



## Commission on the Limits of the Continental Shelf

---

---

### **SUMMARY OF RECOMMENDATIONS OF THE COMMISSION ON THE LIMITS OF THE CONTINENTAL SHELF IN REGARD TO THE PARTIAL REVISED SUBMISSION MADE BY ARGENTINA ON 28 OCTOBER 2016<sup>1</sup>**

Recommendations prepared by the Subcommittee established for the consideration  
of the partial revised Submission made by Argentina

Approved by the Subcommittee on 28 February 2017

Approved by the Commission, with amendments, on 17 March 2017

---

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

---

---

## TABLE OF CONTENTS

<b>GLOSSARY OF TERMS .....</b>	<b>III</b>
<b>I. INTRODUCTION .....</b>	<b>1</b>
<b>II. CONTENTS OF THE PARTIAL REVISED SUBMISSION .....</b>	<b>3</b>
A. Original Submission .....	3
B. Communications and additional material .....	3
<b>III. EXAMINATION OF THE PARTIAL REVISED SUBMISSION BY THE SUBCOMMISSION .....</b>	<b>3</b>
A. Examination of the format and completeness of the partial revised Submission .....	3
B. Preliminary analysis of the partial revised Submission .....	3
C. Main scientific and technical examination of the partial revised Submission.....	4
<b>IV. RECOMMENDATIONS OF THE COMMISSION WITH RESPECT TO THE SUBMISSION.....</b>	<b>4</b>
1. The determination of the foot of the continental slope (paragraph 4(b) of article 76) .....	4
2. The establishment of the outer edge of the continental margin (paragraph 4(a) of article 76). 5	
2.1 The application of the 1% sediment thickness formula (paragraph 4(a)(i) of article 76)....	5
2.2 Configuration of the Outer Edge of the Continental Margin .....	6
2.3 Recommendations.....	6
3. The application of the constraint criteria (paragraphs 5 & 6 of article 76) .....	6
3.1 The construction of the distance constraint line .....	7
3.2 The construction of the combined constraints line .....	7
4. The outer limits of the continental shelf (paragraph 7 of article 76) .....	7
5. Recommendations for the partial revised Submission (paragraph 8 of article 76).....	7
<b>FIGURES.....</b>	<b>8</b>
<b>ANNEX I COORDINATES FOR THE OUTER LIMITS OF THE CONTINENTAL SHELF FIXED POINTS BEYOND 200 M .....</b>	<b>10</b>

## GLOSSARY OF TERMS

<b>200 M line</b>	Line at a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured
<b>2,500 m isobath</b>	A line connecting the depth of 2,500 metres
<b>Article 76</b>	Article 76 of the Convention
<b>Baselines</b>	Baselines from which the breadth of the territorial sea is measured
<b>BOS</b>	Base of the continental slope
<b>Commission</b>	Commission on the Limits of the Continental Shelf
<b>Convention</b>	United Nations Convention on the Law of the Sea of 10 December 1982
<b>Depth constraint</b>	Constraint line determined at a distance of 100 M from the 2,500 m isobath
<b>Distance constraint</b>	Constraint line determined at a distance of 350 M from the baselines from which the breadth of the territorial sea is measured
<b>Distance formula line</b>	Line delineated by reference to fixed points determined at a distance of not more than 60 nautical miles from the foot of the continental slope
<b>Distance formula point</b>	Fixed point determined at a distance of not more than 60 nautical miles from the foot of the continental slope
<b>DOALOS</b>	Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations
<b>FOS</b>	Foot of the continental slope
<b>Guidelines</b>	Scientific and Technical Guidelines of the Commission (CLCS/11 and CLCS/11/Add.1)
<b>M</b>	Nautical mile
<b>Rules of Procedure</b>	Rules of Procedure of the Commission (CLCS/40/Rev.1)
<b>Secretary-General</b>	Secretary-General of the United Nations
<b>Sediment thickness formula line</b>	Line delineated by reference to the outermost fixed points at each of which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from such point to the foot of the continental slope
<b>Sediment thickness formula point</b>	Fixed point at which the thickness of sedimentary rocks is at least 1 per cent of the shortest distance from that point to the foot of the continental slope

(page left intentionally blank)

## I. INTRODUCTION

- 1 On 28 October 2016, Argentina submitted a partial revised Submission to the Commission on the Limits of the Continental Shelf, through the Secretary-General<sup>1</sup> of the United Nations, information on the limits of the continental shelf beyond 200 M from the baselines from which the breadth of the territorial sea is measured, in accordance with paragraph 8 of article 76 of the Convention (the "Submission").
- 2 It is recalled that, on 21 April 2009, Argentina made a submission to the Commission and, on 11 March 2016, the Commission approved the *Recommendations of the Commission on the Limits of the Continental Shelf in regard to the Submission made by Argentina on 21 April 2009*.
- 3 On 2 November 2016, the Secretary-General issued Continental Shelf Notification CLCS.25.Rev.LOS<sup>2</sup> giving due publicity to the Executive Summary of the partial revised Submission in accordance with rule 50 of the Rules of Procedure of the Commission. Pursuant to rule 51 of the Rules of Procedure, the consideration of the partial revised Submission was included in the agenda of the forty-third session of the Commission.
- 4 Pursuant to section 2 of annex III to the Rules of Procedure, a presentation of the partial revised Submission was made to the plenary of the forty-third session of the Commission on 14 February 2017, by Martín García Moritán, Ambassador, Permanent Representative of Argentina to the United Nations, head of delegation; María Teresa Kralikas, Ambassador, Undersecretary, Malvinas Islands, Antarctica and the South Atlantic, head of delegation; Frida M. Armas Pfirter, General Coordinator, Comisión Nacional del Límite Exterior de la Plataforma Continental (COPLA); and Ariel Troisi, Oceanographer, Coordinator of the Technical Subcommission. The Delegation of Argentina (the "Delegation") also included a number of advisers. Mr. Moritán noted that the partial revised submission was being submitted by his Government following the recommendations that had been adopted by the Commission on 11 March 2016, with regard to the submission made by Argentina on 21 April 2009.<sup>3</sup> He noted that the partial revised Submission made by Argentina covered only two points located in the North not included in the recommendations approved by the Commission on 11 March 2016. Ms. Kralikas noted that Argentina prioritised the knowledge possessed by the Commission as a result of interaction with the Subcommission with respect to the elections to take place during the forthcoming Meeting of States Parties in June 2017. In addition to elaborating on substantive points of the partial revised Submission, Ms. Armas Pfirter informed the Commission that one of its members, Mr. Paterlini, had assisted Argentina in the preparation of the partial revised Submission. She noted that the area of the Submission contained no areas envisaged under article 46 of the Rules of Procedure.
- 5 The Commission received no notes verbales from other States in relation to the partial revised Submission.
- 6 The Commission addressed the modalities for the consideration of the partial revised Submission and, recalling the decision taken at its twenty-sixth session whereby revised submissions would be considered on a priority basis

---

<sup>1</sup> On whose behalf the Submission was received by DOALOS.

<sup>2</sup> See [http://www.un.org/depts/los/clcs\\_new/submissions\\_files/arg25\\_rev/2016\\_11\\_02\\_UN\\_NV\\_AS\\_001.pdf](http://www.un.org/depts/los/clcs_new/submissions_files/arg25_rev/2016_11_02_UN_NV_AS_001.pdf)

<sup>3</sup> See [http://www.un.org/Depts/los/clcs\\_new/submissions\\_files/submission\\_arg\\_25\\_2009.htm](http://www.un.org/Depts/los/clcs_new/submissions_files/submission_arg_25_2009.htm).

notwithstanding the queue, the Commission assigned the examination of the partial revised Submission to the Subcommittee established to consider the submission made by Argentina on 21 April 2009. It noted that pursuant to rule 42, paragraph 2, of the Rules of Procedure, the current members of the Subcommittee were Lawrence Folajimi Awosika, Galo Carrera (Chair), Martin Vang Heinesen, Mazlan Bin Madon, Jair Alberto Ribas Marques, Isaac Owusu Oduro (Vice-Chair) and Yong Ahn Park (Vice-Chair).<sup>4</sup> The Commission decided that the Subcommittee would commence its work during the forty-third session, on available dates between 20 and 24 February 2017.

- 7 Following its establishment, the Subcommittee met on 20 February 2017, to commence its consideration of the partial revised Submission and to conduct a preliminary analysis thereof pursuant to paragraph 5(1) of annex III to the Rules of Procedure. The Subcommittee verified the format and completeness of the partial revised Submission. In addition, the Subcommittee completed the preliminary analysis of the partial revised Submission, concluding, among other things, that the test of appurtenance was met and it proceeded to examine all the data and prepare draft recommendations for transmittal to the Commission. It also concluded that the cooperation of relevant international organizations or the advice of specialists, as provided for, respectively, in rules 56 and 57 of the Rules of Procedure, was not required.
- 8 The Subcommittee conducted its analysis of the partial revised Submission during the forty-third session in which it posed 3 questions in writing. During the course of the analysis of the partial revised Submission by the Subcommittee and the Commission, the Delegation provided responses to the questions posed in writing. Having considered the response by the Delegation and having received the concurrence of the Delegation to forego the proceedings contemplated in paragraphs 10.3 and 10.4 of annex III to the Rules of Procedure, the Subcommittee proceeded to the preparation of its draft recommendations.
- 9 The Subcommittee approved its Recommendations on 28 February 2017, and submitted them to the Commission on 28 February 2017 for consideration and approval.
- 10 The Subcommittee presented its recommendations to the Commission on 13 March 2017. On the same day, the Delegation made a presentation to the Commission in accordance with paragraph 15.1 bis of annex III to the Rules of Procedure.
- 11 The Commission prepared these Recommendations, which were approved on 17 March 2017, taking into consideration article 6 of annex II to the Convention and the internal procedures and the methodology outlined in the following documents of the Commission: the Rules of Procedure, and the Guidelines.
- 12 The Recommendations of the Commission are based on the scientific and technical data and other material provided by Argentina in relation to the implementation of article 76. The Recommendations of the Commission only deal with issues related to article 76 and annex II to the Convention and shall not prejudice matters relating to delimitation of boundaries between States with opposite or adjacent coasts, or prejudice the position of States which are parties to a land or maritime dispute, or application of other parts of the Convention or any other treaties.

---

<sup>4</sup> See CLCS/76, paras. 26 to 27.

- 13 The Commission makes these Recommendations to Argentina in fulfilment of its mandate as contained in paragraph 8 of article 76 and articles 3 and 5 of annex II to the Convention.
- 14 The Commission makes Recommendations to coastal States on matters related to the establishment of the outer limits of their continental shelf in accordance with paragraph 8 of article 76 of the Convention. As provided for in this paragraph, the limits of the shelf established by a coastal State on the basis of these Recommendations shall be final and binding.
- 15 Throughout the examination of the partial revised Submission, the Subcommittee requested and received support from the Division of Ocean Affairs and the Law of the Sea, Office of Legal Affairs.

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

### **A. Original Submission**

- 16 The original partial revised Submission received on 28 October 2016 contained three parts: an Executive Summary; a Main Body which is the analytical and descriptive part; and Scientific and Technical Data.

### **B. Communications and additional material**

- 17 In the course of the examination of the partial revised Submission by the Subcommittee, the Delegation submitted additional material, including responses to questions and to a request for clarification by the Subcommittee.

## **III. EXAMINATION OF THE PARTIAL REVISED SUBMISSION BY THE SUBCOMMISSION**

### **A. Examination of the format and completeness of the partial revised Submission**

- 18 Pursuant to paragraph 3 of annex III to the Rules of Procedure, the Subcommittee examined and verified the format and completeness of the partial revised Submission.

### **B. Preliminary analysis of the partial revised Submission**

- 19 Pursuant to paragraph 5 of annex III to the Rules of Procedure, the Subcommittee undertook a preliminary analysis of the partial revised Submission, in accordance with article 76 of the Convention and the Guidelines and determined that:
  - (i) the outer edge of the continental margin, established from the FOS by applying the provisions of paragraph 4 of article 76 of the Convention, extends beyond the 200 M limits of Argentina to delineate the outer limits of its continental shelf beyond its 200 M limits in this region (i.e. the test of appurtenance for the region was satisfied by Argentina;
  - (ii) an appropriate combination of foot of the continental slope points and constraint lines had been used;
  - (iii) the construction of the outer limits contained straight line segments not exceeding 60 M in length;
  - (iv) the advice of any other member of the Commission and/or a specialist in accordance with rule 57 of the Rules of Procedure, or the cooperation of

relevant international organizations, in accordance with rule 56, would not be sought; and

- (v) the Subcommittee expected to reach an advanced stage of consideration of the Submission during the current session.

### **C. Main scientific and technical examination of the partial revised Submission**

20 Pursuant to paragraph 9, section IV of annex III to the Rules of Procedure, the Subcommittee conducted an examination of the partial revised Submission based on the Guidelines and evaluated the following as applicable:

- (i) the data and methodology employed by the coastal State to determine the location of the foot of the continental slope;
- (ii) the data and methodology used to determine the formula line delineated by reference to the outermost fixed points at each of which the thickness of sedimentary rocks was at least 1 per cent of the shortest distance from such point to the foot of the continental slope, or not less than 1 kilometre in the cases in which the Statement of Understanding applies;
- (iii) the data and methodology used to determine the constraint line at a distance of 350 M from the baselines;
- (iv) the construction of the formulae line as the outer envelope of the two formulae;
- (v) the construction of the constraint line as the outer envelope of the two constraints;
- (vi) the construction of the inner envelope of the formulae and constraint lines;
- (vii) the delineation of the outer limit of the continental shelf by means of straight lines not longer than 60 M with a view to ensuring that only the portion of the seabed that satisfies all the provisions of article 76 of the Convention and the Statement of Understanding is enclosed;
- (viii) 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
- (ix) whether the data submitted were sufficient in terms of quantity and quality to justify the proposed limits.

## **IV. RECOMMENDATIONS OF THE COMMISSION WITH RESPECT TO THE SUBMISSION**

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

21 The Subcommittee acknowledged the location of FOS point FOS-02B which had been approved by the Commission, on 11 March 2016, in the *Recommendations of the Commission on the Limits of the Continental Shelf in Regard to the Submission made by Argentina on 21 April 2009*.

22 On that basis, the Subcommittee recommends the use of FOS point FOS-02B for the establishment of the outer edge of the continental margin.

## **2. The establishment of the outer edge of the continental margin (paragraph 4(a) of article 76)**

- 23 These recommendations are concerned with the outer edge of the continental margin in the northern portion of the Río de la Plata Craton passive volcanic continental margin region.
- 24 The outer edge of the continental margin of Argentina in the partial revised Submission, for the purposes of the Convention, was submitted by Argentina on 28 October 2016, in accordance with paragraphs 4 and 7 of article 76 of the Convention.

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

- 25 In the partial revised Submission, Argentina submitted two fixed points based on the sediment thickness formula of paragraph 4(a)(i) of article 76 of the Convention utilizing FOS point FOS-02B (Figure 1). Argentina established sediment thickness formula points ST-01 and ST-02 based on the seismic lines ARG-02 and -04B, respectively.
- 26 The Subcommittee examined the data and information relating to the estimation of sediment thickness at the proposed sediment thickness fixed points ST-01 and ST-02.
- 27 In its consideration of the 1 per cent sediment thickness fixed points, the Subcommittee first examined the data and information with respect to sediment continuity between the sediment thickness fixed points and the FOS. This evidence was submitted by Argentina in the form of multichannel seismic reflection data (lines ARG-02, -04, -05 and -103), along with an isopach map showing the sediment thickness continuity and distribution across the margin, derived from interpretation of seismic sections, as provided in the original partial revised submission. The Subcommittee examined the sediment continuity along all the seismic profiles, both dip and strike lines, joining ST-01 and ST-02 with the sediments at FOS-02B, and is satisfied that the criterion of sediment continuity, as outlined in paragraph 8.5.3(b) of the Guidelines, is fulfilled.<sup>5</sup>
- 28 The Subcommittee examined the methodology employed by Argentina in estimating the sediment thickness at the sediment thickness fixed points ST-01 and ST-02. In accordance with the Guidelines (section 8.2), the sediment thickness was estimated by Argentina based on interpretation of time-migrated multichannel seismic reflection data on which the sediment thickness points are located. Sediment thickness was derived from the difference between seabed depth and the top of the basement identified on time sections, converted to depth using interval velocities determined by velocity analysis at the sediment thickness fixed points at specific shot point locations.
- 29 The Subcommittee verified that the seabed depth on the seismic lines as identified by Argentina for both the sediment thickness points ST-01 and ST-02 are correct. In picking the top of the acoustic basement on seismic data, Argentina provided evidence for the top of the basement as being at the base of a high-amplitude reflective package occurring between the sediment and acoustic basement (Figure 2). This package is interpreted by Argentina as representing volcanic sills and basalt flows interbedded with sediments.

---

<sup>5</sup> See CLCS/78 para 51-53.

- 30 In support of this interpretation, and in accordance with the Guidelines (paragraph 8.4.3), Argentina provided velocity analysis of the seismic data at shot points nearest to the sediment thickness fixed points. The velocity analysis indicates that the interbedded sediment-volcanic layer has interval velocities that are intermediate between those of sediment and igneous basement. The average interval velocity of that layer calculated by Argentina at the sediment thickness fixed points ST-01 and ST-02 are 4368 m/s and 3436 m/s, respectively (Figure 2), and are lower than typical velocities expected for oceanic igneous basement. The Subcommittee considered all the velocity information provided, and following further clarifications by the Delegation, determined that the interval velocities for the high-amplitude reflective package are indeed within the range of velocities expected for interbedded sediments and lava flows.
- 31 On this basis, the Subcommittee agrees with the estimation of sediment thickness at the fixed points ST-01 and ST-02.
- 32 The Subcommittee also verified that the sediment thickness determined at both the sediment thickness fixed points ST-01 and ST-02 is not less than 1 per cent of the distance from these points to FOS-02B.

## **2.2 Configuration of the Outer Edge of the Continental Margin**

- 33 Argentina included the outer edge of the continental margin in the Main Body of the partial revised Submission. The outer edge of the continental margin was determined by reference to sediment thickness points ST-01 and ST-02 and from ST-02 to ST-02B, which had been approved in the *Recommendations of the Commission on the Limits of the Continental Shelf in Regard to the Submission made by Argentina on 21 April 2009*.
- 34 The Subcommittee agreed with the determination of the outer edge of the continental margin as defined in the partial revised Submission submitted by Argentina on 28 October 2016.

## **2.3 Recommendations**

- 35 In the partial revised Submission, the outer edge of the continental margin beyond 200 M is based on points determined by the sediment thickness formula, as described in section 2.1, in accordance with paragraph 7 of article 76 of the Convention. The Commission recommends that the combined formulae line submitted on 28 October 2016 be used as the basis for delineating the outer edge of the continental margin in this region. The Commission recommends that this line be used to delineate the outer limits of the continental shelf in this region.

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

- 36 The outer limits of the continental shelf should be based on the established outer edge of the continental margin, taking into consideration the constraints contained in paragraphs 5 and 6 of article 76 of the Convention. 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 nautical miles from the baselines from which the breadth of the territorial sea is measured, or shall not exceed 100 nautical miles from the 2,500 metre isobath.
- 37 For the outer limits of the continental shelf in the partial revised Submission, Argentina only invoked the distance constraint.

### **3.1 The construction of the distance constraint line**

- 38 The distance constraint line submitted by Argentina in the Submission was constructed by arcs determined at a distance of 350 M from the baselines from which the breadth of the territorial sea of Argentina is measured.
- 39 The Subcommission agreed with the procedure and its accuracy by which the constraint line at a distance of 350 M from the baselines from which the breadth of the territorial sea had been determined.

### **3.2 The construction of the combined constraints line**

- 40 In the partial revised Submission, Argentina applied the outer envelope of the constraint lines based on the distance constraint contained in paragraph 5 of article 76 of the Convention, as described in section 3.1. The Commission agrees with the methodology applied by Argentina to determine this combined constraints line in the partial revised Submission.

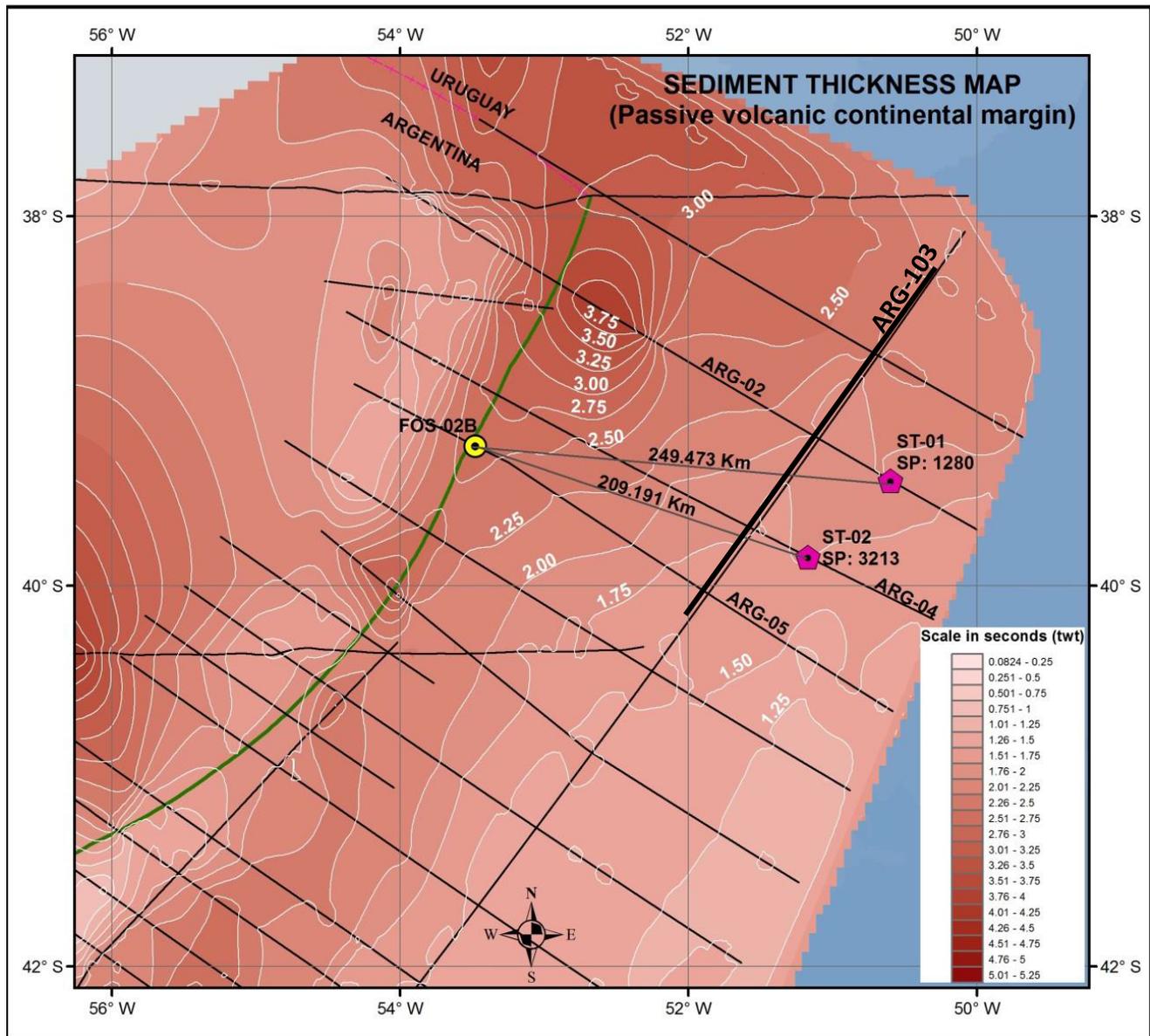
### **4. The outer limits of the continental shelf (paragraph 7 of article 76)**

- 41 The outer limits of the continental shelf in the partial revised Submission result from the application of the combined constraints line, determined according to paragraph 40, to the outer edge of the continental margin, determined according to paragraph 35. The outer limits of the continental shelf consist of fixed points connected by straight lines not exceeding 60 M in length. The Subcommission agreed with the determination of the outer limit defined by fixed points submitted on 28 October 2016, which are listed in annex I. The outer limit of the continental shelf, in the region that was considered, consists of fixed points RA-01, RA-02 and RA-02B connected by straight lines in accordance with article 76 of the Convention.

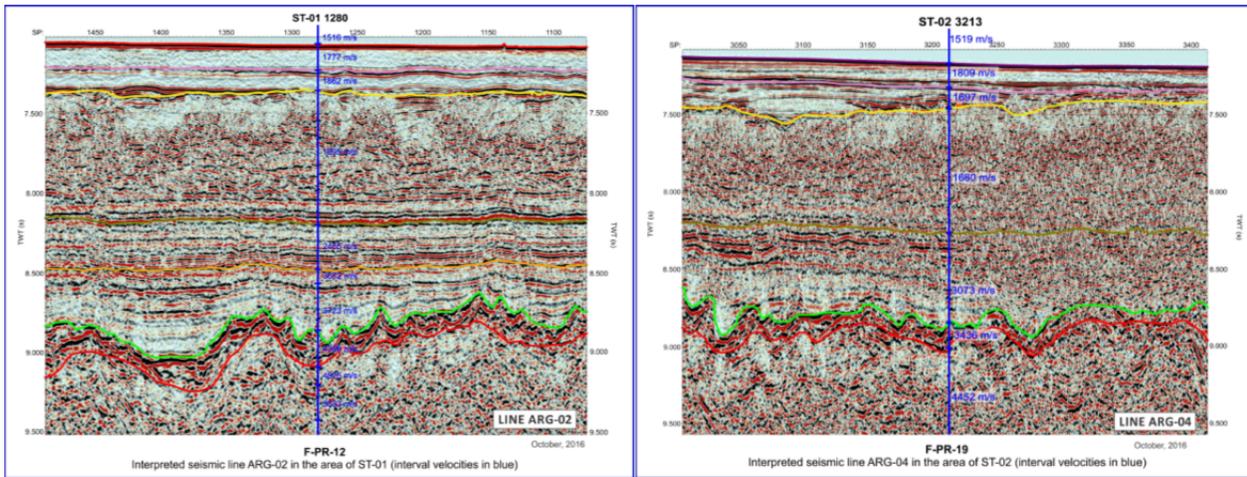
### **5. Recommendations for the partial revised Submission (paragraph 8 of article 76)**

- 42 The Commission recommends that the delineation of the outer limits of the continental shelf in the partial revised Submission be conducted in accordance with paragraph 7 of article 76 of the Convention by straight lines not exceeding 60 M in length, connecting fixed points, defined by coordinates of latitude and longitude. Further, the Commission agrees with the methodology applied in delineating the outer limits of the continental shelf in the partial revised Submission, including the determination of the fixed points listed in annex I, and the construction of the straight lines connecting those points. The Commission recommends that Argentina proceeds to establish the outer limits of the continental shelf from fixed point RA-01 to RA-02 and from RA-02 to RA-02B, which had been approved in the *Recommendations of the Commission on the Limits of the Continental Shelf in Regard to the Submission made by Argentina on 21 April 2009* (Figure 3).

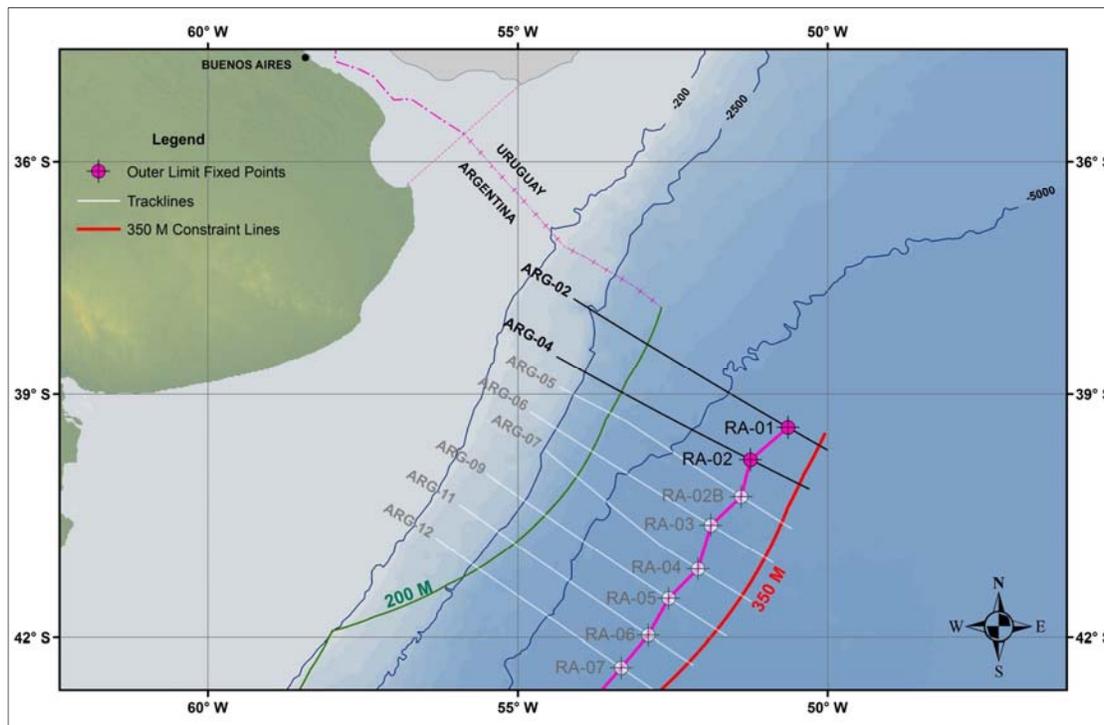
**FIGURES**



**Figure 1: Sediment thickness fixed points ST-01 and ST-02 at the relevant seismic lines used for the determination of the outer edge of the continental margin. Background map is sediment thickness isopach. (Modified, with labelling of seismic line, from Figure F-PR-05 of the Main Body of the partial revised Submission).**



**Figure 2: Sediment thickness fixed points ST-01 and ST-02 with the calculated interval velocities submitted by Argentina (From Figures F-PR-12 and F-PR-19 of the Main Body of the partial revised Submission).**



**Figure 3: Outer limits of the continental shelf of the partial revised Submission, outer limit fixed points RA-01 and RA-02, other outer limit fixed points approved in the *Recommendations of the Commission on the Limits of the Continental Shelf in Regard to the Submission made by Argentina on 21 April 2009* approved by the Commission, on 11 March 2016 (From presentation "Argentine Partial Revised Submission to the Commission on the Limits of the Continental Shelf Presentation by the Delegation of Argentina", slide 5).**

**ANNEX I  
COORDINATES FOR THE OUTER LIMITS OF THE CONTINENTAL SHELF FIXED POINTS BEYOND 200 M**

RA Points	Coordinates								Art. 76 provision invoked - Method	Distance from previous point Nautical Miles (M)
	Latitude	Longitude	Latitude S			Longitude W				
RA-01	-39.436672	-50.596350	39°	26'	12.02"	50°	35'	46.86"	76.4(a)(i)-1% Sediment Thickness	0.00
RA-02	-39.846225	-51.171694	39°	50'	46.41"	51°	10'	18.10"	76.4(a)(i)-1% Sediment Thickness	36.25
RA-02B*	-40.274408	-51.394858	40°	16'	27.87"	51°	23'	41.49"	76.4(a)(i)-1% Sediment Thickness	27.65

\* The outer limit fixed point RA-02B had been accepted by the Commission in the Recommendations adopted on 11 March 2016. It is appended to this table in order to reflect the distance to point RA-02