

United Nations Convention on the Law of the Sea



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 AMENDED SUBMISSION MADE BY THE REPUBLIC OF CÔTE D'IVOIRE ON 24 MARCH 2016*

Recommendations prepared by the Subcommittee established for the consideration
of the amended Submission made by the Republic of Côte d'Ivoire

Approved by the Subcommittee on 22 February 2019

Approved by the Commission, with amendments, on 5 February 2020

* 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. 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	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 foot of the continental slope
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 foot of the continental slope

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I. INTRODUCTION

- 1 On 8 May 2009, the Republic of Côte d'Ivoire (hereinafter Côte d'Ivoire) submitted to the Commission, through the Secretary-General of the United Nations,¹ information on the limits of the continental shelf beyond 200 M from the baselines (hereinafter the "Submission"), in accordance with article 76, paragraph 8, of the Convention.
- 2 The Convention entered into force for Côte d'Ivoire on 16 November 1994.
- 3 On 13 May 2009, the Secretary-General issued Continental Shelf Notification CLCS.42.2009.LOS² 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 the agenda of the twenty-fourth session of the Commission.
- 4 On 28 August 2009, pursuant to paragraph 2 of annex III to the rules of procedure, a presentation of the Submission was made to the plenary of the twenty-fourth session of the Commission by the Minister for Foreign Affairs and Head of Delegation, Youssouf Bakayoko, and the Director of Geology, Ministry of Mines and Energy, Ya Nertin Daouda.
- 5 The Delegation of Côte d'Ivoire (the "Delegation") also included a number of advisers. In addition to elaborating on substantive points of the Submission, Mr. Bakayoko indicated that no member of the Commission had assisted Côte d'Ivoire by providing scientific and technical advice with respect to the Submission.
- 6 In reference to paragraph 2(a) of annex I to the rules of procedure, Mr. Bakayoko informed the Commission that Côte d'Ivoire had held consultations with Benin, Ghana, Nigeria and Togo concerning adjacent and opposite maritime boundaries. During such consultations, those States agreed that they would continue to discuss the issue of maritime boundaries to arrive at a final delimitation after the presentation of either submissions or preliminary information. Further, they would individually address notes verbales expressing their intention not to object to each other's submissions. In this connection, he added that the Submission made by Côte d'Ivoire was without prejudice to the delimitation of boundaries with Benin, Ghana, Nigeria and Togo, and that the note verbale from Ghana dated 28 July 2009 reflected the above agreement, by indicating that the Submission made by Côte d'Ivoire did not prejudice future delimitation of maritime boundaries. Mr. Bakayoko stated that Côte d'Ivoire reserved the right to make future submissions concerning other sections of its continental margin.
- 7 The Commission received and took note of the contents of the note verbale dated 28 July 2009 in which Ghana indicated, inter alia, that it had "no objection to the submission made by Côte d'Ivoire which shall be without prejudice to the final delimitation of the boundary between Ghana and Côte d'Ivoire, and that the actions and recommendations of the Commission on the Limits of the Continental Shelf shall not prejudice matters relating to the future final delimitation of the continental shelf between Côte d'Ivoire and Ghana, adjacent coastal States".³ The Commission also took note of the views expressed by the Delegation in connection with the note verbale.
- 8 The Commission addressed the modalities for the consideration of the Submission and decided that, as provided for in article 5 of annex II to the Convention and in rule 42 of

¹ On whose behalf the Submission was received by DOALOS.

² See www.un.org/depts/los/clcs_new/submissions_files/submission_civ_42_2009.htm.

³ Ibid.

the rules of procedure, the Submission would be addressed by way of a subcommission to be established in accordance with rule 51, paragraph 4 ter, of the rules of procedure, at a future session.

- 9 On 24 March 2016, Côte d'Ivoire submitted to the Commission, through the Secretary-General, amended information on the limits of the continental shelf beyond 200 M from the baselines (hereinafter "the amended Submission"), indicating that it replaced, in its entirety, the information submitted on 8 May 2009.
- 10 On 20 April 2016, the Secretary-General issued Continental Shelf Notification CLCS.42.Rev.2016.LOS⁴ giving due publicity to the Executive Summary of the amended Submission in accordance with rule 50 of the rules of procedure.
- 11 On 8 April 2016, Côte d'Ivoire transmitted a note verbale requesting the Commission to provide it with the opportunity to make a presentation of the amended Submission. Pursuant to rule 51 of the rules of procedure, the consideration of the amended Submission was included in the agenda of the forty-first session of the Commission.
- 12 On 22 July 2016, pursuant to paragraph 2 of annex III to the rules of procedure, a presentation of the amended Submission was made to the plenary of the forty-first session of the Commission by the Head of the Delegation and Permanent Representative of Côte d'Ivoire to the United Nations, Claude Bouah-Kamon, and the Director General of the Société nationale d'opérations pétrolières de Côte d'Ivoire and Chair of the national commission on maritime boundaries and the continental shelf, Ibrahima Diaby. The Delegation also included a number of scientific, technical and legal advisers.
- 13 In addition to elaborating on the substantive points of the amended Submission, Mr. Diaby noted that the amended Submission made by Côte d'Ivoire on 24 March 2016 replaced the original Submission in its entirety. He indicated that no member of the Commission had assisted Côte d'Ivoire by providing scientific and technical advice with respect to the amended Submission.
- 14 Mr. Diaby elaborated in detail on issues of maritime delimitation in the area covered by the amended Submission. In particular, he recalled that Côte d'Ivoire and some of the other coastal member States of the Economic Community of West African States, namely, Benin, Ghana, Nigeria and Togo, had agreed, in February 2009, not to object to the consideration of submissions of the neighbouring States regarding their respective continental shelves beyond 200 M. Recalling the notes verbales from Ghana dated 27 July 2009 and 13 July 2016, he noted that, while part of the area of the amended Submission was subject to a maritime dispute with Ghana and that legal proceedings were pending before the International Tribunal for the Law of the Sea (ITLOS) to settle the dispute, Ghana had expressly consented to the consideration of the original and amended Submissions by the Commission.
- 15 The Commission received and took note of the contents of the note verbale dated 13 July 2016 in which Ghana indicated, inter alia, that it "consents to the Commission's consideration of Côte d'Ivoire's submissions, notwithstanding the existence of a dispute, provided that the existence of the dispute be taken into account in the Commission's consideration of Côte d'Ivoire's submissions, and that any action taken by the Commission in respect of those submissions shall be without prejudice to the delimitation of the maritime boundary, which will be effected by a Special Chamber of the International Tribunal for the Law of the Sea (ITLOS) pursuant to a Special

⁴ See www.un.org/depts/los/clcs_new/submissions_files/submission_civ_42_2009.htm

Agreement under Article 15, paragraph 2, of the ITLOS Statute”.⁵ The Commission also took note of the views expressed by the Delegation in connection with the note verbale.

- 16 The Commission addressed the modalities for the consideration of the amended Submission and reiterated the decision that it had taken at the twenty-fourth session (see paragraph 8 above) that, as provided for in article 5 of annex II to the Convention and in rule 42 of the rules of procedure, the amended Submission would be addressed by way of a subcommission to be established in accordance with rule 51, paragraph 4 ter, of the rules of procedure at a future session. With regard to the communications from Côte d'Ivoire dated 8 April and 11 May 2016, concerning the issue of confidentiality of the data and information contained in the amended Submission in connection with the ongoing proceedings before ITLOS in the *Dispute Concerning Delimitation of the Maritime Boundary between Ghana and Côte d'Ivoire in the Atlantic Ocean*, the Commission decided that it would consider those matters at the time when the amended Submission was next in line for consideration as queued in the order in which it had been received.
- 17 The Subcommission for the consideration of the amended Submission made by Côte d'Ivoire was established on 26 August 2016 during the plenary of the forty-first session of the Commission. The following members of the Commission were elected as members of the Subcommission: Estevao Stefane Mahanjane, Simon Njuguna, Carlos Marcelo Paterlini, Rasik Ravindra, Walter R. Roest and Tetsuro Urabe. The Commission agreed that a seventh member of the Subcommission would be appointed at a subsequent stage. The Subcommission elected Mr. Roest as its Chairperson, and Messrs. Mahanjane and Ravindra as its Vice-Chairpersons.
- 18 The Commission decided that during the forty-second session, the Subcommission would meet from 17 October to 4 November 2016. The Commission also considered the request made by Côte d'Ivoire with respect to the confidentiality of the material contained in the amended Submission and decided, notwithstanding rule 44(1 bis) and paragraph 5.2(a) of annex III to the rules of procedure, to proceed on the basis of that request.
- 19 The term of the members of the Commission elected in 2012 expired on 15 June 2017. On 14 June 2017, at the twenty-seventh Meeting of States Parties, 20 members of the Commission were elected for a term of five years (SPLOS/316, paragraphs 77-82 and annex III). As a result of this election, three vacancies occurred in the composition of the Subcommission. At its forty-fourth session, the Commission appointed Adnan Rashid Nasser Al-Azri, David Cole Mosher and Toshitsugu Yamazaki to replace Messrs. Ravindra, Roest and Urabe, respectively, so that the membership of the Subcommission became as follows: Messrs. Al-Azri, Mahanjane, Mosher, Njuguna, Paterlini and Yamazaki. The Commission decided that a seventh member of the Subcommission would be appointed at a subsequent stage. The Subcommission elected Mr. Mahanjane as Chair and elected Messrs. Mosher and Paterlini as Vice-Chairs.
- 20 The Subcommission examined the amended Submission between the forty-second and forty-ninth sessions. During these sessions, the Subcommission held 28 meetings with the Delegation, posed questions in writing and presented preliminary considerations involving documents and presentations. During the course of the examination of the amended Submission by the Subcommission, the Delegation

⁵ See www.un.org/depts/los/clcs_new/submissions_files/submission_civ_42_2009.htm.

provided responses to the questions posed both in writing and as presentations, and also provided additional material.

- 21 The Subcommittee conducted its interactions with the Delegation according to the rules of procedure and practice of the Commission, which were outlined in a presentation delivered to the Delegation at the first meeting held with the Subcommittee.
- 22 On 19 February 2019, the Subcommittee provided a comprehensive presentation of its views and general conclusions arising from the examination of all of the amended Submission, in accordance with paragraph 10(3) of annex III to the rules of procedure. On 21 February 2019, the Delegation provided its response to the 10(3) presentation by the Subcommittee, pursuant to paragraph 10(4) of annex III to the rules of procedure.
- 23 The Subcommittee approved its Recommendations on 22 February 2019 and submitted them to the Commission on 1 March 2019 for consideration and approval.
- 24 The Subcommittee made a presentation to the Commission on the substance and rationale for its Recommendations on 30 July 2019. 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.
- 25 The Commission prepared these Recommendations, which were approved with amendments on 5 February 2020, taking into consideration article 76 and annex II to the Convention and the procedures and the methodology outlined in the rules of procedure and the Guidelines.
- 26 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 Côte d'Ivoire in fulfilment of its mandate as contained in article 76 and in articles 3 and 5 of annex II to the Convention.
- 27 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, and also shall not 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.
- 28 Pursuant to article 76, paragraph 8, of the Convention, the limits of the continental shelf established by the submitting coastal State on the basis of these Recommendations shall be final and binding.
- 29 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 amended Submission, the Subcommittee was assisted by the Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs.

II. CONTENTS OF THE AMENDED SUBMISSION

A. Amended Submission

- 31 The amended Submission received on 24 March 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

- 32 In the course of the examination of the amended Submission by the Subcommittee, the Delegation submitted additional material, including responses to questions, to requests for clarification and to written preliminary considerations of the Subcommittee.

III. EXAMINATION OF THE AMENDED SUBMISSION BY THE SUBCOMMISSION

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

- 33 Pursuant to paragraph 3 of annex III to the rules of procedure, the Subcommittee examined and verified the format and completeness of the amended Submission.

B. Preliminary analysis of the amended Submission

- 34 Pursuant to paragraph 5 of annex III to the rules of procedure, the Subcommittee undertook a preliminary analysis of the amended Submission (figure 1), in accordance with article 76 and the Guidelines and determined that:
- (i) It would address the test of appurtenance in the context of the main scientific and technical examination of the amended Submission;
 - (ii) The proposed outer limits of Côte d'Ivoire's continental shelf beyond 200 M consist of an appropriate combination of sediment thickness formula points and 60 M formula points and the applicable distance constraint;
 - (iii) The construction of the outer limits contains straight line segments not exceeding 60 M in length;
 - (iv) 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
 - (v) Additional time would be required to review all the data and to prepare its Recommendations during future sessions of the Commission.



ARTICLE 76 PROVISIONS
Côte d'Ivoire submission pursuant to paragraph 8,
Article 76 of UNCLOS

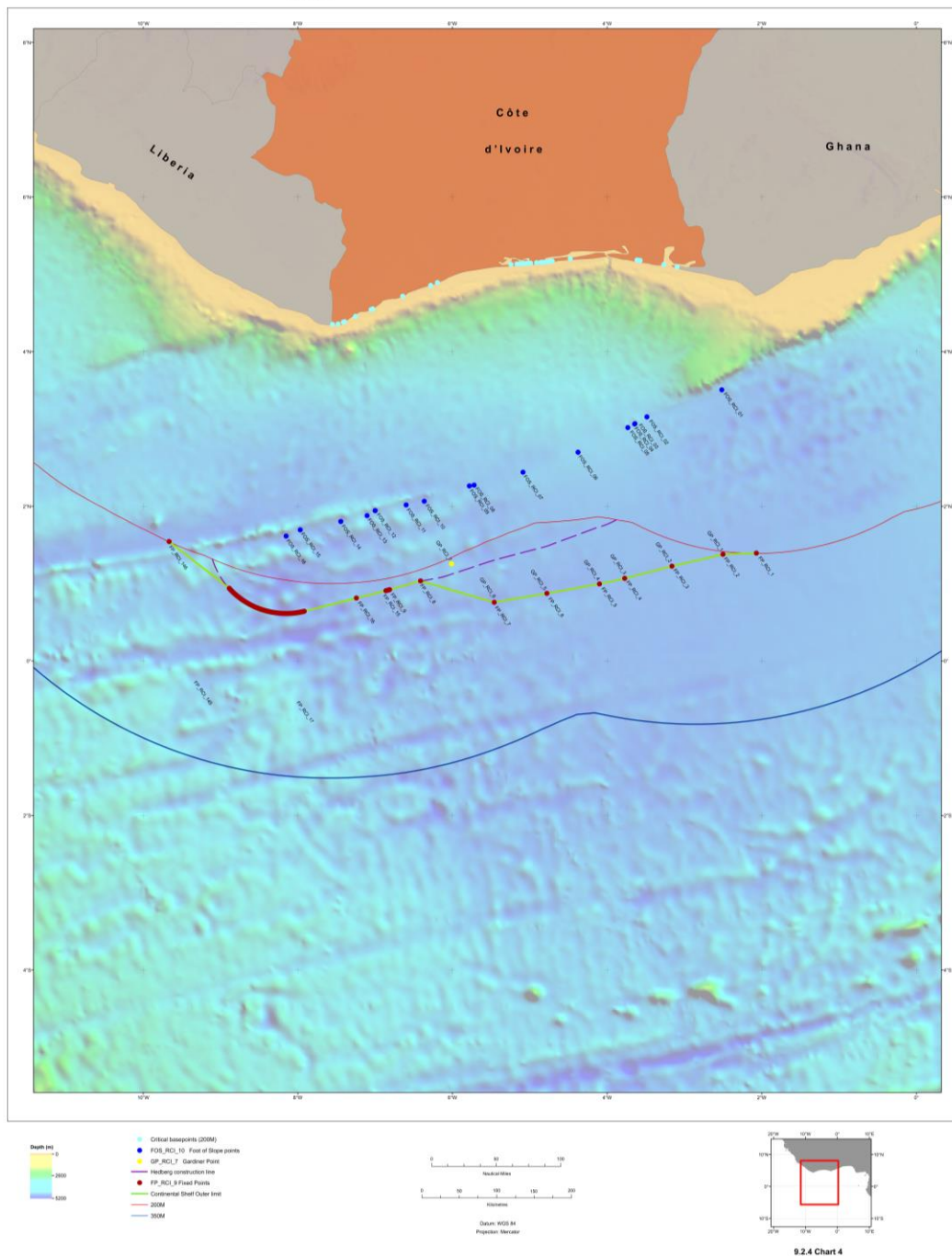


Figure 1: Map of the configuration of the outer limits of the continental shelf as proposed in the amended Submission of Côte d'Ivoire made on 24 March 2016 (figure 9.2.4 of Part 3. Scientific and Technical Data).

C. Main scientific and technical examination of the amended Submission

- 35 Pursuant to paragraph 9 of annex III to the rules of procedure, the Subcommittee conducted an examination of the amended Submission based on the Guidelines and evaluated the following, as applicable:
- (i) The data and methodology employed to determine the location of the FOS;
 - (ii) The methodology used to determine the formula line at a distance of 60 M from the FOS;
 - (iii) 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 FOS, or not less than 1 kilometre in the cases in which the Statement of Understanding applies;
 - (iv) The data and methodology employed in the determination of the 2,500 m isobath;
 - (v) The methodology used to determine the constraint line at a distance of 100 M from the 2,500 m isobath;
 - (vi) The data and methodology used to determine the constraint line at a distance of 350 M from the baselines;
 - (vii) The construction of the formulae line as the outer envelope of the two formulae;
 - (viii) The construction of the constraint line as the outer envelope of the two constraints;
 - (ix) The construction of the inner envelope of the formulae and constraint lines;
 - (x) 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;
 - (xi) 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 amended Submission; and
 - (xii) Whether the data submitted were sufficient in terms of quantity and quality to justify the proposed limits.
- 36 In conducting its examination of the amended Submission, the Subcommittee:
- (i) 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;
 - (ii) sought clarifications and additional data and information from the Delegation, where necessary, through exchanges with the Delegation;
 - (iii) presented preliminary views and conclusions to the Delegation; and
 - (iv) made a comprehensive presentation of its views and general conclusions to the Delegation at an advanced stage of the examination of the amended Submission, as provided for in paragraph 10(3) of annex III to the rules of procedure.

IV. RECOMMENDATIONS OF THE COMMISSION WITH RESPECT TO THE CONTINENTAL MARGIN OF CÔTE D'IVOIRE

37 The amended Submission of 24 March 2016 relates to one region in the eastern Equatorial Atlantic (figure 2).

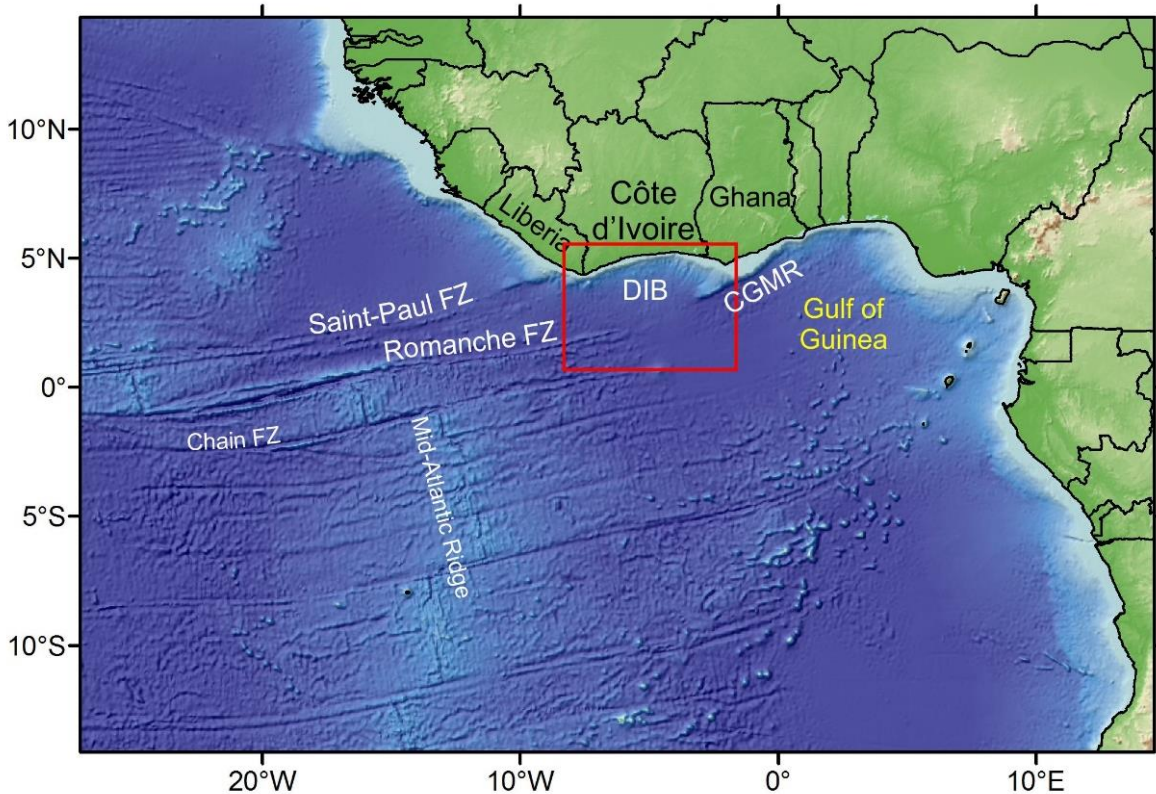


Figure 2. Bathymetric and topographic render using the GMRT grid, showing the location of Côte d'Ivoire and neighbouring States, as well as relevant geographic features. The red rectangle shows the approximate area of Côte d'Ivoire's submission. FZ = fracture zone, DIB = Deep Ivorian Basin, CGMR = Côte d'Ivoire-Ghana Marginal Ridge. The image was prepared by the Subcommittee.

1. Geographical and geological description of the region

- 38 Côte d'Ivoire is a West African coastal State which borders the Gulf of Guinea along a 520 km long coastline between Liberia and Ghana (figure 2). According to the Main Body, the continental margin of Côte d'Ivoire in the Equatorial Atlantic Ocean contains transform sections to the north and south and a rifted section in the middle.
- 39 The Main Body describes the Deep Ivorian Basin (DIB) as having originated in the late Aptian as a major pull-apart structure (Antobreh et al., 2009). This rifted segment of the margin lies between two prominent transform structures, namely the Romanche Fracture Zone (RFZ) and St. Paul Fracture Zone (SPFZ). The SPFZ forms the coastline of Côte d'Ivoire and the RFZ represents the seaward limit of the basin (figure 2). These fracture zones have resulted in considerable vertical off-set and large

translational movement. Sedimentation and subsidence have subsequently modified the basin architecture.

- 40 The DIB contains a thick sedimentary sequence (>6 km) (Masclé et al., 1988). The south-eastern edge of the basin is bounded by the Côte d'Ivoire-Ghana Marginal Ridge (CGMR) (Main Body, paragraph 3.4.4.1). Wide-angle seismic data were used to constrain the deep sedimentary and crustal structure of the DIB. East-west crustal models across the basin show a rifted margin configuration, with the continental crust thinning from 18-20 km to 10-12 km across a 200 km extent (Peirce et al., 1996; Sage et al., 2000) (Main Body, paragraph 3.4.4.3).
- 41 Côte d'Ivoire described in its Main Body (paragraph 3.4.4.3) that the crust is overlain by a 3 to 4 km thick sedimentary section. Based on gravity modelling, Antobreh et al. (2009) place the continent-ocean transition at approximately 4°W under the DIB (figure 3).

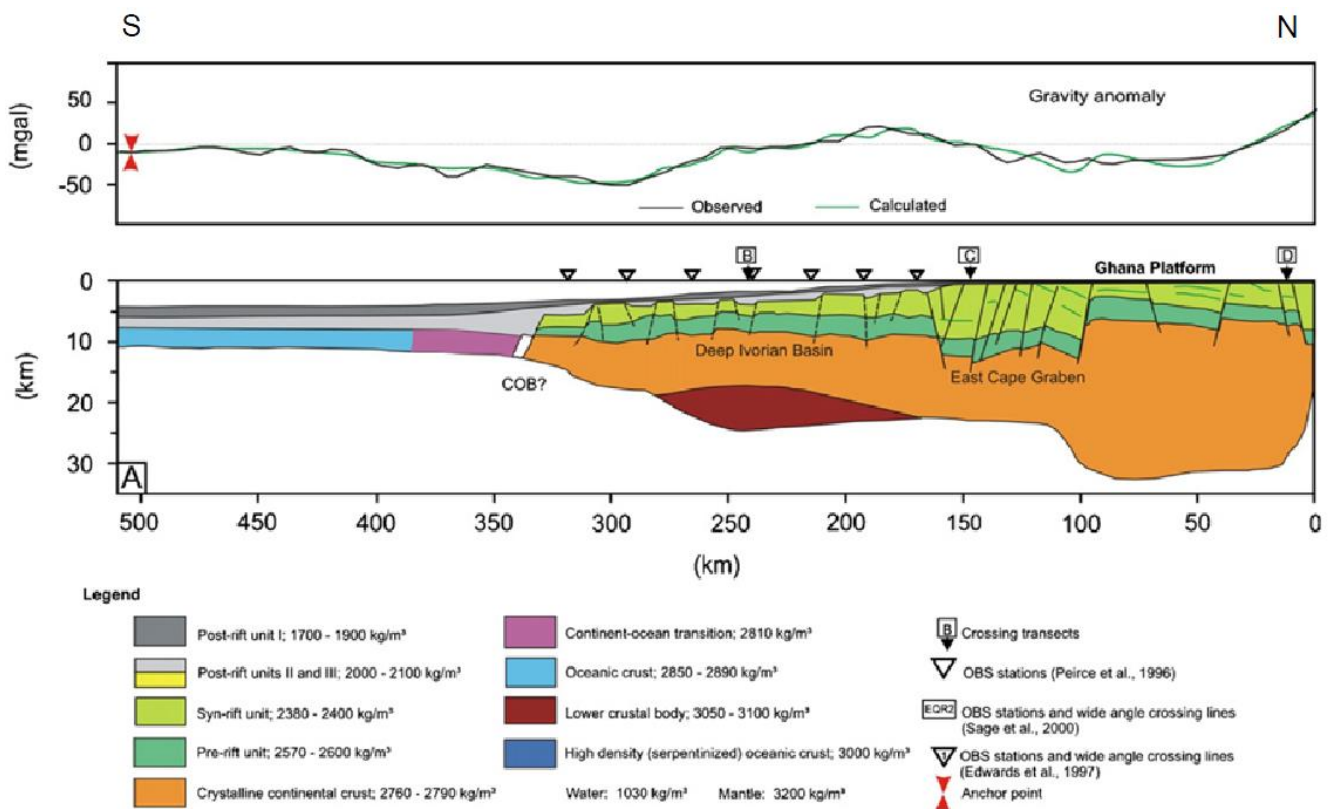


Figure 3: Gravity model across the DIB showing the continental crust thinning towards the west, until the continent-ocean transition is reached at ~4°W (from Antobreh et al., 2009 in figure 3.8 of Main Body).

- 42 The Delegation redefined the location of the continent ocean transition in the DIB, based on newly acquired high quality seismic reflection data (see figure 4).

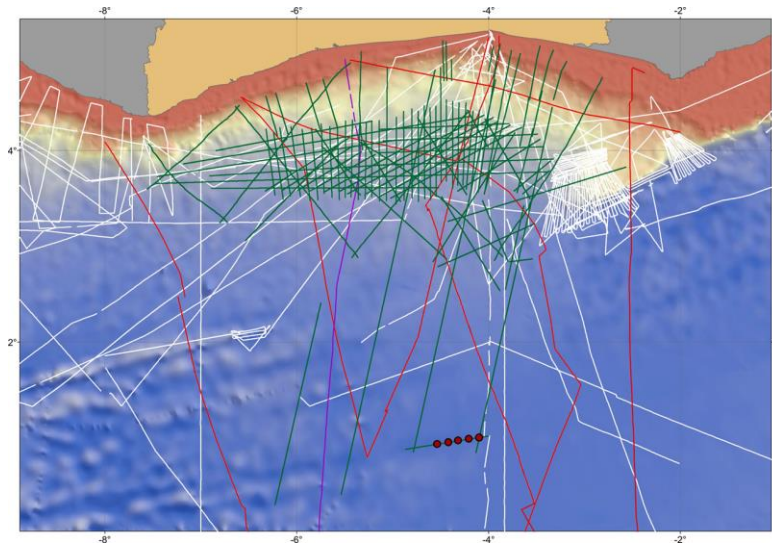


Figure 4: Database including newly acquired high quality seismic reflection data (green lines) (figure taken from presentation 2019_02_21_CIV_PRE_SCCIV_016_AnnexIII_10.4_FINAL, slide 6).

- 43 According to Côte d'Ivoire, the continent-ocean transition is located west of interpretations presented by Antobreh et al. (2009), at between 5°W and 4°W, as shown in figure 5.

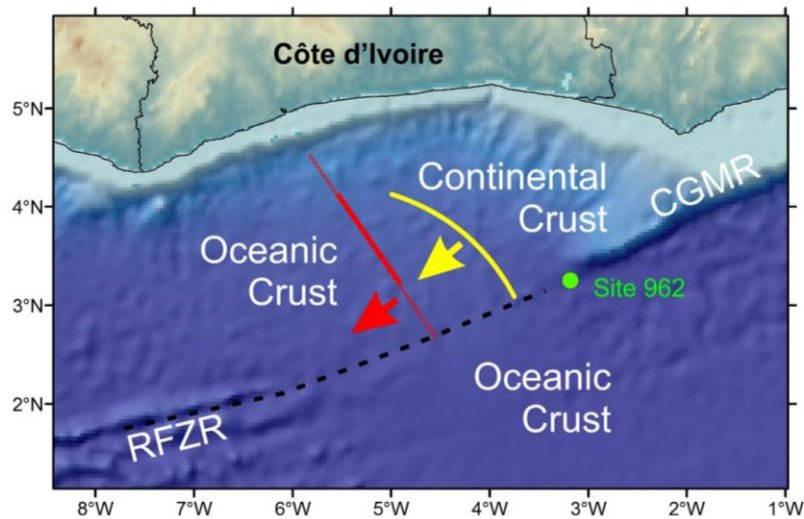


Figure 5. Bathymetric render of the GMRT grid showing Côte d'Ivoire's interpretation of the location of the Continent-Ocean Transition (COT) (red line). The thicker portion of the line is its location based on interpreted seismic reflection data and the thinner dashed portion is the line extrapolated. The yellow line is the location of the COT determined by Antobreh et al. (2009) based on refraction data. Arrows indicate the rifting direction. Site 962 is the location of a drill site from ODP Leg 159 that sampled continental crust. RFZR is the Romanche Fracture Zone Ridge, CGMR is the Côte d'Ivoire-Ghana Marginal Ridge. The dashed black line is the trace of the Romanche Fracture Zone. Figure prepared by the Subcommittee.

44 Drilling data from Ocean Drilling Program Leg 159 sampled continental rocks and found the first evidence for marine sedimentation at late Aptian to early Albian times, which is linked to opening of the ocean basin in this Equatorial Atlantic region (Basile et al., 1998) (Main Body 3.2.2.).

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

45 The FOS should be established in accordance with article 76, paragraph 4(b).

2.1. Considerations

46 In the amended Submission, Côte d'Ivoire established 16 FOS points, FOS_RCI_01 to FOS_RCI_16, that generated formula points beyond 200 M. Determination of these FOS points is predicated on CGMR and a ridge associated with RFZ (see figures 5 and 6).

47 The eastern section of the continental margin is dominated by the CGMR, which is a distinct regional morphological feature with a sharp gradient change at its base (figure 5). In the amended Submission, FOS points FOS_RCI_01 and FOS_RCI_02 were determined along this change in the gradient at the base of CGMR. Remaining FOS points were determined by Côte d'Ivoire along the southern flanks of the RFZ Ridge, which, according to Côte d'Ivoire, is the geological continuation of the CGMR. All the FOS points (figure 6) were determined using the general rule except for FOS_RCI_06 which was based on evidence to the contrary.

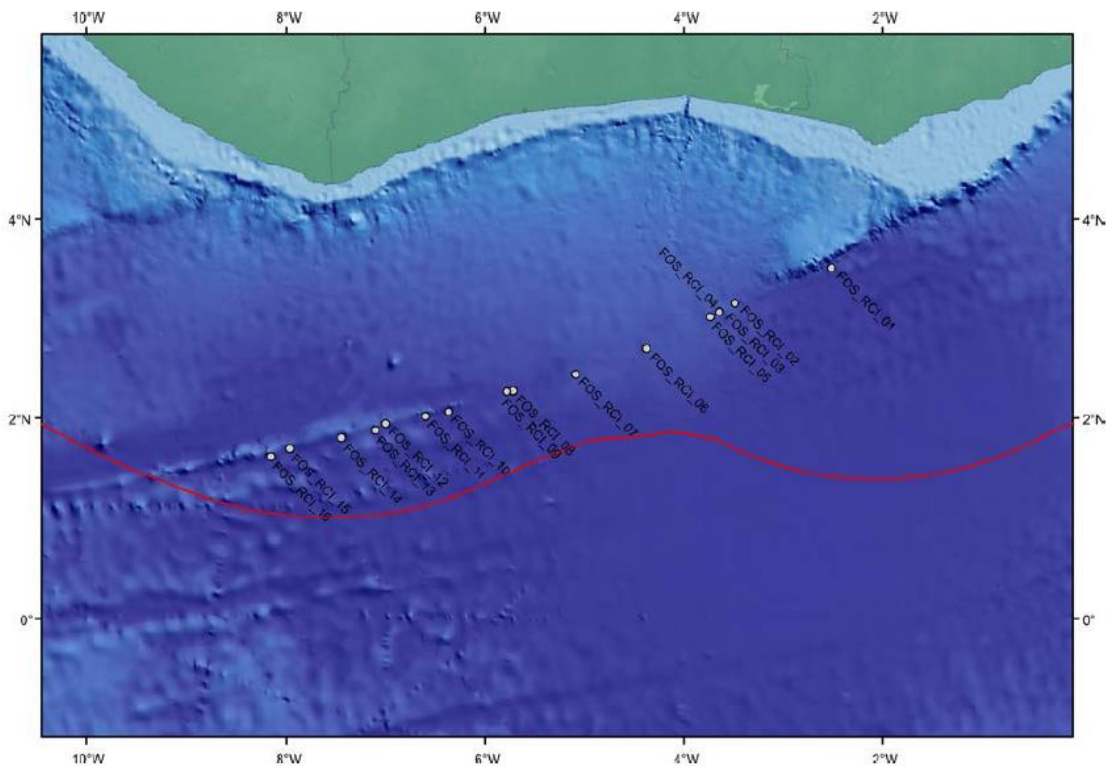
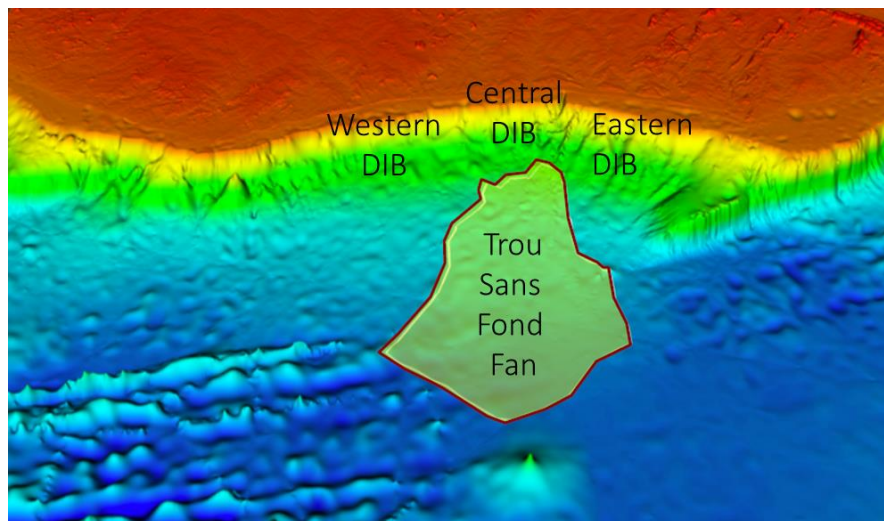


Figure 6: Côte d'Ivoire's FOS points within the 200 M limit line (red) (figure 4.2 from Main Body)

- 48 The Subcommission noted that in the Main Body of the amended Submission, the proposed FOS points were not preceded by identification and/or a description of the BOS region. For the purpose of examination of the test of appurtenance, however, the sharp gradient change at the base of the CGMR is readily identifiable as the BOS (figures 5 and 6). The Subcommission also noted that FOS_RCI_01 is the same location and was determined along the same bathymetric profile (A2075L03) as one that was previously accepted for a neighbouring State. The Subcommission agreed with the location of this FOS point. Further, the Subcommission examined FOS_RCI_02 which lies at the southwestern termination of the CGMR and close to another accepted FOS point of the same neighbouring State. Considering that the same change in the gradient is continuous to this region, the Subcommission agreed with the location of FOS_RCI_02. The Subcommission was not able at this stage to validate the remaining FOS points FOS_RCI_03 to FOS_RCI_16 because there is no obvious morphological continuity from the CGMR to the area of these points that would support a BOS.
- 49 The Subcommission noted that the 60 M formula line from FOS points FOS_RCI_01 and FOS_RCI_02 lies landwards of the 200 M line from Côte d'Ivoire's baselines.
- 50 Through a communication dated 23 February 2017, Côte d'Ivoire submitted evidence that the sediment thickness at fixed point GP_RCI_08, located seawards of the 200 M line from Côte d'Ivoire's baselines, was sufficient to satisfy the 1 per cent sediment thickness requirement from FOS_RCI_01. The Subcommission agreed that the combination of FOS_RCI_01 and sediment thickness formula point GP_RCI_08 would satisfy the test of appurtenance.
- 51 There was no agreed maritime boundary between Côte d'Ivoire and its neighbouring State (Ghana) at that time, but the Subcommission noted that FOS_RCI_01, which had been used to establish the outer edge of the continental margin, might be located beyond the jurisdiction of the submitting State (communication dated 17 March 2017).
- 52 In document 2017_11_13_CIV_DOC_SCCIV_008, Côte d'Ivoire informed the Subcommission that a Special Chamber of ITLOS had rendered its Judgment in the *Dispute Concerning Delimitation of the Maritime Boundary between Ghana and Côte d'Ivoire in the Atlantic Ocean (Ghana/Côte d'Ivoire)* (the "Judgment").⁶
- 53 As a result of the Judgment, FOS_RCI_01 and FOS_RCI_02, as well as the sediment thickness formula point GP_RCI_08, are located east of the maritime boundary. Consequently, the Subcommission requested that Côte d'Ivoire re-examine the test of appurtenance in light of this finding.
- 54 Côte d'Ivoire responded that "[...] for the ease of the Subcommission and without prejudice to Côte d'Ivoire's position regarding the influence of the maritime boundary on the delineation process, the delegation has generated a new Gardiner point GP_RCI_09 from FOS_RCI_03 (that lies west of the maritime boundary) that permits validation of the test of appurtenance" (document 2018_01_22_CIV_DOC_SCCIV_009, paragraph 8).
- 55 After further examination and verification of FOS point FOS_RCI_03 and the corresponding sediment thickness formula point GP_RCI_09, the Subcommission concluded that Côte d'Ivoire passed the test of appurtenance (see in particular paragraph 63 and section 3 below).

⁶ *Dispute Concerning Delimitation of the Maritime Boundary Between Ghana and Côte d'Ivoire in the Atlantic Ocean (Ghana/Côte d'Ivoire)*, ITLOS Case No. 23, Judgment, 23 September 2017. See https://www.itlos.org/fileadmin/itlos/documents/cases/case_no.23_merits/C23_Judgment_23.09.2017_corr.pdf

- 56 During the forty-sixth session, Côte d'Ivoire proposed a step-by-step examination process from east to west, subdividing the DIB into three areas: eastern, central and western (figure 7).



- Figure 7:** Three areas (eastern, central and western DIB) for which Côte d'Ivoire provided supporting information for the identification of the BOS. Trou Sans Fond Fan lies within the central DIB (figure taken from presentation 2018_01_29_CIV_PRE_SCCIV_008, slide 6, labels added by Subcommission).
- 57 In the course of the examination of the BOS/FOS in the eastern DIB area (east of 4°W), the Delegation submitted a number of analyses to demonstrate the submerged prolongation of the Côte d'Ivoire landmass. These were based on interpretation of reflection seismic data in the eastern DIB and proposed that the seafloor and sediments in that area are underlain by continental crust, which extends southwards under the eastern DIB, up to and including the CGMR.
- 58 The Subcommission understood that the Delegation was putting forward geological and geophysical considerations as principal evidence for the identification of the BOS. It reiterated that the BOS region should be identified based on morphological and bathymetric evidence. Geological and geophysical data can be submitted by coastal States to supplement proof that the BOS is found at that location (see paragraph 5.4.6 of the Guidelines). The Subcommission encouraged the Delegation to make full use of available data for bathymetric analysis for the search of the BOS and that geological processes be used in support of this analysis.
- 59 In its response (document 2018_03_12_CIV_DOC_SCCIV_011) the Delegation submitted additional morphological analyses for identification of the BOS (figure 8). Three bathymetric profiles running from the shelf were generated from the GEBCO 30-second grid to support the BOS region in the vicinity of FOS_RCI_03 to FOS_RCI_05B. In addition, several bathymetric profiles from open source (e.g. CITHER 1) and other bathymetric data extracted from the reflection seismic data were presented for the application of the two-step approach for the search of the BOS (paragraph 5.4.5 of the Guidelines). In support of its morphological evidence, the Delegation also provided geological and geophysical analyses describing slope processes and features distinguishing physiographic zones of the DIB in the eastern area. Such description included the continental nature of the underlying crust.

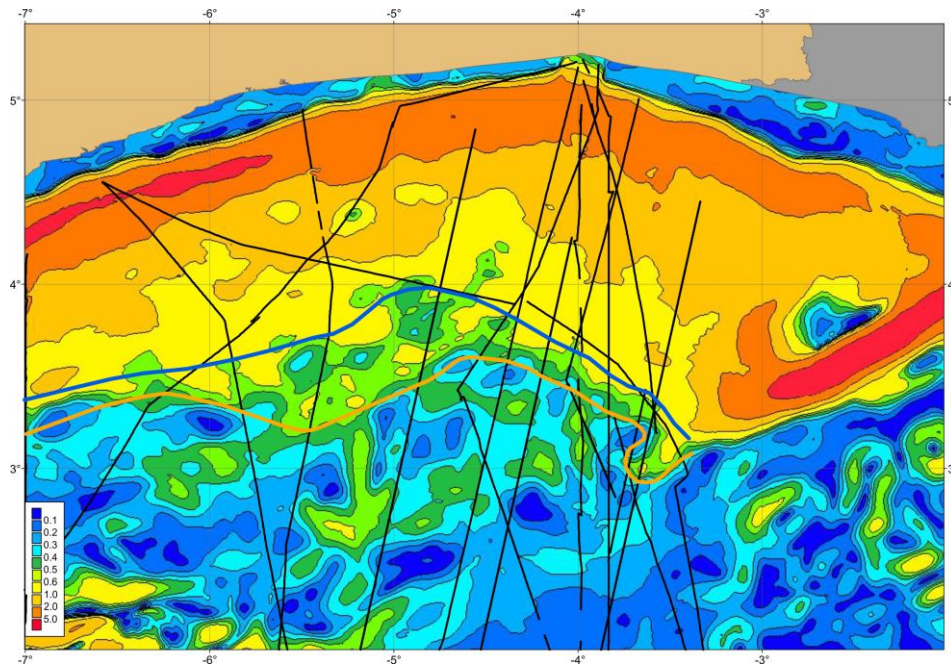


Figure 8: BOS, as supplied by the Delegation, identified using gradient analysis. The blue line is the landward edge of the BOS, the orange line is the seaward edge and the black lines are the track navigation lines of seismic data (figure taken from presentation 2018_11_06_CIV_PRE_SCCIV_013, slide 9).

- 60 The Subcommittee did not agree with the Delegation’s views and observed that the maximum change in the gradient on the features from which FOS points FOS_RCI_03 to FOS_RCI_05B are located do not represent a regional change in the gradient. In the view of the Subcommittee, the gradients, ranging from 3° to 10° on its seaward flank, characterise a local feature. This change is not characteristic of the lower part of the slope. In turn, the Subcommittee suggested that the Delegation proceed with morphological analysis to identify the BOS and suggested appropriate smoothing algorithms to minimize grid artefacts and provide strong correlation between grid and line analyses. This approach would assist in defining regional slope gradients.
- 61 The Delegation agreed with the Subcommittee’s observations and submitted new analyses in presentation 2018_07_27_CIV_PRE_SCCIV_012. With respect to FOS_RCI_03 defined along bathymetric profile CIV-UN08-01, the Delegation applied an average length of 45 km in Geocap to calculate the slope angles. This approach determined FOS_RCI_03 at a maximum change in the gradient with values of 0.60° for the continental slope and 0.10° on the continental rise (figure 9). The Subcommittee had yet to validate the location of the BOS and encouraged the Delegation to identify the BOS along the complete eastern part of the DIB and the remaining regions of Côte d’Ivoire’s margin (communication dated 31 August 2018).

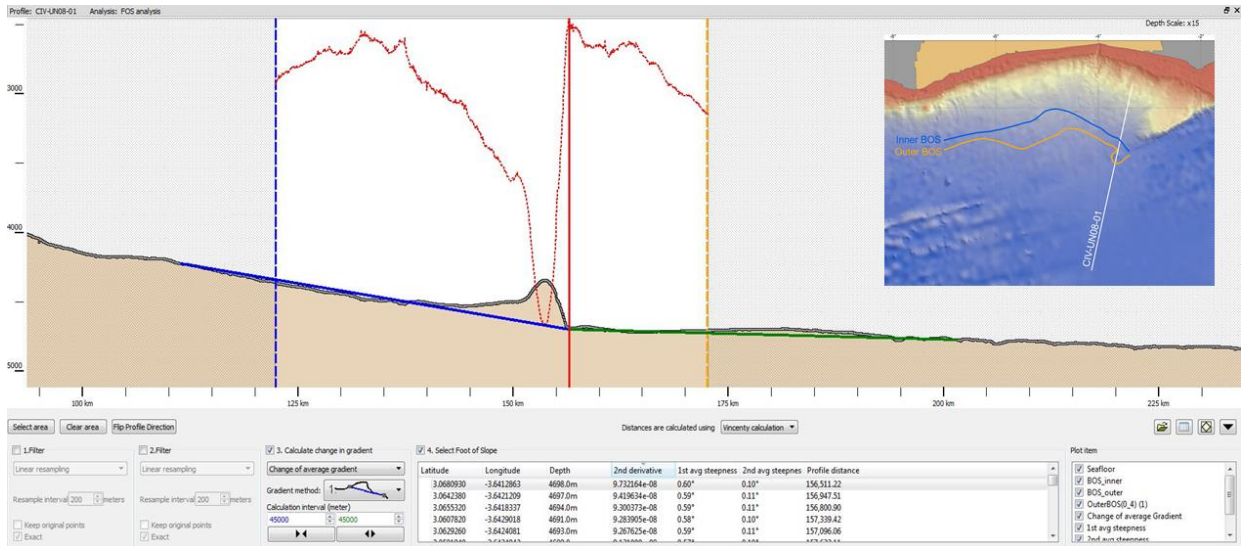


Figure 9: Identification of FOS_RCI_03 at the maximum change in the gradient within the BOS zone. Average slope calculated over 45 km gradient calculation intervals (figure adapted from presentation 2018_11_06_CIV_PRE_SCCIV_013, slides 14 and 17).

- 62 At the forty-eighth session, the Delegation identified a continuous BOS region and submitted eight new FOS points (FOS_RCI_06A, _06B, _06C, _06D, _06E, _06F, _06G and _06H). The inner and outer limits of the BOS were identified and follow the general trends of the 0.6° and 0.4° isoclines, respectively. The Delegation maintained that the locations of BOS limits were validated by using a 25 km moving average window gradient analysis on bathymetric profiles (presentation 2018_11_06_CIV_PRE_SCCIV_013).
- 63 Based on the morphological and geological evidence submitted, the Subcommittee agreed with the location of FOS_RCI_03 and FOS_RCI_05B as determined by the Delegation. The Subcommittee further agreed with the Delegation's approach to the morphological analysis in the eastern region and suggested to extend this analysis to the central and western regions of the DIB.
- 64 The Subcommittee observed that among the submitted FOS points in the central and western DIB, one FOS point, FOS_RCI_06E, was necessary to generate an outer edge of the continental margin as proposed by the Delegation. The Subcommittee noted that FOS_RCI_06E was determined along the profile CWGRAIC99-101 of which the orientation and length were not optimal. The Subcommittee requested that the Delegation first identify the BOS in this region.
- 65 In the view of the Subcommittee, the BOS as proposed by the Delegation required geological and geophysical support given the near-constant curvature of the seafloor in the western DIB (figure 10). Geological and geophysical supporting evidence are needed to help distinguish the slope from the rise/deep ocean floor. However, the Subcommittee noted that there are limited regional data to support the BOS in this region. The Subcommittee requested the Delegation to provide additional documentation supporting the identification of the BOS/FOS for this segment of the margin (document 2018_11_30_SCCIV_DOC_CIV_007).

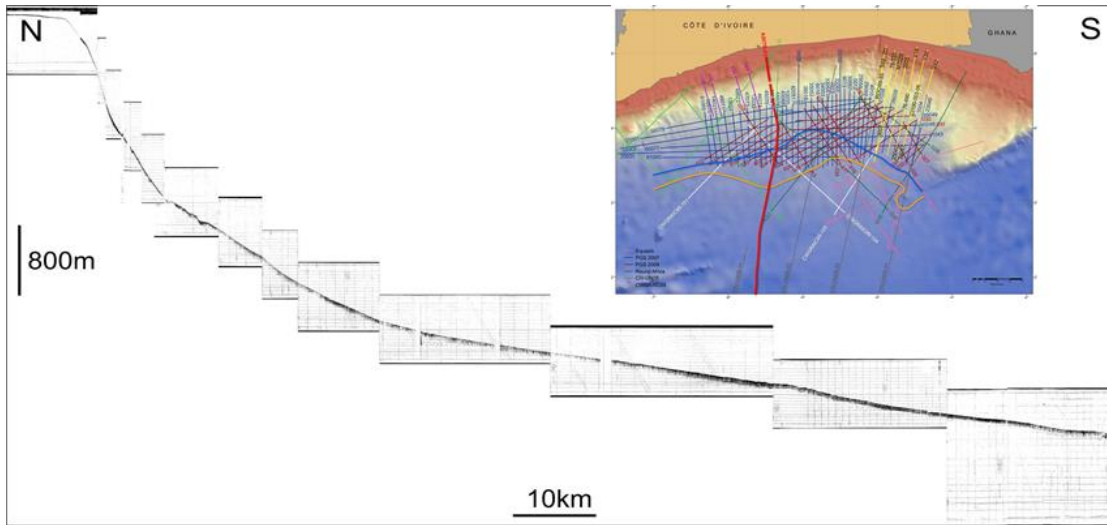


Figure 10: Vema 3.5kHz sub-bottom profile A2075L03, showing that the Deep Ivorian Basin west of 5°20'W exhibits a near-constant curvature of the seafloor. The red line in the inset map indicates the location of the profile. (figure taken from presentation 2019_02_12_CIV_PRE_SCCIV_15, slide 7).

66 The Delegation provided additional reflection seismic data and a sub-bottom profile from part of survey A2075L03 (Atlantis 1975, 3.5 kHz data) as geological evidence that distinguish both landward and seaward sides of the BOS (figure 10). Distinctive geological features demonstrating active slope processes were used as a supporting criterion to differentiate the slope from the rise (figure 11) (document 2019_01_30_CIV_DOC_SCCIV_18).

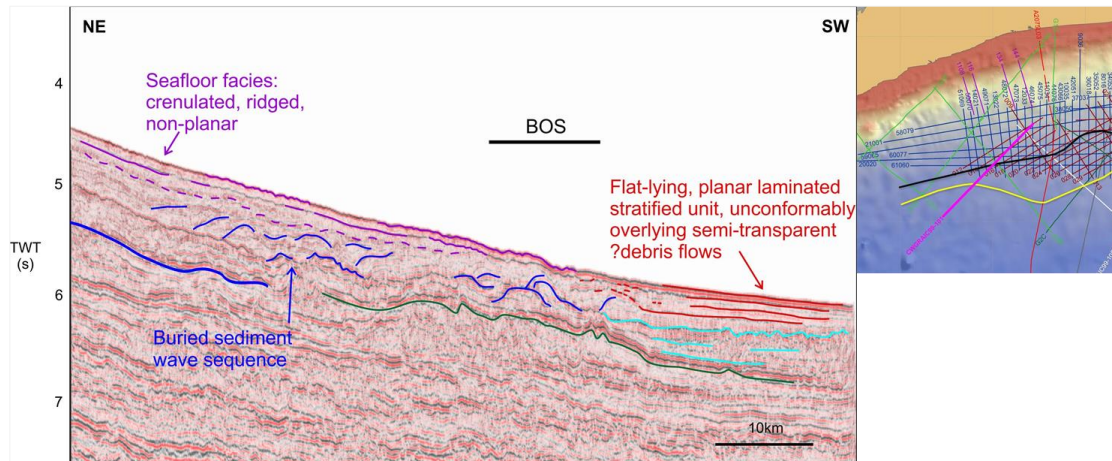


Figure 11: Interpreted MCS section CWGRAIC99_101 shows sedimentary features that are suggestive of active slope processes (central and upslope sections) and flat-lying depositional facies that characterize the deep water rise to the southwest (figure taken from presentation 2019_02_12_CIV_PRE_SCCIV_15, slide 20).

- 67 Additional morphological evidence was presented in the form of a merged grid of all available bathymetric data obtained from the MCS data and public single-beam echosounder records, as well as the GEBCO 2014 grid. In the view of the Delegation, the seafloor of the western DIB does not represent a 'normal' slope configuration. The central and eastern part of the slope is dominated by a broad, gently undulating shoal area which Côte d'Ivoire considered to be part of the lower slope and not the continental rise.
- 68 The Subcommittee examined in detail all the information and conducted its own analysis of the submitted data concerning the BOS in this region and FOS_RCI_06E. The Subcommittee agreed with the Delegation that the geological and geophysical evidence presented for the BOS at the location of FOS_RCI_06E sufficiently support the morphological evidence. It verified and agreed that FOS_RCI_06E as determined by the Delegation is located at the point of maximum change in the gradient at the BOS.

2.2. Recommendations

- 69 The Commission considers the FOS points listed in table I of annex I to these Recommendations to fulfil the requirements of article 76 and chapter 5 of the Guidelines, based on the consideration of the scientific documentation presented in the amended Submission and the additional data and information provided, notably in the documents referred to above. The Commission recommends that these FOS points (figure 12) form the basis for the establishment of the outer edge of the continental margin of Côte d'Ivoire.

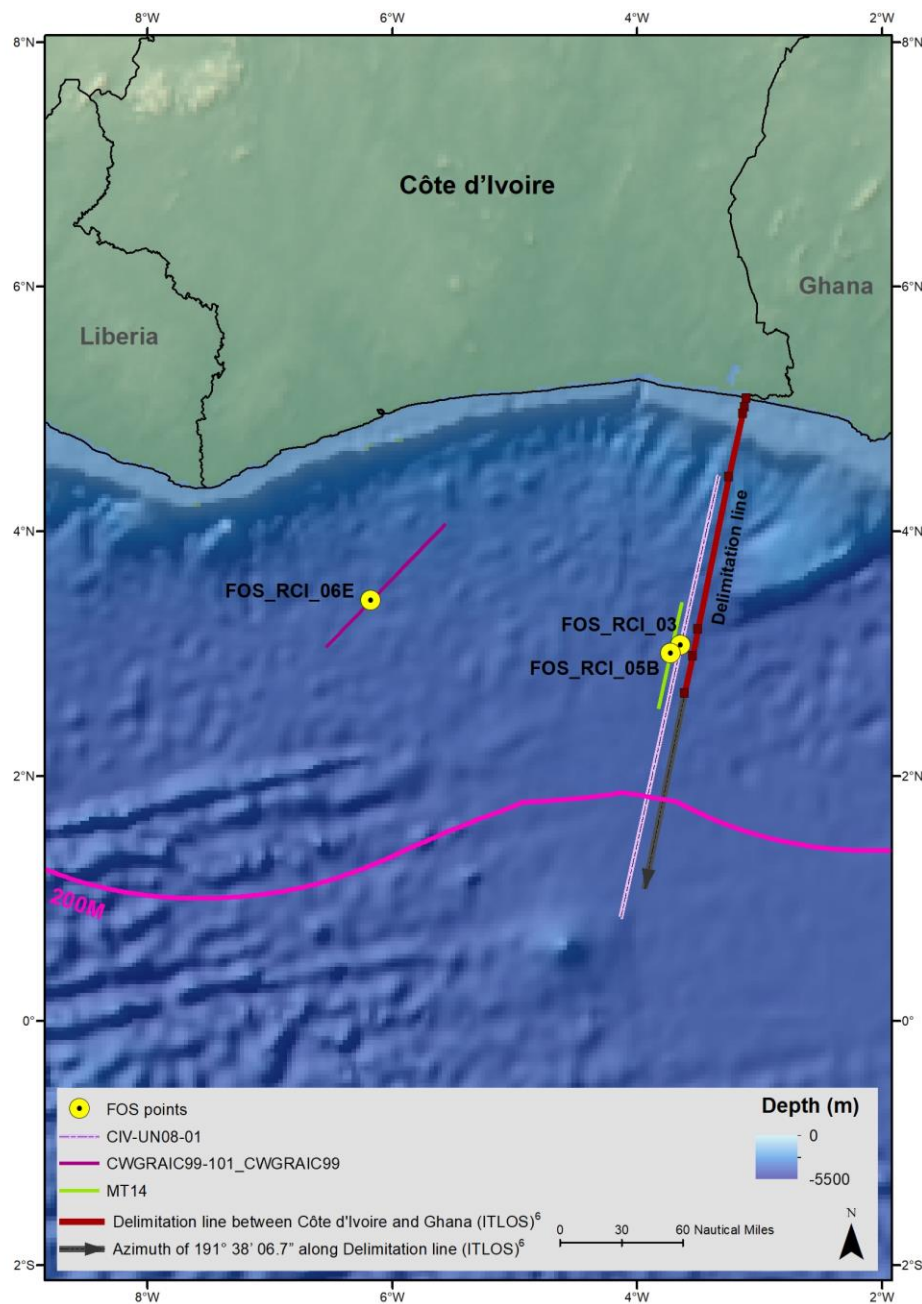


Figure 12*: Illustrative map of the final FOS points listed in table I of annex I to these recommendations

* This illustrative map was prepared by the Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations, upon the request of the Subcommittee established to consider the amended Submission by Côte d'Ivoire, on the basis of the submitted information. The designations employed and the presentation of material on this map 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.

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

70 The outer edge of the continental margin of Côte d'Ivoire shall, for the purposes of the Convention, be established in accordance with article 76, paragraph 4(a).

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

71 In the amended Submission of Côte d'Ivoire, the western segment of the outer edge of the continental margin is based on fixed points constructed at a distance not exceeding 60 M from FOS points FOS_RCI_06, FOS_RCI_07, FOS_RCI_08, FOS_RCI_10, FOS_RCI_11, FOS_RCI_13, FOS_RCI_14 and FOS_RCI_16, in accordance with article 76, paragraph 4(a)(ii).

72 Since the Subcommittee did not agree on the location of the FOS points FOS_RCI_06, FOS_RCI_07, FOS_RCI_08, FOS_RCI_10, FOS_RCI_11, FOS_RCI_13, FOS_RCI_14 and FOS_RCI_16, the 60 M distance formula from these points was not applicable.

3.2. The application of the 1 per cent sediment thickness formula (article 76, paragraph 4(a) (i))

73 As described in the Main Body of the amended Submission, in the eastern part of its continental margin, Côte d'Ivoire submitted seven sediment thickness formula points (GP_RCI_01 to GP_RCI_07) based on article 76, paragraph 4(a)(i). Côte d'Ivoire established these sediment thickness formula points based on seismic lines Atlantis II, Vema V2710, Walda-1, CIV-UN08-01, CIV-UN08-02, CIV-UN08-03 and CIV-UN08-04, respectively.

74 The seismic velocity model used by Côte d'Ivoire is based on a wide-angle reflection and refraction experiment (WARRP) utilising Ocean Bottom Seismometers that allow more accurate time to depth conversion (figure 13).

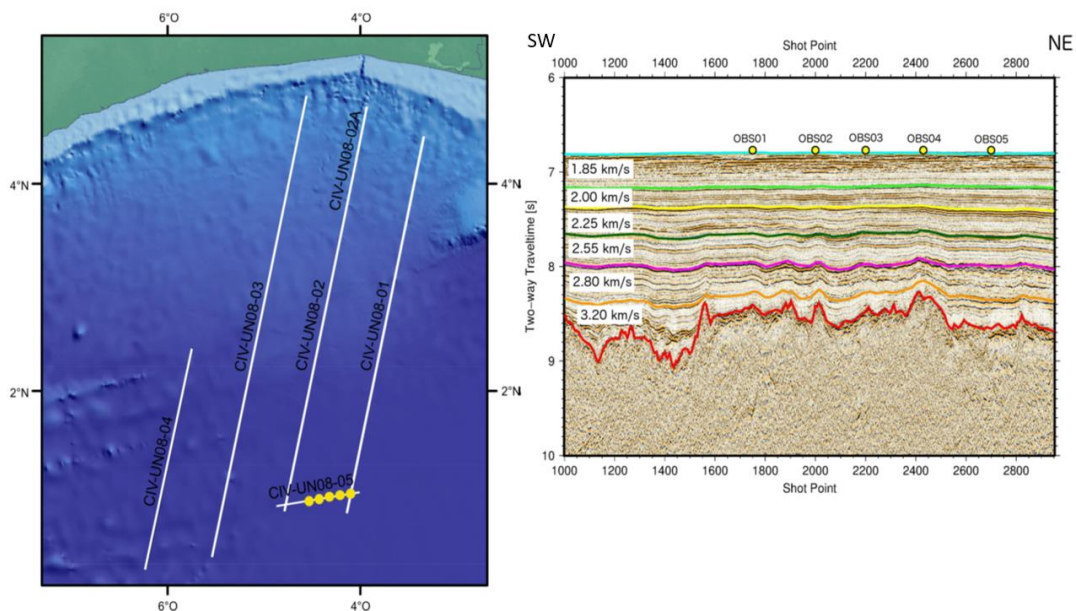


Figure 13: location of the OBS on line CIV-UN08-05 (left); stratigraphic velocity model on line CIV-UN08-05 (right) (figure adapted from presentation 2016_07_22_CIV_PRE_COM_002, slides 46 and 47).

- 75 Owing to the nature and quality of data that had been used in the establishment of the Gardiner points, the Subcommittee could not verify GP_RCI_01 or GP_RCI_02. In particular, GP_RCI_01 had been established on a line drawing representation of the seismic profile, as opposed to seismic data, and at a position where the sediment thickness formula point could not have been ascertained to meet the 1 per cent sediment thickness criterion of article 76, paragraph 4(a)(i). Use of a gravity model in the amended Submission as support could not be verified considering the significant uncertainties inherent in this approach. Gardiner point GP_RCI_02 had been determined on seismic line V2713 which was a low-quality seismic image. It does not show the basement signature at the precise location of this sediment thickness formula point. Without further supporting data and information, the Subcommittee was not able to verify the sediment thickness at this point. GP_RCI_03 on seismic profile Walda-1 was not validated because the applied FOS_RCI_06 was not agreed upon by the Subcommittee.
- 76 During the forty-fifth session, following the Judgment,⁷ the Delegation proposed a new sediment thickness formula point GP_RCI_09 derived along seismic line CIV_UN08_05. The Subcommittee decided to examine this sediment thickness formula point with other relevant sediment thickness formula points.
- 77 In presentation 2018_11_06_CIV_PRE_SCCIV_013, Côte d'Ivoire proposed a new set of sediment thickness formula points GP_RCI_10 to GP_RCI_15 measured from FOS_RCI_03, FOS_RCI_05B and FOS_RCI_06E (figures 14 and 15). These points were determined along multi-channel reflection seismic lines (CIV-UN08 survey). One sediment thickness formula point, GP_RCI_03, located within the Ghanaian continental margin, was determined along the single channel seismic line WALDA-1.

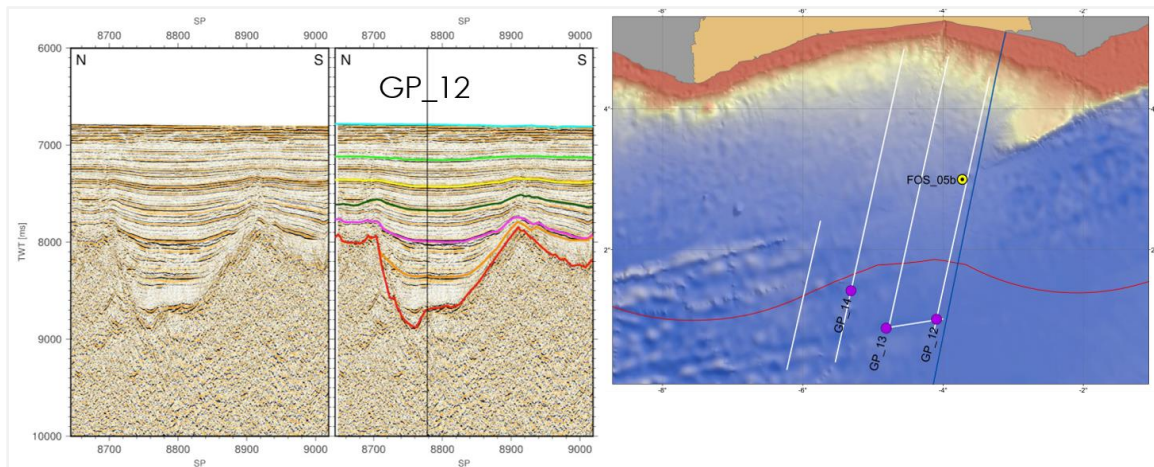


Figure 14: Example showing the location of the sediment thickness formula point GP_RCI_12 on seismic line CIV-UN08-01 (figure taken from presentation 2018_11_06_CIV_PRE_SCCIV_013, slides 34 and 35).

- 78 The Subcommittee examined the stratigraphic seismic velocity model derived from the OBS velocities which the Delegation used for the calculation of the sediment thickness. The OBS velocities defined by Côte d'Ivoire were compared with

⁷ See paragraph 52 above.

internationally published models in marine environment to validate the results. As a result, the Subcommittee agreed with the Delegation's use of the stratigraphic seismic velocity model for calculation of the sediment thickness formula points on the lines intersecting with CIV_UN08_05.

- 79 In document 2018_11_08_SCCIV_DOC_CIV_006, the Subcommittee requested the Delegation to elaborate on the applicability of the seismic velocity model developed on OBS data on CIV-UN08-05 to the regions covered by CIV-UN08-03, CIV-UN08-04 and WALDA-1. In particular, the Subcommittee noted that a "jump correlation" of seismic stratigraphy was required to infer seismic velocities (see figure 13).
- 80 In document 2018_11_09_CIV_DOC_SCCIV_016, in the absence of direct velocity correlation of the lines, the Delegation provided a time-depth equation derived from their OBS results and used it to derive the sediment thickness in metres. The Subcommittee proceeded with the examination of individual sediment thickness formula points and noted discrepancies in thicknesses between the time-depth equation approach and the stratigraphic approach used by the Delegation. Therefore, it suggested that the application of the time-depth equation may be more appropriate for lines that do not have a direct tie to CIV-UN08-05.
- 81 Subsequently, the Delegation revised its calculations and corrected the sediment thickness at the points GP_RCI_03, GP_RCI_09, GP_RCI_12, GP_RCI_13, GP_RCI_14 and GP_RCI_15 measured from FOS_RCI_03, FOS_RCI_05B and FOS_RCI_06E.
- 82 In document 2019_01_30_CIV_DOC_SCCIV_018, the Delegation provided detailed interpretation of the top of the basement for determination of sediment thickness formula point GP_RCI_15 in addition to information on sediment continuity from individual sediment thickness formula points to the FOS.
- 83 Based on the submitted data and information, the Subcommittee agreed to sediment thickness formula points GP_RCI_03, GP_RCI_09, GP_RCI_12, GP_RCI_13, GP_RCI_14 and GP_RCI_15.

3.3. Recommendations

- 84 The outer edge of the continental margin of Côte d'Ivoire beyond 200 M is based on six sediment thickness formula points as described in section 3.2 (see also figure 15), in accordance with article 76, paragraph 7, of the Convention. The fixed points are listed in table II of annex I to these Recommendations. The Commission recommends that these points 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 section 4).

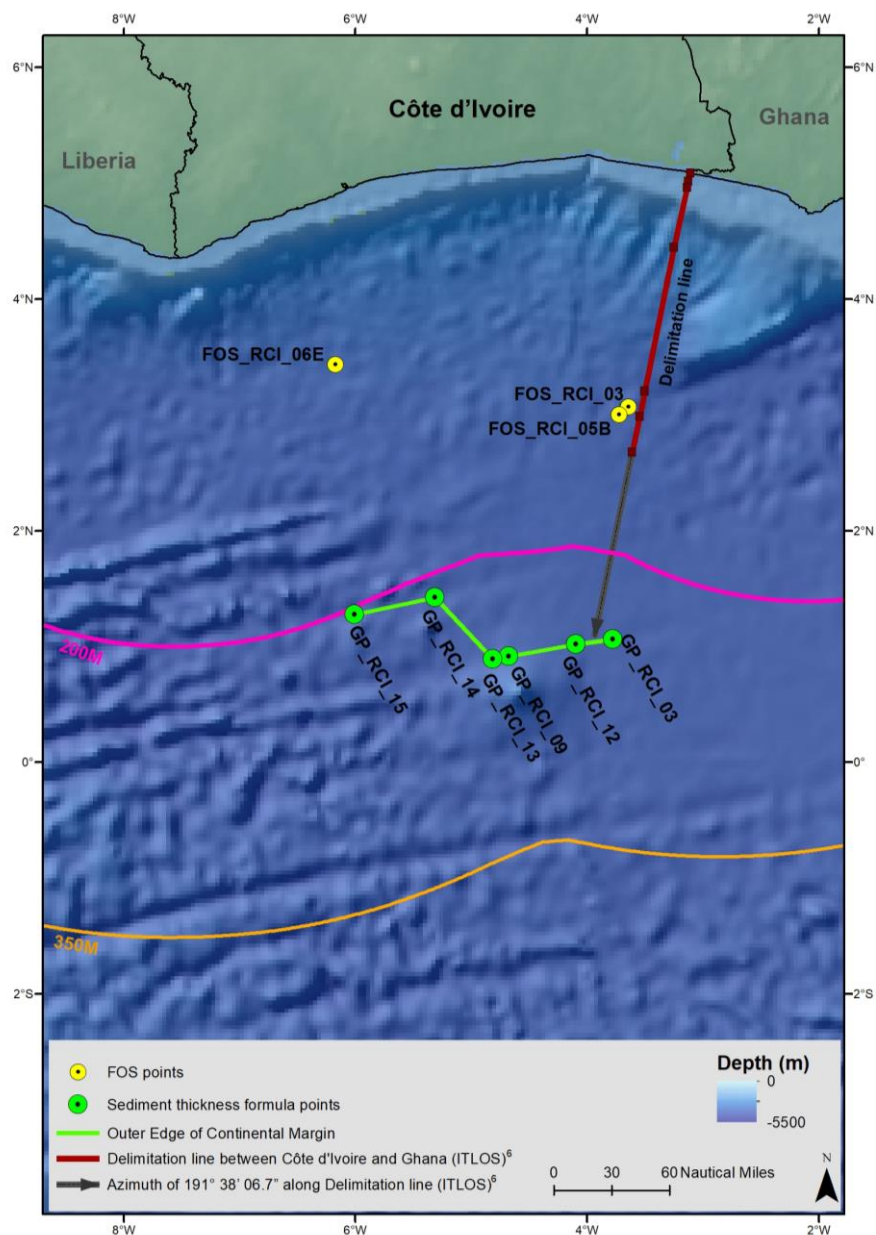


Figure 15*: Illustrative map of the outer edge of the continental margin including the location of applied sediment thickness formula points determining the outer edge of the continental margin beyond 200 M and corresponding FOS points.

* This illustrative map was prepared by the Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations, upon the request of the Subcommittee established to consider the amended Submission by Côte d'Ivoire, on the basis of the submitted information. The designations employed and the presentation of material on this map 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.

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

85 The outer limits of the continental shelf cannot extend beyond the constraints as per the provisions contained in article 76, paragraphs 5 and 6. The fixed points comprising the line of the outer limits of the continental shelf on the seabed, drawn in accordance with article 76, paragraph 4(a)(i) and (ii), either shall not exceed 350 M from the baselines (the distance constraint), or shall not exceed 100 M from the 2,500 m isobath (the depth constraint). For the outer limits of its continental shelf, Côte d'Ivoire has provided information on both constraints. However, Côte d'Ivoire has applied only the distance constraint for the determination of the outer limits of the continental shelf. The construction of the depth constraint line is not relevant.

4.1. The construction of the distance constraint line

86 The distance constraint line submitted by Côte d'Ivoire was constructed by arcs at 350 M distance from the baselines of Côte d'Ivoire (figure 16). The Commission agrees with the procedure and methods applied by Côte d'Ivoire in the construction of this constraint line.

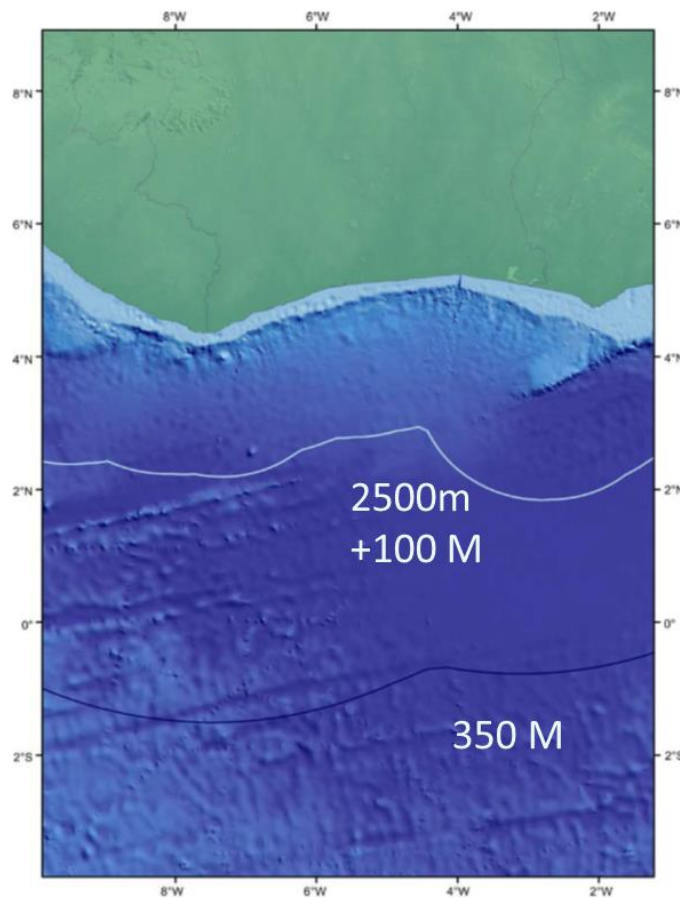


Figure 16: Construction of the constraint lines (Based on figure 7.3 - Main Body, labels added by Subcommittee).

4.2. Recommendations

- 87 The applied constraint line is based on the distance constraint criterion, as described in section 4.1 (figure 16), in accordance with article 76, paragraph 5, of the Convention. The Commission recommends that the distance constraint line be used as the basis in the delineation of the outer limits of the continental shelf in this region (see section 5).

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

- 88 The outer limits of the continental shelf are subject to the application of the constraint determined according to paragraph 87 above. The outer edge of the continental margin lies entirely landward of this constraint line.
- 89 The outer limits, as revised by Côte d'Ivoire as per document 2019_01_30_CIV_DOC_SCCIV_18, are delineated by straight lines not exceeding 60 M in length connecting six fixed points.
- 90 The outer limit fixed points are listed in table III of annex I to these recommendations. FP_RCI_02 to FP_RCI_06 are established in accordance with article 76, paragraph 7. FP_RCI_01 is established by Côte d'Ivoire at the intersection point between the line connecting sediment thickness formula points GP_RCI_03 and GP_RCI_12 and the maritime boundary line between Côte d'Ivoire and Ghana. FP_RCI_07 is located on the 200 M line of Côte d'Ivoire (figure 17).

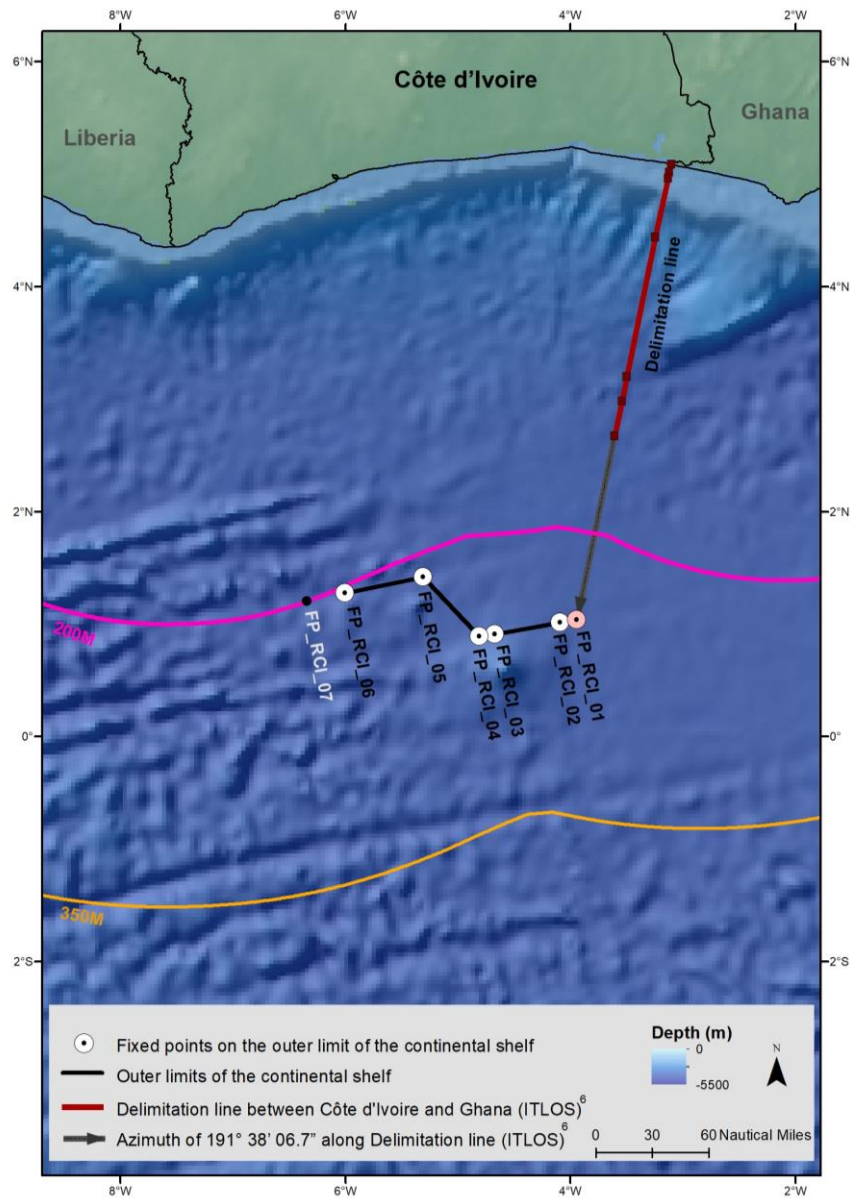


Figure 17*: Illustrative map of the outer limits of the continental shelf of Côte d'Ivoire, and its defining fixed points, connected with straight lines not exceeding 60 M in length, as provided by the Delegation on 19 February 2019. Coordinates of fixed points determining the outer limits of the continental shelf beyond 200 M are contained in table III of annex I to these Recommendations.

* This illustrative map was prepared by the Division for Ocean Affairs and the Law of the Sea, Office of Legal Affairs, United Nations, upon the request of the Subcommittee established to consider the amended Submission by Côte d'Ivoire, on the basis of the submitted information. The designations employed and the presentation of material on this map 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.

6. Recommendations for the Republic of Côte d'Ivoire (article 76, paragraph 8)

- 91 The Commission agrees with the determination of the fixed points listed in table II of annex I to these Recommendations, establishing the outer edge of the continental margin of Côte d'Ivoire. The Commission recommends that the delineation of the outer limits of the continental shelf be conducted in accordance with article 76, paragraph 7, of the Convention, by straight lines not exceeding 60 M in length, connecting fixed points, defined by coordinates of latitude and longitude. Further, the Commission agrees with the methodology, and the accuracy thereof, applied in delineating the outer limits of the continental shelf of Côte d'Ivoire, including the determination of the fixed points listed in table III, annex I of these Recommendations, except for FP_RCI_07, and with the construction of the straight lines connecting those points. FP_RCI_07 is not constructed according to article 76.
- 92 With regard to the location of FP_RCI_07, the Commission has been consistent in its view that the determination of the last segment of the outer limits of the continental shelf shall be established either by the intersection of the formula line, in accordance with article 76, paragraphs 4 and 7, and the 200 M limit from the baselines from which the breadth of the territorial sea is measured, or it shall be determined by the line of shortest distance between the last fixed formula point and the 200 M limit. In all cases, the segment cannot exceed 60 M in length in accordance with article 76, paragraph 7.
- 93 Bearing in mind article 9 of annex II to the Convention, the Commission recommends that Côte d'Ivoire proceed to establish the outer limits of the continental shelf accordingly.

REFERENCES

- Antobreh, A.A., Faleide, J.I., Tsikalas, F., Planke S. (2009): *Rift shear architecture and tectonic development of the Ghana margin deduced from multichannel seismic reflection and potential field data*. Marine and Petroleum Geology 26, p. 345–368, doi: 10.1016/j.marpetgeo.2008.04.005.
- Basile, C., Mascle, J., Benkhelil, J., and Bouillin, J.P. (1998): *Geodynamic evolution of the Côte d'Ivoire-Ghana transform margin: an overview of LEG 159 Results*. In: Mascle, J., Lohmann, G.P., and Moullade, M. (Eds.), (1998). Proceedings of the Ocean Drilling Program, Scientific Results, vol. 159.
- Mascle, J., Blarez, E. and Marinho, M. (1988): *The shallow structures of the Guinea and Ivory Coast - Ghana transform margins: Their bearing on the Equatorial Atlantic Mesozoic evolution*, Tectonophysics 155, p.193 – 209.
- Peirce, C., Whitmarsh, R. B., Scrutton, R. A., Pontoise, B., Sage, F., and Mascle, J. (1996): *Côte d'Ivoire - Ghana margin: Seismic imaging of passive rifted crust adjacent to a transform continental margin*. Geophys. J. Int. 125, p.781 – 795.
- Sage, F., Basile, C., Mascle, J., Pontoise, B., Whitmarsh, R.B., (2000): *Crustal structure of the continent-ocean transition off the Côte d'Ivoire-Ghana transform margin: implications for thermal exchanges across the palaeotransform boundary*. Geophys. J. Int. 143, p.662-678.

ANNEX I – TABLES OF GEOGRAPHICAL COORDINATES OF POINTS

Table I: Coordinates of the foot of the continental slope (FOS) points.

FOS point	Long (W) [dd]	Lat (N) [dd]	Water depth [m]	Bathymetric Line	Data Type
FOS_RCI_03	3.641286	3.068093	4698	CIV-UN08-01	SBES
FOS_RCI_05B	3.724201	3.001831	4698	MT14	SBES
FOS_RCI_06E	6.171701	3.434649	4315	CWGRI99-101	SBES

Table II: Coordinates for the sediment thickness formula points used in the determination of the outer edge of the continental margin beyond 200 M, and their corresponding FOS points.

Continental Margin Fixed Point	Long [dd W]	Lat [dd N]	CM-related shot point/ line	Sediment thickness (km)	Distance to next CM point [M]	Article 76 criterion	Relevant FOS Point	Survey line ID	Distance to FOS (km)
GP_RCI_03	3.776560	1.061668	n/a	2.347	19.26651	4(a)(i)-1% Sediment Thickness	FOS_RCI_03	Walda	222.372
GP_RCI_12	4.0939592	1.0162855	8778	2.351	35.43835	4(a)(i)-1% Sediment Thickness	FOS_RCI_05B	CIV-UN08-01	223.570
GP_RCI_09	4.6745494	0.9125601	1436	2.911	8.258990	4(a)(i)-1% Sediment Thickness	FOS_RCI_03	CIV-UN08-05	264.619
GP_RCI_13	4.8102848	0.8909665	1129	2.794	43.73022	4(a)(i)-1% Sediment Thickness	FOS_RCI_05B	CIV-UN08-05	262.830
GP_RCI_14	5.3126407	1.4208610	8751	2.671	42.53702	4(a)(i)-1% Sediment Thickness	FOS_RCI_05B	CIV-UN08-03	248.550
GP_RCI_15	6.005672	1.275728	3206	2.636	n/a	4(a)(i)-1% Sediment Thickness	FOS_RCI_06E	CIV-UN08-04	239.757

Table III: Coordinates for the fixed points determining the outer limits of the continental shelf beyond 200 M, and their corresponding FOS points, as submitted by Côte d'Ivoire.

Outer Limit Fixed Point	Final OL Point Long [dd W]	Final OL Point Lat [dd N]	OL related shot point/line	Sediment thickness (km)	Distance to next OL Point (M)	Art. 76 criterion	Method	Relevant FOS point/line	Relevant FOS point Long [dd W]	Relevant FOS point Lat. [dd N]	Distance FOS – Final OL (km)
FP_RCI_01	3.9453894	1.0375324	n/a	n/a	9.018435		Fixed point on the maritime boundary line at intersection with line between GP_RCI_03 and GP_RCI_12	n/a	n/a	n/a	n/a
FP_RCI_02	4.0939592	1.0162855	8778	2.351	35.43835	4(a)(i)	GP_RCI_12	FOS_RCI_05B	3.724201	3.001831	223.570
FP_RCI_03	4.6745494	0.9125601	1436	2.911	8.258990	4(a)(i)	GP_RCI_09	FOS_RCI_03	3.641286	3.068093	264.619
FP_RCI_04	4.8102848	0.8909665	1129	2.794	43.73022	4(a)(i)	GP_RCI_13	FOS_RCI_05B	3.724201	3.001831	262.830
FP_RCI_05	5.3126407	1.4208610	8751	2.671	42.53702	4(a)(i)	GP_RCI_14	FOS_RCI_05B	3.724201	3.001831	248.550
FP_RCI_06	6.005672	1.275728	3206	2.636	20.59931	4(a)(i)	GP_RCI_15	FOS_RCI_06E	6.171701	3.434649	239.757
FP_RCI_07*	6.3412100	1.2051523	n/a	n/a	n/a		200M	n/a	n/a	n/a	n/a

*The Commission does not recommend the present location of FP_RCI_07 for establishment of the outer limits of the continental shelf (see paragraph 92).