INDEPENDENT REPORT ON THE GUYANA – SURINAME COASTAL GEOGRAPHY AND THE IMPACT ON THE MARITIME BOUNDARY DELIMITATION

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Introduction

1. This paper examines the coastal geography of Guyana and Suriname and assesses how this geography affects their maritime boundary delimitation. Specifically, the question is posed as to whether or not the coastlines of either Guyana or Suriname give an unfair advantage in the calculation of a boundary based on the equidistance methodology. [2]

2. The location and configuration of coastlines are key factors when considering whether or not a boundary based on the equidistance methodology leads to an equitable solution. In this case, much has been written on the presence and influence of coastal concavities and coastal convexities on the course of the equidistant line. Comments will be made on the attempt to establish and define "relevant" coastlines for the purpose of delimiting the maritime boundary. Suriname stated in its Counter-Memorial that:

"The relevant circumstances applicable to any delimitation of a single maritime boundary are dominated by the coastal geography. Indeed, Suriname submits that the present dispute can and should be resolved exclusively on the basis of coastal geography of the delimitation area."[3]

3. Suriname continues with this line of thought that it is important to study the coastal geography to determine that part of the coast relevant to the delimitation area when it cites to the 1969 North Sea Continental Shelf Cases:

"The fundamental importance of coastal geography is best explained by reference to some of the early continental shelf cases that stand for the proposition that sovereignty over the coast is the basis of title to maritime areas. That is the meaning of the principle of the *North Sea Continental Shelf* cases that 'the land dominates the sea.' Any

[1] My curriculum vitae is attached to this Independent Report as Annex 1.
[2] It should be noted that for this analysis Guyana's Memorial (G-M) and Suriname's Counter-Memorial (S-CM) have been read.
[3] Suriname, S-CM at para. 4.19, p. 45.

delimitation of maritime areas must ultimately depend on considerations of the source of title to the maritime area concerned – namely the coast."[4]

4. The coastal features that influence the equidistant line will be examined with a view to identifying those features, if any, that distort the course of this line or which cause a geographic imbalance in the boundary area. Both sides in this case agree that this is an adjacent State situation.[5] Often in adjacent State maritime boundary delimitations one or more offshore features can have undue influence in determining the course of an equidistant line. An important geographic reality in this case is that there are no offshore features, such as islands or low-tide elevations that influence the drawing of an equidistant line. Nor are there any large peninsulas or protrusions from one of the coastlines that dramatically skew the course of an equidistant line. If, however, there is a party placed at a disadvantage by applying the equidistant line it is Guyana.

5. Whereas Suriname implies that the coastlines in this case should cause one to be wary of the equidistance method[6], it is actually Suriname's coastline that may be judged to skew the equidistant line in its favor. It is part of Suriname's coastline, from a point near the mouth of the Coppename River, at an area named Hermina Bank, to the Maroni River, at the land boundary terminus with French Guiana that is convex relative to the other parts of the coastline in the boundary region. Only a couple of basepoints in this area of Suriname's coast affect a relatively long segment of the equidistant line. This convexity pushes the direction of the equidistant line back towards Guyana's coast.

6. Geographical scale is important when making an assessment of which coastal features are relevant and important to the boundary delimitation at hand. The area will be viewed from several different geographic perspectives, from macro-geography to the micro-geographic level. It is perhaps the regional scale, in between the macro and micro geographic level, that affords the best perspective on coastline relevance. Suriname states that "there is a change in the direction of the coastline of South America in the vicinity of the Suriname – Guyana land boundary terminus where the west bank of the Corantijn River meets the sea."[7] This sweeping assessment of the "coastline of South America" is based on a rather micro-geographic part of the coast, at the river mouth itself. Suriname's characterization does not accurately portray the overall Guyana - Suriname geographic coastal relationship.

7. The analysis which follows is made from a two-dimensional perspective, using nautical charts as the primary sources depicting the coastlines. Sub-surface features, such as geology of the offshore region will not be studied. As acknowledged by both Guyana and Suriname, "geological factors are of no material relevance for this case."[8]

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[4] Suriname, S-CM at para. 4.20, p. 45. The quote from the North Sea Continental Shelf Cases is cited at Judgment, ***I.C.J. Reports 1969***, p. 51, para. 96.
[5] G-M at para. 2.7, p. 8; S-CM at para. 6.3, p.93.
[6] S-CM at para. 6.3, p.93.
[7] S-CM at para. 6.4, p.93.
[8] G-M at para. 7.35, p.89, S-CM at para. 2.6, p.7.

Macro-Geography of the Region

8. The east coast of the South American mainland faces on to the Atlantic Ocean (Figure 1).[9] There are seven political units along this coastline, six independent States (from the north, Venezuela, Guyana, Suriname, Brazil, Uruguay, and Argentina) and one dependency (French Guiana, an overseas Department of France). When viewing the east coast of South America one is struck by how large Brazil is and how it separates the four northern political units from the southern two States. The direction of the Atlantic-facing South American coastline changes dramatically within Brazil.

9. From Venezuela through French Guiana the general trend of the coastline is northwest – southeast and this general trend continues into the southern hemisphere to the eastern-most bulge of Brazil.[10] At this point, the coastline trend heads to the southwest until about the middle of Argentina where the coastline turns to head in a southerly direction. At this macro-scale one can only see broad trends in the coastline. But, even at this macro-geographic scale one can view a geographic anomaly that occurs along the Suriname coastline. If one creates a "coastal front" line simplifying the northwest-southeast segment from Venezuela to Brazil the section of this part of South America that is "out of line" is a part of Suriname and French Guiana which extends into the Atlantic Ocean. At this continental scale one can also discern a concavity formed by the coastlines on either side of where the Corentyne River meets the Atlantic Ocean at the Guyana and Suriname land boundary terminus. The coastlines of both Guyana and Suriname contribute to this concavity.

Maritime Boundary Agreements: State Practice in the Region

10. On the east coast of South America, beginning in the north, maritime boundaries will be required between the following pairs of South American countries:

Guyana – Venezuela
Guyana – Suriname
Suriname – French Guiana
French Guiana – Brazil
Brazil – Uruguay
Uruguay – Argentina

11. Of these, the last three pairs have concluded maritime boundary treaties (on Figure 1 these are labeled 3-2, 3-3, and 3-4).[11] Equidistance clearly has been the method

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[9] Map taken from Jonathan I. Charney and Lewis M. Alexander (eds), ***International Maritime Boundaries***, American Society of International Law, Martinus Nijhoff Publishers, Vol. I, 1993 at p. 291 (Charney and Alexander).

[10] For this geographic analysis only the Atlantic-facing coastline of Venezuela is considered and not that part of Venezuela that faces north into the Caribbean Sea.

[11] The numbers refer to studies found in Charney and Alexander, Vol. I.

of choice by these countries. Judge Eduardo Jimenez de Arechaga, former President of the International Court of Justice, summarized these three agreements in the following way as he compared these agreements to those on the west coast of South America[12]:

"On the other hand, the South American maritime delimitation treaties in the Atlantic Ocean, between Argentina and Uruguay..., Uruguay and Brazil...and Brazil with France (French Guiana)..., all concluded after the 1958 Conference, follow the method of equidistance. The Argentina- Uruguay maritime boundary is the equidistant line, determined by the adjacent coasts. The France – Brazil delimitation fixes a boundary closely approaching the equidistant line and affecting an exchange of areas approximate equivalence. In the treaty between Brazil and Uruguay, the parties adopted a line nearly perpendicular to the general direction of the coasts. It achieved substantially the same result as the equidistant line which had been originally agreed to in a joint declaration. In none of these delimitations were there special circumstances justifying a departure from the equidistant line based upon the geography of these areas."

12. Thus, it is clear that the respective parties involved in these negotiations, viewing no special circumstances, decided that equidistance was the proper method to employ. In these adjacent State circumstances geography played a neutral role where the coastlines offered a geographic balance.

Coastal Geography in the Boundary Area

13. It is difficult, however, when viewing the entire South American east coast to appreciate what impact the coastlines of Guyana and Suriname may have on the boundary delimitation in question. To begin to gain a better appreciation of the impact that the coastline configuration may have on the delimitation in this case one must narrow the geographic scope (and use larger-scale charts). Each State should be viewed not only by itself but in conjunction with each other, and in the context of its other neighbors. One seeks a delimitation methodology that leads to a fair and equitable solution and it is important to employ a delimitation methodology that reflects a geographic balance of coastal features. To accomplish this, it is important to discern the "relevant coastal" area of each State that impacts the delimitation of the "relevant offshore region".

14. It is also important to appreciate that geography, as revealed by coastal configurations such as concavities and convexities, does not follow man-made boundaries. To define geographic realities with political borders often leads to incorrect descriptions of an area. One should ignore political boundaries when describing the geography of an area and only use political names for reference.

15. Guyana's coastline generally faces northeastward and is relatively smooth, as shown on Figure 2, which is a reproduction of Suriname's Counter Memorial Figure 30.

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[12] Eduardo Jimenez de Archechaga, "South American Maritime Boundaries," Region III, in ***International Maritime Boundaries***, Volume I, Jonathan I. Charney and Lewis M. Alexander (eds), American Society of International Law, Martinus Nijhoff Publishers, 1993, p. 285.

The coastline that defines the Essequibo estuary and the mouth of the river is concave in that immediate area. Without the presence of the islands in the mouth of the river the concavity would be more severe, but it is a concavity in a micro-geographic setting. From the area of the Essequibo River and proceeding to the southeast, the Guyana coastline begins a long and shallow concavity that continues through the land boundary terminus with Suriname and extends to the Coppename River.[13] From Figure 2 one can see the general concavity that is formed by both coastlines.

16. At this regional scale, one can discern that Suriname's coastline has two distinct segments. For the western third of its coastline, from pt. 61 (the land boundary terminus with Guyana) to the Coppename River, Suriname's coastline continues the broad concavity along a smooth coastline described above that begins in Guyana. The eastern two thirds of Suriname's coastline is convex as it arches seaward from the Coppename River to the Maroni River, at its land boundary terminus with French Guiana. Most of this coastline segment is shown on Figure 2 and the entire segment can be seen on Figure 1.

Comparing Guyana and Suriname Coastlines to the North Sea Coastlines

17. Since the 1969 North Sea Continental Shelf Cases have been cited often in this case, it would be useful to assess the geography of the North Sea countries involved in that case and to compare it to the coastal geography present in this arbitration. Germany, Denmark, and The Netherlands were the States which brought their continental shelf delimitation disputes before the International Court of Justice (ICJ).[14] Their geographic situation is schematically illustrated in Figure 3, which reproduces Sketch I in the Judgment in the North Sea Continental Shelf Cases.[15] In this sketch State B is Germany, State C is Denmark, and State A is The Netherlands.

18. With Germany's coastline situated in the "back" of the concavity and having a foreign State on each side of it, the coastal configuration causes the equidistant lines to converge in front of Germany's coastline and to cut off its extension into the North Sea. The ICJ found this geographical situation to be unfair and thus ruled that Denmark and The Netherlands each needed to re-negotiate with Germany a continental shelf boundary that deviated from applying an equidistant line. Following these negotiations Germany's continental shelf extended to the middle of the North Sea. Figure 4 shows the reality of the North Sea situation. The red lines represent the two equidistant lines that converged to cut off Germany's natural prolongation, and the green lines are the continental shelf boundaries negotiated by the parties following the ICJ decision.

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[13] For the purpose of this paper and analysis, point 61 (or, in Suriname's terms, the 1936 point) will be considered the land boundary terminus. It is acknowledged that this precise point may be an offset of the legal boundary given that it is not practical to place a boundary monument in an area that is subject to natural forces, such as daily tides.

[14] In 1969 it was the Federal Republic of Germany (West Germany) involved in this case. Germany was not unified until 1990.

[15] Sketch I of the North Sea Continental Shelf Cases, I.C.J. Reports, 1969, p. 17.

19. The North Sea coastal geography present before the ICJ was significantly different than the Guyana-Suriname coastline in this arbitration. To better compare the two coastlines, Figure 5 has been created to overlay the coastlines of Denmark-Germany-The Netherlands with the coastlines of Guyana and Suriname.[16] The North Sea coastlines are superimposed in a manner where the Netherlands-Germany land boundary terminus Denmark-Germany land boundary terminus aligns with Suriname's low-water line.

20. What is quite striking in this comparison is that Germany's concave coastline overlays that portion of Suriname where the coastline is convex. The very geography that placed Germany at such a disadvantage with its neighboring States is aligned where Suriname's coastline is convex and gives it an advantage over Guyana. Suriname certainly is no Germany. Whereas most of Germany's coastline facing the North Sea is concave and "in the back", Suriname's Atlantic Ocean- facing coastline is very much "out front" in a convex configuration. Thus, where Germany was disadvantaged by its coastline when the equidistant method was applied, quite the opposite is true in the present situation. Suriname's coastline configuration places it at an advantage against Guyana when an equidistant line is created.

Coastal Geography and the Equidistant line

21. An equidistant line is a line which in its entirety is equally distant from at least one point of each coastline. At the equidistant line turning points the line is equally distant from one point of one coastline and two points of the other coastline, with the second point influencing the new direction of the equidistant line.[17]

22. The configuration of the coastline clearly is the key component when assessing if an equidistant line leads to an equitable solution. In the North Sea, Germany's concave coastline led the ICJ to decide that boundaries other than those based on equidistance were warranted. When one looks at the Denmark – Germany – The Netherlands equidistant lines, and the influencing coastal points, the inequity becomes apparent. Figure 6 depicts the equidistant lines and the controlling coastal points that were judged by the ICJ to be improper and unfair.

23. For Germany, approximately four coastal points influenced the equidistant line with Denmark and about two coastal points influenced the equidistant line with Netherlands. All the controlling coastal points were near the land boundary terminus with its neighbors. But, perhaps more importantly, less than 10% of Germany's coastline that fronted on the North Sea was represented by these controlling points. In the Court's mind, Germany's concave coastline did not give it less legal entitlement of its natural

[16] To achieve a match of coastlines, the geographic orientation of the North Sea coastlines was shifted to face westward, whereas the coastline of Guyana and Suriname is northward. It should be noted that Germany used this westward orientation in most of its illustrations in the ICJ cases.

[17] Computer software should be used to determine the equidistant line which should comprise turning points connected by geodesics. When equidistant lines are shown graphically on charts it should be for illustrative purposes only.

prolongation than did the convex coastlines of Denmark and the Netherlands. To discount the dramatic impact of this concavity the ICJ ruled that a delimitation method other than equidistance would be proper in this case. Given that the ICJ had not been asked to delimit the continental shelf boundaries its decision was to judge on the principles involved and to order the States back to the negotiating table to agree on continental shelf boundaries based on lines other than equidistant lines.

24. Suriname has identified 14 Suriname and 19 Guyana coastal points used to construct the provisional equidistant line.[18] It calculates the provisional equidistant line to comprise 32 segments from the coast to 200 miles.[19]

25. Annex 2 to this paper reproduces Tables 1, 2, and 3 of Suriname's Annex 69, found in Volume III of its Counter-Memorial. These coastal point positions and the provisional equidistant line turning points given in Suriname's Counter Memorial Annex 69 have been used for the purpose of the analysis in this paper. In addition to the geographic coordinates of the controlling basepoints, as supplied by Suriname, two columns have been added to Tables 1 and 2. In one column, the distance between controlling coastal points has been calculated and in the second column, the distance between the particular controlling coastal point and the land boundary terminus at Point 61 is shown.

26. In Table 3 Suriname provides information on its calculation of the provisional equidistant line by listing the geographic coordinates of the turning points and then citing to the controlling coastal points of each State.[20] Two columns have been added which show the distance (1) of the controlling coastal points to the particular equidistant line turning point and (2) between the turning points. It is interesting to note that one of the Dutch charts used by Suriname in its Counter Memorial, NL 2218, was produced only in July 2005 and that its depiction of the low-water line at Vissers Bank differs significantly from the low-water line shown on the previous edition of this chart as well as on the chart produced by the United States. If either the previous edition of NL 2218 or the U.S. chart were used then the low-water line at Vissers Bank would not influence the Guyana – Suriname provisional equidistance line out to 200 miles. The analysis done in this paper, however, takes the geographic positions of the coastal points in Suriname's Counter Memorial as a given and therefore assumes that this feature indeed exists in the location show on the new NL 2218.[21]

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[18] Suriname C-M, Volume III, Tables 1, 2, and 3 at Annex 69.

[19] Suriname C-M, at para. 6.16, p.96, Figure 31 and Annex 69. It should be noted that Suriname states in para. 6.16 that "the geographic coordinates of each provisional equidistance line turning point and the relevant coastal basepoints and their coordinates" are to be found at Annex 67; it is Annex 69. Unless otherwise stated, all mileage in this report is nautical miles. One nautical mile equals 1, 852 meters.

[20] Again, judgment is reserved on the appropriate provisional equidistant line starting point from the coast.

[21] The use of the geographic coordinates provided by Suriname in these tables does not necessarily imply agreement on the starting point of the provisional equidistant line or the validity of the location of the coastal points at Vissers Bank at the other locations. Should subsequent analysis show that any of the coastal points are situated in a different location, the calculations given in this paper would have to be revised.

27. The controlling coastal points, the provisional equidistant line, and the "construction lines" showing which coastal points influence each turning point of the provisional equidistant line are shown on Figure 7, which is a reproduction of Suriname's Figure 32. All portions of each coastline are represented by some controlling coastal points. Whereas all Guyana's controlling points are either within the concavity of the coast or at the beginning of it, Suriname's coastal points that influence the provisional equidistance line are situated both in the concavity and on its convex portion.

28. On Guyana's coastline 16 of the 19 controlling coastal points (84%) defined by Suriname are within 25 miles of the land boundary terminus at point 61. Then the next controlling point is not encountered for another 35 miles (G17 on Figure 7). From here there is another 55 miles of concave coastline before the final two controlling coastal points are found at Devonshire Castle Flats.

29. Along Suriname's coastline 10 of 14 controlling coastal points (71%) are situated within 40 miles of the land boundary terminus at point 61. Then there is a gap of 43 miles before the next three controlling points (S11-13) are found on the convex portion of Suriname's coast at Hermina Bank. And, 23 miles further to the east the last controlling point (S14), if a valid basepoint, is encountered on Vissers Bank. Thus, for Guyana all its controlling coastal points are either at the start of the concave coastline (G18-19 at Devonshire Castle Flats) or along the concave coastline itself. On Suriname's side S1-10 are within the concave coastline and then S11-14 are situated on the convex portion of the coastline relevant to this delimitation.

30. For its analysis, Suriname has divided the provisional equidistance line into three sections which, in its words, are caused by "two reorientations" in the coastline, Figure 7.[22] The entire length of the provisional equidistance line, as determined by Suriname, is 218.6 miles. Suriname's section 1 proceeds from the coast to point T-26, just seaward of the 200 meter isobath (shown as 200m on Figure 7). This portion of the provisional equidistance line consists of 25 segments extends 127 miles from the land boundary terminus (78% of the total number of segments but only 58% of the total length of the provisional equidistance line).

31. Suriname argues that the direction of this first section of the provisional equidistance line is due to the change in the "direction of the South American coast at the mouth of the Corantijn River...."[23] As noted earlier in this paper, this macro-geographic characterization of the change in the coastline direction of the continent of South America is based on a micro-geographic description, using the mouth of the Corentyne River as its reference point. Suriname believes that in this first section "the provisional equidistance line thrusts east northeast in front of the mouth of the Corantijn River and continues in a northeasterly direction across the coastal front of Suriname."

32. When one studies the coastlines in the vicinity of the land boundary terminus at the mouth of Corentyne River this first section of the provisional equidistance line

[22] Suriname C-M at para. 6.19, pp. 96-97.
[23] Suriname C-M at para. 6.20, p.97.

(shown as a red line on Figure 7) does not appear to be cutting across either side's coastal front, but it looks to be dividing in a pretty fair manner the maritime jurisdiction that is projecting from both coastlines. Points G1-15 and S1-10 are the controlling coastal points that determine section 1. First, and foremost, Suriname's eastern bank of the Corentyne River at its mouth faces to the northwest and then as the coastline bends to the east this coastline, which is still a part of the shallow coastal concavity, faces to the northeast. On Guyana's side of the Corentyne River the coastline clearly faces to the northeast. With "Section 1" of the provisional equidistance line proceeding in a northeast direction it looks correctly directed and properly reflecting the orientation of the respective coastlines in this area.

33. Suriname labels as "Section 2" that part of the provisional equidistance line that veers back in front of Guyana's northeastward coastal front (shown as the green line on Figure 7). It is Guyana that is disadvantaged by the few coastal points on Suriname's convex portion of its coastline, at Hermina Bank (S11-13; the distance between S11 and S13 is less than a mile). Had the trend of the concave coast continued eastward past the Coppename River the provisional equidistant line would have continued to reflect the northeastward facing coasts of both Guyana and Suriname. These three coastal points closely situated to each other on the convex Hermina Bank, influence approximately 91 miles of the provisional equidistance line. Only the impact of Guyana's coastline at Devonshire Castle Flats allows the equidistant line to turn back somewhat to the northeast for the final 16 miles, in what Suriname labels as "Section 3" (shown as the blue line, T30-33 on Figure 7), before reaching the 200-mile limit.

34. Suriname attempts to argue that the provisional equidistance line "cuts off" its coastal front because of its perception of "the overall convexity of Guyana's coast"[24] and the "recessed nature of Suriname's coast".[25] The real geography present does not justify these assertions.

35. Suriname also tries to discredit the validity of using the equidistance method by stating that the coastline is subject to the natural forces of accretion and erosion.[26] Many factors, such as the geomorphology of the adjacent ocean bottom and subsequent wave action on the coastline, or weather patterns in the area (for example, if the area were on the annual path of hurricanes), or man-made structures like piers and jetties, could cause erosion or accretion and impact the coastline configuration. However, usually coastal change from erosion and accretion is minimal on an annual basis.

36. Suriname suggests that even "slight" accretion on one side and "slight" erosion on the other side "could result in substantial shifts in the provisional equidistance line from year to year".[27] This is an overstatement. Suriname does not define "slight", but under normal circumstances of daily tidal action any coastline change would probably be measured in centimeters and not chartable at the scale of the charts being shown in this

[24] Suriname C-M at para. 6.33, p.100.
[25] Suriname C-M at para. 6.34, p.100.
[26] Suriname C-M at para. 6.35, p.100.
[27] Ibid.

case. The impact of "slight" erosion or accretion on the course of the equidistant line is likely to be quite minimal, if perceivable at all.

37. Another response to Suriname's concern regarding the possible effect of accretion and erosion on the equidistance line is a citation to all the maritime boundary agreements that have been reached that use an equidistant line as the method of delimitation. In a study of 134 boundary agreements, involving both opposite and adjacent situations, it was found that the equidistance method formed the basis of 103 boundaries, or 77 percent.[28] And, in each of these situations the coastal States face the same uncertainty of what may happen to their respective coasts by way of erosion or accretion. And, it has been noted that worldwide "not one maritime boundary agreement contains a termination provision. Thus, states have treated their maritime boundaries as being permanent...."[29] The idea that a particular area of the coastline may be subject to accretion or erosion does not lead to discrediting the use of the equidistance methodology as a viable means towards achieving an equitable solution.

Equidistant Lines in a Regional Context

38. According to the ICJ in the 1969 North Sea Continental Shelf Cases, the equidistant lines in the North Sea "cut off" Germany's natural prolongation from its coast and from receiving its rightful entitlement to the continental shelf. To fully appreciate the convergence of the two equidistant lines "in front" of Germany's coastline, the ICJ needed to view both the Denmark- Germany and The Netherlands – Germany equidistant lines together. Because of the severe concavity in Germany's coastline there was not a geographic balance among the coastlines and thus Germany was disadvantaged by the application of the equidistant methodology.

39. When the Guyana – Suriname boundary area is viewed in a regional context one readily sees that Suriname makes out quite nicely when equidistant lines are used as the maritime boundaries. Figure 8 shows the Guyana – Venezuela, Guyana – Trinidad & Tobago, Guyana – Barbados, Guyana – Suriname, and Suriname – French Guiana provisional equidistant lines. If there is a State here that is disadvantaged by the application of the equidistance methodology it is Guyana. As one measure of this, the distance along Guyana's 200-mile limit is far less than its coastline facing the Atlantic Ocean suggesting that it has not received the full extent of maritime prolongation from its northeastward-facing coastline. And, if these provisional equidistance lines were projected beyond the 200 mile limit the lines involving Guyana would eventually converge and cut off the maritime projection from Guyana's coast.

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[28] Leonard Legault and Blair Hankey, "Method, Oppositeness and Adjacency, and Proportionality in Maritime Boundary Delimitation," in Charney and Alexander (eds), ***International Maritime Boundaries***, Vol. I American Society of International Law, Martinus Nijhoff Publishers, 1992, p. 214.

[29] David Colson, "The Legal Regime of Maritime Boundary Agreements," in Charney and Alexander (eds), ***International Maritime Boundaries***, Vol. I American Society of International Law, Martinus Nijhoff Publishers, 1992, p. 42.

40. On the other hand, Suriname's two provisional equidistance lines, with Guyana and with French Guiana, diverge giving it perhaps more maritime entitlement than it deserves. One can readily see on Figure 8 that the length along its 200 mile limit exceeds the length of its coastline.

Relevant Coastlines

41. Suriname, in its Counter-Memorial, suggests that in adjacent State situations, which it agrees with Guyana is present in this case, "there is reason to be wary of the equidistant method."[30] And, in evaluating the provisional equidistant lines Suriname states that "it is useful to examine the relationship between the neighboring adjacent States."[31] Indeed, it has become common practice to create a provisional equidistant line and then to analyze this line in some fashion to determine whether or not the equidistant line leads to an equitable solution. In its analysis, however, there are some assumptions on the coastal geography made by Suriname that are questionable.

42. For example, Suriname has created single-line coastal fronts for itself and for Guyana from which to analyze the provisional equidistant line.[32] Simplifying the coastline by creating an arbitrary line is one means by which to define a coastline and attempt to judge the appropriateness of a provisional equidistant line as the maritime boundary. However, one needs to be mindful when creating a single-line coastal front whether or not it creates a credible approximation of the real coastline. It is obvious that some of the real coast will project a bit seaward of this coastal front line and some of the real coast will be behind, or landward, of this coastal front line. Secondly, there needs to be consistency in applying the coastal fronts methodology to both States. Suriname's approach to creating coastal fronts may be subject to some criticism.

43. Suriname has drawn Guyana's coastal front from the mouth of the Essequibo River to what it labels as the "mouth of the Corantijn River" (Figure 9, which is based on Suriname's Counter Memorial Figure 33). Suriname terminates this southeastern point about 10.3 miles off the coast and mouth of the Corantyne River.[33]

44. Suriname has drawn its coastal front line from what it states is the "mouth of the Corantijn River to the east end of Warappa Bank, east of the mouth of the Suriname River."[34] On Figure 9 (based on Suriname's Counter Memorial Figure 33) it appears that Suriname's "mouth of the Corantijn River" is the land boundary terminus with Guyana at point 61. It seems that Suriname has attempted to create its coastal front line using the 6° parallel of north latitude. Given that point 61 is situated at 5° 59' 53.8" N, 57° 08' 51.5" W. and given the scale of this map, Suriname achieves this perception of the 6° parallel of

[30] Suriname C-M, para. 6.3 at p. 93.
[31] Suriname C-M, para 6.24 at p.98.
[32] Suriname, C-M, Chapter 6, section III, p. 98 and Figure 33.
[33] Suriname C-M, 6.25 at p. 98 and Figure 33.
[34] Ibid.

north latitude by using a line with a width that covers that parallel of latitude.[35] In the east, Suriname seems to stop the coastal front at a point where the coastline drops to the southeast off the 6° N. parallel of latitude. Suriname appears to have arbitrarily chosen the eastern terminus of its coastal front line and both termini for Guyana's coastal front line.

45. If one were to employ a single line to represent an entire coastline for two States that share a land boundary, it would seem appropriate and reasonable to have a common terminal point as one end of each coastal front line. And, this common point should be Point 61, the land boundary terminus. Thus, Guyana's coastal front should be altered from Suriname's depiction and brought landward, to Point 61. The other ends of each coastal front should have some rational basis behind their placement, as well.

46. In this case, since it is the provisional equidistance line that is being analyzed for its appropriateness, it would seem reasonable that the last controlling coastal point on each State's coastline would provide the appropriate end point.[36] For Guyana, the northwest point of its coastal front line would be a point at an area known as Devonshire Castle Flats near the northwest headlands of the Essequibo River. Not only is this the final Guyana controlling point for the provisional equidistance line, but it is also where the coastline begins its concave sweep that ends at the Coppename River in Suriname. For Suriname, the eastern point of the coastal front line would be at a point at Vissers Bank. Should the coastline at Vissers Bank be different than what is depicted on NL 2218 then coastline lengths would have to be re-calculated.[37]

47. It is interesting to note that Suriname's preference would be to determine a boundary based on coastal fronts instead of determining an equidistant line from all coastal points, which it refers to as relying on "micro-geography".[38] When the entire coastline that controls the equidistance line is used for both States, this is hardly micro-geography. But, if the influence of an isolated single point on Vissers Bank (which is 22.6 miles distant from the next controlling point on Hermina Bank)[39] or the closely bunched three coastal points on Hermina Bank that control over 90 miles of the provisional equidistance line (about 42% of the entire length of the line) is what Suriname considers "micro-geography" then it is Suriname who benefits by this approach, not Guyana.

48. It should be noted that using a single coastal front line is only one method to calculate a State's relevant coastline. Generally, one of three approaches could be used. Approach one would be to accept that the single coastal front line accurately reflects the geography of the respective coastlines. Approach two would be to identify the

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[35] Geographic position of point 61 taken from Guyana Memorial at para. 1.13, p. 5.
[36] The assumption made for this analysis is that the basepoints used by each State in its calculation of the provisional equidistant line is a valid basepoint under the provisions of international law, as reflected in the 1982 United Nations Convention on the Law of the Sea.
[37] The assumption is being made here that the coastal point at Vissers Bank is a valid basepoint, subject to further analysis.
[38] Suriname, C-M at para. 6.24, p.98.
[39] It should be noted that only three points separated by 0.43 km are found on Hermina Bank.

controlling coastal points that influence the calculation of the provisional equidistant line out to 200 miles and "connect" these controlling points which would create another type of artificial coastline. This "controlling point" coastline would be more reflective of the real coast than would be the single coastal front line. A third approach would be to measure the coastline along the low-water line and appropriate river closing lines. This approach would reflect the "real" coast and essentially reflect how each of the States has determined its territorial sea and other maritime zones.[40] Figure 10 depicts the three approaches.

49. Making calculations for each of these approaches the results are as follows:[41]

Coastline	Distances Miles (approximate)		Ratio Guyana: Suriname Coastline lengths
	Guyana	Suriname	
I. Single-line coastal front	116	105	1.10 : 1
II. Controlling point coastal front	215	153	1.41 : 1
III. Low-water line (river closing line)	246	167	1.47 : 1

50. The Guyana: Suriname ratio of coastline lengths ranges from 1.10: 1 using the single-line coastal front method to 1.47: 1 using the low-water line method (see table above). In all cases Guyana has the longer coastline facing the maritime area to be delimited.

Coastal Front Projection

51. Not only is Suriname's description of the relevant coastlines flawed in how it characterizes the coastal geography but so is its projection of the coastal fronts seaward to create what is supposedly the area to be delimited in this case. Suriname suggests that

[40] Guyana, by Maritime Boundaries Act, No. 10, of June 30, 1977 established a 12 mile territorial sea, a 200 mile exclusive economic zone and a continental shelf to 200 miles or to the edge of the continental margin. These limits are to be determined from the low-water line as straight baselines were not claimed in this legislation or in any other law. While the law acknowledges that straight closing lines may be drawn to close off the mouth of a river no such closing lines have been drawn. Suriname in Act No. 26 of June 11, 1978, claimed a 12 mile territorial sea and 200 mile exclusive economic zone. Straight baselines were not claimed in this act nor in any law.

[41] All calculations are based on coastal points provided by Suriname, including the one on Vissers Bank. If the coastal point on Vissers Bank is found to be invalid then calculations for coastline lengths and ratios would have to be re-calculated.

the projection of each State's maritime jurisdiction is to be depicted by creating perpendicular lines to the coastal fronts it has defined and this is shown in its Figure 33. It has already been shown that the method used by Suriname to create the coastal fronts is not based on any appropriate or reasonable application of the geography in the area.

52. But, then to conclude that a State's maritime entitlement only projects in one direction (e.g., the perpendicular lines) plainly misrepresents reality. A maritime claim projects in all directions from the coastline. To state that the "land dominates the sea" means that maritime jurisdiction flows in all directions from the land and not in just one direction

Conclusion

53. The overriding principle in maritime boundary delimitation is to reach an equitable solution between the States involved. The equidistance method has been a very popular means to achieve this equitable solution. First and foremost, once the coastline (or baseline) is identified, it is an objective mathematical means to establish the line. An examination of maritime boundary treaty State practice shows that States reach agreement to use the equidistance method in situations where the coastlines of the parties are in geographic balance. Often this is achieved in opposite State situations or in adjacent State situations where there are no extenuating geographic circumstances, such as in areas where an unfortunate placement of an island belonging to one State is located in front of the coast of the neighboring State. Or, as in Germany's North Sea coastline, a dramatic concave coastline may make an equidistant line unacceptable.

54. In the Guyana – Suriname situation, if the equidistance methodology is used it would be Guyana, not Suriname, that would be disadvantaged. The coastline has a broad concave sweep that incorporates the coastlines of both States. Suriname has an area of convexity where the few coastal points have a significant impact on influencing the direction of almost half the length of the equidistant line in Suriname's favor and to the disadvantage of Guyana. To best reflect the northeastward facing coastlines in this region of South America and to discount Suriname's convex coastline as a pivotal point in the calculation of the provisional equidistance line ("Section 2" as labeled by Suriname and shown in Figure 7), the direction of the provisional equidistance line depicted in "Section 1" should be continued seaward.

Annex 1

Resume of

DR. ROBERT W. SMITH

PROFESSIONAL EXPERIENCE

CURRENT: GEOGRAPHIC CONSULTANT AND ADVISOR

Advise on all aspects of ocean policies and planning including developing strategies for exploring and exploiting offshore resources in an environmentally sound manner. Provide technical expertise for maritime boundary delimitation and arbitration, offshore jurisdictional claims, and sovereignty disputes. Research and write position papers to support policy decisions on the rational development and management of marine resources.

1975- 2006 (March) GEOGRAPHER, U.S. DEPARTMENT OF STATE

As the U.S. government expert on maritime boundary and jurisdictional issues, I assisted in the development and implementation of U.S. ocean policy. I was responsible for the technical and geographical aspects of negotiating U.S. bilateral maritime boundaries and establishing U.S. claims to marine jurisdiction. In this role, I coordinated the U.S. effort to develop technically accurate and precise boundaries and outer limits for the territorial sea, contiguous zone, exclusive economic zone, and the continental shelf. For the establishment of U.S. maritime limits, I assured that all U.S. claims were in accordance with international law of the sea principles using modern charting techniques. I represented the U.S. Government at international meetings and conferences, including United Nations meetings, on subjects of my expertise.

My State Department career was spent in two offices: in the Office of The Geographer (1975-87) I served as the Chief of the International Boundary and Resource where I managed several geographic analysts and then as the Special Assistant of Ocean Affairs and Policy Planning. From 1987 to March 2006 I was the geographer for the Office of Oceans Affairs. Throughout my State Department career I oversaw and was the principle author of the State Department's *Limits in the Seas* studies, in which analyses is given on the state practice of maritime claims and boundaries. Other related experiences during my State Department career included:

United States Representative to:

United Nations 13th States Parties Meeting for the Law of the Sea Convention, 2003
Caribbean Maritime Boundary Conference (Mexico City), 2003
United Nations Conference on Maritime Boundary Delimitation, 1999
United Nations Conference on the Continental Shelf, 1993 and 1995
United Nations Conference on the Maritime Baseline, 1987
International Hydrographic Organization Law of the Sea Group of Technical Experts, 1985

United States Department of State Representative to Department of the Interior's Outer Continental Shelf Advisory Committee, 2002-2006

Member, National Security Council Interagency Committee on the U.S. Baseline, 1975-2006

United States Delegations

Head of Delegation: Major Maritime Powers Meeting: 1998-Tokyo, 1997-London

Delegation Member: numerous bilateral and multilateral negotiations, including maritime boundaries, International Court of Justice boundary case (U.S. vs. Canada Gulf of Maine case, 1984), fisheries, and law of the sea meetings.

United States Expert Witness in Supreme Court cases:

U.S. vs. Alaska (1985, 1980)
U.S. vs. Louisiana (Mississippi, 1986)
U.S. vs. Maine (Mass., 1982)
U.S. vs. Maine (R.I., 1981)

United States Department of State Deputy Member: United States Board on Geographic Names (1979-83)

TEACHING

2004 - 2005: **Georgetown University**, Adjunct Professor
Course taught: Political Geography of the Oceans

2006, 2005, 2002 **Rhodes Academy,** Lecturer
(Law of the Sea course, Rhodes, Greece)

1991- 2005 **International Boundary Research Unit**, Instructor: maritime boundary workshops (Durham, England and London, England—about 7 times)

1994 **World Affairs Program**, Royal Viking Cruise Line, Lecturer

1976- 1980 **George Mason University,** Adjunct Professor
Courses taught: Marine resource management, world geography

1974-75 **University of North Carolina, Chapel Hill**, Instructor
Course taught: cultural geography

1972 **University of Rhode Island**, Instructor
Course taught: political geography

OTHER PROFESSIONAL ACTIVITIES

Board of Advisors: International Boundary Research Unit (IBRU), University of Durham, England (1990-present)

Advisory Board, *Geopolitics* (1989-1995)

Secretary, International Geographical Union Marine Geography Study Group (1986-87)

Editorial Board, *The Virginia Geographer* (1982-86)

Member, Advisory Council at the Conference of International Straits of the World, Bellagio, Italy (April 1976)

HONORS

Department of State Superior Honor Award; 2000, 1984
Department of State Meritorious Honor Award; 1988, 1977
Department of Justice Commendation; 1989

EDUCATION

University of North Carolina, Chapel Hill
PhD, Geography, 1980
Dissertation: "A Geographical Analysis of the North Sea Continental Shelf Cases"
University of Rhode Island
MA, Geography, 1973
Thesis: An Analysis of the Concept "Strategic Quality of International Straits": A Geographical Perspective with Focus on Petroleum Tanker Transit and on the Malacca Strait

Bucknell University
BA, Political Science, 1971

LECTURES AND SPEECHES

"Maritime Claims and Boundaries in the Arctic", Columbia University (January 2006)

"Hot Spots of Maritime Boundary Disputes—Global Impact on Oil and Gas Interests," Conference on International Border Dispute Resolution, Houston, (September 2004)

"Maritime Boundary Negotiations: National Considerations", Advisory Board on the Law of the Sea Conference, International Hydrographic Organization, Monaco (October, 2003)

"Political Geography of the Oceans", Woodrow Wilson School of Public and International Affairs, Princeton University, (November 2002)

"Issues in International Oceans Policy", University of Virginia School of Law (March-2002-06)

"Future of Islands: Delimitation and Development," SEAPOL conference on Ocean Governance and Sustainable Development, Bangkok (March 2001)

"International Maritime Boundaries: Impact on Oil and Gas Interests," Resolving International Border Disputes, Global Business Network Ltd, London, 2000.

"Geography and U.S. ocean policy", Bucknell University (March 2002, April 1989)

"Baselines: Normal, Straight, and Archipelagic", Institute of Petroleum, International conference on "Oil Under Troubled Waters: An Introduction to Maritime Jurisdiction and Boundary Disputes", London (November 2000)

"International Maritime Boundaries: Impact on Oil and Gas Interests," Global Business Network Limited, "Resolving International Border Disputes", (London, July 2000)

"United States - Canada Maritime Boundaries: A Study of Negotiations, Arbitration, and Management", Korea Maritime Institute Conference on Marine Policy and the Korea Economy: Issues and Opportunities, (Seoul, Korea, October 1998)

"Navigation Considerations in East Asian Waters," Geopolitics and International Boundaries Research Centre's Conference on Island and Maritime Disputes of South East Asia (London, May 1993)

"United States - Russia Maritime Boundary", International Boundary Conference, Durham University (Durham, England, July 1991)

"The State Practice of National Maritime Claims and the Law of the Sea," University of Virginia School of Law conference on "State Practice and the 1982 Law of the Sea Convention, (Cascais, Portugal, April 1990)

"Navigation and Overflight Rights in the Law of the Sea," Cannon Air Force Base (April 1986)

"Law of the Sea and the United States," Bucknell University (April 1986)

"The Geopolitics of the Arctic," 52nd annual meeting of the Assoc. of American Geographers (Detroit, April 1985)

"National Claims and the Geography of the Arctic," Law of the Sea Institute Conference (San Francisco, September 1984)

"U.S.-Canadian Maritime Relations" and "Geographical Aspects of Foreign Affairs," Bucknell University (October 1984)

"Political Geography and the law of the sea," East Stroudsburg State College (Sept. 1980)

"Geographic influences on the political and economic development in the Pacific," Bucknell University (October 1979)

"National Maritime Claims," International Studies Association 20th annual conference (Toronto, March 1979)

"Geography of Maritime boundary delimitation," Assoc. of American Geographers' annual meeting (New Orleans, April 1978)

PUBLICATIONS

Books

David A. Colson and Robert W. Smith (eds). ***International Maritime Boundaries***, Vol. V, The American Society of International Law, Martinus Nijhoff Publishers, March 2005

Jonathan I. Charney and Robert W. Smith (eds). ***International Maritime Boundaries***, Vol. IV, The American Society of International Law, Martinus Nijhoff Publishers, 2002.

J. Ashley Roach and Robert W. Smith, ***United States Responses to Excessive Maritime Claims***, 2nd edition, Martinus Nijhoff Publishers, 1996.

J. Ashley Roach and Robert W. Smith, ***Excessive Maritime Claims***. International Law Studies Vol. 66, U.S. Naval War College, 1994.

Robert W. Smith. ***Exclusive Economic Zone Claims, An Analysis and Primary Documents***. Martinus Nijhoff Publishers, 1986.

Monographs

Robert W. Smith and Bradford L. Thomas, ***Island Disputes and the Law of the Sea: An Examination of Sovereignty and Delimitation Disputes***. Maritime Briefing Volume 2 Number 4, International Boundaries Research Unit, 1998.

Robert W. Smith, "National Maritime Claims: 1958-85," ***Geographic Research Study No. 20,*** 1985, Office of The Geographer, U.S. Department of State

Book Chapters

With J. Ashley Roach, "Caspian Sea Boundaries," in ***International Maritime Boundaries***, Vol. V, Colson and Smith (eds), Martinus Nijhoff Publishers, 2005

With J. Ashley Roach, "Kazakhstan – Russia", "Azerbaijan – Russia", "Azerbaijan - Kazakhstan", "Azerbaijan - Kazakhstan – Russia" in ***International Maritime Boundaries***, Vol. V, Colson and Smith (eds), Martinus Nijhoff Publishers, 2005

With George Taft, "Legal Aspects of the Continental Shelf" (chapter 3) in, Peter J. Cook and Chris M. Carleton (eds), ***Continental Shelf Limits: The Scientific and Legal Interface.*** Oxford University Press, 2000.

With J. Ashley Roach, "Navigational Rights and Responsibilities in International Straits," (Chapter 14) in ***The Straits of Malacca***, Hamzah Ahmad (ed), Pelanduk Publications, 1997.

"Joint Development Zones: A Review of Past Practice and Thoughts on the Future," in ***Sustainable Development and Preservation of the Oceans: The Challenges of UNCLOS and Agenda 21***. Mochtar Kusuma-Atmadja, Thomas A. Mensah, and Bernard Oxman (eds). The Law of the Sea Institute, 1995.

"Cuba-United States," "Mexico-United States," "Cook Islands- United States," "New Zealand (Tokelau) – United States," in ***International Maritime Boundaries***, Vol. I, Charney and Alexander (eds), Martinus Nijhoff Publishers, 1993.

"Navigational Issues in the Law of the Sea," (Chapter 6) in ***Maritime Issues in the 1990s***, Dalchoong Kim et al (eds). Institute of East ad West Studies, Yonsei University, 1992.

"United States – Russia Maritime Boundary," International Boundary Research Unit international conference, 1991.

"Establishing Maritime Boundaries: The United States Experience," In ***International Boundaries and Boundary Conflict Resolution***, C.Grundy-Warr (ed), International Boundary Research Unit, Durham, England, 1990.

"Geographic Considerations in Maritime Boundary Delimitations" (Chapter1) in Dorinda G. Dallmeyer and Louis DeVorsey, Jr (eds). ***Rights to Oceanic Resources***. Martinus Nijhoff Publishers, 1989.

"Global Maritime Claims: The Current Status," (Chapter 1) in ***Global Ocean Politics***, Dalchoong Kim, Choon-ho Park and Seo-Hang Lee (eds), Institute of East and West Studies, Yonsei University, 1989.

"National Claims and the Geography of the Arctic," Law of the Sea Institute's San Francisco conference, 1984.

"The Effect of Extended Maritime Jurisdiction on Land Sovereignty Disputes," in ***The 1982 Convention on the Law of the Sea***. Albert Koers and Bernard Oxman (eds), Law of the Sea Institute, 1983.

With Robert D. Hodgson, "Unilateralism: The Wave of the Future?" (Chapter 9) in Law of the Sea: ***Conference Outcomes and Problem of Implementation***. Edward Miles and John King Gamble (eds) Ballinger Publishing Company, 1976.

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"Coastal Planning and Carteret (North Carolina) Fishermen," in ***Carrying Capacity: A Basis for Coastal Planning***. D Godschalk and F. Parker (eds), Univ. of North Carolina Press, 1974.

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With J. Ashley Roach "Straight Baselines: The Need for a Universally Applied Norm," *Ocean Development and International Law*, 31: 47-80, 2000

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"The Political Geography of the Marine Environment," ***The Geographical Bulletin***, Vol 10, 1975.

"An Analysis of the Strategic Attributes of International Straits: A Geographical Perspective," ***Maritime Studies and Management***, 1974.

"Oceanborne Shipment of Petroleum and the Impact of Straits on VLCC Transit, ***Maritime Studies and Management***, 1973.

Author (or co-author) of following U.S. Department of State, ***Limits in the Seas*** studies:

No. 36- National Claims to Maritime Jurisdiction (4th-8th revisions)
No. 62- Continental Shelf Boundary: India-Indonesia, August 25, 1975.
No. 63- Continental Shelf Boundary: Iran- UAE (Dubai), September 30, 1975.
No. 64- Continental Shelf Boundary: Argentina-Uruguay, October 24, 1975.
No. 67- Continental Shelf Boundary: Iran-Oman, January 1, 1976.
No. 68- Territorial Sea and Continental Shelf Boundary: Guinea-Bissau – Senegal, March 15, 1976.
No. 69- Maritime Boundary: Colombia-Ecuador, April 1, 1976.
No. 71- Continental Shelf Boundary: Finland-Sweden, June 16, 1976.
No. 73- Maritime Boundary: Brazil-Uruguay, September 30, 1976.
No. 74- Maritime Boundary: FRG-GDR, October 5, 1976.
No. 75- Continental Shelf Boundary and Joint Development Zone: Japan – Republic of Korea, September 2, 1977.
No. 76- Straight Baselines: Cuba, October 28, 1977.
No. 77- Maritime Boundaries: India-Sri Lanka, February 16, 1978.
No. 78- Maritime Boundary: India-Maldives and Maldives' Claimed Economic Zone, July 24, 1978.
No. 79- Maritime Boundaries: Colombia-Panama, November 3, 1978.
No. 82- Straight Baselines: Korea, January 22, 1979.
No. 84- Maritime Boundary: Colombia-Costa Rica, February 15, 1979.
No. 85- Maritime Boundary: The Gambia-Senegal, March 23, 1979.
No. 86- Maritime Boundary: Chile-Peru, July 2, 1979.
No. 88- Maritime Boundary: Ecuador-Peru, October 2, 1979.
No. 90- Continental Shelf Boundary: Italy-Spain, May 14, 1980.
No. 91- Maritime Boundary: United States-Venezuela, December 16, 1980.
No. 92- Territorial Waters Boundary: Kenya-Tanzania, May 15, 1981.
No. 93- Continental Shelf Boundaries: India-Indonesia-Thailand, August 17, 1981.
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No. 97- Maritime Boundaries: Costa Rica – Panama, December 6, 1982.
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No. 100- Maritime Boundaries- United States- Cook Islands and United States- New Zealand (Tokelau), December 30, 1983.

No. 101- Fiji's Maritime Claims, November 30, 1984.
No. 103- Straight Baselines, Colombia, April 30, 1985.
No. 104- Maritime Boundary: Cuba-Mexico, September 10, 1985.
No. 105- Maritime Boundaries: Colombia- Dominican Republic and Netherlands-Venezuela, January 22, 1986.
No. 106- Developing Standard Guidelines for Evaluating Straight Baselines, with P. Bernhardt and G. Greiveldinger, August 31, 1987.
No. 107- Straight Baselines: U.S.S.R. (Pacific, Sea of Japan, Sea of Okhotsk, and Bering Sea), September 30, 1987.
No. 108- Maritime Boundaries of the World (rev.1), November 30, 1990.
No. 109- Continental Shelf Boundary: Turkey-USSR and Straight Baselines: USSR (Black Sea), with D.Dzurek, September 28, 1988.
No. 110- Maritime Boundary: Cuba-United States, February 21, 1990.
No. 111- Straight Baseline: Costa Rica, August 17, 1990.
No. 112- United States Responses to Excessive Maritime Claims, with A. Roach, March 9, 1992.
No. 113- Straight Baseline Claims: Djibouti and Oman, April 22, 1992.
No. 114- Iran's Maritime Claims, March 16, 1994.
No. 115- United States- United Kingdom Maritime Boundaries in the Caribbean, April 11, 1994.
No. 116- Straight Baseline Claims: Albania and Egypt, May 6, 1994.
No. 117- Straight Baseline Claim: China, July 9, 1196.
No. 118: Straight Baseline Claim: Pakistan, December 20, 1996.
No. 119: Maritime Boundary: Niue- United States, July 30, 1997.
No. 120: Straight Baseline and Territorial Sea Claim: Japan, April 30, 1998.
No. 121: Straight Baseline and Territorial Sea Claim: South Korea, September 30, 1998.
No. 122: Straight Baseline Claim: Thailand, with S. Morison, September 8, 2000.
No. 123: Uruguay's Maritime Claims, with S. Morison, November 27, 2000.
No. 124: Straight Baseline Claim: Honduras, June 28, 2001.
No. 125: Jamaica's Maritime Claims and Boundaries, February 4, 2004.
No. 126: Maldives Maritime Claims and Boundaries, September 8, 2005.
No. 127: Taiwan's Maritime Claims with A. Roach, November 15, 2005

March 2006
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Annex 2

Suriname's Counter Memorial
Vol. III
Annex 69
with annotations

Table 1

Basepoints on Suriname's Coast
Used to Construct the Provisional Equidistance Line

No	Latitude (WGS 84)	Longitude (WGS 84)	Distance to Next Influencing Coastal Point (nmi)	Distance to Land boundary terminus at Point 61 [5° 59' 53.8" N, 57° 08' 51.5" W] (nmi)
S1	06 01' 34" N	057 08' 22" W	9.30	1.73
S2	06 01' 19" N	056 59' 02" W	1.66	9.89
S3	06 01' 40" N	056 57' 24" W	0.05	11.55
S4	06 01' 41" N	056 57' 21" W	0.10	11.60
S5	06 01' 41" N	056 57' 15" W	12.13	11.70
S6	06 00' 10" N	056 45' 10" W	0.37	23.61
S7	06 00' 09" N	056 44' 48" W	0.32	23.97
S8	06 00' 08" N	056 44' 29" W	14.73	24.29
S9	05 57' 25" N	056 29' 57" W	0.65	38.85
S10	05 57' 21" N	056 29' 18" W	42.51	39.50
S11	06 00' 17" N	055 46' 44" W	0.37	81.83
S12	06 00' 22" N	055 46' 22" W	0.43	82.19
S13	06 00' 22" N	055 45' 56" W	22.57	82.62
S14	06 01' 35" N	055 23' 19" W		105.17

Table 2

Basepoints on Guyana's Coast
Used to Construct the Provisional Equidistance Line

No	Latitude (WGS 84)	Longitude (WGS 84)	Distance to Next Influencing Coastal Point (nmi)	Distance to Land boundary terminus at Point 61 [5° 59' 53.8" N, 57° 08' 51.5" W] (nmi)
G1	06 01' 36" N	057 08' 33" W	1.12	1.72
G2	06 02' 35" N	057 09' 06" W	0.17	2.68
G3	06 02' 45" N	057 09' 04" W	0.12	2.85
G4	06 02' 52" N	057 09' 04" W	0.10	2.96
G5	06 02' 58" N	057 09' 05" W	2.08	3.06
G6	06 05' 00" N	057 09' 35" W	0.23	5.13
G7	06 05' 14" N	057 09' 37" W	0.89	5.36
G8	06 06' 05" N	057 09' 54" W	1.59	6.24
G9	06 07' 33" N	057 10' 32" W	0.29	7.80
G10	06 07' 48" N	057 10' 41" W	3.34	8.07
G11	06 10' 44" N	057 12' 19" W	0.13	11.32
G12	06 10' 50" N	057 12' 24" W	6.84	11.44
G13	06 16' 20" N	057 16' 31" W	1.29	18.05
G14	06 17' 12" N	057 17' 29" W	2.04	19.24
G15	06 18' 28" N	057 19' 06" W	3.55	21.11
G16	06 20' 15" N	057 22' 11" W	34.66	24.22
G17	06 40' 44" N	057 50' 21" W	55.28	57.95
G18	06 22' 02" N	058 27' 32" W	1.24	113.18
G19	06 23' 04" N	058 28' 14" W		114.41

Table 3

Turning Points of the Provisional Equidistance Line Starting at Intersection of 10 Line with Low-Water Line (T1) and Ending at 200 Nautical Miles (T33)

No	Latitude (WGS 84)	Longitude (WGS 84)	Relevant Basepoints			Distance to Equidistance Line (nmi)	Distance to next Equidistance Line Turning Point (nmi)
			Guyana (G)	Suriname(S)	G/S		
T1	06 01' 33" N	057 08' 34" W	N/A	N/A	N/A		0.87
T2	06 02' 23" N	057 08' 19" W	G1	S1	G 2	0.8	0.14
T3	06 02' 28" N	057 08' 12" W	G2	S1	G 3	0.9	0.67
T4	06 02' 48" N	057 07' 37" W	G3	S1	G 4	1.4	1.11
T5	06 03' 20" N	057 06' 38" W	G4	S1	G 5	2.5	3.45
T6	06 04' 51" N	057 03' 31" W	G5	S1	S 2	5.8	0.56
T7	06 05' 25" N	057 03' 31" W	G5	S2	G 6	6.1	0.67
T8	06 06' 03" N	057 03' 18" W	G6	S2	G 7	6.3	2.23
T9	06 08' 09" N	057 02' 31" W	G7	S2	G 8	7.6	2.64
T10	06 10' 35" N	057 01' 27" W	G8	S2	G 9	9.5	1.91
T11	06 12' 17" N	057 00' 33" W	G9	S2	S 3	11.0	2.11
T12	06 14' 13" N	056 59' 41" W	G9	S3	G10	12.7	0.10
T13	06 14' 18" N	056 59' 38" W	G10	S3	S 4	12.8	2.38
T14	06 16' 28" N	056 58' 38" W	G10	S4	G11	14.8	3.52
T15	06 19' 30" N	056 56' 49" W	G11	S4	S 5	17.7	6.31
T16	06 24' 56" N	056 53' 33" W	G11	S5	G12	23.4	9.15
T17	06 32' 48" N	056 48' 48" W	G12	S5	G13	32.1	3.13
T18	06 35' 18" N	056 46' 54" W	G13	S5	S 6	35.0	6.33
T19	06 40' 57" N	056 43' 59" W	G13	S6	S 7	40.6	7.00
T20	06 47' 13" N	056 40' 47" W	G13	S7	S 8	47.0	24.68
T21	07 09' 20" N	056 29' 34" W	G13	S8	G14	70.5	18.10
T22	07 25' 28" N	056 21' 09" W	G14	S8	S 9	88.1	4.47
T23	07 29' 37" N	056 19' 25" W	G14	S9	S 10	92.4	8.35
T24	07 37' 22" N	056 16' 12" W	G14	S10	G15	100.4	2.97
T25	07 40' 07" N	056 15' 02" W	G15	S10	S 11	103.3	14.15
T26	07 54' 04" N	056 12' 16" W	G15	S11	S 12	116.1	34.72
T27	08 28' 18" N	056 05' 32" W	G15	S12	G16	148.5	8.57
T28	08 36' 44" N	056 03' 47" W	G16	S12	G17	156.6	24.14
T29	08 59' 47" N	055 56' 12" W	G17	S12	G18	178.8	6.28
T30	09 05' 24" N	055 53' 19" W	G18	S12	G19	184.3	1.65
T31	09 06' 52" N	055 52' 33" W	G19	S12	S 13	185.7	15.17
T32	09 20' 25" N	055 45' 32" W	G19	S13	S 14	199.1	1.03
T33	09 21' 22" N	055 45' 07" W	G19	S14	N/A	200.0	