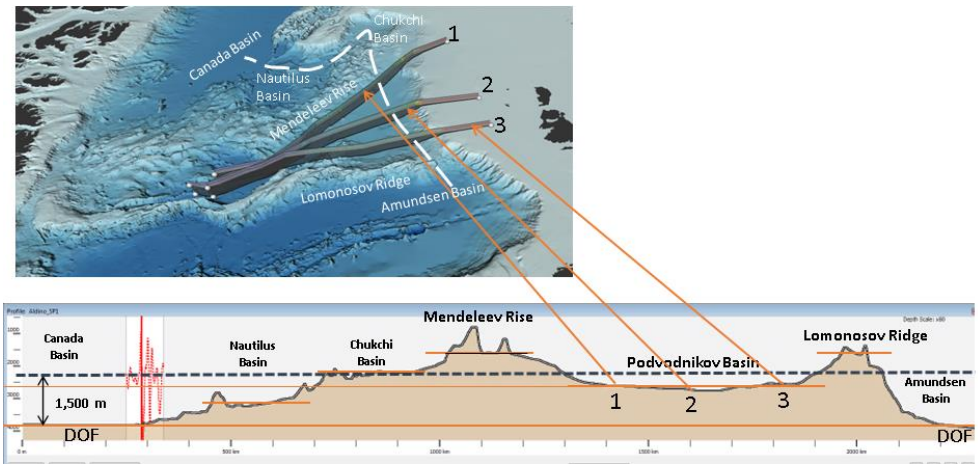


Figure 22*. Morphological analysis of Podvodnikov Basin along a profile from Canada Basin to Amundsen Basin indicated by white dashed line, showing its elevation above the deep ocean floor (DOF) and morphological continuity with the adjacent Lomonosov Ridge and Mendeleev Rise. Points 1, 2, and 3 on the profile are points of intersection with the corresponding dip profiles also shown in Figure 8.

104. Based on the seismic evidence and palinspastic reconstructions, North Chukchi and Podvodnikov basins had prograded northwards and became an integral part of the East Siberian continental margin for more than 260 million years. In addition, the continuous sedimentary cover over Podvodnikov Basin and the adjoining Lomonosov Ridge and Mendeleev-Alpha Rise, landward into North Chukchi Basin on the East Siberian Shelf, indicates a common sedimentation history since Late Cretaceous.

105. Based on the above evidence, in the view of the Subcommission, Podvodnikov Basin is morphologically connected with Lomonosov Ridge and Mendeleev-Alpha Rise as a single sea-floor high that is attached to the East Siberian Shelf, forming an integral part of the sedimentary evolution of the margin. Therefore, Podvodnikov Basin is considered as a submarine elevation that is a natural component of the East Siberian margin in accordance with article 76, paragraph 6.

106. In conclusion, based on the data and information provided in the Submission, the Subcommission agreed with the Russian Federation that Lomonosov Ridge, Mendeleev-Alpha Rise, and Podvodnikov Basin are submarine elevations that are natural components of the margin in accordance with article 76, paragraph 6. Hence, the depth constraint can be applied for the delineation of the outer limits of the continental shelf.

4.3 Application of the constraint lines

107. The Russian Federation submitted data and information on the construction of the depth constraint lines along Lomonosov Ridge and Mendeleev-Alpha Rise. The 2,500 m isobaths were constructed using multibeam bathymetric data (Figures 15 and 16).

108. In the Eurasian Basin, the distance constraint line measured from the baselines of the Russian Federation on the Barents-Kara Sea shelf and the depth constraint line along Lomonosov Ridge intersect in the southern part of Amundsen Basin. Although Lomonosov Ridge lies opposite to the Barents-Kara Sea shelf, taking into account paragraph 2.3.9 of the Guidelines, the Commission concluded that Lomonosov Ridge, as a submarine elevation according to article 76, is a continuous part of, and not separate from, the continental margin of the Russian Federation.

109. Since Lomonosov Ridge and the Barents-Kara Sea shelf are part of a continuous continental margin, either constraint can be used to establish the outer limits of the continental shelf.

110. In Amundsen Basin, the outer edge fixed points 8H11 to 4G3_rev lie landward of the depth constraint line and therefore define the outer limit of the continental shelf. Southeast of fixed point 4G3_rev, the outer edge fixed points 4G2_rev and 4G1_rev lie seaward of the depth constraint line but landward of the distance constraint line. Therefore, 4G2_rev and 4G1_rev also define the outer limits of the continental shelf (Figure 15).

111. In Nansen Basin, only the distance constraint is applied and therefore the outer edge of the continental margin defines the outer limit of the continental shelf, as determined by fixed points 3E1_fin to 2G2_rev (Figure 15).

112. In Canada Basin, the Russian Federation applied the depth constraint along Mendeleev-Alpha Rise to the outer edge of the continental margin to define the outer limit of the continental shelf fixed points 10D161 to 10H1_rev (Figure 16).

113. The Subcommission agreed with the methodology used by the Russian Federation in the construction of the depth constraint lines to be applied to the continental margin in the Arctic Ocean.

4.4 Recommendations

114. The Commission recommends the use of the constraint lines as applied by the Russian Federation to establish the outer limits of the continental shelf in the Arctic Ocean (Figures 15 and 16).

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

115. In Amundsen Basin the outer limit consists of 34 fixed points established in accordance with article 76 (Figure 23; Table 3 of annex I).

116. In Nansen Basin, the outer limit consists of nine fixed points established in accordance with article 76. Points 3E1_fin, 2E13_fin and 2E6_fin are located at the intersection of the formulae line with the 200 M line of the Russian Federation measured from the baselines of the Barents-Kara Sea shelf (Figure 23; Table 3 of annex I).

117. The outer limit in Amundsen Basin and the outer limit in Nansen Basin are not connected (see sections 3.2 and 3.3; Figure 23).

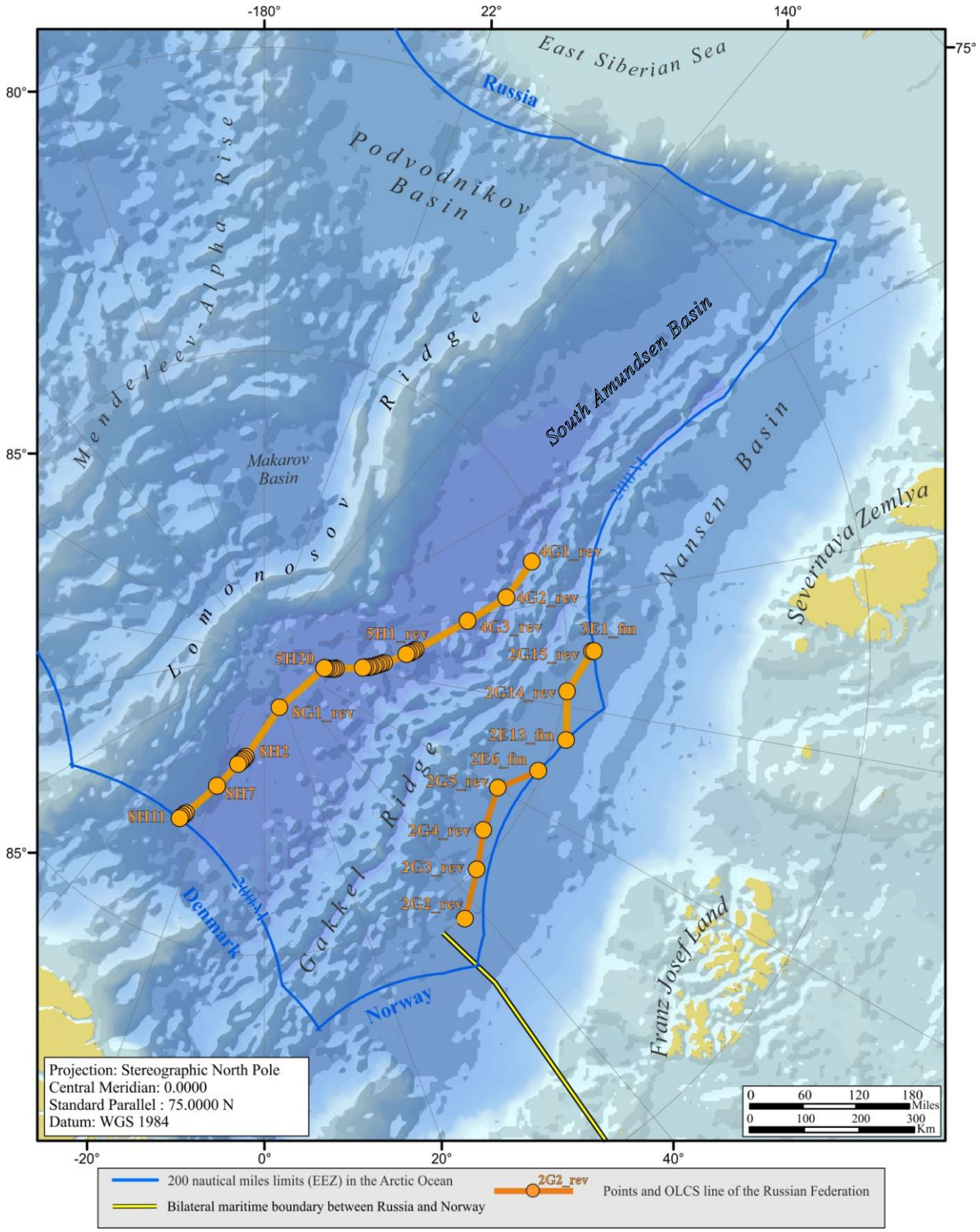


Figure 23. Outer limits of the continental shelf of the Russian Federation in Amundsen and Nansen basins, and their defining fixed points, connected by straight lines not exceeding 60 M in length.

118. In Canada Basin, the outer limit consists of 142 fixed points established in accordance with article 76 along Mendeleev-Alpha Rise up to the 200 M line of Canada (Figure 24; Table 3 of annex I).

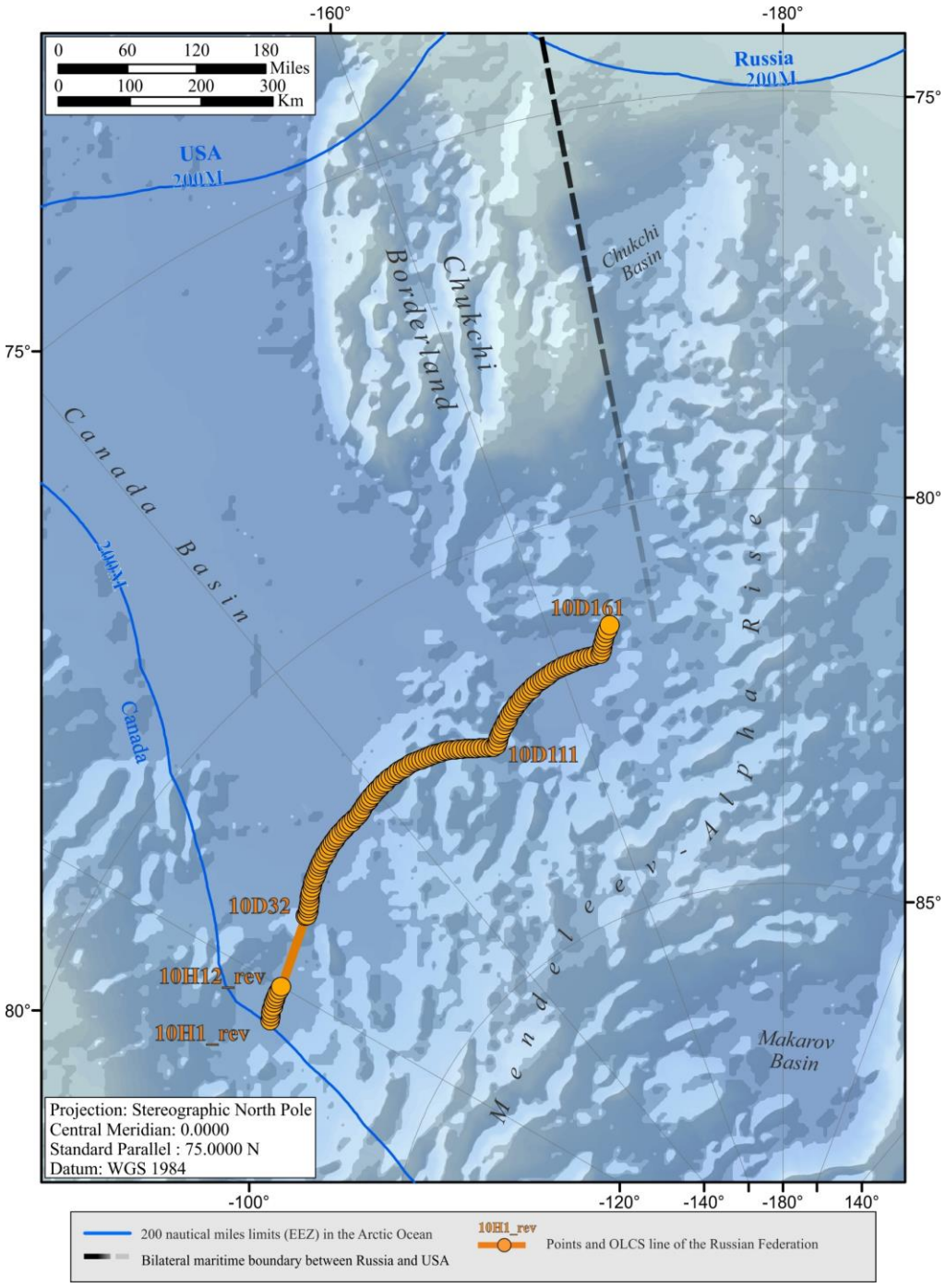


Figure 24. Outer limit of the continental shelf of the Russian Federation in Canada Basin, and its defining fixed points, connected by straight lines not exceeding 60 M in length.

6. Recommendations for the Russian Federation in respect of the Arctic Ocean (article 76, paragraph 8)

119. The Commission recommends that the Russian Federation proceeds to establish the outer limits of the continental shelf from fixed point 2G2_rev to fixed point 3E1_fin in Nansen Basin, from fixed point 4G1_rev to fixed point 8H11 in Amundsen Basin, and from fixed point 10H1_rev to fixed point 10D161 in Canada Basin (Figure 25; Table 3 of annex I).

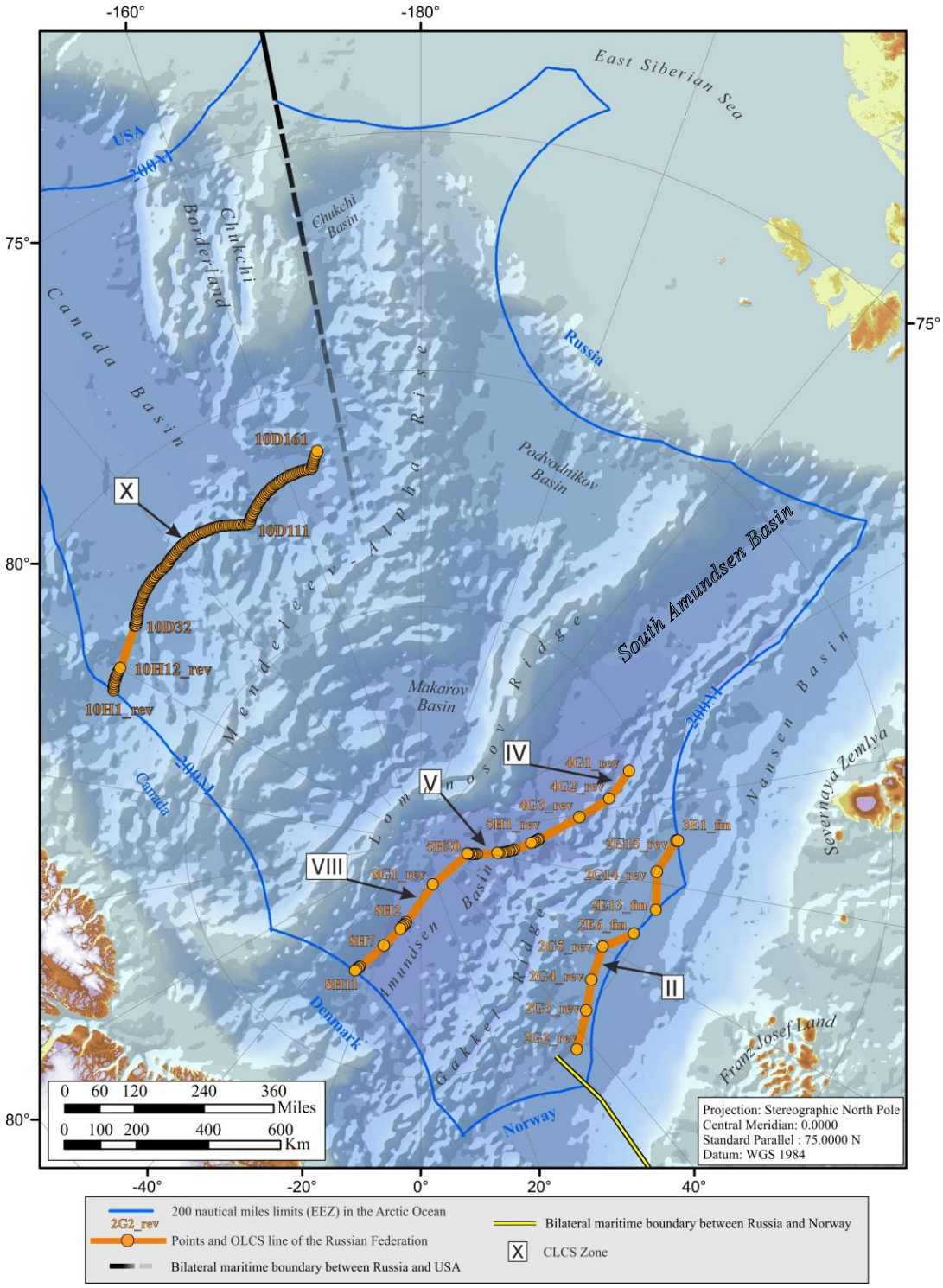


Figure 25. Outer limits of the continental shelf of the Russian Federation in the Arctic Ocean, and their defining fixed points, connected by straight lines not exceeding 60 M in length.

120. Due to insufficient data and information provided for the outer edge of the continental margin, the outer limits of the continental shelf in the southern part of Amundsen Basin have not been defined (see chapters 3 and 5).The Commission recommends that the Russian Federation makes a partial revised submission in respect of its continental shelf in that area.

121. The Commission recognizes that the establishment of the final outer limits of the continental shelf of the Russian Federation in the Arctic Ocean may depend on continental shelf delimitation with neighboring States.

* The illustrative maps marked by an asterisk are prepared by the Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations, upon the request of the Subcommission established to consider the Submission made by the Russian Federation on the basis of the submitted information. The designation employed and the presentation of material on these maps does not imply the expression of any opinion whatsoever on the part of the Secretariat of the United Nations concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries.

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ANNEX I
TABLES OF GEOGRAPHICAL COORDINATES OF: THE FOOT OF THE CONTINENTAL SLOPE POINTS, THE OUTER EDGE OF THE CONTINENTAL MARGIN BEYOND 200 M AND THE OUTER LIMITS OF THE CONTINENTAL SHELF BEYOND 200 M AS RECOMMENDED BY THE COMMISSION, BASED ON THE SUBMISSION BY THE RUSSIAN FEDERATION IN THE ARCTIC OCEAN (DATUM: WGS-84)

Table 1. Coordinates of the foot of the continental slope points

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Depth (m)	Comments
Nansen Basin					
1	**FOS_3**	83.153651	42.077707	3511	
2	**FOS_4**	83.364239	48.043781	3621	
3	**FOS_5**	83.444324	53.211839	3662	
4	**FOS_6**	83.351108	59.419944	3364	
5	**FOS_7_recom**	83.917008	66.457420	3420	Changed. Moved landwards.
6	FOS_9	83.629610	72.192193	3148	Not critical point.
7	**FOS_10**	83.613742	78.013352	3316	
8	**FOS_1407N**	83.347876	83.949667	3304	
Amundsen Basin					
9	FOS_1420	78.538049	123.691817	2847	Not critical point.
10	FOS_22	77.801394	128.215632	2248	Not critical point.
11	FOS_23	78.702963	131.118820	2814	Not critical point.
12	FOS_24	79.396775	134.644782	3136	Not critical point.
13	FOS_25	80.092852	136.280114	3225	Not critical point.
14	FOS_26	81.027554	134.237353	3707	Not critical point.
15	FOS_1405	81.581848	134.481595	3768	Not critical point.
16	FOS_27	81.971821	136.606560	3758	Not critical point.
17	FOS_28	82.703004	136.357903	4040	Not critical point.
18	FOS_29	83.570014	137.033668	4152	Not critical point.
19	FOS_30	84.211930	138.155696	4118	Not critical point.
20	FOS_31	84.981640	137.993602	4053	Not critical point.
21	FOS_1410	85.148805	136.706269	4188	Not critical point.
22	FOS_1409	85.327352	136.367024	4242	Not critical point.
23	FOS_32	85.614603	135.263358	4267	Not critical point.
24	FOS_34	86.474703	130.280578	4282	Not critical point.
25	**FOS_1407A**	86.779882	126.670203	4323	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Depth (m)	Comments
26	**FOS_35**	87.197827	122.261430	4326	
27	**FOS_36**	87.796573	114.508599	4272	
28	**FOS_37**	88.227160	115.156308	4238	
29	**FOS_38**	88.653625	122.959378	4242	
30	FOS_39	89.192266	148.078210	4178	Not critical point.
31	FOS_1439	89.234590	150.845113	4170	Not critical point.
32	**FOS_1439A_Recom**	89.389053	-163.823010	4102	Changed. Moved landwards.
33	FOS_LA-01_Rev	89.519576	-90.945806	4179	Not critical point. Changed. New 2D profile along MB swath.
34	FOS_LA-02	88.996760	-53.112809	4045	Not critical point.
35	**FOS_LA-03**	88.459322	-44.705520	4056	
36	**FOS_LA-04**	87.900966	-44.833421	3878	
37	**FOS_LA-05_Rev**	87.246009	-45.731594	3573	Changed. moved landwards.
Makarov Basin					
38	FOS_1406	88.222122	169.023962	3942	Points are not critical for the OECM establishment. Were used to demonstrate the complete overlap of the 60 M formula lines in the Makarov Basin.
39	FOS_1442	88.409401	174.951378	3933	
40	FOS_1407M	87.650600	153.859224	3957	
41	FOS_1407M2	86.232943	-165.259800	3859	
42	FOS_1102_4	87.365924	-165.339550	3913	
43	FOS_1102_5	87.769260	-168.421030	3901	
44	FOS_42	88.353615	172.925633	3915	
45	FOS_44	87.051356	159.457901	3877	
46	FOS_45	86.299363	159.595554	3898	
47	FOS_46	85.896284	161.257692	3816	
48	FOS_73	86.116225	166.969223	3908	
49	FOS_74	86.184704	177.117236	3780	
50	FOS_75	86.010686	-174.131543	3722	
51	FOS_76b	86.218752	-168.216360	3898	
Canada Basin					
52	**FOS_CAN-01_Rev**	83.631653	-119.86656	3143	Changed. Moved landwards.
53	FOS_CAN-02	84.109721	-125.454380	3165	Not critical point.
54	FOS_CAN-03	83.711005	-132.364510	3384	Not critical point.
55	**FOS_CAN-04**	82.833410	-134.042670	3544	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Depth (m)	Comments
56	**FOS_CAN-05**	82.550039	-137.739290	3573	
57	**FOS_CAN-06**	81.759079	-139.776190	3727	
58	**FOS_CAN-07**	81.470387	-143.929420	3795	
59	**FOS_CAN-08_Rev**	81.411125	-149.806650	3797	Changed. Moved landwards.
60	**FOS_CHU-11_Rev**	79.988000	-154.707970	3787	Changed. New 2d profile along MB swath.
61	**33**	79.204327	-154.291640	3824	
62	**34**	78.578579	-153.164182	3808	
63	**35**	78.164806	-152.526129	3813	
64	**36**	77.940264	-152.320867	3821	
65	**37**	77.637607	-152.447570	3816	
66	**38**	76.931097	-153.393493	3842	
67	**39**	76.224782	-154.825660	3826	
68	**40**	75.785926	-155.473314	3847	
69	**41**	75.153660	-156.410918	3839	

Table 2. Coordinates of fixed points defining the outer edge of the continental margin beyond 200 M and their corresponding FOS points

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Relevant FOS point	Distance to the next OECM point (M)	Article 76 provision invoked
Nansen Basin						
1	2G2_rev	84.489856	36.998100	FOS_3	50.8	76(4)(a)(i)
2	2G3_rev	84.982789	44.467344	FOS_4	39.8	
3	2G4_rev	85.340113	51.055289	FOS_5	44.5	
4	2G5_rev	85.538102	60.014404	FOS_6	59.2	
5	2H6_rev	84.884989	68.824396	FOS_7_recom	2.7	76(4)(a)(ii)
6	2H7_rev	84.872433	69.310734		2.7	
7	2H8_rev	84.857702	69.783058		2.7	
8	2H9_rev	84.840748	70.244559		2.7	
9	2H10_rev	84.821626	70.693859		2.7	
10	2H11_rev	84.800399	71.129661		2.7	
11	2H12_rev	84.777134	71.550761		2.7	
12	2H13_rev	84.751907	71.956050		59.5	
13	2G14_rev	84.947376	82.743956	FOS_10	47.2	76(4)(a)(i)
14	2G15_rev	84.576767	90.296850	FOS_1407N	0.0	
Amundsen Basin						
15	4G1_rev	85.321318	108.835147	FOS_1407A	44.0	76(4)(a)(i)
16	4G2_rev	85.892922	102.902799	FOS_35	44.9	
17	4G3_rev	86.589866	98.906330		59.7	
18	5H1_rev	87.495938	91.099090	FOS_36	1.9	76(4)(a)(ii)
19	5H2	87.524453	90.749882		2.7	
20	5H3	87.564632	90.288854		2.7	
21	5H4	87.605518	89.855884		2.7	
22	5H5	87.647060	89.452955		24.1	
23	5H6	88.013030	85.150291	FOS_37	2.7	
24	5H7	88.053272	84.578662		2.7	
25	5H8	88.094183	84.037580		2.7	
26	5H9	88.135716	83.529636		2.7	
27	5H10	88.177831	83.057564		2.7	
28	5H11	88.220483	82.624416		2.7	
29	5H12	88.263616	82.233593		2.7	
30	5H13	88.307181	81.888786		2.7	
31	5H14	88.351117	81.594124		26.8	
32	5H15	88.783718	77.620921	FOS_38	1.7	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Relevant FOS point	Distance to the next OECM point (M)	Article 76 provision invoked
33	5H16	88.811537	77.264196	FOS_38	2.7	76(4)(a)(ii)
34	5H17	88.855094	76.754689		2.7	
35	5H18	88.899000	76.307161		2.7	
36	5H19	88.943205	75.929841		1.8	
37	5H20	88.972946	75.733443		59.5	
38	8G1_rev	89.060898	15.691505	FOS_1439A_Recom	59.5	76(4)(a)(i)
39	8H2	88.257124	-10.119159	FOS_LA-03	2.7	76(4)(a)(ii)
40	8H3	88.218126	-10.833886		2.7	
41	8H4	88.179858	-11.573012		2.7	
42	8H5	88.142351	-12.334589		2.7	
43	8H6	88.105633	-13.116852		30.4	
44	8H7	87.662206	-19.645107	FOS_LA-04	40.9	
45	8H8	87.050158	-26.019007	FOS_LA-05_Rev	2.7	
46	8H9	87.008697	-26.344755		2.7	
47	8H10	86.967926	-26.696654		2.7	
48	8H11	86.927901	-27.073226		1.1	
49	8H12	86.912058	-27.236541		0.0	
Canada Basin						
50	10H0	82.740150	-116.138339	FOS_CAN-01_Rev	0.9	76(4)(a)(ii)
51	10H1_rev	82.733796	-116.245986		2.7	
52	10H2_rev	82.716544	-116.572221		2.7	
53	10H3_rev	82.700929	-116.902814		2.7	
54	10H4_rev	82.686972	-117.237305		2.7	
55	10H5_rev	82.674692	-117.575234		2.7	
56	10H6_rev	82.664106	-117.916144		2.7	
57	10H7_rev	82.655226	-118.259581		2.7	
58	10H8_rev	82.648066	-118.605093		2.7	
59	10H9_rev	82.642635	-118.952229		2.7	
60	10H10_rev	82.638939	-119.300539		2.7	
61	10H11_rev	82.636985	-119.649576		2.7	
62	10H12_rev	82.636773	-119.998891		2.7	
63	10H13_rev	82.638306	-120.348036		2.7	
64	10H14_rev	82.64158	-120.696563		2.7	
65	10H15_rev	82.646591	-121.044025		2.7	
66	10H16_rev	82.653333	-121.389972		2.7	
67	10H17_rev	82.661796	-121.733953		2.7	
68	10H18_rev	82.67197	-122.075518		2.7	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Relevant FOS point	Distance to the next OECM point (M)	Article 76 provision invoked
69	10H19_rev	82.683841	-122.414211	FOS_CAN-01_Rev	2.7	76(4)(a)(ii)
70	10H20_rev	82.697393	-122.749577		2.7	
71	10H21_rev	82.712608	-123.081157		2.7	
72	10H22_rev	82.729466	-123.408491		2.7	
73	10H23_rev	82.747942	-123.731114		2.7	
74	10H24_rev	82.768013	-124.048559		2.7	
75	10H25_rev	82.789651	-124.360353		2.7	
76	10H26_rev	82.812825	-124.666024		2.7	
77	10H27_rev	82.837504	-124.965091		2.7	
78	10H28_rev	82.863652	-125.257073		2.7	
79	10H29_rev	82.891233	-125.541482		2.7	
80	10H30_rev	82.920207	-125.817828		2.3	
81	10H31	82.946367	-126.050034	FOS_CAN-04	2.5	
82	10H32	82.905231	-126.042172		2.7	
83	10H33	82.860467	-126.049271		2.7	
84	10H34	82.815788	-126.072373		2.7	
85	10H35	82.771281	-126.111139		2.7	
86	10H36	82.727031	-126.165207		2.7	
87	10H37	82.683125	-126.234202		2.7	
88	10H38	82.639642	-126.317729		2.7	
89	10H39	82.596664	-126.415383		2.7	
90	10H40	82.554267	-126.526745		2.7	
91	10H41	82.512528	-126.65139		2.7	
92	10H42	82.471518	-126.788882		2.7	
93	10H43	82.431309	-126.93878		2.7	
94	10H44	82.391968	-127.100637		2.7	
95	10H45	82.353562	-127.274005		2.7	
96	10H46	82.316154	-127.458428		2.7	
97	10H47	82.279804	-127.653453		2.7	
98	10H48	82.244571	-127.858622		2.7	
99	10H49	82.21051	-128.07348		2.7	
100	10H50	82.177675	-128.29757		2.7	
101	10H51	82.146117	-128.530436		2.7	
102	10H52	82.115883	-128.771622		2.7	
103	10H53	82.087021	-129.020676		2.7	
104	10H54	82.059572	-129.277146		2.7	
105	10H55	82.033578	-129.540581		2.7	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Relevant FOS point	Distance to the next OECM point (M)	Article 76 provision invoked
106	10H56	82.009077	-129.810534	FOS_CAN-04	2.7	76(4)(a)(ii)
107	10H57	81.986105	-130.086559		2.7	
108	10H58	81.964696	-130.368213		2.7	
109	10H59	81.944879	-130.655053		2.7	
110	10H60	81.926683	-130.946641		2.7	
111	10H61	81.910135	-131.242539		2.7	
112	10H62	81.895257	-131.542312		2.7	
113	10H63	81.882071	-131.845527		2.7	
114	10H64	81.870595	-132.151752		2.5	
115	10H65	81.861569	-132.435468	FOS_CAN-05	2.2	
116	10H66	81.836861	-132.624331		2.2	
117	10H67	81.813059	-132.81832	FOS_CAN-06	1.4	
118	10H68	81.790655	-132.821015		2.7	
119	10H69	81.745938	-132.836878		2.7	
120	10H70	81.701367	-132.866489		2.7	
121	10H71	81.657029	-132.909573		2.7	
122	10H72	81.613009	-132.965835		2.7	
123	10H73	81.56939	-133.034965		2.7	
124	10H74	81.526255	-133.116637		2.7	
125	10H75	81.483683	-133.210514		2.7	
126	10H76	81.44175	-133.316247		2.7	
127	10H77	81.400532	-133.433475		2.7	
128	10H78	81.360101	-133.561832		2.7	
129	10H79	81.320528	-133.700942		2.7	
130	10H80	81.281881	-133.850423		2.7	
131	10H81	81.244225	-134.009888		2.7	
132	10H82	81.207624	-134.178946		2.7	
133	10H83	81.172138	-134.357202		2.7	
134	10H84	81.137826	-134.544258		2.7	
135	10H85	81.104742	-134.739714		2.7	
136	10H86	81.07294	-134.943167		2.7	
137	10H87	81.042471	-135.154214		2.7	
138	10H88	81.013382	-135.372452		2.7	
139	10H89	80.985719	-135.597476		2.7	
140	10H90	80.959525	-135.828882		2.7	
141	10H91	80.934839	-136.066264		2.7	
142	10H92	80.9117	-136.309218		2.7	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Relevant FOS point	Distance to the next OECM point (M)	Article 76 provision invoked
143	10H93	80.890142	-136.557342	FOS_CAN-06	2.7	76(4)(a)(ii)
144	10H94	80.870199	-136.810232		2.7	
145	10H95	80.851898	-137.067484		2.7	
146	10H96	80.835269	-137.328699		2.7	
147	10H97	80.820335	-137.593473		2.7	
148	10H98	80.807118	-137.861408		2.7	
149	10H99	80.795638	-138.132104		2.7	
150	10H100	80.785912	-138.405161		2.7	
151	10H101	80.777953	-138.680182		2.7	
152	10H102	80.771774	-138.956768		2.7	
153	10H103	80.767383	-139.234523		1.4	
154	10H104	80.765859	-139.37383	FOS_CAN-07	1.4	
155	10H105	80.749757	-139.484822		2.7	
156	10H106	80.720817	-139.697013		2.7	
157	10H107	80.693312	-139.915781		2.7	
158	10H108	80.667284	-140.140731		2.7	
159	10H109	80.642774	-140.37147		2.7	
160	10H110	80.61982	-140.607602		2.7	
161	10H111	80.598457	-140.848735		2.7	
162	10H112	80.578717	-141.094475		2.7	
163	10H113	80.560629	-141.344427		2.7	
164	10H114	80.544222	-141.598199		2.7	
165	10H115	80.529518	-141.855399		2.7	
166	10H116	80.516542	-142.115634		2.7	
167	10H117	80.50531	-142.378513		2.7	
168	10H118	80.495841	-142.643646		2.7	
169	10H119	80.488148	-142.91064		2.7	
170	10H120	80.482242	-143.179107		2.7	
171	10H121	80.478132	-143.448656		2.7	
172	10H122	80.475824	-143.718898		2.7	
173	10H123	80.475322	-143.989443		2.7	
174	10H124	80.476626	-144.259901		2.7	
175	10H125	80.479734	-144.529884		2.7	
176	10H126	80.484641	-144.799001		2.7	
177	10H127	80.491341	-145.066862		2.7	
178	10H128	80.499824	-145.333079		2.7	
179	10H129	80.510077	-145.59726		2.7	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Relevant FOS point	Distance to the next OECM point (M)	Article 76 provision invoked
180	10H130	80.522085	-145.859014	FOS_CAN-07	2.7	76(4)(a)(ii)
181	10H131	80.53583	-146.117951		2.7	
182	10H132	80.551292	-146.373679		1.4	
183	10H133_rev	80.560287	-146.509417	FOS_CAN-08_Rev	1.8	
184	10H134_rev	80.545547	-146.672407		2.7	
185	10H135_rev	80.525301	-146.915245		2.7	
186	10H136_rev	80.506701	-147.162397		2.7	
187	10H137_rev	80.489773	-147.413472		2.7	
188	10H138_rev	80.474543	-147.668078		2.7	
189	10H139_rev	80.461035	-147.925826		2.7	
190	10H140_rev	80.449268	-148.186325		2.7	
191	10H141_rev	80.439259	-148.449186		2.7	
192	10H142_rev	80.431024	-148.714019		2.7	
193	10H143_rev	80.424574	-148.980435		2.7	
194	10H144_rev	80.419919	-149.248047		1.8	
195	10H145_rev	80.417777	-149.431101	FOS_CHU-11_Rev	1.8	
196	10H146_rev	80.389529	-149.362493		2.7	
197	10H147_rev	80.347399	-149.271847		2.7	
198	10H148_rev	80.30461	-149.193331		2.7	
199	10H149_rev	80.261256	-149.12696		2.7	
200	10H150_rev	80.217433	-149.072717		2.7	
201	10H151_rev	80.173234	-149.030559		2.7	
202	10H152_rev	80.128754	-149.000414		2.7	
203	10H153_rev	80.084085	-148.982183		2.7	
204	10H154_rev	80.03932	-148.975747		2.7	
205	10H155_rev	79.99455	-148.980961		2.7	
206	10H156_rev	79.949866	-148.997661		2.7	
207	10H157_rev	79.905356	-149.025664		2.7	
208	10H158_rev	79.861107	-149.064767		2.7	
209	10H159_rev	79.817205	-149.114752		2.7	
210	10H160_rev	79.773733	-149.175386		2.7	
211	10H161_rev	79.730775	-149.246422		2.7	
212	10H162_rev	79.68841	-149.3276		2.7	
213	10H163_rev	79.646715	-149.418649		0.6	
214	10H164	79.636323	-149.407211	33	2.7	
215	10H165	79.594791	-149.314295		2.7	
216	10H166	79.552524	-149.232513		2.7	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Relevant FOS point	Distance to the next OECM point (M)	Article 76 provision invoked
217	10H167	79.509619	-149.161917	33	2.7	76(4)(a)(ii)
218	10H168	79.466168	-149.102520		2.7	
219	10H169	79.422265	-149.054313		2.7	
220	10H170	79.378002	-149.017262		2.7	
221	10H171	79.333474	-148.991308		2.7	
222	10H172	79.288775	-148.976369		2.7	
223	10H173	79.243997	-148.972340		2.7	
224	10H174	79.199230	-148.979094		2.7	
225	10H175	79.154439	-148.959249	34	2.7	
226	10H176	79.116435	-148.833714		2.7	
227	10H177	79.077348	-148.718174		2.7	
228	10H178	79.037282	-148.612825		2.7	
229	10H179	78.996324	-148.517792		2.7	
230	10H180	78.954568	-148.433173		2.7	
231	10H181	78.912106	-148.359041		2.7	
232	10H182	78.869032	-148.295439		2.7	
233	10H183	78.825440	-148.242384		2.7	
234	10H184	78.781421	-148.199869		2.7	
235	10H185	78.737071	-148.167861		2.7	
236	10H186	78.692484	-148.146307		2.7	
237	10H187	78.647751	-148.135129		2.7	
238	10H188	78.603909	-148.089498	35	2.7	
239	10H189	78.562580	-148.002376		2.7	
240	10H190	78.520494	-147.925306		2.7	
241	10H191	78.477745	-147.858352		2.7	
242	10H192	78.434427	-147.801547		2.7	
243	10H193	78.390632	-147.754901		2.7	
244	10H194	78.346454	-147.718399		2.7	
245	10H195	78.301985	-147.692006		2.7	
246	10H196	78.257319	-147.675663		2.7	
247	10H197	78.212556	-147.669293		2.7	
248	10H198	78.168163	-147.640017	36	2.7	
249	10H199	78.124005	-147.603557		2.7	
250	10H200	78.079555	-147.577017		2.7	
251	10H201	78.034901	-147.560340		2.7	
252	10H202	77.990137	-147.553453		2.7	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Relevant FOS point	Distance to the next OECM point (M)	Article 76 provision invoked
253	10H203	77.945354	-147.556261	36	2.7	76(4)(a)(ii)
254	10H204	77.900642	-147.568655		2.7	
255	10H205	77.856089	-147.590505		2.7	
256	10H206	77.811785	-147.621666		2.7	
257	10H207	77.767816	-147.661978		2.7	
258	10H208	77.724269	-147.711264		2.7	
259	10H209	77.681234	-147.769328		2.7	
260	10H210	77.636871	-147.798935	37	2.7	
261	10H211	77.592170	-147.812026		2.7	
262	10H212	77.547640	-147.834334		2.7	
263	10H213	77.503367	-147.865719		2.7	
264	10H214	77.459437	-147.906027		2.7	
265	10H215	77.415935	-147.955088		2.7	
266	10H216	77.372945	-148.012720		2.7	
267	10H217	77.330549	-148.078729		2.7	
268	10H218	77.288828	-148.152907		2.7	
269	10H219	77.247859	-148.235037		2.7	
270	10H220	77.207719	-148.324891		2.7	
271	10H221	77.168480	-148.422237		2.7	
272	10H222	77.130208	-148.526844		2.7	
273	10H223	77.092975	-148.638457		2.7	
274	10H224	77.056847	-148.756819		2.7	
275	10H225	77.021889	-148.881663		2.8	
276	10H226	76.983156	-148.989453	38	2.7	
277	10H227	76.938452	-148.990958		2.7	
278	10H228	76.893722	-149.001328		2.7	
279	10H229	76.849143	-149.020458		2.7	
280	10H230	76.804804	-149.048224		2.7	
281	10H231	76.760788	-149.084486		2.7	
282	10H232	76.717182	-149.129094		2.7	
283	10H233	76.674068	-149.181881		2.7	
284	10H234	76.631530	-149.242672		2.7	
285	10H235	76.589647	-149.311278		2.7	
286	10H236	76.548500	-149.387498		2.7	
287	10H237	76.508166	-149.471120		2.7	
288	10H238	76.468721	-149.561923		2.7	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Relevant FOS point	Distance to the next OECM point (M)	Article 76 provision invoked
289	10H239	76.430234	-149.659683	38	2.7	76(4)(a)(ii)
290	10H240	76.392772	-149.764176		2.7	
291	10H241	76.356404	-149.875159		2.7	
292	10H242	76.321194	-149.992386		2.7	
293	10H243	76.287207	-150.115597		2.7	
294	10H244	76.254503	-150.244531		2.7	
295	10H245	76.223138	-150.378923		2.7	
296	10H246	76.193168	-150.518505		2.8	
297	10H247	76.163164	-150.663028	39	2.7	
298	10H248	76.118770	-150.685263		2.7	
299	10H249	76.074576	-150.715681		2.7	
300	10H250	76.030749	-150.754113		2.7	
301	10H251	75.987374	-150.800414		2.7	
302	10H252	75.944534	-150.854423		2.7	
303	10H253	75.902313	-150.915968		2.7	
304	10H254	75.860791	-150.984866		2.7	
305	10H255	75.820047	-151.060922		2.7	
306	10H256	75.780154	-151.143937		2.7	
307	10H257	75.741183	-151.233710		2.7	
308	10H258	75.703206	-151.330024		2.7	
309	10H259	75.666292	-151.432656		2.7	
310	10H260	75.624446	-151.495825	40	2.7	
311	10H261	75.580718	-151.534885		2.7	
312	10H262	75.537461	-151.581550		2.7	
313	10H263	75.494762	-151.635662		2.7	
314	10H264	75.452698	-151.697058		2.7	
315	10H265	75.411348	-151.765565		2.7	
316	10H266	75.370790	-151.840995		2.7	
317	10H267	75.331102	-151.923149		2.7	
318	10H268	75.292358	-152.011821		2.7	
319	10H269	75.254630	-152.106795		2.7	
320	10H270	75.217985	-152.207856		2.7	
321	10H271	75.182486	-152.314784		2.7	
322	10H272	75.148197	-152.427354		2.8	
323	10H273	75.110557	-152.535778	41	2.7	
324	10H274	75.066338	-152.552690		2.7	

№	Name	Latitude (decimal deg), N	Longitude (decimal deg), W/E	Relevant FOS point	Distance to the next OECM point (M)	Article 76 provision invoked
325	10H275	75.021992	-152.577352	41	2.7	76(4)(a)(ii)
326	10H276	74.977974	-152.609540		2.7	
327	10H277	74.934371	-152.649127		2.7	
328	10H278	74.891267	-152.695973		2.7	
329	10H279	74.848741	-152.749930		2.7	
330	10H280	74.806875	-152.810841		2.7	
331	10H281	74.765747	-152.878535		2.7	
332	10H282	74.725437	-152.952831		2.7	
333	10H283	74.686020	-153.033538		2.7	
334	10H284	74.647572	-153.120455		2.7	
335	10H285	74.610161	-153.213379		2.7	
336	10H286	74.573852	-153.312108		2.7	
337	10H287	74.538711	-153.416425		2.7	
338	10H288	74.504803	-153.526104		0.0	

Table 3. Coordinates of fixed points defining the outer limits of the continental shelf beyond 200 M

№	Name	Latitude (decimal deg). N	Longitude (decimal deg). W/E	Distance to the next OLCS point (M)	Method; Article 76 provision invoked
Section II - Nansen Basin					
1	2G2_rev	84.489856	36.998100	50.9	Fixed point from 1% sediment thickness formula 76(4)(a)(i)
2	2G3_rev	84.982789	44.467344	39.8	
3	2G4_rev	85.340113	51.055289	44.5	
4	2G5_rev	85.538102	60.014404	43.6	
5	2E6_fin	85.067673	66.731838	0	Fixed point on the 200 M EEZ line of the Russian Federation at intersection with the line between 2G5_rev (1% sediment thickness point) and 2H6_rev (point on 60 M formula line) 76(4)(a)(i) 76(4)(a)(ii)
6	2E13_fin	84.800962	73.857296	48.6	
7	2G14_rev	84.947376	82.743956	47.2	Fixed point from 1% sediment thickness formula 76(4)(a)(i)
8	2G15_rev	84.576767	90.296850	2.1	
9	3E1_fin	84.542119	90.312091	0	Fixed point on the 200 M EEZ line of the Russian Federation at intersection with the line between 2G15_rev (1% sediment thickness point) and 2H16 (point on 60 M formula line) 76(4)(a)(i) 76(4)(a)(ii)
Section IV - Amundsen Basin					
10	4G1_rev	85.321318	108.835147	44.0	Fixed point from 1% sediment thickness formula 76(4)(a)(i)
11	4G2_rev	85.892922	102.902799	44.9	
12	4G3_rev	86.589866	98.906330	59.7	
Section V - Amundsen Basin					
13	5H1_rev	87.495938	91.099090	1.9	Fixed point on 60 M formula line 76(4)(a)(ii)
14	5H2	87.524453	90.749882	2.7	
15	5H3	87.564632	90.288854	2.7	
16	5H4	87.605518	89.855884	2.7	
17	5H5	87.647060	89.452955	24.1	
18	5H6	88.013030	85.150291	2.7	

№	Name	Latitude (decimal deg). N	Longitude (decimal deg). W/E	Distance to the next OLCS point (M)	Method; Article 76 provision invoked
19	5H7	88.053272	84.578662	2.7	Fixed point on 60 M formula line 76(4)(a)(ii)
20	5H8	88.094183	84.037580	2.7	
21	5H9	88.135716	83.529636	2.7	
22	5H10	88.177831	83.057564	2.7	
23	5H11	88.220483	82.624416	2.7	
24	5H12	88.263616	82.233593	2.7	
25	5H13	88.307181	81.888786	2.7	
26	5H14	88.351117	81.594124	26.8	
27	5H15	88.783718	77.620921	1.7	
28	5H16	88.811537	77.264196	2.7	
29	5H17	88.855094	76.754689	2.7	
30	5H18	88.899000	76.307161	2.7	
31	5H19	88.943205	75.929841	1.8	
32	5H20	88.972946	75.733443	59.5	
Section VIII - Amundsen Basin					
33	8G1_rev	89.060898	15.691505	59.5	Fixed point from 1% sediment thickness formula 76(4)(a)(i)
34	8H2	88.257124	-10.119159	2.7	Fixed point on 60 M formula line 76(4)(a)(ii)
35	8H3	88.218126	-10.833886	2.7	
36	8H4	88.179858	-11.573012	2.7	
37	8H5	88.142351	-12.334589	2.7	
38	8H6	88.105633	-13.116852	30.4	
39	8H7	87.662206	-19.645107	40.9	
40	8H8	87.050158	-26.019007	2.7	
41	8H9	87.008697	-26.344755	2.7	
42	8H10	86.967926	-26.696654	2.7	
43	8H11	86.927901	-27.073226	0.0	
Section X – Canada Basin					
44	10H1_rev	82.733796	-116.245986	2.7	Fixed point on 60 M formula line 76(4)(a)(ii)
45	10H2_rev	82.716544	-116.572221	2.7	
46	10H3_rev	82.700929	-116.902814	2.7	
47	10H4_rev	82.686972	-117.237305	2.7	

№	Name	Latitude (decimal deg). N	Longitude (decimal deg). W/E	Distance to the next OLCS point (M)	Method; Article 76 provision invoked
48	10H5_rev	82.674692	-117.575234	2.7	Fixed point on 60 M formula line 76(4)(a)(ii)
49	10H6_rev	82.664106	-117.916144	2.7	
50	10H7_rev	82.655226	-118.259581	2.7	
51	10H8_rev	82.648066	-118.605093	2.7	
52	10H9_rev	82.642635	-118.952229	2.7	
53	10H10_rev	82.638939	-119.300539	2.7	
54	10H11_rev	82.636985	-119.649576	2.7	
55	10H12_rev	82.636773	-119.998891	57.6	
56	10D32	82.393357	-127.095050	1.3	Fixed point on depth constraint 76(5)
57	10D33	82.404664	-127.237357	2.7	
58	10D34	82.392573	-127.560467	2.7	
59	10D35	82.367712	-127.841287	2.7	
60	10D36	82.343680	-128.125275	2.7	
61	10D37	82.320488	-128.412290	2.7	
62	10D38	82.298144	-128.702203	2.7	
63	10D39	82.276658	-128.994877	2.7	
64	10D40	82.256038	-129.290182	2.7	
65	10D41	82.236291	-129.587993	2.7	
66	10D42	82.217426	-129.888187	2.7	
67	10D43	82.199449	-130.190639	2.7	
68	10D44	82.182368	-130.495227	2.7	
69	10D45	82.166189	-130.801824	2.7	
70	10D46	82.150919	-131.110304	2.7	
71	10D47	82.136564	-131.420544	2.7	
72	10D48	82.123129	-131.732435	2.7	
73	10D49	82.110619	-132.045852	2.7	
74	10D50	82.099039	-132.360687	2.7	
75	10D51	82.088393	-132.676831	2.7	
76	10D52	82.078684	-132.994154	2.7	
77	10D53	82.069884	-133.312498	2.7	
78	10D54	82.062000	-133.631769	2.7	
79	10D55	82.055063	-133.951891	2.7	

№	Name	Latitude (decimal deg). N	Longitude (decimal deg). W/E	Distance to the next OLCS point (M)	Method; Article 76 provision invoked
80	10D56	82.049068	-134.272754	2.7	Fixed point on depth constraint 76(5)
81	10D57	82.044025	-134.594251	2.7	
82	10D58	82.039938	-134.916267	2.7	
83	10D59	82.036806	-135.238695	2.7	
84	10D60	82.034631	-135.561425	2.7	
85	10D61	82.033415	-135.884351	2.7	
86	10D62	82.033157	-136.207361	2.7	
87	10D63	82.033857	-136.530347	2.7	
88	10D64	82.035516	-136.853206	2.7	
89	10D65	82.038132	-137.175822	2.7	
90	10D66	82.031305	-137.494848	2.7	
91	10D67	82.018160	-137.803315	2.7	
92	10D68	82.005945	-138.113261	2.7	
93	10D69	81.994665	-138.424581	2.7	
94	10D70	81.984283	-138.737091	2.7	
95	10D71	81.974835	-139.050733	2.7	
96	10D72	81.966334	-139.365416	2.7	
97	10D73	81.958781	-139.681022	2.7	
98	10D74	81.952180	-139.997441	2.7	
99	10D75	81.946534	-140.314558	2.7	
100	10D76	81.941844	-140.632268	2.7	
101	10D77	81.938113	-140.950458	2.7	
102	10D78	81.935341	-141.269015	2.7	
103	10D79	81.933530	-141.587836	2.7	
104	10D80	81.932680	-141.906808	2.7	
105	10D81	81.932792	-142.225824	2.7	
106	10D82	81.933865	-142.544772	2.7	
107	10D83	81.935900	-142.863544	2.7	
108	10D84	81.938895	-143.182026	2.7	
109	10D85	81.942850	-143.500116	2.7	
110	10D86	81.947763	-143.817697	2.7	
111	10D87	81.953631	-144.134663	2.7	

№	Name	Latitude (decimal deg). N	Longitude (decimal deg). W/E	Distance to the next OLCS point (M)	Method; Article 76 provision invoked
112	10D88	81.960454	-144.450899	2.7	Fixed point on depth constraint 76(5)
113	10D89	81.968227	-144.766297	2.7	
114	10D90	81.976931	-145.080770	2.7	
115	10D91	81.986580	-145.394184	2.7	
116	10D92	81.997170	-145.706425	2.7	
117	10D93	82.008698	-146.017377	2.7	
118	10D94	82.021159	-146.326927	2.7	
119	10D95	82.034549	-146.634960	2.7	
120	10D96	82.048861	-146.941353	2.7	
121	10D97	82.064092	-147.245990	2.7	
122	10D98	82.080233	-147.548751	2.7	
123	10D99	82.097280	-147.849516	2.7	
124	10D100	82.115224	-148.148175	2.7	
125	10D101	82.134056	-148.444609	2.7	
126	10D102	82.153774	-148.738684	2.7	
127	10D103	82.174369	-149.030272	2.7	
128	10D104	82.195831	-149.319238	2.7	
129	10D105	82.218154	-149.605451	2.7	
130	10D106	82.239207	-149.897613	2.7	
131	10D107	82.258177	-150.198280	2.7	
132	10D108	82.278028	-150.496558	2.7	
133	10D109	82.298086	-150.794808	2.7	
134	10D110	82.317526	-151.096110	2.7	
135	10D111	82.337592	-151.396093	2.7	
136	10D112	82.324972	-151.719810	2.7	
137	10D113	82.293908	-151.960718	2.7	
138	10D114	82.263585	-152.205895	2.7	
139	10D115	82.234018	-152.455169	2.7	
140	10D116	82.205221	-152.708391	2.7	
141	10D117	82.177204	-152.965423	2.7	
142	10D118	82.149980	-153.226124	2.7	
143	10D119	82.123562	-153.490340	2.7	

№	Name	Latitude (decimal deg). N	Longitude (decimal deg). W/E	Distance to the next OLCS point (M)	Method; Article 76 provision invoked
144	10D120	82.097960	-153.757927	2.7	Fixed point on depth constraint 76(5)
145	10D121	82.073185	-154.028756	2.7	
146	10D122	82.049247	-154.302685	2.7	
147	10D123	82.026156	-154.579591	2.7	
148	10D124	82.003921	-154.859334	2.7	
149	10D125	81.982552	-155.141779	2.7	
150	10D126	81.962058	-155.426807	2.7	
151	10D127	81.942445	-155.714285	2.7	
152	10D128	81.923724	-156.004091	2.7	
153	10D129	81.905900	-156.296097	2.7	
154	10D130	81.888981	-156.590186	2.7	
155	10D131	81.872973	-156.886234	2.7	
156	10D132	81.857884	-157.184119	2.7	
157	10D133	81.843718	-157.483725	2.7	
158	10D134	81.830482	-157.784936	2.7	
159	10D135	81.818180	-158.087635	2.7	
160	10D136	81.806817	-158.391704	2.7	
161	10D137	81.796398	-158.697035	2.7	
162	10D138	81.786927	-159.003508	2.7	
163	10D139	81.778407	-159.311015	2.7	
164	10D140	81.770837	-159.619434	2.7	
165	10D141	81.764201	-159.928639	2.7	
166	10D142	81.758525	-160.238541	2.7	
167	10D143	81.753811	-160.549036	2.7	
168	10D144	81.750061	-160.860009	2.7	
169	10D145	81.747277	-161.171351	2.7	
170	10D146	81.745458	-161.482958	2.7	
171	10D147	81.744607	-161.794713	2.7	
172	10D148	81.744723	-162.106515	2.7	
173	10D149	81.745807	-162.418249	2.7	
174	10D150	81.747857	-162.729804	2.7	
175	10D151	81.750874	-163.041073	2.7	

№	Name	Latitude (decimal deg). N	Longitude (decimal deg). W/E	Distance to the next OLCS point (M)	Method; Article 76 provision invoked
176	10D152	81.754856	-163.351945	2.9	Fixed point on depth constraint 76(5)
177	10D153	81.755469	-163.689262	2.7	
178	10D154	81.719860	-163.876271	2.7	
179	10D155	81.680682	-164.026232	2.7	
180	10D156	81.642031	-164.182074	2.7	
181	10D157	81.603812	-164.342180	2.7	
182	10D158	81.566168	-164.507836	2.7	
183	10D159	81.529117	-164.678889	2.7	
184	10D160	81.492666	-164.855036	4.5	
185	10D161	81.433666	-165.157636	0.0	