

THE USE OF THE EQUIDISTANCE/MEDIAN LINE PRINCIPLE  
AND METHOD AS THE MOST EQUITABLE BOUNDARY SOLUTION

by

TIMOTHY J. POWERS  
B.A., University of Victoria, 1980

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We accept this thesis as conforming  
to the required standard

Dr. William Ross

Dr. Terence Morley

Dr. Charles N. Forward

Professor T. McDorman

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University of Victoria

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Supervisor: Dr. William Ross

#### ABSTRACT

This thesis examines the principles and methods of maritime boundary delimitation recognized by international law as equitable and thus applicable to the delimitation of an equitable exclusive economic zone and continental shelf boundary. An argument is developed that in contrast to the present pattern of international law wherein a more flexible, individualized framework is emerging, boundary delimitation should retain the traditional fixed rule wherein the equidistance principle enjoyed a pre-eminent function. This argument is based on the belief that in theory and in practice the equidistance principle and method objectively and consistently produce an equitable boundary which is easily administered and readily complied with.

The review of the literature on 'other' principles and methods of maritime boundary delimitation largely focuses on the primary and secondary sources of international conventional and customary law. An attempt is made to assess the conformance of these legally declared principles and methods with tenets of natural sciences and resource management. The review of literature on the equidistance principles is largely comprised of the primary and secondary writings of geographers and hydrographers with legal

materials also referenced secondarily. The review of the literature on the applicable law shows how law-makers consider the principles and methods proposed to be creative of equity and at the same time how they view the equidistance principle achieves or falters in this regard.

Throughout the literature review, a multi-dimensional theoretical framework is applied whereby not only legal principles are considered but also principles of geography, biology, ecology, and political science are used to assess the equitableness of boundary delimitation principles and methods.

This study adapts this multi-dimensional theoretical framework to the case study. The objective of the case study is to provide through descriptive and graphic information, an evaluation of the practical application of these various 'equitable' principles and methods to delimitation of a disputed maritime boundary. The case study also affords the opportunity to assess the application of these equitable principles and methods to a geographic situation of both coastal adjacency and oppositeness.

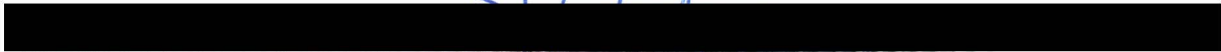
While the study does attempt to substantiate the application of the equidistance principle as a general rule of maritime boundary delimitation and also generalize the findings of the case study to wider geographical situations, the study nevertheless recognizes that special circumstances may sometimes occur which warrant a deviation from the

general rule.

Examiners:



Dr. William Ross



Dr. Terence Morley



Dr. Charles N. Forward



Professor T. McDorman

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CHAPTER I  
INTRODUCTION

Delimitation of offshore maritime boundaries is a state activity of relatively recent origin. The movement to delimit maritime offshore boundaries was motivated in the mid-1940's by coastal states' realization that contiguous continental shelf areas and their superjacent waters possessed potentially valuable resources. At the same time, the increasing efficiency and mobility of fishing and mining technology, and the lack of any political controls in these offshore areas meant that the resources therein could be exploited without benefit to, or to the detriment of the contiguous state. By the early 1950's, the international community decided, for perhaps the first time, to peacefully negotiate a solution to this geopolitical problem. In 1958, these negotiations produced two almost universally accepted conventions on maritime boundary delimitation, one which dealt directly with offshore maritime boundaries.

Problem Identification

The 1958 Convention on the Continental Shelf declared that failing agreement between parties and unless another boundary is justified by special circumstances, an equitable boundary is best determined by application of the principle of equidistance. The equidistance principle delimits a boundary by a line which is the same distance from whatever

point is nearest to it on a coast.

Since 1958 most coastal states have applied the equidistance principle to delimitation of their coterminus continental shelf and exclusive economic zone boundaries. Where the equidistance principle has not been applied, coastal states have resorted to other traditional delimitation methods such as parallels of latitude, and continuation of the land boundary or a line perpendicular to the coast.

Notwithstanding, there are four boundary delimitations where coastal states could not find any mutually acceptable principle or method on which to base the delimitation of their coterminus continental shelf and/or exclusive economic zone boundaries. Subsequently, these coastal states willingly submitted their boundary disputes to binding arbitration. The three judgments of the International Court of Justice's boundary tribunals, one by an ad-hoc international arbitration court, plus related decisions on boundary matters are recognized as an authoritative source of customary law of offshore boundary delimitation.

In the boundary arbitrations, the subsequent judgments pronounced that the fundamental rule of law on maritime boundary delimitation was that, failing agreement between states, offshore maritime boundaries are to be delimited by the application of equitable principles. At the same time, the boundary tribunals held that the conventional rule of

boundary delimitation, as stated in the 1958 Convention on the Continental Shelf, was simply an expression of this fundamental rule. Consequently, the tribunals declared that the equidistance principle was not to be considered as having a preeminent role in maritime boundary delimitation. Rather, the equidistance principle was to be regarded as just one of many indeterminate equitable principles which could produce an equitable boundary.

The tribunals considered that this interpretation of the law of maritime boundary delimitation was flexible enough to accommodate the wide diversity of geographic, political, socioeconomic and legal conditions which exist throughout all boundary regions. Moreover, the latest source of conventional law, the 1982 United Nations Convention on the Law of the Sea, has aligned itself with this flexible, individualized rule.

Ironically, while coastal states would now seem to be permitted by international law to have extensive boundary conditions considered in their boundary negotiations, they, nevertheless, continue to demonstrate a preference to the fixed rule, the equidistance principle. Furthermore, three of the four boundary tribunals after refuting the pre-eminence of the equidistance principle actually delimited the disputed offshore boundaries by applying the essential components of the equidistance principle.

## Study Goals

This paper contends that the reason for this situation is that the equidistance principle is indeed the most equitable principle or rule of offshore maritime boundary delimitation. Moreover, the equidistance principle generally produces in a precise, objective and convenient way, an equitable boundary. On the other hand, while boundary arbitrators have proposed a flexible rule composed of broad principles for maritime boundary delimitation, they have been unable to integrate these principles into functioning boundaries. Consequently, this paper will develop an argument for the retention of the equidistance principle as a preferred method for delimitation of an equitable offshore maritime boundary.

To this end, the study assesses those 'other' principles and rules of international law determined by infrequent states' practice and the four boundary arbitrations to be the basis of an equitable boundary delimitation. The equidistance principle is then examined to determine how and why it came to be accepted as a preferred method and principle of maritime boundary delimitation. The sources of international law of maritime boundary delimitation are then referred to so as to establish the legal basis of all the principles and rules of maritime boundary delimitation. A case study of an existing boundary dispute between Canada and the United States in the Dixon

Entrance/Hecate Strait boundary region is then presented and an attempt made to apply the principles and rules of maritime boundary delimitation to an actual boundary situation. This offers not only a chance to evaluate the ability of each principle or rule to produce an equitable boundary, but also provides an opportunity to assess the appropriateness of the disputants' boundary claims to effect an equitable solution.

This study provides a timely opportunity to assess the merits of an individualized flexible rule of delimitation versus a fixed rule. There are an enormous number of lateral maritime boundaries that, as a result of the legitimization of the 200 mile exclusive economic zone by the 1982 Convention, require delimitation.<sup>1</sup> As a result of just this move, each of the world's 137 coastal nations and their dependencies are faced with an area of potential overlap with at least one neighbouring state amounting to delimitation of 376 maritime boundaries of which 285 or 75% are unresolved.<sup>2</sup>

Canada and the United States have three such unresolved claims to areas of overlapping jurisdiction. Their dispute in the Dixon Entrance/Hecate Strait boundary region is perhaps the most resistive to a negotiated settlement because at stake are not only maritime boundaries but also access to potential mineral and petroleum resources, conservation and management of considerable fishery stocks and

issues of environmental protection. This study also assesses the recent 1984 judgment of the International Court of Justice in the Case Concerning the Delimitation in the Gulf of Maine between Canada and the United States with respect to the appropriateness of the equidistance principle (Canada) versus 'other' equitable principles (i.e., the United States) for delimiting an equally resource-rich boundary region.

It is important to note that this study attempts to evaluate the application of the equidistance principle and other equitable principles to the equitable delimitation of a single maritime boundary for the continental shelf and the exclusive economic zone. International law makes no provision for the delimitation of a single maritime boundary but neither does it expressly state that delimitation could not be by a single maritime boundary. In fact, the 1984 Gulf of Maine Case and numerous bilateral boundary agreements have delimited a single maritime boundary.

There are differences in legal criteria for delimitation of a continental shelf boundary and an exclusive economic zone boundary. Continental shelf delimitation focuses on geological and geographical factors, while the criteria relevant to the exclusive economic zone, although not very well developed, may be regarded as also encompassing historic usage and economic considerations.<sup>3</sup>

Single maritime boundary delimitation can also be considered as having no basis in geographical principles. It cannot be assumed that unity exists between the seabed and the water column. An 'ecological' criteria for delimitation of the water column could scarcely be adapted to a delimitation which had not only to divide a volume of water but also had to effect a division of the underlying continental shelf. Conversely, where distinctive geological characteristics can be observed in the continental shelf there would in all likelihood be no reason to extend the effect of those characteristics to the division of the superadjacent volume of water.<sup>4</sup>

There are, however, firm practical reasons or 'political considerations' which favour a common line for both delimitation of the continental shelf and the exclusive economic zone. One can imagine the potential for relentless conflicts in resource management strategies or protraction of boundary disputes if one country were to have jurisdiction over the waters of the exclusive economic zone and the other were to have jurisdiction over the continental shelf in a particular area. Also, the plurality of separate delimitations would be an administrative nightmare. Therefore, this study will assume delimitation is to be of a single maritime boundary line.

The consequences of this assumption are negligible. The only discernible equitable criteria that may make analysis

between the continental shelf and the exclusive economic zone delimitation incomparable is the contentious criteria of geologic natural prolongation. However, the study will show that natural prolongation is in fact of very limited significance in lateral maritime boundary delimitation.

Chapter One Endnotes

<sup>1</sup> All references to miles are nautical miles as specified in the 1958 Geneva Conventions on the Law of the Sea and 1982 United Nations Convention on the Law of the Sea. These Conventions also specify metres for bathymetric contours.

<sup>2</sup> R.W. Smith, "A Geographical Primer to Maritime Boundary-Making," Oceans Development and International Law Journal, 12(1/2), 1982, p. 13.

<sup>3</sup> J.R.V. Prescott, The Political Geography of the Oceans (London: Methuen, 1975), p. 118.

<sup>4</sup> International Court of Justice, "Case Concerning Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)," Judgment, October 12, 1984 (The Hague: n.p., 1984) (hereinafter referred to as the "Gulf of Maine Case"), p. 86, para. 193.

## CHAPTER II

## PRINCIPLES AND RULES IN THE LAW OF DELIMITATION

The Fundamental Norms

The fundamental norm of maritime boundary delimitation is "agreement between parties." Agreement between parties is reached either directly or if need be by some alternative method which must, however, be based on consent.<sup>1</sup> Since 1969, the rule of law for maritime boundary delimitation which has come to be regarded as underlying this fundamental norm of 'mutual agreement' and which has displaced the equidistance/median line principle is the "application of equitable principles" or equitable criterion.<sup>2</sup>

The concept of 'equitable principles' is derived from the Truman Proclamation of September 28, 1945 which unilaterally declared that in cases where the continental shelf off the coast of the United States extended to the shores of another state or was shared with an adjacent state, the boundary should be determined by the United States and the State concerned "in accordance with equitable principles."<sup>3</sup> However, the first multilateral agreements on maritime boundaries, the 1958 Geneva Convention on the Continental Shelf (Article 6) and the Convention on the Territorial Sea and Contiguous Zone (Articles 12 and 24), make no specific reference to equitable principles as a rule of law for maritime boundary delimitation.<sup>4</sup>

The primacy of equitable principles, both for states that are parties to these Conventions and for states that are not parties, was first adopted into customary law through the International Court of Justice's 1969 North Sea Continental Shelf Cases.<sup>5</sup> The Court, having found the delimitation provisions of the 1958 Geneva Convention on the Continental Shelf to be inapplicable between parties as Germany was not a signatory to the Convention, concluded that customary international law did not recognize the equi-distance/median line principle as the preferred method or formula of law for maritime boundary delimitation. Rather the Court required that continental shelf boundaries be determined primarily in accordance with equitable principles.<sup>6</sup>

Application of equitable principles as the rule of international law for maritime boundary delimitation was thereafter adopted by the International Court of Justice in the 1977 United Kingdom-France Continental Shelf Arbitration Award<sup>7</sup>, the 1982 Case Concerning the Continental Shelf between Tunisia/Libyan Arab Jamahiriya<sup>8</sup> and the 1984 Case Concerning Delimitation of the Maritime Boundary in the Gulf of Maine (Canada/United States of America). Equitable principles were also seen to be a rule of conventional law by the International Court of Justice's interpretation in the North Sea Cases and the Court of Arbitration in the Anglo-French Award of the 'special circumstances' part of the

delimitation formula in Article 6 of the 1958 Geneva Convention on the Continental Shelf as implying use of equitable principles<sup>9</sup>. And, while equitable principles were endorsed by the Court in the Tunisia/Libya Case as being a part of conventional law, the Court chose to evaluate these principles by the results produced rather than the methods applied. The Court in the Tunisia/Libya Case stated:

It is however, the result which is predominant; the principles are subordinate to the goal. The equitableness of a principle must be assessed in the light of its usefulness for the purpose of arriving at an equitable result. It is not every such principle which is in itself equitable; it may acquire this quality by reference to the equitableness of the solution....From this consideration it follows that the term 'equitable principles' cannot be interpreted in the abstract; it refers back to the principles and rules which may be appropriate in order to achieve an equitable result.<sup>10</sup>

The 1982 Law of the Sea Convention uses the term 'equitable solution' which bears a similar result-oriented implication.<sup>11</sup> The Chamber of the International Court of Justice in the Gulf of Maine Case employs both the application of equitable principles to ensure an equitable result.<sup>12</sup> As such, the 1984 Chamber amalgamated process and product. Of course, the use of 'equitable' in all these cases represents an attempt to embody the underlying rule of law. And yet, despite all the attention customary adjudicators and conventional law-makers have given to the primacy of equitable principles or solutions as a rule of

law for maritime boundary delimitation, the meaning of the terms and their role in maritime boundary delimitation have not been articulated and consequently remain obscure.<sup>13</sup>

The guiding precept of equitable principles or solutions is 'equity'. Equity is a term that legal scholars have used to convey many different meanings. Blecher argues that equity is reflected in the International Court of Justice's use in the 1969 North Sea Cases and the Court of Arbitration in the 1977 Anglo-French Award of the term to mean certain fundamental norms as 'fairness' and 'justice', 'reasonableness' and 'appropriateness'.<sup>14</sup> Charney comments that equity encompasses "some rules that are clearly articulated normative standards and others that are highly abstract."<sup>15</sup> Charney adds that the most appropriate use of 'equity' in boundary delimitation is one based on "normative assumptions about the appropriate rules of law."<sup>16</sup> Thus, it is expected that "in individual cases the operation of equity will reflect the underlying normative rule."<sup>17</sup>

The International Court of Justice in the 1969 North Sea Cases reiterated both authors' view on equity when it stated:

On a foundation of very general precepts of justice and good faith, actual rules of law are here involved which govern the delimitation of adjacent continental shelves...it is not a question of applying equity simply as a matter of abstract justice, but of applying a principle of law which itself requires the application of equitable principles, in accordance with the ideas which have always underlain the development of the

legal regime of the continental shelf in this field....<sup>18</sup>

The Court's statement indicates that one has to resort to principles of equity but one may not be able to articulate the underlying norm.<sup>19</sup> Thus, like the determination of what are equitable principles, one is still unclear as to what precisely constitutes equity. Perhaps a precise statement of their contents is undesirable or even impossible.

The Chamber in the International Court of Justice's Gulf of Maine maritime boundary delimitation advised that it is not to be expected in the new and evolving field of maritime delimitation of extended national claims that general international law would provide a detailed set of rules which could be used for solving any delimitation. The most that can be expected is:

a limited set of norms for ensuring the co-existence and vital co-operation of the members of the international community, together with a set of customary rules whose presence...can be tested by induction based on the analysis of a sufficiently extensive and convincing practice,<sup>20</sup> and not from deduction from preconceived ideas.

A more useful course is to seek a better formulation of the fundamental norm. The Chamber in the Gulf of Maine Case, being the most recent jurisprudence source, summarizes this formulation of the fundamental norm from a compilation of customary and conventional law. The Chamber says that the current state of international law prescribes

in every delimitation between neighbouring States that the fundamental norm is:

No maritime delimitation between States with opposite or adjacent coasts may be effected unilaterally by one of those States. Such delimitation must be sought and effected by means of an agreement, following negotiations conducted in good faith and with the genuine intention of achieving a positive result. Where, however, such agreement cannot be achieved, delimitation should be effected by recourse to a third party possessing the necessary competence.<sup>21</sup>

and the general rule of law is:

In either case, delimitation is to be effected by the application of equitable criteria and by the use of practical methods capable of ensuring, with regard to the geographic configuration of the area and other relevant circumstances, an equitable result.<sup>22</sup>

However the Chamber then adds to the obscurity of the applicable rule of law for maritime boundary delimitation by raising the question of whether there exists:

...a special international law that must be looked at, in order to ascertain whether that law, as at present in force between Parties to this Case does or does not include some rule specifically requiring the Parties, and consequently the Chamber to apply certain criteria or certain specific practical<sup>23</sup> methods to the delimitation that is requested.

While it may be impossible to determine what in fact constitutes 'equitable principles' or 'equity' within the rule of law for boundary delimitation, it is known what definitely does not constitute equity or equitable

principles. Equity, or its manifestations as equitable principles, does not mean the sharing of resources of the area to be delimited. It is not the goal or function of boundary delimitation to apportion maritime areas but to delimit a boundary. As the International Court of Justice held in the 1969 North Sea Continental Shelf Cases:

Delimitation is a process which involves establishing the boundaries of an area already, in principle, appertaining to the coastal State,<sup>24</sup> not the determination 'de novo' of such an area.

The Court in the 1982 Tunisia/Libya Case echoed their colleagues' finding.<sup>25</sup>

These findings are consistent with the geographical idea that boundaries are found, not made. For example, apportionment would contradict the principle that coastal state entitlement to the continental shelf is based fundamentally on the shelf being the natural prolongation of its land territory. To establish boundaries regardless of geography has been referred to, in some cases, as 'refashioning geography'.<sup>26</sup> When a court is called upon to delimit a boundary in accordance with principles of international law, it is not required or entitled to award shares that it believes to be just and reasonable. It is theoretically bound to determine a boundary the location of which may conceivably work hardship on one of the parties to the delimitation.<sup>27</sup> The awarding of a just and equitable share would be an act of apportionment rather than a

delimitation.<sup>28</sup>

Equitable Principles, Applicable Methods and Relevant Circumstances

The most that can be said of equitable principles is that they achieve an equitable result. Accordingly, there can be no single method required for application of equitable criteria to maritime boundary delimitation. Each method, in essence, must achieve a reasonable and equitable result.<sup>29</sup> In addition, there is no limit to the considerations that may affect this goal.

It may be readily assumed that if equitable principles remain undefined, circumstances are likely to be of the same nature. However, there are equitable principles and practical methods (other than the equidistance/median line principle and method) as well as relevant circumstances which have been proposed and, in some cases, accepted as being applicable to boundary delimitation. These equitable principles are "essentially to be determined in relation to what may properly called the geographical features of the area."<sup>30</sup> In practice, customary law extensively indicates that equitable principles to date have been determined foremost by geographical characteristics. Customary law has conversely displayed a tendency to reject non-geographical 'principles' as equitable criteria and, if accepted at all, relegate them to the status of 'relevant circumstances.'

Those geographical principles that are found able to stand alone as rules on which delimitation may proceed may be distinguished as 'autonomous' equitable principles or criteria. Those geographical principles proposed by disputants which customary law have held not to be 'autonomous' equitable principles, that is, unable to serve as a direct basis for delimitation, are relegated to being 'auxiliary' equitable principles or special circumstances, or even just relevant circumstances. 'Autonomous' equitable principles and auxiliary equitable principles (or special circumstances) are not mutually exclusive. 'Auxiliary' geographic equitable principles can be applied in conjunction with 'autonomous' principles or serve to correct any inequities that strict adherence to autonomous principles may produce or disregard. Practical methods have correspondingly been devised for application of both 'autonomous' and 'auxiliary' geographical principles to actual boundary delimitation. And similar to the conjunctive use of autonomous and auxiliary principles, practical methods may be applied singularly or in combination with other methods as geographical and other relevant circumstances warrant.

These introductory comments provide the framework for discussing equitable principles, practical methods and relevant circumstances. Non-geographical principles which have largely been rejected as equitable criteria will first

be described, and the reasons for their rejection or relegation to relevant circumstances presented. Then geographic principles beginning with those relating to human and economic geography, or more for sake of clarity, resource interests will be analyzed for their consideration as equitable principles, special circumstances or merely relevant circumstances. Finally, those geographical principles with more physical derivatives will be looked at. The practical methods will be discussed with those 'principles' that they are commonly associated with.

### Security

Military security of states was an important reason for the establishment of territorial seas and contiguous zones. The 12 mile territory sea where full state sovereignty exists, and the 24 mile contiguous zone where a coastal state's regulation of custom, fiscal and immigration or sanitary laws is permitted, provide a state with a protective band around its coasts.<sup>31</sup> Security interests should diminish, however, as states negotiate lateral boundaries for their continental shelf area and 200 mile exclusive economic zone because full territorial sovereignty does not extend to these zones. A state is restricted to the exclusive right to the natural resources of these zones, the exploitation of which should not threaten their territorial sovereignty. There are, however, some elements

related to security including shipping lanes and navigational rights, which may influence a state's boundary negotiating position.<sup>32</sup> The 1982 United Nations Convention on the Law of the Sea has strived to offer assurances to states that these elements are not compromised in boundary negotiations. 'Innocent passage' in the territorial sea and, to a lesser degree, in the contiguous zone is permitted as long as it is in compliance with the coastal state's laws and involves legitimate commercial activities.<sup>33</sup> No freedom of overflight is permitted over the territorial sea or contiguous zones without coastal state approval. In the exclusive economic zone and over continental shelf areas, the 1982 Convention provides for freedom of navigation for all maritime vessels and air traffic.

International straits which connect two areas of the high seas or the exclusive economic zone are a special situation. In those straits less than 24 miles in width which have this connective feature, freedom of navigation is provided for all vessels (submarines must surface). This does not affect the legal status of the waters forming the straits or the exercise by states bordering the straits of their sovereignty or jurisdiction over such waters and their air space, bed and subsoil.<sup>34</sup>

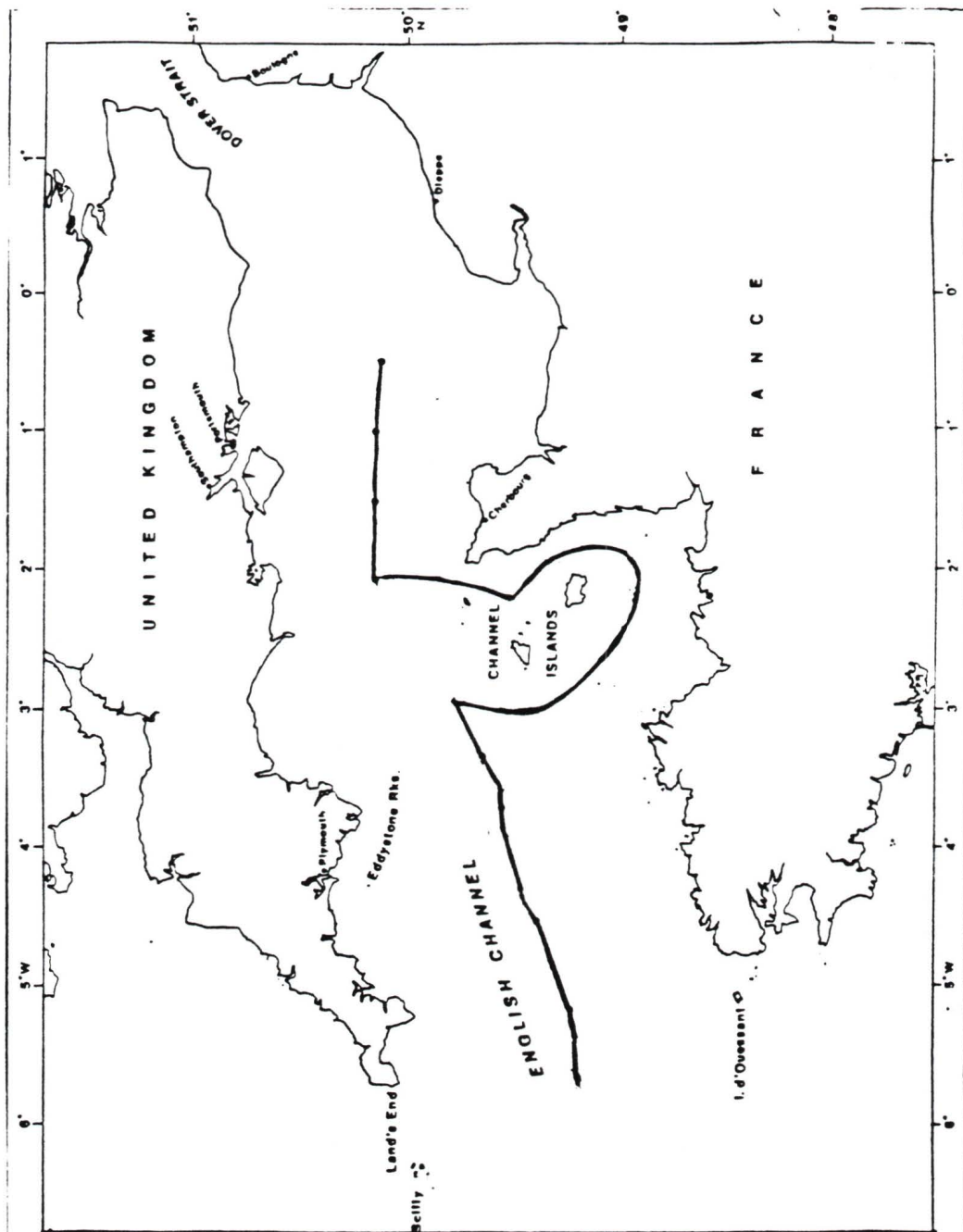
The examples of a state pronouncing security circumstances as relevant to maritime boundary delimitation in customary law amounts to only one of note. In the 1977

Anglo-French Arbitration, the United Kingdom submitted that in the Channel Islands region, a median line should be drawn between their coastlines. The United Kingdom contended that for this purpose the Channel Islands formed a part of the coastline of England. This would create an intervening tongue of the United Kingdom continental shelf to reach out from its mainland to the Channel Islands separating the French continental shelf into an eastern and western half (Figure 1). France countered that such a delimitation would be inequitable because it would sever its continental shelf in the Channel into two separate zones putting France's vital interests in the security and defense of its territory in doubt. The United Kingdom replied that these interests should not be given weight but contrarily, urged similar considerations in support of its own proposal. The Court denied the United Kingdom's claim and held that defense and security "may support and strengthen, but they cannot negative [sic] any conclusions that are already indicated by the geographical, political and legal circumstances of the region which the Court identified."<sup>35</sup>

#### Other Maritime Boundaries

The relevance of 'other' maritime boundaries may be have some weight in the delimitation of an exclusive economic zone or continental shelf boundary. Another maritime boundary may reflect the realities of the situation and a

Figure 1



United Kingdom Proposed Equidistance Line

Source: United Kingdom of Great Britain and Northern Ireland, Secretary of State for Foreign and Commonwealth Affairs, Arbitration Between United Kingdom of Great Britain and Northern Ireland and the French Republic on the Delimitation of the Continental Shelf. Miscellaneous No. 15. London: Her Majesty's Stationery Office, 1978. Map supplement inside back cover.

balance of the real interests of the parties that was not visible in their advocacy before the Court.<sup>36</sup> 'Other' maritime boundaries played a role in two boundary arbitrations and was rejected in another boundary arbitration.

In the Anglo-French Arbitration, the French Republic argued for establishment of a 6 mile enclave around the Channel Islands.<sup>37</sup> In response, the United Kingdom asserted that regardless of whether 'enclaving' was, in principle, justified, or whether international law now recognized a 12 mile territorial sea, a continental shelf boundary should at least respect this and the islands' already recognized fishery zone of 12 miles should be delimited.<sup>38</sup>

The Court took account of the United Kingdom's assertion that the extent of a state's territorial sea and fisheries zone could be relevant in making an equitable delimitation of the continental shelf. The Court decided to enclave the Channel Islands with a continental shelf zone of 12 miles.<sup>39</sup> The Court apparently interpreted prior state practice in delimiting maritime boundaries as relevant.

In the Tunisia/Libya Case, the Court found as relevant to the delimitation, concession lines established in 1919 by the former colonial masters (i.e. France and Italy) for fisheries enforcement purposes and adhered to since 1966 by Tunisia and 1968 by Libya. These lines also served as the bounds for oil and gas concessions granted since 1974. These lines, from the territorial sea at a bearing of 26<sup>o</sup> east of

north to a point on the parallel of latitude drawn from the most westerly point of the Tunisian coastline between Ras Kaboudia and Ras Ajdii, corresponded with a line perpendicular to the coast at the point of the terminus of the land boundary.

Presumably this was the reason for its selection back in 1919. While this may temper a justification based on a former maritime boundary, the Court nevertheless invoked a concession line for one segment of the Tunisia/Libya continental shelf boundary as evidence "of the line or lines which the Parties themselves may have considered equitable or acted upon as such - if only as an interim solution affecting part only [sic] of the area to be delimited."<sup>40</sup> The critical factor to the Court seems to have been that some line was drawn by both parties separately and that Tunisia was the first to do so.<sup>41</sup>

The Chamber in the Gulf of Maine Case was presented with arguments from both Parties on what they felt were relevant maritime boundaries. Canada argued that the United States Bureau of Land Management (BLM), as the agency responsible for granting U.S. oil and gas concessions, had observed a line approximating Canada's proposed equidistance line in granting concessions on George's Bank. Supporting evidence was presented by Canada of two oil companies' adherence to these concession limits. The U.S., on the other hand, presented BLM and corporate evidence to refute

the Canadian claim. Moreover, the U.S. argued that three multilateral fisheries organizations, the original NACFI (North American Council on Fisheries Investigations), its successor ICNAF (International Council on North Atlantic Fisheries) and NAFO (North American Fisheries Organization) in which Canada and the United States were members, had established administration lines between sub area 4 and 5 which closely aligned the Northeast Channel.

The Chamber found that unilaterally imposed oil and gas concession lines were not relevant to delimitation of a single boundary for the continental shelf and exclusive economic zone. With regard to the fisheries boundaries, the Chamber held that co-operative arrangements such as NACFI, ICNAF, NAFO, are entered into without prejudice to claims of sovereignty or jurisdiction. Furthermore, these multilateral arrangements had no particular relevance to the bilateral relations of Canada and the United States. Therefore, pre-existing maritime boundaries were not considered relevant to the delimitation of the single maritime boundary on the Gulf of Maine.

The legal arguments behind these 'other' maritime boundaries revolve around the principles of "acquiescence" and "estoppel". Briefly, "acquiescence" in law is a failure to protest when protest or a reservation of rights is called for in the presence of knowledge. A tacit agreement results in an acquisitive prescription or an "estoppel" to some

thing or action. The duration of acquiescence is critical, as is the conduct of parties before an "estoppel" is acquired. On the other hand, unilateral claims by one party never accepted or acquiesced in by the other would not be relevant. The Court in the Tunisia/Libya Case found that the Parties had acquiesced in the use of a line for operational purposes over a long period of time, despite the admitted continuation of the boundary dispute.<sup>42</sup> That history was given substantial weight in the delimitation of a portion of the boundary.<sup>43</sup> In the Gulf of Maine Case, the duration of the United States "acquiescence," as contended by Canada, is at most four years. A related matter concerned the responsibility of the United States official who had knowledge of the Canadian oil and gas concessions and whether it warranted legitimate sovereign acceptance.

Nonetheless, other maritime boundaries may be relevant circumstances in the equitable delimitation of a maritime boundary. Their relevance, it would appear, depends on the purpose, duration and level of diplomatic recognition that constitute acquiescence. The Anglo-French and the Tunisia/Libya situations show previous fisheries boundaries were used. The Tunisia/Libya Case demonstrates an almost 50 year span of tacit agreement by the former colonial government without either party disputing the 'estoppel'. However, it is interesting to note that the fishery concession lines in the Tunisia/Libya Case corresponded to a perpendicular line

from the coastline, which is an acceptable geographic method for lateral boundary delimitation. Meanwhile, the Gulf of Maine Case reveals, at the most, a four year 'acquiescence' by the U.S. of the Canadian claim, even if the Canadian perception of the status of "acquiescence" is accepted.

Customary law does not provide any evidence that the existence of 'other' maritime boundaries constitute, by itself, an equitable principle for boundary delimitation. It does provide evidence though that other maritime boundaries are relevant to the assessment of a boundary found first on the basis of geographical principles.

Blecher points out that there are, of course, limits to the scope for referring to other maritime boundaries. The Court in the Anglo-French Arbitration rejected a French proposal for using lines drawn in the general direction of the coast in the Atlantic region. France cited the Anglo-Norwegian Fisheries Case and the North Sea Continental Shelf Cases for establishing the concept of general direction of the coast as a criterion of general validity in the delimitation of maritime areas.<sup>44</sup> The Court held that the Anglo-Norwegian Fisheries Case was distinguishable from the Anglo-French Arbitration because the former was not concerned with the continental shelf and was therefore not based on the principle of natural prolongation.<sup>45</sup> The North Sea Cases was distinguishable because the International Court of Justice was not thinking of a situation like that

in the Atlantic, where most of the continental shelf lies "off" the coastlines of the parties and the presence of offshore islands complicates the delimitation.<sup>46</sup>

#### Resource Interests

Fishery rights derived from historical use or economic dependence is important for illustrating the development of the legal regime of the extended fishery or exclusive economic zone and for the difference in the law relating to delimitation of the exclusive economic zone and the continental shelf. However, fishery rights would seem to have limited application for boundary delimitation in these jurisdictions.

The Truman Proclamation on coastal fisheries in high sea areas, released concurrently with the Truman Proclamation on the continental shelf, acknowledges not only a state's special rights to coastal fisheries but also of other states which may have established a legitimate interest therein. This differs somewhat from the exclusive exploitation rights to continental shelf resources enjoyed by coastal states as declared in the Truman Proclamation on the continental shelf. In addition, whereas the Truman Proclamation on the continental shelf provides for delimitation of maritime boundaries in accordance with equitable principles, the coastal fisheries proclamation contains no provisions at all for boundary delimitation.<sup>47</sup>

The Truman Proclamation on coastal fisheries provides only that regulation and control of fisheries activities, with respect to fisheries in which more than one nation participates, are to be undertaken by agreement.<sup>48</sup>

The 1958 Geneva Convention on the Territorial Sea and Contiguous Zone recognizes the significance of historic rights for boundary delimitation. Article 12 of the Convention states that the equidistance principle may be superseded in the delimitation of the territorial sea "where it is necessary by reason of historical title...to delimit the territorial sea of the two States in a way which is at variance with this provision."<sup>49</sup> For extended zones of national jurisdiction, the 1958 Geneva Convention on Fishing and Conservation of the Living Resources of the High Seas indirectly observes the significance afforded historic rights in the water column by providing for delimitation of fishery conservation zones in accordance with the provisions of Article 12 of the Convention on the Territorial Sea and Contiguous Zone.<sup>50</sup> The Convention on the Continental Shelf grants exclusive exploitation rights over continental shelf resources including sedentary fisheries but makes no specific reference to 'historic' special circumstances found or inferred by the other two previously mentioned Conventions.<sup>51</sup> Notwithstanding, the position of sedentary fisheries may require separate consideration. If title has been acquired to such a fishery in the area of what is now

recognized as the continental shelf prior to the Truman Proclamations, it has been argued by a dissenting judge in the 1969 North Sea Cases, citing the *Grisbarna Case*, that preservation of such rights may require a modification of the equidistance line of delimitation.<sup>52</sup> The judge feels his opinion is justified in conventional law by the 'special circumstances' provision of Article 6 of the 1958 Convention on the Continental Shelf which 'intended' to include historic use of fisheries.<sup>53</sup>

The 1982 Convention on the Law of the Sea retains the provisions outlined in the 1958 Convention on the Territorial Sea and Contiguous Zone of preferential consideration of historic use over the equidistance principle for territorial sea delimitation.<sup>54</sup> For zones of extended coastal jurisdiction, no specific provisions for historic use or fishing rights are in the delimitation provisions of Articles 74 and 83, for the exclusive economic zone and the continental shelf respectively.<sup>55</sup> While the 1982 Convention places all the resources of the exclusive economic zone and the continental shelf under coastal state jurisdiction, in the exclusive economic zone, unlike the exclusive exploitation rights enjoyed on the continental shelf, the resources especially fisheries are subject to duties to practice conservation and management measures and to allow other states to catch "surplus fish."<sup>56</sup> The 1982 Convention's Article 62 allows for other states' utilization

of fishery stocks based on the surplus stocks available from the optimum allowable catch unused by the coastal state, not territorial considerations. The concept of historic rights remains relevant only to the extent that "the need to minimize economic dislocation in States whose nationals have habitually fished in the zone" is among the factors to be taken into account in giving access to surplus fish.<sup>57</sup> Further, where fishery stocks occur within the exclusive economic zone of two or more coastal states, or in an area beyond and adjacent to the zone, these states shall seek, "either directly or through appropriate subregional or regional organizations, to agree upon the measures necessary to co-ordinate and ensure the conservation and development of such stocks."<sup>58</sup> The same provisions are applied to highly migratory species and marine mammals.<sup>59</sup>

It would appear then that the use of historic fishing rights and economic dependency as equitable principles for boundary delimitation of the exclusive economic zone and the continental shelf is not confirmed by conventional law. Conventional law seems to regard historic fishing rights and economic dependency as primarily a question of resource allocation and management and not territorial division.

Customary law does not appear to be as conclusive on the role that historic fishing rights and their economic dependence has in maritime boundary delimitation of the extended jurisdictional zones. The Permanent Court of

Arbitration in the 1909 *Grisbardna Case* believed that historic fishing rights and their economic dependence might justify a slight deviation from a maritime boundary line based solely on geographical considerations. In the *Grisbardna Case*, which involved the interpretation of a 17th century boundary treaty, delimitation of an outer, adjacent territorial sea area between Sweden and Norway was the issue. The inner area, where the coasts are opposite, was delimited by use of a median line. The use of the equidistance method in the outer area was rejected because the Court felt this method did not evolve until the 19th century and therefore could not have been considered at the time.<sup>60</sup> In the outer area, the Court recommended delimitation by a perpendicular line to the general direction of their adjacent coastlines be applied as this method was the most frequent one used in the 17th century. This recommendation was rejected by both parties because it would sever the rich lobster-laden *Grisbardna* fishing bank in half. Subsequently, the Court then diverted the perpendicular line 1° which resulted in Sweden acquiring the entire *Grisbardna* Bank. The Court cited, as reasons for its finding, Sweden's historic use, economic dependency and Norway's acquiescence to Sweden's installation of navigational devices on the *Grisbardna* Bank.<sup>61</sup> Underlying the Court's decision was the principle that the actual state of things should be changed as little as possible.<sup>62</sup> In other words, the Court felt

existing factual circumstances should be maintained and this supported a slight variation of a line primarily based on geographical factors rather than as an independent source of right to maritime territory.<sup>63</sup>

The 1951 Anglo-Norwegian Fisheries Case supported the proposition that fishing rights and economic dependency may be relevant in maritime boundary delimitation.<sup>64</sup> In this Case, the International Court of Justice upheld the validity of Norway's use of straight baselines to determine the outer portions of its territorial sea. The Court attached certain weight to usage and dependency on fisheries but only as support for more important geographical factors.<sup>65</sup> Primarily, the Court held that the 'skjaergaard' (the numerous islands, islets, rocks and reefs) constituted the Norwegian coastline and its use as the baseline was "dictated by geographical realities."<sup>66</sup> These 'realities' were first, adherence to a baseline which follows the general direction of the coast, and second, the geographical linkage between the land and the sea as illustrated by the skjaergaard.<sup>67</sup> The Court then cited as a third consideration that "there is one consideration not to be overlooked, the scope of which extends beyond purely geographical factors: that of certain economic interests peculiar to a region, the reality and importance of which are clearly evidenced by a long usage."<sup>68</sup> These economic factors were considered only because geographical factors clearly established the right

to use straight baselines.<sup>69</sup> Considerations of historic rights and economic dependency would seem to have been used by the Court as supportive criteria to the essential geographical factors.

Historic fishing rights and economic dependency were not issues in the International Court of Justice's judgments on the delimitation of the continental shelf in the 1969 North Sea Cases and the 1977 Anglo-French Case. Though not a boundary delimitation arbitration, the 1974 International Court of Justice's decision in the Fisheries Jurisdiction Case<sup>70</sup> was an important development in the legal concept of the exclusive economic zone and the issue of historic fishing rights therein. The Court was asked to arbitrate a conflict which arose when Iceland proclaimed a 50 mile exclusive fisheries zone and then sought to exclude United Kingdom fishermen from the zone. The Court refused to rule on the legitimacy of Iceland's 50 mile exclusive fisheries zone because it had not been recognized in international law. The Court did find however that a coastal state may claim preferential rights to offshore fisheries when it is a situation of dependency on coastal fisheries. These claims though cannot nullify the concurrent rights of other States.<sup>71</sup> The coastal state must negotiate with other states which have been traditionally fishing on the same fishing ground with an intention "to balance and regulate equitably, questions such as those of catch limitations and

share allocation."<sup>72</sup> These are generally the same requirements referenced previously in the discussion of Articles 62 and 63 of the 1982 Convention on the Law of the Sea.

In the Tunisia/Libya Case, Tunisia made a claim to historic title over the seabed and superjacent waters, based on fixed fisheries for mobile species on the shallow inshore banks and exploitation of sedentary species on the deeper banks. This claim raised the question whether a state can acquire historic title by occupation and exploitation of the continental shelf areas that may appertain to another state. The Court discussed the issue in general terms that imply a negative answer.<sup>73</sup> The Court did not provide a more substantive reply to Tunisia's claim probably because the boundary line indicated by their judgment did not encroach on the area claimed by Tunisia on the basis of historic title.

In the Gulf of Maine Case, the United States claimed that sole development and almost exclusive historical domination of the Georges Bank fisheries by American fishermen warranted a departure from an equidistant line that would sever the Bank.<sup>74</sup> Canada countered that preservation of the vital economic dependence of Nova Scotian coastal communities on the Georges Bank scallop fishery stocks justified the application of an equidistance boundary.<sup>75</sup> The Chamber rejected both claims. The Chamber stated:

respective scale of activities connected with fishing - or navigation, defence or for that matter, petroleum exploration and exploitation cannot be taken into account as a relevant circumstance, or if the term is preferred, as an equitable criterion to<sup>76</sup> be applied in determining the delimitation line.

The Chamber qualified this by stating that it may regard the activities as a legitimate "scruple" if a delimitation irrespective of these considerations were so radically inequitable "to entail catastrophic repercussions for the livelihood and economic well-being of the population of the countries concerned."<sup>77</sup> The Chamber felt it had no reason to believe this would result on account of its choice of a delimitation line.

Therefore, historic fishing rights and economic dependency, while they are considered equitable principles for territorial sea delimitation, are not supported by international law as equitable principles for delimitation of the exclusive economic zone and the continental shelf. In conventional law, historic fishing rights and economic dependency are only considered factors for excess fish allocation in these zones, not territorial division or even relevant circumstances thereof. Customary law has shown limited support for historic fishing rights and economic dependency as relevant circumstances (i.e. *Grisbardna Case*, *Anglo-Norwegian Fisheries Case* and a 'last resort' in *Gulf of Maine Case*) in delimitation of extended jurisdiction zones. This support is qualified to their ability to

sustain more important geographical principles.

### Unity of Resources

Unity of natural resources is a concept whereby states claim that a boundary delimitation should preserve the whole of a discrete, resource-bearing area rather than allocate only a portion of an area. The boundary delimitation method for maintaining the unity of natural resources may be a geographically identifiable line such as a bathymetric contour or have no identification with physical features such as an international fisheries organization's administrative line. The international law of the sea for boundary delimitation of extended zones of coastal jurisdiction has explicitly rejected the concept of "unity of resources" or, in particular, unity of mineral deposits and fishery stocks or their management as "special circumstances" or 'auxiliary' equitable criteria, and generally as relevant circumstances.

The International Law Commission in its preparatory work for the 1958 Geneva Convention did not include unity of resources within the scope of special circumstances.<sup>78</sup> In the 1969 North Sea Cases, the International Court of Justice found preservation of natural resources (in this case minerals) "so far as known or readily discernible," not as a major factor but merely "a factual element which it is reasonable to take into consideration in the course of

negotiations." The Court did not elaborate as to why it should be considered, but Judge Ammoun in a separate opinion stated "that unity of resources does not fall within the category of a rule of delimitation."<sup>79</sup> Germany, not on any specific directions from the Court, did agree to allow Denmark to retain certain shelf areas where Danish concessionaires had already conducted drilling. The provision was not based on a principle of unity of resources but more in recognition of existing activity.<sup>80</sup>

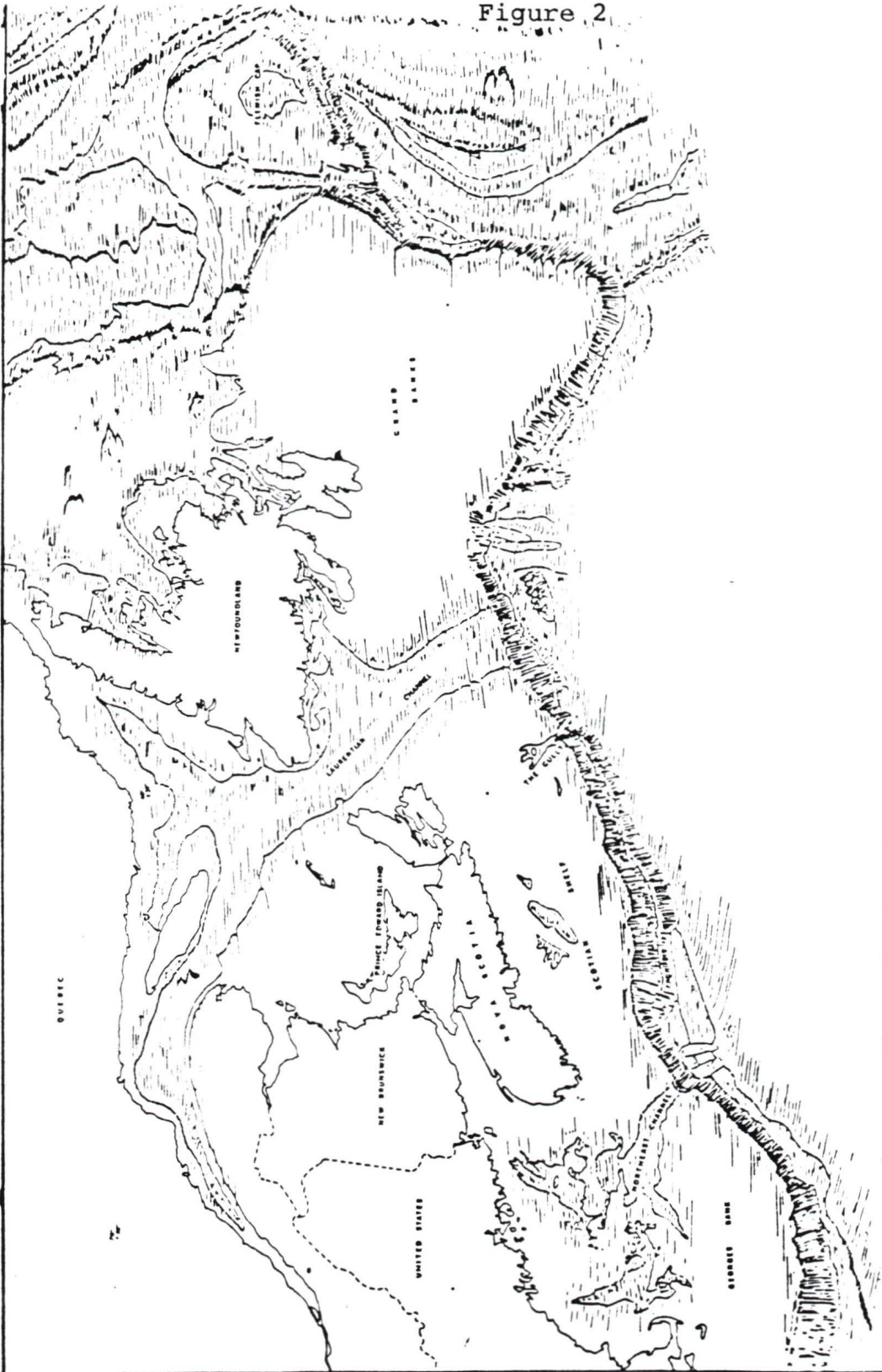
Unity of mineral resources was not at issue in the Anglo-French and the Tunisia/Libya cases. It was also found not to be relevant in the Gulf of Maine Case because the distribution of hydrocarbon resources in the Gulf of Maine was virtually unknown, thus it could not affect actual delimitation. Although, in a dissenting opinion Judge Gros stated that the presence of natural resources on the continental shelf was a relevant factor the Court should have considered.

Unity of fishery stocks or more broadly the unity of marine resources and unity of resources management were both concepts proposed by the United States in the Gulf of Maine Case. The former was argued as a relevant 'environmental' circumstance and the latter was forwarded as an equitable principle. The unity of marine resources as a relevant circumstance was proposed by the United States to support their argument for the Northeast Channel as the boundary

line. The Northeast Channel in this area was said by the United States to constitute a "natural boundary" between the distinct ecological regimes of the Georges Bank and the Scotian Shelf<sup>81</sup> (Figure 2). The Chamber held that it was impossible to discern a genuine, sure and stable geological, geomorphological or ecological natural boundary in so fluctuating an environment as waters of the ocean, their flora and fauna and especially in respect of delimiting a single boundary that must recognize the importance of the resources of the continental shelf, its sea-bed and subsoil and the resources of superjacent waters.<sup>82</sup>

Regarding the proposed equitable principle of unity of resource management, the Chamber found that international law demonstrates a rejection of the premise on which sole state management and conservation is based, which is the need to avoid risk of prejudicial or wasteful exploitation. International law states that negotiated agreements are the solution for resource management and conservation not territorial division.<sup>83</sup> There are however some individual agreements negotiated between states where an equidistant line has been modified in order to give an equal share of oil deposits.<sup>84</sup> As for the principle of the need to minimize the possibility of future disputes, the Chamber declared that it could not perceive any difficulties whether related to conservation and management of natural resources or other infringements that could not be resolved by the Parties,

Figure 2



Mills p.37 After Heizen & T. Harp

given the traditional friendly and fruitful co-operation in maritime matters enjoyed thus far.<sup>85</sup>

#### Geologic Natural Prolongation

Geologic natural prolongation defines the geological link between the land territory and the continental shelf wherein characteristics or composition of the continental shelf's seabed and subsoil demonstrate a continuation of similar features found in the land of one disputant. In this geological sense, natural prolongation has been found to have limited usefulness for delimitation of maritime boundaries between states with adjacent or opposite coasts because most states share the same continental shelf. From a legal perspective, the utility of the principle of natural prolongation is more in making states eligible for claims to continental shelf rights rather than as a rule for delimitation of maritime boundaries. The body of international law attests to this.

The principle of natural prolongation as a function of a state's eligibility to continental shelf rights was first found in the 1945 Truman Proclamation on continental shelf where it stated:

the exercise of jurisdiction over the natural resources of the subsoil and the sea bed of the continental shelf by the contiguous nation is both reasonable and just, since the effectiveness of measures to utilize and conserve these resources would be contingent upon cooperation and protection from the shore, since the continental

shelf may be regarded as an extension of the land mass of the coastal nation and thus naturally appurtenant to it, since these resources frequently form a seaward extension of a pool or deposit lying within the territory, and since self-protection compels the territory, the coastal nation to keep a close watch over activities off its shores which are of the nature necessary for the utilization of these resources.<sup>86</sup>

However, as a rule or principle of maritime boundary delimitation the Proclamation states only that the boundary be determined "in accordance with equitable principles."

The 1958 Geneva Convention on the Continental Shelf makes no mention of natural prolongation as either a constituent of a continental shelf or as a rule or principle of boundary delimitation.<sup>87</sup> The Convention does implicitly recognize that opposite and adjacent states sharing the same continental shelf are the most frequent claims to continental shelf rights and therefore in most need of principles or rules for delimitation, by providing provisions only for these situations. These provisions contain a delimitation formula which gives equidistance a pre-eminent role. Nevertheless, the 1982 Convention on the Law of the Sea uses the term "natural prolongation" to define the continental shelf<sup>88</sup> but similarly refrains from a specific mention of natural prolongation in any of its boundary delimitation provisions.

The first source of law to ostensibly declare geologic natural prolongation as a general principle or rule of law for states' claims to continental shelf rights and maritime

boundary delimitation was the International Court of Justice in the 1969 North Sea Continental Shelf Cases. The Court, guided by the 1945 Truman Proclamation on the continental shelf, found that:

[w] hat confers the 'ipso jure' title which international law attributes to the coastal State in respect to its continental shelf, is in fact that the submarine areas concerned may be deemed to be actually part of the territory over which the coastal State already has dominion, - in the sense that, although covered with water, they are a natural prolongation or continuation of that territory, an extension of it under the sea. From this it would follow that whenever a submarine area does not constitute a natural - or the most natural - extension of the land territory of a coastal state, even though that area may be closer to it than it is to the territory of any other State, it cannot be regarded as appertaining to that State; - or at least it cannot be so regarded in the face of a competing claim by a State of whose land territory the submarine area concerned is to be regarded as a natural extension, even if it is less close to it.

Delimitation, the Court went on to say, should be achieved:

in such a way to leave as much as possible to each Party all those parts of the continental shelf that constitute a natural prolongation of its land territory into and under the sea, without encroachment on the natural prolongation of the land territory of the other.

Unfortunately, most states especially adjacent states share the same continental shelf thereby making geologic natural prolongation of limited practical use as a boundary delimitation principle. However, the Court did acknowledge with much less elaboration, that resulting areas of

overlapping claims by states sharing the same continental shelf should be "divided between them in agreed proportions or failing agreement, 'equally' unless they decide on a regime of joint jurisdiction, user or exploitation for the zones of overlap or any part of them."<sup>91</sup>

The 1977 United Kingdom-France Continental Shelf Arbitration Award declared that the principle of geologic natural prolongation states the problem in continental shelf boundary delimitation between opposite and adjacent states rather than solve it. The basic functions of this principle is "to make states eligible for claims to continental shelf areas, not to serve as a rule for delimitation; the problem of delimitation arises precisely because in situations there [sic] the territories of two or more states abut on a single continuous area of continental shelf...."<sup>92</sup> The Court of Arbitration employed the principle to demonstrate that both parties shared the continental shelf and consequently to reject a French claim in the Atlantic region which attempted to attach the delimitation almost completely from the coasts abutting on the continental shelf.<sup>93</sup> In the Channel Islands region the Court found that the principle of geologic natural prolongation only illustrated that the continental shelf in the Channel was geologically the natural prolongation of both the United Kingdom and France.

The International Court of Justice's decision in the 1982 Tunisia-Libya Arab Jamahiriya Continental Shelf Case

reiterated that geologic natural prolongation is not generally useful in delimitation of continental shelf boundaries. The Court concluded that "since Libya and Tunisia derive continental shelf title from a natural prolongation common to both territories, the ascertainment of the extent of the areas of shelf appertaining to each State must be governed by criteria of international law other than those taken from physical features."<sup>94</sup> In the International Court of Justice's 1984 Gulf of Maine Case, the Chamber concurred with both Parties' submissions that geologic natural prolongation was not a factor to be considered in delimitation, recognizing the essentially contiguous character of the continental shelf in the boundary region.<sup>95</sup>

There are however instances where a continental shelf delimitation could have disregarded this general tendency by international law to regard geologic prolongation as an ineffective equitable principle for boundary delimitation. These instances exist where a geomorphological trait is so significant as to constitute a rift in the geology of the shelf. For example, the Norwegian trough which lies off the west and south coasts of Norway at a depth of from 200 to 650 meters, and ranging in width from 30 to 70 nautical miles, was disregarded in the 1965 continental shelf delimitation between Norway and the United Kingdom and Norway and Denmark.<sup>96</sup> In another case, the extremely deep Timor Trough with depths of 1000 to 3000 meters and a width

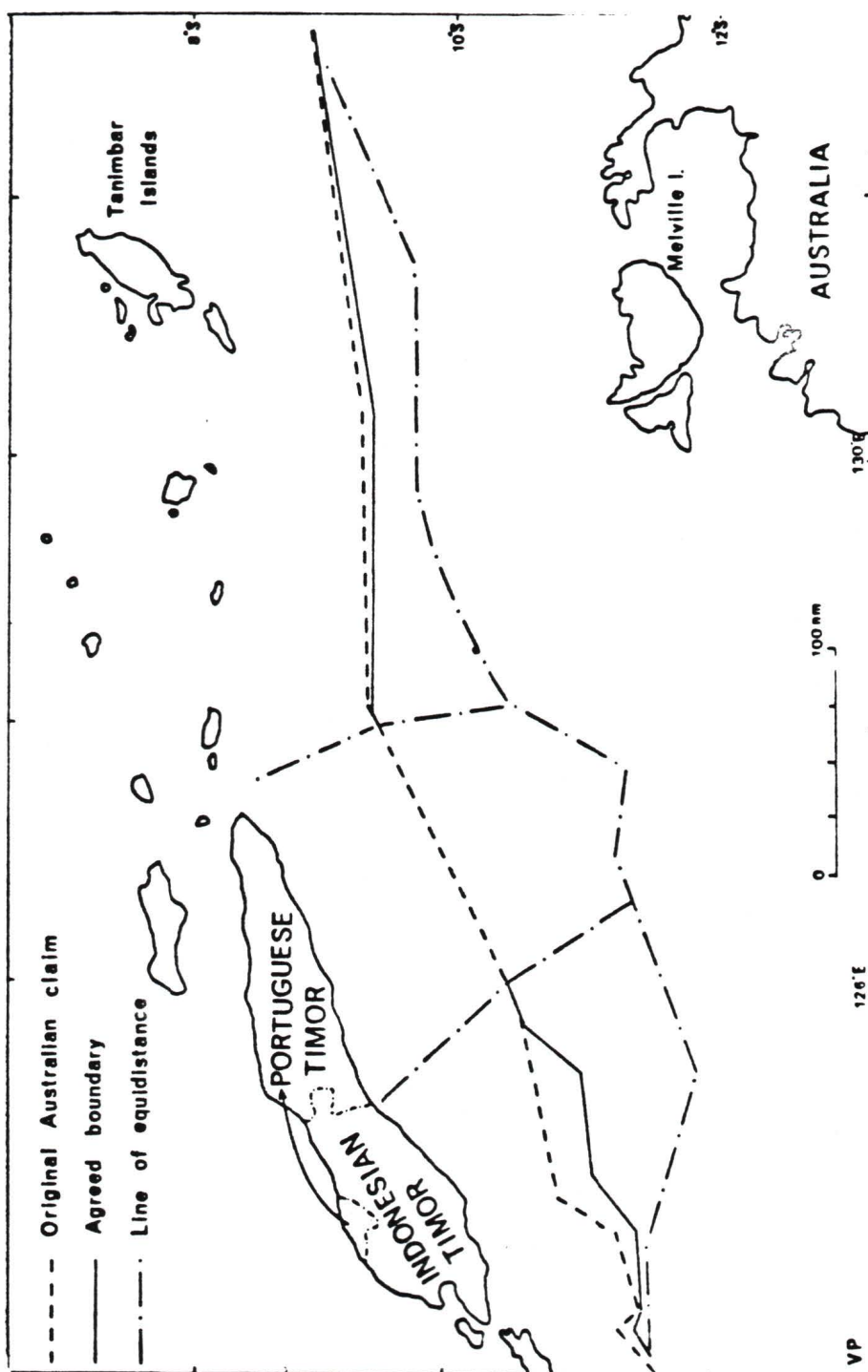
of 70 miles in some sections was given partial effect in the 1972 continental boundary agreement between Australia and Indonesia<sup>97</sup> (See Figure 3). And finally, the Republic of Korea and Japan gave only half effect to the northern part of the Okinawa Trough where depths ranged from 300 to 1300 meters in their 1974 continental boundary accord. The Parties established a joint development zone roughly between the trough line claimed by Korea and the equitable line by Japan.<sup>98</sup>

In summation, geologic natural prolongation has been acknowledged for determining a states' rights to the continental shelf. Although a few circumstances exist where geologic natural prolongation is applicable, generally speaking, geologic natural prolongation has proved to be ineffective is an equitable principle of maritime boundary delimitation. However, an alternative meaning of natural prolongation cited by the Court in the 1969 North Sea's judgment has received more attention as a possible equitable principle of maritime boundary delimitation.

#### Geographic Natural Prolongation

Geographic natural prolongation refers to the extension of the land into maritime areas to be divided in accordance with its coastal frontage, that is, the general configuration and relative lengths of the coast of the parties. The principle of geographic natural prolongation

Figure 3



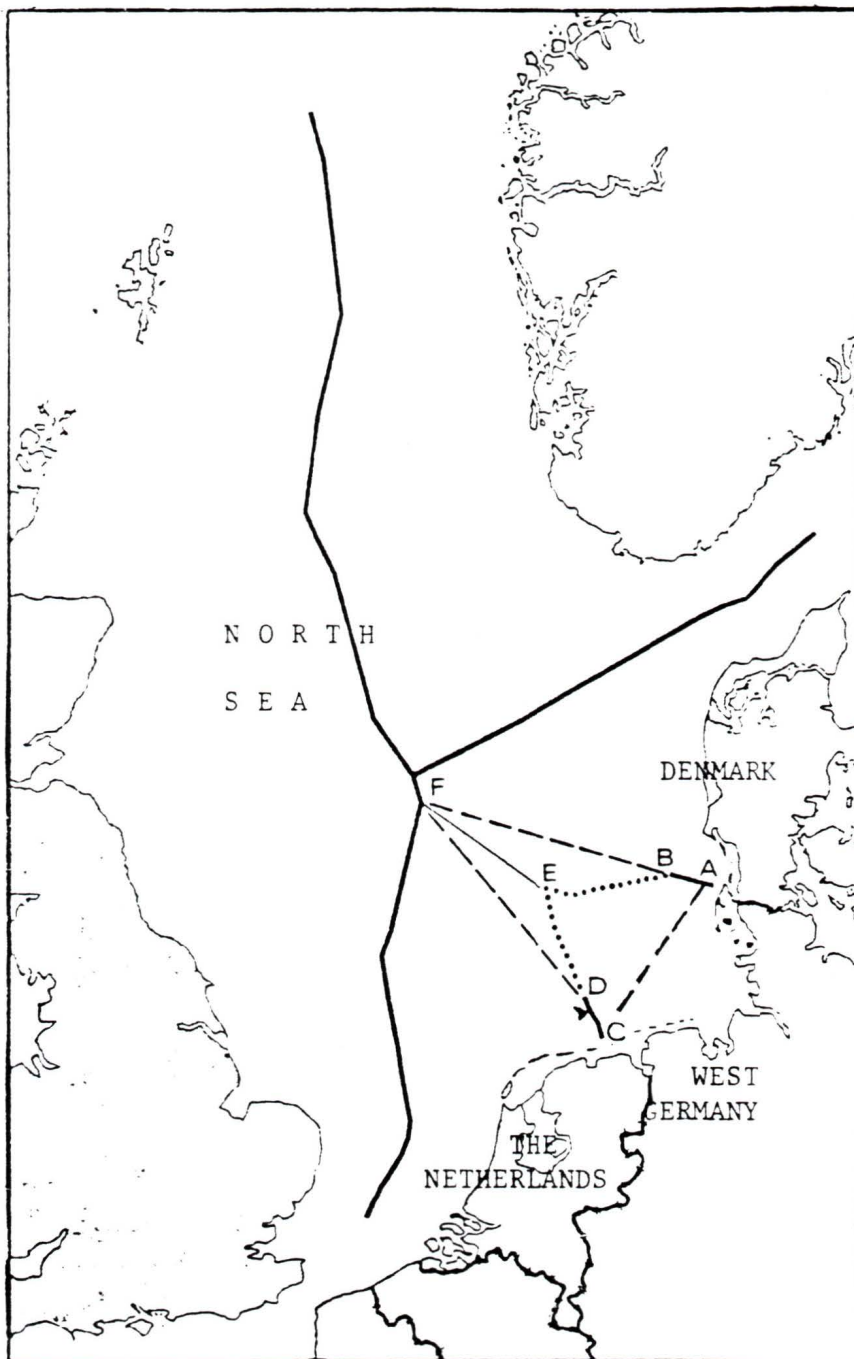
Source: Prescott, J. R. The Political Geography of the Oceans. Methuen, 1975. p. 193.

was first put forward in the International Court of Justice's 1969 North Sea arbitration. The boundary dispute arose between Germany, Denmark and the Netherlands when the latter two proposed to divide the overlapping continental shelf areas appertaining to their territory by means of an equidistance line (Figure 4, line D-E-B).

West Germany argued that due to the recessive or concave nature of its coast relative to its neighbours' coasts, the concurrent use of the equidistance method by its neighbours would 'cut-off' shelf areas lying in front of its coast (i.e. line D-F-B). This result, West Germany argued, contravened the aim of the continental shelf boundary which they felt was to provide a 'just and equitable' share.<sup>99</sup> An equidistance line was said only to affect a 'just and equitable' share where a straight baseline existed. On coasts that are not straight and if the Convention on the Continental Shelf were held to be applicable in this Case, 'special circumstances' would then apply because an equidistant line drawn from two different points pulls the boundary inwards in the direction of the concavity. This deprived Germany of an equitable share of the continental shelf warranted by the relative length of its coastline.

Germany also raised the issue that boundary delimitation respect 'macrogeographic' conditions when it submitted that:

Figure 4  
Boundaries Proposed by Parties



Existing equidistance boundaries  
German boundary proposal  
the Netherlands and Denmark proposals

Source: International Court of Justice, "North Sea Continental Shelf," Judgment. Report, 3, 1969. The Hague. p. 15.

in a sea shaped as is the North sea...where the situation of the circumjacent States causes a natural convergence of their respective continental shelf areas toward a central point situated on the median line of the whole seabed - or at any rate in those locations where this is the case - each of the States concerned is entitled to a continental shelf area extending up to this central point (in effect a sector) or at least extending to the median line at some point or other.<sup>100</sup>

West Germany's claim was not totally based on their perception of the existence of geographical irregularities. The West Germans wanted a larger share of the North Sea continental shelf than was provided for by use of equidistance lines as well as access near the centre of the North Sea where the prospects of finding commercial oil and gas fields were considered better.

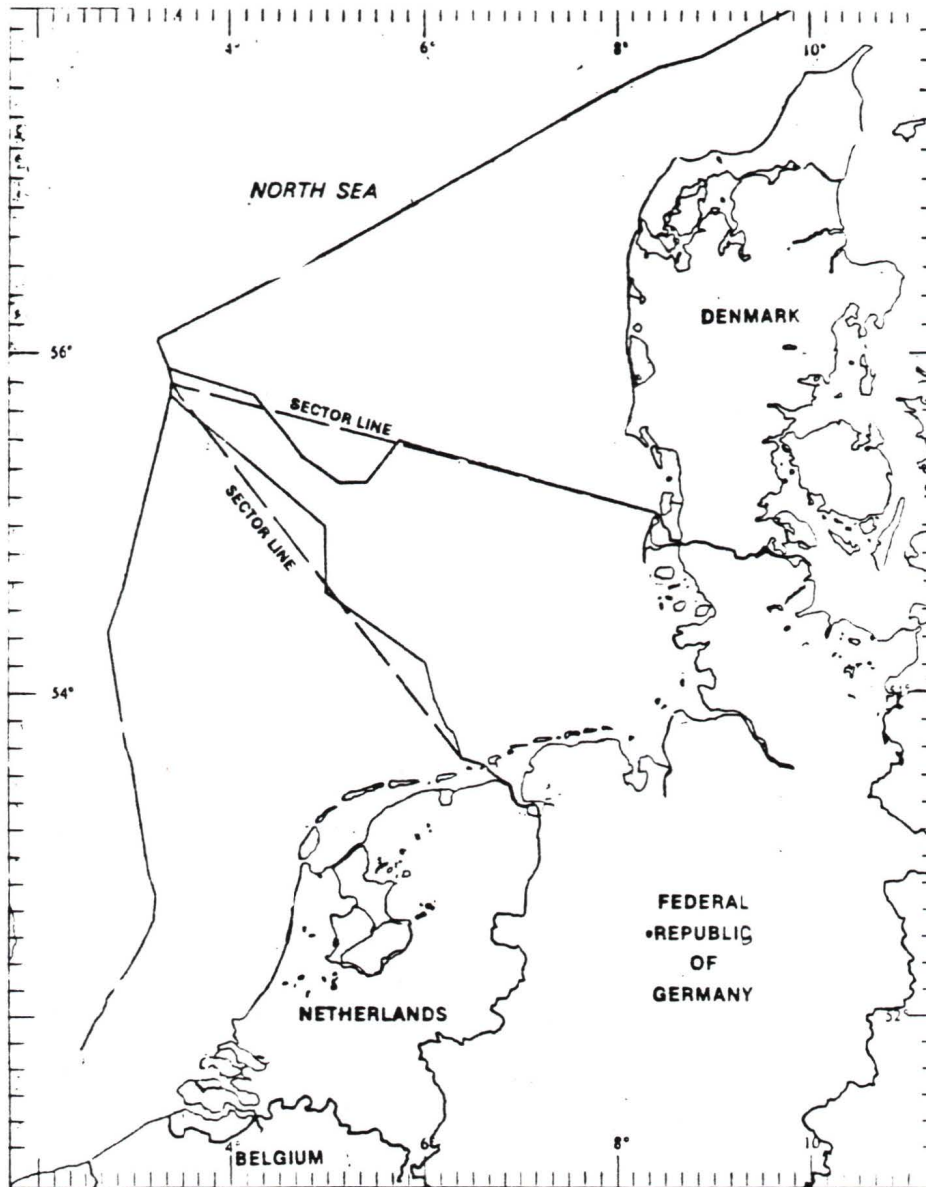
To correct the equidistance method's contentious 'cut-off' effect and to satisfy West Germany's entitlement to a shelf area up to the median line, West Germany proposed as a method of delimitation connecting the two basepoints from which its two continental shelf boundaries should be measured with a straight baseline (Figure 4, line A-C). An artificial coastal front would result from which a sector or triangulation could reach the median line (line A-F-C).

The Court recognized that the equitable principle of natural prolongation included extension of land territory into the sea based on a broad geographical relationship between parties with particular reference to the general configuration of coast and the proportionality or relative

lengths of coastlines. The Court found geographic natural prolongation or "coastal front extension" to be an equitable principle because it reasoned that 1) the application of the equidistance method produces inequity in the area in question, in that the irregularity of the coastline would be magnified; 2) the exaggeration of the consequences of a natural geographic feature must be remedied; and 3) that "given a geographical situation of quasi-equality" - in the length of the coastal frontage of the three States - one must abate the effects of an incidental special feature from which an unjustified difference of treatment could result.<sup>101</sup>

Unlike the limited applicability that geologic natural prolongation was found to have, geographic natural prolongation or coastal front extension was later propounded by other disputants and tribunals to have broader meaning. In spite of the fact, as Prescott points out, there are only three other geographical situations where states which have concave coasts may also be shelf-locked by use of equidistant methods. These are Cambodia, North Vietnam and Korea (west coast only).<sup>102</sup> And while the Court in North Sea Cases declared that geographic natural prolongation was an equitable principle, due to the Court's mandate no methods were proposed by the Court for its use in actual resolution of maritime boundary delimitation. However, Figure 5 illustrates how the Parties chose to implement

Figure 5



AGREED NORTH SEA CONTINENTAL SHELF BOUNDARIES AS COMPARED TO THE SECTOR LINES PROPOSED BY THE FEDERAL REPUBLIC OF GERMANY

The continental shelf boundaries established by agreements between the States concerned. The black, dashed lines represent the sector lines that had been proposed boundaries by the Federal Republic of Germany, *I.C.J. Pleadings, North Sea Continental Shelf*, Vol. 1 p. 85, Figure 21.

these equitable principles.

The International Court of Justice in the Tunisia/Libya Case provided salutary acceptance for geographic natural prolongation as useful in explaining the relationship of the coastal fronts of the Parties to the shelf area to be delimited. The Court spoke of coastal front extension not as an equitable principle for boundary delimitation but as a relevant circumstance for determining eligibility of a coastal state's entitlement to shelf areas. The Court stated that the geographic correlation between coast and submerged areas off the coast is the basis of a coastal state's legal title.<sup>103</sup>

The Court also attached importance to geographic natural prolongation for determining the areas of overlap to be divided, and as a relevant circumstance which supported the delimitation line proposed by the Court. In identifying the areas of overlap, the Court observed that areas relevant to the dispute would include only those areas 'off the coast' of one of the parties and that the area in dispute, "where one claim encroaches on the other," was part of these areas that could be considered to lie off the coasts of both parties.<sup>104</sup> Feldman, in his review of the Case, believes it is clear from the context that the Court considers an area to lie "off" the coast of a party if it is situated "in front of the coast of that Party."<sup>105</sup> Consequently, the Court excluded two seabed areas from

delimitation because they "cannot overlap with the extension of the coast of the other."<sup>106</sup> The Court's selection of the perpendicular line to that section of the coast where the land frontier begins was supported by the relevant circumstance of the "concept of prolongation of the general direction of the land boundary which together ensured an equitable solution."<sup>107</sup>

In the Tunisia/Libya Case, the Court thought that equitable principles respect the extension of coastal fronts. Delimitation should correspond to the general geographic relationship of the coasts of the parties and not give effect to features that cut off the coast of a party from the maritime areas situated in front of that coast.<sup>108</sup> Coastal front or geographic natural prolongation could also be used to assess the equitableness of a boundary line determined primarily on 'autonomous' principles and as such may be considered at most an auxiliary principle but more reasonably a relevant circumstance.

The Chamber of the International Court of Justice in the 1984 Gulf of Maine Case was presented with a new interpretation of the principle of geographic natural prolongation. The United States proposed as an equitable principle for delimitation the principle of preferential nature of the relationship between 'primary' coasts (versus 'secondary' coasts) and the maritime and submarine areas situated frontally before them. Primary coasts are those

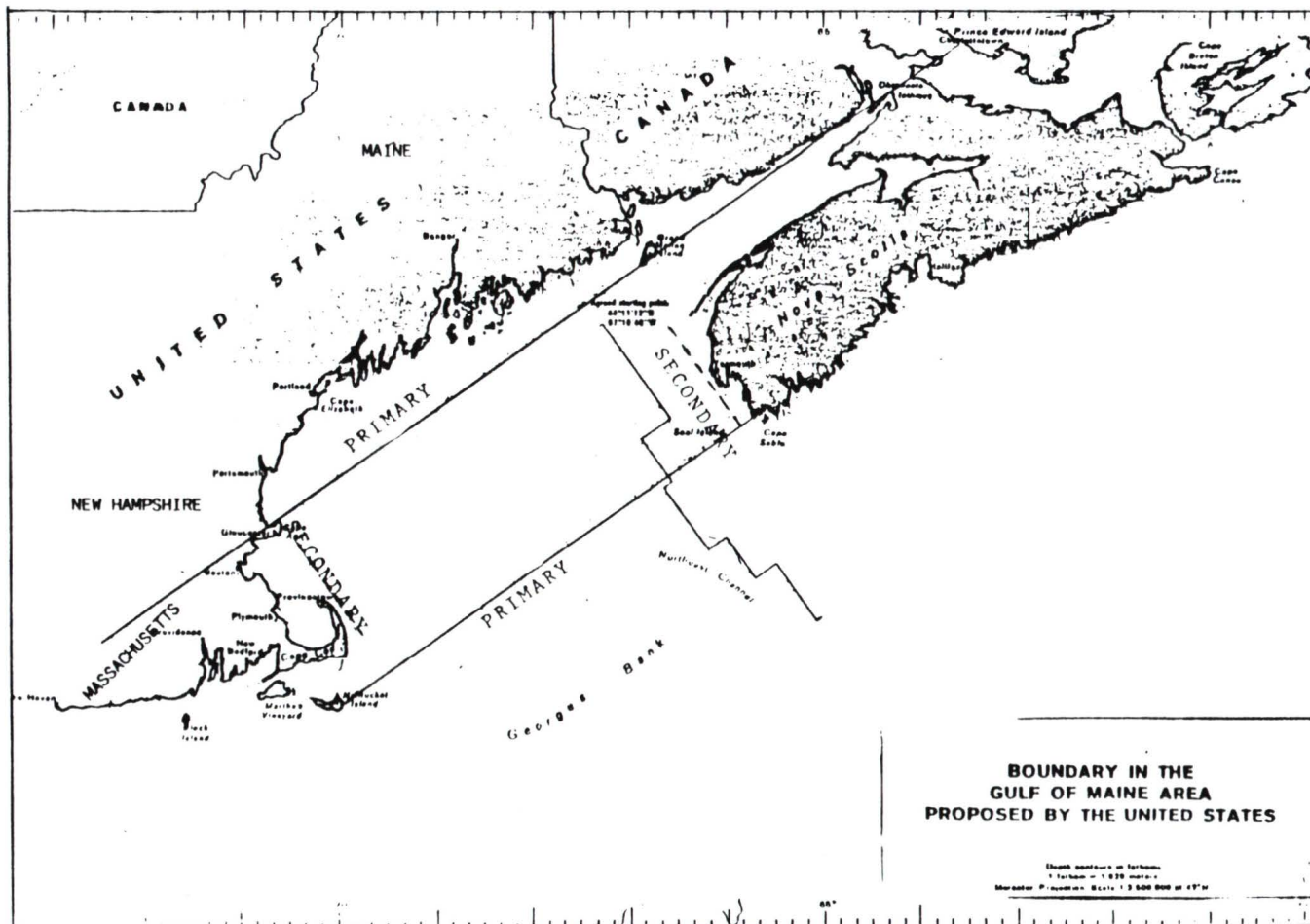
that follow the general direction of the mainland coast as a whole, or parallel to it. Coasts defined as secondary are those that deviate from the general direction of the coast or are perpendicular to it. In terms of practical consequences this preferential relationship should prevail over the relationship with secondary coasts even if these are closer.<sup>109</sup> The maritime areas lying off the primary coast should be allocated to that coast and not to the secondary coast, regardless of whether the secondary coast is nearer. Consequently, geographic natural prolongation of the principal coasts and that of the extension of the coastal front of the state to which they belong should dominate over the proximity principle.

For the geographical conditions in the Gulf of Maine, this means that the primary coast is generally comprised of the coasts of the states of Maine and New Hampshire. The secondary coast(s) is the coast of the Province of Nova Scotia and the State of Massachusetts in the Gulf of Maine. In essence then, the coasts of Maine and New Hampshire or their primary coastal front would then be extended throughout the Gulf of Maine until parallel with the general south-south west to north-north east direction of the Atlantic coasts of New England and Nova Scotia. Delimitation would then proceed by a perpendicular line to the limits of the 200 mile exclusive economic zone in the Atlantic. The United States modified the strict

perpendicular bisector that would extend in the Gulf of Maine region to allow Canada to control the Scotian Shelf ecological regime (Figure 6).

The United States formulated this principle in response to Canada's proposal that the equidistance principle was the most equitable method to divide the overlapping areas resulting from each party's claim to a 200 mile exclusive economic zone. The United States felt that the equidistance line would produce an inequitable share of the continental shelf and superjacent waters based on the relative length of each party's coastlines in the boundary region. The equidistance line, the United States contended, would also encroach on maritime areas lying off its coasts because the concavity of the coast of Maine and the convex nature of the Nova Scotian coast in the Gulf of Maine plus the location of the land boundary terminus would cause the equidistance line to cut off the seaward projection of the coast of Maine (Figure 7). The United States cited the recognition by the Court in the 1969 North Sea Cases of this effect and the need to remedy it by application of the equitable principle of geographic natural prolongation or coastal front extension.

The Chamber rejected as an equitable principle that delimitation respect the relationship between the relevant coasts of the parties (i.e., the preferential nature) and the maritime areas lying in front of those coasts. The Chamber found this principle as being unacceptable in both



Outline Map Source: International Court of Justice, Canada. "Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)." Counter-Memorial submitted by Canada, June 28, 1983. The Hague. p. 11, Figure 1.

Figure 6



geography and law. In geography, the Chamber held that:

there is nothing to preclude the possibility of the so-called secondary coasts being of equal if not of even greater importance than the 'primary coasts from other aspects. Above all, geographical facts are not in themselves either primary or secondary; the distinction in question is the expression, not of any inherent property of the facts of nature, but of a human value judgement which will necessarily be subjective and which may vary on the basis of the same facts depending on the perspectives and the ends in view."<sup>110</sup>

As this principle pertains to law, the Chamber held that the United States' contention that only comparable coasts are entitled to comparable treatment and that not all coasts are comparable, was not found in case law. The Chamber declared that case law holds that the "equality of all coasts must be measured in the same plane."<sup>111</sup> However, it must be noted that the Court in the Tunisia/Libya Case seems to contradict this statement when it pronounced that the "requirement of equity is that one should compare like with like."<sup>112</sup>

Nevertheless, the Chamber did "concur in some measure" with the United States' contention that delimitation prevent, as far as possible, any cut-off effect of the seaward projection of the coast but noticeably omits the reasons why and to what extent it concurs.<sup>113</sup> The Chamber also found proportionality a factor to be considered. In consideration of this latter factor and "strengthened by its conviction"<sup>114</sup> of a cut-off effect, the Chamber modified the median line segment where the parties' two coasts were

opposite each other, by a proportionality formula.

It would seem then that what dissuaded the Chamber from accepting the principle of the preferential nature of coasts and the maritime areas lying in front of those coasts was the Chamber's refusal to accept the factor of "coastal-front extension." The Chamber also rejected the United States' attempt to parallel the detrimental effects of the application of the equidistance principle on a concave coast in the Gulf of Maine with the situation of West Germany in the 1969 North Sea Cases.<sup>115</sup> The Chamber states there are "appreciable differences" but does not elaborate as to what they may be.<sup>116</sup> An appreciable difference would be that here delimitation involved the use of equidistance methods for a boundary between two states, not its concurrent use to delimit two boundaries between three states. The United States would also not be shelf-locked if the equidistance method were applied, as was the alleged effect of its use on West Germany.

Customary law, as evidenced by the declarations of the International Court of Justice in the 1969 North Sea, 1982 Tunisia/Libya and 1984 Gulf of Maine boundary arbitrations displays a marked variance in the importance attached to the concept of geographic natural prolongation. The Court, in the North Sea Cases, found natural prolongation, geologically and geographically, to be a pre-eminent element of the formula or rule of law for lateral maritime boundary

delimitation. The factors which would have to be considered to ensure the application of natural prolongation as an equitable principle included geography (i.e., configuration of coast), geology and proportionality.<sup>117</sup> However, the Court did not recommend methods to transform the general principle of geographic natural prolongation or any of its associated factors into an actual boundary line. Indeed, the Court did not have a mandate to undertake actual delimitation.

In the Tunisia/Libya Case, the Court did not find natural prolongation (either geologic or geographic) to be a pre-eminent element of the formula or rule of law for lateral boundary delimitation<sup>118</sup>; rather only that "application of equitable principles" was. However, unable or unwilling to define the equitable principles involved, the Court cited geographic natural prolongation to be a relevant circumstance for assessing methods to be applied for equitable delimitation. The geologic factor was deemed to be of no use in this case and of limited application generally. The coastal front element was accepted for its inherent purpose to avoid application of a method which 'cuts-off' areas situated directly before it.

The Chamber in the Gulf of Maine Case rejected coastal front extension or geographic natural prolongation as an element of the formula for lateral boundary delimitation. Although, the Chamber did declare for unspecified reasons

that the coastal front component (i.e., the avoidance of cut-off effect) was relevant. However, the Court inexplicably found the concept to be relevant not in assessing the recommended method where the cut-off effect seemed obvious, but in strengthening the Chamber's resolve to modify a median line segment of the boundary in an area where the 'cut-off' effect diminished.<sup>119</sup> The Chamber chose the proportionality doctrine, that is, the relative lengths of the Parties' coastlines, as the modifying agent of the median line but in this regard characterized the doctrine of proportionality as a 'special circumstance' or 'auxiliary' equitable principle.<sup>120</sup>

Therefore, geographic natural prolongation has been found in customary law to be either a pre-eminent element of the rule of law for lateral boundary delimitation or a relevant circumstance for assessing the methods of equitable boundary delimitation. However, the Court's 1969 North Sea finding that geographic natural prolongation is a part of the rule of law for lateral boundary delimitation is debatable.

The Court's deduction that the Truman Proclamation propounded natural prolongation to be significant for lateral delimitation of extended coastal zones rather than only for seaward delimitation of these zones seems faulty. Brown states that "this is indicated by the admission that areas of natural appurtenance may overlap"-- an admission

which obliged the Court to resort "to distinguishing between 'natural' and 'most natural' prolongations of territory."<sup>121</sup> There is no distinction in geography between natural, more natural and most natural. This distinction is only in the expression, not in the facts.

The Court then assumes an irregular coastline is a creature of inequity. Again, there is no distinction in geography between a regular or 'natural' coastline (presumably a straight coast) and an irregular or 'unnatural' coastline. If natural occurrence is a function of regularity or normalcy it is doubtful straight coasts would dominate. Nevertheless, such irregular coasts can hardly be considered in the realm of the incidental features recognized by international tribunals as constituting special circumstances. In the 1951 Anglo-Norwegian Case, the Court held that such incidental features as islands, promontories or indentations on the coast constituted deviations or distortions from the general configuration of the coast.<sup>122</sup> To consider the macrogeographic aberration of the 100° concave angle of the West German's North Sea coastline in this same regard is untenable. The Chamber in the Gulf of Maine Case, moreover, rejected consideration of macrogeographic features, which the United States argued, repudiated the use of the equidistance method.<sup>123</sup> The Chamber rightfully declared that the "facts of geography are not a product of human action to positive or negative judge-

ment, but the result of natural phenomenon, so they can only be taken as they are...."<sup>124</sup>

The 1969 Court also held that the principle of geographic natural prolongation requires that "given a geographical situation of quasi-equality"--the lengths of Parties' coastlines-- then "one must abate the effects of an incidental special feature from which an unjustifiable difference in treatment could result."<sup>125</sup> To reach such a finding, the contentious macrogeographic perspective must be assumed for a geographical situation of quasi-equality of coastline lengths to exist. For example, all of the coasts of Denmark and the Netherlands would have to be included in this evaluation, which are clearly not in the vicinity of their boundary regions with West Germany. In addition, the Court now finds the concave coast of West Germany to be an "incidental special feature" when in fact no other geographical feature predominates that of the concave nature of the West German coast. And lastly, to hold that application of the equidistance principle results "in unjustifiable difference in treatment" is only valid in relation to the results to be expected from the application of the questionable "quasi-equality" doctrine. In summary, the concept of geographic natural prolongation or coastal front extension should only be considered as a relevant circumstance and not as a pre-eminent rule of law for lateral boundary delimitation as founded by the Court in the 1969

North Sea Cases.

### Proportionality

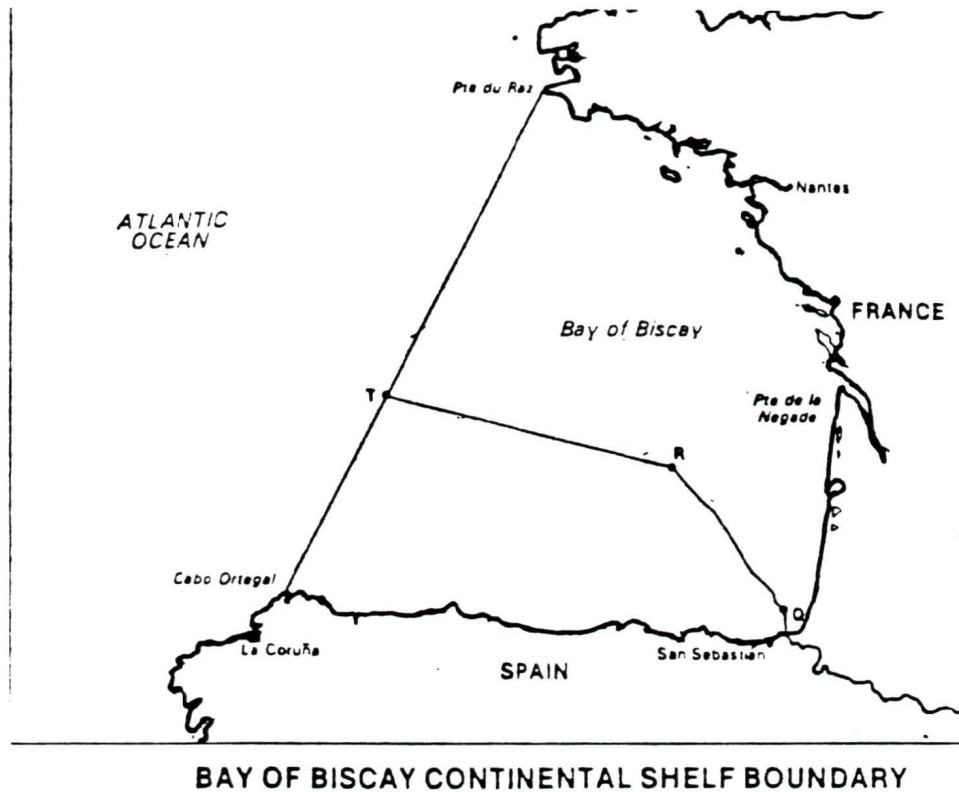
The doctrine of proportionality is based on the concept that maritime areas of adjacent or opposite states should be delimited in proportion to the lengths of their respective coastlines which face the maritime boundary region. Three views are distinguishable with regard to the role of proportionality in the law of maritime boundary delimitation. One view holds that proportionality is an autonomous equitable principle providing the direct basis on which a maritime boundary can be delimited. This view was presented in S.M. Rhee's review of Samuel Pudentorf's 19th century study on water boundaries. Pudentorf saw proportionality as "bulwark against the impractical and illogical claim that the whole body of rivers, lakes, or arms of sea could be used by one coastal state to the exclusion of the other."<sup>126</sup> Pudentorf's proportionality theory was based on the general principle of law that "lakes and other running water should be a natural part of and give access to the land."<sup>127</sup>

The doctrine of proportionality did not draw attention again as an autonomous equitable principle of boundary delimitation until the 1974 Bay of Biscay maritime boundary settlement between Spain and France. Both Parties, having agreed to the first segment of boundary line on the basis of equidistance, then decided to apportion the remaining area

according to proportionality. The Parties calculated the total area in the boundary region within an artificial closing line. They then laterally delimited the remaining area by a straight line extending from the sea terminus of the equidistant line to the closing line on a ratio of 9 to 5 in accordance with the lengths of their respective coastlines within the boundary region as delineated by the closing line<sup>128</sup> (Figure 8).

The second view has the doctrine of proportionality as a substantive equitable principle analogically related to the equally substantive equidistance principle, but neither one in itself is the basis of a boundary delimitation. Supporters of this view<sup>129</sup> feel that judicial customary law endorses, if not explicitly, then implicitly, their argument that the principle of proportionality and the equidistance principle must be used together to assure that a delimitation of an offshore zone is equitable.<sup>130</sup> According to this theory an equidistant line is drawn and then adjusted to account for the relative lengths of the parties' coastlines. The only tribunal that explicitly adopted and applied such a perspective of the joint use of proportionality and equidistance, and which recognized the doctrine of proportionality as more than a relevant circumstance, was the Chamber in the Gulf of Maine dispute. However, the Chamber differentiated the principle of proportionality from the equidistance principle by declaring

Figure 8



Source: International Court of Justice. "Canada. Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)." Reply. Submitted by Canada, December 12, 1983. Figure 33.

the former an "auxiliary" principle or a "special circumstance" serving only to meet the need "to correct appropriately, on the basis of the inequalities noted," that is, the relative lengths of the parties coastlines, "the untoward consequences of applying a different main criteria."<sup>131</sup> The Chamber then determined the ratio of the lengths of the coastlines of Canada and the United States and adjusted the median line segment in the boundary area where the two parties' coasts are opposite each other by this ratio.

What customary law confirms is that the doctrine of proportionality in itself does not constitute either a principle as a direct basis for delimitation or a joint method that can be used to implement such a delimitation.<sup>132</sup> Rather, customary law holds proportionality to be one of many 'factors' or relevant circumstances that may be considered by states in equitably delimiting an offshore boundary. The principal condition where proportionality becomes relevant is a geographical situation of otherwise equality that is disturbed by the presence of some geographical or other feature which affects the direction of the boundary. In such cases, proportionality exercises a corrective function. In the North Sea Cases, the International Court of Justice held that a factor which would have to be considered to ensure the application of natural prolongation as an equitable principle of

delimitation was:

The element of a reasonable degree of proportionality...between the extent of the Continental Shelf appertaining to the States concerned and the lengths of the respective coastlines....<sup>133</sup>

The Court expressed the doctrine of proportionality as a 'relevant' consideration where geographical features such as the concavity of the coast may affect a situation of otherwise equality.<sup>134</sup> The Court unfortunately made no such calculations in this case as the actual delimitation of the boundary was not in the Court's mandate.

The Court of Arbitration in the 1977 United Kingdom-France Case concurred with the Court's 1969 findings on the role of proportionality in the law of maritime boundary delimitation. The Court of Arbitration, while eschewing the notion that its function was to make nice calculations of shelf areas and lengths of coastlines, established the doctrine of proportionality as "a criterion to assess the distorting effects of particular geographical features and the extent of the resulting inequity."<sup>135</sup> Although the Court of Arbitration did not make an attempt at such a calculation, it did make some general observations on proportionality in the Channel Islands and the Atlantic regions with regard to the equality (or the inequality) of the geographical factors of length of coastlines and effect of islands, respectively, on the use of the equidistance

method.<sup>136</sup> However, it was solely the effect of an island which led the Court to adjust the equidistance line in the Atlantic region.

In the Tunisia/Libya Case, the Court held that among the relevant circumstances to be taken into account in achieving an equitable delimitation is:

The element of a reasonable degree of proportionality...between the extent of the continental shelf appertaining to the coastal state and the length of the relevant part of the coast, measured <sup>137</sup>in the general direction of the coastline.

Proportionality was not discussed in terms of balancing geographical inequities that a particular method (usually cited as the equidistance method) may affect, but as a negative criterion to test the appropriateness of the delimitation method selected. The Court subsequently chose a method (not the equidistant method) and calculated resulting ratios of parties' coastlines to seabed areas to assess the equity of the boundary.

Thus, customary law does not illustrate that the doctrine of proportionality is either an 'autonomous' equitable principle or an equitable principle that must be applied in conjunction with the principle of equidistance. To elevate proportionality to either of the above statuses would be to return to the extreme version of the principle of proportionality that grew out of the "just and equitable share" approach of West Germany in the North Sea Cases,

which was rejected by that Court.<sup>138</sup> The key to invoking the doctrine of proportionality is to do so in the context of the circumstances found to be applicable in the boundary region. Moreover, it must be shown that there is a situation of otherwise equality which is disturbed by the presence of some geographical or other feature that affects the direction of the boundary. The absence of this equality is simply the invocation of the idea that the purpose of delimitation is to allocate a just and equitable share.<sup>139</sup>

There are no set methods which correspond to the doctrine of proportionality. Rather, the doctrine of proportionality generally responds to other methods of delimitation which in the 1977 Anglo-French Case and the 1984 Gulf of Maine Case involved the use of the equidistance method. The method used in the Spain-France Bay of Biscay boundary agreement was a straight line angled in such a way to correspond to the ratio of their respective coastlines.

There is however a method generally followed for measuring the coastline length on which proportionality is based. This is to use the general direction of the coast. In the North Sea Cases, the Court suggested drawing a straight baseline between the extreme points at either end of the coast, or in some cases, a series of such lines.<sup>140</sup> In the Tunisia/Libya Case, the Court used the general direction of the coastline without taking account of small inlets, creeks and lagoons.<sup>141</sup> The Chamber in the Gulf of

Maine Case measured a series of straight baselines along the coastlines of the parties' coasts in the Gulf of Maine region.

### Geomorphology

Geomorphology in maritime boundary delimitation concerns the physical relief features of the underlying continental shelf. Geomorphological criteria have been proposed where it is felt that the unity and uniformity of the whole sea-bed could be differentiated by the existence of some distinguishable geomorphological feature which serves to delineate the natural prolongation of one coastal state from another. Geomorphological criteria have thus far not been applied by boundary tribunals as equitable principles or relevant circumstances. However, that is not to say that there are no situations in which a boundary based on geomorphological considerations may be considered as an equitable principle or a relevant circumstance.

The Court in the 1977 Anglo-French Case was the first tribunal required to consider geomorphological criteria in the delimitation of a maritime boundary. The United Kingdom argued that if the Court should not find the median line to be the appropriate boundary in the Channel region, then it should decide that the boundary runs "along the axis of the Hurd Deep and the Hurd Deep Fault Zone...."<sup>142</sup> The Hurd Deep is described by the Court as a "distinct fault" in the

geomorphology of the Channel Islands, extending "in a south-westerly direction for a distance of some 80 nautical miles, with a width of between one and three nautical miles and a depth of over 100 metres."<sup>143</sup> These features were argued to be an interruption in the nature of a trench or trough. However, the essential geological continuity of the continental shelf was never questioned by either Party. The Court having found the same to be true, declared the Hurd Deep-Hurd Deep Fault Zone not to be a "a geographical feature capable of exercising a material influence on the determination of the boundary."<sup>144</sup>

In the Tunisia/Libya Case, the Court was taxed with a geomorphological argument presented by Tunisia. Tunisia argued that:

The physical contours of the seabed, which parallel the contours of the Tunisian coast, demonstrate that the continental shelf is a veritable submerged Tunisia; the natural prolongation of the shelf, slope and rise trends northeast towards the abyssal deeps.<sup>145</sup>

and suggested a sheaf of lines, based on geomorphological and geometrical factors which it believed reflected the natural prolongation of the two states. The Court did not accept the Tunisian argument that such a marked disruption or discontinuance of the sea-bed constituted an indisputable indication of the limits of two separate natural prolongations.<sup>146</sup> However, the Court did not exclude the possibility:

that certain geomorphological configurations of the sea-bed which do not amount to such an interruption of the natural prolongation of one Party with regard to that of the other, may be taken into account for the delimitation, as relevant circumstances characterizing the area....In such a situation, however, the physical factor constituting the natural prolongation is not taken as a legal title, but as one of several circumstances considered<sup>147</sup> to be the elements of an equitable solution.

In the Court's view, no such features were present in the Tunisia/Libya Case.

The United States in the Gulf of Maine Case initially proposed as geomorphological criteria that the Northeast Channel served to distinguish the discontinuity of the continental shelf in the boundary region and this should serve as a boundary line between itself and Canada. The United States withdrew this claim and re-submitted the geomorphological criteria under the guise that the Northeast Channel or more specifically its deepest isobath was a natural boundary that kept intact the unity of each of various ecosystems which were clearly distinguishable throughout the sea to be delimited. The Court rejected this argument as noted in the previous discussion on unity of resources.<sup>148</sup>

The International Court of Justice has thus far not accepted geomorphological considerations as an equitable principle which would displace another boundary method or as a relevant circumstance which affects the application of any method. The Court in the 1977 Anglo-French Case, while

rejecting geomorphological criteria in the Channel region, did provide some guidance on situations in which these features may be considered as relevant circumstances. First, where the trough itself is of such a nature to constitute a rift in the geology of the shelf, thereby signifying the end of the natural prolongation of each state, it may be the appropriate boundary.<sup>149</sup> Second, in cases where there is no interruption of essential geological continuity of the continental shelf, a boundary following a trench rather than an equidistance or median line may be appropriate in order to produce an equitable delimitation, but the mere existence of the trench does not create inequity.<sup>150</sup> Each case would depend on its own geographic and geologic circumstances.

#### Sector Principle

The sector principle is based on sectors with their apices at the pole and the sides formed of two radii and an arc. The principle originates in a proposal made by a Canadian senator at the beginning of this century as a means of formalizing Canadian claims to the Arctic. It was, however, rejected by the Canadian Senate. It remains to be seen if Canada will formally claim the sector principle in the Arctic or simply the extension of the 141° meridian dividing line between Yukon and Alaska in the Beaufort Sea. Nevertheless, international law does not recognize the

sector principle as a basis for delimitation of maritime or, for that matter, land boundaries.

The sector principle was first applied by Britain in the creation of the Falkland dependencies in the early 1920's. The sector principle was the basis of the claims of Australia, France, Norway, New Zealand, Argentina and Chile to the Antarctic in the 1930's and 1940's.<sup>151</sup> The claim by West Germany to a sector with its apex meeting the median line in the North Sea was the first non-polar sector claim.

#### Perpendicular Line Method

The perpendicular line is a boundary delimitation method which generally has been applied between States with adjacent coasts. The perpendicular boundary method is drawn by either one of two ways. A line is either drawn at a right angle to the coast at a point where the land frontier reaches the sea or a line is drawn at a right angle to the general direction of the coast. The resulting perpendicular line is then extended to the seaward limit of the coastal jurisdiction claimed. A perpendicular line may extend the entire length of the lateral boundary or comprise a segment of the overall boundary.

The perpendicular boundary method is said to be an outgrowth of the method of delimitation based on the use of geometric lines such as parallels of latitude, meridians of longitude or specified azimuths.<sup>152</sup> As the predecessor to

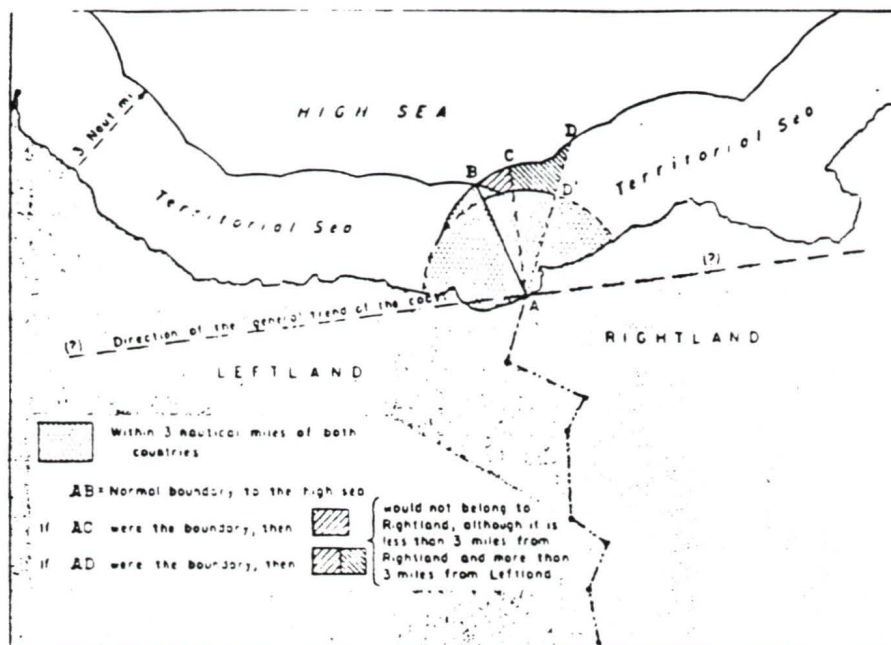
the perpendicular line, lateral boundary delimitation along geometric lines applied more in the 19th century territorial sea delimitation. A boundary line according to this method is simply drawn by extending the lateral line along a latitude or longitudinal line passing through the point at which the land frontier meets the coast or perpendicular to a line running straight along a latitude or longitude. The territorial waters of the Rio Griadiana estuary between Portugal and Spain (1885) and those in the Bay of Figuiet between France and Spain (1879) were delimited by applying meridians.<sup>153</sup> The perpendicular line evolved from the geometric method where the closest latitudinal or longitudinal line nearest to being at right angles to the coast was applied.

Scholarly attention was first directed at the perpendicular line method as a boundary delimitation technique in 1908 at the 25th Conference of the International Law Association in Budapest. The noted jurist Deszo Darday expressed scepticism with the straight line perpendicular to the coast at the land boundary method as a general rule for boundary delimitation between adjacent states. Darday felt this method would not be applicable where the land boundary terminates at the tip of a promontory or at the deep corner of a bay.<sup>154</sup> Darday proposed the use of the median line as a general rule.

Lapradelle (1928) differed with Darday's doubts and argued that lateral boundary lines should be delimited by i) a seaward extension or prolongation of the land boundary (i.e., the last straight line section) and ii) a line drawn seaward and perpendicular to the general direction of the coastline at the point where the land boundary terminates.<sup>155</sup> Lapradelle's pronouncement coincides with the Belgian Government's statement to the Preparatory Committee of the Hague Codification Conference that the territorial sea boundary of two contiguous states "should lie along a line perpendicular to the coast, at the end of the frontier."<sup>156</sup>

S.W. Boggs, Geographer for the United States' Department of State (1940), criticized the perpendicular line method on the grounds that it is not always feasible to determine general trend of the coast and moreover, a zone of waters of controvertible jurisdiction would be produced<sup>157</sup> (Figure 9). In support of Boggs' initial criticism, S.M. Rhee states that although in theory the line perpendicular to the general direction of the coast looks simple and convenient, and is to be commended for its idea of dividing the territorial sea into two equitable parts, in practice it is extremely difficult to objectively determine the general direction of the coastline.<sup>158</sup> This is due to the greater preponderance of coastlines being irregular with indented coastal formations and/or scattered islands rather than

Figure 9



#### THE INTERNATIONAL BOUNDARY THROUGH TERRITORIAL WATERS

The line passes through the belt of territorial waters (or "territorial sea") from the coastal terminus of the land boundary to the high sea. This is an example of the simple type, where there are no islands or highly irregular coast line. The most reasonable boundary is the line A-B, the point B being the intersection of the envelopes of arcs of three-mile radius drawn from all points on the shores of the two countries, "Leftland" and "Rightland" respectively.

Two other definitions of the international boundary are sometimes employed. (1) the extension of the last section of the land boundary (in this example, the line AD'), or (2) a line perpendicular to "the general trend of the coast" (along the line AC a distance of three miles). Both of these are objectionable, certain areas (ruled shading) being waters of convertible jurisdiction.

The textual commentary, at pages 189-190, reads as follows

it will be seen that, if the boundary terminates at either C or D<sup>2</sup>, there will be a zone of waters between AC or AD (as the case may be) and the line AB that needlessly constitutes a zone of waters of convertible jurisdiction. These waters (shaded on the diagram) do not

belong to "Rightland" because they are to the left of the boundary; they should not belong to "Leftland" because they are more than three miles from its shores; and yet they are not part of the high sea because they are less than three miles from "Rightland".

Source: **Boggs, S.W. International Boundaries.**  
New York: Columbia University Press,  
1940. p. 189.

straight with no incidental features. From a geographical perspective, it is almost an essential condition for use of the perpendicular method that the boundary to be drawn should concern two countries whose territories lie successively along a more or less rectilinear coast for a certain distance at least. The ideal situation would be one in which the course of the line would leave an angle of  $90^{\circ}$  on either side.

There are many bilateral agreements which have adopted the perpendicular method for boundary delimitation of the territorial sea and the continental shelf. Where the coast at the land boundary terminus was rather straight, Panama and the United States (1917), Albania and Yugoslavia (1926) in the Adriatic Sea<sup>159</sup> and Poland and the United Socialist Soviet Republic (1958) in the Gulf of Gdansk<sup>160</sup> have applied the perpendicular line method for delimitation of their territorial sea boundaries. Bilateral agreements in which a perpendicular line to the general direction of the coast was used for delimitation of a continental shelf boundary include: Brazil-Uruguay (1976), and Argentina-Uruguay (1975) where part of the boundary line is perpendicular to the closing line across the Rio de Plata.<sup>161</sup>

International law commissions and tribunals have also recognized the perpendicular line in specific cases but have generally rejected it as a general rule of law for boundary delimitation. The Permanent Court of Arbitration in 1909

ruled that the outer portion of a boundary line between Sweden and Norway "in accordance with the ideas of the 17th century and with notions of law prevailing at the time...should be delimited by tracing a line perpendicularly to the general direction of the coast."<sup>162</sup> The Court's 1909 decision has been criticized for not providing the historical background necessary to make the assertion that the 17th century status of boundary law favoured a perpendicular line and moreover state practice has not shown its use for ocean boundaries until the late 19th century.<sup>163</sup> However, the Court based its decision for applying a perpendicular line on the conviction that an equitable boundary would result.

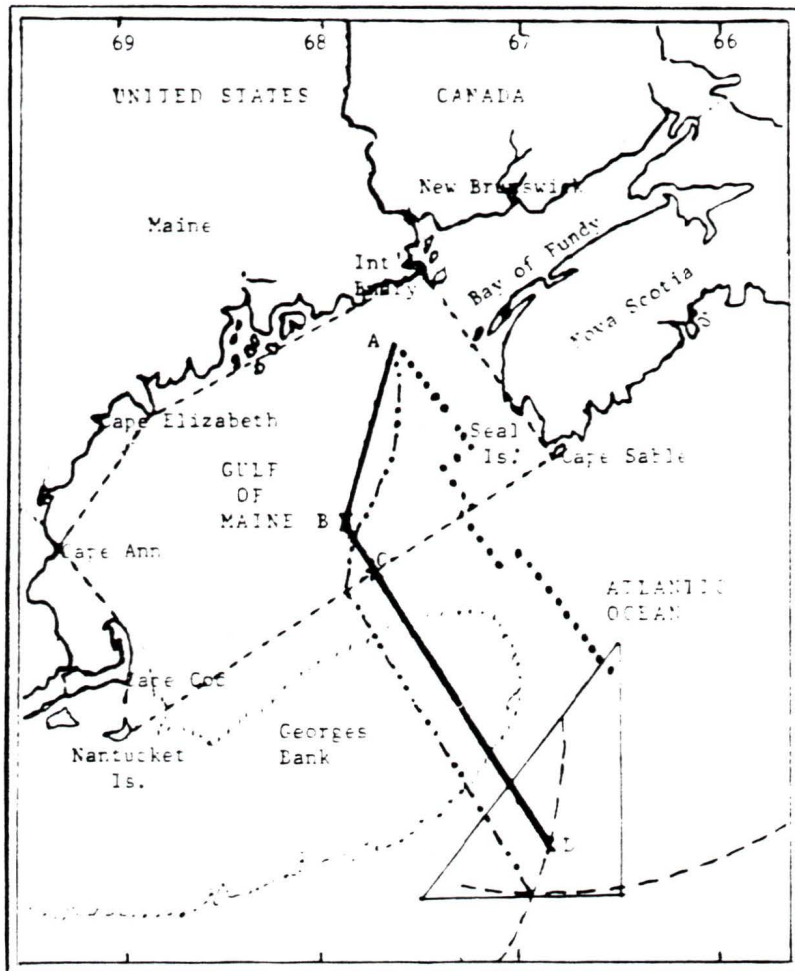
In 1954, the International Law Commission, in preparation for the 1st United Nations Conference on the Law of the Sea at Geneva in 1958, asked a Committee of Experts for its views on various methods for delimitation of offshore boundaries. The Committee considered that in special situations a line perpendicular to a coast on which the territories of two states meet, a line perpendicular to the general direction of the coast from the land boundary terminus and a line coinciding with the geographic parallel passing through the point where the land frontier meets the coast, could be suitably applied. The Committee of Experts, however, rejected as impracticable these methods as generally applicable to all boundary delimitations.<sup>164</sup>

The International Court of Justice in the 1982 Tunisia/Libya Case declared that the factor of perpendicularity to the coast is a "relevant criteria [sic] to be taken into account in selecting a line of delimitation calculated to ensure an equitable solution."<sup>165</sup> Subsequently, the Court concluded that a line extending seaward from the coast at a 26° angle east of north "was an equitable line, since it corresponded to a line which was perpendicular to the general direction of the coast...."<sup>166</sup>

The Chamber in the 1982 Gulf of Maine Case both rejected and accepted the application of the perpendicular line method. The Chamber rejected the United States proposal for use of an adjusted perpendicular method from the New Brunswick-Maine international boundary terminus to effect the primacy of the Maine and New Hampshire coasts and their extension outside the Gulf of Maine area.<sup>167</sup>

The Chamber, however, used the perpendicular line method for delimiting the outer adjacent maritime area from a closing line extending across the Gulf of Maine and out to approximately the seaward limit of the 200 mile exclusive economic zone (Figure 10, line C-D). The Chamber called for the use of the perpendicular line method in this area because there was no geographical point of reference outside the actual shores of the Gulf of Maine that could serve as basis for carrying out the final operation.<sup>168</sup> Therefore, the Chamber stated, it appears obvious that the only kind of

Figure 10



- 1984 Gulf of Maine Boundary Award
- ..... 200 meter isobath on George's Bank
- - - Artificial Baselines
- · - · - Canada's 1978 Adjusted Equidistant Line
- ..... United States' 1962 Adjusted Perpendicular Line

Source: International Court of Justice. "Case Concerning Delimitation of the Maritime Boundary in the Gulf of Maine Area." Judgment. Reports. 1984. Compendium of Map 1, p. 27; Map 3, p. 47; and Map, p. 104.

practical method which can be considered for this purpose is...a geometrical method. The most appropriate geometric method is "that recommended above all for its simplicity, namely in this instance the drawing of a perpendicular line to the closing line of the Gulf from a point on the closing line where the corrected median line encounters the closing line."<sup>169</sup> The Chamber supported its reasoning by a somewhat puzzling reference to the perpendicular line argument of the United States because it was at a right angle generally to the direction of the Maine coastline. The Chamber also noted it closely followed Canada's original equidistance line proposal.<sup>170</sup>

The perpendicular line method demonstrates that in a special case it could result in the equal division of disputed maritime areas. The special case would be where two contiguous states lie on a rectilinear coast. The examples of adjacent states applying the perpendicular line method cited heretofore generally have this characteristic. However, in boundary regions where two contiguous states occupy a curvilinear coast, the perpendicular line method has limited application. In this situation, the perpendicular line method could have difficulty adhering to the geographic concepts of appurtenance and proximity. As a function of appurtenance, it is critical that the general direction of the coast be identified or, as the Gulf of Maine Case demonstrated, what coast primarily determines the general

direction. Objective identification has been found in practice to be extremely difficult. As a function of proximity, the use of a perpendicular line along a sinuous coast may create a controvertible maritime zone where maritime zones which are closer to one state are delimited in favor of an adjacent state that may not in fact be closer or even within the allowable limits of these zones (e.g., 200 miles).

The perpendicular line method has been generally rejected as a rule of law for boundary delimitation but customary law has found that this method, or more precisely perpendicularity, is a relevant criteria to be considered in selecting an equitable delimitation line.

#### Extension of the Land Boundary

The extension of the land boundary as a delimitation method is a direct outgrowth of the appurtenance concept. A line drawn according to this method simply extends into the maritime zone and out to the seaward limit according to the bearing of the last segment of the land boundary. This boundary delimitation method has had limited application and then only by virtue of agreement between the states concerned and not by any judicial decision. The boundary lines between the United States and Mexico in the Gulf of Mexico at the Rio Grande, and between Norway and the United Socialist Soviet Republic in Varanger Fiord are

delimited in accordance with this method.

Some scholars, Lapradelle (1928) for example, promoted 'extension of the land boundary' as a general rule, however this method has generally been rejected as impracticable as a general rule of boundary delimitation.<sup>171</sup> Boggs criticized this method because it is usually accidental in direction having no relation to the necessities of delimiting a water boundary. He also noted that a controvertible maritime zone similar to the perpendicular line method, may be produced (Figure 9).<sup>172</sup> The International Law Commissions 1954 study also rejected the 'extension of the land boundary' method.

#### The Thalweg Line

The term "thalweg" is a German word derived from "Thal" a valley, and "Weg" the way. Translated to English the term means the middle, the deepest or most navigable channel. The most common application of the thalweg line in boundary delimitation has been in rivers and delimiting the territorial sea in straits. Twiss (1861), Bluntschli (1868) and Field (1872) recognizing the impact of steamships and their subsequent increase in tonnage and importance to commerce, proposed as a supplementary rule to the median line principle the concept of equal rights of navigation to the thalweg by co-riparian states. These scholars considered the paramount interest of delimitation in navigable streams to be an equal division of the surface of the water

and equal access to and sharing of navigable waters.<sup>173</sup> In the 1920's and 1930's scholars refuted the application of the thalweg principle as a supplementary rule to delimit international straits citing the difficulty in determining where the deepest part of channel is and, if determined, the zigzagging nature of such a line would produce an impractical line.<sup>174</sup> In exceptional cases the thalweg principle could be used to correct evident inequities caused by the application of the median line principle.<sup>175</sup>

Due to the uniformly deeper waters found in straits and oceans and the subsequent remote likelihood that a boundary in these areas will restrict a co-riparian state from access to a navigable channel, the thalweg line has been found to be of little use in delimitation of the territorial sea boundaries between adjacent states and the continental shelf and the 200 mile exclusive economic zone boundaries between both opposite and adjacent states.

### Summary

In summary, mutual agreement is the fundamental norm of law for maritime boundary delimitation universally recognized as applicable and valid for all states. It is also generally accepted as the rule of law for maritime boundary delimitation that agreement will be found and an equitable solution reached when equitable principles are applied. However, the law is not as conclusive as to what

equitable principles are operative in delimiting the exclusive economic and continental shelf zones. Concurrently, there are no determinate and certain limits to the practical methods and relevant circumstances involved in conveying equitable principles and the notion of equity. Though, states' practice and the jurisprudence which has evolved from arbitration of maritime boundary disputes clearly demonstrates that geographic principles are regarded as pre-eminent factors applicable to maritime boundary delimitation.

This chapter has presented those geographic factors thought primarily to reflect a state's rights based on being considered an appendage of the land. In addition, non-geographic factors were examined which are characterized more by activities in the offshore appurtenant to the states' interests rather than by physical extension. In general, this review has demonstrated that geographic variables could be considered as equitable principles, practical methods or relevant circumstances whereas non-geographic factors are at most considered relevant circumstances.

Of the non-geographical factors presented, security interests are shown not to be a function of exclusive economic and continental shelf zones delimitation. The prior existence of other non-territorial boundaries depending on their purpose, duration and level of state

compliance, while not by themselves constituting an equitable principle have been given weight as a relevant circumstance supporting a boundary based foremost on more important geographical factors. Historic fishing rights in the territorial sea are affirmed by conventional law as equitable principles for boundary delimitation. The *Grisbardna Case* (1919) shows that customary law has recognized that historic fishing rights and economic dependency may justify a deviation from a territorial sea boundary based solely on geographical considerations. In the extended jurisdictional zones, international law holds that historic fishing rights and economic dependency are primarily elements of resource allocation and management, not equitable principles for territorial division. Preserving the unity of fishery or mineral resources in a boundary region is a factor which has not been recognized in international law as an equitable principle. There are, however, some bilateral maritime boundary agreements which indicated that the unity of mineral resources may have been considered when actual delimitation of a boundary occurred.<sup>176</sup>

Geologic natural prolongation was found by the Court in the 1969 *North Sea Cases* to be an equitable principle for continental shelf delimitation. The 1977 *Anglo-French Arbitration* and the 1982 *Tunisia/Libya Case*, while not refuting its status as an equitable principle, found that geologic

natural prolongation is an ineffectual equitable principle for practical maritime boundary delimitation because most neighbouring states share the same continental shelf area. Thus, geologic natural prolongation basically provides a principle on which states may declare their eligibility for claims to continental shelf zones but does not serve as a practical principle for delimitation. In addition, the relevance of the principle of geologic natural prolongation to delimitation of exclusive economic zones is uncertain.

The principle of 'geographic natural prolongation' or 'coastal front extension' was another principle deduced by the Court in the 1969 North Sea Cases as a pre-eminent element of the formula for maritime boundary delimitation. The tribunals in the 1982 Tunisia/Libya Case and the 1984 Gulf of Maine Case, however, declared that geographic natural prolongation was not an equitable principle but rather a relevant circumstance to assess the equitableness of a boundary determined first by other equitable principles.

Proportionality has been promoted by some scholars as an essential equitable principle of maritime boundary delimitation or as a substantive equitable principle to be used in conjunction with the median line/equidistance principle. Yet customary international law clearly demonstrates that proportionality by itself does not constitute an equitable principle to either base or jointly

determine a maritime boundary. Customary law holds that proportionality is a negative criterion which can be used to assess the inequity of a particular maritime boundary delimitation.

Geomorphology has not been accepted thus far as an equitable principle or as a relevant circumstance of maritime boundary delimitation. Although, this does not preclude the possibility that geomorphological factors may be considered relevant circumstances or even an equitable principle for continental shelf delimitation where they signify a discernible discontinuity in the continental geologic structure between two boundary states. However, the application of geomorphological criteria to the delimitation of a single maritime boundary for the exclusive economic zone and the continental shelf is unsure.

The sector principle is not recognized in international law of maritime boundary delimitation although several states have unilaterally used the sector principle as the basis of territorial claims in the Antarctic which include maritime areas.

The perpendicular line to the general direction of the coast boundary delimitation method shows that where two contiguous states lie on a rectilinear coast this method would produce an equal division of disputed areas. The perpendicular line method found broad but qualified support prior to World War I and only for delimitation of the

territorial sea. Since then, and for delimitation of extended zones of jurisdiction the perpendicular line method has generally been accepted only where it produces substantially the same result as an equidistance line or where its use has been justified by a special or unique combination of circumstances. Involving as it does a line of constant bearing, it reflects only a single coastal direction and is not capable of taking account of more complex coastal configurations. In nature, straight coastlines are the exception rather than the rule, thus the geographical conditions necessary for the application of the perpendicular method are seldom present. Boggs also showed that a perpendicular line may create an offshore zone of controvertible jurisdiction where the most proximal state is not necessarily granted jurisdiction over the waters closer to its coast.

A zone of controvertible jurisdiction can also be produced where the maritime boundary is simply an extension of the land boundary according to the last bearing of the land boundary. Extending the land boundary has generally been rejected as an equitable principle in international law even though there are some examples where this method was used. The thalweg line has been applied to maritime boundaries in rivers and straits between opposite states, but has been used sparingly to delimit territorial sea boundaries between adjacent states and not at all for boundary delimitation of

regimes of extended jurisdiction.

This review of 'equitable principles,' practical methods and relevant circumstances proposed or applied in international law, states' practice and in the scholarly literature confirms that none of these principles and methods have approached attaining a consistent, pre-eminent position in the formula for delimiting extended maritime boundaries. Most of these principles and methods, though, could be accredited at least the status of relevant circumstances in boundary delimitation.

There is, however, one principle and method that has received authoritative acceptance, has a firm underpinning in the legal theory underlying claims to extended jurisdictional regimes and, perhaps above all, is quite precise, relatively easy to apply and makes eminent good sense.<sup>177</sup> This principle and method is based on facts and not on philosophical notions of equity the meaning of which boundary tribunals have thus far not spelled out.<sup>178</sup> Indeed, this principle and method depend on precise measurement rather than subjective factors and can thus be applied in a large variety of geographical situations to achieve an equitable delimitation. This principle and method are referred to as the median line/equidistance principle and method.

Chapter Two Endnotes

- 1 Gulf of Maine Case, p. 51, para. 87.
- 2 Ibid.
- 3 Truman Proclamation No. 2667 at p. 67 in M.D. Blecher, "Equitable Delimitation of the Continental Shelf," American Journal of International Law, 73(1), 1979.
- 4 1958 Geneva Convention on the Continental Shelf, Article 6, Article 12 and Article 24 of the 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone.
- 5 International Court of Justice, "North Sea Continental Shelf Judgement," Reports, 3, 1969. para. 53 (hereinafter referred to as "North Sea Cases").
- 6 "...the association of the terms 'rules' and 'principles' is no more than the use of a dual expression to convey one and the same idea, since in this context 'principles' clearly means principles of law, that is, it also includes rules of international law in whose case the use of the term 'principles' may be more justified because of their more general and more fundamental character." International Court of Justice, "Case Concerning Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)," Judgment, 1984 (hereinafter referred to as the "Gulf of Maine Case"), p. 49, para. 79.
- 7 United Kingdom of Great Britain and Northern Ireland, Secretary of State for Foreign and Commonwealth Affairs, Arbitration Between United Kingdom of Great Britain and Northern Ireland and the French Republic on the Delimitation of the Continental Shelf, Miscellaneous No. 15 (London: Her Majesty's Stationery Office, 1978), (hereinafter referred to as the "Anglo-French Arbitration"), paras. 97, 95.
- 8 International Court of Justice, "Case Concerning the Continental Shelf) (Tunisia/Libyan Arab Jamahiriya)," Report, 1982, paras. 44, 70 (hereinafter referred to as the "Tunisia/Libya Case").
- 9 North Sea Cases, paras. 55, 101; and Anglo-French Arbitration, paras. 70, 75.
- 10 Tunisia/Libya Case, paras. 50, 70.
- 11 The 1982 Law of the Sea Convention, Articles 74(1) and 83(1).
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- 18 North Sea Cases, para. 85.
- 19 Charney, p. 590.
- 20 Gulf of Maine Case, para. 111.
- 21 Ibid., para. 112.
- 22 Ibid.
- 23 Ibid., para. 114.
- 24 North Sea Cases, p. 33.
- 25 Tunisia/Libya Case, p. 61, para. 73.
- 26 North Sea Cases, para. 50.
- 27 Blecher, p. 63.
- 28 Ibid.
- 29 D.J. Padwa, "Submarine Boundaries," International and Comparative Law Quarterly, 9, October 1960, p. 629.
- 30 Gulf of Maine Case, para. 59.
- 31 R. W. Smith, "A Geographical Primer to Maritime Boundary-Making," Oceans Development and International Law Journal, 12(1/2), 1982, p. 6.
- 32 Ibid.
- 33 1982 Convention of the Law of the Sea; Innocent Passage in the Territorial Sea, Articles 17-32.
- 34 Ibid., Straits Used for Navigational Purposes, Articles 34-44.

- 35 Anglo-French Arbitration, para. 188.
- 36 Tunisia/Libya Case, paras. 96, 118.
- 37 Anglo-French Arbitration, paras. 150, 151.
- 38 Belcher, p. 67.
- 39 Anglo-French Arbitration, paras. 201-202.
- 40 Tunisia/Libya Case, p. 84, para. 118.
- 41 M.B. Feldman, "The Tunisia-Libya Continental Shelf Case: Geographic Justice of Judicial Compromise?" American Journal of International Law, 77(2), p. 234.
- 42 Tunisia/Libya Case, para. 93-96.
- 43 Ibid., paras. 117, 118.
- 44 Anglo-French Arbitration, para. 219.
- 45 Ibid., para. 246.
- 46 Blecher, p. 68.
- 47 Ibid., p. 67.
- 48 Ibid.
- 49 The 1958 Geneva Convention on the Territorial Sea and the Contiguous Zone, Article 12(1).
- 50 The 1958 Geneva Convention on Fishing and Conservation of the High Seas, Article 7(5) provides: "The principles of geographical demarcation as defined in Article 12 of the Convention on the Territorial Sea and the Contiguous Zone shall be adopted when coasts of different States are involved".
- 51 The 1958 Geneva Convention on the Continental Shelf, Article 2(4) states: "The natural resources referred to in these articles consist of the mineral and other non-living resources of the seabed and subsoil together with living organisms belonging to sedentary species...."
- 52 E.D. Brown, "Delimitation of the Continental Shelf Between Opposite and Adjacent States: The North Sea Continental Shelf Case" in The Legal Regime of Hydrospace, E.D. Brown (ed.) (London: Unwin and Sons, 1971), p. 69.
- 53 Ibid.

54 The 1982 United Nations Convention on the Law of the Sea, Article 15. states: "...The above provision does not apply, however, where it is necessary by reason of historic title or other special circumstances to delimit the territorial seas of the two States in a way which is at variance therewith."

55 The 1982 Convention on the Law of the Sea: The Exclusive Economic Zone, Article 74 and the Continental Shelf, Article 83.

56 Ibid., Articles 61 and 62.

57 Ibid.

58 Ibid., Article 63.

59 Ibid., Articles 64 and 65.

60 The Grisbardna Case (Norway vs Sweden), Hague Court Reports Permanent Court of Arbitration 1909, at p. 129, cited in E. Collins, Jr. and M.A. Rogoff, "The International Law of Maritime Boundary Delimitation," Maine Law Review, 34(1), 1982. p. 57.

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- 72 Ibid., p. 31.
- 73 Tunisia/Libya Case, pp. 73-74, para. 100.
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- 75 Gulf of Maine Case; Oral Proceedings Verbaton Record, Reply of Canada, May 3/84 to May 5/84, Part 6, p. 34(5).
- 76 Gulf of Maine Case, para. 237.
- 77 Ibid.
- 78 Brown, p. 67.
- 79 North Sea Cases, p. 53, para. 97.
- 80 Ibid., Separate Opinion of Judge Ammoun, p. 149.
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- 82 Gulf of Maine Case, paras. 54, 56 and 193.
- 83 See 1974 Fisheries Jurisdiction Case, and Article 62.
- 84 Japan and Korea, *infra* note 176; 1958 boundary agreement between Bahrain and Saudi Arabia permits equal shares of net resource revenues from disputed shelf zone; and 1968 Saudi Arabia-Iran boundary agreement provided for joint management of transboundary resources.
- 85 Gulf of Maine Case, para. 240.
- 86 In F.A. Eustis, "Notes: Delimitation of the Continental Shelf Jurisdiction Between States: The Effect of Physical Irregularities in the Natural Continental Shelf," Virginia Journal of International Law, 17(1), Fall 1976, p. 78.
- 87 The 1985 Geneva Convention on the Continental Shelf, Articles 1 and 6.
- 88 1982 United Nations Convention on the Law of the Sea, Article 76(1).
- 89 North Sea Cases, p. 32.

- 90 Ibid., p. 53, para. 99.
- 91 Blecher, p. 62.
- 92 Anglo-French Arbitration, para. 79.
- 93 Ibid.
- 94 Tunisia/Libya Case, para. 67.
- 95 Gulf of Maine Case.
- 96 S.M. Rhee, "Equitable Solutions to Maritime Boundary Delimitation between the United States and Canada in the Gulf of Maine," American Journal of International Law, 75(4), 1981, p. 616.
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- 98 Ibid., North Sea Cases, p. 20, para. 15.
- 99 Ibid., p. 169.
- 100 Ibid.
- 101 Ibid., pp. 49-50, paras. 89-91.
- 102 Prescott, p. 166.
- 103 Tunisia/Libya Case, p. 61, para. 73.
- 104 Ibid., para. 74
- 105 Feldman, p. 231.
- 106 Tunisia/Libya Case, para. 75.
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- 108 Feldman, p. 239.
- 109 Gulf of Maine Case, para. 36.
- 110 Ibid.
- 111 Ibid., para. 108.
- 112 Tunisia/Libya Case, p. 76, para. 104.
- 113 Gulf of Maine Case, para. 219.
- 114 Ibid.

- 115 Ibid.
- 116 Ibid.
- 117 North Sea Cases, p. 50, para. 90.
- 118 Tunisia/Libya Case, p. 46, para. 43.
- 119 Gulf of Maine Case, para. 220.
- 120 Ibid., para. 281.
- 121 Brown, p. 49.
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- 123 Gulf of Maine Case, para. 36.
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- 125 North Sea Cases, p. 50, para. 90.
- 126 S.M. Rhee, "Sea Boundary Delimitation between States before World War II," American Journal of International Law, 76(3), 1982, p. 556.
- 127 Ibid.
- 128 Rhee (1981), p. 620.
- 129 See Collins and Rogoff, p. 33; Belcher, p. 77; and Rhee, pp. 615-619.
- 130 Collins and Rogoff, p. 33.
- 131 Gulf of Maine Case, para. 218.
- 132 D.B. McRae, "Proportionality and the Gulf of Maine Dispute," Canadian Yearbook of International Law, 1981, p. 301.
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- 136 Ibid., i.e., Channel Islands, para. 201; Atlantic Region, para. 248.
- 137 Tunisia/Libya Case, p. 93, para. 133(5).

- 138 McRae, p. 300.
- 139 Ibid., p. 301.
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- 141 L.M. Alexander, "Baseline Delimitation," Virginia Journal of International Law, 23(4), 1983, p. 533.
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- 144 Ibid., para. 107.
- 145 Feldman, p. 223.
- 146 Tunisia/Libya Case, p. 57, para. 66.
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- 149 D.B. McRae, "Delimitation of the Continental shelf between the United Kingdom and France: The Channel Arbitration," Canadian Yearbook of International Law, 15, 1977, p. 187.
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- 154 Ibid.
- 155 A.D. Cukwurah, The Settlement of Boundary Disputes in International Law (Manchester: Manchester University Press, 1967), p. 73.
- 156 Rhee, p. 579.
- 157 S.W. Boggs, "A Study of Boundary Functions and Problems," International Boundaries (New York: AMS Press Inc., 1966), pp. 188-189.
- 158 Rhee, p. 576.
- 159 Ibid., p. 579.

- 160 Alexander, p. 532.
- 161 Ibid.
- 162 Rhee, p. 569.
- 163 Ibid., p. 565.
- 164 Padwa, p. 642.
- 165 Tunisia/Libya Case, pp. 70, 85, paras. 93, 120.
- 166 Alexander, p. 531.
- 167 Gulf of Maine Case, paras. 36, 54, 56 and 193.
- 168 Ibid., para. 224.
- 169 Ibid.
- 170 Ibid.
- 171 Cukwurah, p. 73. See footnote 160.
- 172 Boggs, (1966), p. 189.
- 173 Rhee, p. 560.
- 174 Ibid., p. 572.
- 175 Ibid., p. 573.
- 176 Subsequent to the International Court of Justice's 1969 North Sea Judgment, Germany and Denmark agreed on a maritime boundary line which deviated from a straight line so as to accommodate prior Danish hydrocarbon concessions. In 1972, Russia and Japan concluded a boundary accord which provided for a common exploration area near Sakhalin Island. A similar agreement was required to resolve a 1974 boundary dispute between Japan and Korea in the East China Sea.
- 177 Collins and Rogoff, pp. 13-14.
- 178 A.O. Adede, "Toward the Formulation of the Rule of Delimitation of Sea Boundaries between States with Adjacent or Opposite Coasts," Virginia Journal of International Law, 19(2), 1979, p. 254.

## CHAPTER III

The Median Line/Equidistance Principle and MethodDefinition

The median line/equidistance principle is defined in the abstract as the line every point of which is the same distance away from the nearest coast of each State involved in maritime boundary delimitation. The legal definition of the median line/equidistance principle as enunciated in the 1958 Convention on the Territorial Sea and Contiguous Zone (Art. 12) and the Convention on the Continental Shelf (Art. 6(1) and (2)) is essentially the same but these stipulate strict adherence to the nearest points on the baseline from which the breadth of the territorial sea of each State is measured rather than the coast of each State.<sup>1</sup> Of course the median/equidistance line could be equally measured from other agreed baselines.

The median line/equidistance principle is influenced by and derives from the equitable criterion that the most equitable solution in boundary delimitation is the equal division of the maritime areas where the extension of jurisdiction on adjacent and opposite state's coasts overlap. The median/equidistance line generally offers a means whereby a state's sovereign rights can be protected through division of the area concerned as equally as possible.

The median/equidistance line does not necessarily yield an equal division in terms of area, but relies rather on the relationship of the coast to the area of delimitation. The coasts which actually abut the boundary region are the starting point for the delimitation and the basis from which a state's jurisdiction extends over the adjacent areas, irrespective of the nature of the title to these areas. Adjacency in terms of distance or proximity from the coast establishes the source and extent of title to the appurtenant maritime areas off a state's coast. Simply, a median/equidistance line determines the appurtenance of maritime areas to the coastal state by ceding to each of the states concerned all those portions of the exclusive economic zone or continental shelf area that are nearer to a point on its coast than they are to any point on the coast of another state.

The precepts of adjacency and proximity seem particularly valid for extension of a state's rights in the water column of the exclusive fishery or economic zone because proximity to the coast, i.e., 200 miles, is the basis of title. Conversely, proximity would conflict with the theoretical primacy of the equitable principle of geologic natural prolongation for continental shelf entitlement. But as shown, geologic natural prolongation is, practically speaking, of limited usefulness due to the rarity of different continental masses existing between

bordering states. Regardless, the 200 mile distance or 350 mile criterion has now also been accepted as basis to continental shelf entitlement.

A median/equidistance line may consist of either a 'median line' between 'opposite' states or a 'lateral' line between 'adjacent' states. The Convention on the Continental Shelf (Art. 6) contains separate provisions for continental shelf boundaries between opposite and adjacent states using different language, which in the case of adjacent states would seem to be less positive than for opposite states. On the other hand, the Convention on the Territorial Sea and Contiguous Zone (Art. 12) does not distinguish between opposite and adjacent states in its boundary provisions. In the course of this chapter's analysis, this difference in treatment will be discussed.

At the same time, the distinction between opposite and adjacent states is also not a geographical absolute. Certain geographical configurations such as bays and gulfs can be both opposite from and adjacent to one another to varying degrees according to the nature of both a median line and lateral line. Notwithstanding, there exists a distinction between a median line and a lateral line even though they are synonymous to the extent that both are the result of the same cartographic geometry and both methods stem from the territorial sea baselines. As Shalowitz pointed out:

This distinction between an equidistant line [i.e. a 'lateral line'] and a median line seems valid from a geometrical point of view, for a true median line presupposes a line that is in the middle. Theoretically at least a boundary line through the territorial sea between two adjacent States, while an equidistant line, is not a true median line.<sup>2</sup>

While the median line/equidistance principle would seem to be plausible, and given man's long-standing knowledge of the principles of geometry one would think readily applied, the method for implementing the median line/equidistance principle in maritime boundary delimitation and in particular, to territorial sea boundaries is of relatively recent origin. However, the median line/equidistance principle is rooted in tenets that date back to the 16th century.

#### Historical Evolution of the Equidistance Principle

The 16th century experienced the greatest expansionary movement by maritime nations up to this time. One impact of this movement was the response by less powerful maritime nations to determine the limits of their sovereignty. The doctrine of the middle line (usually in a river) based on the fundamental principle of sovereign equality seemed to best protect their interests. Sovereignty, it was believed, should extend to the middle on the surface of the water or to the middle of the channel. Even the staunch advocate of 'freedom of the seas' Hugo Grotius (1583-1645), recognized

this belief when he stated that "...sovereignty extends to the middle of the river."<sup>3</sup> Pudendorf also declared in 1672 that "the sovereignty of each State shall extend into the middle...."<sup>4</sup>

The 17th and 18th centuries saw the world's great naval powers reach their zenith. Respect for maritime boundaries was subsequently at its lowest point. Still, less bellicose nations such as Norway (then united with Denmark) and Sweden in 1661 set the maritime frontier in their fjord boundary roughly in the middle of the waters between the two countries.<sup>5</sup> The 19th century, with the powers of traditional maritime nations waning, saw an increase in the number of states that delimited their territorial sea boundaries in accordance with the median line principle. A few examples are Finland and Sweden (1809) in the Gulf of Bothnia and the Aaland Sea; Britain and China (1842) in the strait between the island of Hong Kong and the mainland; Britain and the United States (1846) in the Strait of Juan de Fuca and Japan and Russia (1855) between the islands of Ituprup and Urup.<sup>6</sup> However, while the median line principle was finding states' acceptance as an equitable principle for maritime boundary delimitation and in particular for delimitation between states lying opposite each other, in most cases no means of delimiting a median line boundary was included in the boundary treaties. Subsequently, disputes arose over the specific placement of the median line. Often the median

line was interpreted as the central deep water line or the 'thalweg'.

Despite the confusion of the median line method in practice, the median line principle was respected as a general rule for the delimitation of territorial waters between opposite states by numerous scholars of the day, such as David Dudley Feld, Imbart Latour, John Bassett Moore and Travers Twiss.<sup>7</sup> The thalweg principle was considered generally as a supplementary rule "applicable only to those straits and channels where the thalweg was easily identifiable and where the preservation of equal access and the right of navigation was paramount."<sup>8</sup> Scholarly bodies which reflected this opinion included the Institute of International Law (1894) and the International Law Association (1895).<sup>9</sup>

But confusion still persisted on the technical means of delimiting a median line to water bodies with their particular geographical characteristics. For example, the International Waterways Commission in 1913 after having agreed on the median line as the most equitable principle for delimitation of international water boundary between Canada and the United States in Lake Erie found the median line principle implied three methodologies:

- a line being at all points distant from each shore;
- a line following the general lines of the shores and dividing the surface water as nearly as practicable

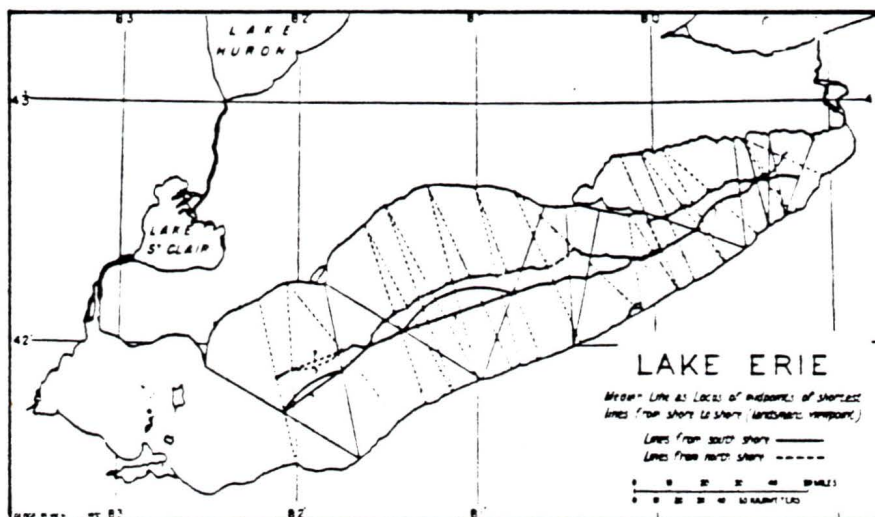
into two equal parts; or

- a line along the mid-channel dividing the navigable portion of the lake and being at all points equally distant from the shoal on each shore.<sup>10</sup>

None of these methods by themselves provides a precise method for delimitation of a water boundary in accordance with the median line principle. The first method, which Boggs described as "the landsman's or the shoreline viewpoint," was stated to be "quite impossible, even from one shore, and...the results from the opposite shores of the lake would be quite dissimilar"<sup>11</sup> (see Figure 11). The second method is founded on the idea that a median line that leaves one-half of the area on each side seems to be desirable. But any number of lines may be drawn to that effect.<sup>12</sup> Nothing is specific in such a definition. The third implied method is the thalweg which is generally imprecise and not easily identifiable in most cases. Moreover, it addresses water boundaries in the vertical plane not the horizontal plane.

The connection of geographical coordinates between opposite states was used after World War I as a more precise method of the median line principle. Finland and Sweden in the waters between the Aaland Islands (1921) and the United Kingdom and the United States in the Grand Manan Channel between New Brunswick and Maine (1925) are illustrations of the application of this median line method.<sup>13</sup>

Figure 11



AN IMPRACTICABLE CONCEPT OF THE  
MEDIAN LINE (A "LANDSMAN'S VIEWPOINT")

The median line is the locus of the midpoints of all lines drawn from points on one shore to the nearest point on the opposite shore. The line differs as it is drawn from the north or the south shore, the two versions only occasionally being coincident.

Source: Boggs, S.W. International Boundaries. New York, Columbia University Press, 1940, p.184.

In the case of adjacent states, the median line principle did not have the same historical roots. In fact it was not until the mid-19th century that delimitation of lateral territorial sea boundaries drew much attention and the median line principle was infrequently proposed as the equitable principle for delimitation. Instead, in those few cases where lateral boundaries were delimited, the perpendicular line to the coast at the land terminus or the general direction of the coast, the use of latitudes, meridians or azimuths, and the extension of the land boundary, were the usual means of delimitation for adjacent coasts. The preceding chapter offers incidences of these methods' application. In 1908 Deszo Darday at the Twenty-fifth Conference of the International Law Association in Budapest suggested the use of the median line principle for maritime boundaries between adjacent states.<sup>14</sup> However, it was almost another 20 years before the median line method was discussed in a scholarly forum as a delimitation principle for adjacent states. In 1926, the International Law Association of Japan presented draft rules for bays and gulfs between states which may include both adjacent and opposite situations. The Association suggested that:

In the case of bays and gulfs the coasts of which belong to two or more States, the littoral waters follow the trend of the coasts according to the general rule. In those portions of such bays and gulfs where the distance between the two coasts does not amount to six marine miles, the dividing line between respective littoral waters in

principle<sup>15</sup> be the middle line measured from the two coasts.

The middle or median line principle was recommended 'in principle' for bodies less than 6 miles wide, which left open the possibility that agreements might depart from the rule.

States had, however, come to realize that by focusing on the median line principle for maritime boundary delimitation, their sovereign rights could be best protected by a division of the maritime area as equally as possible. Yet, states were still frustrated by the absence of an exact method which would actually sustain the median line principle in all geographical situations and determine objectively each bit of territorial sea that was rightfully theirs. With the absence of such a method and because demarcation of water boundaries was extremely difficult if not impossible, maps were critical components of boundary treaties. Perhaps the first boundary treaty that approached resolving this impasse was the Finnish-Norwegian Convention of 1924 in which a detailed description of an 'equal distance' method was presented:

From the point where the channel ends in the Arctic Ocean beyond the mouth of the Jakobselv (Vuoremajoki) the dividing line between the territorial waters of the two Contracting States shall be drawn in such a way that any point on the said line shall be situated at an equal distance from the coasts of the two States, measured from the nearest point on the mainland, islands, islets, or reefs which is not perpetually submerged<sup>16</sup>

However, owing to the rather straight coastal formation present, the "equal distance" line generally coincided with the line perpendicular to the general direction of the coast and as such was probably not accorded the distinctive attention it deserved at this time in resolving the ambiguity of the median line principle. This became evident when at the Hague Conference in 1930 the 'equal distance' method was not even discussed. Moreover, no uniform principle for delimitation of the territorial sea between either adjacent and opposite states could be agreed upon at the Conference.<sup>17</sup>

Shortly thereafter, the median line principle was applied by Italy and Turkey (1932) for delimiting the territorial sea boundary near certain islets off the Anatolian coast. Also, Denmark and Sweden in the same year delimited their entire territorial sea boundary in seven straight-line segments on the basis of the median line principle using precise geographical coordinates up to seconds.<sup>18</sup> Similarly, Denmark and Norway (1932) followed this delimitation technique.<sup>19</sup>

#### Methodology of the Equidistance Method

It was not until 1934, though, that the German jurist Fritz Munch in trying to define the median line initiated a technical study of the equidistance line method by incorporating the fundamental methodology and rationale of

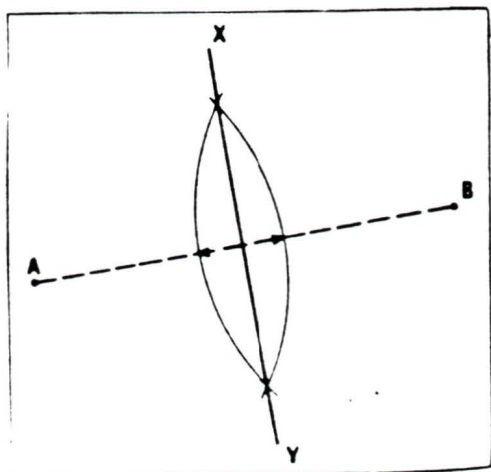
the perpendicular method. However, Munch failed because in his effort to find a general principle or method of delimitation he mistook form for substance, the particular for the general. Munch's theory ignored that since all coasts involve some element of irregularity, a single line of constant bearing will seldom remain perpendicular to the relevant coasts for very long. Regardless, Munch's work provided the impetus for S. Whittemore Boggs, a Special Advisor on Geography in the U.S. Department of State, to propose a geometrical technique which considered all relevant geographical circumstances and offered a means to plot a true median line based on a series of segments of perpendicular bisectors of straight lines joining the nearest points on the coasts of the parties.

Boggs, in response to an invitation to propose a method of delimiting a true median line boundary between the states of Michigan and Wisconsin through Lake Michigan, suggested using an "equidistance" technique. He defined this technique as "the line every point of which is equidistant from the nearest point or points on opposite shores."<sup>20</sup> He rightly stated that "only one such line can be drawn," and this is therefore a precise definition and claimed that "indication of the boundary or published charts is not essential, though it is desirable."<sup>21</sup> As to the method of plotting it on a chart, Boggs said,

The median line being equally distant from opposite shores follows a straight line that is equally distant from two projecting points on the two shores until a third point that is equally distant is reached; then it usually proceeds in relation to one of the first two points and the new point. Each such straight line lies on the perpendicular that bisects the line connecting the two nearest points on opposite shores; in fact, the median line consists of a series of such straight lines, each of which is extended until it intersects the next.

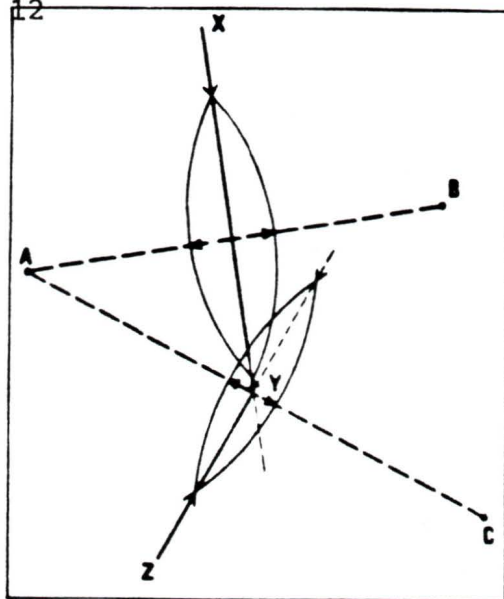
This method of plotting on a chart is represented in Figure 12. A 'true' equidistant line would consist of a locus of points producing a sinuous line but Boggs, by choosing the salient features of the coastline, yielded a more manageable median line comprised of a series of straight line segments. Figure 13 illustrates the application of Boggs' recommended median line method to delimitation of the Wisconsin-Michigan maritime boundary in Lake Michigan. Other techniques include derivations of Boggs' traditional median line method by Shalowitz, traditional methods coupled with computer refinements and a totally computer developed median line technique.

Boggs' median line/equidistance method was initially proposed for delimitation of the territorial sea in lakes and rivers between opposite states. However, in both theory and practice the median line/equidistance principle and geometrical method can generally be extended to delimit those water and seabed boundaries for the continental shelf and exclusive economic zones where opposite states share the

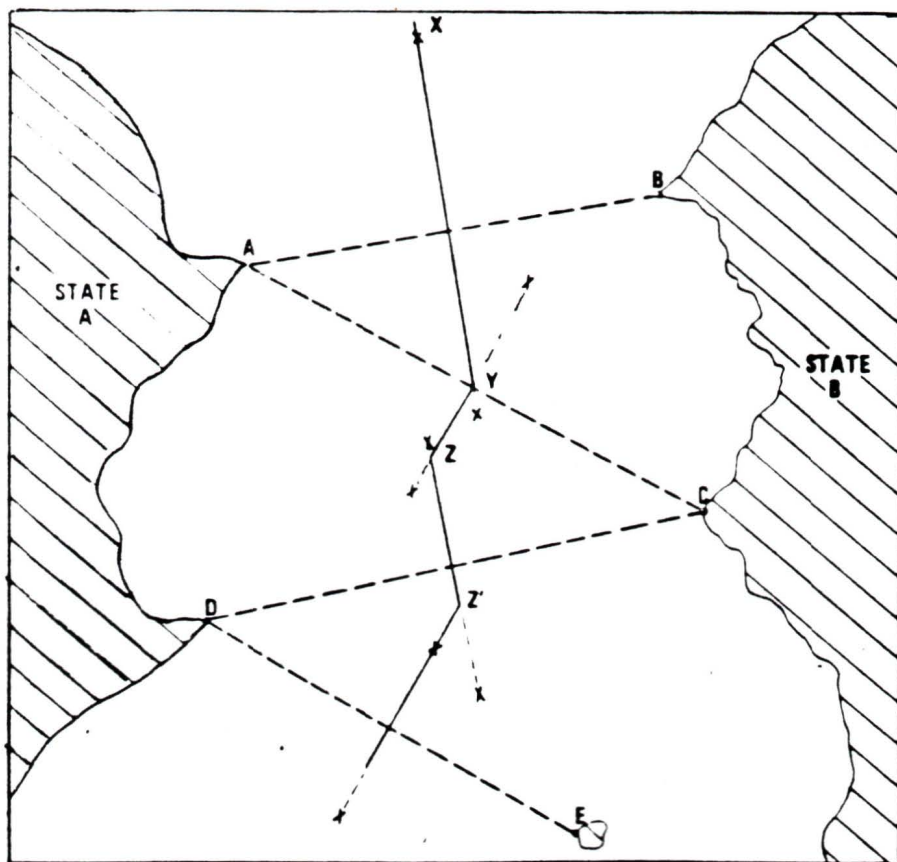


Perpendicular bisector as the equidistant line between two points.

Figure 12



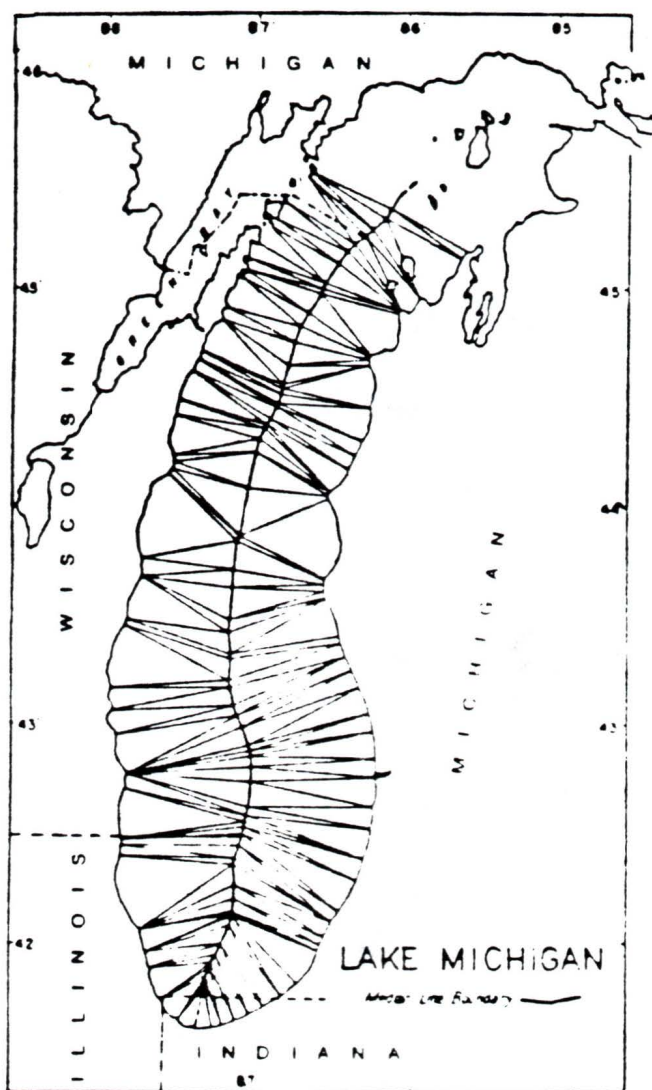
Line of equidistance between point A and point B and point C is depicted by X-Y-Z.



Theoretical equidistant boundary delimitation.

Source: Hodgson, R.D. and E. John Cooper. "Delimitation of a Modern Equidistance Boundary", Ocean Development and International Law Journal 3(4) pp. 364-366.

Figure 13



S. W. BURGESS EQUIDISTANCE LINE

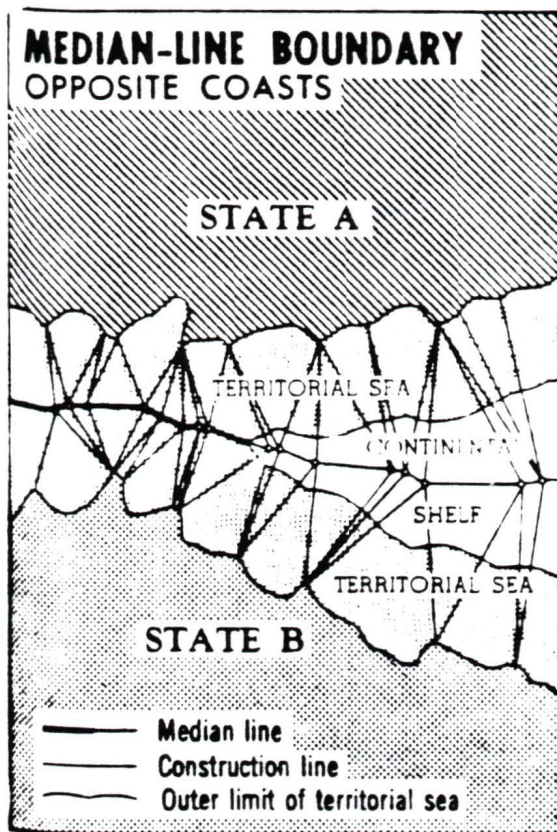
The drawing shows the line all points of which are equidistant from the nearest points on opposite shores. The Michigan-Wisconsin boundary in Green Bay and to the middle of Lake Michigan, according to the decree of the United States Supreme Court of March 1st, 1936, is also shown (as a broken line).

Source: Boggs, W.W. International Boundaries.  
New York, Columbia University Press,  
1940, p. 185.

same continental shelf and/or the distance between their respective coasts does not exceed 400 nautical miles. Figure 14 illustrates a median line delimitation of the continental shelf for opposing states sharing the same continental shelf area. In most instances, no major geometrical problems are encountered. Although, by mutual agreement the site of known or potential resources, the location of a navigation channel, or traditional offshore practices of one of the litigant states could cause a median boundary to be modified or disregarded completely. Median line construction could also be complicated but not necessarily prevented by the presence of offshore islets, rocks and minor coastal projections, the disproportionality distorting effect of which can be eliminated by other means. Usually the issue is whether these geographical anomalies should be considered basepoints for the delimitation of a median line or omitted entirely in the construction. This issue in delimitation of offshore boundaries will be discussed shortly hereafter. Nevertheless, since the median-line method is objective, it is usually considered to be at least a point of departure in the reaching of an agreement on maritime boundaries between opposite states.<sup>23</sup>

In the case of adjacent states, Boggs rejected the traditional perpendicular and extension of the land boundary methods for territorial sea delimitation instead proposing delimitation by a modified equidistance formula. Boggs

Figure 14



A median-line boundary line may extend through the territorial sea and over the continental shelf alike.

Source: Percy, G.E. Geographical Aspects of the Law of the Sea. 1957, p. 17.

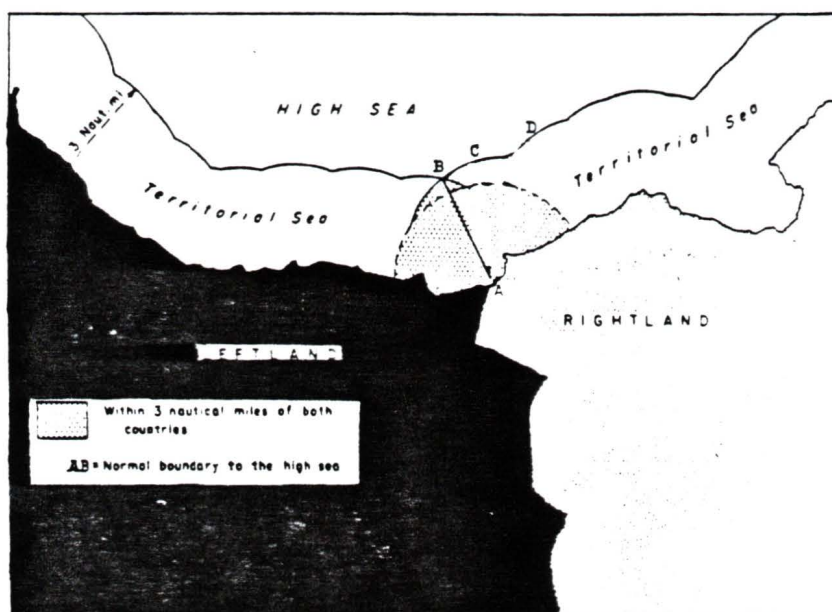
chose to extend a straight line drawn from the land boundary terminus to the equidistant intersection point on the outer limit of the territorial sea. If both states have the same breadth of territorial sea, such an equidistant intersection point or "triple point" can be found by using:

an envelope of arcs of circles of three nautical miles drawn from all points on the respective coasts. The two curves will intersect at a point which may be exactly three miles, but is often more than that distance from the terminus of the land boundary on the shore.<sup>24</sup>

A straight line is then extended from the land boundary terminus to the 'triple point',<sup>25</sup> except where islands make it unfeasible. Figure 15 illustrates this method.

It is not clear why Boggs at this time (i.e. 1937) did not use the equidistance line rather than the combined straight line-equidistance intersection method, but "such a line does not run counter to the equidistance principle because it is in fact a simplified or straightened-out equidistance line."<sup>26</sup> In spite of the apparent simplicity of this method, Boggs' method for delimiting a maritime boundary between adjacent states may result in an inequitable delimitation, depending upon particular geographical situations such as the presence of islands or the irregular configuration of coastlines and other special circumstances as the existence of special mineral or fishery rights in one of the states. Such inequities may be incidental where the breadth of the territorial sea is

Figure 15



#### THE INTERNATIONAL BOUNDARY THROUGH TERRITORIAL WATERS

The line passes through the belt of territorial waters (or "territorial sea") from the coastal terminus of the land boundary to the high sea. This is an example of the simple type, where there are no islands or highly irregular coast line. The most reasonable boundary is the line A-B, the point B being the intersection of the envelopes of arcs of three mile radius drawn from all points on the shores of the two countries, "Leftland" and "Rightland" respectively.

Source: Boggs, S.W. International Boundaries.  
New York: Columbia University  
Press, 1940. p. 189.

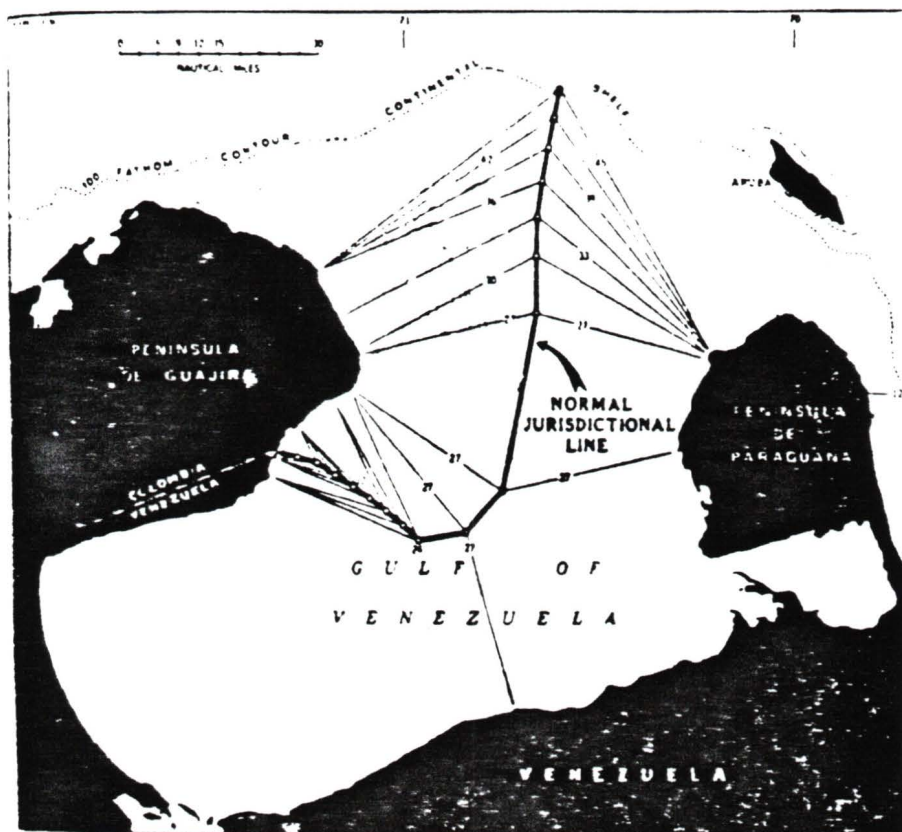
3 miles and the coasts are not particularly complex, but the broader the territorial sea the greater the inequities that may arise.

A little over a decade after Boggs proposed his median line/equidistance principle and method for opposite coasts and the combined straight line-equidistance principle and method for adjacent coasts, Boggs realized that the latter principle and method offered a means to delimit extended jurisdictional zones, again provided both states shared the same breadth of continental shelf and exclusive economic zone. The combined straight line-equidistance method lays down the lateral line, first by describing:

the envelope of arcs of circles of 6 mile radius from the coasts of the two states, noting carefully the point in which they intersect and connecting that with the point of intersection of the 3 mile arcs i.e. the territorial sea 'triple point'. Then proceed successively to describe the envelope of arcs of 9 mile, 12 mile, 15 mile radius etc.<sup>27</sup> until the line is carried out as far as desired.

Figure 16 shows how the application of the straight line-equidistance method would appear when applied to the boundary waters between Venezuela and Columbia, ignoring the Monks Islands (Venezuela) and Aruba (Netherlands). As shown, the vagaries of the coastlines are more likely to be accounted for with this progressive development of the 'equidistant line'. Contrast this to the simplified straight line equidistance method represented in Figure 17

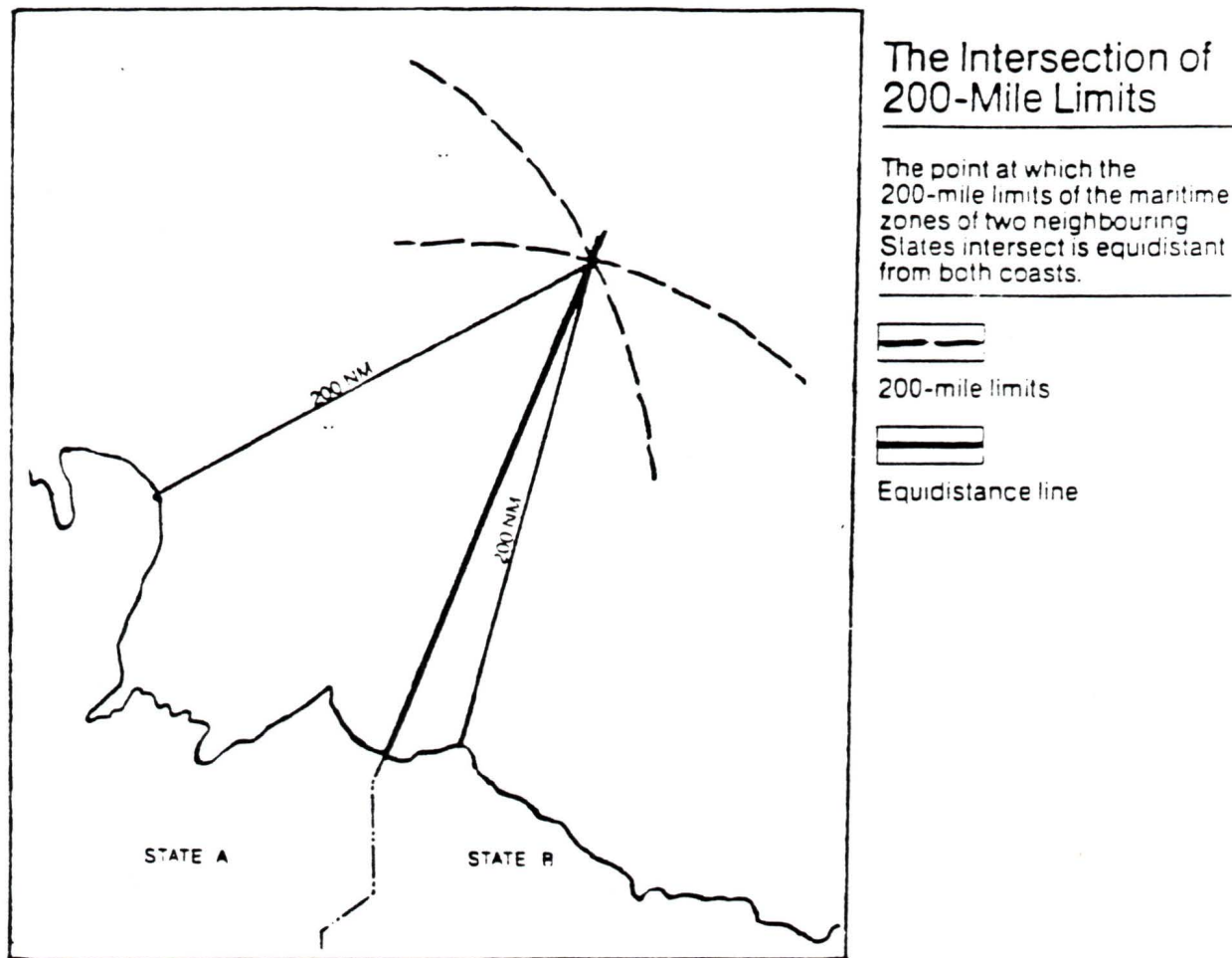
Figure 16



LATERAL JURISDICTIONAL LIMITS OF CONTIGUOUS ZONES

Source: Boggs, S.W. "Delimitation of Seaward Areas Under National Jurisdiction", American Journal of International Law, 45, 1951, p. 261.

Figure 17



Source: International Court of Justice. "Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)." Counter-Memorial. Submitted by Canada. June 28, 1983. The Hague. p. 236, Figure 42.

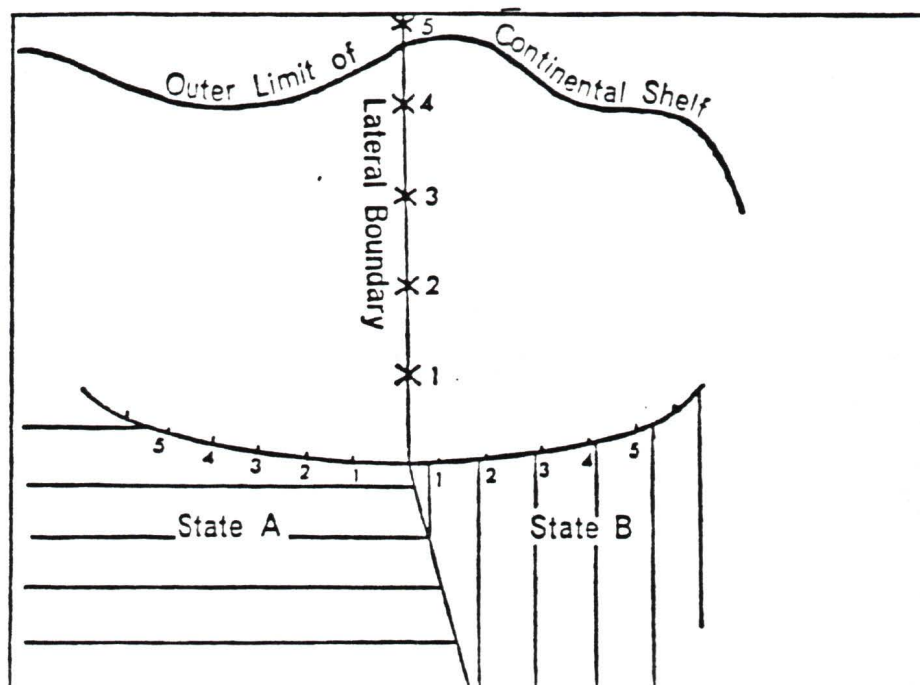
where the equidistant intersection point is determined and then a straight line extended to it from the land boundary terminus. Here the coastal sinuosities would be largely disregarded. Shalowitz also proposed a derivation of Boggs' straight line equidistance method where the coastlines of two adjacent States is not particularly complex. It involves drawing intercepts at equal intervals along the coastline of each state with the shore terminus of the land boundary as centre.

Arcs are then swung seaward from corresponding intercepts with radii equal to the distance between them. The intersections of corresponding arcs form points on the lateral boundary, each of which is by construction equidistant from corresponding points on the coastline of each State.<sup>28</sup>

Figure 18 illustrates Shalowitz's application of the principle. Only the intersection points on the boundary line are necessarily equidistant from the nearest points on the two coasts. To achieve greater approximation to the true equidistance line, the initial intersects could be drawn with smaller increments such as one mile increments.<sup>29</sup>

For more complex coasts, Shalowitz realized that the geometric foundations of Boggs' median line/equidistance principle and method had merit for application to adjacent coasts as well. By applying the same perpendicular bisector formula Shalowitz was able to show that greater and greater

Figure 18



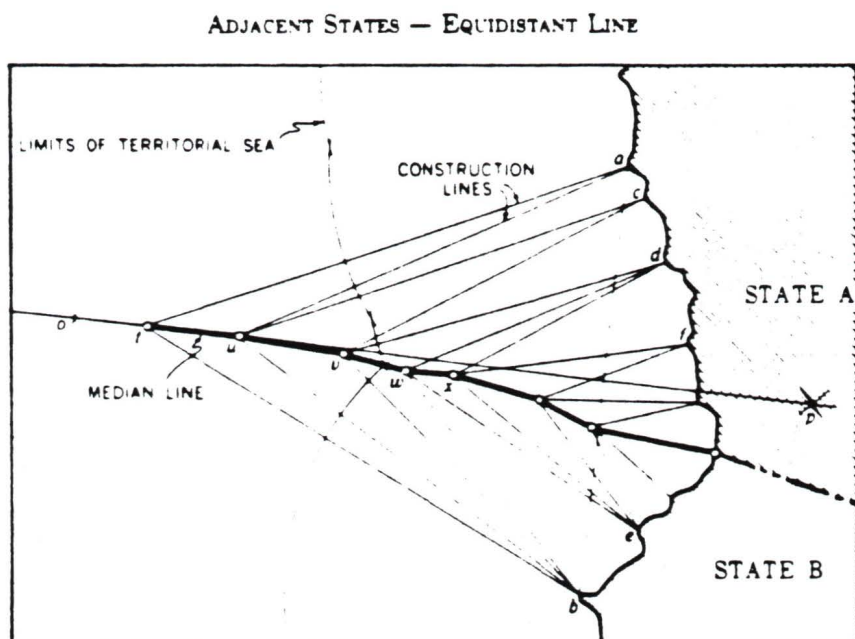
Source: Brown, E.D. The Legal Regime of Hydrospace  
London, Union & Sons, 1971. p. 73.

stretches of the coasts of two adjacent States, together with all their sinuosities could be taken into account and reflected in the resulting equidistant line. Figure 19 depicts Shalowitz's application of the equidistance method to adjacent coasts.

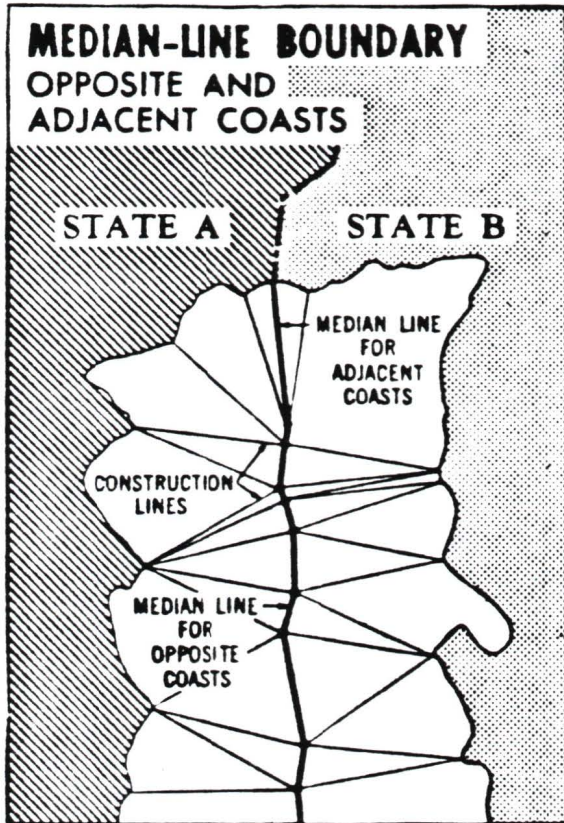
Each turning point in all equidistance-developed boundaries, except for the turning point nearest the mainland and the high-sea terminus in delimitation of boundaries between adjacent states, is a point that is equidistant from three points of land. In defining the boundary, therefore, (1) each turning point may be defined by indicating the three points from which it is equidistant; (2) each turning point may be indicated by latitude and longitude; or (3) the line may be defined by directions (i.e., bearings) and distances from the initial point.<sup>30</sup> Generally, the practical application of a maritime boundary delimitation includes all three categories either alone or in combination with each other.

As noted before, there is no absolute geographical distinction between opposite and adjacent coastal situations. Similarly, the delimitation of a maritime boundary may partake of the construction of a median/equidistance line involving coasts which are both adjacent and opposite. The median line/equidistant method can accommodate such a situation and use the same geometric formula. Figure 20 illustrates this event. Additionally,

Figure 19



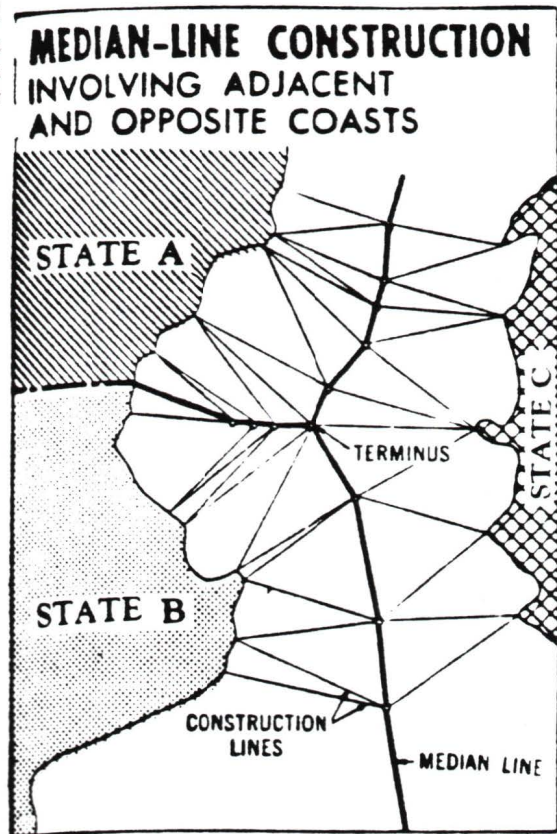
Source: Shalowitz, H. "Shore and Sea Boundaries", Vol. 1, 1962, p. 235.



When two coasts fulfill the requirements of being both *opposite* and *adjacent* to each other a single median-line boundary serves to divide the water between them in both instances.

Figure 21

Source: Percy, G.E. "Geographical Aspects of the Law of the Sea", A.A.A.G., 1959, p. 19.



The juncture of the two median-line boundaries in this diagram (marked "terminus") is a tri-point of lines dividing the waters among three states. In no case does such a line extend more than half-way to any other state.

Source: Percy, G.E. "Geographical Aspects of the Law of the Sea", A.A.A.G., 1959, p. 18.

the median line/equidistant method is not restricted to maritime boundary delimitation between two coastal states. The number of states which may border on a maritime boundary region and whether they are lying opposite or adjacent each will not affect the application of the median line/equidistant method. An example of a situation whereby the maritime boundaries of three states are delimited according to the median line/equidistant method is demonstrated in Figure 21.

Notwithstanding, the application of the median line/equidistance principle is more likely to lead to inequitable results when used to draw the lateral boundary of adjacent states than when used to draw the median line boundary of opposite states. This distinction is based not on a difference in the legal regime applicable in the two situations but on "a difference in the geographic conditions in which the applicable legal regime operates."<sup>31</sup> In opposite state situations where the natural prolongation of two states meet and overlap, the median line effects an equal division of the boundary area involved as near as possible. In adjacent situations, however, the effect of even slight coastal distortions on the areas of extended jurisdiction apportioned to each state is magnified, the greater the distance the boundary extends from the shore. As the Court of Arbitration in the 1977 Anglo-French Case asserted: "it is the combined effect on the side by side relationship of

the two States and the prolongation of the lateral boundary for great distances to seawards which may be productive of inequity and is the essence of the distinction between adjacent and opposite coast situations."<sup>32</sup> However, while Padwa does not argue with the geometric validity of this assertion, he questions whether a distorting effect operating in a lateral delimitation necessarily produces an inequitable delimitation. Padwa states that "although the resulting division may be unequal it is not necessarily inequitable."<sup>33</sup> The equality of states is a principle which does refer to shape and size in much the same way as geographical delimitation must respond to.

Regardless, even in adjacent state situations the principle of equidistance is fundamentally important in the delimitation of extended jurisdictional boundaries. The line is to be deviated from only when its use produces inequitable results; even then its use is important in achieving an equitable delimitation.<sup>34</sup> State practice and the legal regime of the continental shelf points out that in situations in which geographical or other circumstances produce a distorting effect on an 'equidistance' line boundary, "a solution must be sought in a method modifying or varying the equidistance method rather than to have recourse to a wholly different criterion of delimitation."<sup>35</sup> Indeed, the merit of the equidistant principle is that it is likely to provide a point of departure for negotiations,

neither party likely to be content with less than it would if the equidistance principle were applied.<sup>36</sup> Therefore, determining the role of equity in maritime boundary delimitation or its manifestation as an equitable boundary calls for an appropriate mitigation of the disproportionate effects of particular circumstances, usually geographical, on the equidistance line.

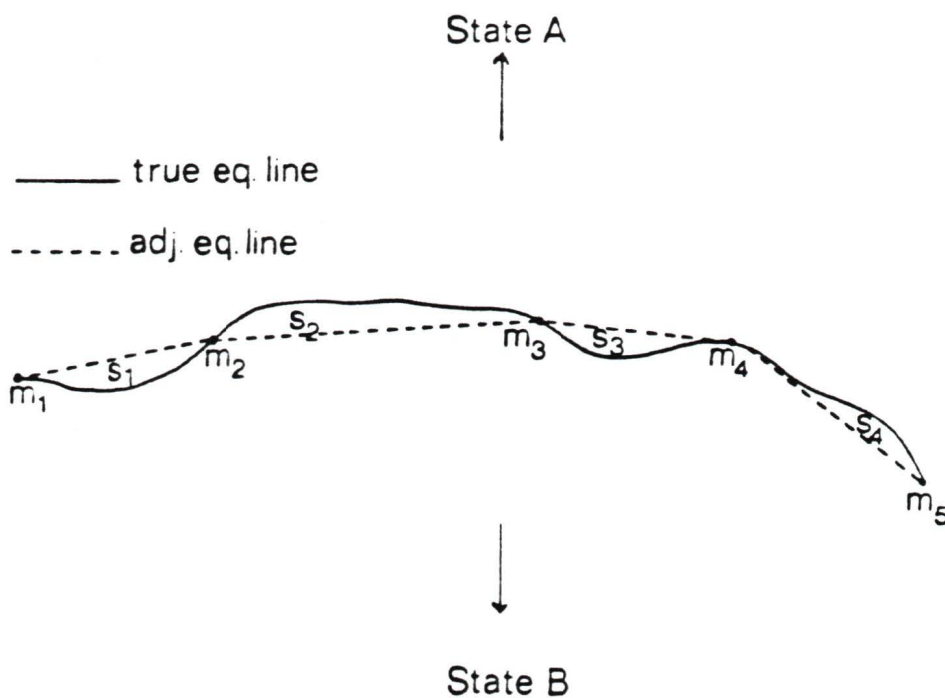
Other reasons, outside of distorting effects, may cause an equidistant line to be modified or abandoned completely. In fact, few 'true' equidistant boundaries (i.e., where every point on the line is equidistant to nearest points on the coasts or baselines of two States) have been agreed upon. In most cases, where the baseline is the low water line, the baselines would be extremely irregular due to either off-lying islands or a pronounced sinuosity of the coast. Consequently, many control points will have a bearing on the course of the true equidistance line between two states. The line may be delineated by a set of points forming many curves, and so will not be easily defined.

To avoid such a case, the two states may agree to adjust or approximate the equidistance line so that the line follows only roughly the general contour of the coastlines using a multi-segmented equidistance line. The reason for this and the most common purpose of altering an equidistant line, is to facilitate the administration of a maritime boundary. Also from the perspective of a fisherman or a

navigator, a relatively constant course does not compel these ocean users to keep constantly checking their position in relation to the complicated path of a curving equidistant line. Navigation simplification makes a fisherman's task much easier especially when pursuing fishery stocks in their mobile habitat. A simplified equidistant boundary line becomes an even more critical element when navigators must collate their position on charts that may themselves be inaccurate in terms of map projections utilized, differences in horizontal and vertical datums and so on. A discussion of such factors will be shortly forthcoming.

Figure 22 illustrates the situation of simplifying a true equidistant line. In this procedure a number of areas of different size and shape ( $s_1, s_2, s_3, s_4$ ) between the true and the adjusted equidistance lines will be "cut off". From the point of view of equity of area it then seems advisable to choose the adjusted line according to an equal area "cut off" principle. This presupposes that each basic unit in the boundary waters has the same potential value. If this is not the case, then the contested area may be subdivided qualitatively, i.e., the small areas can be weighted and compared in order to delineate a final line of division.<sup>37</sup> An alternative, of course, is to reject 'prima facie' the equidistance principle and follow azimuths or parallels that are, nevertheless, approximately equidistant from the coasts of the parties.

Figure 22



Source: Thamsborg, M. "Geodetic Hydrography as Related to Maritime Boundary Problems." International Hydrographic Review 51(1) 1974 p. 162.

In a territorial sea of 12 miles or less, an equidistant line will seldom not produce an equitable division of an area because as Hodgson and Cooper point out, "the area to be divided relates to the baseline that generates the territorial sea, the resulting division of the territorial sea can scarcely be any more disadvantageous to either state."<sup>38</sup> The likelihood of a geometrically-constructed equidistant line producing an inequitable division of offshore areas increases when delimiting the seaward extension of an exclusive economic or fishery zone to a distance of 200 nautical miles and a continental shelf area up to 350 nautical miles from proximal coastlines. Where a continental shelf extends past 350 miles, proximity yields to appurtenance or natural prolongation as the determinant of the limits of a coastal state's jurisdiction. The probability of inequity arising in equidistant boundary delimitation seems to be particularly present in delimiting boundaries of the zones of extended jurisdiction between adjacent states. Special circumstances may exist which distort the application of the equidistance method.

The meaning and scope of these special circumstances which equity requires be considered is not conclusive. The inability to provide an 'a priori' definition of "special circumstances" does not mean it is a purely subjective characterization. Like most 'ad hoc' legal concepts the term "special circumstances" can be expected to gain

precision through experience and the utility of the phrase is not significantly diminished by any original uncertainty as to its scope.<sup>39</sup> Special circumstances can refer to certain legal, political and economic considerations as well as geographic ones. A wide variety of circumstances, some not yet encountered, may be relevant to any particular boundary situation. However, not all circumstances are equally relevant and some are not relevant at all.

However, state's practice and jurisprudence clearly demonstrate that the doctrine of special circumstances is most likely to be invoked with respect to certain purely geographical conditions affecting the measurement of the line of equidistance. The next section discusses these geographic considerations. Legal and technical guidelines are offered in an attempt to resolve the "inequitableness" that particular geographic circumstances produce on an equidistant boundary delimitation between opposite and adjacent coasts. A brief discussion on inequities produced from the use of faulty charts and the application of traditional plotting methodologies in delimiting an equidistant line concludes this chapter.

## Special Circumstances

### Introduction

While the meaning and scope of the term special circumstances is inconclusive, there are characteristics of

special circumstances that are evident. For instance, Padwa points out that since the existence of "special circumstances" detracts from the application of a general rule--that of equidistance--it is necessary for those circumstances to be alleged in a specific manner.<sup>40</sup> This does not mean, of course, that the existence of such circumstances is evidenced by a bare assertion to that effect, but simply that such an allegation must be made in order to fall within the exception. It is then reasonably safe to assert, says Padwa:

that the issue of special circumstances can only be invoked by that party whose territorial interests are affected, and no one else. Whether the special circumstances are alleged to exist with respect to the territory of the party invoking them or with respect to the territory of the other party is of no significance in this context. Nor does it matter how many parties are involved with respect to any given area, for the presence or absence of special circumstances does not depend on a majority decision by the States concerned. Finally, the allegation itself must be made in good faith, and not spuriously or with an eye to delay.<sup>41</sup>

'Special circumstances' were first mentioned in a 1953 report by a Committee of Experts of the International Law Commission (I.L.C.). The report, prepared as a draft paper for the 1958 Geneva Convention on the Law of the Sea, presented a formula for delimitation of territorial sea and continental shelf boundaries of both opposite and adjacent States. The formula provided that the boundary of the territorial sea was to be determined by agreement and in the

absence of agreement, by application of the principle of equidistance, unless another boundary was justified by the presence of "special circumstances." On the nature of special circumstances the only guidance provided by the commission was in reference to departures from the principle of equidistance "necessitated by any exceptional configuration of the coast, as well as the presence of islands or of navigable channels."<sup>42</sup> To that extent, the Commission added "the rule partakes of some elasticity."<sup>43</sup>

The draft delimitation provisions of the Committee of Experts for the International Law Commission were adopted overwhelmingly by the delegate nations at the 1958 Geneva Conference on the Law of the Sea. These provisions are contained in Article 6 (1) and (2) of the Convention on the Continental Shelf. The delimitation formula in the Convention on the Territorial Sea and Contiguous Zone, although worded slightly different, also recognized in territorial sea delimitation that "special circumstances" may warrant a modification or departure from the application of the median line/equidistant method. Although, for contiguous zone delimitation, the respective article (Art. 24) makes no reference to any "special" circumstances or otherwise which would permit less than the application of the median line/equidistance principle provides. Both Conventions did not explain or enumerate "special circumstance."

The 1982 Convention on the Law of the Sea explicitly retains "special circumstances" only in the delimitations provisions for the territorial sea (Art. 15). The contiguous zone no longer has any provisions for delimitation (see Art. 33) while the delimitation articles for the continental shelf and the newly-recognized exclusive zone make no specific reference to "special circumstances". The 1982 Convention does not explain either the constituents of "special circumstances" or equitable principles.

International customary law has however attempted to define and delineate some special circumstances which various tribunals believed were inherent in the rule of the law for maritime boundary delimitation. For example, in rejecting the equidistance rule as a rule of customary international law, the 1969 International Court of Justice's North Sea decision emphasized the primacy of the theory of natural prolongation in continental shelf delimitation. The Court reasoned that where competing claims arise concerning the ownership of adjacent shelf areas, each state must receive that portion of the shelf which is the most natural extension of its territory, even though some of its natural shelf is closer to the competing state.<sup>44</sup> To determine the natural shelf boundary, an equitable delimitation must be accomplished which considers "all relevant" or "special circumstances." The Court listed several geological and geographical factors as relevant circumstances to be

considered in any equitable agreement; general configuration of the coast; presence of special or unusual features; physical structure and natural resources of the shelf area "so far as known or readily ascertainable;" unity of deposits; a reasonable degree of proportionality of the respective coastlines; and the effect, actual or prospective, of any other delimitation between adjacent states in the same region.<sup>45</sup> The last two relevant circumstances reveal the majority of the Court's belief that macrogeographical factors are important considerations for an equitable agreement to be concluded. Judge Koretsky in his dissenting opinion expressed that "special circumstances" such as the first four relevant circumstances listed by the Court "only justify a deviation from the normal line if they are located comparatively near to the landward starting point of the boundary line of the Continental Shelf adjacent to the territories of the two (and only two) adjacent States...."<sup>46</sup> As for such macrogeographic special or relevant circumstances, he felt that such considerations are "entirely irrelevant, except in the improbable framework of a desire to redraw the political map of one or more regions of the world."<sup>47</sup>

The 1977 Court of Arbitration reasoned that geographical considerations comprised the 'special circumstances' that warranted deviation of a true equidistant line delimitation. However, the issue of special circumstances

raised by the Court of Arbitration primarily evolved around the role that special circumstances played in the rule of law for maritime boundary delimitation. Special circumstances were viewed as an equal part with equidistance of a single, combined equidistance-special circumstances rule with the role of the 'special circumstances' condition being to ensure an equitable delimitation. The Court of Arbitration felt that Article 6 of the Convention on the Continental Shelf demonstrated that the special circumstances condition was introduced into the Article because it was recognized that owing to particular geographical features or configurations, application of the equidistance principle might not infrequently result in an unreasonable or inequitable delimitation of the continental shelf.<sup>48</sup> In this respect, the Court identified as a geographical circumstance which affected an inequitable application of the equidistance principle, the possible skewing effects that islands produce in the Atlantic region. Holding the presence of islands to be a special circumstance, the Court decided upon a variation of the strict equidistant line in the Atlantic region. The International Court of Justice's judgment in the 1982 Tunisia/Libya Case similarly held, as did the Court of Arbitration in the Anglo-French Arbitration, that consideration of equitable principles cannot be divorced from the relevant circumstances. In as much as the Court did not elaborate equitable principles as such,

its analysis focussed primarily on identifying and balancing up the relevant circumstances. The Court cited as relevant circumstances:

identification of the relevant coastal fronts [which] is critical to the projection of the general direction of the coasts, calculations of proportionality as between the length of the relevant coasts and the area attributed to each coastal state, and selection of those geographic features that should be discounted to allow for a delimitation that reflects<sup>49</sup> the broad geographic relationship of the parties.

The Court also stipulated that the factor of perpendicularity to the coast and concept of prolongation of the general direction of the land boundary are relevant criteria to be taken into account in selecting a line of delimitation calculated to ensure an equitable solution.<sup>50</sup> The Court in the 1982 Tunisia/Libya Case turned its primary attention to the configuration of the coasts and its relationship to other geographic circumstances (e.g., proportionality). The Court then specified non-geographical circumstances deemed relevant such as existing and potential delimitations with other states in the area or the prior conduct of parties.

The Chamber of the International Court of Justice in the 1984 Gulf of Maine held that the applicability of the median line/equidistance principle is subject to the condition that "there are no special circumstances...which would make the criterion inequitable by showing each

division to be unreasonable."<sup>51</sup> The Chamber designated "special circumstances" as auxiliary criterion and noted "the necessity of granting some effect, however limited to the presence of a geographic feature such as an island or group of small islands lying off a coast; when strict application of the basic criterion might entail giving them full effect or alternatively no effect."<sup>52</sup> The Chamber also noted the effects of a concave coast and the proportional lengths of the coastlines as relevant circumstances to be considered in the delimitation of an equitable boundary.

The most frequently encountered "special circumstance" which may distort an equidistance line is the presence of islands. Exceptional coastal configurations such as concavities and convexities, promontories or gradual shifting of the coastal configuration, as in the region of the delta are other types of "special circumstances" that may cause an equidistant line to be inequitable. The decisive factor that converts such geographical features into "special circumstances" is the use of these features in baseline delineation.

The drawing of baselines or basepoints along the coast closes off a coastal state's internal waters and serve as the starting point for measurement of the territorial sea. A coastal state can greatly increase its maritime jurisdiction without altering the fixed breadth of any zone simply by drawing a more expansive straight baseline system

rather than the normal baseline system of the low-water line. The condition necessary for, and the method of drawing straight baselines are established in the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone (Articles 3-11, 13) and in the 1982 Convention on the Law of the Sea (Articles 7-14). If straight baselines are delineated in accordance with these articles, then straight baselines are justifiably applicable to the measurement of lateral and seaward boundaries. Customary law as well recognizes the legitimacy of the straight baseline system as evidenced by the 1951 Anglo-Norwegian Fisheries Case.

However, coastal states have claimed, with a certain degree of success, that the incorporation of particular geographical features such as islands or promontories as basepoints for a straight baseline delineation constitute, in particular cases, "special circumstances." In such instances, claims to the existence of special circumstances are based on the distorting effect such geographical features exert on the equidistance line. The argument forwarded is that the use of these geographical features as basepoints in a straight baseline system pursuant to the application of the equidistant method may produce, in particular boundary regions, a disproportionate division of maritime areas relative to their size and significance, and in the case of islands, distance from their mainland nation. The effect of conceding such a geographical feature the

status of a basepoint to one coast for delimitation of an equidistant line over the exclusive economic zone or continental shelf against another coast, may be measurable in hundreds, indeed in some cases thousands, of square miles.

### Islands

Article 10(1) of the Convention on the Territorial Sea and Contiguous Zone and Article 131(1) in the 1982 Convention on the Law of the Sea similarly define "islands" as a naturally formed area of land, surrounded by water which is above water at high tide. There is no restriction as to size. Exposed rocks which are mere menaces to navigation are "islands" by this definition. Article 3 of the same 1958 Convention and Article 5 of the 1982 Convention provide that "Except where otherwise provided in these articles, the normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast as marked on large-scale charts officially recognized by the coastal State." Article 10(2) of the same 1958 Convention provides that "the territorial sea of an island is measured in accordance with the provisions of these articles."

Article 1 of the 1958 Convention on the Continental Shelf applies the term 'continental shelf' to the seabed and subsoil of similar marine areas adjacent to the coasts of islands. Article 131(2) of the 1982 Convention provides

that, for the regime of islands, "the territorial sea, the contiguous zone, the exclusive economic zone and the continental shelf of an island are determined in accordance with the provisions of this Convention applicable to other land territory." However, Article 131(3) of the 1982 Convention does place a restriction on "rocks which cannot sustain human habitation or economic life of their own" as having no exclusive economic zone or continental shelf. Therefore, an island no matter how small has a "baseline," and, measured from the baseline it has a 12-mile territorial sea and a 24-mile contiguous zone. An island also has an exclusive economic zone (which shall not extend beyond 200 nautical miles) and a continental shelf (which may extend either to 200 nautical miles or 100 nautical miles from the 2500 metre isobath or 350 miles) but there is a restriction on islands attaining these zones.

Article 6(1) and (2) of the 1958 Convention on the Continental Shelf provides that opposite and adjacent continental shelf boundaries, respectively, be measured from "the baselines from which the breadth of the territory sea of each State is measured." However, Articles 74(1) and 83(1) of the 1982 Convention stipulate only that the boundaries of the exclusive economic zone and continental shelf, respectively, "be effected by agreement on the basis of international law, as referred to in Article 38 of the Statute of the International Court of Justice, in order to

achieve an equitable solution."

Further, conventional law in Article 12(1) of the 1958 Convention on the Territorial Sea and Contiguous Zone and Article 15 of the 1982 Convention on the Law of the Sea states where the two coasts of two States are opposite or adjacent to each other, neither is entitled, failing agreement to the contrary, "to expand its territorial sea beyond the median line every point of which is equidistant from the nearest point on the baselines from which the breadth of the territorial seas of each of the two States is measured." Both provide that the above provisions shall not apply "where it is necessary by reason of historic title or other special circumstance to delimit the territorial seas of the two States in a way" that varies with this provision. Article 24(3) of same 1958 Convention in the same manner provides that "where the coasts of two States are opposite or adjacent to each other, neither of the two States is entitled, failing agreement between them to the contrary to extend its contiguous zone beyond the median line every point of which is equidistant from the nearest point on the baselines from which the breadth of the territorial seas of the two States is measured." However, Article 33 of the 1982 Convention has dropped this provision.

Therefore conventional law holds that an island's baseline is used to measure its territorial sea and its contiguous zone. However, while Article 6 of the 1958

Convention on the Continental Shelf recognized the use of an island's baseline to delimit its continental shelf, Articles 74(1) and 83(1) of the 1982 Convention include no such provisions. An island's baseline is also used to measure an equidistant line in cases where its territorial sea overlaps that of another state, regardless of the island's size. The latter was formerly recognized in the 1958 Convention for an island's contiguous zone as well, but the 1982 Convention again contains no such provision. Consequently, it can be said that contemporary conventional law recognizes that an island possesses a baseline, a territorial sea, a contiguous zone, an exclusive economic zone and a continental shelf. Further, recent conventional law provides that an island's territorial sea and a contiguous zone be measured from baselines but excludes the other extended zones of jurisdiction from such provision. However, convention law prior to 1982 permitted continental shelf boundary delimitation to be measured from baselines.

International conventional law allows all 'islands' to be included in straight baseline delineation for the measurement by the equidistant method of the 12 mile territorial sea. Conventional law is however ambiguous with regard to the role of 'islands' in delimitation of the contiguous zone, the exclusive economic zone and the continental shelf. However, the critical factor that becomes evident under the 1982 Convention on the Law of the Sea is

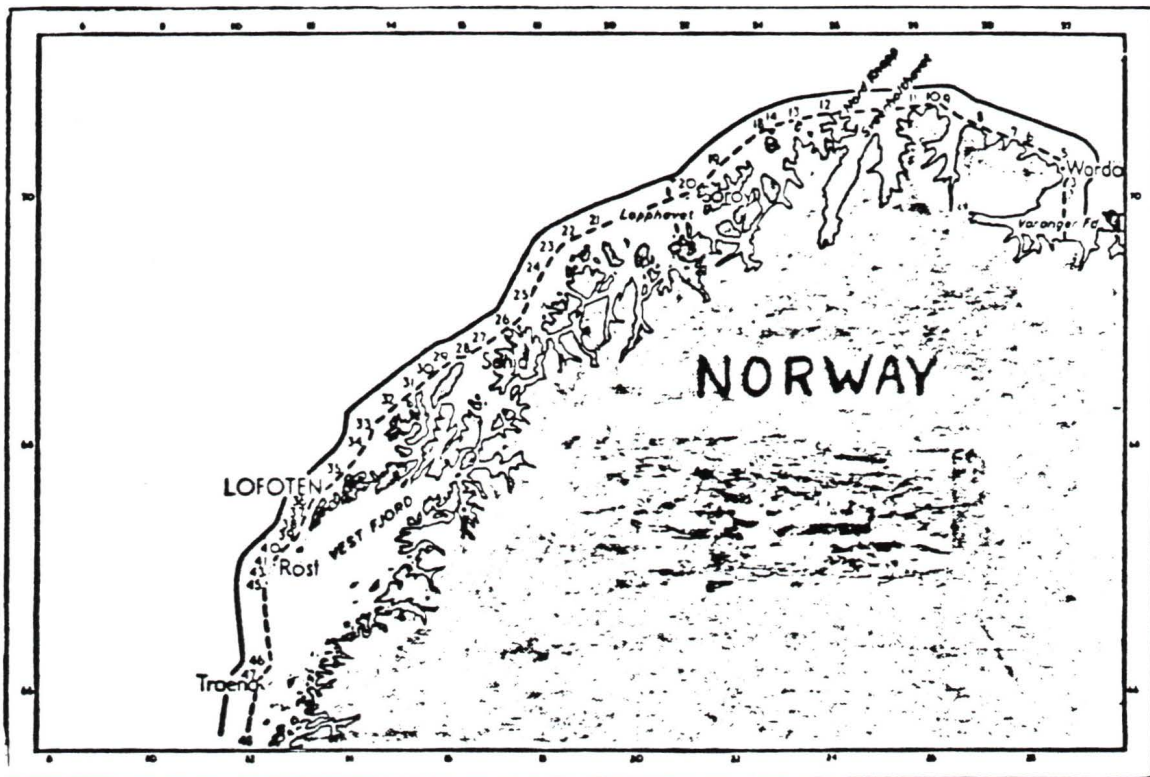
that equitable principles should determine the use of islands as baselines for delimitation of the exclusive economic zone and the continental shelf. It is also clear that islands, except islands that are uninhabitable or those with no economic enterprise of their own, possess an exclusive economic zone and a continental shelf. This reliance on equitable principles as determinants of the status of the islands in boundary-making seems justified. If all islands were included for purposes of measurement (as Article 1 of the Convention on the Continental Shelf provides for the continental shelf), it might lead to extremely inequitable and implausible results in determining the boundary especially for the exclusive economic zone and continental delimitation. For example it would seem inequitable if the existence of an island should be allowed to divert a boundary and thus give extensive areas of shelf to the state possessing the island. Should such an island exist about halfway between opposite states, both on the same shelf area, and its baselines be allowed to be used in forming the median line, this line would be switched from the middle of the area separating the states to three quarters of the way across, towards one side or the other dependent on the sovereignty of the island.<sup>53</sup> On the other hand, if only some islands were to be included, it would be necessary to devise certain criteria in order to make the distinction. International customary law, state practice

and geography demonstrate that certain criteria both subjective and objective, have been proposed to determine which islands should be included in delimitation of a boundary by the equidistance formula.

Court's first notable example of customary law's treatment of islands in maritime boundary delimitation was by the International Court of Justice in the 1951 Norwegian Fisheries Case. The matter involved Norway's desire to delimit straight baselines along its deeply-indented, island-fringed coastline. The decision of the Court is reflected in Article 4 of the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone. The Court upheld the validity of Norway's use of straight baselines, declaring that the 'skjaergaard' (the numerous islands, islets, rocks and reefs) constituted the Norwegian coastline and its use as the baseline was "dictated by geographical realities."<sup>54</sup> These 'realities' were first adherence to a baseline which follows the general direction of the coast, and second, the geographical linkage between the land and the sea.<sup>55</sup> It would then seem reasonable to include those islands which could be fairly considered an integral part of the coastal domain (See Figure 23).

The Court in the North Sea Continental Shelf Case identified offshore islands as a possible 'special circumstance' but did not relate the issue of islands to that of baseline delineation. However, the Court was not required to

Figure 23



----- Straight Baselines

———— Territorial Sea Limit

Source: Waldock, C.H. "The Anglo-Norwegian Fisheries Case:", British Yearbook of International Law, XXVII, 1951, p.115.

address any arguments regarding particular islands in the boundary region.

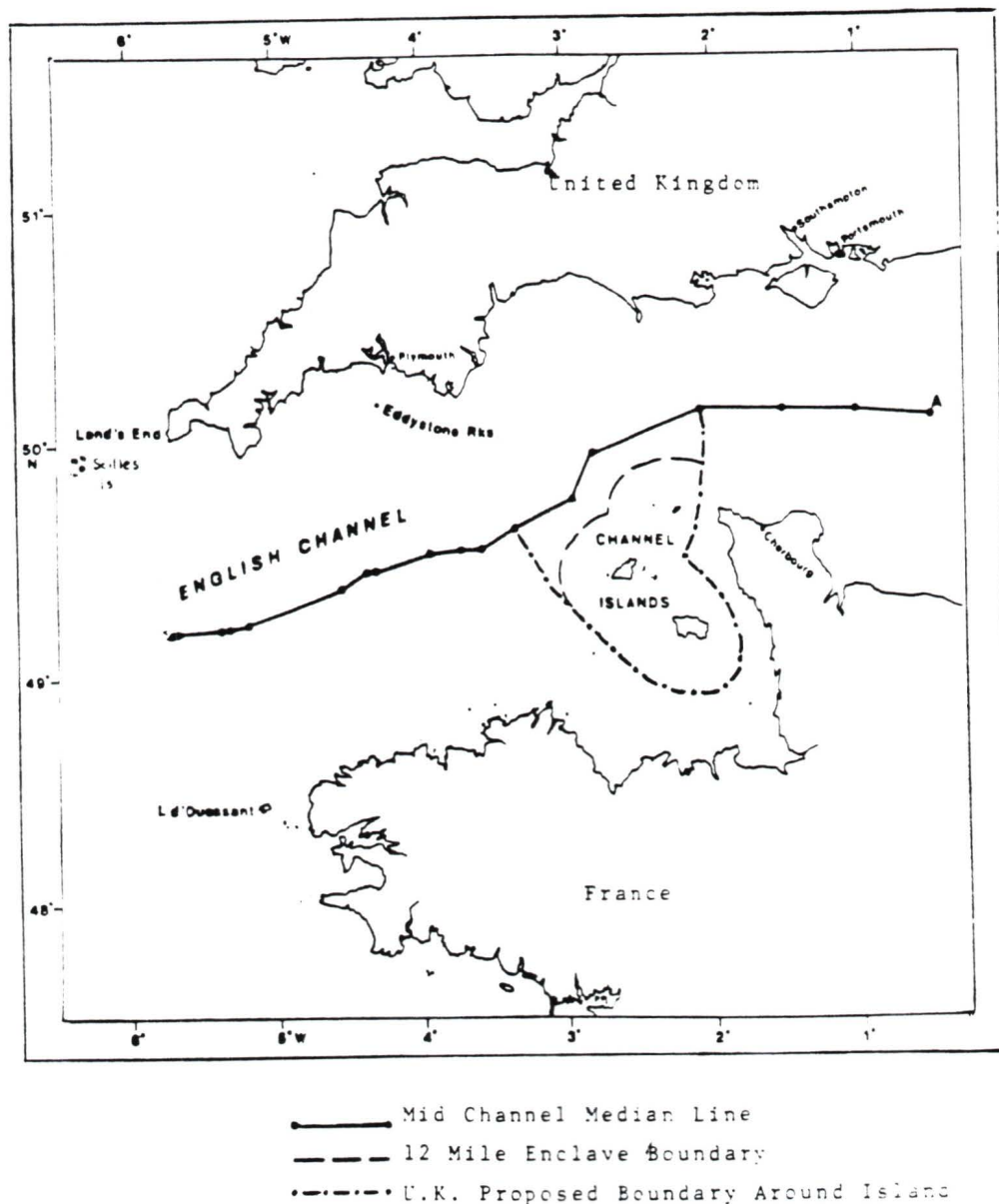
The 1977 Anglo-French Continental Shelf Arbitration involved three aspects with regard to islands in the delimitation of an equidistant boundary. One aspect regarded the interpretation of whether Eddystone Rock was an island and therefore if it should be used as a basepoint for measuring the median line boundary in the English Channel. A second matter centered on the question of whether to include the Channel Islands (i.e., Guernsey, Jersey, Sark et. al.) in the delimitation of a median line boundary which both parties agreed should be the basis of the boundary in the Channel Islands region. A third aspect concerned the argument forwarded by France that a special circumstance existed in the western approaches to the Channel or in the Atlantic Ocean area because the United Kingdom's Scilly Islands projected further into the Atlantic than France's Ile d'Ouessant (i.e., Ushant Is.). This fact, it was alleged by France, produced an inequity by deflecting a median line in a more southerly direction and thus comprised a 'special circumstance' which warranted departure from a strict application of the equidistant method.

As to whether a rock is an island, the situation was this. The parties, having agreed that the boundary in the mid-Channel south of Plymouth should be the median line, could not similarly agree whether Eddystone Rock should be

used as one of the basepoints for determining the equidistance line's course (Figure 24). France argued that Eddystone Rock was a low-tide elevation which in this instance was entitled to no territorial sea and thus could not be used as an equidistant line basepoint.<sup>56</sup> The United Kingdom countered that it was an island, having a territorial sea, and thus relevant as a basepoint for measuring the equidistant line. Evidence was presented to the Court that even at mean high-water spring tides Eddystone Rock is above water but that it is occasionally awash during certain of the highest tides.<sup>57</sup> France claimed that an island under international law must always be above water. This view does not accord with international practice, nor the interpretation normally given to 'high tide' in Article 10(1) of the 1958 Convention on the Territorial Sea and the Contiguous Zone and Article 131(1) of the 1982 Convention on the Law of the Sea. However the Court decided the issue not on the question of what constitutes "high tide" but on the basis of France's acquiescence to the United Kingdom's use of Eddystone Rock as a basepoint for delimiting its fisheries zone since 1965.

Colson, in his review of the 1977 Anglo-French Continental Shelf Arbitration, notes the important role islands as baselines play:

Figure 24



Source: United Kingdom of Great Britain and Northern Ireland. Secretary of State for Foreign and Commonwealth Affairs. Arbitration Between United Kingdom of Great Britain and Northern Ireland and the French Republic on the Delimitation of the Continental Shelf. Miscellaneous No. 15. London: Her Majesty's Stationery Office, 1978. Map Supplement, inside back cover.

Indeed, the selection of basepoints for measuring the equidistant line may be equally as important as agreement on the general method of delimitation. Since seldom do two neighboring states employ precisely the same baseline system, the determination of an equidistant line becomes something considerably more than a mechanical process. It becomes an exercise of principle, where the application of international law to the geographical facts is as important as it is in the determination of the method of delimitation.<sup>58</sup>

Colson's point will be considered in the discussion of technical considerations in applying an equidistance line which follows this section.

The second matter in the 1977 Anglo-French Case concerned the inclusion or exclusion of islands in a median line delimitation. France argued that the median line boundary in the Channel should be delimited from the baseline of the territorial seas on the respective mainland coasts disregarding the Channel Islands. An enclave should exist around the Channel Islands made up of the tangent of six-mile circles around each island. The United Kingdom, while agreeing on the median line boundary, believed that the Channel Islands being of significant size and population, were entitled to a full continental shelf regime regardless of their location. The median line should transverse between the Islands and mainland coast of France allowing the seaward side of the Channel Islands shelf to merge with that of mainland United Kingdom (See Figure 24). France, besides pointing to the strategic and navigation disadvantages to this approach, countered that the Channel

Island's shelf was, in principle, the natural prolongation of France.<sup>59</sup>

The Court having concluded that delimitation by a median line was appropriate due to the oppositeness of their approximately equal coastlines in relation to their continental shelf then held that the "areas of shelf left to each Party on either side of the median line should be broadly equal or at least broadly comparable."<sup>60</sup> The Court felt that the effect of the Channel Islands on such a median line would produce a radical distortion of the boundary creative of inequity.<sup>61</sup> The Court decided that a primary boundary should be drawn equidistant from France's coast and the mainland coast of the United Kingdom, disregarding the presence of the Islands. A boundary should then be delimited between the French shelf south of the mid-Channel median line and the Channel Islands. This boundary was drawn on the seaward side of the Islands by extending the tangents of twelve-mile circles from the baselines of the territorial sea of the Islands (Figure 24). Twelve miles allowed for non-encroachment upon the existing 12 mile fishing zones of the Islands and did not preclude a subsequent extension of the territorial sea of the Islands to 12 miles.<sup>62</sup> The Court held it was without competence to delimit the boundary on the landward side of the Channel Islands.<sup>63</sup>

McRae views the Court's finding that equivalent coasts deserve equivalent areas of continental shelf as nothing

more than apportioning the shelf rather than delimiting it.<sup>64</sup> Furthermore, McRae ponders how the Court could reach the figure of 12 miles for the shelf. By doing so he points out, the Channel Islands are being accorded only the territorial sea limit afforded under international law. In effect, this denied the United Kingdom any continental shelf in respect of the Channel Island at all.<sup>65</sup> This would seem to contravene Article 6 of the 1958 Convention on the Continental Shelf and Article 131(2) of the 1982 Convention on the Law of the Sea which provide that all islands (Article 6) or at least those inhabited or economically meaningful islands (i.e. Article 131(2)) have a continental shelf area.

The third aspect of the Anglo-French Case involving islands concerned the distorting effect islands may have on a strictly applied equidistance line. In the Atlantic region, France had initially claimed that because the geographical situation was one of neither oppositeness nor adjacency, Article 6 of the 1958 Convention of the Continental Shelf did not apply. And if the Court found this not to be the case and Article 6 did apply, then France contended that a 'special circumstance' existed which justified the inapplicability of the strict equidistant method. This 'special circumstance' was that the coastal frontage of the United Kingdom projected further into the Atlantic than that of France. This was true whether one took the outer edge of the mainland of the respective states

or the outermost points on the islands (Figure 24).

The Court upheld the validity of Article 6. The Court then had to decide whether this geographical fact which France claimed was a 'special circumstance' produced inequity by deflecting a median line in a more southerly direction. In the Court's view this came down to whether the projection of the Scilles westward of Ushant Island rendered an equidistance line inequitable.<sup>66</sup> The Court noted that the effect of the Scilles on the equidistance line was to deflect it considerably more to the southwest than would be the case if the equidistance line was delimited from the English mainland. The difference in the angle between the two equidistant lines is  $16^{\circ} 36' 14''$ , and the area between the two equidistant lines is approximately 4,000 square miles.<sup>67</sup> The Court found that the "further projection westwards of the Scilles Isles, when superadded to the greater projection of the Cornish mainland westward beyond Finistere" was similar to "the projection of an exceptionally long promontory which is generally recognized to be one of the potential forms of special circumstance."<sup>68</sup> This situation, coupled with the fact that France and the United Kingdom abut on the same continental shelf with coasts of roughly similar length in relation to the shelf was in the Court's opinion a distortion "material enough to justify a boundary other than the strict median line" proposed by the United Kingdom or "envisaged in Article 6(1) of

the 1958 Convention on the Continental Shelf."<sup>69</sup> Therefore the position of the Scilles was a special circumstance within the meaning of Article 6.

To account for this 'special circumstance' France had proposed a method of delimitation which bisected the angle formed by lines defining the general direction of the Channel coasts of each state. The Court rejected this method because it had the effect of detaching itself from the coasts actually abutting on the continental shelf of the Atlantic region and therefore not easily reconciled with natural prolongation. Instead, the Court felt that since equidistance would otherwise be appropriate except for the distorting effect of the Scilles, a modified form of equidistance was needed. Precise calculations of the effect of the distortion and effect of the abatement were not necessary because, as the Court found, "the principle of proportionality is not an absolute one requiring absolute equality between states in respect of the shelf areas pertaining to them."<sup>70</sup> The Court then decided to give the Scilles less than the full effect in applying the equidistance method by using a method used by Iran and Saudi Arabia to delimit their maritime boundary. This method gave a half-effect to an offshore island by:

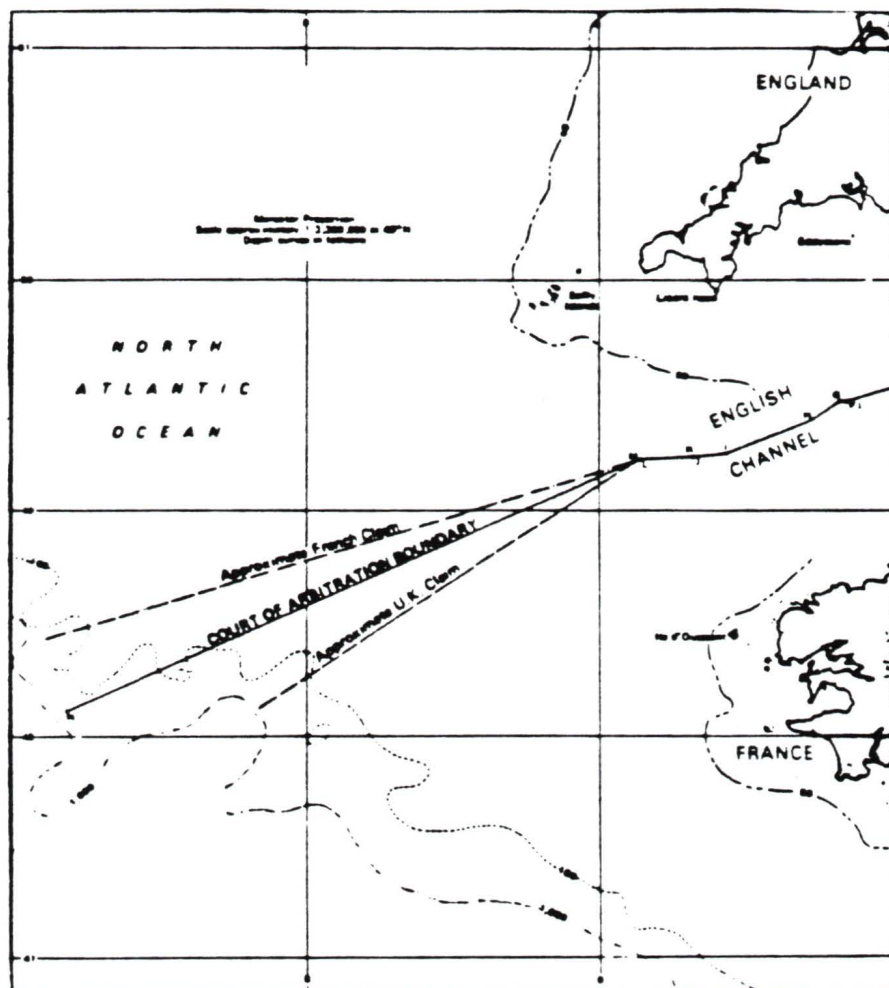
delimiting the line equidistant between the two coasts, first without use of the off-shore islands as a basepoint; and, secondly, with its use as

basepoint; a boundary giving half-effect to the island is then the line drawn mid-way between those two equidistance lines.<sup>71</sup>

It was then applied to the Atlantic region by drawing an equidistant line using the outer edge of the Scilles and the outer edge of Ushant Island as basepoints. Then another equidistance line was drawn using the outer edge of the Cornish mainland and the outer edge of Ushant Island as basepoints. The boundary was then drawn midway between these two equidistance lines (See Figure 25).

McRae again raises questions as to the validity of the reasoning behind the decision to recognize the existence of a special circumstance and the method employed to abate its effect on equidistance lines. McRae rightly notes that it was not clear whether it was the offshore islands that extended the coast of the United Kingdom further than the coast of France including Ushant Island or whether it was the English coast for purpose of delimiting the boundary, and therefore including the islands which extended further than the French coast, that constituted the "special circumstance."<sup>72</sup> It is essential to know whether the inequity found here can only be present in the case of offshore islands, or whether it can be found to exist in any case of opposite states where the coast of one extends further than the other. "Moreover, by what standard is it inequitable for one state to command a larger area of continental shelf because its coastline (including islands) extends further

Figure 25



Source: Colson, D.A. "The United Kingdom - France Continental Shelf Arbitration," American Journal of International Law 72, 1978, p.107.

that an opposite state."<sup>73</sup> McRae feels the Court again seems to be apportioning equal shares of the shelf rather than delimiting it by adopting the relative equality of the coasts in other respects.<sup>74</sup> McRae also questions whether a half effect was really achieved by the method adopted by the Court. McRae's argument is convincing in relating the error which results from the second line in the 'half-effect' method rather than a point precisely halfway between the outer point of the Scilles and the outermost point of the Cornish mainland.<sup>75</sup> This would have reduced the effect of the Scilles upon the equidistance line and would have had the advantage of less complexity.<sup>76</sup> Regardless, the Court was trying to only select a method that would give to the Scilles "less than the full effect in applying the equidistance method."<sup>77</sup> And to this end, the Court was successful.

The International Court of Justice in the 1982 Tunisia/Libya Continental Shelf Case addressed the question of 'islands' in its judgment. While the Court did not elaborate on the equitable principles to be considered in delimitation, the Court did focus primarily on identifying and balancing up the relevant circumstances. Of these relevant circumstances, the presence of the Tunisia islands was considered in determining the second segment of the boundary where it was felt the Tunisia coast took a radical change which resulted in the two states' coasts being opposite

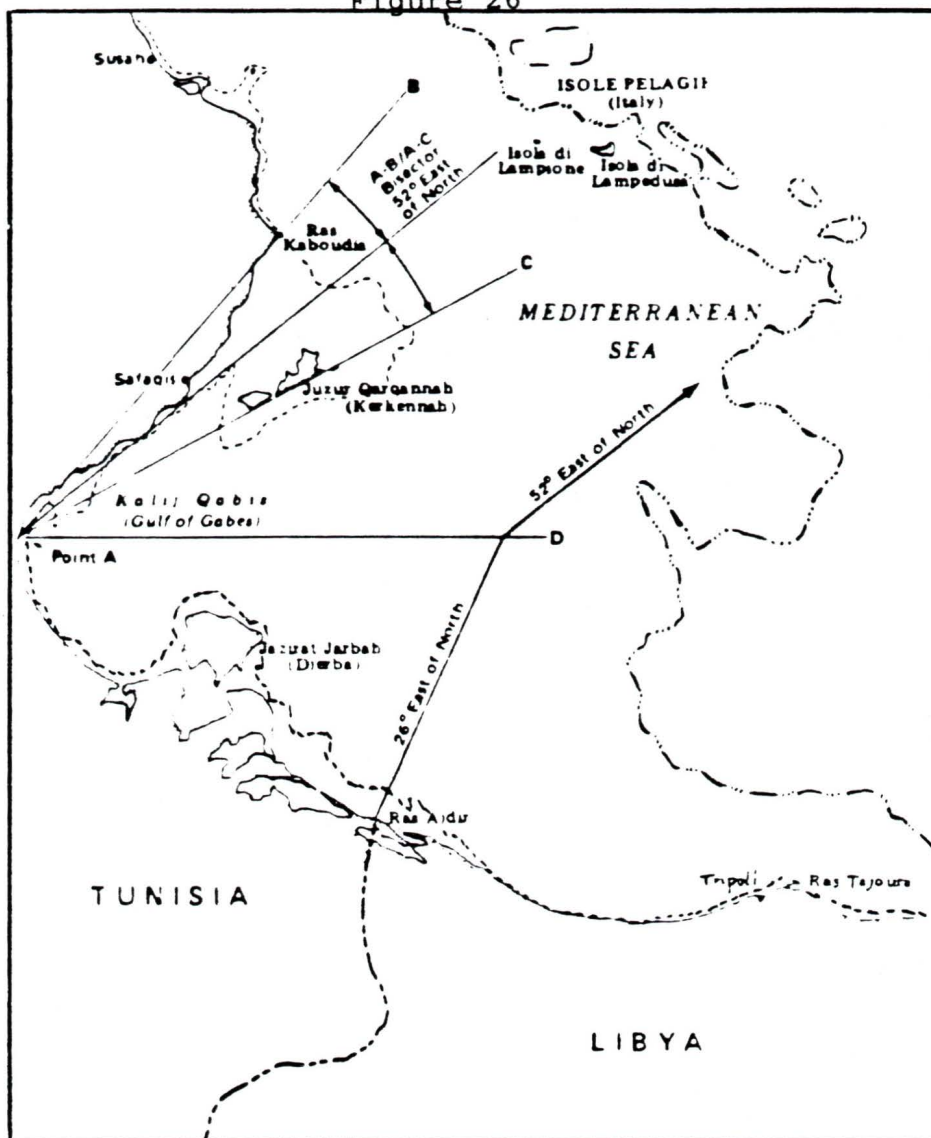
rather than adjacent to each other. The angle of the seaward segment (i.e., the second segment) of the boundary line was based on the general direction of the Tunisian coast from the point of deepest concavity of the Gulf of Gabes. To determine this direction, the Court needed to address the effect that the Kerkennah Islands and the low-tide elevations surrounding them would have. The Court determined that full effect "would in the circumstances of the case, amount to give [sic] excessive weight to the Kerkennahs."<sup>78</sup> While Judge Schwebel agreed with this finding he wrote in a separate opinion that "the Court has not carried the burden of demonstrating why granting full effect to the Kerkennahs would result in giving them 'excessive weight.'"<sup>79</sup> In a dissenting opinion, Judge Gros contended that the Kerkennahs were entitled to full effect because they are close to the Tunisia mainland with a considerable population divided from it only by shallow waters.<sup>80</sup> Judge Oda conversely would not have given the Kerkennahs any effect in developing his preferred modified equidistance line. He felt that the islands "being elongated and far from parallel to the coast, project far out to sea" and consequently such a projection may have a disproportionate effect on an equidistance line.<sup>81</sup>

Regardless, the Court allowed the Kerkennahs half-effect, following the precedent of the Anglo-French Case. In this case, the Court adopted a method which made

the line of delimitation parallel to a line bisecting the angle by a line drawn along the Tunisian coast and one drawn along the seaward coast of the Kerkennah Islands. (This method is similar to that proposed by France and rejected by the Court in the 1977 Arbitration Award.) As the angle of the former was  $42^{\circ}$  east of north and the latter  $62^{\circ}$  east of north, the angle of the bisector was  $52^{\circ}$  east of north. (See Figure 26). The second segment of the boundary line then adhered to this bearing from the seaward terminus of the first segment, then extending to a point which was undetermined due to the implications that such a limit had on the interests of third states.<sup>82</sup>

The International Court of Justice in the 1984 Gulf of Maine Case considered the presence of islands as relevant circumstances for delimitation of a median line boundary. Having determined that the coasts of the parties between Nova Scotia and Massachusetts approached a condition of oppositeness rather than the adjacency found to exist in the first segment of the boundary, the Chamber held that a median line boundary was appropriate in this second segment. The Chamber then found that the most pressing "special circumstance" existing in the boundary region, that is the 283 to 206 mile or the 1.38 to 1 ratio advantage in the lengths of coastal fronts for the United States, justified an adjustment to the median line boundary in this second segment.

Figure 26



**ICJ AWARD:  
Libya-Tunisia Maritime Boundary Dispute**

- Point A Most westerly point on the low water line of the Gulf of Gabes
- A-B Construction line drawn from Point A past the seaward tip of Ras Kaboudia
- A-C Construction line drawn from Point A along the seaward coast of the Juzur Qarqannah
- A-D Parallel of latitude of the most westerly point on the low water line of the Gulf of Gabes
- International boundary
- ICJ "Award Line"
- 20 meter bathymetric contour
- 100 meter bathymetric contour

Source: Feldman, M.B. The Tunisia-Libya Continental Shelf Case: Geographic Justice or Judicial Compromise. American Journal of International Law, 77, 1983, p. 221.

The Chamber adjusted the median line to reflect the difference between the lengths of each state's coastal fronts by correcting on a transverse displacement (not an angular one) the median line boundary by the 1.38 to 1 ratio. The Chamber then held that the presence of inhabited Seal Island, two and a half miles long, nine miles from the Nova Scotian mainland at the entry to the Gulf, constituted a relevant circumstance which should influence the final calculation of the adjusted median line method. Thus the Chamber gave the presence of Seal Island a half-effect which amounted to decreasing the 1.38 to 1 ratio correction for the special circumstance to a 1.32 to 1 ratio. No reasons were discussed by the Chamber for their decision that Seal Island only be afforded a half-effect. McRae's previous concerns that such corrections constitute apportionment by the Court rather than delimitation, conceivably could be echoed for the actions taken by the Chamber in this second segment.

The delineation of seven straight line segments which measured the relative lengths of each coastal front from eight salient coastal features is an issue not addressed by the Chamber. It is doubtful that such a method for baseline delineation would conform to international law. While most islands were contained within these straight line segments, there were however some islands on the Maine coast seaward of that baseline which were not included in the measurement

of this coastal front. In addition, the straight line segment which determined Nova Scotia's southwestern coastal front, created a significant promontory on the seaward side of the line by crossing the peninsula where Yarmouth is situated. This promontory was not considered in the measurement of this coastal front (see Figure 10).

States practice evidences various treatments of islands in boundary treatment which give either full effect, half effect or no effect to islands. Full effect given to islands in equidistant boundary delimitation usually consists of applying an 'arcs' technique. This involves extending a circle of arcs of various dimensions from the baseline of an island, producing a bulge on an equidistance line primarily determined by measurement from the mainland coasts of the parties. Along the Italian-Yugoslav maritime boundary the Yugoslav islands of Pelagrutz and nearby Kajola are located very close to where a median line boundary would be. Accordingly, 12-mile arcs were described, separating the islands from the Italian mainland to the west; these arcs form a part of what would otherwise be an equidistant boundary (Figure 27).<sup>83</sup> Italy and Tunisia described 12 mile arcs about the Italian island of Lamione which is some 35 miles closer to the Tunisia coast than, if there were no islands, the equidistant line would be.<sup>84</sup> About the Italian islands of Panellera, Linosa and Lampedusa, 13 mile arcs were drawn (See Figure 28).<sup>85</sup> On the Iran-Saudi Arabian



Figure 27  
 Italian-Yugoslav  
 Continental Shelf  
 Boundary

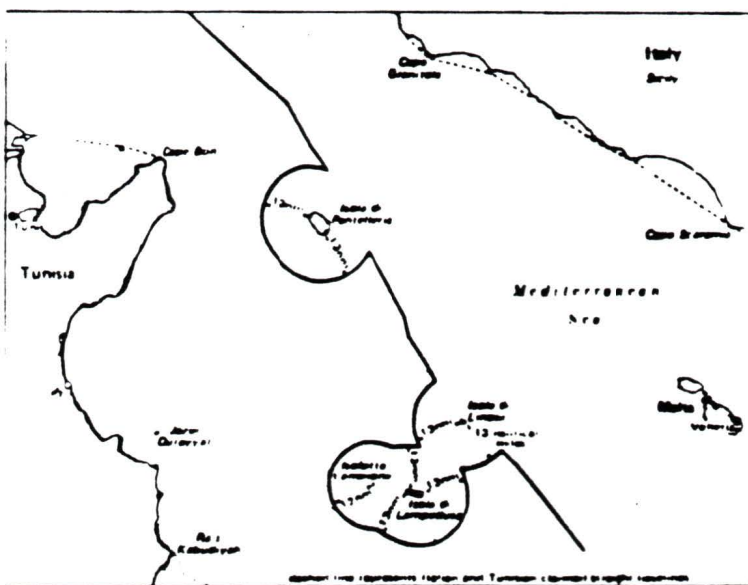


Figure 28  
 Italy Tunisia  
 Continental Shelf  
 Boundary

Source: Alexander, L. M. "Baseline Delimitation",  
 Virginia Journal of International Law, 23(4),  
 983. p. 527.

maritime boundary, a 12 mile arc is detailed around the Iranian island of Farsi and the Saudi-Arabian island of Arabi. A straight line segment connects the two arc lines (See Figure 29).<sup>86</sup> The Abu Dhabi-Qatar maritime boundary includes a 3 mile arc around the Abu Dhabi island of Dayyinah.<sup>87</sup> In addition, a part of the Iran-Oman maritime boundary is a sector of a 12 mile arc based on the Iranian island of Larak.<sup>88</sup> A variant of the arc technique was applied in the Anglo-French boundary arbitration for delimiting the north and west maritime boundaries of the Channel Islands off the coast of France.

Partial-effect given to islands has occurred infrequently in state practice but would include one segment of the Iranian-Saudi Arabia maritime boundary where a half-effect was given to the Iranian island of Khark (Kharg) lying 17 miles off Iran's coast. Also partial effect was given in the maritime boundary delimitation between Italy and Greece to the Greek islands of Otranto and Nisi Stamfani.<sup>89</sup>

Giving no effect to islands was included in the boundary agreement between Norway and the Soviet Union where the continental shelf boundary drawn from median points at each terminal does not recognize two small Soviet islands as basepoints.<sup>90</sup> The India-Sri Lanka boundary was delimited disregarding the Adams Bridge islands on both sides of the boundary at the southern limit of Palk Strait.<sup>91</sup> The Iran-

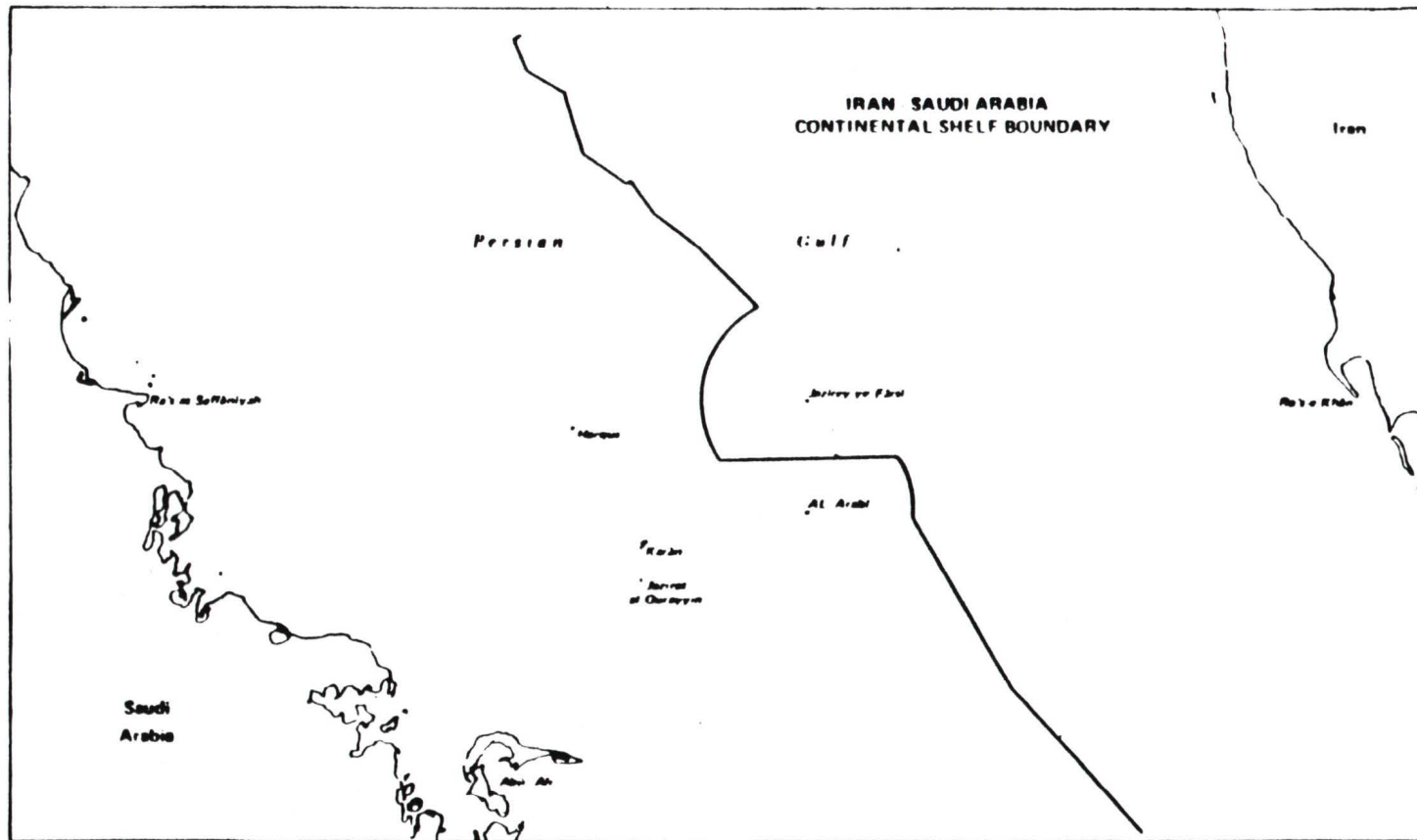


Figure 29

Source: Alexander, L. M. "Baseline Delimitation", Virginia Journal of International Law, 23(4), 1983.  
p. 528.

Qatar boundary ignores a number of small islands located well offshore in the vicinity of the boundary.<sup>92</sup> The island of Ven, located north of Copenhagen on the Swedish side of the territorial sea boundary with Denmark, was ignored in their boundary agreement.

Certain criteria have been proposed to determine whether an island is entitled to recognition of its coast as a baseline for the calculation of a median (or equidistance) line between adjacent and opposite coasts of states. An important first step to satisfy before applying criteria to assess whether an island is entitled to extended jurisdictional zones is to call attention to the distortion of the equidistance line which might result from recognition of any island situated at a distance from its owner's mainland or an island owned by one state, lying on another state's side of the mainland equidistance line. It should be asked initially, in each case, whether the distortion is of major significance and whether both states are claiming islands as baselines. Having answered these questions in the affirmative, objective criteria such as distance and size could be utilized to determine if the island(s) is an integral part of the coastal domain.

Distance from the mainland may be an important controlling criterion. In this regard, it has been suggested that an island would be recognized in baseline delineation if any portion of the island lies within 24 nautical miles

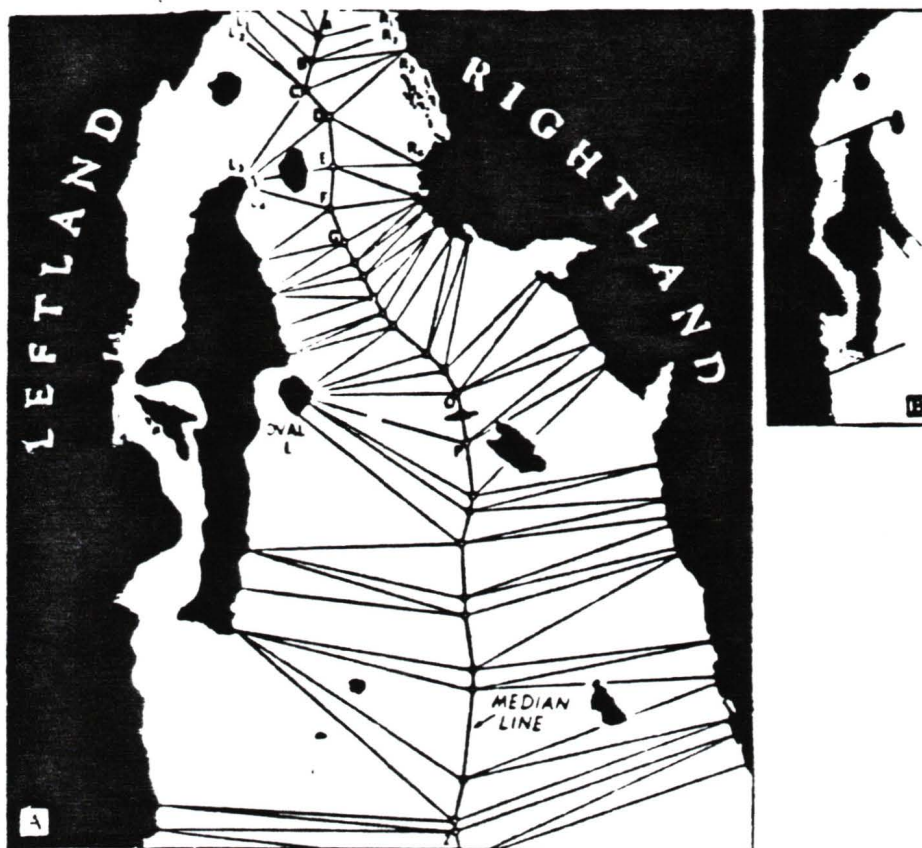
of the coast of its owner's mainland or another island. This criterion is based on arcs which are used to delimit the seaward boundaries of the 12 mile territorial sea of the island merging with the 12 mile territorial sea off the state's coast. S.W. Boggs proposed a criterion based on both distance and 'size' to determine whether an island should be assimilated to the mainland. Boggs suggested that:

The most reasonable and workable rule is believed to be to draw that pair of parallel lines tangent to opposite ends or sides of the island which encloses the least area of water between island and mainland....Then, if the land area of the island (properly planimetered from the low-tide shoreline) exceeds the water area bounded by the parallel lines, the island and mainland, the island should be reckoned as if part of the mainland base line, <sup>93</sup> in laying down the median line... (See Figure 30).

Padwa points out that the weakness in Boggs' approach is the fact that the shape of the island and the direction of the longer axis are crucial elements of the formula.<sup>94</sup> Given two sister islands of identical area and distance from the shore, this formula might exclude one island simply because of its unsatisfying shape.<sup>95</sup>

'Size' has also been analyzed by Ely as a criterion to evaluate the status of islands. The essential question to be answered is just how small must an island be, to be disqualified as a "special circumstance." Also, what amount of continental shelf and exclusive economic zone is to be made

Figure 30



This illustration is devised especially to present the problems and techniques of laying down a median line in lakes, gulfs, etc., and in particular how to deal with islands. The opposing coasts in this illustration are taken from different parts of the world, and are slightly modified for the present purpose.

(A) *The Median Line*, the construction of which is here shown, is the line every point of which is equidistant from the nearest point or points on opposite shores. Each of the turning points (found by trial and error with a pair of dividers), such as *A*, *B*, *C*, and *D*, is equidistant from two or more points on the same shore as well as from one or more points on the opposite shore, e.g., *D* from *L<sub>1</sub>*, *R<sub>2</sub>* and *R<sub>3</sub>*.

(B) The means recommended for determining whether an island is to be regarded as if it were part of the mainland and thus used as part of the base line in laying down the median line—or, on the other hand, whether it is to be disregarded—is here illustrated. First draw that pair of parallel lines tangent to opposite ends or sides of the island which encloses the least area of water between island and mainland, as here shown for "Gross I." (shaded in illustration). If the land area exceeds the water area behind it, the island is used as part of the base line (as here); otherwise it is ignored.

Source: Boggs, S. W. "Delimitation of Seaward Areas Under National Jurisdiction", American Journal of International Law, 48, [96]. p. 257.

available to each island. Ely compares the area of a small island with the area of the 12 mile territorial sea (allowed under the 1982 Convention on the Law of the Sea). Ely computed that an island with a diameter of one mile commands a territorial sea area 190 times its land mass and the ratio does not approach unity until an island of nearly 60 miles in diameter, or an area of some 2,800 sq. miles is measured.<sup>96</sup> Applying Ely's formula for a comparison of the area of an island (excluding rocks which are uninhabited and unable to sustain themselves economically) to the area of a 200 mile exclusive economic zone indicates that a island of approximately 1,000 miles in diameter is needed to approach a unit in ratio between the area of the island's landmass and the area of the 200 mile exclusive economic zone.

Alternatively, a principle for determining the amount of the continental shelf or exclusive economic zone to be made available to each island would be to determine the perimeter of the continental shelf around each island as a function of the total size of the island. Then each island, great or small, would have a proportional area of continental shelf and exclusive economic zone.<sup>97</sup> This criterion, of course, would be applied only to islands located on the 'wrong' side of an equidistance line measured from the mainland of the two parties' coasts. These islands would retain a perimeter of continental shelf in proportion to their size and would form an enclave belonging to the

more distant state which owned the island. Where the line of equidistance traversed an island, the boundary would bend by following the perimeter criterion or 12 mile arcs, thus creating a slight saliency in the line in one direction or another, depending on who owned the island.<sup>98</sup> Where an island was a state or a similar independent entity, the principle of equidistance would be applied in a routine manner and the technique of a perimeter based on the size of that island-state would be ignored.<sup>99</sup>

Ely expresses doubts on such objective criteria of 'size' and 'distance.' While satisfied that islands too distant from its owner's mainland irrespective of size which do not fall within the 12 mile envelope of arcs should be ignored, Ely feels that 'size' alone does not afford a fair controlling criteria. He points out that some small islands are of economic importance, densely populated and linked to the economy of the mainland and to that of other outlying islands.<sup>100</sup> Ely explains that:

Common sense seems to compel a concept of unity of mainland and outlying islands, even at a distance of scores of miles, when isolated populations of say several thousands, and an important inter-locked mainland-island economy are involved.<sup>101</sup>

Ely suggests in delimiting a median/equidistance boundary that perhaps islands with such characteristics:

may be given half-effect...or given a proportional effect reflecting the ratio between the distance from the island its owner's mainland shore, and the distance from the island to the opposing coast.<sup>102</sup>

In summary, there can be no question that islands, depending on locations and relationships, could cause gross distortions in equidistant boundaries. The solution to the problems raised by the effects of islands on equidistant boundaries and allocations of extended jurisdictional zones may be determined rationally by varying the effects of islands on the limits under specific circumstances.<sup>103</sup> International law, state practice and various criteria point out several types of categorization of islands in their relationship to maritime boundaries. They also point out that restrictions must be placed on the use of certain small islands for equidistance delimitation in order to remove or reduce distortions and to preserve a semblance of equity.<sup>104</sup>

#### Coastal Configurations

Exceptional coastal configurations are recognized in international law as "special circumstances" which justify deviation from a boundary line based on the equidistance principle. While conventional law does not enumerate the constituents of 'special circumstances,' it would be fair to say that customary law has held that coastline concavities, promontories, deltas and the previously discussed, locations of islands constitute if not special circumstances that

require departure from the equidistance principle, at least relevant circumstances to be considered in application of the median/equidistant method. Again, the effect of such geographical special circumstances is largely manifested by their inclusion in baseline delineation from which equidistance boundary lines are measured. The effects of such geographical features on baselines are usually considered a 'special circumstance' or creative of inequity where their impacts are clearly out of proportion to their size or significance. To give such features full effect allocates to one of the contending states a disproportionate share of the disputed maritime areas.

The International Law Commission in its preparatory work to the 1958 United Nations Law of the Sea Conference recommended in a 1953 study that boundary delimitation be based on agreement between parties and failing agreement, the principle of equidistance be applied unless another boundary is justified by special circumstances. In this regard, the study suggested that provision must be made for "departures necessitated by any exceptional configuration of the coast...."<sup>105</sup> This recommendation was adopted in the Final Report of the International Law Commission in 1956. However, while the delegates at the 1958 Conference endorsed the formula for boundary delimitation, the resulting conventions did not stipulate the nature of these "special circumstances." The 1982 United Nations Convention on the

Law of the Sea similarly does not detail the components of special circumstances or even more the equitable principles to be applied to reach an equitable solution.

Customary law provides a better definition of what constitutes exceptional configurations of the coast. The International Court of Justice in the North Sea Continental Shelf Cases was faced with two divergent views of what type of exceptional configuration constituted a special circumstance. The Federal Republic of Germany argued that:

Special circumstances are always present should the situation display not inconsiderable divergences from the normal case. The normal case, in which the application of the equidistance method leads to a just and equitable apportionment, is a more or less straight coastline, so that the areas of the shelf apportioned through the equidistance boundary more or less correspond to the shore lines (facades) of the adjacent States. Should this not be the case, and should therefore no equitable and appropriate solution result, <sup>106</sup> the clause of the special circumstances applies.

Denmark and Netherlands on the other hand, advanced the following interpretation of the scope of "special circumstances" in relation to exceptional geographical configuration:

the correction of the principle of the equidistance principle...can take place only if the deviation from the equidistance line is justified towards both States - i.e. the State which 'gains' and the State which 'loses' by the correction....It seems thus legitimate to interpret the 'special circumstances' clause to the effect that it can be invoked against a State whose Continental Shelf boundary under the equi-

distance principle reflects projecting geographical features (primarily certain islands and peninsulas) whereas it cannot be applied against a State whose Continental Shelf has a solid geographical connection with the territory of that State thereby constituting a natural continuation of the territory of the State in conformity<sup>107</sup> with the general geographical situation.

The Court's judgment aligned with that of the German perspective. The Court held that in certain geographical circumstances, the application of the equidistant method would undoubtedly lead to inequity. For example, the Court felt that if the equidistant method were applied to a concave or convex coastline then

the greater the irregularity and the further from the coastline the area to be delimited, the more unreasonable are the results produced. So great an exaggeration of the consequences of a natural geographical feature must be remedied or compensated for as much as possible, being of itself creative of inequity.<sup>108</sup>

Consequently, the Court held that a consideration which States may take into account to ensure that application of equitable principles is the geographical factor.

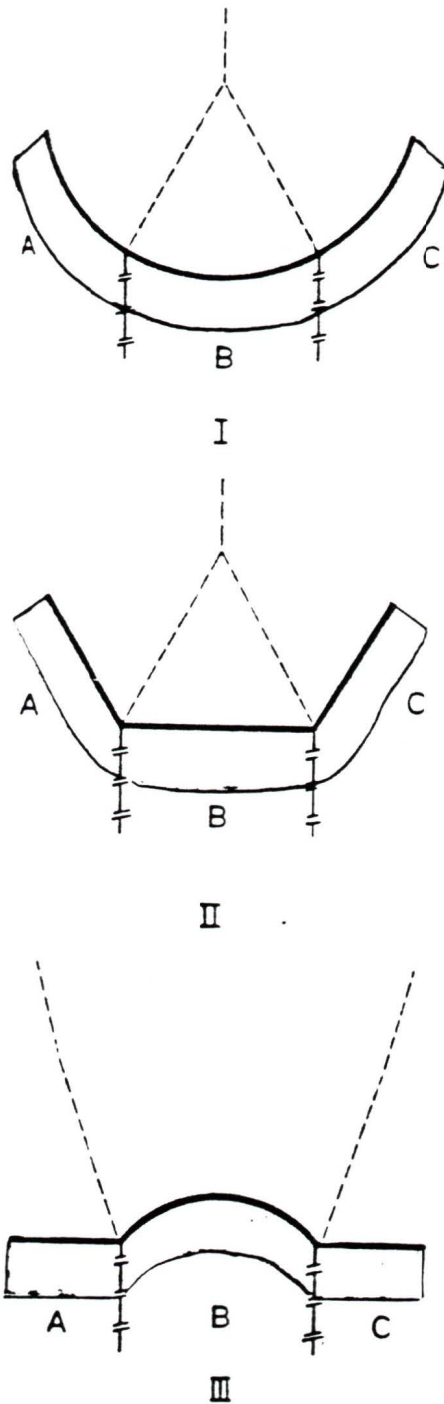
It is...necessary to examine closely the geographical configuration of the coastlines whose Continental Shelves are to be delimited. This is one of the reasons why the Court does not consider that markedly pronounced configurations can be ignored; for, since the land is the legal source of the power which a State may exercise over territorial extensions to seaward, it must first be clearly established what features do in fact constitute such extensions."<sup>109</sup>

The Court went on to specify that the "factors" to be taken into account in the course of negotiations should include "(1) the general configuration of the coasts of the Parties as well as the presence of any special or unusual features."<sup>110</sup> The Court then established that the macro-geographic feature of the 100° concavity of the German coast constituted a factor of the general configuration which should be considered.

The German pleadings contained a description of the inequitable effects produced on a concave coast by the concurrent use of the equidistance principle by its two neighbouring coastal states on the North Sea. The effect of the concurrent use of the equidistance method was to pull the boundary inwards in the direction of the concavity. This results in the 'cutting off' of shelf areas lying in front of its coast and therefore a contravention in the allocation of a 'just' and 'equitable' share of the continental shelf based on coastal length. An equidistance line was said only to affect a 'just and equitable' share where a straight baseline existed.<sup>111</sup>

It is important to note that this situation arose where three coastal states were involved. In addition, the effects are more pronounced in the case of adjacent states. Figure 31 illustrates the geometrical effects of the case of the equidistance principle on concave and convex coasts where three coastal states are involved. However, as noted

Figure 31



Source: International Court of Justice. "North Sea Continental Shelf Judgment." Report, 3, 1969, p. 16.

in this study's discussion on geographic natural prolongation, only three other geographical situations have been identified where the concurrent application of an equi-distance principle would possibly produce a 'cut-off' effect (see page 52). The situation of a convex coast of one state located between two states, producing a radial projection that would be 'unjust or inequitable', have not as yet been encountered. The Gulf of Maine Case, which will be discussed shortly hereafter in this context, involved arguments by both parties that the situation of concavity or convexity of coastlines produced an inequity that should be remedied. The Chamber rejected both arguments.

Notwithstanding, the Court's decision in the North Sea Cases has been criticized. Judge Koretsky's Dissenting Opinion held that

even if the presence of special circumstances is observed and confirmed, those special circumstances can only justify a deviation from the normal line if they are located comparatively near to the landward starting point of the boundary line...of the two (and only two) adjacent States...All 'macrogeographically'[sic] considerations are entirely irrelevant, except in the improbable framework of a desire to redraw the political map of one or more regions of the world.<sup>112</sup>

And the prior criticisms presented on the question of geographical natural prolongation are echoed here (See pages 63-65). Essentially, geography makes no distinction between regular or 'natural' coastlines or irregular or 'un-

natural' coastlines. Straight coastlines are not the norm in the world. Even more, it is questionable that the macro-geographical nature of the 100<sup>o</sup> concave angle of West Germany's coastline would constitute an incidental feature of the coast as held by the Court in the 1951 Anglo-Norwegian Fisheries Case.

In the 1977 Anglo-French Arbitration Award, the Court of Arbitration found that geographical considerations dominated both their decision and the reasoning for their decision. The previous section demonstrated that these geographical considerations focussed on the presence of islands in the boundary region. However, in regard to the exceptional configuration of the coasts, the Court of Arbitration pointed out that when two states abut on the same continental shelf

their continental shelf boundary must in large measure reflect the respective configurations of their two coasts. But particular configurations of the coast or individual geographical features may, under certain conditions, distort the course of the boundary, and thus affect the attribution of continental shelf to each State which would otherwise be indicated by the general configuration of their coasts.

The Court of Arbitration stated clearly the need to mitigate the disproportionate of effects certain geographical features in its discussion of the Atlantic region: "What equity calls for is an appropriate abatement of the disproportionate effects of a considerable projection on to the

Atlantic continental shelf of a somewhat attenuated portion of the coast to the United Kingdom."<sup>114</sup> The Court viewed the presence of the Scilles Isles not in the context of islands but rather as a distorting projection of the United Kingdom. The effects are, nevertheless, the same.

The International Court of Justice in the Tunisia/Libya Case found that relevant circumstances or equitable principles applicable to continental shelf delimitation included the configuration of the coasts. This circumstance was specified as the dramatic change in direction of the Tunisia coast from the point of deepest concavity of the Gulf of Gabes where it changed from a south-east to north-west course to a south-west to north-west direction.<sup>115</sup> This was felt to be a critical reason for departing from the principles operating in the first segment of the boundary for the seaward second segment. The second segment was delimited to reflect this radical change in direction of the coast although tempered by the presence of the Kerkennah islands.

In the Gulf of Maine Case, the Chamber adjusted a median line boundary to accommodate the presence of Seal Island in the boundary region. However, other special or relevant circumstances in the form of exceptional configurations of the coast were advanced by the parties in the dispute but were subsequently rejected by the Chamber. However, the Chamber's reasoning for rejection of these

alleged circumstances makes very interesting reading and may impact on subsequent interpretations of the role geographical 'special circumstances' performs in the delimitation of an equidistance line.

The Chamber was first called upon to assess the United States argument that 'primary' coasts should dominate 'secondary' coasts. On this basis, the United States contended, the coast of Maine should pre-empt the Nova Scotian coast from consideration in the delimitation of a boundary. Accordingly, a perpendicular line was proposed extending from the land boundary terminus to the 200 mile exclusive economic limit, although it was adjusted to incorporate the unity of ecosystems. The Chamber rejected the American proposal.<sup>116</sup>

The importance of the Chamber's comments and their relation to this discussion on exceptional coastal configurations is contained in the statements which immediately followed the above decision. The Chamber held that:

The same may be said as regards the idea put forward in the course of proceedings that certain geographical features are to be deemed aberrant by reference to the presumed dominant characteristics of an area, coast or even continent.<sup>117</sup>

One aberrant geographical feature, argued by the United States, was that Nova Scotia represented a distortion to the generally southwest to northeast declination of North America's eastern coast. Another distortion that the United

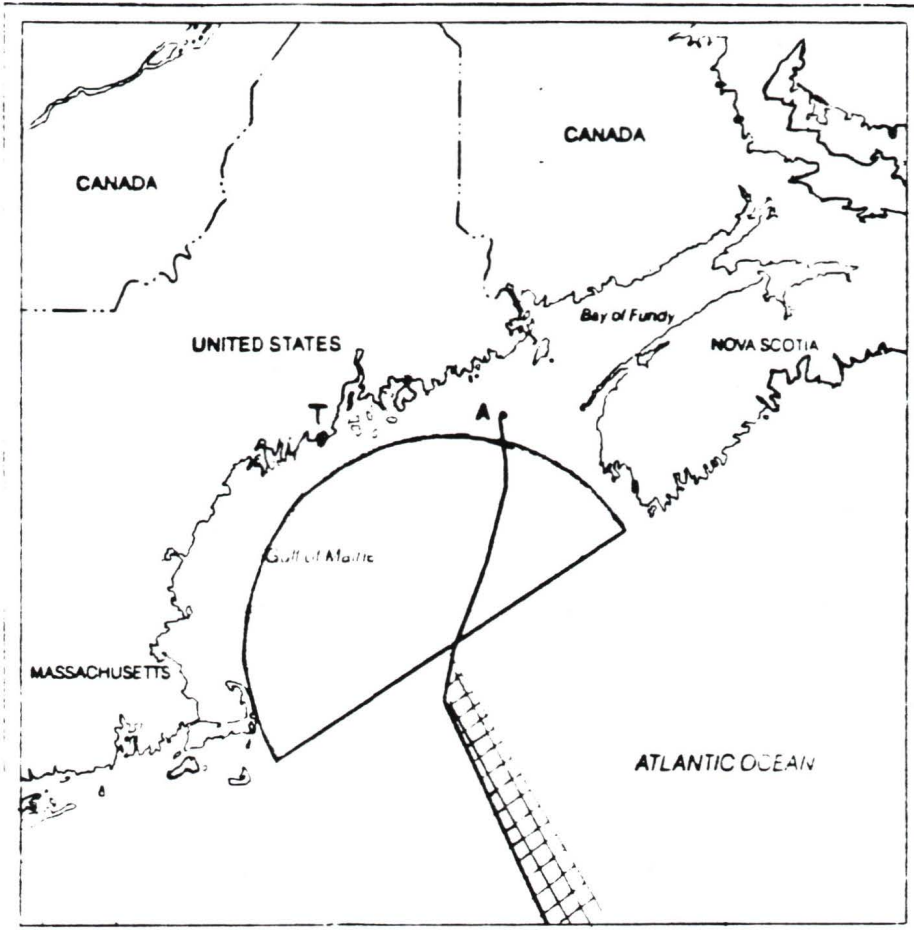
States contended existed and which would produce an inequitable equidistance line, was the convexity of the Nova Scotian southwestern coast when measured against the concave Maine and Massachusetts coasts. Also, Canada argued that the protrusion formed by Nantucket Island and the Cape Cod peninsula constituted an aberration to the general configuration of the coast. The Chamber rejected macrogeographic "special circumstances" and implicitly recognized that 'facts of nature' should be the primary determinants of the location of a boundary line not the subjective interpretations of geographical features. This is noteworthy with respect to the North Sea Cases where macrogeographic variables were considered relevant circumstances in boundary delimitation and subjective interpretations of the nature of coastlines, that is, regular or natural versus irregular or unnatural coastlines, were used.

The Chamber also refused to accept the United States' argument that a parallel existed between the detrimental effects upon its interests produced by application of the equidistance method owing to the concavity of the coast, and those effects that such an application would have produced for Germany on account of the concavity of the German coast if the Court in 1969 had not adopted another solution. The Chamber considered that there are appreciable differences between the two situations."<sup>118</sup> The Chamber gave no clue as to what these appreciable differences were. The obvious

difference is that only two states were involved in the delimitation and thus the 'cut-off' effect is rather limited (See Figure 32). In fact, Figure 33 demonstrates that the application of the equidistance method in a deep concavity, regardless of the location of the land boundary, will intersect the closing line of the concavity at its mid-point and will extend seaward as a line essentially perpendicular to the closing line. Thus, an inequitable distribution of maritime area is possible for application of the equidistance method between two states situated on a concave coast.

Deltas are another type of coastal configuration that may have the effect of moving the baseline. Due to their gradual shift, deltas may affect the location of the baseline and hence move the line of equidistance. In an attempt to meet this problem, Article 6(8) of the 1958 Convention on the Territorial Sea and Contiguous Zone provides that the line of equidistance "should be defined with reference to charts and geographical features as they exist at a particular date. Once the date is agreed upon, the line remains fixed, irrespective of coastal changes. Since no coastline is immutable this becomes a necessary convenience. Article 7(2) of the 1982 United Nations Convention on the Law of the Sea stipulates that:

Figure 32



Outline Map.  
 Source: Inter-  
 national Court  
 of Justice.  
 "Canada. Deli-  
 mitation of  
 Maritime Boundary  
 in the Gulf of  
 Maine Area  
 (Canada/United  
 States of Amer-  
 ica)." Reply.  
 Submitted by  
 Canada. p. 154,  
 Map B.

Ibid. p. 153,  
 Map B.

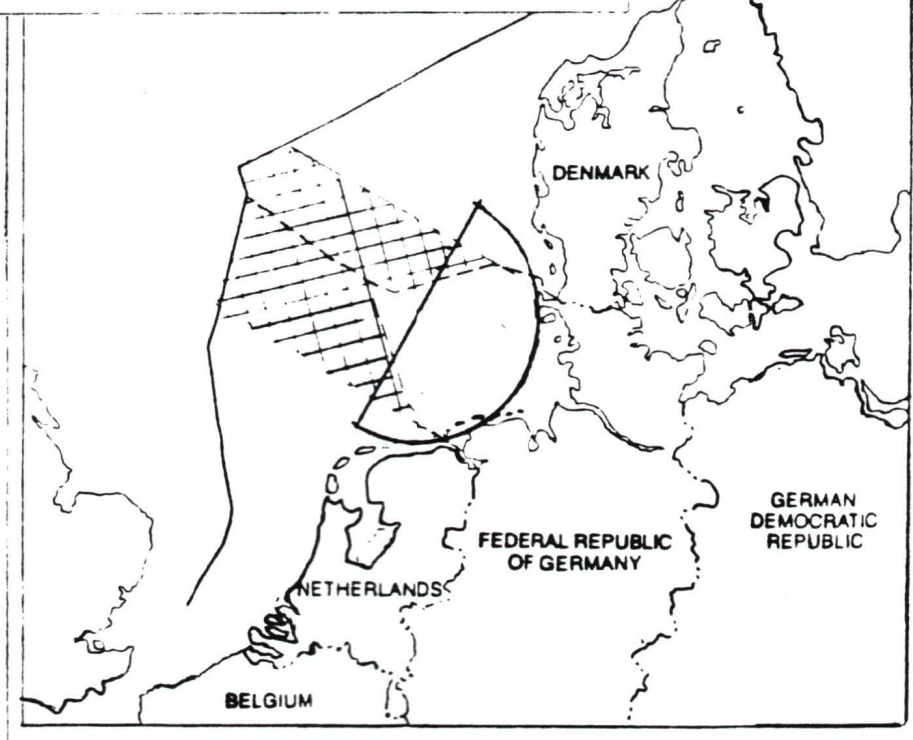
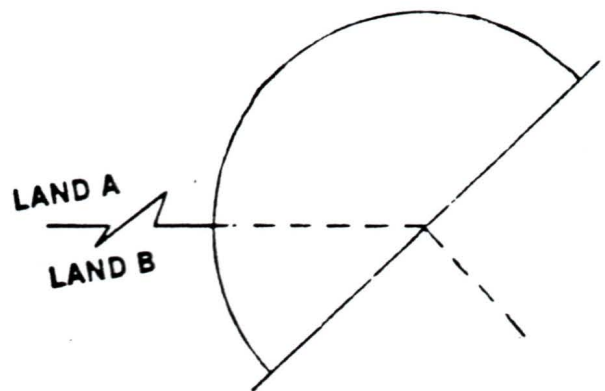
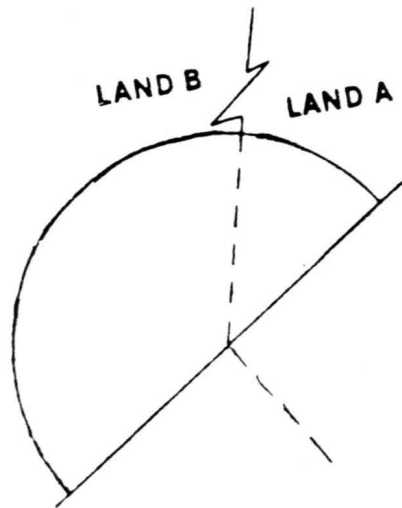
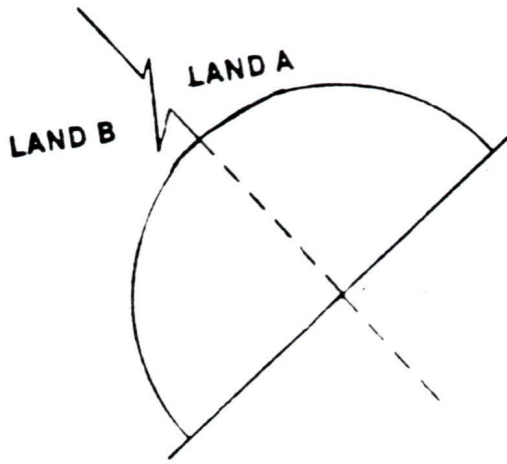


Figure 33



where because of the presence of a delta and other natural conditions the coastline is highly unstable, the appropriate points may be selected along the furthest seaward extent of the low waterline and notwithstanding subsequent regression of the low water line, the straight baselines shall remain effective until changed by the coastal State in accordance with the Convention.

Changes of considerable magnitude are extremely infrequent. Deltas commonly do not shift more than a few feet loss or gain in a decade. The rarity and limited nature of delta change make it doubtful that this situation would be considered a "special circumstance."

This discussion on the presence of 'special circumstances' demonstrates that various parameters are involved in its application. 'Special circumstances' in the case of islands and generally in the case of an exceptional coastal configuration does not necessarily invalidate the principle of equidistance. Rather, it merely affects the delineation of baselines to be used in measurement requiring the use of an equidistance line measured from points other than the normal baseline. And, although special circumstances have not been enumerated in international law, the presence of 'special circumstances' is not a subjective process dependent on the unilateral judgment of the coastal State. While it is difficult to provide substantive criteria, objective standards are available to determine the existence of special circumstances. These standards usually involve geographical criteria. However, especially in

customary law practice, it would seem that special circumstances are determined perhaps inevitably, on the merits of each particular case. Of course, this does not preclude parties deciding the presence of "special circumstances" by mutual agreement.

## Technical Considerations

### Introduction

The delimitation of a maritime boundary should include enough information so as to avoid later disputes. Simplicity in defining a boundary while a worthy goal, should not be achieved at the sacrifice of accuracy or precision.<sup>119</sup> On the other hand an accurate boundary can be achieved without excessive complexity. The degree of accuracy will depend on a number of factors, including the available data base and the general purpose of the boundary or zone.<sup>120</sup> A final boundary can only be as reliable and accurate as the charts and maps used to determine the coordinates of turning points and coastal reference points.

The possible inequities that result may however be due to the charts and the traditional methodology of plotting equidistance lines used. Manual geometric construction, where still desirable, must incorporate newly developed techniques for determining the right map projections, scales, spheroids, tidal datums, horizontal datums, nature of the line utilized for the boundary, baselines and

tolerances; all of which influence the location of an equidistance line. Otherwise, boundary negotiators may and likely will resort to the use of computers with all the above factors programmed in to determine precise distances and azimuths of equitable equidistant maritime boundaries at great distances from the baselines.

### Map Projections

Chart selection is critical to maritime boundary delimitation. Map projection and scale will influence the potential distortion that may result. To reduce a spheroid to a two dimensional map, modifications must be made to the geometric relationship of the spheroid on the map so as to retain the essential properties of distance, shape and direction. For example, no projection can represent consistently the distances between uniformly spaced points on the earth.<sup>121</sup> Scale may vary in different directions about a point: map distance relationships among all points cannot be maintained without distortion.<sup>122</sup> Thus, direction among these divergent points cannot be shown without comparable distortions.

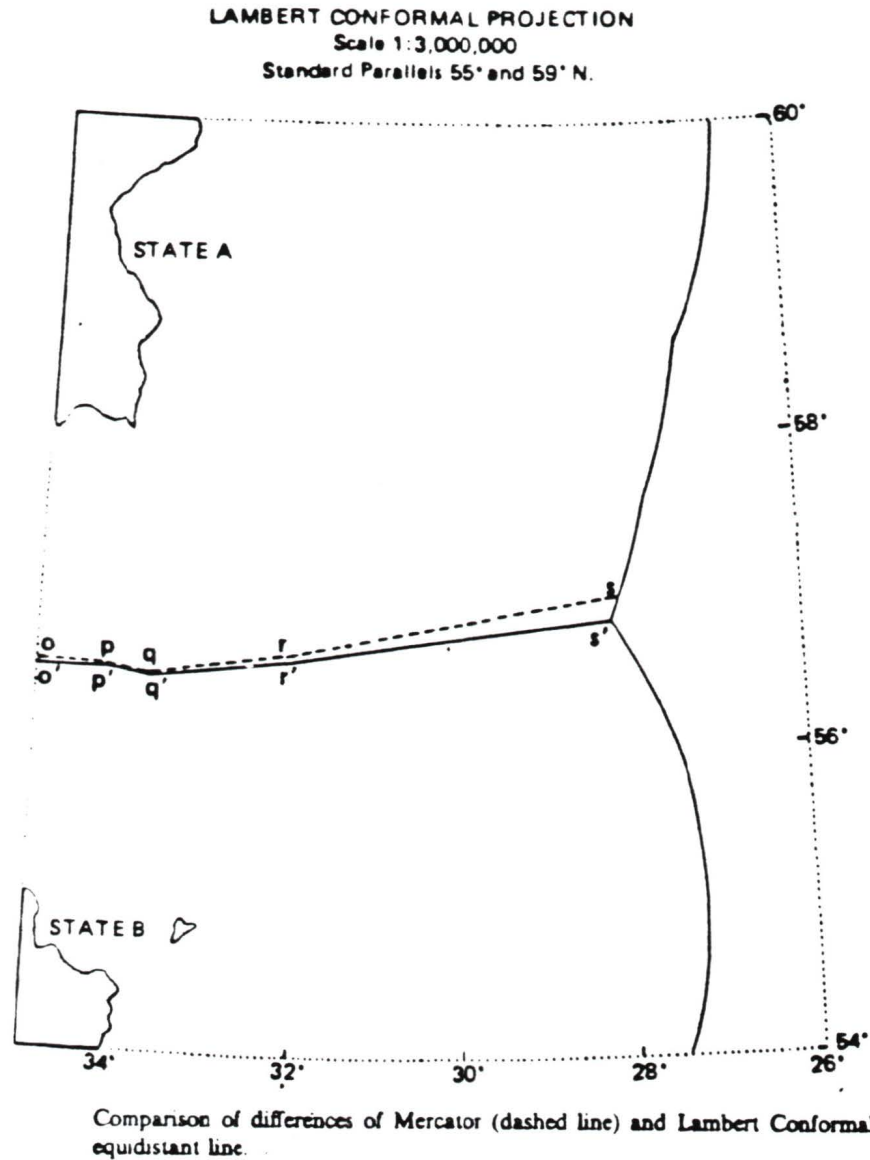
Projections attempt to either conform in shape and form to the spheroid although scale must vary from one point to another or maintain area relationships (equivalent projections) although shapes and forms will be distorted, being lower near the center and greater toward the edges or

extremes of the projection. An equidistant boundary requires maps with conformal projections to provide accurate measurements of angles, distances, and directions.<sup>123</sup> However, no one conformal projection will prove satisfactory for all areas of the earth. Mercator projection charts are used primarily for navigational purposes since straight lines provide a constant bearing. However, because of the projection, distance and shapes become greatly distorted in latitudes poleward of  $15^{\circ}$  and thus should not be used for these regions.<sup>124</sup> Lambert conformal projections maps are suited for the zones from  $4^{\circ}$  to approximately  $72^{\circ}$  north and south of the equator.<sup>125</sup> They provide excellent direction and good relationships for the east-west latitude zone on which it is developed because area exaggerations between and near the parallels are relatively small.<sup>126</sup> Distance and directional measurements are excellent in an east-west latitudinal zone as well. Scale, however, is absolutely true only along the standard parallels; it is compressed between them and expanded beyond.<sup>127</sup> (This projection is tailored for the charting of the equidistant line in the Dixon Entrance-Hecate Strait boundary region at  $54^{\circ}$  N.). Stenographic projection which is both conformal and azimuthal is recommended for polar regions. Area exaggeration increases outward from the center, and thus the application of the projection should be restricted to the areas poleward of  $60^{\circ}$ .

Hodgson and Cooper compare the use of the Mercator to the Lambert conformal projection at approximately 57° North latitude and show that a sizeable error may occur in the calculation of an equidistant line using the Mercator projection (Figure 34). The degree of accuracy attained on the Lambert conformal chart relates largely to the scale of the maps used.<sup>128</sup> The larger the scale, the more accurate the results will be, however a boundary out to 200 miles from a baseline requires medium to small scale maps.

The type and scale of coastal charts are an important consideration for determining the coastal control points necessary for the boundary delimitation. A significant factor in the construction of an equidistance line is a precise delineation of each state's baselines. Where a low-water line is used as a state's baseline for delimitation of its territorial sea limits, then modern large-scale charts should be involved which show the low-water line and low-tide elevations. The scale of the map depends directly on the size of the area to be delimited and practical considerations such as portability. The larger the scale, the more accurate will be results. Articles 75 and 84 of the 1982 Convention on the Law of the Sea state that the outer limits of the exclusive economic zone and the continental shelf, respectively, shall be shown on charts of a scale or scales adequate for ascertaining their position. Generally, for zones of extended jurisdiction the scale will

Figure 34



The area contained within the plotted position of the two lines and the limit of the 200-nautical-mi zone measures more than 700 sq nautical mi. This area presumably would be "lost" to state A if the equidistant boundary had been developed geometrically on a Mercator projection chart.

Source: Hodgson, R.D. and E.J. Cooper.  
"Technical Delimitation of a Modern  
Equidistant Boundary", Ocean  
Development and International Law  
Journal, 3(4) 1976 p. 376.

be in the range between 1:200,000 and 1:1,000,000.<sup>129</sup> Aerial photos are another important tool sometimes used to determine the most recent and accurate depiction of islands and coastal features which may be elements of an equidistant line calculation.

Co-ordinates should be expressed to the same degree of precision as those for the control points in the surrounding coastal area in both the case of a boundary line obtained by geodetic calculations on the basis of coastal control points and for that of a line merely negotiated (i.e. not mathematical). Where appropriate, lists of geographical co-ordinates of points, specifying the geodetic datum may be substituted for outer limit lines and lines of delimitation.<sup>130</sup>

#### Spheroids and Datums

The earth's shape and related dimensions varies regionally and may cause considerable discrepancies in a boundary delimitation. Scientists who study these elements, or geodesists, have for computational purposes, developed reference spheroids which assume certain shapes and dimensions for the earth. The reference spheroid for North America is the Clarke spheroid with an axis of 6,378, 206 m and flattening effect of 1/295.0.<sup>131</sup>

Because of local variations that may exist in regional spheroids, a geodetic datum must be considered. A

definition of geodetic datum forwarded by Smith is "a mathematical quantity or set of such quantities which serve as a reference or basis for other quantities."<sup>132</sup> Basically, a common reference point must be established so that geodetic measurements are at least regionally consistent. Two types of geodetic datum exist; a horizontal datum and a vertical datum.

In a horizontal datum, an origin would be established from which all other points, usually expressed in terms of latitude and longitude, could be determined. If variations in positions occur between the origin or 'normal' points of adjacent states, differences in equidistant boundaries may develop as a consequence of the nonconformity of the horizontal positions in relation to each other, that is, to their horizontal datums.<sup>133</sup> In North America, the horizontal datum which is tied to the Clarke 1866 spheroid is located at Meades Ranch, Kansas.<sup>134</sup> Where common horizontal datums have not been determined "it may be necessary to establish a geodetic link between the two coastal states and to apply corrections to the co-ordinates of baseline points to conform to common datum."<sup>135</sup> Such corrections may vary over the area concerned where errors in scale and orientation may be present.<sup>136</sup>

A vertical datum establishes 1) a reference plane for elevations of land features above Mean High Water or Mean Sea Level and 2) a lowest plane for referencing depths i.e.,

the tidal datum.<sup>137</sup> Differences among neighbouring states on the particular vertical or tidal datum are likely to exist because of varying requirements by each nation's ocean users and hydrographers. Variations in tidal datum affect baseline delineation which in turn impacts on the development of equidistant boundaries. Depending on the extent of the variation and the boundary methodology, the course of the boundary may be affected significantly or slightly. If tidal datums vary between neighbouring states, variations are more acute in nearshore areas and less important at the greater distances of the continental shelf and exclusive economic zones. Not surprisingly, boundary cartographers should apply identical or nearly identical datums so that one state will not gain an inequitable advantage over the other. In this context, while the United States and Canada have adopted common spheroids and horizontal datum, they differ on the vertical or tidal datums used. The United States employs a 'Mean Lower Water' tidal datum while Canada uses a 'Lowest Normal Water' tidal datum. The impact of this variation is overshadowed in delimitation of their overlapping extended jurisdictional zones by the differing baseline designations adopted by each.

The dividing line in most maritime boundary agreements is commonly stated as a straight line between given points in terms of geographical co-ordinates or else by bearing and distance to a fixed point. However a straight line on the

three-dimensional, spheroidal earth can be interpreted at least nine different ways on a two dimensional chart of which a great circle arc, small circle arc, loxodrome or rhumb line and geodesic are the most frequent renditions. It is the geodetic line (i.e., geodesic) which is the most accurate line because it represents the shortest distance between two points on the spheroidal ellipsoid.

However, early boundary treaties normally interpreted the 'straight line' as a loxodrome or a compass line, for the simple reason that this curve happens to be a straight line on ordinary nautical charts (if they are on the Mercator projection).<sup>138</sup> It appears curved on all other projections. Then there was a tendency to utilize great circle arcs for 'straight lines'. The great circle arc was considered a better representation of the curve of the shortest distance. However, on a Mercator chart on which parallels of latitudes and meridians of longitude all intersect at right angles, a great circle arc appears as a curved line because, of course, the earth is not a perfect sphere. In this situation for the great arc circle to be a straight line, the spheroid would have to be identified by radius, center and the appropriate coordinate conversions duly specified.<sup>139</sup> Yet on meridians of longitude or at the equator, and if gnomonically projected, a great circle arc will be a straight line.<sup>140</sup> A great circle arc and a geodesic are very similar and the difference between them,

depending on chart scale, may not be distinguishable.<sup>141</sup> There is however an important difference between a rhumb or loxodromic line and geodesic line, depending on the length of the boundary segment and latitude.<sup>142</sup> This is illustrated in Figure 35. The difference in area between the two types of lines measured is approximately 2.070 square nautical miles. Therefore geodesics provides the most precise line to delimit boundaries. The recent decision of the International Court of Justice in the Gulf of Maine maritime boundary delimitation between the U.S. and Canada specified in its technical report the use of geodetic lines.<sup>143</sup>

#### Baselines and Tolerances

The 1958 Convention on the Territorial Sea and Contiguous Zone and the 1982 United Nations Law of the Sea Convention allows two general methods of establishing the baseline from which equidistant boundaries may be constructed. These two methods also apply in the 1958 Convention to the delimitation of an equidistance boundary for the continental shelf and, in the 1982 Convention, to the delimitation of an equidistance boundary for both the continental shelf and exclusive economic zone. The first method, referred to as the 'normal' baseline,<sup>144</sup> is measured according to the low-water line along the coast as marked on large-scale, officially recognized charts. The second

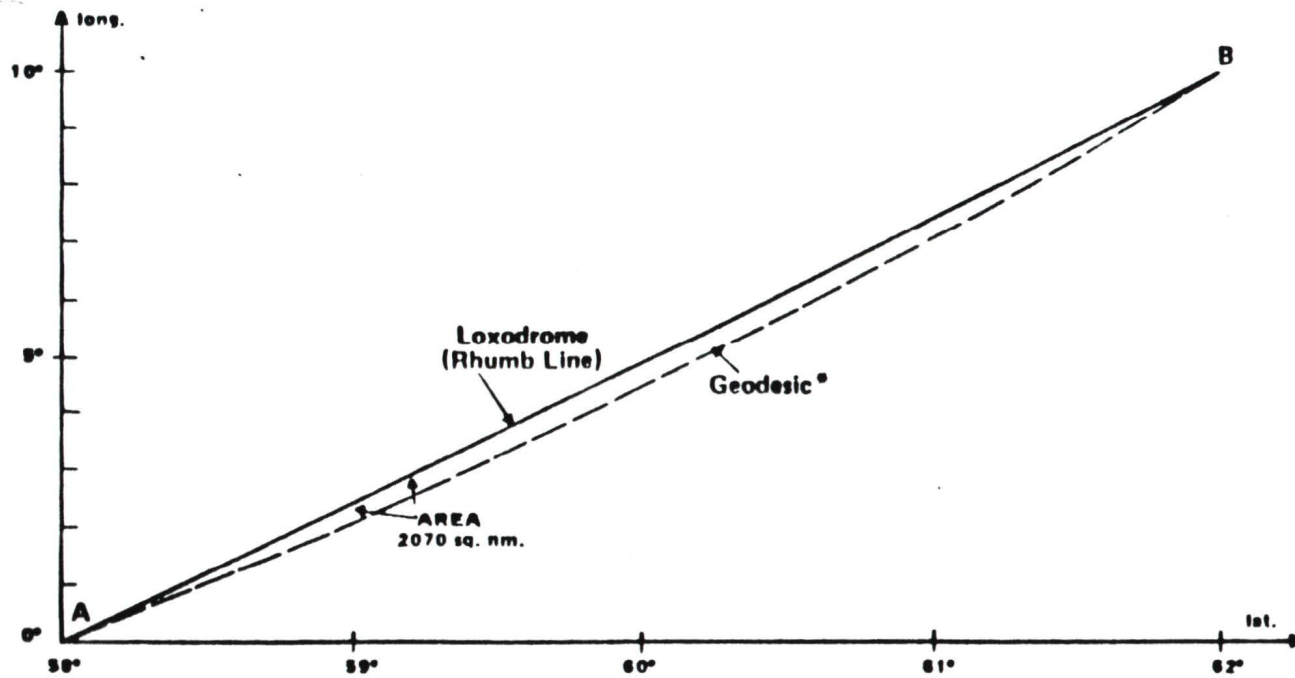


Figure 35

Comparison of rhumb line and geodesic between two points.

It should be pointed out that the lines in should be reversed; in the northern hemisphere the geodesic will fall to the west and north of the rhumb line.

Source: Thamsborg, M. "Geodetic Hydrography as Related to Maritime Boundary Problems", International Hydrographic Review 51\*1) 1974 p. 158.

method, said to be used in whole or part by nearly two-thirds of the coastal states to 1976,<sup>145</sup> is the 'optional' straight baseline system. The system of straight baselines is described in the 1958 Convention on the Territorial Sea and Contiguous Zone and the 1982 Convention on the Law of the Sea.

An equidistant boundary delimited between parties which concurrently employs either low-water baselines or straight baselines will result in "straight line" segments for the equidistant line. However technical problems may arise where the baseline system of one party in a boundary delimitation is incongruous with the baseline system of the other party or parties. In such an instance, the parties will have to reach an agreement on a consistent baseline method either by one party ignoring the straight baseline method and then utilizing a low-water baseline or one party abandoning its low-water baseline for a straight baseline method. The change by one party to the other party's baseline system need not serve as the national baseline system. The change may be confined only to equidistant boundary delimitation in the immediate boundary region. This procedure occurred between Malaysia and Indonesia for delimiting equidistant territorial sea and continental shelf boundaries in the Strait of Malacca when Malaysia, which nationally employed a low-water baseline system, applied the straight system that Indonesia followed.<sup>146</sup> A variation of

this accommodation is evidenced in the delimitation of the United States-Cuba maritime boundary. Cuba had nationally adopted a straight baseline system which the United States did not recognize, while the United States had no baseline system.<sup>147</sup> To overcome this incongruity in baseline systems the parties established the equidistant boundary as follows:

An equidistant line was then calculated by use of the Cuba straight baselines and the artificial construction lines of the United States. Another equidistant line was calculated by use of the relevant basepoints on the low-water line of the coasts of the two countries. A third line was then created between those lines, which was not equidistant but which divided equally the area between them.<sup>148</sup>

In quite another context, one of the parties in a boundary dispute may contend that a baseline to be used in the measurement was improperly drawn. The problem may be solved by reference to rules of international law. The provisions of the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone (Articles 3 through to 13) and the 1982 United Nations Convention on the Law of the Sea (Articles 5 through 14) are generally expressive of existing rules of international law in this regard. With respect to the validity of straight baselines, the provisions of the 1958 Convention which are largely incorporated in the 1982 Convention tend to reflect the judgment of the International Court of Justice in the Anglo-Norwegian Fisheries Case - where the system of straight baselines is not suited to the

geographical situation, then references to 'coast' or 'shore' are understood to mean low-water line. A state cannot be required to use any other line against its will. Any doubts as to exact location of the "low-water" line, such as whether the neap-tide or spring-tide are to be used, must be resolved in favour of the coastal state.<sup>149</sup> This is expressly confirmed by the reference to "large-scale charts officially recognized by the coastal State."

The problem of "tolerances" relates to the areal limits on charts that states will allow to encroach on their side of the 'true' equidistance line so that a modified equidistance line may be constructed rather than a line which strictly adheres to the equidistance principle. In Figure 22 tolerances would be indicated by areas  $s_1$  and  $s_3$  to State A, and  $s_2$  and  $s_4$  to State B. Essentially, this is the 'give' and 'take' of areas so that administration and ocean users' compliance of the boundary is made less difficult. The problem becomes evident where straight baselines exist and where the coastline is a very smooth arc or a straight line. For example, between straight baselines, 'true equidistance' may prevail for every point in the line (i.e., for an infinite number of points). The results will be a winding equidistant line altering direction so often and for such short distances as to no longer constitute straight lines. To assist in the determination of base-points which effect turning points and line segments that

provide 'tolerances' acceptable to states, Hodgson and Cooper suggest two means. Firstly, they propose:

in a longitudinal distance, that is, along the axis of the baseline, the line will be considered to have been reached in the sense of equidistance for a specific distance along the baseline depending on the baseline's length. For example, in the case of a 30-nautical-mi. line, it can be agreed that points should not be used to determine equidistance unless they are at least 1 mi. or 2 mi. - or any agreed distance-apart, so as to reduce the number of turning points required. If the longitudinal distance is agreed upon and the same conditions prevail for both states, the "gains" or "losses" should average out in the long run. In addition, the equidistant line will have fewer turning points and will be easier to administer."<sup>150</sup>

And secondly, they recommend:

in a lateral distance, that is, across the axis of the line, the condition of equidistance will be deemed to prevail so long as the distance does not exceed a certain depth beyond the line. In an exercise to determine an equidistance boundary in Lake Sabine between Texas and Louisiana, the parties agreed, as a result of the smooth, accurate shoreline of the lake, that the condition of equidistance would not be met unless the distance penetrated beyond the coastline for a depth of 50 ft. This distance was judged to be the distance value of the thickness of the line utilized on the chart to represent the coastline. Any distance, of course, could be agreed upon, and if the same conditions prevail for both states, the gains and losses will again average out over the entire boundary.<sup>151</sup>

Where the coastline includes sharp, angular relationships, separated basepoints will form the critical factors and the boundary lines will be considerably simplified.<sup>152</sup>

Depending on the situation, one of the two means suggested to facilitate acceptable tolerances is preferable but not absolute due to the extreme variation in geographic conditions. Generally, where distances are short the lateral penetration of depth is more meaningful, and the longitudinal system more applicable to longer distances and when straight baselines are used. In the final analysis though, reasonableness and fairness should influence the 'tolerances' accepted by the parties.<sup>153</sup>

Therefore, negotiators of exclusive economic zone boundaries in particular, and of those continental shelf boundaries that extend to great distances from baselines need to employ many of the new methods, techniques and procedures discussed in this last section. Negotiators and boundary technicians can not rely on the traditional methodology of constructing equidistant lines because the inherent distortion errors involved in the charts and methodology will be often magnified over the larger distances involved in delimiting zones of extended jurisdiction. Minor errors may still be acceptable, although computers offer the means, provided they are properly programmed, to determine precise distances and azimuths.

### Summary

The principle of equidistance is based on the premise that the most equitable boundary is one that effects as much as possible an equal division of the appurtenant maritime areas of two or more contiguous states. This premise is consistent with international law which holds that equality of states is one of its fundamental norms. The equidistance principle also reiterates this relationship between law and geography because an equidistance boundary is determined by the coasts actually abutting on the boundary region which is also the source of coastal states' title over contiguous waters. Moreover, the seaward extent of coastal state jurisdiction to appurtenant areas of its coast, for example, the 200 mile exclusive economic zone, is decided by the proximity to, or distance from the coast, both of which are essential components of the equidistance principle.

The equidistance principle has historically been applied ever since the need for formal maritime boundaries was recognized in the 16th century. Although the equidistance method was not technically fashioned until this century, the essential premise of the equidistance principle, the equal division of contiguous coastal areas, has been accepted since the 16th century as the general rule for maritime boundary delimitation between opposite states. With Boggs' adaptation of a geometrical technique to precisely and objectively implement the equidistance

principle in the 1930's, it was thought that an equal division of maritime areas could now be achieved in all geographical situations of coastal oppositeness.

Boggs and others also adapted the equidistance method to delimitation of maritime boundaries between adjacent states. Through more and more refinement of the geometric technique, it was shown that the equidistance method could also produce an equal division of adjacent maritime areas of contiguous coastal states. Experts soon realized though that because the application of the equidistance method to delimitation of a boundary between adjacent states involved a radial determination of an intersecting point (in contrast to a lateral delineation in opposite coasts), in some geographical situations, a minor coastal aberration could geometrically distort the equidistance line the greater the distance the boundary extended from the shore. In the case of continental shelf and exclusive economic zone boundary delimitation, a minor coastal feature such as an island or a promontory used as a basepoint for delimitation of an equidistance boundary could allocate to one of the adjacent coastal states possibly hundreds or thousands of square miles of maritime areas which would be disproportionate to the coastal aberrations' real influence.

According to the 1958 Conventions, a geographical situation of this sort constituted a 'special circumstance' which could preclude the application of the equidistance

method. According to the arbitration judgments, the possibility of such an event occurring, was reason enough to reject the equidistance principle entirely as a general rule of maritime boundary delimitation. However, international law held that a solution must first be sought in modifying or varying the equidistance method rather than recourse to a wholly different criterion of delimitation. This proposition is founded on the political belief that the merit of the pre-eminent use of the equidistance method is that it is likely to provide a point of departure for boundary negotiations because neither party is likely to be content with less than it would if the equidistance method were applied.

Nevertheless, it was demonstrated how international law and geography determine what is a special circumstance. Additionally, various techniques were discussed which mitigate the distorting impacts of geographic special circumstances on the delimitation of an equidistance line and thereafter produce an equitable boundary solution. And finally, different aspects were presented of transferring an equidistance line boundary to a map which ensure that a boundary accord based on the equidistance principle is correctly represented graphically for the benefit of those ocean users who must comply with such a boundary.

Chapter Three Endnotes

<sup>1</sup> In order to contrast a median line separating the waters of adjacent states from one separating the waters of opposite states, the former is sometimes referred to as a "lateral" line. However, the term has never received wide recognition, nor is it employed in official documents.

<sup>2</sup> A.L. Shalowitz, Shore and Sea Boundaries, vol. 1B (Washington, D.C.: U.S. Government Printing Office, 1962), p. 231.

<sup>3</sup> S.-M. Rhee, "Sea Boundary Delimitation between States before World War II," American Journal of International Law, 76(3), July 1982, p. 556.

<sup>4</sup> Ibid.

<sup>5</sup> Ibid., pp. 559-560.

<sup>6</sup> Ibid., p. 563.

<sup>7</sup> Ibid.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> S.W. Boggs, "A Study of Boundary Functions and Problems," International Boundaries (New York: A.M.S. Press Inc., 1966), p. 581.

<sup>11</sup> Ibid., p. 180.

<sup>12</sup> Ibid.

<sup>13</sup> Ibid., p. 578.

<sup>14</sup> Ibid., p. 565.

<sup>15</sup> Ibid., p. 574.

<sup>16</sup> Ibid., p. 579.

<sup>17</sup> Ibid., p. 577.

<sup>18</sup> Ibid., p. 580.

<sup>19</sup> Ibid.

20 S.W. Boggs, "Problems of Water Boundary Definition: Median Lines and International Boundaries through Territorial Waters," Geographical Review, 27, 1937, p. 448.

21 Ibid., pp. 448-449.

22 Ibid., p. 149.

23 G.E. Pearcy, "Geographical Aspects of the Law of the Sea," Annals of the Association of American Geographers, 49(1), 1959, p. 16.

24 Boggs, (1966), p. 181.

25 A triple point in the boundary sense is the point at which the boundaries of two contiguous countries' territorial seas meet (and for that matter its exclusive economic and continental shelf zones), as well as each country's boundary between its territorial sea (or exclusive economic or continental shelf zone) and the high sea.

26 Rhee, p. 585.

27 S.W. Boggs, "Delimitation of Seaward Areas under National Jurisdiction," American Journal of International Law, 48, 1961, p. 265.

28 Shalowitz, p. 233.

29 E.D. Brown, "Delimitation of the Continental Shelf between Opposite and Adjacent States: The North Sea Continental Shelf Cases," The Legal Regime of Hydrospace (London: Unwin & Sons, 1971), p. 73.

30 Boggs, (1966), p. 192.

31 E. Collins, Jr., and M.A. Rogoff, "The International Law of Maritime Boundary Delimitation," Maine Law Review, 34(1), 1982, p. 34.

32 Anglo-French Arbitration, para. 95.

33 Padwa, p. 645.

34 Collins and Rogoff, p. 34.

35 Ibid.

36 Padwa, p. 637.

37 M. Thamsborg, "Geodetic Hydrography as Related to Maritime Boundary Problems," International Hydrographic Review, 57(1), 1977, p. 162.

38 R.D. Hodgson and E.J. Cooper, "The Technical Delimitation of the Modern Equidistance Boundary," Ocean Development and International Law, 3(4), 1976, pp. 366-367.

39 Padwa, p. 644.

40 Ibid., p. 643.

41 Ibid.

42 Ibid.

43 Ibid.

44 North Seas Cases, paras. 19, 43.

45 Ibid., paras. 94-98.

46 Ibid., Dissenting Opinion of Judge Koretsky, para. 162.

47 Ibid.

48 Collins and Rogoff, p. 30.

49 M.B. Feldman, "The Tunisia/Libya Continental Shelf Case: Geographic Justice or Judicial Compromise?" American Journal of International Law, 77(2), 1983.

50 Tunisia/Libya Case, pp. 70, 85, paras. 93, 120.

51 Gulf of Maine Case, p. 60, para. 115.

52 Ibid., p. 88, para. 196.

53 R.H. Kennedy, "Brief Remarks on Median Lines of Equidistance and on the Methods of their Construction," paper distributed by United Kingdom Delegation at the First United Nations Conference on the Law of the Sea, Geneva, 1958, pp. 7-8.

54 International Court of Justice, Fisheries Case: Great Britain and Northern Ireland vs Norway (1951), International Court of Justice Report 1951 (hereinafter referred to as "1951 Fisheries Case").

55 Ibid.

56 D.A. Colson, "The United Kingdom-France Continental Shelf Arbitration," American Journal of International Law.

57 Ibid.

58 Ibid., p. 105.

59 United Kingdom of Great Britain and Northern Ireland, Secretary of State for Foreign and Commonwealth Affairs, Arbitration between United Kingdom of Great Britain and Northern Ireland and the French Republic on the Delimitation of the Continental Shelf, Miscellaneous No. 15. (London: Her Majesty's Stationery Office, 1978)(hereinafter referred to as the "Anglo-French Arbitration"), para. 165.

60 Ibid., para. 182.

61 Ibid., para. 199.

62 Ibid., para. 179.

63 Ibid., para. 175.

64 D.B. McRae, "Delimitation of the Continental Shelf between the United Kingdom and France: The Channel Arbitration," Canadian Yearbook of International Law, 15, 1977, p. 189.

65 Ibid., p. 190.

66 Colson, p. 110.

67 Ibid.

68 Anglo-French Arbitration, para. 244.

69 Ibid.

70 Ibid., para. 248.

71 Ibid., para. 251.

72 McRae, p. 193.

73 Ibid., p. 194.

74 Ibid.

75 Ibid.

76 Ibid.

- 77 Anglo-French Arbitration, para. 249.
- 78 Tunisia/Libya Case, p. 89, para. 128.
- 79 Ibid., Separate Opinion of Judge Schwebel, p. 99.
- 80 Ibid., Gros Dissent, p. 150, para. 14.
- 81 Ibid., Oda Dissent, p. 271, para. 183(2).
- 82 Feldman, p. 237.
- 83 L.M. Alexander, "Baseline Delimitation," Virginia Journal of International Law, 23(4), 1983, p. 526.
- 84 Ibid.
- 85 Ibid.
- 86 Northcutt Ely, "Seabed Boundaries between Coastal States: The Effect to be Given Islets as Special Circumstances," International Lawyer, 6(2), p. 229.
- 87 Ibid.
- 88 Alexander, p. 526.
- 89 Ibid.
- 90 Ely, p. 229.
- 91 Alexander, p. 524.
- 92 Ibid.
- 93 S.W. Boggs, "Delimitation of Seaward Areas under National Jurisdiction," American Journal of International Law, 48, 1961, pp. 257-258.
- 94 Padwa, p. 648.
- 95 Ibid.
- 96 Ely, p. 234.
- 97 Padwa, p. 648.
- 98 Ibid.
- 99 Ibid.
- 100 Ely, p. 232.

- 101 Ibid., p. 234.
- 102 Ibid.
- 103 R.D. Hodgson, Islands: Normal and Special Circumstance (Washington, D.C.: U.S. Department of State, 1973), p. 42.
- 104 Ibid.
- 105 Brown, p. 55.
- 106 Ibid., p. 65; German Memorial Pleadings, vol. I, pp. 68-69.
- 107 Ibid., p. 66; Common Rejoinder, Pleadings, vol. I, pp. 526-527.
- 108 North Sea Cases, p. 49, para. 89.
- 109 Ibid., p. 51, para. 96.
- 110 Ibid., pp. 53-54, para. 101.
- 111 Ibid., p. 20, para. 15.
- 112 Ibid., Dissenting Opinion of Judge Koretsky, p. 149.
- 113 Anglo-French Case, para. 100.
- 114 Ibid., para. 249.
- 115 Feldman, p. 237.
- 116 Gulf of Maine Case, para. 36.
- 117 Ibid.
- 118 Ibid., para. 219.
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- 120 Ibid.
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- 129 Ibid., p. 377.
- 130 Thamsborg, p. 160.
- 131 Smith, p. 19.
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- 142 Ibid.
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- 145 Ibid.
- 146 Ibid., p. 381.
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- 148 R.W. Smith, "Maritime Boundaries of the United States," Geographical Review, 71, 1981, p. 407.
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150 Hodgson and Cooper, p. 382.

151 Ibid.

152 Ibid.

153 Ibid.

CHAPTER IV  
APPLICABLE LAW

The 1945 Truman Proclamation on the Continental Shelf

The 1945 Truman Proclamation is often cited as the starting point of the positive law on the continental shelf. The Truman Proclamation declared that boundaries "shall be determined by the United States and the State concerned, in accordance with equitable principles."<sup>1</sup> The Truman Proclamation also stated that "the continental shelf may be regarded as an extension of the land mass of the coastal nation and thus naturally appurtenant to it."<sup>2</sup>

The Truman Proclamation explicitly mentions "equitable principles" as the basis of continental shelf delimitation between the United States and its neighbours. The term 'equitable principles' was not defined in the Proclamation. The object of declaring 'equitable principles' as the basis of delimitation for the continental shelf in the Truman Proclamation was simply to provide for the negotiation of a 'fair' and 'reasonable' boundary. This concurs with the jurisprudential concept of 'equity' which generally recognizes 'equitable principles' to be principles based on 'fairness' and 'reasonableness'. This interpretation of equitable principles in the Truman Proclamation also corresponds to the United States' view that it was "reasonable and just" that the contiguous nation should exercise

jurisdiction over the natural resources of the subsoil and seabed of the continental shelf.

The Truman Proclamation on the continental shelf was not clear on whether the concept of natural prolongation provided an 'equitable principle' for lateral boundary delimitation, as the Court in the 1969 North Sea Cases held. The Court stated:

that whenever a given submarine area does not constitute a natural - or the most natural - extension of the land territory of a coastal State, even though that area may be closer to it than it is to the territory of any other State, it cannot be regarded as appertaining to that State - or at least it cannot be so regarded in the face of a competing claim by a State of whose land territory the submarine area concerned is to be regarded as a natural extension, even if it is less close to it.<sup>3</sup>

E.D. Brown disputes the Court's finding. Brown feels that the Truman Proclamation's statement that "the continental shelf may be regarded as an extension of the land mass of the coastal nation and thus naturally appurtenant to it" is a declaration of the principle for seaward delimitation of the continental shelf not lateral boundary delimitation.<sup>4</sup> The judgments of the Court of Arbitration in the 1977 Anglo-French Arbitration, the Court in the 1982 Tunisia-Libya Case and the Chamber in the 1984 Gulf of Maine Case, wherein they found natural prolongation as a principle for lateral boundary delimitation to be ineffective, lends support to Brown's contention. Notwithstanding, it must be finally

noted that the Truman Proclamation makes no reference to the purpose of boundary delimitation as being to share-out or apportion the individual continental shelf area.<sup>5</sup>

The 1945 Truman Proclamation initiated a worldwide movement to expand national jurisdiction within the maritime zones adjacent to coastal areas. However, no consistent theory and practice had evolved for lateral boundary delimitation of the traditional maritime zones let alone the new continental shelf zone. As an increasing number of states extended the breadth of their sovereignty in offshore waters and seabed areas, the international community recognized the need to examine the emerging doctrines of international maritime law.<sup>6</sup>

#### The International Law Commission

The first serious juridical attention to analyzing established international law and state practice concerning boundary delimitation of the territorial sea, the contiguous zone, the continental shelf and the high sea was made by the International Law Commission in 1951. The first suggestion of the Commission, released in the same year, called for a boundary for the continental shelf to be fixed by agreement or by compulsory arbitration.<sup>7</sup> This suggestion was widely criticized by governments either because it provided no "guiding principles" or because it would establish compulsory arbitration or both.<sup>8</sup> At its 1952 session, the

principle of equidistance was formally introduced to the Commission when Special Rapporteur J.P.A. Francois proposed an equidistance line to separate the territorial seas of both opposite and adjacent states, unless a special configuration of the coast justified a departure from that line.<sup>9</sup> Francois' proposal was referred to a group of experts to grapple with the technical problems of boundary delimitation in the territorial sea.

The Committee of Experts included into their task a delimitation formula which could also be used for the delimitation of the respective continental shelves of two States bordering the same continental shelf. The Committee recommended for opposite coasts "the median line, every point of which is equidistant from the baselines of the States concerned" adding that "there may...however be special reason, such as navigation and fishing rights which may divert the boundary from the median line."<sup>10</sup> For adjacent coasts the Committee studied drawing a perpendicular line on the coast at the intersection of the land frontier and the coastlines, a line drawn vertically on the general direction of the coastline, and the median line. The Committee recommended that the lateral boundary, if not fixed otherwise (i.e., by agreement), should be drawn according to the principle of equidistance from the respective coastlines. The Committee added, however, that "[I]n a number of cases this may not lead to an equitable

solution, which should then be arrived at by negotiation."<sup>11</sup>

Rapporteur Francois, on the basis of the Committee's 1953 Report, proposed to the Commission a draft article which provided for lateral maritime boundaries including the continental shelf to be delimited on the basis of the principle of equidistance. He omitted the other provisions contained within the committee's recommendations for delimitation of opposite and adjacent coasts. Rapporteur Francois then included a provision that in the event states could not agree on how the boundary was to be drawn in accordance with the equidistance principle, their dispute was to be submitted to arbitration.<sup>12</sup>

On acceptance of the Francois report, the International Law Commission added provisions for 'mutual agreement' and for departures from the principle of equidistance when such were justified by the presence of 'special circumstances' (Article 7). The Commission accepted Rapporteur Francois' arbitration recommendation (Article 8). After lengthy review and reformulation, the Commission submitted its report to the General Assembly in 1956 which provided that the rule for the territorial sea boundary (Article 14) should also be used for delimitation of the continental shelf (Article 72). The rule provided that boundaries were to be determined by agreement and, in the absence of agreement, by application of the principle of equidistance, unless another boundary was justified by the presence of special circumstances.<sup>13</sup>

The Commission's narrative which accompanied the draft Article 72 (i.e., continental shelf delimitation) declared that, in the cases of both opposite and adjacent states, "the rule of equidistance is the general rule" subject to the modification that "in cases in which another boundary line is justified by special circumstances" such as exceptional configuration of the coast, as well as the presence of islands or of navigable channels.<sup>14</sup> To that extent the commission commented, "the rule partakes of some elasticity." The Commission's commentary to Article 14 emphasized that the equidistance line was the best and most equitable solution, since the technique could produce an equitable boundary in straight, curved and irregular coastline situations.<sup>15</sup>

#### The 1958 United Nations Conference on the Law of the Sea at Geneva

During the discussion of the Commission's draft Article 72 at the 1958 Conference, delegates in the Fourth Committee presented views ranging from the position that the principle of equidistance should take precedence over agreements negotiated between states to the position that, because no general rule including equidistance would be satisfactory in all cases, the parties to a dispute should be directed to reach agreement through negotiations.<sup>16</sup> The Commission's draft was defended by several delegates as a suitable compromise between the two extreme positions.<sup>17</sup> The British

and American delegates stated that in any case, the median line would serve as a starting point or an objective standard of reference for negotiating an agreement even in the presence of special circumstances.<sup>18</sup>

The text of the Commission's draft was then adopted by the Fourth Committee with minor changes by 86 votes in favour, none against and 19 abstentions and at the Plenary Session of the Conference by a vote of 63 in favour, none against and 2 abstentions.<sup>19</sup> Padwa's review of the debate at Geneva reveals what is virtually unanimous support for the principle of equidistance; there is very little doubt that the abstentions were directed towards the issue of "special circumstances" rather than anything else.<sup>20</sup>

The delimitation provisions of Article 6 (i.e., draft Article 72) of the Geneva Convention on the Continental Shelf declare that failing agreement and unless another boundary is justified by special circumstances, the equidistance principle shall apply.

Is an attempt at an agreement a necessary precondition for the application of the principle of equidistance? It is unlikely the states will engage in empty exercises knowing the consequences that will result. It is more plausible that the absence of agreement will be precipitated by either party refusing to negotiate on its position. Thus, failure to attempt to negotiate does not affect the application of the principle. This is not intended to mean that an attempt

to reach an agreement is without relevance. Surely there is value in hearing what the other party has to present and seeing if any common ground exists in the matter especially where special circumstances may exist? However, a need to attempt to reach agreement as a precondition to the application of the principle of equidistance may be more apparent than real.<sup>21</sup> If one were to examine Article 12 of the 1958 Convention on the Territorial Sea and Contiguous Zone a somewhat different emphasis than Article 6 of the Convention on the Continental Shelf is apparently suggested.

Article 12 provides as follows:

1. Where the coasts of two States are opposite or adjacent to each other neither of the two States is entitled, failing agreement between them to the contrary, to extend its territorial sea beyond the median line every point of which is equidistant from the nearest point on the baseline from which the breadth of the territorial sea is measured. The provisions of this paragraph shall not apply, however, where it is necessary by reason of historic title or other special circumstances to delimit the territorial seas of the two States in a way which is at variance with this provision.

Article 12 sets no precondition about states reaching agreement; it presumes a lack of agreement. Further, Article 12 says what the boundary is not, unlike Article 6 of the Convention on the Continental Shelf which states what the boundary is.<sup>22</sup> Similarly, Article 12 speaks of a necessary variance caused by special circumstances rather than stating, as Article 6 does, that "another line" may be

"justified" by such circumstances. And Article 12 makes no distinction in the application of the equidistance principle between adjacent and opposite states whereas Article 6 distinguishes in degree of positiveness between opposite states, where "the boundary is the median line" or equidistance line, and adjacent states, where "the boundary shall be determined by application of the principle of equidistance." Finally, Article 12 stipulates "historic title" as one type of special circumstance. Despite these apparent differences, they are only academic; the two Articles are essentially the same in their effect.<sup>23</sup> Both Articles contain the three same, essential ingredients: 1) agreement between states based on the premise that freely accepted boundaries by both states represent the best boundaries; 2) failing agreement the application of the principle of equidistance; and 3) except where special circumstances are present.

While both Articles provided the first substantive legal formula by which maritime boundaries may be delimited, the subsequent differences which have emerged on whether this formula constitutes the rule of law for boundary delimitation results from the weight attached to each criterion within the formula. As such, these differences can be attributed to three slightly different but very important interpretations which alter the balance of the formula. For example, the formula could mean that only in

the absence of agreement or unless another boundary is justified by special circumstances is the principle of equidistance laid down in Article 6 to be resorted to. Or, the formula could be interpreted to mean only two conditions justify departure from the principle of equidistance: agreement between parties and the presence of special circumstances. A third interpretation that has evolved and which will be discussed shortly is agreement between parties failing which a combined equidistance-special circumstance rule of equal rank prevails.

Nevertheless, the principle of equidistance is the only explicit technique referred to by the Conventions of the 1958 United Nations Conference on the Law of the Sea. As the previous chapter demonstrates, the presence of "special circumstances" does not necessarily invalidate the pre-eminent application of the equidistance principle where agreement is not found. Methods are available to adjust or modify most geographical 'special circumstances'.

Canada and the United States are both signatories to the 1958 Convention on the Continental Shelf. Canada, however, did not sign the 1958 Convention on the Territorial Sea and Contiguous Zone. This is important in regard to the contractual obligation on signatories that subsequent international judicial bodies have found the Conventions to possess. Also, the United States' acceptance with no reservations of the Convention on the Continental Shelf of

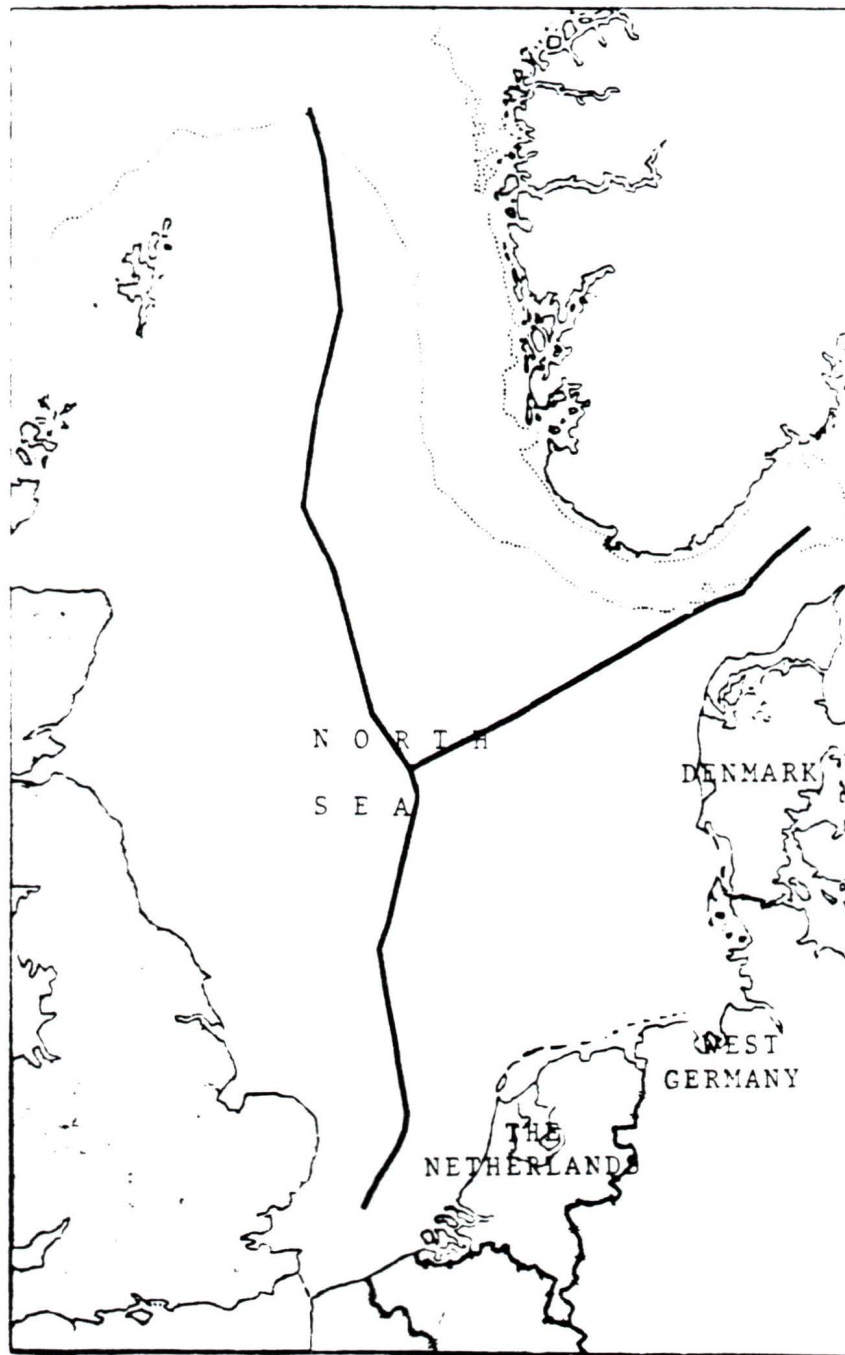
the more precise boundary delimitation formula contained therewithin would seem to provide evidence that this formula is congruent with the vague principle for continental shelf boundary delimitation declared in the 1945 Truman Proclamation, that is, "the application of equitable principles."

#### The 1969 North Sea Continental Shelf Cases

The North Sea Continental Shelf Cases involved a boundary dispute in the North Sea, between Denmark, the Netherlands and the Federal Republic of Germany on the delimitation of their continental shelf boundaries (See Figure 36). As a result of bilateral negotiations, previous agreements had been concluded between the Netherlands and Germany (1964) and Denmark and Germany (1965), under which a partial delimitation had been effected on the basis of the principle of equidistance. No agreement could be reached on the remainder of the boundaries however, because of disagreement over the rules which should govern the delimitation. The Netherlands and Denmark maintained that the formula stated in Article 6(2) of the 1958 Convention on the Continental Shelf applied to delimitation of their respective boundaries with Germany.

Germany argued, however, that the delimitation should be governed by the principle that each coastal state is entitled to a just and equitable share. Since application

Figure 36



— Equidistance lines already delimited

Source: International Court of Justice.  
"North Sea Continental Shelf Judgment." Report, 3, 1969. p. 15.

of the equidistance method would not in this particular case lead to a just and equitable apportionment, the delimitation must be settled by an agreement which would apportion a just and equitable share to each of the Parties in the light of all the relevant factors.<sup>25</sup>

Due to this disagreement, the Parties agreed in 1967 to submit the dispute to the International Court of Justice. The Court was requested to decide: "What principles and rules of international law are applicable to the delimitation as between the Parties of the areas of the Continental Shelf in the North Sea which appertain to each of them beyond the partial boundaries [determined by previous agreement]."<sup>26</sup> The Parties agreed they then would delimit their continental shelf boundaries by agreement pursuant to the Court's decision.

The Court, by eleven votes to six, held that Article 6(2) of the 1958 Convention on the Continental Shelf was purely a conventional law and did not contain the applicable law because Germany was not a signatory to the Convention and had not expressed its consent to be bound by its behaviour.<sup>27</sup> Also, the Court found that the equidistance principle was neither inherent in the basic doctrine of the continental shelf nor was it a principle of customary law.<sup>28</sup>

The Court stated that the applicable principles and rules were:

1. delimitation is to be effected by agreement in accordance with equitable principles, and taking account of all the relevant circumstances in such a way as to leave as much as possible to each Party all these parts of the Continental shelf that constitute a natural prolongation of its land territory into and under the sea, without encroachment on the natural prolongation of the land territory of the other;
2. if, in the application of the preceding subparagraph, the delimitation leaves to the parties areas that overlap, these are to be divided between them in agreed proportions or failing agreement, equally unless they decide on a regime of joint jurisdiction, user, or exploitation <sup>29</sup> for the zones of overlap or any part of them.

In providing its rationale for these principles, the Court felt that the Truman Proclamation must be considered as having "propounded the rules of law in this field."<sup>30</sup> The Court held that the Truman Proclamation's provisions for delimitation by mutual agreement and in accordance with equitable principles "have underlain all the subsequent history on the subject."<sup>31</sup>

The Court also found that the most important doctrine proclaimed in the Truman Proclamation was the principle that the coastal state has "an original, natural, and exclusive right to the Continental Shelf off its shores."<sup>32</sup> The Court elaborated on this principle by stating that:

the rights of the coastal State in respect of the area of Continental Shelf that constitutes a natural prolongation of its land territory into and under the sea exist ipso facto and ab initio, by virtue of its sovereignty over the land, and as

an extension of it in an exercise of sovereign rights for the purpose of exploring <sup>33</sup>the sea-bed and exploiting its natural resources.

Notwithstanding, the Court felt that the purpose of applying equitable principles was for the process of delimitation which is essentially one of drawing a boundary between areas which already appertained to one or other of the states affected. The delimitation had to be equitably effected but could not have as its object the awarding of an equitable share or indeed of a share as such at all, for the fundamental concept involved did not admit of there being anything undivided to share out.<sup>34</sup> Accordingly, the Court rejected Germany's claim for a 'just and equitable' share or apportionment of the continental shelf.

The Court described the context in which equity is applied by stating that:

it is not a question of applying equity simply as a matter of abstract justice, but of applying a rule of law which itself requires the application of equitable principles, in accordance with the ideas which have always underlain the development of the legal regime of the continental shelf in this field, namely:

- (a) an obligation to enter into meaningful negotiations with a view to arriving at an agreement;
- (b) an obligation to act in such a way that taking all the circumstances into account, equitable principles are applied, - for this purpose the equidistance method can be used, but other methods exist and may be employed alone or in combination.

- (c) the continental shelf of any State must be the natural prolongation of its land territory and must not encroach upon what is the natural prolongation of the territory of another State.<sup>35</sup>

Natural prolongation, as has been shown, is useful for determining a state's entitlement to continental shelf rights but it is essentially ineffective as principle for delimitation of continental shelf boundaries.

The Court recognized that the equidistance principle was not totally creative of inequity. In fact, the Court commented that it "has never doubted that the equidistance method of delimitation is a very convenient one"<sup>36</sup> and that "it would probably be true to say that no other method of delimitation has the same combination of practical convenience and application."<sup>37</sup> However, it is only to be used when it provides an equitable result which is the common aim of customary international law and Article 6 of the Convention on the Continental Shelf. The principle of equidistance is most likely to lead to equitable results when used to draw the median line boundary of opposite states.<sup>38</sup> This distinction is based on "a difference in the geographical conditions in which the applicable legal regime operates."<sup>39</sup> In opposite state situations, the natural prolongation of the two states meet and overlap and "can therefore only be delimited by means of a median line; and ignoring the presence of islets, rocks and minor coastal projections, the disproportionally distorting effect of

which can be eliminated by other means, such a line must effect an equal division of the particular area involved.<sup>40</sup>

The Court said, however, in certain geographical circumstances the equidistance principle may lead to inequity. In adjacent state situations, the effect of even slight coastal irregularities on the areas of the continental shelf allocated to each state is automatically magnified the greater the distance the boundary extends from the shore.<sup>41</sup> For example, the Court felt that if the equidistance method were applied to concave coastlines such as Germany's north coast, "then the greater the irregularity and the further from the coastline the area to be delimited, the more unreasonable [would be] the results produced."<sup>42</sup> The Court felt "so great an exaggeration of the consequences of a natural geographical feature must be remedied or compensated for as far as possible, being of itself creative of inequity."<sup>43</sup>

But as previously discussed and as the 'special circumstances' component in Article 6 of the 1958 Convention on the Continental Shelf provided for, the principle of equidistance does not necessarily have to be rejected as an equitable principle because a distorting geographical feature is producing an inequitable equidistance line. There are techniques available which compensate for or remedy geographical distortions impacting on an equidistance line in adjacent state situations so that it is not strictly

a mechanical method of delimitation. And while the resulting division may be unequal, it is not of necessity inequitable.<sup>44</sup>

The Court's rejection of the equidistance principle as a general or pre-eminent rule because it is distorted by certain geographical features seems excessive. One is reminded that Prescott noted only three other similar geographical situations existing in boundary regions, similar to the North Sea's southeastern coast.<sup>45</sup> While the decisions of the International Court Justice do not constitute formal precedents, a judgment as a substantive guide in international customary law based on this relatively uncommon situation, should be tempered in jurisprudential meaning.

The Court's sole concern with the inequity possibly produced by the equidistance method, in isolation of the other two elements in the formula, is faulty. Mutual agreement and special circumstances as expressed in Article 6 allow for a balancing of inequities. Modification or adjustment to the equidistance line can produce an equitable solution. Rejection of the entire principle without consideration of the other two elements would seem to be an inequitable process for determining 'equitable principles'.

In view of the fact the Court was not asked to actually delimit a boundary only determine the abstract principles, it is difficult to evaluate the ability of these principles

to produce an equitable solution. On the other hand, the effectiveness of the equidistance principle to produce an equitable solution may be presumed by its overwhelming use by coastal states.

The Court's reasoning relies too heavily on the Truman Proclamation as a substantive source of customary international law for lateral boundary delimitation. The unilateral declaration by the United States of the Truman Proclamation is more concrete as a source of legal doctrine under which states became entitled to push their frontiers seaward and enjoy exclusive rights to explore and exploit the natural resources of vast new areas of submarine territory contiguous to its coasts than as a source for lateral boundary delimitation. Evidence of the equidistance principle having been recognized as the basis for lateral boundary delimitation by coastal states is not given proper attention and recognition by the Court.<sup>46</sup> The Court is at variance with present trends of boundary delimitation between states in which the equidistance principle dominates. Moreover, the Court fails to note that the formulators of the Truman Proclamation, that is the United States, by ratifying the 1958 Convention on the Continental shelf, embraced the pre-eminent role of equidistance in the formula within Article 6. The United States' action demonstrates that the United States believes that equitable principles of the Truman Proclamation were embodied in Article 6

and that the equitable principles and Article 6 are not merely juxtaposed, but form a continuum of law.<sup>47</sup>

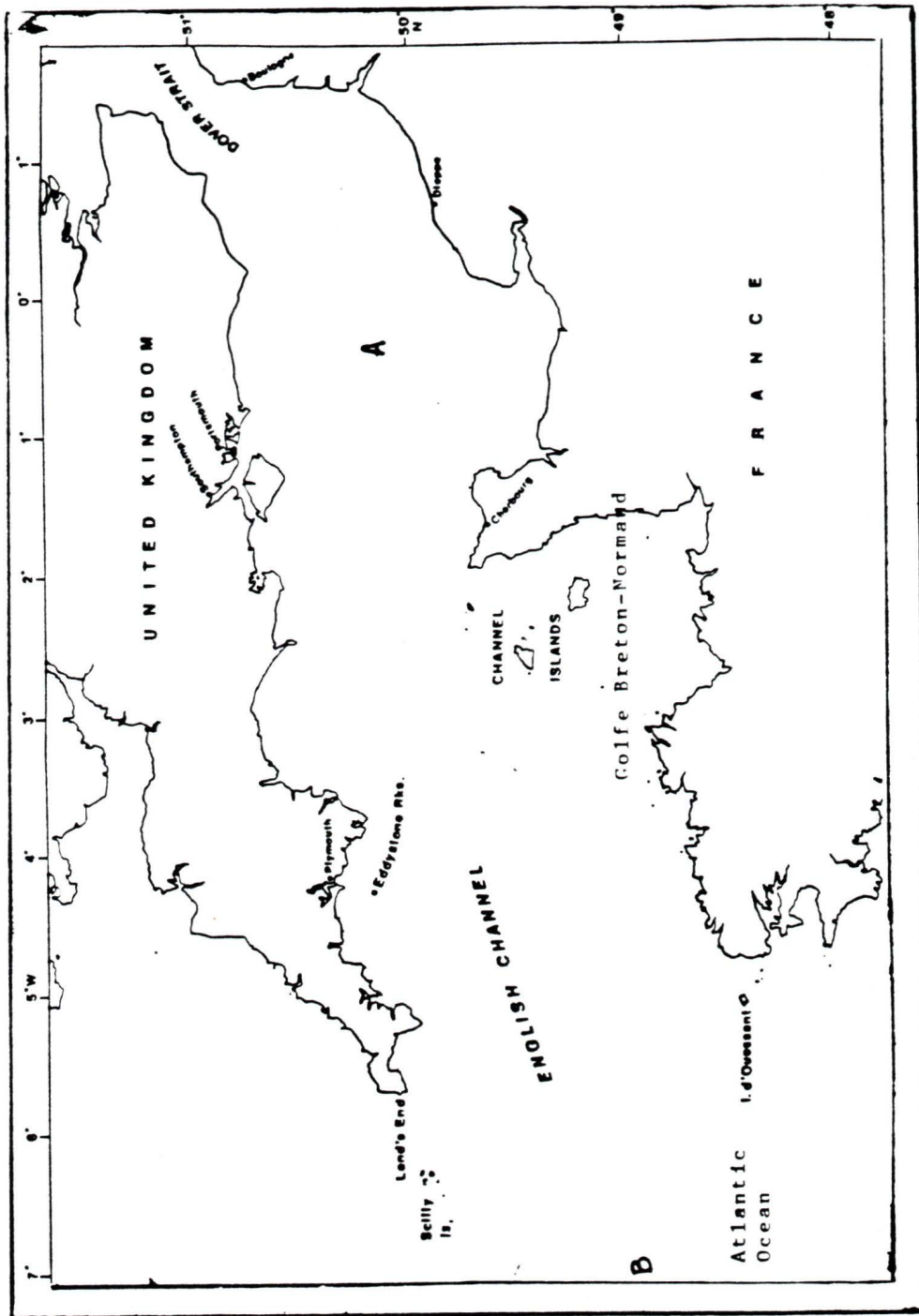
Finally, it is hard to escape the conclusion that the process engaged in by the International Court of Justice in the North Sea Cases is delimitation, which with all respect to the Court, might as well have been called apportionment.<sup>48</sup> Apportionment was an evident factor which seemed to influence the Court when it noted the coasts

in fact [are] comparable in length and which, therefore, have been given broadly equal treatment by nature except that the configuration of one of the coastlines would, if the equidistance method is used, deny to one of these States treatment equal<sup>49</sup> or comparable to that given the other two.

#### The 1977 United Kingdom-France Continental Shelf Arbitration

The United Kingdom-France Continental Shelf Arbitration arose from the inability of these two states to agree on their mutual continental shelf boundary in the English Channel and its western approaches in the Atlantic Ocean (See Figure 37). The United Kingdom and France engaged in negotiations on delimitation of their continental shelf boundary from 1970 to 1974. The negotiations resulted in some agreements, specifically, east of 30 minutes longitude west of Greenwich (point A in Figure 37) where the two sides agreed in principle that the boundary should be based on the principle of equidistance. However, the sides were in fundamental disagreement concerning the portion of the

Figure 37



Source: United Kingdom of Great Britain and Northern Ireland, Secretary of State for Foreign and Commonwealth Affairs, Arbitration Between United Kingdom of Great Britain and Northern Ireland and the French Republic on the Delimitation of the Continental Shelf. Miscellaneous Report No. 15. London: Her Majesty's Stationery Office, 1978. Map inset.

continental shelf boundary west of 30 minutes longitude west of Greenwich (point A to point B).

There were two major areas of difference based on particular geographic circumstances. The United Kingdom contended that in the Golfe Breton-Normand, the boundary should be delimited equidistant between the French coast and the Channel Islands. This would leave to France only a narrow strip of continental shelf jurisdiction between the French coast and the Channel Islands and allot to the United Kingdom virtually all of the continental shelf of the English Channel in this area. France's position was that the boundary should follow an equidistant line between the French coast and the mainland of the United Kingdom and that the Channel Islands should be entitled to no more than a belt of jurisdiction six miles wide on the side of those islands facing the English Channel. The effect of the French position was to create an enclave for the Channel Islands on what would otherwise be the French continental shelf.

The other major area of difference was in the Atlantic, in the western approaches to the English Channel. The French argued that the boundary should follow the bisector of an angle formed by two lines expressing the general direction of the coasts of the United Kingdom and France. On the contrary, the United Kingdom contended that the boundary in this area should be determined by application of

the principle of equidistance, utilizing both the Scilly Isles and Ile d'Ouessant (Ushant) as basepoints for the measuring of the equidistant line. Both sides were unable to resolve their differences in these two areas by negotiation so they agreed, by the Arbitration Agreement of July 10, 1975, to submit their dispute to the Permanent Court of Arbitration.<sup>50</sup> The Court was requested to decide, in accordance with the rules of international law applicable in the manner as between the Parties:

What is the course of the boundary (or boundaries) between the portions of the continental shelf appertaining to the United Kingdom and the Channel Islands and to the French Republic, respectively, westward of 30 minutes west of the Greenwich Meridian as far as the 1,000 metre isobath?<sup>51</sup>

The Court was also asked to draw the course of the boundary on a chart.<sup>52</sup>

In their submission to Court for the geographical position noted above, France contended that it was founded on the legal argument that the 1958 Convention on the Continental Shelf was not in force between the parties because of valid reservations made by France when it assented to the Convention and subsequent equally valid objections to such reservations by the United Kingdom. Alternatively, France argued if the Court found the 1958 Convention to be in force between the parties, Article 6 concerning delimitation was still not applicable between them due to their reservations registered to the Convention.

(Signatories to the Convention are permitted to make reservations to certain articles). In that case, the rules of customary law propounded in the North Sea Cases should be considered applicable. This meant that the boundary must be delimited according to the principle of natural prolongation and in compliance with 'equitable principles'. And in the event that the Court did find Article 6 to be applicable between the parties, 'special circumstances' in the Channel Islands and in the Atlantic areas precluded the use of the equidistance method.<sup>53</sup>

The United Kingdom based its geographical position of the boundary on the view that legally the entire 1958 Convention on the Continental Shelf was in force between the parties. In addition, the United Kingdom maintained that objections by the United Kingdom to French reservations did not prohibit entry into force of the Convention as between the parties. Furthermore, the United Kingdom claimed that the French reservations to Article 6 were not true reservations or permissible reservations to Articles 6. Even if the reservations were applicable, they would not make any difference in the application of the relevant legal principles. The United Kingdom considered Article 6(1) was applicable and France was therefore required to prove that 'special circumstances' within the meaning of Article 6 existed in the boundary region. Therefore, the United Kingdom felt that the entire area should be delimited by

application of the equidistance principle, giving full effect to the Scilly and Channel islands as basepoints from which the territorial sea was measured.

Alternatively, the United Kingdom argued that if Article 6 was found to be inapplicable and customary law governed, then the boundary line shown be delimited so as to leave as much as possible to each party of its natural prolongation without encroachment on the natural prolongation of the other party.<sup>54</sup> As the continental shelf was essentially of a continuous geologic character, the United Kingdom argued that the natural prolongation of the two countries should be divided by the equidistant line which would be in accordance with equitable principles.<sup>55</sup> However if the Court of Arbitration found there was a structural discontinuity to the continental shelf, the boundary line should follow the axis of this structural discontinuity.

The Court deemed the Convention on the Continental Shelf to be applicable between Parties because both of the disputing states were parties to the Convention. Notwithstanding, the Court of Arbitration held that it was appropriate to take into account recent developments in customary law in assessing the case before them. The Court of Arbitration also held that France's reservations to the Convention, that is, one dealing with equidistant boundaries determined from baselines established after 1958, another

regarding boundaries extending beyond the 200-metre isobath, and a third dealing with areas of special circumstances, including the Bay of Granville (the Channel Islands area), were appropriate and that each modified the legal effect of Article 6.<sup>56</sup> In the areas where the reservations were operable, the Court of Arbitration held that principles of customary law applied. In practical terms, this meant only the third reservation was applicable because the other two were irrelevant since no post-1958 baselines were at issue, and since the parties had agreed to extend the delimitation to the 1000-metre isobath.<sup>57</sup>

Having concluded that part of the delimitation was to be governed by Article 6 and part by customary international law, the Court of Arbitration held that in view of the geographical and other circumstances of the present case, the rules of customary law lead to much the same result as the provisions of Article 6.<sup>58</sup> The Court of Arbitration held that the equidistance and special circumstances components of the formula expressed in Article 6 were not two distinct rules, an equidistance rule and a special circumstances rule, but a combined equidistance-special circumstances rule wherein both were equal parts, with the role of special circumstances being to ensure an equitable delimitation. The Court of Arbitration stated:

the role of the 'special circumstances' condition in Article 6 is to ensure an equitable delimitation; and the combined 'equidistance-special circumstances rule,' in effect, gives particular expression to a general norm that, failing agreement, the boundary between States abutting on the same continental shelf is to be determined on equitable principles.<sup>59</sup>

The Court of Arbitration doubted whether there was any legal burden of proof in regard to the existence of special circumstances.<sup>60</sup> As Article 6 provides no criteria for determining whether 'special circumstances' exist, the Court of Arbitration explained that the appropriateness of the use of the equidistance principle was to be determined relative to the particular geographical circumstances. The Court of Arbitration said:

Article 6 neither defines 'special circumstances' nor lays down the criterion by which it is to be assessed whether any given circumstances justify a boundary line other than the equidistance line. Consequently, even under Article 6 the question whether the use of the equidistance principle or some other method is appropriate for achieving an equitable delimitation is very much a matter of appreciation in the light of the geographical and other circumstances.<sup>61</sup>

The Court of Arbitration attested to the "truth of the observations"<sup>62</sup> made by the Court in the North Sea Cases that the equidistant method is without parallel for its combined qualities of practical convenience and certainty of application.<sup>63</sup> Similarly, the Court of Arbitration felt the principle of equidistance was to be used only when it produced an equitable result. The differing geographical

circumstances in which the legal regime operates determined the equity of the results. In most opposite coasts situations, a median equidistance boundary line is less likely to produce inequity. However, in a geographical situation of coastal adjacency where an equidistance line is used, the Court stated that it:

may not infrequently result in an inequitable delimitation by reason of the distorting effect of individual geographic features.<sup>64</sup>

In consideration of this, the Court of Arbitration propounded that the applicable law was:

...the appropriateness of the equidistance method or any other method for the purpose of effecting an equitable delimitation is a function or reflection of the geographical and other relevant circumstances of each particular case. The choice of the method or methods of delimitation in any given case, whether under the 1958 Convention or customary law, has therefore to be determined in the light of those circumstances and of the fundamental norm that the delimitation must be in accordance with equitable principles.<sup>65</sup>

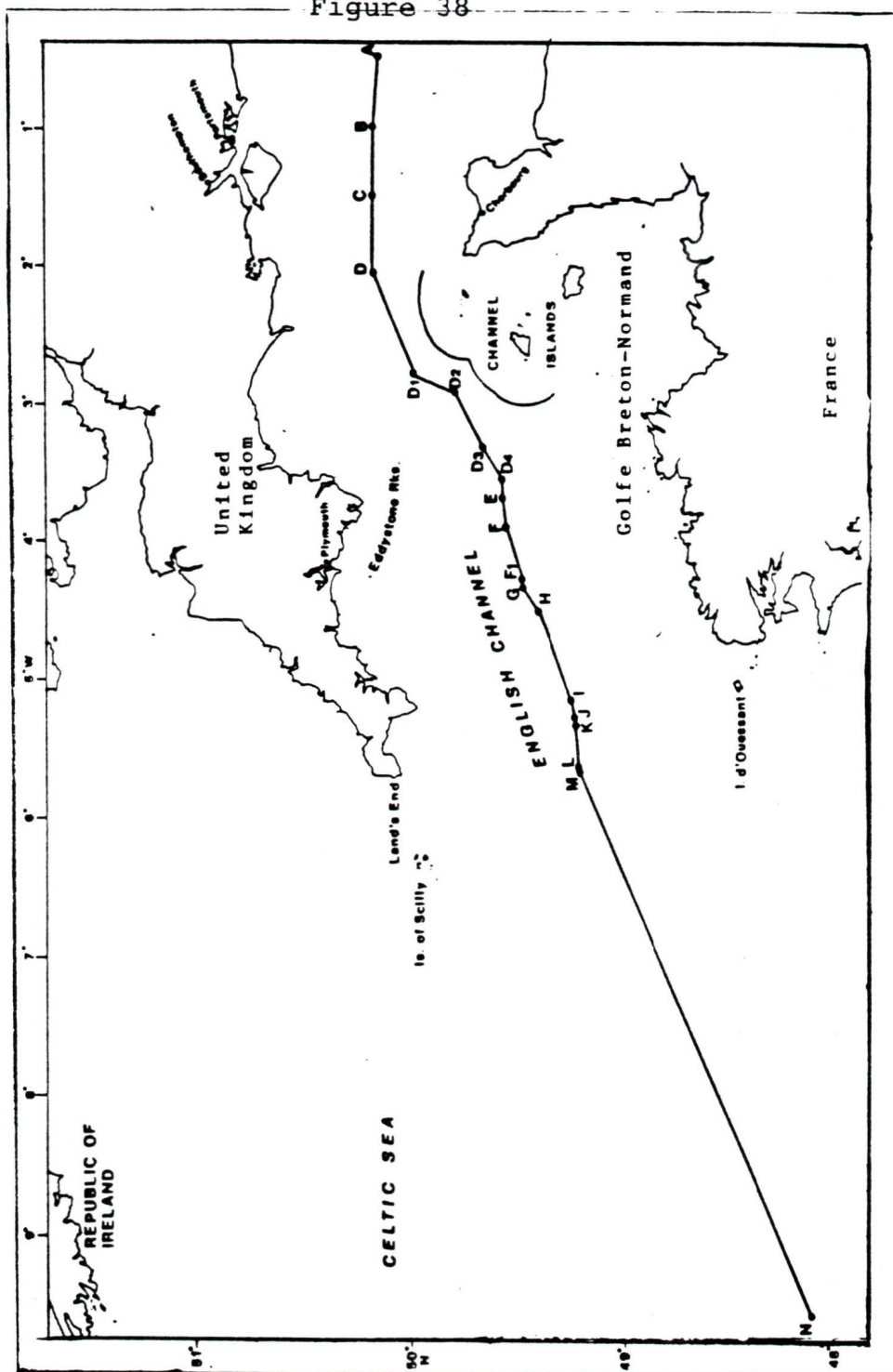
Even in adjacent state situations, the principle of equidistance is fundamentally important in the delimitation of continental shelf boundaries. According to the Court of Arbitration, both state practice and the legal rules governing the continental shelf indicate that in situations in which geographical or other circumstances produce a distorting effect on an equidistance line boundary, a solution must be sought in a method "modifying or varying the equi-

distance method rather than to have recourse to a wholly different criterion of delimitation."<sup>66</sup> Equity calls for an appropriate abatement of the disproportionate effects of particular circumstances, usually geographical, on the equidistance line.

Based on what was considered to be the applicable law, the Court of Arbitration determined that the boundary line in the Channel Islands region where the coasts were opposite was to be a median line measured from the baselines of the parties' respective mainlands. The Channel Islands were 'enclaved' on the French side of the median line by a 12 mile circle of arcs around the Islands' north and west perimeters. In the Atlantic region where the coasts were determined to be geographically adjacent, the Court of Arbitration applied the equidistance method but modified it to take account of what was deemed to be the distorting effect of the Scilly Isles on the equidistance line. Figure 38 illustrates the Court of Arbitration's judgment.

The Court of Arbitration's efforts to align Article 6 and the concept of 'special circumstances' with the rather open-ended concept of boundary delimitation according to equitable principles rather than create a substantial difference would be illogical and to this extent the judgment is to be welcomed.<sup>67</sup> However an attempt should have been made to detail the concept of equity. In this regard, the Court of Arbitration's decision resembles the

Figure 38



Source: United Kingdom of Great Britain and Northern Ireland, Secretary of State for Foreign and Commonwealth Affairs, Arbitration Between United Kingdom of Great Britain and Northern Ireland and the French Republic on the Delimitation of the Continental Shelf. Miscellaneous No. 15. London: Her Majesty's Stationery Office, 1978, Map inset.

Court's judgment in the North Sea Cases. Equity would seem to be open for each tribunal to determine, with little in the way of objective guidelines provided except those that mention or infer a sense of apportionment. The Court of Arbitration's application of equity whereby states with roughly equal coastlines should have roughly equal shelf areas, however, appears to infringe on the apportionment guideline.<sup>68</sup>

In this same manner, the Court of Arbitration's finding that special circumstances warrants a more substantive role in delimitation of equidistance boundaries between adjacent states without clearly defining the limits whereby it is creative of inequity can only exacerbate the abstraction in the concept of equity already realized.

McRae also questions the Court of Arbitration's judgment of the interplay of geology and law in this boundary delimitation dispute. Citing this interplay as "probably the most important factor contributing to uncertainty in the rules relating to boundary delimitation on the continental shelf,"<sup>69</sup> McRae argues that the Court of Arbitration's continuing emphasis on geology as a dictate of the law is wrong. McRae feels the concept of the continental shelf is entirely juridical. However, while the 1958 Convention on the Continental Shelf may be more illustrative of McRae's contention, the Law of the Sea has nonetheless strived to define the continental shelf primarily on

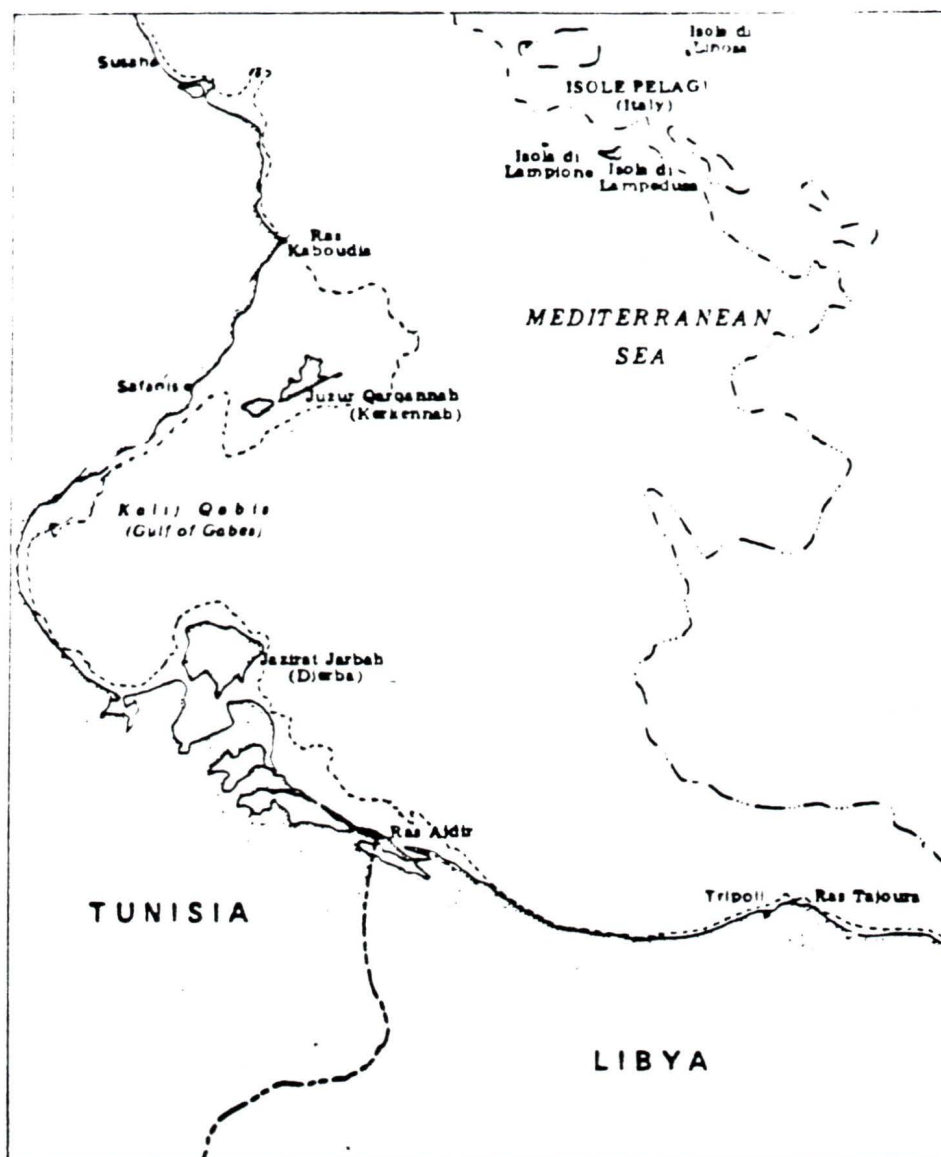
geological criteria.

Finally, it is ironic that the Court of Arbitration sought to weaken the pre-eminent role of the principle of equidistance in the formula for boundary delimitation while at the same time delimiting a boundary largely based on the principle of equidistance.

#### The 1982 Tunisia-Libya Continental Shelf Case

Tunisia and Libya are contiguous states on the Northern Africa continent fronting on the Mediterranean Sea. The Libyan coast in the boundary region is relatively uniform and open, following a general west-northwest to east-southeast direction. The Tunisian coastline follows the same general direction for some 100 miles from its land terminus with Libya at Ras Ajdir towards the Gulf of Gabes where the coast makes a dramatic change in a northwest direction creating the concavity of the Gulf of Gabes. The Tunisia coast is not as open as Libya's, due to the presence of the large Tunisian islands of Jerba some 45 miles west of Ras Ajdir, and the Kerkennah Islands 11 miles off the Tunisian coast south of Ras Kaboudia<sup>70</sup> (See Figure 39). Since 1966 hydrocarbon exploration and drilling has occurred in the boundary area.<sup>71</sup> The Tunisian concession line of October 21, 1966 followed a bearing of approximately 26°, roughly perpendicular to the general direction of the coast in the vicinity of Ras Ajdir. In 1968 Libya granted a

Figure 39



#### Libya-Tunisia Maritime Boundary Dispute

Source: Feldman, M.B. The Tunisia-Libya Continental Shelf Case: Geographic Justice or Judicial Compromise. The American Journal of International Law 77, 1983, p. 221.

concession up to the Tunisian line and subsequent concessions followed the 26<sup>o</sup> line. The concessions granted by Tunisia in 1974 extended further east up to an equidistance line. Both parties claimed larger areas before the Court.<sup>72</sup>

The parties submitted their dispute to the International Court of Justice on December 1, 1978. The Court was asked:

What are the principles and rules of international law which may be applied for the delimitation of the area of the continental shelf appertaining to the Republic of Tunisia and the area of the continental shelf appertaining to the Socialist People's Libyan Arab Jamahiriya and, in rendering its decision, to take account of equitable principles and the relevant circumstances which characterize the area, as well as recent trends admitted at the Third Conference on the Law of the Sea.<sup>73</sup>

The Court was not asked to delimit the course of the boundary but rather "to specify the practical way in which the aforesaid principles and rules apply in this particular situation so as to enable the experts of the two countries to delimit those areas without any difficulties."<sup>74</sup>

Neither Libya nor Tunisia were signatories to the 1958 Geneva Convention on the Continental Shelf. This differed from the previous arbitrations of the Court where the context or content of the 1958 Convention was at issue. In fact the principle of equidistance was not proposed by either party; both based their claims to areas of continental shelf primarily on the principle of natural prolongation in its

physical dimension. Considering Tunisia's use of the equidistance principle in granting drilling concession in 1974, their position was surprising. Meanwhile, the majority of the Court refused to consider the equidistance method as a possible means of effecting delimitation in accordance with equitable principles. Instead, the Court laid down the general rule that "delimitation is to be effected in accordance with equitable principles, and taking account of all relevant circumstances."<sup>75</sup> However, the Court did offer some comments on the use of the equidistance principle, so in this respect it is worthy of study. The Court's decision is also deserving of attention because it differed from the International Court of Justice's previous two other judgments on boundary delimitation by focusing on the product or the solution not the process of boundary delimitation.

The Court did not confirm the pre-eminence of natural prolongation as a principle of boundary delimitation. The Court held that

natural prolongation may, where the geographical circumstances are appropriate, have an important role to play in defining an equitable delimitation...but...the satisfying of equitable principles and the identification of the natural prolongation...are not to be placed on a plane of equality.<sup>76</sup>

In the Court's view natural prolongation is the basis for sovereign rights of the coastal state over its appurtenant

continental shelf but "would not necessarily be sufficient, or even appropriate," in itself to determine the precise extent of the rights of one State in relation to those of a neighboring State."<sup>77</sup>

With this finding, the Court weakened the link between equitable principles and natural prolongation proclaimed by the Court in the North Sea Cases and the Court of Arbitration in the 1977 Anglo-French Case. The Court in the Tunisia/Libya Case stated that it was bound to decide the case on the basis of equitable principles, "divorced from the concept of natural prolongation."<sup>78</sup> However, the Court did not identify any equitable principles as such. As a matter of fact the Court declared that "[i]t is...the result which is predominant; the principles are subordinate to the goal....[The] term 'equitable principles' cannot be interpreted in the abstract."<sup>79</sup> The equity of any principle depends on whether it produces a just result in the circumstances of the particular case.<sup>80</sup> "The task of the Court...[is to] balance up the various considerations which it regards as relevant in order to produce an equitable result."<sup>81</sup>

The Court began its discussion on the methods of delimitation by looking at the principle of equidistance. Tunisia, supported by the dissenting opinion of Judge Oda, claimed that trends in the international law of boundary delimitation indicated that the distance principle was

becoming recognized as the basis of title.<sup>82</sup> The Court responded by stating that "equidistance may be applied if it leads to an equitable solution; if not, other methods should be employed."<sup>83</sup> The Court, much to the criticism of dissenting Judges Gros and Oda,<sup>84</sup> then rejected the notion that it was required to examine the effects of applying the equidistance method as a first step, "since equidistance is not...either a mandatory legal principle, or a method having some privileged status in relation to other methods."<sup>85</sup>

The Court then prescribed methods for delimitation of a first segment which resulted in a boundary line based on both prior states' recognition and perpendicular to the coast at the terminus of the land boundary. The second segment of the boundary was delimited by a line "parallel to a line drawn from the most westerly point of the Gulf of Gabes bisecting the angle formed by a line from that point to Ras Kaboudia and a line drawn from the same point along the seaward coast of the Kerkennah islands."<sup>86</sup>

The Court's judgment in the Case Concerning the Continental Shelf (Tunisia/Libya Arab Jamahiriya) has drawn much criticism from the four dissenting judges and scholars as lacking in legal principle, verging on an unauthorized determination without reference to legal principles, and providing little guidance for the delimitation of maritime boundaries in other disputes. In a separate opinion to the Gulf of Maine case Judge Gros considered that the

Tunisia/Libya case introduced disorder into the conception of equitable principles, and has

given equity in maritime delimitation this doubtful content of indeterminate criteria, methods and corrections which are now wholly result-oriented. A decision not subject to any verification of its soundness on a basis of law may be expedient, but it is never a judicial act. Equity discovered by an exercise of discretion is not a form of application of law.<sup>87</sup>

Judge Gros went on to say that the 1982 Judgment "is no longer a decision based on law but an appraisal of the expediency of a result, which is the very definition of the arbitrary, if no element of control is conceivable."<sup>88</sup>

As pertains the limited guidance that the Judgment affords to further delimitation disputes, a principal difficulty is the Court's unwillingness to delineate the weighing process. The Court did identify specific factors that it discounted for the purpose of delimitation, such as geological, geomorphological and economic data. It also identified certain factors that it considered to be highly relevant. It did not, however, clearly articulate an analysis that "weighed" all the relevant factors in order to reach the appropriate line including preliminary comparison with an equidistance line. In this regard, Judge Gros said "The way in which it has been maintained and accepted that anything could be presented as a relevant factor to be thrown into the balance of equities is an abuse of the word 'relevant' and renders the judge's mission impossible,

except as a conciliator, which is a role he has not been asked to fill."<sup>89</sup>

Therefore, it is questionable whether the 1982 Judgment lends any credibility to customary law's perception of the equidistance principle, let alone to the body of international law on boundary delimitation. Notwithstanding, the Court's comments were limited because equidistance was not propounded by either one of the parties as an applicable principle of delimitation and subsequently little judicial attention was directed at the equidistance principle. But the parties failure to propound the equidistance principle did not preclude the Court from addressing its applicability.

Of recent interest, the International Court of Justice on December 16, 1985 ruled against a Tunisia request for a review of the 1982 Judgment. Tunisia had argued a vital Libyan document, a 1968 Libyan Government resolution on oil exploration concessions, was vital to the case and was overlooked by the Court's earlier ruling. The Court decided that this document did not constitute decisive new evidence.<sup>90</sup>

#### The 1982 United Nations Conference on the Law of the Sea

The Third United Nations Conference on the Law of the Sea (UNCLOS III) convened at Caracas, Venezuela in the summer of 1974. Two major unresolved issues from the 1958

Geneva Convention on the agenda of the 1974 Caracas Conference had direct implications for the conventional provisions of lateral boundary delimitation. These two issues were: 1) agreement on a definite, universal limit to the seaward extension of the territorial sea; and 2) the establishment of an exclusive economic zone in which coastal states would have sovereign rights to the living resources in the water and the minerals on the seabed. Preliminary agreement was reached on a 12 mile territorial sea and a 200 mile exclusive economic zone. Lateral boundary delimitation was, of course, important where establishment of these new limits by contiguous coastal states met and overlapped.

Since the 1958 Geneva Conference, state practice evidenced three significant developments that UNCLOS had to consider in deciding how far to reproduce the Geneva texts in the boundary provisions for the territorial sea and the exclusive economic zone. These developments also had serious implications for the continental shelf boundary provisions in the 1958 Convention on the Continental Shelf. These developments were:

- 1) most actual delimitation settlements were accomplished on the basis of a median or equidistance line adjusted to fit the circumstances of the case;
- 2) the International Court of Justice told us that the Geneva rule, at least as far as the continental shelf was concerned, was a contractual rule and did not adequately

reflect the position under the customary international law;

- 3) the internal balance of the Geneva rule itself was adjusted by state practice and judicial decisions and was brought closer to the International Court's view of customary international law by the displacement of the median or equidistance line as the cornerstone of the rule in favour of equitable principles.<sup>91</sup>

Philip Allot conveys a fourth critical development that UNCLOS had to take into account. More than 50 states at the Conference had unresolved sea boundaries with neighbouring states. In formulating rules that might apply to or affect their own situation, these states had to moderate their natural loyalty to the Geneva Conventions and Court decisions with a realistic appreciation of where their interests lay.<sup>92</sup> What happened was that approximately half of the specially interested states decided that their interests would be best served by the apparently more equitable approach of the judicial decisions.<sup>93</sup> These states became known as the "Equitable Principles Group." The remaining states thought the original spirit of Geneva had been sound, that equality was the ultimate equity.<sup>94</sup> These states became known as the "Median Line Group."

The dichotomy in positions became evident when a consensus could not be reached on the draft boundary provisions for delimitation of the exclusive economic zone and the

continental shelf. The Informal Composite Negotiating Text (ICNT) had proposed provisions for the exclusive economic zone (Article 74) and the continental Shelf (Article 83), which mentioned use of equitable principles and referred to the median or equidistance line as a method of demarcation. The mention of both standards was unacceptable to the supporters of either position.

The Median Line Group objected to the median line-equidistance rule being considered simply a method and not as a basic principle of boundary delimitation. The Equitable Principles Group were even more rigid, taking exception to the very mention of the median line/equidistance line as a standard of delimitation, let alone raising that standard to the status of a basic principle.<sup>95</sup>

Another problem was caused by the different interpretations of international law used by supporters of each of these standards. The Median Line Group insisted that Article 6 of the 1958 Convention on the Continental Shelf and the preparatory work of the International Law Commission supported their claim that the median line/equidistance principle was regarded as a general rule, the application of which is limited by the existence of special circumstances. The Median Line Group emphasized that the principle is straightforward based on the facts and not on philosophical notions of equity. Equitable principles are considered by

the Median Line Group to be vague and subjective and not liable to direct application between parties because equitable principles must rely on third party procedures to determine the limits of equity. Compulsory judicial settlement procedures are invariably linked to the application of equitable principles. The Median Line Group regarded Article 6 of the 1958 Convention on the Continental Shelf as stating the applicable law on maritime boundary delimitation and pointed out that a number of states had embraced the median line equidistance principle as a legal principle in their laws and bilateral agreements.<sup>96</sup>

The Equitable Principles Group, relying on the judgments of the International Court of Justice in the 1969 North Sea Continental Shelf Cases and the 1977 United Kingdom-France Continental Shelf Arbitration, felt equitable principles represented the international law on delimitation. The International Court of Justice in the North Sea Cases minimized the significance of the median line/equidistance principle referred to in Article 6. The Court stressed 'equitable principles' as representative of the customary international law on delimitation. The Court held that equitable principles play more of a role in delimitation of the continental shelf between states with adjacent coasts than between states with opposite coasts. The median line principle generally produces an equitable boundary for states with opposite coasts, but between

adjacent states, the mechanical application of the median line/equidistance principle may produce an inequitable result. Therefore, the Equitable Principles Group felt the median line/equidistance principle could not be considered a rule of delimitation.

In the 1977 Continental Shelf Arbitration, the Court of Arbitration suppressed the pre-eminence of the median line/equidistance principle in Article 6 by finding that rule was a combined equidistance-special circumstance rule, not the two separate rules of equidistance and special circumstances. The effect of this combined rule was the application of equitable principles. The Equitable Principles Group likewise maintained that equitable principles were adopted by certain states in their laws or bilateral agreements.<sup>97</sup>

The compromise solution between these two positions--adopted for the exclusive economic zone and the continental shelf--provides no substantive rule for boundary delimitation. Article 74 of the 1982 Convention on the Law of the Sea provides for delimitation of the exclusive economic zone between states with opposite or adjacent coasts by:

1. The delimitation of the exclusive economic zone between States with opposite or adjacent coasts shall be effected by agreement on the basis of international law, as referred to in Article 38 of the Statute of the International Court of Justice, in order to achieve an equitable solution.

2. If no agreement can be reached within a reasonable period of time, the States concerned shall resort to the procedures provided for in Part XV.
3. Pending agreement as provided for in paragraph 1, the States concerned, in a spirit of understanding and co-operation, shall make every effort to enter into provisional arrangements of a practical nature and, during this transitional period, not to jeopardize or hamper the reaching of the final agreement. Such arrangements shall be without prejudice to the final delimitation.
4. Where this is an agreement in force between the States concerned, questions relating to the delimitation of the exclusive economic zone shall be determined in accordance with the provisions of that agreement.

Article 83, of the same 1982 Conventions contains the exact same boundary delimitations provisions as Article 74 except of course for the substitution of the continental shelf for the exclusive economic zone.

Philip Allot in an examination of Articles 74 and 83, details a three-part structure to these articles containing a process, a principle, and a purpose:

- 1) process = agreement: if agreement is not reached within a reasonable period of time, resort to the dispute settlement procedures of part XV;
- 2) principle = international law, as referred to in Article 38 of the Statute of the International Court of Justice;
- 3) purpose = to achieve an equitable solution.<sup>98</sup>

The process sets the procedural limits of the powers of the states concerned. Following a complex legal analysis of the process, Allot concludes that Articles 74 and 83 do not contain a "substantive default provision, applicable in the case of an absence of agreement; nor do they contain a fully constraining third-party settlement system." The process aspect is concerned with constraining the behavior of states concerned in relation to their unresolved sea boundaries rather than with preceding their dispute by edict.<sup>99</sup> Allot rightly considers this a more realistic and sophisticated approach than the corresponding Geneva process offered.

The principle contained within Articles 74 and 83 is described as "mysterious" by Allot.<sup>100</sup> It would seem absurd to require states to reach agreement "on the basis of international law" when that obligation is contained within an instrument that is said to be the highest and most authoritative possible source of international law. This is exacerbated by reference to Article 38 of the Statute of the International Court of Justice, which, as has long been recognized, is emphatically not an apt list of either the formal or the material sources of international law.<sup>101</sup> However, Allot concludes that a meaning does exist to this principle which is that "[I]t must be taken to be legislation by means of a symbolic formula."<sup>102</sup> It sets the parameters of the delimitation process. "These parameters are finite in number and kind but not wholly specific. They

are not wholly specific, but they are exclusive."<sup>103</sup>

The purpose of the process--"in order to achieve an equitable solution"--is still that 'reasonableness' and 'fairness' are manifested by the process into the product. However, the purpose is still very abstract and situational implying no bounds to the principles, criteria and methods which may be relevant to the delimitation at hand. This formula echoes many of the faults that were noted in the Tunisia/Libya Case. The United States' Ambassador to the Conference observed that:

If the main purpose of a Convention on the Law of the Sea is to reduce the possibility of disputes and conflict between States, and to help resolve differences that do arise by narrowing and reformulating them in generally acceptable legal terms, then this is not the time for the conference to give up and move forward with an anodyne text that cannot achieve these purposes and that may indeed have the opposite effect of adding confusion to the law...a text that delegations on both sides privately look upon with embarrassment.<sup>104</sup>

The formula nonetheless could perhaps be summed up simply as agreement and equity.

The Chamber in the 1984 Gulf of Maine Case, the first judicial case after the Convention, observed that the Convention's boundary provisions "even if in some respects they bear the mark of the compromise surrounding their adoption, may nevertheless be regarded as consonant at present with general international law on the question."<sup>105</sup> Although Judge Gros in his dissenting opinion feels:

that...what is enshrined in the two articles of the 1982 Convention...open the way to arbitrariness by defining nothing....<sup>106</sup>

### The 1984 Gulf of Maine Case

The 1984 Gulf of Maine Case was a boundary arbitration between Canada and the United States conducted by a Special Chamber of the International Court of Justice. This boundary dispute crystallized in 1977, when the 200 nautical mile exclusive economic zone claimed by each nation came into effect. The dispute centered on the northeastern tip of Georges Bank, a fertile fishing bank with potential for oil production, lying within 200 miles of Canada and the United States.

A continental shelf boundary dispute preceded this economic zone controversy. In 1964, citing the principle of equidistance expressed by the 1958 Convention on the Continental Shelf, Canada issued geological exploration permits to petroleum companies for the Georges Bank area lying on the Canadian side of the equidistance line. In 1969, subsequent to the decision in the North Sea Cases that rejected the pre-eminence of the equidistance delimitation method, the United States refused to recognize the validity of the Canadian exploration permits. The United States countered that the natural prolongation and therefore the legal continental shelf of Canada and United States was separated by the Northeast Channel. Canada then ratified

the 1958 Convention on the Continental Shelf in 1969 with the statement that the presence of an accidental feature such as a depression or a channel in the continental shelf should not be considered an interruption of the natural prolongation of national territory. Canada's action was an apparent attempt to strengthen its right to invoke the equidistance rule.<sup>107</sup> Starting in 1976, the two nations began formal consultations with respect to the limits of maritime jurisdiction in the Gulf of Maine. As a result, a 1977 report recommended principles for resource management in the disputed areas but reserved the boundary issue for later negotiations. In 1978, after suspension of a 1977 provisional arrangement for fishery exploitation in the disputed area, Canada withdrew its equidistant boundary claim. Based on the 1977 Anglo-France arbitration, Canada claimed an equitable or modified equidistant boundary line, citing the Court of Arbitration's finding that land extensions may have a "distorting effect" on marine boundary delimitations. Canada considered Cape Cod and Nantucket Island as incidences of distorted land extensions. In 1979, Canada and the United States negotiated draft accords on Gulf of Maine fisheries management and resolution of the boundary dispute by binding arbitration. In 1981, the United States under intense Senate pressure withdrew from the fisheries' accord but both States agreed to submit their maritime boundary dispute in the Gulf of Maine to a Special

Chamber of the International Court of Justice. During this arbitration, the United States altered its claim from one based on the equitable principle of natural prolongation to a claim that an equitable solution is best accomplished by a single maritime boundary that is perpendicular to the general direction of the coast in the Gulf of Maine area adjusted to leave German Bank and Browns Bank to Canada (See Figure 10).

The Chamber was requested to decide "with the principles and rules of international law applicable as between Parties, the following question:

What is the course of the single maritime boundary that divides the continental shelf and fisheries zones of Canada and the United States of America, from a point in latitude  $44^{\circ} 11' 12''$  N, longitude  $67^{\circ} 16' 46''$  W to a point to be determined by the Chamber within an area bounded by straight lines connecting the following sets of geographical coordinates: latitude  $40^{\circ}$  N, longitude  $67^{\circ}$  W; latitude  $40^{\circ}$  N, longitude  $65^{\circ}$  W; latitude  $42^{\circ}$  N, longitude  $65^{\circ}$  W?<sup>108</sup>

Drawing upon the judgment of the 1969 North Sea Cases, the Chamber held that a boundary should be by mutual agreement. Where mutual agreement is not possible, third party arbitration should occur. In either case, an equitable result will be effected by using equitable principles and methods, and regard for the geographic configuration of the area and other relevant circumstances.<sup>109</sup>

In reaching this finding, the Chamber had to deal with several proposals on the applicable law propounded by

Canada. Canada first argued that the concept of adjacency entitled a state, any part of whose coasts is less distant from the zones than those of the other state, to claim the jurisdictional zones as theirs own. Canada's contention was identified by the Chamber as basically characteristic of the principle of equidistance. The Chamber rejected as an equitable principle, 'adjacency' and distance or 'proximity,' based on its belief that in the North Sea Cases, the Court found natural prolongation refuted "the rule, the ultimate effect of which would be to prohibit any State (otherwise than by agreement) from exercising continental shelf rights in respect of areas closer to the coast of another State."<sup>110</sup> The Chamber added: "submarine areas appertaining to the coastal State were not always those closest to its coasts." However, customary law has generally recognized the limited practical effect of natural prolongation for lateral boundary delimitation.

The Chamber also had to respond to the Canadian claim that because both parties had ratified the 1958 Convention on the Continental Shelf, the parties should then be bound by the delimitation provisions of Article 6, regardless of the reservations to Article 6 by Canada and the United States' objection to these reservations. The Chamber ruled that the equidistance principle mentioned in the Article 6 was not a principle or rule of international law, rather a particular practical method for the actual implementation of

the delimitation process.<sup>111</sup> The equidistant method, the Court held, was a method inspired by and derived from the particular equitable criterion: "the equitable solution at least prima facie, is an equal division of the areas of overlap of the continental shelf of the two litigant States."<sup>112</sup> Applicability of the equidistance method was deemed by the Chamber to be subject to no special circumstances which make such criterion inequitable by showing such division to be unreasonable and so "entailing recourse to a different method or methods or at the very least, appropriate correction of the effect produced by application of the first method."<sup>113</sup>

The Chamber then held that even if Article 6 of the Convention on the Continental Shelf required the mandatory application of the equidistance method, it would only apply to continental shelf delimitation subject of course to recourse to another method or combination of methods where special circumstances existed. However, because the boundary delimitation was concerned with a single boundary for both the continental shelf and the exclusive economic zone, Article 6 of the 1958 Convention on the Continental Shelf was not applicable in the case.<sup>114</sup>

The Chamber then turned its attention to a theoretical discussion on the nature and the use of methods for effecting 'equitable principles.' The Chamber held that the essential consideration is that "none of the potential

methods has intrinsic merits which would make it preferable to another in the abstract."<sup>115</sup> The Chamber declared that in general the most that can be said is

that certain methods are easier to apply and that because of their almost mechanical operation, they are less likely to entail doubts and arouse controversy....At any rate there is no single method which intrinsically brings greater justice or is of greater practical usefulness....Nor is there any method of which it can be said that it must receive priority, a method with whose application every delimitation operation could begin, albeit subject to its effects being subsequently corrected or it being even discarded in favour of another, if those effects turned out to be clearly unsatisfactory in relation to the case".<sup>116</sup>

The Chamber then proceeded to specify the actual equitable criteria and the practical methods necessary for implementing the criteria to the particular boundary situation. The Chamber's preamble to its selection of the applicable equitable criteria points out that "preference...be given to criteria that, because of their more neutral character are best suited for use in a multi-purpose delimitation,"<sup>117</sup> that is, a single boundary line. Accordingly, the Chamber felt bound to apply criteria more derived from the geography of coasts, primarily the physical aspect and secondarily the political aspect. Within this framework, the Chamber favoured a criteria:

long held to be as equitable as it is simple, namely that in principle, while having regard to the special circumstances of the case, one should aim at an equal division of areas where the mari-

time projections of the coasts of the States between which delimitation is to be effected converge and overlap.<sup>118</sup>

The Chamber then notes that, in the present case, the situation arising out of the political and physical geography of the delimitation area "does not present ideal conditions for the full, exclusive application of the [equal division of maritime areas] criterion...."<sup>119</sup> The Chamber felt it should be tempered by the auxiliary criterion (or commonly, the 'special circumstances') whereby a fair measure of weight should be given to a by no means negligible difference within the delimitation area between the lengths of the respective coastlines of the countries concerned.<sup>120</sup>

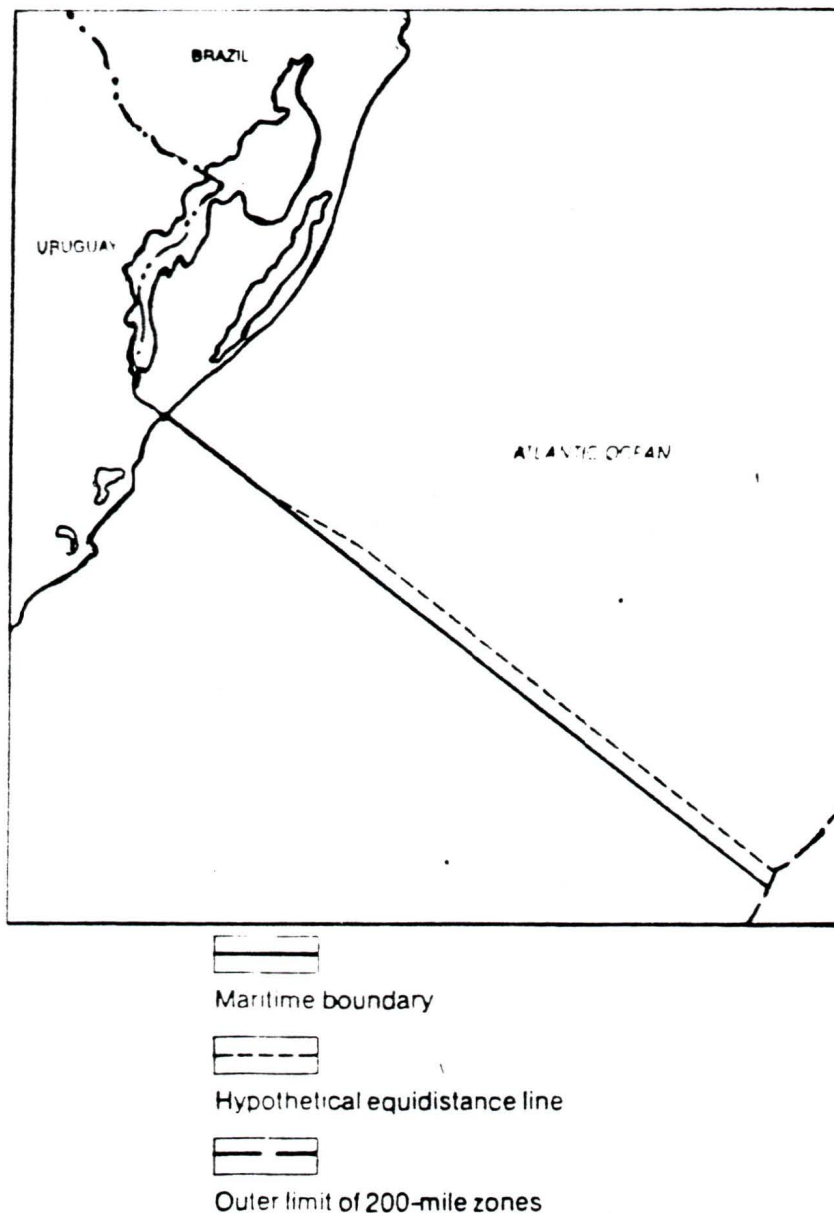
The Chamber thereafter moved to the discussion of the appropriate practical methods in which these criteria are to be reflected in the drawing of a particular delimitation line. At the outset, the Chamber held that the equitable criteria predetermined that "methods must be chosen which are instruments suitable for giving effect to those criteria and not other criteria of a fundamentally different kind."<sup>121</sup> Consequently, the Chamber held that like the criteria, the practical methods in question can only be methods appropriate for use against a background of geography. Moreover, like the criteria "the methods employed to give them effect must, in this particular case, be just as suitable for the delimitation of the sea-bed and

its subsoil as for the delimitation of the superadjacent waters and their fishery resources. In the outcome, therefore, only geometrical methods will serve."<sup>122</sup>

The appropriate equitable criteria and practical method that is evident from the Chamber's findings is the equidistant method. However the Chamber felt compelled to express its qualification of the application of the equidistance principle. The Chamber emphasized the necessity of "not allowing oneself to be too easily swayed by the perfection which is apparent a priori, from the viewpoint of equally dividing a disputed area, in a line drawn in strict compliance with the canons of geometry, i.e. a line so constructed that each point in it is equidistant from the most salient points on the respective coastlines of the parties concerned."<sup>123</sup>

Where the prevailing geographical relationship of the coast of Maine and the coast of Nova Scotia is one of adjacency, the Chamber decided the boundary should be a lateral delimitation line. The Chamber renounced the idea of employing the technical method of equidistance line largely because the Parties in their Special Agreement selected as the point of departure of the delimitation line, Point A lying quite a distance from the corner of the concavity (See Figure 40). The Chamber considered that preference must be given to a method which is inspired by the same considerations. Subsequently, the Chamber bisected

Figure 40



Source: International Court of Justice. Canada. "Delimitation of Maritime Boundary in Gulf of Maine Area (Canada/United States of America)." Counter-memorial. Submitted by Canada, June 28, 1983. The Hague. p. 268, Figure 47.

the angle formed by the nearly  $90^{\circ}$  angle of adjacency between the coast of Maine and the Nova Scotian coast (Figure 40 Line A-B). The bisector is the median line between the lines forming the outside angles. In the second segment, where there existed a geographic situation of quasi-parallelism between the coast of Massachusetts and the Nova Scotian coast, the Chamber held that the geography prescribes that the delimitation line should be a median line.<sup>124</sup> The Chamber then adjusted the median line to accommodate the larger coastline length enjoyed by the United States in the boundary region but tempered the adjustment by giving effect to Seal Island off the Nova Scotian coast (Figure 40 Line B-C). The third segment was delimited by means of a perpendicular line because the Chamber believed that the parties coast were basically rectilinear and therefore an equal division could result. Also the Chamber held that no points of each party's coasts affected the delimitation of the outer segment in this area (Figure 40 Line C-D).

The Chamber's repudiation of the equidistance principle as a pre-eminent rule of the international law of maritime boundary line seems rhetorical given that all three segments of the Chamber's boundary are closely based on the equidistance principle. In this way, the Chamber reflects the 1977 Anglo-French Arbitration in which the pre-eminence of the equidistance method was downgraded but then the Court

delimited the boundary on the median line/equidistance principle, albeit with some modification. The Gulf of Maine Case also suffers from the same symptoms exhibited by previous judgments of the International Court of Justice. Equity and equitable principles are left undefined and unenumerated. The Chamber also fails to acknowledge the numerous instances in state practice which have employed the principle and/or method of equidistance and examine the rationale behind such bilateral agreements.

#### States Practice

International law recognizes that nations are obligated to delimit maritime boundaries by agreement. Most nations have negotiated bilateral boundary agreements delimiting co-terminus territorial sea, continental shelf, exclusive economic zones and single maritime boundaries without recourse to arbitration.

Bilateral agreements are generally considered as applying the laws deemed applicable by the parties rather than creating law for the parties.<sup>125</sup> Notwithstanding, the general principle that such bilateral boundaries are based upon is equitable division.<sup>126</sup> The equidistance method is the principle that most states have used to affect an equitable division.

For one, the equidistance method has often provided the starting point for negotiations but may be subsequently

altered or abandoned. In the Brazil-Uruguay maritime boundary accord, the equidistance principle was initially selected as the basis of their boundary negotiation but the eventual boundary line was the azimuth running at  $128^{\circ}$  nearly perpendicular to the general direction of the coast.<sup>127</sup> Figure 40 demonstrates the difference between the hypothetical equidistance line and the azimuth. The final boundary line was decided by the parties to be simple and equitable.

Commonly, an equidistance line is modified to simplify the boundary. In fact, the number of true equidistance boundaries agreed upon and now in force is small.<sup>128</sup> Simplification of an equidistance boundary is usually undertaken to reduce the number of turning points of the boundary line. The equidistance method or more precisely the median line method has been applied in this manner for the delimitation of the continental shelf between opposite coasts first in 1942 between Venezuela and Trinidad/Tobago. It was then more than twenty-five years later before Saudi Arabia and Iran in 1969 agreed on an equidistance line (with a half-effect given to Iran's Kharg Island) between their opposite coasts in the Persian Gulf. In the same year, Iran also delimited their continental shelf area with Qatar based on a simplified equidistance line. Meanwhile, Indonesia (Sumatra) and Malaysia (both Western and Eastern) concluded a boundary agreement on the continental shelf in the Strait

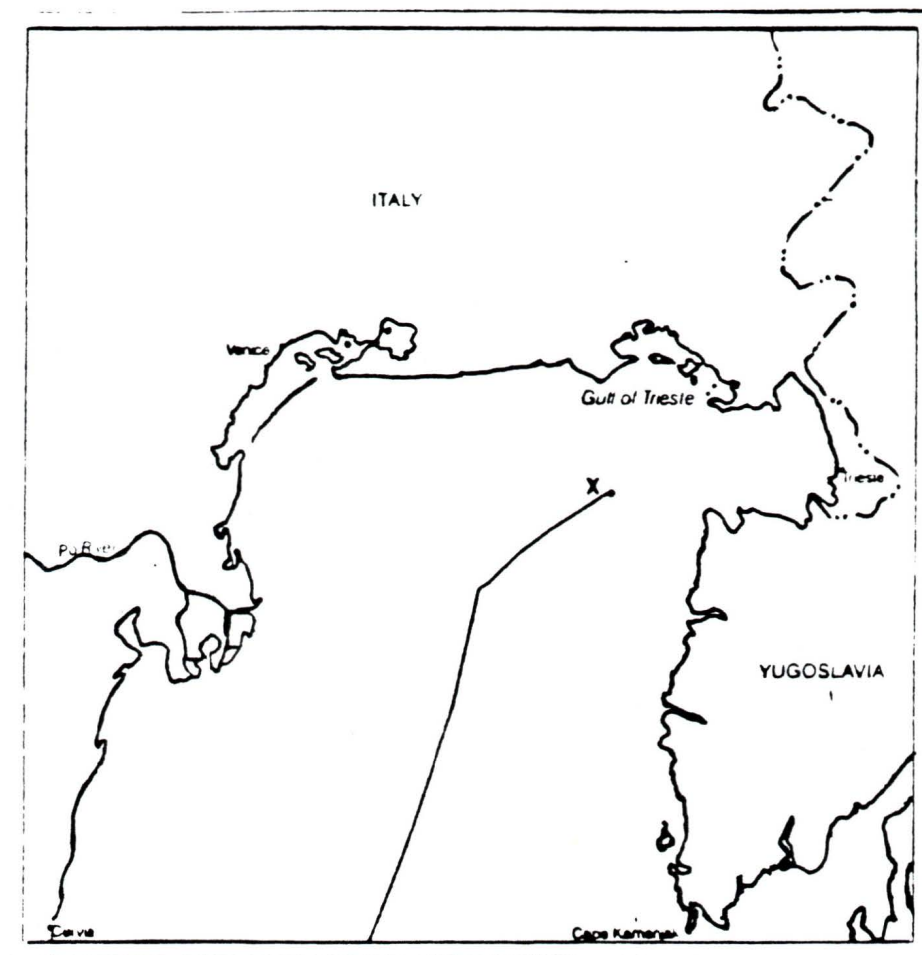
of Malacca and South China Sea in accordance with the equidistance method. Two years later in 1971, Indonesia (Sumatra) then reached agreements with India (Nicobar Islands) and Thailand, dividing their respective continental shelf areas by an equidistance line. India and Maldives also settled their continental shelf boundary in 1971, by means of an equidistance line as did Italy with Tunisia (tempered by the presence of islands), Greece and with Spain (that is, between the Italian island of Sardinia and the Spanish Balearic Islands). The following year, Japan and the Union of Soviet Socialist Republics agreed on an equidistance line to delimit their contiguous continental shelf in the La Perouse Strait and in the Okhotsk Sea with a common exploration area near Sakhalin Island. A similar arrangement was required to resolve a boundary dispute between Japan and Korea in 1974. Both countries agreed to an equidistance boundary delimitation in the Korea Strait where their coasts lie opposite each other. But in the East China Sea where their coasts approach a situation of adjacency, the status of the Japanese islands of Danjo Gunto and Shama made agreement impossible so a zone of common economic development was delimited. In 1974, Norway also concluded equidistance boundaries with Denmark and the United Kingdom, both agreements ignoring the presence of the Norwegian Trench which would have made a continental shelf based on the natural prolongation principle plausible.

Natural prolongation was also somewhat ignored in 1975 when Australia and Papua New Guinea divided their continental shelf area by an equidistance boundary in the Torres Strait.<sup>129</sup> M. Frederick in his review of bilateral boundary agreements on the continental shelf between States with opposite coasts, found that 22 of 25 such agreements concluded between 1945 and 1978 adhered to a strict or tempered application of the principle of equidistance.<sup>130</sup>

The equidistance method has also found application for delimitation of continental shelf boundaries between states with adjacent and opposite coasts. Finland and the Union of Soviet Socialist Republics in the Gulf of Finland (1966) and in the Baltic Sea (1968) delimited their continental shelf area between their opposite and adjacent coasts by an equidistance line. Italy and Yugoslavia (1968) in the Gulf of Triest and in the Adriatic Sea embraced the equidistance method for continental shelf delimitation, though such a line was deviated from, allowing the Yugoslavian island of Palaguiza a coastal margin. Figure 41 demonstrates the equidistance line's application where their shelf area lies opposite and adjacent to each other. In 1972, Finland and Sweden delimited their continental shelf boundary in the Gulf of Bothnia by an equidistance line.<sup>131</sup>

The equidistance method was also applied to the continental shelf boundary between states with adjacent coasts by the following accords. The agreement between the

Figure 41

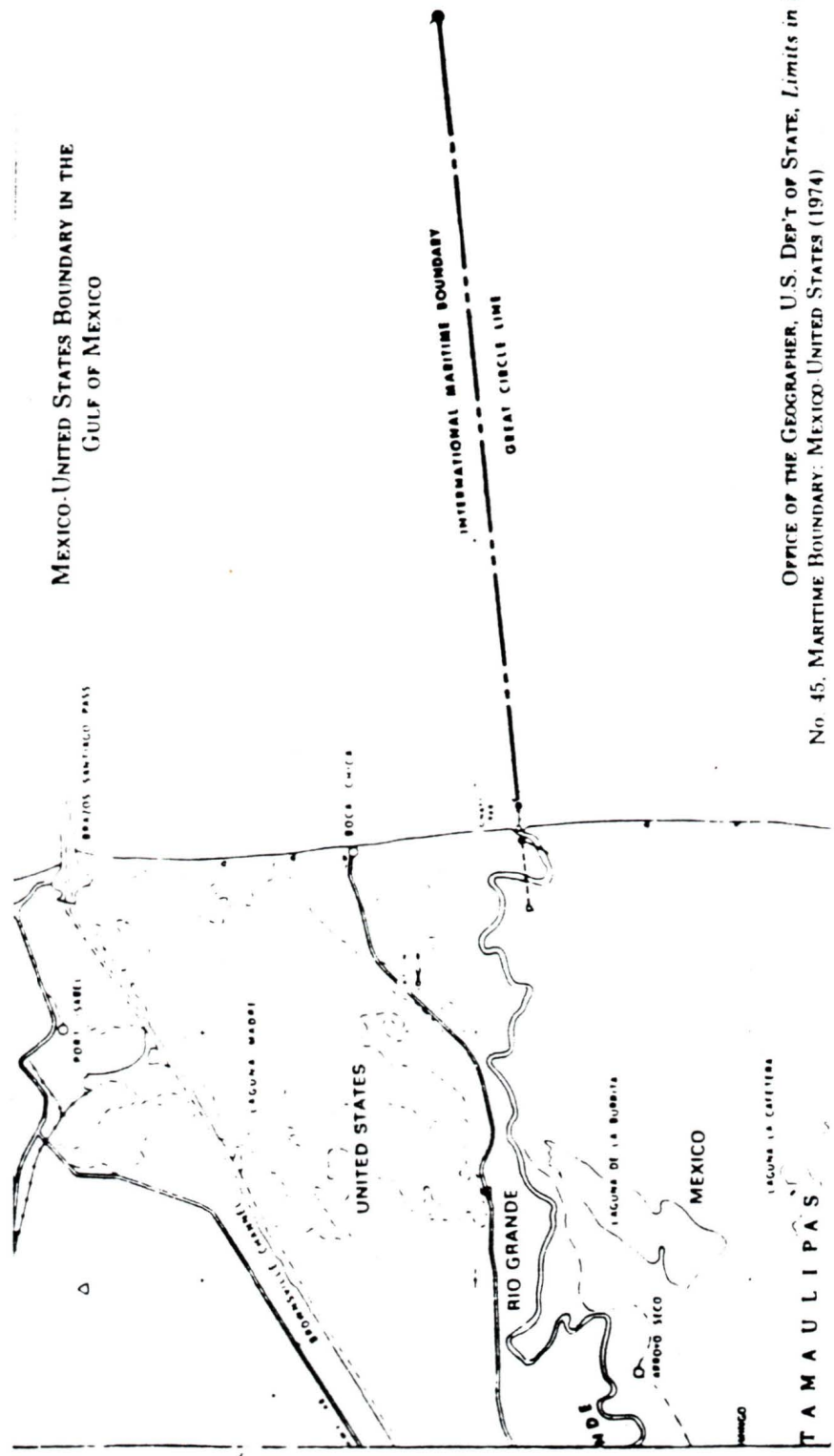


Source: International Court of Justice. Canada. "Delimitation of Maritime Boundary in Gulf of Maine Area (Canada/United States of America)." Reply. Submitted by Canada, December 12, 1983. The Hague. p. 149, Map B.

Union of Soviet Socialist Republics and Norway in 1957 divided the continental shelf in the Varanger Fiord by an equidistance line. Eight years later, Saudi Arabia and Kuwait concluded a continental shelf boundary accord in the Persian Gulf based on the equidistance method. Norway finalized another boundary accord with Sweden in 1969 delimiting an equidistance line for the continental shelf in the Strait of Skajerrak. In 1974, Mexico and the United States in the Gulf of Mexico and in the Pacific Ocean delimited their continental shelf boundaries by a simplified equidistance line (Figure 42 and Figure 43). In the Pacific Ocean accord, islands were an issue in the equidistance delimitation, and in the Gulf of Mexico agreement, a fluctuating Rio Grande mouth was a problem. In 1975 Poland and the Union of Soviet Socialist Republics in the Gulf of Gdansk and in the Baltic Sea, and Poland and East Germany in the Baltic Sea as well, divided their continental shelf boundaries by an equidistance line. France and Spain in 1976 delimited the first segment of their continental shelf boundary in the Bay of Gascony by a  $45^{\circ}$  angle between their adjacent coast which follows the principle of equidistance. And finally, Malaysia and Thailand in the Gulf of Thailand applied the equidistance method to delimit their continental shelf area.<sup>132</sup>

Single maritime boundaries delimiting both the continental shelf and the exclusive economic zone are

Figure 42



OFFICE OF THE GEOGRAPHER, U.S. DEPT OF STATE, *Limits in the Seas*  
 No. 45, MARITIME BOUNDARY: MEXICO-UNITED STATES (1974)

Source: Butler, E. "Boundary Delimitation in the Exclusive Economic Zone: The Gulf of Maine Dispute", Maine Law Review, 30, 1979. p. 216.

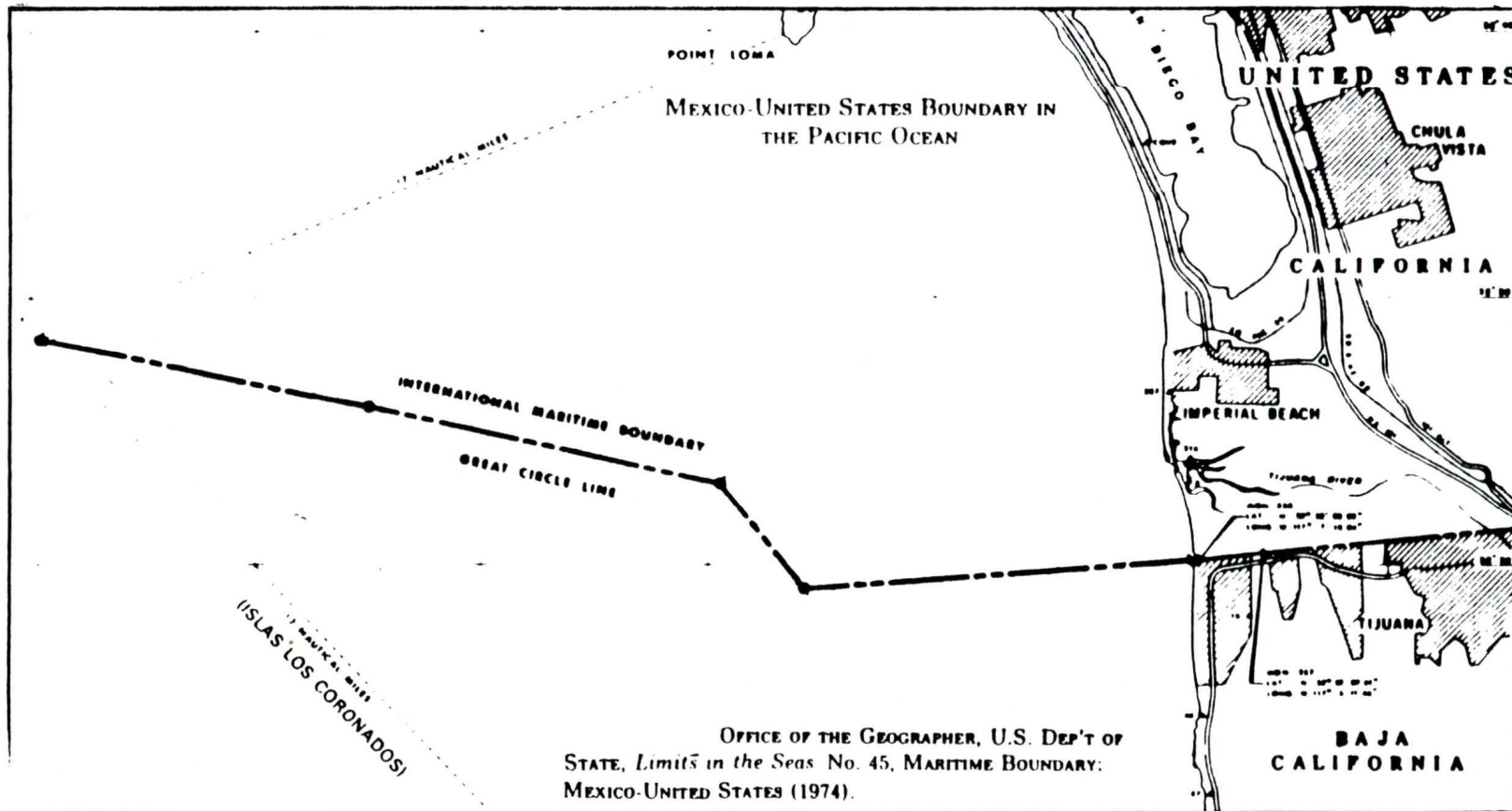


Figure 43

Source: Butler, E. "Boundary Delimitation in the Exclusive Economic Zone: The Gulf of Maine Dispute", Marine Law Review, 30, 1979, p. 215.

increasingly being settled. Argentina and Uruguay beyond the Rio de la Plata out to the 200 mile limit defined their single boundary as an equidistant line.<sup>133</sup> Columbia and Panama in 1978 delimited a portion of their single boundary on an equidistance line with some slight minor deviations.<sup>134</sup> In the same year, India and Sri Lanka in the Gulf of Manaar and the Bay of Bengal agreed to a modified equidistance line ignoring some smaller offshore islands and utilizing some larger islands closer to their respective coasts as basepoints for application of the equidistance method.<sup>135</sup> In 1979 Gambia and Senegal simplified their single maritime boundary initially delimited by the equidistance method to follow a parallel. The United States has concluded single maritime boundaries with its neighbouring states on the principle of equidistance. These include: with Cuba in the Gulf of Mexico and the Florida Strait and with Venezuela between Puerto Rico and the United States' Virgin Islands in the Caribbean Sea.

States's practice would appear to support the application of the equidistance method or a simplified line using an azimuth or parallel which closely approximates an equidistance line. States' practice also would appear to approve of using the equidistance method as a starting point for delimitation of extended maritime boundaries.

An examination of the literature also revealed that for the continental shelf boundary, states with opposite coasts

and adjacent coasts additionally favoured the equidistance method. For strictly adjacent coasts, the equidistance method (or a simplified form) was used in a majority of cases, but prolonging a land boundary was evidenced for example in the continental shelf delimitations between Tanzania and Kenya, Senegal and Gambia, Maroc and Mauritania, Peru and Chile and Ecuador and Columbia. Senegal and Gambia's boundary in particular approaches an equidistance line. Also using azimuths perpendicular to the coast was applied by Brazil and Uruguay and Senegal and Guinea-Bissau. Their coastlines are however approximately rectilinear, which generally produces an equal division of coastal area.<sup>136</sup>

### Summary

The United States' 1945 Truman Proclamation is widely acclaimed as the eminent doctrine in customary international law which proclaimed that a coastal state enjoyed certain exclusive resource rights to its contiguous continental shelf. The Truman proclamation has also been considered by several scholars and international jurists to be the source of positive law on lateral delimitation of continental shelf boundaries. The Truman Proclamation declared that the "continental shelf boundaries of the United States were to be determined in accordance with equitable principles." The Truman Proclamation did not however provide any substantive

rule or guiding principle on which a fair and reasonable or equitable continental shelf boundary would result. The fundamental principle of "mutual agreement" between contracting parties was not even mentioned.

It is conceivable that the Truman Proclamation is the pre-eminent source of international law for proclaiming coastal states' continental shelf rights. As a doctrine resting on the authority of the country which framed it, the Truman Proclamation was framed by a nation which emerged from the Second World War with the world's most powerful navy, significant global maritime interests and extensive continental shelf areas off its coasts. Continental shelf rights were founded on the substantive principle that the continental shelf is an extension of a coastal state's land mass and thus naturally appurtenant to it.

On the other hand, it is questionable whether the Truman Proclamation qualifies as the source of customary international law on maritime boundary delimitation. While the role of precedence in international law remains unclear,<sup>137</sup> it is a well-established principle though, that customary international law is primarily developed by bilateral state practice. The 1942 Venezuela-Trinidad/Tobago continental shelf boundary accord deserves consideration as the initial development in customary international law on continental shelf delimitation. The accord delimited the parties' continental shelf boundaries in accordance with the

substantive principle of equidistance.

In addition, the Truman Proclamation did not provide any substantive rule or guiding principles for identifying and delimiting an equitable continental shelf boundary. Nor did the Proclamation include any mention of methods which would be consistent with "equitable principles." The Truman Proclamation only reaffirmed the legal axiom that laws should be made based on reasonableness and fairness and applied in a similar manner to delimitation of United States continental shelf boundaries. The Truman Proclamation can be substantiated as a positive source of law on coastal states' continental shelf rights but its status as a pre-eminent doctrine of continental shelf boundary delimitation is not as evident.

The preparatory work of the International Law Commission for the inaugural United Nations Law of the Sea Conference at Geneva in 1958 is considered the initial development in conventional international law on territorial sea and continental shelf boundary delimitation. The International Law Commission recommended in its final 1956 report that the United Nations' General Assembly adopt a formula for lateral delimitation of maritime boundaries wherein a maritime boundary be foremost determined by mutual agreement. In the absence of agreement, the Commission advised that the principle of equidistance be applied to the delimitation of both opposite and adjacent maritime

boundaries unless another boundary is justified by the presence of special circumstances such as exceptional configuration of the coasts, or the presence of islands or navigable channels. In an attached commentary to its recommendations, the Commission stated that the equidistance line was the best and most equitable boundary in straight, curved or irregular coastline situations.

The International Law Commission's delimitation recommendations were incorporated into the boundary provisions for the Convention on the Territorial Sea and Contiguous Zone (Article 12) and the Convention on the Continental Shelf (Article 6). Both Conventions proclaimed that lateral maritime boundaries were to be delimited by mutual agreement, failing which the principle of equidistance was applicable except where special circumstances existed. The 1958 Convention on the Continental Shelf is the source of conventional international law on delimitation of continental shelf boundaries. The Convention accorded the principle of equidistance a pre-eminent role in the boundary making formula and the rule of conventional law for continental shelf delimitation. The United States' acceptance of Article 6 as a source of conventional law suggests that the equidistance principle and method was considered to be consistent with the customary law of boundary delimitation proclaimed in the Truman Proclamation, that is, in accordance with equitable principles.

In the decade following the signing of the 1958 Convention on Continental Shelf, most continental shelf boundary accords were concluded using either a strict or modified equidistance method. It is the 1969 North Sea Continental Shelf Cases however which garners the most critical attention in the development of the body of law on maritime boundary delimitation. In the North Sea Cases, Germany contended that the concurrent use of the equidistance method by its neighbouring coastal states, Denmark and the Netherlands, ignores certain relevant geographic factors and would apportion to Germany an unjust and unreasonable share of the continental shelf areas off its coasts. The Parties requested that the Court determine the legal principles which the Parties would then apply to the delimitation of the continental shelf boundaries.

Citing the Truman Proclamation as propounding the rule of law and forming the basis of customary international law on continental shelf delimitation, the Court declared that the application of equitable principles and geologic natural prolongation constituted the rules for delimiting continental shelf boundaries. Where the same geologic continental shelf between nations overlapped, boundary delimitation was to be by agreed proportions or failing agreement, equally unless some form of joint use was preferred. The Court went on to specify that certain relevant factors primarily geographic, be taken into account in

negotiating an equitable continental shelf boundary. The Court rejected the German contention that Germany be entitled to be apportioned a just share of the continental shelf off its coast. Yet, it is difficult to ignore some parts of the Court's judgment that would in fact support apportionment. For example, the Court's finding that overlapping areas be first delimited in agreed proportions, explicitly promotes apportionment.

The Court held that although the equidistance principle and method was practically convenient, precise and frequently produced an equitable boundary, it was not a rule of law on maritime boundary delimitation. The Court felt that because in some adjacent coastal situations the strict application of the equidistance method may be creative of inequity, the equidistance method could not be recognized as a general rule of maritime boundary delimitation. The Court also decided that the equidistance principle was neither inherent in the basic doctrine of the continental shelf nor was it a principle of customary international law. The Court failed to recognize the traditional and proven applications of the equidistance principle by most states to peacefully resolve boundary disputes.

As previously noted, consideration of the Truman Proclamation as a tangible doctrine of the rule of law or the source of customary law on continental shelf delimitation is controvertible. Similarly, the Court's

reliance on the Truman Proclamation is questionable. The Court, like the Truman Proclamation did not identify any substantive equitable principles except geologic natural prolongation which subsequently proved ineffective. The Court, however, did state that equitable principles were primarily based on geographic factors.

Following the 1969 North Sea Continental Shelf Cases, many bilateral boundary agreements over both opposite and adjacent coasts were concluded primarily using the equidistance principle and method. However, it was the 1977 adjudication of the English-French continental shelf boundary by a special Court of Arbitration which attracted attention as the next most significant development in international customary law on continental shelf delimitation.

The 1977 Court of Arbitration was requested by the United Kingdom and France to decide the legal principles underlying delimitation of their continental shelf area and unlike the Court in the North Sea Cases, undertake the actual delimitation of the boundary. The Court of Arbitration held that Article 6 of the Convention on the Continental Shelf was applicable between Parties. The Court of Arbitration stated though that recent developments in customary law would be considered because in view of geography and other circumstances, the rules of customary law lead to much the same result as the conventional law provisions of Article 6. The Court of Arbitration declared

that Article 6 propounded a combined rule of equidistance-special circumstances which in effect gives particular expression to a general norm that failing agreement, the boundary between states abutting on the same continental shelf is to be determined on equitable principles. However, the Court of Arbitration did not enumerate either the equitable principles which it equated with the equidistance-special circumstances formula or the "special circumstances" which displaced the pre-eminence of the equidistance principle. Although, the Court of Arbitration did explain that special circumstances were generally determined by geographic features.

The 1977 Court of Arbitration concurred with the Court in the 1969 North Sea Cases that the equidistance method is without parallel for its combined qualities of practical convenience and certainty of application but only when it produces equitable solutions as determined by relevant geographical circumstances. The 1977 Court agreed that the equidistance method generally creates an equitable boundary where coasts are opposite but there is a likelihood that an inequitable boundary may be produced where the equidistance method is applied to adjacent coasts. But the Court of Arbitration did not believe such a likelihood warranted complete rejection of the equidistance principle and method as a rule of continental shelf boundary delimitation. Rather, the Court of Arbitration declared that state

practice and the law of continental shelf delimitation indicated that in situations where geography or other circumstances produce a distorting effect on an equidistant line boundary, a solution must first be sought in a method "modifying or varying the equidistance method rather than recourse to a wholly different criterion of delimitation."

While the Parties had tacitly agreed prior to submitting their boundary dispute to arbitration that the equidistance method was the appropriate boundary technique they differed on the basepoints from which the equidistance method line was to be measured. Accordingly, the Court of Arbitration delimited the continental shelf boundary in the English Channel by a median line, enclaving the Channel Islands by twelve mile arcs on the French side of the median line. In the Atlantic region where the two nations' coasts are adjacent, the Court of Arbitration applied a modified equidistance method taking account of what was deemed to be the distorting effect on the equidistance line of the projecting Scilly Islands.

The Court of Arbitration provided no further clarification or enumeration of the equitable principles said to underlie customary law. Meanwhile, the Court of Arbitration found that the pre-eminent role that the equidistance principle was thought to enjoy under Article 6 of the Convention on the Continental Shelf was accorded to the role of special circumstances or equitable principles. However, special

circumstances were also not enumerated by the Court of Arbitration. Nevertheless, the Court of Arbitration held that the equidistance method be first applied to a continental shelf boundary delimitation and modified for special circumstances if necessary before another method is applied.

The 1982 Tunisia-Libya Continental Shelf Case was the next continental shelf boundary dispute to be submitted to the International Court of Justice for arbitration. The Court was requested by Tunisia and Libya to specify how practically they could apply the principles and rules the Court finds to be applicable to delimit their continental shelf boundary. The Court focussed their judgment on the delimitation methods appropriate to the circumstances presented. Little attention was given to the customary or conventional legal principles underlying the methods for continental shelf delimitation. The Court felt that equity was not defined by the process of delimitation or the underlying principles thereof, but the equity of any principle depended on whether a just result was produced in the circumstances of the particular case. And while the Court failed to provide a list of normative factors from which possibly the equitable principles necessary for an equitable solution could be extracted, the Court did specify the relative factors or special circumstances it felt were present in this particular boundary region.

In contrast to previous boundary decisions of the International Court of Justice, the Court in the Tunisia/Libya arbitration gave prominence to non-geographical factors. The first segment of the Tunisia/Libya continental shelf boundary was delimited in accordance with such factors. The second segment was delimited on an unsubstantiated geographic criterion which can be loosely defined as parallelism.

The Court's opinion on the application of the equidistance principle and method was limited. The equidistance principle was not proposed by the disputants as applicable to delimitation of their continental shelf boundaries nor did the Court feel it appropriate to do so. Moreover, the Court rejected the 1977 Court of Arbitration's finding that the equidistance method should first be applied and if necessary modified before another method is used because "equidistance is not...either a mandatory legal principle or method having some privileged status in relation to other methods."

The judgment of the International Court of Justice in the 1982 Tunisia/Libya Continental Shelf Case obscured the ICJ's previous attempts to establish the 'application of equitable principles' as the rule of law on continental shelf delimitation. The 1982 Judgment held that equity cannot be interpreted by the application of 'abstract' equitable principles, rather the equity of any principle

depends on whether it produces a just result in the circumstances of a particular case. Equity was determined by the result not the process of continental shelf delimitation. However, while the Court felt its task was to balance up the various considerations it regarded as relevant in order to produce an equitable result, it identified factors which would not be considered conventional or conclusive. Moreover, the Court failed to delineate the weighing process by which the factors interact to achieve an equitable solution.

Consequently, the 1982 Judgment has been criticized as a judicial decision which verges on being *ex aequo et bono*, or simply, to do what the Court felt was good and right in this particular situation without verification by any relevant customary or conventional legal principles. As such, it is questionable whether this Judgment contributed to the development of the rule of law on continental shelf delimitation. Regarding the Court's view on the status of the equidistance principle, while it may theoretically be valid that the equidistance principle has not attained that status of a mandatory legal principle, in practice the equidistance principle is the most frequently-applied, time-honoured delimitation principle used.

In the latter part of 1982, the Third United Nations Conference on the Law of the Sea concluded with a new convention. The 1982 Law of the Sea Convention contains boundary provisions for the territorial sea (Article 15)

essentially the same as those provisions in Article 12 of the 1958 Convention on the Territorial Sea and Contiguous Zone. However, Article 83 of the 1982 Convention declared a new delimitation formula for conventional shelf boundaries which on the surface appeared quite dissimilar to the boundary provisions found in Article 6 of the 1958 Convention on the Continental Shelf. Additionally, the revised formula for continental shelf delimitation found in the 1982 Convention was applied to the boundary provisions of the now legally recognized exclusive economic zone (Article 74). The boundary provisions for the continental shelf area and the exclusive economic zone in the 1982 Convention contained no reference to the equidistance principle or equitable principles but reflect the judgment of the Court in the Tunisia/Libya Case wherein principles of international law be applied to achieve an equitable solution.

The underlying reasons for revision of the boundary provisions in the 1982 Convention on the Law of the Sea from those in the 1958 Convention on the Continental Shelf would appear primarily to be political and secondarily legal. Firstly, since 1958 substantial deposits of offshore hydrocarbon have been delineated in many boundary areas. Meanwhile 50 states at the Third World Conference on the Law of the Sea had unresolved sea boundaries with neighbouring states. Consequently, in formulating rules that might apply to their own situations and given the possible resource

wealth involved, these 50 states had to moderate their former loyalty to the principles of the Geneva Conventions with the realistic appreciation of where their interests lie. The decisions of the International Court of Justice provided an opportunity for coastal states to claim continental shelf resources which the application of the equidistance principle might otherwise prohibit. Conversely, the equidistance principle may protect coastal nations from arguments for delimitation based on legitimate special circumstances or judicial interpretations of fairness and reasonableness in continental shelf delimitation.

As a result, two camps evolved in the negotiation of the boundary provisions, a Median Principles Group and an Equitable Principles Group. Neither group would agree to the inclusion of the other's formula in the boundary delimitation provision for the continental shelf and exclusive economic zone. The compromise solution was a formula which did not include either group's standards while at the same time providing no substantive rule whatsoever. However, in this way the 1982 Convention aligned conventional law with customary law.

The 1982 Convention, like customary law, failed to provide a substantive legal norm by which the possibility of boundary disputes would be reduced. Moreover, the 1982 Convention's boundary provisions for extended maritime jurisdictions offers no assistance to boundary negotiators

or arbitrators for resolving differences which may arise in boundary delimitation.

The 1984 Gulf of Maine judgment by the International Court of Justice was the first maritime boundary arbitration to delimit a single maritime boundary for the continental shelf and the exclusive economic zone. The boundary dispute arose when Canada, in 1964, claimed that a strict equidistance boundary appropriately delimited its continental shelf boundary with the United States in the Gulf of Maine. In 1978 Canada withdrew its original claim and declared that a modified equidistance line which ignored the Cape Cod peninsula was the most suitable boundary. Both claims were based on the principle of proximity or distance being the applicable law of maritime boundary delimitation.

The United States initially claimed that geologic natural prolongation provided the basis for the delimitation of the continental shelf boundary in the Gulf of Maine. Thus, the Northeast Channel marked the limit of the geologic natural prolongation of the United States continental shelf and therefore the 'thalweg' of the Northeast Channel should delimit the continental shelf boundary. In 1981 the United States withdrew its position on the Northeast Channel and claimed anew that an equitable solution is best accomplished by a single maritime boundary which is perpendicular to the general direction of the primary coast in the Gulf of Maine but adjusted to leave the ecological regimes of Browns Bank

and German Bank to Canada.

The Special Chamber of the International Court of Justice rejected Article 6 of the 1958 Convention on the Continental Shelf as applicable even though both parties were signatories to the Convention. The Chamber held that Article 6 only addressed the delimitation of continental shelf boundaries not the joint delimitation by a single boundary of both the exclusive economic zone and the continental shelf. The Chamber also refuted Canada's contention that the equitable principle of proximity or distance was the applicable law. The Chamber argued that the Court in the 1969 North Sea Cases rightly found that the equitable principle of geologic natural prolongation may permit a state to exercise continental shelf rights in respect to areas closer to the coast of another state. However, the Chamber also refused to recognize the United States' position on the grounds that neither geography nor law affirms the preferential or dominant stature of one coast over another coast.

The Chamber ruled that the applicable law of maritime boundary delimitation was that failing agreement, a third party should delimit a maritime boundary by the application of equitable criteria and practical methods which ensure, with regard to the geographic configuration of the area and other relevant circumstances, an equitable result. Thereby the Chamber fused the process orientation of the 1969 and

1977 International Court of Justice judgments with the significance attached to the results, as propounded in the 1982 Convention on the Law of the Sea and by the Court in the Tunisia/Libya Case. Notwithstanding, the Chamber then went on to rule that the most appropriate autonomous equitable principle in this circumstance was the equal division of the overlapping areas although the 'auxiliary' equitable principle of proportionality of each State's coastlines tempered to a degree the strict application of the autonomous principle. Subsequently, the Chamber turned its attention to the practical methods available to enact these applicable principles.

In its discussion of the equidistance method, the Chamber concluded that this method had evident deficiencies as a method of general application. The Chamber also rejected the proposition that the equidistance method be first applied to determine the equitableness of its application and modified if possible before an entirely different method was used. Thereafter the Chamber proceeded to delimit the single maritime boundary by the same geometrical methods which form the basis of the equidistance method. The geometric method used deviated from the equidistance method only insofar as the basepoints for the measurement of the maritime boundary were not necessarily geographical features but geometric axes which represented the general direction of the coastlines.

The 1984 judgment by the Chamber of the International Court of Justice on the Gulf of Maine Case suffers from the same deficiency which characterize the Court's previous boundary arbitrations as well as the 1982 Convention on the Law of the Sea. The Chamber does not delineate the essential characteristics of equitable principles in continental shelf and exclusive economic boundary delimitation other than to point to the supporting decisions of its colleagues. The Chamber also ignores the overwhelming application by states of the equidistance method. And yet, the Chamber partakes in great discourse on the inapplicability of the equidistance method but then ironically uses its essential characteristics to delimit the single maritime boundary in the Gulf of Maine.

State practice demonstrates that those maritime boundaries concluded by mutual agreement are generally founded on the principle of equidistance in both adjacent and opposite coastal situations. Commonly though, the strict equidistance method gives way to a simplified form of equidistance which allows for ease of administration and navigation. State practice also shows rejection of those few equitable principles detailed by the International Court of Justice in its judgments. For example, where the equitable principle of geologic natural prolongation would seem to have valid application, parties to the delimitation of the continental shelf have disregarded its effect.<sup>138</sup>

In conclusion, the applicable law of delimitation of maritime boundaries for the continental shelf and the exclusive economic zone would undoubtedly be 'agreement between Parties'. International customary law as propounded by the International Court of Justice would also include the application of equitable principles as the second most important element--however without specification of either the content of the equitable principles or the extent of their application. Although, the Court has ruled that the equidistance principle enjoys no favourable or prescriptive position as an equitable principle.

Conventional international law demonstrates acceptance of mutual agreement as essential to the body of law on maritime boundary-making. However, unlike the International Court of Justice's perspective of the secondary elements of the applicable law, conventional law initially recognized the pre-eminent role of the principle of equidistance as a component of the rule of law for delimitation of maritime boundaries. Recent developments in conventional law have however displaced the pre-eminence of the principle of equidistance in maritime boundary delimitation.

States practice on the other hand shows an overwhelming acceptance of the principle of equidistance as an essential and substantive element of the body of law of maritime boundary delimitation. The generally dispute-free conditions which exist in those boundary regions where nations

have applied the equidistance method would seem to attest to the fair and equitable nature of this method.

Chapter Four Endnotes

<sup>1</sup> International Court of Justice, "North Sea Continental Shelf Judgement, Reports 3, 1969 (hereinafter referred to as the "North Sea Cases"), p. 33, para. 47.

<sup>2</sup> Ibid.

<sup>3</sup> North Sea Cases, p. 31, para. 43.

<sup>4</sup> E.D. Brown, "Delimitation of the Continental Shelf between Opposite and Adjacent States: The North Sea Continental Shelf Cases," The Legal Regime of Hydrospace (London: Unwin & Sons, 1971), p. 49.

<sup>5</sup> Ibid., p. 45.

<sup>6</sup> R.D. Hodgson and R.W. Smith, "Boundaries and the Economic Zone," Tenth Annual Conference on the Law of the Sea Institute (Kingston, R.I.: University of Rhode Island, 1976), p. 184.

<sup>7</sup> E. Collins, Jr. and M.A. Rogoff, "The International Law of Maritime Boundary Delimitation," Maine Law Review, 34(1), 1982, p. 25.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> Brown, p. 54.

<sup>11</sup> Ibid.

<sup>12</sup> Collins and Rogoff, p. 27.

<sup>13</sup> Ibid.

<sup>14</sup> Ibid.

<sup>15</sup> E. Butler, "Note: Boundary Delimitation in the Exclusive Economic Zone: The Gulf of Maine Dispute," Maine Law Review, 30, 1979, p. 210.

<sup>16</sup> Collins and Rogoff, p. 28.

<sup>17</sup> Ibid.

<sup>18</sup> Ibid.

<sup>19</sup> D.J. Padwa, "Submarine Boundaries," International and Comparative Law Quarterly, 9, October 1960, p. 632.

- 20 Ibid.
- 21 Ibid., p. 637.
- 22 Ibid., p. 638.
- 23 Ibid.
- 24 Brown, p. 42.
- 25 Ibid.
- 26 North Sea Cases, p. 3.
- 27 Ibid., pp. 25-27.
- 28 Ibid., pp. 32, 41.
- 29 Ibid., pp. 53-54, para. 100.
- 30 Ibid., p. 47.
- 31 Ibid., p. 46, para. 85.
- 32 Ibid., p. 33, para. 47.
- 33 Ibid., p. 22.
- 34 Ibid., p. 17, para. 20.
- 35 Ibid., p. 47, para. 86.
- 36 Ibid., p. 23.
- 37 Ibid.
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- 75 Ibid., p. 92, para. 133.
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137 Article 59 of the Statute of the International Court of Justice expressly provides that the decision of the International Court of Justice has no binding force except between the parties and to the particular case being decided.

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## CHAPTER V

The Case Study: The Dixon Entrance/Hecate Strait  
Boundary DisputeIntroduction

This paper now presents a case study of maritime boundary delimitation with the intention of determining which known boundary delimitation principle or method best produces an equitable solution to the Dixon Entrance/Hecate Strait boundary dispute. Subsequently, the case study applies those 'equitable' principles or practical methods detailed in Chapter Two and the equidistance principle from Chapter Three to the delimitation of a maritime boundary in the Dixon Entrance/Hecate Strait boundary region between Canada and the United States. The ability of these 'equitable' principles and methods to produce an equitable boundary solution is assessed in relation to the applicable law presented in Chapter Four and to those geographic principles referred to thus far. As a consequence of this case study, an evaluation can be made of the equitableness of the boundary delimitation proposals argued by Canada and the United States.

The case study begins by examining the national maritime boundary policies and legislation of the two respective parties in the dispute. It then relates the history of the dispute, the issues involved and the positions of the two nations and the Province of British

Columbia in the dispute. The equitable principles and methods of maritime boundary delimitation are then applied to the boundary region.

### United States and Canada Maritime Boundary Policies and Legislation

While the applicable international law of boundary delimitation appears inconclusive and insubstantial, Canada and the United States have nevertheless established tangible maritime boundary laws and policies which are within the bounds of applicable international law and respond to both their bilateral and domestic maritime concerns and aspirations. This study first will briefly examine the substantive maritime boundary laws and policies of Canada and the United States to gain an appreciation of the pervading atmosphere and the underlying reasons behind the resoluteness of each party's position in the boundary dispute.

Canada and the United States generally follow different maritime boundary positions. The United States claims a 3 mile territorial sea as provided by the 1958 Geneva Convention on the Territorial Sea and Contiguous Zone. Canada conversely rejected the 1958 Convention's boundary provisions choosing rather in 1970 to subscribe to a 12 mile territorial sea, a position taken by many coastal states and later endorsed by the 1982 Convention on the Law of the Sea. Canada also measures its 12 mile territorial sea from straight baselines as permitted by the judgment of

the International Court of Justice in the 1951 Anglo-Norwegian Fisheries Case and the aforementioned 1958 and 1982 conventions. Meanwhile, the United States measures its 3 mile territorial sea from the traditionally-recognized normal baselines or low tide level. This difference in the parties' measurement techniques allows Canada to claim comparatively larger areas of territorial sea and internal waters.

The distinct positions of Canada and the United States in seaward delimitation of the territorial sea are derived from each party's differing economic and political orientation. The United States has major offshore commercial investments which contribute significantly to its strong, diversified economy. Moreover, the United States as one of the world's two super-powers has empowered itself as worldwide promoter and protector of democratic and capitalistic principles. Accordingly, the United States advocates narrow coastal sovereignty limits. This advocacy allows American industry few restrictions on exploiting global offshore resources and provides freer navigation by its massive naval forces and commercial maritime fleet when its major offshore investments and subsequent geo-political interests require protection and security. Conversely, Canadian controlled industry has limited investments in other offshore areas. In fact, Canada's national economy is more dependent and indeed several of its regional economies

are acutely reliant on the economic wealth provided by marine resources lying off its immediate coast. Canada also plays a comparatively insignificant role in global maritime affairs with a small navy and a virtually non-existent commercial maritime fleet. Consequently, Canada promotes maritime policies which call for broad coastal state sovereign limits.

Canada and the United States also subscribe to differing positions on the seaward delimitation of the continental shelf. The United States initially asserted in the 1945 Truman Proclamation, a continental shelf defined by its natural appurtenance to its mainland territory. Then in 1961 the United States ratified the 1958 Geneva Convention on the Continental Shelf wherein a continental shelf was defined by an artificial 200 metre isobath which is a line connecting the depth of 200 metres or the limits of technological exploitation. Canada on the other hand, initially did not sign the Convention because of the 200 metre isobath and exploitability criteria, rather preferring the use of a geologic definition for the continental shelf more in keeping with the natural appurtenance concept. While Canada did later ratify the 1958 Convention on the Continental Shelf in 1969, this action was largely to provide political support to its lateral boundary delimitation position in the Gulf of Maine and in conjunction with the natural geologic prolongation rule held

by the Court in the 1969 North Sea Cases. Nevertheless, Canada's preference for a definition of the continental shelf based on geologic criteria was sustained by inclusion of such criteria in the 1982 Law of the Sea Convention's definition of the continental shelf. And to the dismay of the United States, the exploitability criteria was dropped and the isobath variable increased from 200 metres to 2,500 metres.<sup>1</sup>

The United States' support of the 1958 Convention on the Continental Shelf's definition of the continental shelf and the subsequent rejection of the 1982 convention's definition can be directly attributed to two factors. Firstly, the United States is the world's major manufacturer and user of offshore mining technology and therefore had the most to benefit from an exploitability criteria. Secondly, the limits of the United States' continental margin largely coincide with a maximum change in gradient at the 200 metre isobath and within 200 miles of its coast. Canada's continental margin, on the other hand, extends geologically to depths up to 2,200 metres and within 650 miles off Newfoundland and up to 2,600 metres in the Beaufort Sea before a maximum change in gradient occurs.<sup>2</sup> In addition, Canada is not a major producer of offshore mining technology although Canadian companies have expanded their involvement in offshore petroleum development in recent years especially in the Arctic.

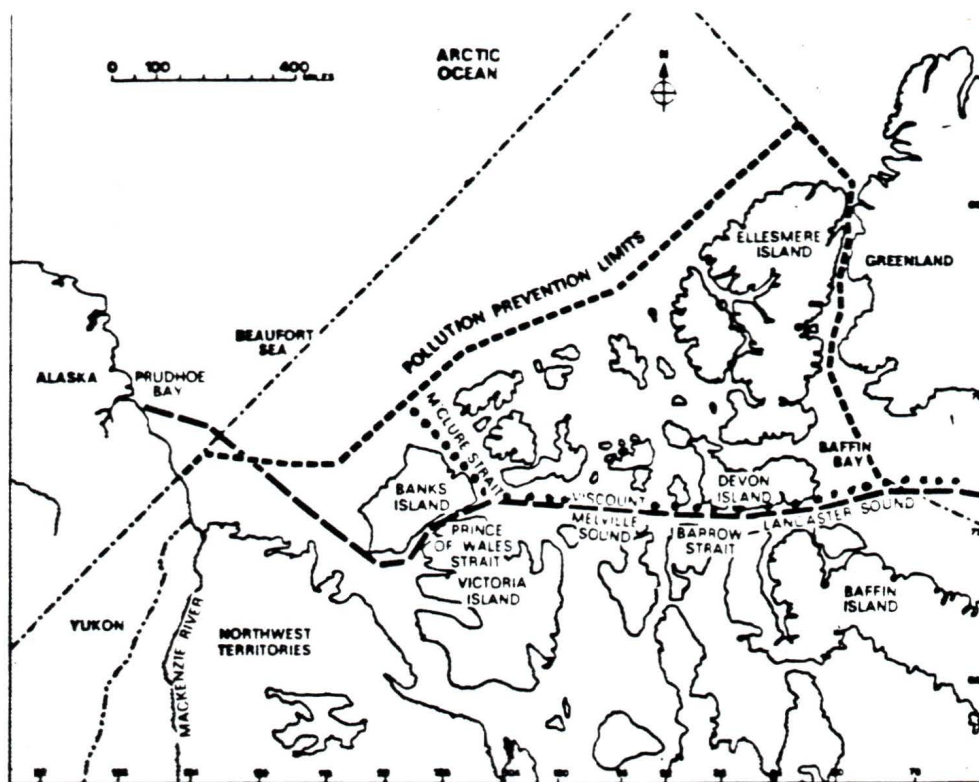
Another contentious issue in Canadian-American boundary relations is Canada's 1970 declaration of a 100 mile pollution control zone in its ice-covered waters north of 60° latitude. Canada's action was instigated by events which occurred in 1969 and 1970. One was the successful 1969 navigation of the Arctic's Northwest Passage by the "Manhattan", a United States-registered oil supertanker which was ostensibly assessing the feasibility of commercially transporting Alaskan crude to eastern U.S. markets. The other event was the grounding on the Nova Scotian coast of the "Arrow", a Liberian-registered oil tanker whose grounding caused serious environmental degradation. The "Arrow" grounding also revealed the inability of a coastal state, in this case Canada, to attach liability and obtain compensation for damages from irresponsible operations of vessels regulated under the then 'flag state' administrative regime. The combined effect of the "Manhattan" voyage and the "Arrow" disaster was to instil a distrust in Canadian maritime authorities of any commitment by flag-state administrators to effectively implement and enforce the maritime measures needed for safe and pollution-free passage through the hazardous environmental conditions existing in Arctic waters. As a result, Canada in 1970 enacted the Arctic Waters Pollution Prevention Act under which a 100 mile coastal zone north of 60° latitude was created. In this zone Canada claimed the right

to adopt and enforce non-discriminatory laws and regulations for the prevention, reduction and control of marine pollution. The United States reacted by protesting Canada's unilateral action as having no basis in international law. Additionally, the United States was fearful such legislation would initiate a global movement to such a regime and create further barriers to the unrestricted navigation on which its maritime interests thrived. However, Canada's 1970 action was later affirmed by the 1982 Convention on the Law of the Sea.<sup>3</sup>

The Manhattan's 1969 voyage, the related enactment of Canada's 1970 Arctic Waters Pollution Prevention Act and the 1985 voyage through the Northwest Passage by the United States Coast Guard icebreaker "Polar Sea" all serve to illustrate another controversy in Canadian-American boundary relations. This controversy centers on the status of the Northwest Passage as an international strait (see Figure 44).

The United States has maintained throughout these above events that the Northwest Passage is a strait connecting two areas of high seas and therefore subject to innocent passage by all vessels without coastal state approval being required. Canada for its part holds that the Northwest Passage is not subject to innocent passage because these waters are integral components of the Arctic archipelago. As such, the Northwest Passage must be considered internal

Figure 44



- 141° meridian
- Manhattan's 1969 voyage
- ..... Polar Star's 1985 voyage

Map Source: Canada Gazette, part 11, vol. 106.  
no. 16 (September 23, 1972).

waters and not subject to innocent passage. Moreover, Canada has claimed that the navigational risks presented by the environmental conditions in the Northwest Passage and the possibility therein of maritime pollution resulting could not legitimately be considered an innocent activity.

Canada however has not as yet established straight baselines around the Arctic archipelago permitted by the 1951 judgment of the International Court of Justice in the Anglo-Norwegian Fisheries Case, the 1958 Convention on the Territorial Sea and Contiguous Zone and the 1982 Convention on the Law of the Sea which would establish the Passage as internal waters. Although, the recent outcry by the Canadian public concerning the "Polar Sea" expedition has pressed the Canadian government to announce its future intention to delimit straight baselines around the Arctic archipelago.<sup>4</sup> Also, the Canadian government has initiated the construction of an icebreaker which will allow Canada to establish an effective presence in the Arctic.<sup>5</sup> This latter action is felt to be necessary to counter what many observers believe was the real intention of the United States' Polar Sea voyage, that is, to establish the historic use of the Northwest Passage as an international strait. This whole matter centers on the sovereignty of the Northwest Passage, however the Americans are also concerned with the ability of their naval force to protect their continental interests from Russian aggression by ready

access to Arctic waters by other than the vulnerable Bering Strait.

A final indication of the distinctive approaches by Canada and the United States to maritime issues is demonstrated by their response to the 1982 United Nations Convention on the Law of the Sea. Canada was one of 119 nations to sign the Convention while the United States and 23 other states refrained from signing it.<sup>6</sup> Specific provisions of the convention elicited different responses from the United States and Canada. For example, the United States, as the world's leading manufacturer and user of seabed mining technology, disagreed with the establishment of an International Seabed Authority (I.S.A.) with powers to define production levels for certain seabed minerals and require the sharing of mining technology by industrialized nations with undeveloped states. Canada as a minor player in seabed mining was offered market protection for its land-based minerals (e.g., nickel) and did not feel its few objections to the I.S.A. concept warranted total rejection of the treaty. Additionally, Canada supported the Convention's provision wherein the jurisdiction of the coastal state in the 200 mile exclusive economic zone included marine scientific research.<sup>7</sup> The United States believed such a provision may further inhibit its ability to undertake research necessary to protect its vital interests.

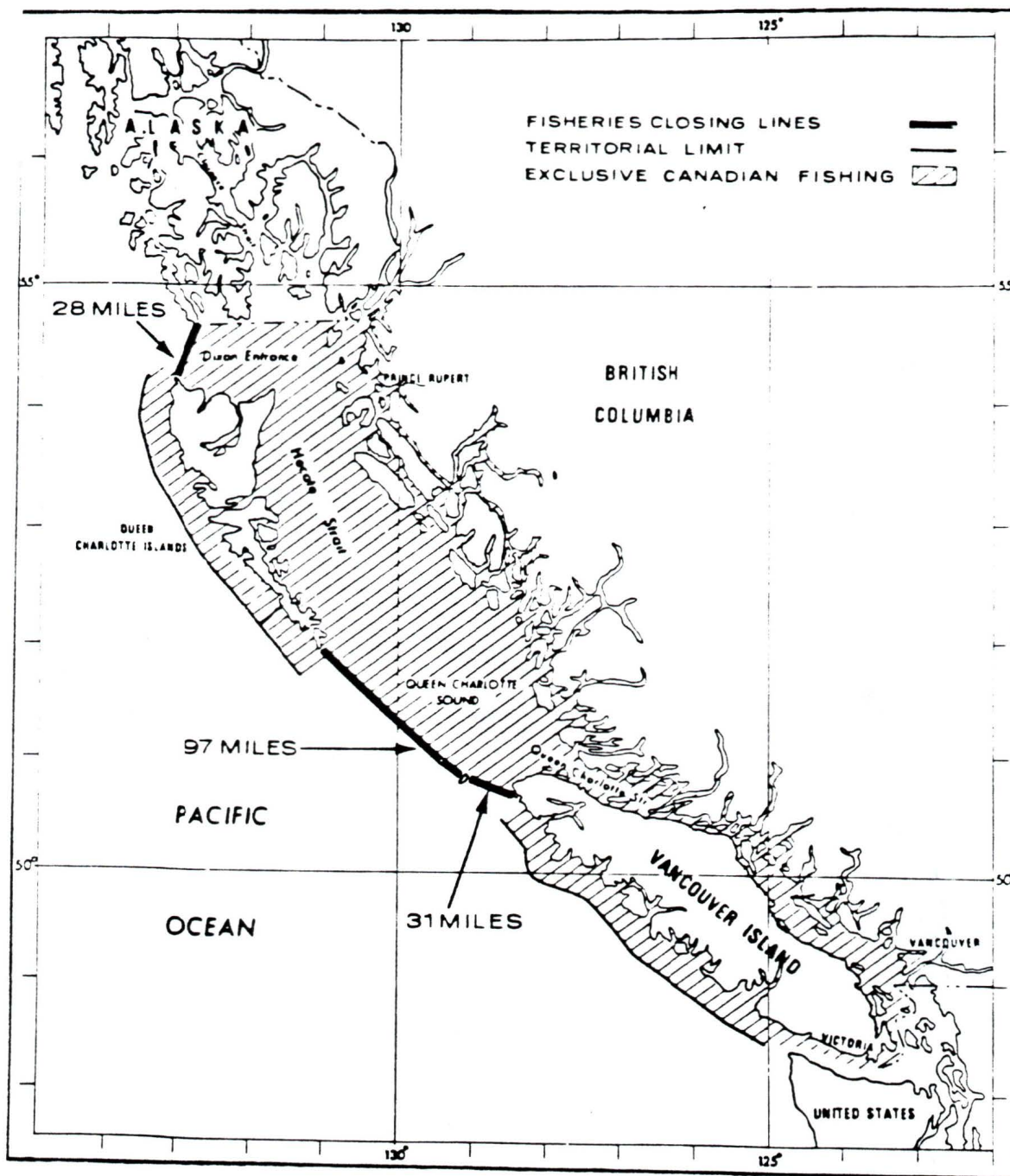
While Canada and the United States generally pursue different maritime boundary policies and laws, there are however a few notable positions in which common attitudes are evidenced. For instance, Canada and the United States have delimited most of their contiguous territorial sea boundaries by the equidistant method as illustrated in the Strait of Juan de Fuca, the Great Lakes and the Grand Manan Channel. Canada and the United States have also jointly supported a pre-eminent role for the equidistant method in the rule of conventional law on delimitation of the continental shelf and the exclusive economic zone boundaries. Boundary agreements by Canada with Greenland and by the United States with Cuba, Venezuela, Mexico and many of the neighbouring states of its South Pacific territories attest to their support of the pre-eminent delimitation of such boundaries by an equidistant line.

The United States and Canada have as well both proclaimed similar extensions of fishery conservation zones, the predecessor to the exclusive economic zone. In 1964, Canada established a 12 mile fisheries conservation zone, followed two years later by the United States. Then in 1977 both nations declared a 200 mile fisheries conservation zone. A major irritation to the United States in the intervening years arose when Canada unilaterally proclaimed fishery closing lines greater than 24 miles across Cabot Strait on the east coast in 1969, and Queen Charlotte Sound

and Dixon Entrance on the west coast in 1971 (see Figure 45). This move gave Canadian authorities power to prohibit foreign fishery fleets landward of these closing lines. The Parties' 1977 announcement of 200 mile fisheries conservation zones did however touch off further controversy in their maritime boundary relations. The most obvious controversy was that overlapping boundary claims were created in their four contiguous boundary areas, further aggravating the unresolved boundary claims. A related controversy which dramatized the need for resolution of the boundary disputes was the status of fishing activities effected by the 1977 proclamations.

With the proclamation of the 200 mile fisheries conservation zone, Canada and the United States concluded bilateral agreements with foreign fleets previously operating in these 200 mile zones which provided for the recognition of a coastal state's right to manage the fisheries stocks. Foreign fleets were also allowed access to those stocks deemed surplus to the Canadian or American domestic requirements. However, agreement between Canada and the United States on the continuing participation of each nation's fishermen in the other's fisheries conservation zone was not as readily forthcoming. When a permanent accord could not be concluded in 1977, an interim reciprocal agreement was negotiated and thereafter extended to 1979.<sup>8</sup> In 1979 a long term agreement consisting of four

Figure 45



Department of Fisheries and Forestry of Canada, "Fishing Closing Lines Announced by Fisheries and Forest Minister Jack Davis," News Release (Ottawa, December 18, 1970), p. 5.

sub-agreements, two on the east coast and two on the west coast was reached. In the disputed boundary waters, it was agreed that each nation would regulate its own fishing fleet's activities (i.e. flag-state enforcement).

On the west coast agreement, an orderly two year phase-out of reciprocal fishing rights for groundfish species was provided. Salmon, an anadromous species, was excluded and though a separate agreement was later concluded, the problem of each nation intercepting the other's salmon stocks remains a contentious issue especially in the Dixon Entrance.<sup>9</sup> An agreement on tuna, a highly migratory species, was also difficult to conclude. The United States believed tuna to be exempt from coastal state regulation. Subsequently, the U.S. did not discourage its nationals from tuna fishing in Canada's 200 mile zone in 1979 when tuna entered these waters on their four year cycle. Canada seized some American vessels but a compromise was later reached in 1980 with the U.S. that prevented prosecution and which was followed in 1981 by the conclusion of a long-term treaty.<sup>10</sup> Flag state enforcement in the disputed Dixon Entrance/Hecate Strait boundary area has also been controversial, with numerous incidences existing where fisheries enforcement officials of both nations have attempted to exercise jurisdiction over the other's fishing activities.

In 1979, a lasting agreement on the east coast gained preliminary approval from American and Canadian negotiators

however it was later withdrawn by the United States Senate whose members were intensely lobbied by New England fisheries interests. As a result reciprocal fishing rights were discontinued. Nevertheless, most of their mutual fishing activity occurred in the disputed waters superjacent to the Georges Bank, especially of highly-valued scallops. Both sides accused the other of allowing their nationals to overfish these stocks on the Bank. The 1984 Gulf of Maine boundary settlement, although only ceding about 1/6 of Georges Bank to Canada, did divide the Bank's scallop beds nearly in half.

What becomes apparent from this preview on Canadian-American maritime boundary relations is that essential differences exist in their respective positions. Generally, these differences concern the breadth of the territorial sea and the continental shelf regimes, the baselines from which they are measured, the rights exercised in the exclusive economic zone, the existence of a 100 mile pollution control zone in the Arctic and the sovereign status of the Northwest Passage. However, notable parallels exist in Canada-United States maritime boundary relations which are important to the discussion of the Dixon Entrance/Hecate Strait. For one, Canada and the United States have delimited their coterminus territorial sea boundaries by the equidistance method. Secondly, both nations have not only verbally supported the equidistance method, but also have concluded boundary agree-

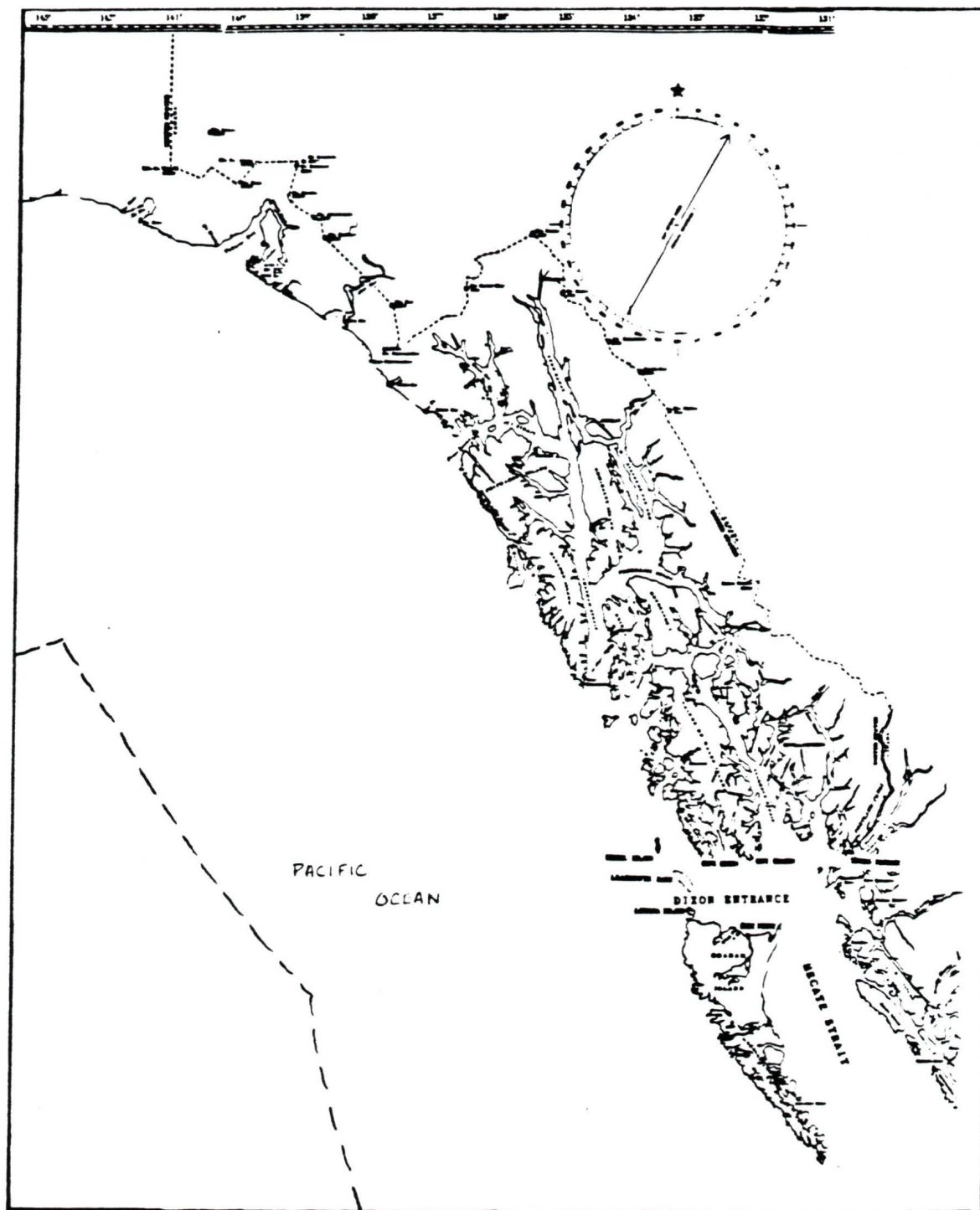
ments on continental shelf and exclusive economic zone delimitation with other coastal nations based on the principle of equidistance. It is in this context of major differences and notable similarities that this study now addresses the Dixon Entrance/Hecate Strait boundary dispute.

### The Dixon Entrance/Hecate Strait Boundary Dispute

#### Geographical Setting and Resources

The Dixon Entrance/Hecate Strait boundary waters consists of Hecate Strait, the Dixon Entrance and the offshore waters outside Dixon Entrance out to the 200 mile exclusive economic zone (See Figure 46). Hecate Strait primarily runs on a north-west bearing, extending some 230 miles from Queen Charlotte Sound in the south to where it narrows and meets Clarence Strait between Gravina Island and Prince of Wales Islands in the north. Hecate Strait is bordered on its western side by the indented coast of Moresby Island, the rather uniform coast of Graham Island, the eastern limit of Dixon Entrance and southern coast of Prince of Wales Island. On the eastern coast of Hecate Strait, lies the broken fringe of islands of the west coast of mainland British Columbia and the Alaskan Panhandle. The immediate boundary region is the open waters from Dixon Entrance to the present international maritime boundary coterminus in Tongas Passage, a distance measured from Cape Chacon at the southernmost tip of Prince of Wales Island to the 'triple

Figure 46



Source: Map courtesy of U.S. National Oceanic and Atmospheric Administration (NOAA), Map No. 531, Gulf of Alaska

point' in Tongas Passage of approximately 67 miles.

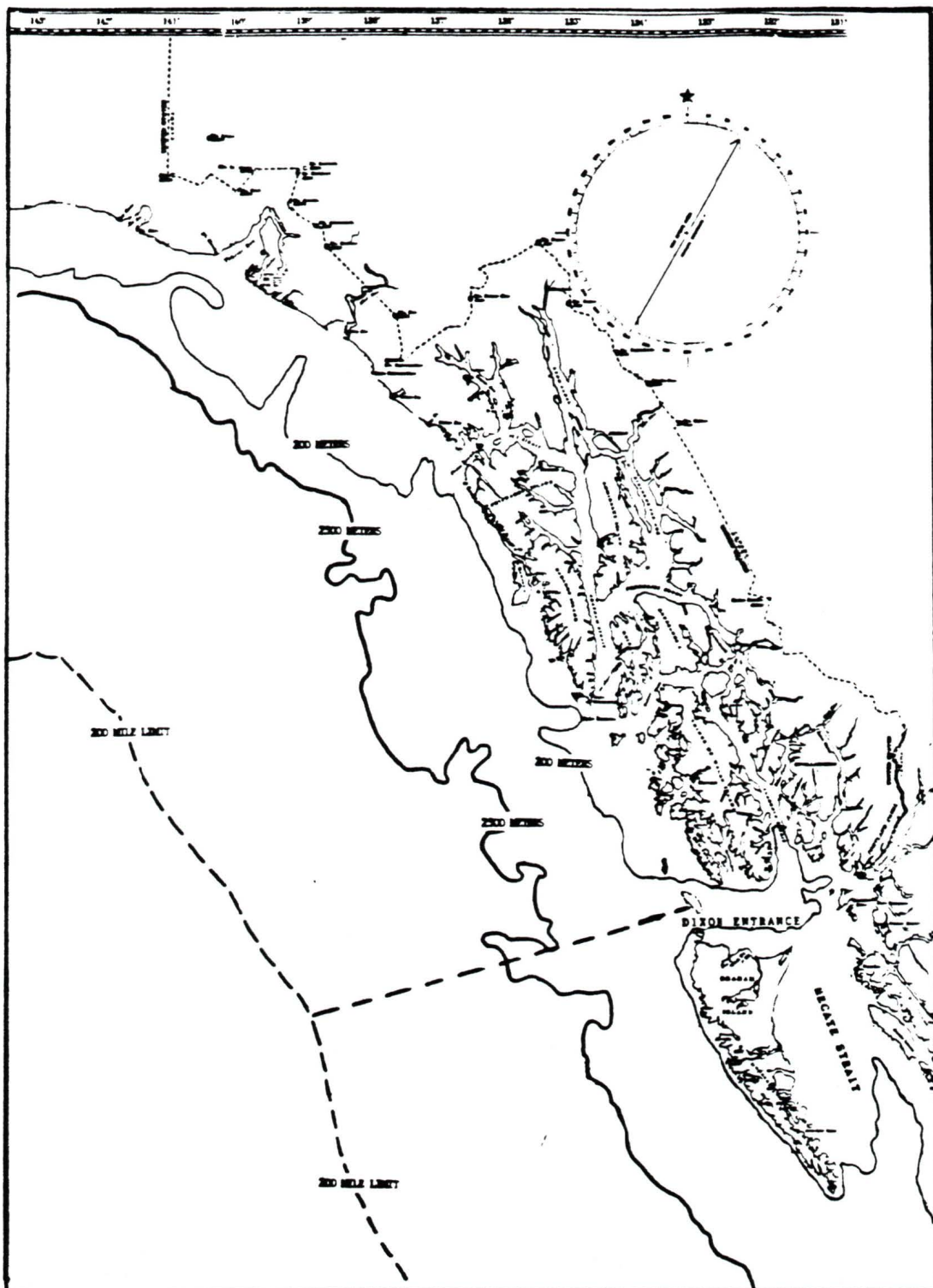
The aptly-named Dixon Entrance, allows east-west passage from offshore waters to Hecate Strait - past the encompassing Queen Charlotte Islands and Alexander Archipelago. Dixon Entrance, the second largest boundary segment, has as its entry points, Forrester Island on the north and Langara Island on the south, a distance of some 43 miles. From here Dixon Entrance extends some 64 miles to its confluence with Hecate Strait between Cape Chacon on Prince of Wales Island and Rose Point on Graham Island, a distance like its entry point of about 43 miles. On the south shore of Dixon Entrance lies Langara Island and the somewhat concave coast of Graham Island. The northern shore is comprised of the open waters between Forrester Island and Dall Island, Kargani Strait and Cordova Bay and the jutting intrusions of Dall Island and Prince of Wales Island. At its narrowest point between Cape Muzon on Dall Island and Langara Point on Langara Island, Dixon Entrance is 28 miles. The offshore waters out to the 200 mile exclusive economic zone comprise the largest segment of the boundary waters.

The seabed of the Dixon Entrance/Hecate Strait varies throughout. In the Hecate Strait generally south of a line down from Rose Point to Dundas Island the seabed is smooth-bottomed with low relief and superjacent waters averaging less than 50 metres. Above this imaginary line, Hecate Strait drops precipitously into a rough-bottomed, moderate

to high relief seabed with superjacent waters reaching a depth near 300 meters. This submarine 'gully' extends to Portland Inlet in the east, north to Clarence Strait and westward forms the main seabed characteristic of Dixon Entrance (See Figure 47). In Dixon Entrance, the submarine gully runs close to the shores of Graham Island and the Alexander archipelago and at its deepest point the seabed is found at 400 metres. The gully is interrupted by Learmouth Bank, a rising submarine plateau of approximately 9 miles in length and 3 miles in width with waters at a minimum of 40 metres in its center. In the offshore waters, the continental shelf west of Queen Charlotte Islands and the southern Alexander archipelago is relatively narrow generally extending not more than 10 miles from shore where the continental slope or more accurately a marginal escarpment occurs. Although, in the immediate vicinity of the Dixon Entrance, a tongue-like continental shelf extension of some 25 miles is found with a more gradual slope down to where a precipitous gradient is met. Notwithstanding, the continental margin (i.e. the shelf, slope and rise) or the 2,500 metre isobath is generally well within the 200 mile exclusive economic zone of both states. The continental margin however extends to a much greater distance up the northern coast in the Gulf of Alaska region.

The seabed in the boundary area offers some potential for mineral and petroleum exploitation. In the 1960's there

Figure 47



Source: Map courtesy of U.S. National Oceanic and Atmospheric Administration, Map No. 531.

was petroleum exploration off the British Columbia coast; however, exploratory results were discouraging. In 1972, a moratorium was placed on such activity, a decision which is currently being reviewed. Recently, some interest in re-viewing petroleum exploration in Dixon Entrance, Hecate Strait and Queen Charlotte Sound has been expressed. However, government geologists using new seismic techniques have found the greatest potential for finding commercial oil reserves exists in southern Queen Charlotte Sound. Dixon Entrance and Hecate Strait are thought to hold reserves of natural gas with questionable commercial potential.

The British Columbia government states in a 1977 submission on west coast boundaries to the Canadian federal authorities that Dixon Strait may have copper reserves of considerable value.<sup>11</sup> However a subsequent glut of copper on the world's metal markets, a related low price and the abundance of recently discovered and relatively cheaper developed land-based reserves raises questions of the real value of such copper reserves.

Fisheries resources in the boundary region vary in location, species, abundance and frequency. In the shallow depths of Hecate Strait off Graham Island, a major groundfish fishery exists, consisting mainly of a highly-valued halibut fishery but sole and cod are also fished. Periodically, a highly-valued herring fishery occurs in these waters as well. However, large-scale trawling of

halibut in Dixon Entrance is limited by its deep waters and rough bottom terrain. Although, Learmouth Bank does yield a sizable groundfish fishery in Dixon Entrance. Trolling and jigging on the narrow intertidal zones of Dixon Entrance off Graham, Prince of Wales and Dall Island provides commercial fishermen with fresh stocks of cod. Since 1928, the halibut fishery in waters outside the territorial sea have been managed by the International Pacific Halibut Commission, however their jurisdiction has been limited by Canada's and the United States' proclamation of 200 mile fishery conservation zones. However, the Commission's 50 year involvement in the management of halibut fisheries has provided the basis for continuing cooperation among these Parties.

Hecate Strait, Dixon Entrance and the immediate offshore waters are important habitats of migratory salmon. The salmon fishery is not restricted, like groundfish, by the seabed habitat because they swim in large open expanses of water which allows the operation of highly-efficient gill-netting and purse-seining fishing fleets. Most of the salmon stocks migrating through the Dixon Entrance/Hecate Strait boundary region originate in the Nass and Skeena River whose watersheds are entirely within Canadian borders while others enter Alaskan waters. As such, interception of salmon by both Canadian and American fishermen has become a major issue in the management of the salmon fishery herein. Although, the recently-signed Pacific Salmon Treaty has

established a basis for long-term co-operation, salmon management and related research in British Columbia and Alaskan waters. A related consequence of such co-operation is an attempt to determine the origins of west coast salmon stocks and allocate the fishing activity accordingly.

#### The History of the Dispute: The A-B Line

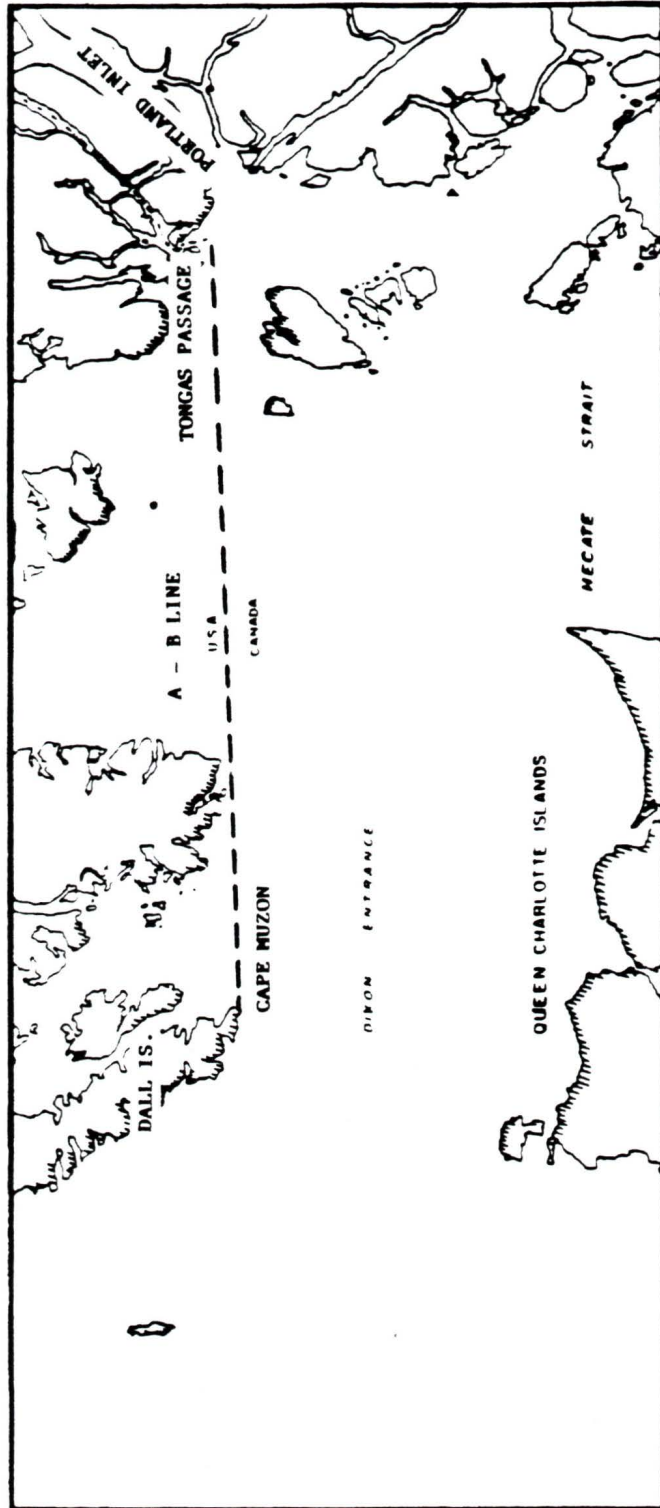
The area of dispute between Canada and the United States in Dixon Entrance/Hecate Strait centers on the seabed and superjacent waters east of Learmouth Bank. West of Learmouth Bank, the Parties concur that a single equidistant boundary is appropriate for delimitation of the continental shelf and exclusive economic zones. However, the Province of British Columbia contends in a 1977 submission to the federal government that the principle of equidistance is not appropriate as the basis for the delimitation of either the exclusive economic zone or the continental shelf.<sup>12</sup> The Province proposes maritime boundaries for each zone in this area that are quite at variance with the equidistance principle and which will be discussed shortly herein.

The boundary dispute in Dixon Entrance and Hecate Strait concerns the status of the waters and the seabed. Canada claims these waters and seabed to be solely Canadian. The United States maintains that a maritime boundary is required in Dixon Entrance and Hecate Strait. The dispute centers on the function of a line referred to as the "A-B

Line" in the Alaskan Boundary Tribunal Award of 1903. The "A-B Line" runs from approximately Tongas Passage at the mouth of Portland Inlet westward to Cape Muzon on Dall Island, Alaska (Figure 48). Canada contends that when the 1903 Alaska Boundary Tribunal gave the Alaska Panhandle to the United States, the common assumption of the Parties at the time was that the Tribunal established the "A-B Line" as the international maritime boundary demarcating Canada and U.S. sovereignty. Canada also argues that the then and subsequent practice of the Parties is supportive of this assumption. The Province of British Columbia supports the Government of Canada's position on the "A-B Line" whereby all waters south of the "A-B Line" are Canadian. The United States counters that based on its interpretation of the 1903 Alaska Boundary Tribunal Award, the Tribunal did not establish the "A-B Line" as a maritime boundary but the "A-B Line" only serves to allocate sovereignty over the land not the water. Therefore, all islands and other lands north of the line belong to the United States, and all islands to the south appertain to Canada. Subsequently, the United States is entitled to claim a territorial sea and other jurisdictional zones seaward of the Alaskan mainland and its islands in the Dixon Entrance and Hecate Strait.

The 1903 Alaskan Boundary Tribunal was established to resolve a 75 year dispute over where the actual territorial boundaries expressed in an 1825 Treaty between Great Britain

Figure 48



(Map courtesy of Canadian Hydrographic Service)

and Russia, were located. The Tribunal rejected Canadian and American proposals and delimited a territorial land boundary on the Alaskan Panhandle's eastern fringe based on Russian maps prepared shortly after the 1825 Treaty.<sup>13</sup> On the southern extremity of the Panhandle, the Tribunal decided in favour of the Canadian claim that the 1825 Treaty's reference to Portland Channel meant Portland Canal rather than Portland Inlet (the United States' claim). Canada did, however, resent the suspected sell-out by the British president of the Tribunal, Lord Alverstone, who agreed with the American claim that the last segment of the territorial boundary in Portland Canal should abruptly alter course at Tongas Channel and proceed southeast to a terminus in Portland Inlet at  $54^{\circ} 40'$ . The effect of Lord Alverstone's decision was to deny Canada ownership of Sitklan and Kannaghunut Island. However, it was the Tribunal's ambiguous ruling on the course the line mentioned in the 1825 Treaty should take from its point of commencement (i.e., Cape Muzon) to the entrance to Portland Inlet which would later serve to protract the boundary dispute. The Tribunal ruled that the so-called "A-B Line" should follow the  $54^{\circ} 40'$  latitude but it failed to define the function of the "A-B Line".

An isolated incident six years earlier should have forewarned the 1903 Tribunal of the need to define the "A-B Line"'s function. In 1897, a Canadian fisheries protection

vessel warned an American fishing boat it was not permitted to fish anywhere in Hecate Strait or in any other territorial waters of Province of British Columbia. No mention was made of Dixon Entrance. The United States protested this incident to Great Britain forthwith but her protest went unanswered.

In 1905, the United States sought further clarification from Great Britain on Canada's 1897 action and again received no response. The United States did not press the issue at this time possibly because American fishermen were continuing to fish outside Canada's 3 mile territorial sea without interference.<sup>14</sup> Indeed, the United States seemed to have differentiated between fishery rights and territorial sovereignty when in 1908 with its prior protests on fishing jurisdiction still not addressed, the United States nevertheless requested Great Britain's approval to lay a telegraph cable in Hecate Strait and Dixon Entrance outside recognized territorial sea boundaries.<sup>15</sup>

The issue of the function of the "A-B Line" crystallized in 1908 when Canada again warned an American fishing vessel that its activities in Hecate Strait contravened Canadian jurisdiction. The United States responded by requesting that Great Britain state her formal policy on the question of fishery rights in Hecate Strait. Great Britain passed this task on to her Canadian representatives. Canada declared its policy by promulgating an Order-in-Council

which asserted Canada's right to territorial jurisdiction over both Hecate Strait and the waters of Dixon Entrance "south of the line established by the Alaska Boundary Award of 1903."<sup>16</sup> Canada justified its position by stating that although the treaty rights assigned in 1825 were unclear, the effect of the 1903 Tribunal's boundary award especially considering the Tribunal's terms of reference, the questions it addressed and the way the boundary line was drawn, did in fact create "a boundary line separating territorial possessions - water as well as land."<sup>17</sup> Additionally, Canada supported its claim by reference to the parallel situation in the 1846 delimitation of the boundary line in the Strait of Juan de Fuca wherein Great Britain and the United States treated the waters of the respective sides as territorial, including water beyond 3 miles and up to 20 miles in breadth.<sup>18</sup> Although Great Britain queried Canada's claim, Canada ignored British doubts still mindful of the perceived disloyalty practiced by Lord Alverstone in 1903 when he sided with the Americans on the course of the boundary through Tongas Passage. The United States condemnation was more forceful, asserting that the waters of Hecate Strait and Dixon Entrance outside the 3 mile limit were not British waters.

Canada followed its 1909 Order-in-Council with another one in 1914 wherein Canada reasserted that the waters of Hecate Strait and Dixon Entrance were territorial waters.

Canada noted that in addition to the justifications cited for its 1909 claim, Canada's 1914 claim that the "A-B Line" served as a line of territorial demarcation was based on the improvident and wasteful methods of U.S. fishermen, the peculiar topography of the region, acknowledgement by a U.S. fisheries official of Canadian jurisdiction and the American's 1908 request for Canadian government approval to lay a cable in this region.<sup>19</sup>

Thereafter, Canada reasoned that the United States practice from 1867 to the 1890s of enforcing its customs laws and its 1923 seizure of a Canadian fishing vessel in waters north of the "A-B Line" outside the 3 mile territorial sea limits, meant that the United States considered all waters north of the A-B line to be their territorial waters.<sup>20</sup> Canadian officials concluded from this that the waters south of the A-B line must then be Canadian. Canada believed further substantiation of this conclusion was implicit in the American's 1952 and 1955 requests for Canadian approval of activities the United States sought to undertake in Dixon Entrance and Hecate Strait.<sup>21</sup>

Since 1964 Canada has taken more substantive measures to assert its claim to sovereignty over these waters. In that year, Canada ordered Russian and Japanese fishing vessels to cease fishing in these waters and both nations subsequently complied.<sup>22</sup> In 1971, Canada established, under 1970 amendments to the Territorial Sea and Fishery Zones

Act, fishery closing lines across Dixon Entrance. This move brought a strong protest from the United States even though Americans were still permitted to fish in the zone outside Canada's 3 mile territorial sea. In 1977, Canada pre-empted the United States proclamation of a 200 mile exclusive fishery conservation zone by rushing through similar legislation of its own for January of the same year. The 200 mile fishery conservation zone in Dixon Entrance and Hecate Strait had the "A-B Line" as its northern maritime boundary.

The United States for its part, started in 1969 to refrain from implicit recognition and passive denial of Canadian claims to territorial sovereignty over all waters in Dixon Entrance and Hecate Strait by ordering a Canadian government-contracted vessel to leave waters within 3 miles of Cape Muzon.<sup>23</sup> In 1971 while seeking a Canadian fishing vessel thought to be intruding in its 3 mile territorial sea off Cape Muzon, the United States attempted to seize another vessel for the same infraction.<sup>24</sup> And in 1977, United States proclaimed a 200 mile exclusive fishery conservation zone which stipulated co-ordinates in Dixon Entrance and Hecate Strait aligned along an equidistant line. Finally, in 1984, the United States published a notice in the Federal Register seeking interest in the sale of exploration leases for about 25 million acres of continental shelf area, including some offshore acreage near Dixon Entrance claimed by Canada.<sup>25</sup>

Canada and the United States have attempted to resolve the dispute that emerged from the 1903 Alaska Boundary Tribunal's ruling, or lack of, on the "A-B Line". In 1914 Canada offered to submit to arbitration the question of whether the "A-B Line" was a line of allocation or a line demarcating territories.<sup>26</sup> World War I then overshadowed Canada's offer and the issue was not revived until the 1940s. At this time, negotiations were attempted to settle the legal status of the boundary waters. These efforts culminated in 1945, when the Cabinet of the Government of Canada proposed to divide Dixon Entrance by a median line while maintaining each state's right to fish and navigate on both sides of the line outside the 3 mile territorial sea.<sup>27</sup> The United States approved the Cabinet's proposal but the Province of British Columbia rejected the proposal and subsequently Canada did not proclaim the required Order-in-Council. The United States countered by proposing a boundary line in Dixon Entrance and Hecate Strait which would leave as high seas, waters outside the 3 mile limit. Canada offered no response to this proposal.<sup>28</sup> In June 1973, the United States offered to submit the "A-B Line" dispute to the International Court of Justice for arbitration, perhaps due to the pre-eminence then given to the equidistance principle in conventional international law and evidence of its predominance in states' practice. Canada refused this offer in early 1974 indicating that it was "prepared to

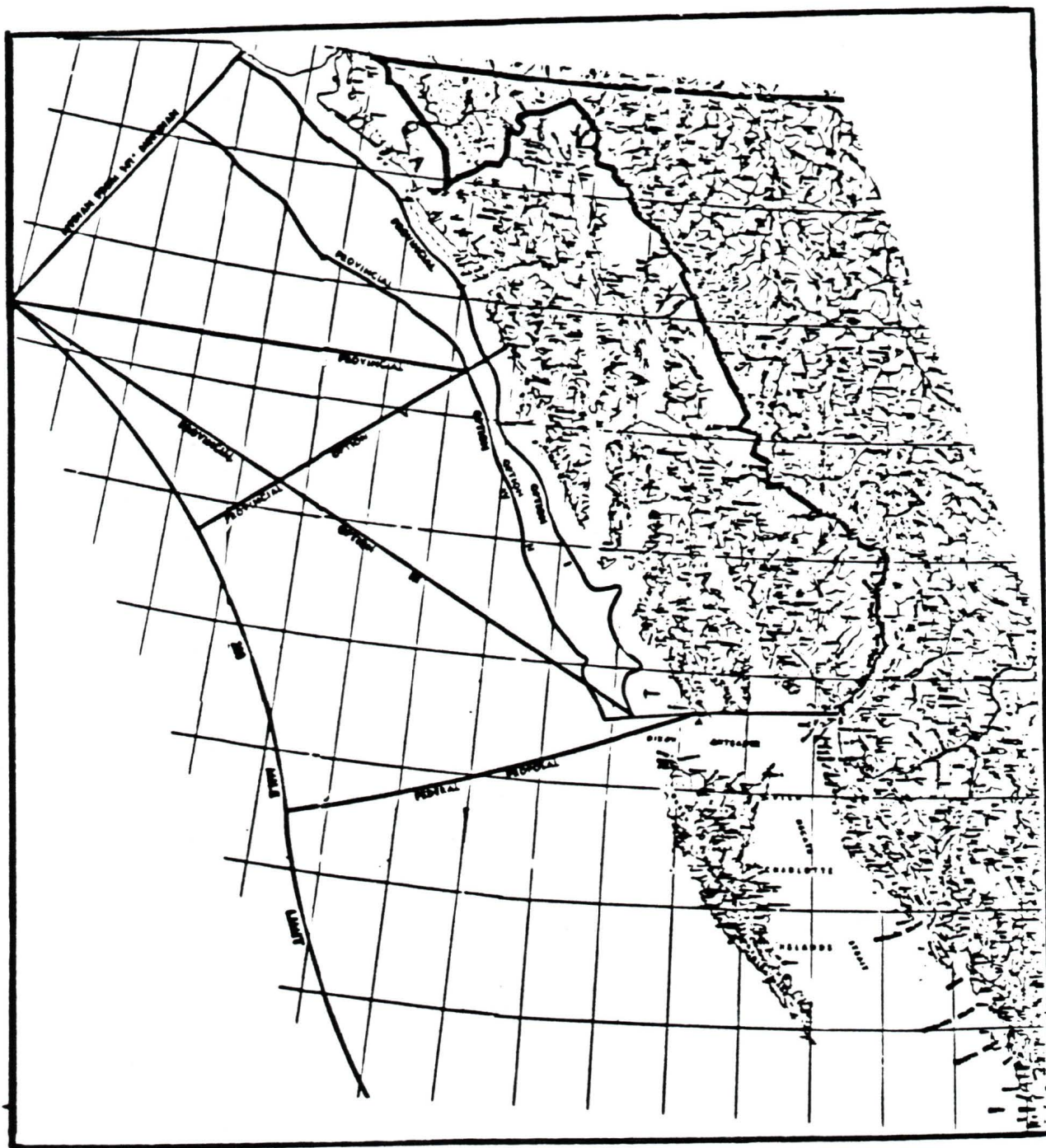
consider the entire matter in the light of the legislative measures adopted and the practices maintained by two parties, as well as on the basis of international law as it has developed over the years."<sup>29</sup> Canada apparently was making reference to the status 'historic rights' has attained in international maritime boundary law. Nonetheless, Canada did suggest early consultations be undertaken on the entire matter.<sup>30</sup> From a political stance, this is where the situation lies; Canada maintaining the existence of the A-B Line as a line of territorial demarcation in Dixon Entrance and Hecate Strait based on historic and treaty rights and an equidistance boundary in the offshore waters out to the 200 mile limit. Meanwhile the United States asserts that the equidistance principle is the operative maritime boundary delimitation principle from Portland Inlet out to the 200 mile limit.

The involvement of the Province of British Columbia in the boundary dispute has restrained any progress towards a final negotiated settlement on the boundary dispute between the federal governments of Canada and the United States. In a 1977 submission to the Government of Canada, British Columbia supported the federal government's traditional position that the A-B Line is an international boundary in Dixon Entrance and Hecate Strait. However, British Columbia states that the maritime boundaries off its west coast as proposed by the federal government were unacceptable and

prejudicial to its interests.<sup>31</sup> British Columbia demanded, as was recognized in 1945, that its position on west coast maritime boundaries be considered by the federal government due to the considerable impact such delimitation would have on the economic and social welfare of its citizens.<sup>32</sup>

British Columbia proposed separate boundaries for the exclusive fisheries jurisdiction and the continental shelf outside of Dixon Entrance. Citing the 1969 North Sea Continental Shelf Cases and the 1977 United Kingdom-France Arbitration Award, British Columbia argued that the Alaska Panhandle was a geographic coastal configuration characteristic of those special circumstances recognized by international law.<sup>33</sup> The effect of these "special circumstances" was to sever the natural prolongation of the land mass of Canada from its appurtenant continental shelf off the Alaska Panhandle.<sup>34</sup> As such, British Columbia maintained it was incumbent upon the United States and Canada to negotiate a continental shelf boundary on equitable principles that will give due regard to these special circumstances. British Columbia then proposed five possible continental shelf boundary locations all of which generally ascend in a northwesterly direction from Cape Muzon (Point A). Figure 49 shows Option I which follows a 12 mile territorial sea limit to the 141° meridian; Option II follows the 1,500 metre isobath to an equidistance line triple point at the 141° meridian; Option III commences 12 miles westward of

Figure 49



Source: Province of British Columbia. Submission of the Province of British Columbia on West Coast Maritime Boundaries Between Canada and the United States. Victoria: Queen's Printer, 1977. Map supplement.

Forrester Island and runs diagonally to the intersection of the median line with the 200 mile limit; Option IV follows the 1,500 metre isobath but at an "appropriate" point runs in northwesterly direction to the intersection of the median line with the 200 mile limit; and finally Option V which represents the division of the seabed so that each country has complete jurisdiction, by a line drawn perpendicular to the coast approximately at the same latitude as Juneau, Alaska. British Columbia also suggested a joint management alternative.<sup>35</sup>

While British Columbia did propose that a separate fisheries boundary was required, it however did not provide any specific boundary options. Rather, the Province concluded that the Government of Canada was obligated to negotiate fishing zone boundaries with the United States in accordance with equitable principles that reflect a just and equitable allocation of the marine resources in the boundary areas.<sup>36</sup> Therefore, the boundary for fisheries outside Dixon Entrance should ascend in a northwesterly direction in a manner that will accord to British Columbia fishermen an equitable share of the fisheries especially the halibut fishery off the Alaska Panhandle.<sup>37</sup> Where it may not be possible to draw a boundary that would provide a truly equitable allocation of the fishery resource to B.C. fishermen, the Province suggested that their proposed continental shelf boundaries may be adopted.<sup>38</sup> The 1977 submission by

British Columbia still represents its position on west coast maritime boundaries.<sup>39</sup> Before assessing British Columbia's position, let us first return to those of the federal governments of Canada and the United States.

The validity of Canada's and the United States' positions rests primarily on the 1903 Alaskan Boundary Tribunal Award and alternately on the 1825 Treaty between Great Britain and Russia. McRae and Bourne undertook an extensive analysis of these treaties to determine if the purpose and intentions of their negotiations provided some clues to the proper interpretation of the "A-B Line".

McRae and Bourne found from their analysis that there is sufficient evidence to make both the claims of the United States and Canada (or Great Britain) plausible, but insufficient evidence to make either claim conclusive.<sup>40</sup> The authors found that while it appears that negotiators of the 1825 Treaty were not concerned with a maritime boundary, there is evidence which suggests that after Russia ceded Alaska to the United States in 1867 until at least shortly after the 1903 Alaska boundary award, both Great Britain and the United States assumed each had jurisdiction over the waters on their side of the boundary.<sup>41</sup> Moreover, the Tribunal may later have proceeded on this common assumption although the Tribunal was not expressly requested to determine the function of the line. Consequently, McRae and Bourne find that the evidence is too ambiguous to decide the

real intention of those involved in these treaty making events.

McRae and Bourne then question whether such tenuous evidence is sufficient to usurp the then 3 mile territorial sea permitted under international law on maritime boundaries. They note that a valid precedent did exist between the two parties which attest to their common assumption that the A-B Line did in fact delimit territorial waters regardless of international law. In the 1846 Strait of Juan de Fuca boundary arbitration, Great Britain and the United States accepted the delimitation of territorial waters up to 20 miles in breadth.<sup>42</sup> Thus, it is reasonable to believe that the Parties may have shared an assumption that the A-B Line served to demarcate territorial jurisdiction over the waters in Dixon Entrance and Hecate Strait even though such an assumption would have contravened international law.

Finally, McRae and Bourne assess the possibility that statements in 1903 and 1908 by American government representatives amounted to an acquiescence in and thus is now estopped from disputing Canada's claim to jurisdiction over waters south of the A-B line. (The related legal principles of acquiescence and estoppel were discussed in Chapter Two as possible equitable principles and their pertinence to the 1984 Gulf of Maine boundary dispute.) McRae and Bourne express doubts that these statements sufficiently

and unequivocally constitute an acquiescence which would raise an estoppel.<sup>43</sup> The authors feel these statements are not conclusive though they may at least reveal the attitude of the United States.<sup>44</sup>

In the final analysis, McRae and Bourne conclude that resolution of the status of the A-B Line and thus the jurisdiction of the disputed waters of Dixon Entrance and Hecate Strait through an arbitration that relied solely on the historical evidence of title would inspire little confidence. Accordingly, if the dispute were submitted to arbitration,

- (a) tribunal might well be forced to conclude, that, in view of the absence of clear evidence at least by 1903, neither state had established any claim to areas of water beyond three miles from their respective coastlines on the mainland and the islands, a decision favorable to the United States, but reached by default rather than on the basis of any clear intention.<sup>45</sup>

McRae and Bourne suggest that a rational settlement of this dispute is one that is negotiated and which primarily addresses economic issues particularly those involving fisheries and continental shelf exploitation, a suggestion British Columbia would endorse. Historical evidence should be treated only as part of all considerations relevant to the boundary region.<sup>46</sup>

Application of 'Equitable' Principles, Practical Methods and Relevant Circumstances to the Dixon Entrance/Hecate Boundary Region

Introduction

International law and states' practice indicate that the purpose of boundary delimitation is to find a just and reasonable boundary by application of equitable principles, practical methods and relevant circumstances which are primarily geographic. International law also holds that the function of boundary delimitation is not to apportion maritime areas or resources therein but to determine a boundary the location of which may conceivably work hardship on one of the parties in the delimitation. It is the purpose of this case study to apply this theoretical framework of boundary law to a single maritime boundary in the Dixon Entrance/Hecate Strait boundary region. McRae and Bourne, in their analysis of the Dixon Entrance/Hecate Strait boundary dispute, suggest that any rational settlement of the dispute should seek to produce an equitable boundary and consider such factors as military security, navigation, economic interests primarily fishing and continental shelf exploration and environmental protection.<sup>47</sup>

Security

International law accords military security little relevance to the delimitation of either exclusive economic zone or continental shelf boundaries. Under conventional law, coastal states do not exercise full sovereignty in

these jurisdictions only exclusive or preferential right to their resources. Exploration of the resources found therein should not threaten territorial sovereignty. Furthermore, freedom of navigation and overflight are permitted within these extended jurisdictional zones. Perhaps, coastal state regulation of scientific research in these zones could inhibit military security interests but practically - speaking it is doubtful Canada would disapprove of such American activity in its offshore zones because it would serve Canadian security interests without the associated costs. Moreover, coastal state approval of scientific research allows Canada to restrict such Soviet activities in its offshore which would be in the interests of both United States and Canada.

Customary law does not substantiate the consideration of military security in the delimitation of offshore maritime boundaries. The Court of Arbitration in the 1977 Anglo-France Arbitration rejected each party's arguments that the other's maritime boundary proposal for the Channel Islands involved security issues.<sup>48</sup> Further, the Chamber in the 1984 Gulf of Maine Case found military security was not applicable either as an equitable principle or a relevant circumstance in determining the delimitation line.<sup>49</sup>

Regardless of what international law demonstrates, certain realities in the Dixon Entrance/Hecate boundary region counteract the necessity of military security factors

being considered as the basis for an equitable boundary delimitation. Foremost, neither disputant has raised security issues in its boundary claim. Additionally, neither the United States nor Canada operates strategic military bases in the region. And even if one nation did operate for example a strategic naval base in the region, maritime access is available to each Party's internal waters by other than the Dixon Entrance, albeit more time consuming. Moreover, the United States and Canada have a mutual defence agreement which includes military security provisions that transgress maritime boundaries. Also, Canada's small naval force is already overtaxed by its security responsibilities on the west coast which leads one to question how Canada could realistically undertake further offshore enforcement responsibilities of even fisheries and seabed activities were any of the Province of British Columbia's offshore boundary options successful.

In the final analysis, it must be determined how military security interests would be unfairly compromised by either of the states' claimed boundaries. An equidistance boundary would recognize the military security interests of both parties by providing each with the best direct access to their internal waters in the region. Canada would not have its military security interests compromised by an equidistance boundary line. On the other hand, the A-B Line would prevent the United States from providing effective

naval protection to the southernmost parts of its Alexander archipelago.

Consequently, while international law, geographical circumstances and political realities discount the relevancy of military security in delimitation of maritime boundaries, it can nevertheless be stated that if military security interests were considered, the A-B Line would be inequitable in this regard.

#### Navigation

Navigation is still implicitly recognized by conventional law as a special circumstances that may preempt the application of the median line method to territorial sea delimitation. Customary law however illustrates that in the last 100 years navigation and its manifestation as the thalweg boundary line has been rarely applied primarily because locales where it is most applicable, that is, as international river boundaries, were largely delimited by the late 1880's. As maritime boundary concerns moved to the uniformly deeper oceanic regions, the issue of equal access to navigable waters diminished. In offshore waters superjacent to the continental shelf and of the 200 mile exclusive economic zone, the issue of access to navigable waters is virtually non-existent.

Navigation as a factor in boundary delimitation no longer concerns access to navigable waters but centers on the question of safe navigation in maritime waters. In

areas such as the approaches to straits and in the straits themselves, an international boundary located therein may serve to produce differing jurisdictional and administrative systems and thereby create navigational conflicts. In the approaches to the Dixon Entrance and in the Dixon Entrance itself, risks produced by different ship routing systems would be compounded by periodic thick fog, the presence of shoals, converging fishing fleets and the passage of large bulk vessels and the possible introduction of hazardous fuel supertankers.

However, international conventions such as the 1960 International Convention for Safety at Sea and its pursuant regulations exist which provide for international standards of vessel operations.<sup>50</sup> Canada and the United States are also members of the Intergovernmental Maritime Consultative Organization (IMCO) which is active in promoting compulsory regulations for certain shipboard navigational equipment and providing pilotage and port advisory services.<sup>51</sup> Furthermore, Canada and the United States have taken concrete measures which could serve as a model for the Dixon Entrance region. In the narrower Strait of Juan de Fuca and its offshore approaches, Canada and the United States have implemented and jointly operate an effective maritime ship routing and separation scheme which to date has largely prevented navigational accidents despite a median line division of their territorial waters. In addition, Canadian and

American Coast Guards have collaborated to establish stringent watch-keeping standards and develop more precise navigational aids.

The existence of both international and bilateral vessel navigation schemes would seem to preclude an argument that an equidistance boundary could contribute to fragmented administration of vessel navigation in boundary waters and subsequently navigational risks. Conversely, the A-B Line, by delimiting Dixon Entrance and Hecate Strait waters as internal waters of Canada, would unjustly prevent equal access by a riparian state to navigable waters on its shores. However, a thalweg line in Dixon Entrance and Hecate Strait is neither justified nor practical because there is no discernible navigable channel, being that these waters are uniformly deep and such a line would be so erratic as to make administration of vessel management unduly complex. Therefore, navigation should not be considered an equitable principle or a practical method for boundary delimitation in Dixon Entrance and Hecate Strait. Although, perhaps navigation could be considered a relevant circumstance or more precisely a negative criterion for recognition of the A-B Line as an equitable boundary delimitation.

### Resource Interests

Fishing rights are central to the Dixon Entrance/Hecate Strait boundary dispute. McRae and Bourne submit that pressure for the settlement of the Dixon Entrance/Hecate Strait boundary dispute is most likely to come as a result of friction and conflict over fishing [and continental shelf] rights.<sup>52</sup> Indeed, it was the harassment of American fishery vessels in the late 1880's and early 1900's by Canadian authorities in Dixon Entrance and Hecate Strait which crystallized the disputed status of the A-B Line. Canada even pointed to wasteful and improvident fishing practices by American fishermen as one reason for promulgating its Order-in-Council which proclaimed the A-B Line as a territorial boundary.

The issue of fishery rights in maritime boundary delimitation is usually linked to historic use and/or the economic dependence thereof by one or all parties to the boundary dispute. Under the 1958 Convention on the Territorial Sea and Contiguous Zone and the 1982 Convention on the Law of the Sea, historic use vis-a-vis fisheries is recognized as a special circumstance which may pre-empt the use of a median line territorial sea boundary. However, historic fishing rights and economic dependence is not confirmed in conventional law as applicable to the 200 mile exclusive economic zone.

The 1982 Convention on the Law of the Sea clearly indicates that in the Exclusive Economic Zone, boundary fishery stocks (excluding sedentary species) and marine mammals should be regulated and controlled by sub-regional or regional resource management organizations rather than territorial division. Sedentary fishery stocks such as lobster and crab are a different matter. Sedentary fishery stocks are considered continental shelf resources under the Convention and thereby are subject to exclusive coastal state control and exploitation or more to the point, a form of territorial division.

The 1919 Grisbardna Arbitration and the 1951 Anglo-Norwegian Fisheries Case demonstrate that historic fishing rights and economic dependency could affect territorial sea delimitation. Outside the territorial sea, customary law has, however, rejected the application of historic fishing rights and economic dependency to the delimitation of offshore maritime boundaries.

The province of British Columbia maintains that existing and potential fisheries which are important to its economy and welfare will be affected by the United States' median line proposal in Dixon Entrance and both national governments' recommendation for a single equidistance boundary off Dixon Entrance. It is said that such effects would happen in Dixon Entrance because British Columbia would be deprived of a large proportion of "its" halibut,

salmon, sole and cod fishery, as well as deny it access to area for sole and shrimp fishery development.<sup>53</sup> The Province also indicates a median line boundary in Dixon Entrance would enhance the opportunity for America fishermen to intercept Canadian salmon and divide the resources of Learmouth Bank.<sup>54</sup> In the offshore zone, British Columbia maintains an equidistance line would not involve a just and equitable allocation of resource and would thus cause a grave dislocation to the fishermen of British Columbia from their traditional salmon, halibut, sole, and cod fishery.<sup>55</sup>

Subsequently, the Province encouraged Canada to maintain its A-B Line position in Dixon Entrance and Hecate Strait. In the offshore zone, British Columbia urged Canada to principally secure the interests of the Province not through reciprocal access, but by a boundary line which accords to their fishermen an "equitable share" of the halibut fishery off the Alaskan Panhandle.<sup>56</sup> Unable to actually delimit such a boundary, British Columbia considered that an exclusive economic zone boundary which ascended in a northwesterly direction like those it proposed for continental shelf resources, would achieve the desired result (See Figure 49).<sup>57</sup> Consequently, one must assess whether these proposals are equitable and based on international law.

Regarding the A-B Line as a fishery's boundary, conventional law allows for deviation from an equidistance

territorial sea boundary where historic rights exist. Accordingly, the A-B Line could be considered a legitimate territorial sea boundary if the A-B Line delimited the historic fishery of British Columbian fishermen. However, since the initial reference to the 54° 40' line in the 1825 treaty between Russia and Great Britain and in the 1903 Alaska Boundary Arbitration Award right up to the present, both Americans and Canadians have historically fished the waters of Dixon Entrance and Hecate Strait. It would then be difficult to conclude that either party could justifiably claim exclusive historic fishing rights in these waters which would warrant deviation from an equidistance territorial sea boundary. Moreover, international law does not recognize a state's claim of historic rights to "potential" fisheries (i.e., access to area for...fishery development). The 1919 Grisbardna Case, while acknowledging that historic rights may justify a deviation in a territorial sea boundary, held that such a deviation could only modify a line primarily founded on geographical criteria. The A-B Line is foremost a geometrical concept applied to geography not vice versa (the latter case is the essential matter in dispute, i.e. A-B Line allocates territory).

British Columbia's contention that a median line boundary in Dixon Entrance would encourage American interception of salmon and division of Learmouth Bank relate to the proposed equitable principle of maintaining unity of

resources. International law has rejected this proposed equitable principle. Conventional law does not specifically address unity of resources, but fisheries resource management issues in the exclusive economic zone are expressly stated to be dealt with not by territorial division but by bilateral and multilateral resource management agreements. Indeed, Canada and the United States have applied these provisions of conventional law to precisely such fishery stocks in the Dixon Entrance/Hecate Strait boundary region. Further, the Chamber in the 1984 Gulf of Maine Case refuted the notion that a boundary delimitation should attempt to maintain the unity of resources (i.e., Georges Bank versus Scotian Shelf). And lastly, it is difficult to understand how any fixed yet abstract maritime boundary line such as the A-B Line can distinguish migratory American salmon from Canadian salmon and thereby prevent interception of either salmon stock by the other's nationals.

In the offshore waters off Dixon Entrance, British Columbian fishermen can not be said to have acquired any more of a prescriptive right to these waters than Alaskan fishermen. The relative intensity or amount of catch does not by itself determine which nation has acquired a prescriptive right over another nation to the waters or fisheries stock therein. Rather, the issue is whether one nation exclusively and historically fished the stock or waters prior to the other nation's entry into this fishery.

Moreover, international law refutes the notion that the function of any maritime boundary is to allocate a share of any of the resources found therein. Rather, international law states that in the exclusive economic zone allocation of fisheries is not achieved by territorial division but bilateral and multilateral resource agreements which provide that fishery stocks excess to domestic requirements be firstly allocated to those nations which traditionally fished in these waters. Notwithstanding, there can not be different boundaries based on catch statistics trends for various fishery stocks. And finally, the province's presumption that aligning exclusive economic zone boundaries with those delimiting mineral continental shelf resources will serve to allocate a nation's historical fishery share, is a relationship with no ecological basis.

Therefore historic fishery rights may not be considered an equitable principle or a relevant circumstance in delimitation of offshore maritime boundaries. Also, no practical methods could equitably delimit such offshore boundaries with respect to fishing due to variable behaviour of fishery stocks in space and time.

The 1984 Gulf of Maine judgment did however infer that fishery rights may be considered relevant if the location of a boundary line were to create catastrophic economic consequences to either parties in a dispute. However, it is doubtful such consequences would be inflicted on British

Columbia were an equidistance boundary line used to delimit the waters of the boundary region. The British Columbian fishing industry is presently undergoing critical structural changes unrelated to boundary issues that to date have not created catastrophic economic impacts. For example, the federal government of Canada has determined that there is significant over-capacity in the west coast fishing industry which is affecting the biological integrity of several fishery stocks. Subsequently, the federal government of Canada which has jurisdiction over marine fisheries, has implemented an extensive vessel buy-back program and catch restrictions. To date, no catastrophic socio-economic impacts have been directly attributed to these initiatives.

Continental shelf or mineral rights as equitable principles or relevant circumstances have been proposed for maritime boundary delimitation. Unlike fisheries though, the issue of continental shelf rights in the Dixon Entrance/Hecate Strait boundary dispute is of relatively recent origin. And in general, historic rights vis-a-vis continental shelf resources are not a critical factor to maritime boundary delimitation. In fact, where such rights have been propounded such as in the 1982 Tunisia/Libya Case, they have been rejected as relevant circumstances. Additionally, states have not claimed economic dependence on continental shelf resources as being relevant to boundary delimitation, largely because most continental shelf

boundary resources are undeveloped.

However, conventional law does address continental shelf resources in themselves. Conventional law indicates that the continental shelf and seabed are to be territorially divided. The problem of one nation exclusively undertaking exploratory drilling or developing a common boundary hydrocarbon reserve is not specifically discussed in conventional law. This problem relates again to the issue of unity of resources. Customary law and states' practice illustrate though that variations to territorial division have been found which address the problem of exploiting continental shelf resources located on or near a boundary.

In the 1969 North Sea Cases, the Court stated without elaboration that the unity of resources (in this case minerals) "so far as known or readily discernible" is not a major factor for delimitation of an equitable boundary but merely "a factual element which it is reasonable to take into consideration in the course of negotiations." In the 1984 Gulf of Maine Case, the Chamber held that the unity of hydrocarbon resources was not to be considered a relevant circumstance for actual delimitation because the distribution of these hydrocarbon resources was virtually unknown. This finding would seem reasonable for those hydrocarbon resources not delineated, although known or delineated hydrocarbon resources may be relevant to a boundary

delimitation. States' practice reveals that territorial division of common boundary resources is not necessarily universally accepted. Japan has agreed with both Russia and Korea in certain boundary areas to deviate from an equidistance boundary where common boundary resources are thought to be located. In these areas, the contiguous states have concluded joint exploration and development accords for the continental shelf and seabed resources.

Thus, in relation to Dixon Entrance, the issue of potential hydrocarbon resources and seabed minerals may not be considered relevant to the delimitation. No hydrocarbon reserves have actually been delineated, so their distribution is unknown. Although, even if the distribution of hydrocarbon resources were known in the Dixon Entrance/Hecate Strait boundary region, territorial division is not necessarily required. Canada and the United States could conclude a joint exploration and exploitation agreement to regulate continental shelf or seabed resources at or near a proposed boundary line in the Dixon Entrance/Hecate boundary area.

#### Environmental Protection

Environmental protection as a proposed equitable principle or a relevant circumstance in maritime boundary delimitation may relate to a claim that maritime boundaries should respect environmental systems and the physical

features of the marine environment. Conversely, environmental protection may also refer to the proposition that because environmental systems do not respect political boundaries, contiguous states must establish a unified and co-ordinated environmental management system for trans-boundary resource problems. Such an approach may be deemed necessary to counter a fragmented, disorderly institutional response that a political boundary may encourage.

Transboundary environmental problems can occur where accidental or operational discharges of pollutants from marine vessels, activities relating to industrial development of continental shelf or seabed resources or ocean dumping of dredge spoils or land based wastes alters the environment and the effects of those actions are felt across the boundary. A co-ordinated bilateral response is usually put in place where the environmental effects are ubiquitous in the boundary region. However, a fragmented approach is likely where the environmental effects from an activity on one side of the boundary are most seriously felt on the other side of the boundary possibly due to a uni-directional flow of water.

Conventional law demonstrates various approaches to issues concerning environmental protection. The 1958 Convention on the Territorial Sea and Contiguous Zone gives coastal states powers to prevent pollution in territorial waters and the contiguous zone although coastal states are

under no obligation to do so. The 1958 Convention on the Continental Shelf obligates states to protect the living resources of the sea as they undertake activities exploiting the continental shelf, but there are no provisions for implementing the obligation, nor are there methods for compensating others for damage. The 1958 Convention on the High Seas obliges states to prevent marine pollution by oil and calls for co-operation on taking measures to prevent pollution by radioactive materials and other harmful agents. Enforcement, jurisdiction and compensation matters are not addressed.

The 1954 International Convention for the Prevention of Pollution of the Sea by Oil (amended in 1962, 1969 and 1973) is a comprehensive treaty containing general provisions and specific provisions for vessel operation and construction. Dumping and pollution resulting from exploiting seabed minerals are excluded. Violations are subject to flag states' sanctions or, if the violation is within the jurisdiction of a state, the sanctions of that state. Vessels are required to hold valid certificates verifying compliance with construction and equipment standards. Certificates are subject to inspection by port states within these jurisdiction and vessels are also subject to inspection if a violation is suspected. For routine operation of tankers, the Convention specifies discharge limits and construction and equipment regulations. For pollution resulting from

accidents, provisions to minimize effects are detailed which include design and equipment regulations.<sup>58</sup>

The 1969 International Convention relating to Intervention on the High Seas in Cases of Oil Pollution Casualties permits a coastal state to take measures on the high seas to protect its coast from pollution following a maritime casualty. The 1969 International Convention on Civil Liability for Oil Pollution Damage provides a \$14 million fund per incident for damages done within territorial waters by accidental discharge of oil. The fund was raised to \$36 million by the 1971 International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damages.<sup>59</sup>

Canada and the United States have implemented their own national legislation for dealing with pollution at sea. Under the Canada Shipping Act, all ships south of 60° in internal waters, territorial waters and exclusive fishery zones are prohibited from pollution discharges and liable to fines for non-compliance. Discharges into international waters which drift into Canadian coastal areas are not covered if done by non-Canadian vessels. However, these are covered under the above-mentioned Conventions. Part XX of the Act establishes a fund to pay claims of all persons who could not collect the full amount of a court award because a ship owner is unidentifiable or the liability exceeded what vessel operators could pay. The United States has similar

legislation.

Consequently, conventional law and Canadian-United States' practice on prevention of oil pollution at sea indicate that a substantive framework exists to deal with pollution from oil and other noxious liquid substances in near and offshore waters. Navigational measures to complement these vessel regulations have been previously discussed and again it was demonstrated that effective mechanisms exist which attempt to provide environmental protection with regard to transportation of oil and other substances.

Concerning ocean dumping, the 1972 Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matters requires member countries to act individually in carrying out the obligations of the Convention. The Convention requires states to take all practical steps to prevent dumping that would create hazards to human health, harm marine life or damage amenities. It requires regulation of dumping by national governments according to the nature of the dumped material. The Convention does not apply to incidental dumping from normal ship operations, marine sewage outfalls, and wastes from exploiting and processing continental shelf resources or military vessels.<sup>60</sup>

Canada and the United States have carried out the obligations of the Convention by passing domestic legislation on ocean dumping in 1975 and 1972, respectively. Both their domestic legislations were extended to cover

wastes generated from continental shelf exploitation. The United States' legislation, the Water Pollution Control Act, is applicable to its 3 mile territorial sea and in its 9 mile contiguous zone to the extent dumping in the 9 mile zone affects its territorial waters. Control of dumping in the zone between 12 and 200 miles is accomplished by regulating transport of material through territorial waters for eventual dumping. Canada's legislation, the Ocean Dumping Control Act, extends out to the 200 mile exclusive economic zone. Canadian ships require a permit in any area of sea but all vessels are required to have permits to dump in the 200 mile exclusive economic zone. Thus, both Canada and the United States have jointly taken steps to prevent pollution from ocean dumping.

Additionally, Canada and the United States, as members of the Organization for Economic Development, are obligated to provide guidelines to avoid disputes over transfrontier pollution by means of harmonious laws. Such laws must ensure non-discrimination in the application of legislation; provide equal right of access in administrative and legal procedures; implement warning systems and ensure full exchange of relevant information.<sup>61</sup> In conjunction with the last obligation, Canada and the United States are also active members of G.E.S.A.M.P. (Group of Experts on the Scientific Aspects of Marine Pollution).<sup>62</sup>

Canada and the United have established a bilateral institutional arrangement for the ongoing management of their common environments which should serve as a model to interpret and implement measures necessary to prevent transfrontier pollution in the Dixon Entrance/Hecate Strait boundary area. The International Joint Commission, established under the Boundary Waters Treaty of 1909, has proved to be an effective bilateral administrative mechanism to manage boundary resources. The 1972 Great Lakes Water Quality Agreement and the 1961 Columbia River Treaty attest to the fact that Canadians and Americans share similar objectives for high environmental quality and have agreed to a co-ordinated approach to maintain environmental quality along the frontier. The International Joint Commission may offer a means to manage the environment of the boundary waters in the Dixon Entrance/Hecate Strait region.

And finally, the environmental perceptions and values in both countries are fundamentally similar. Neither government can easily justify activities that blatantly do environmental damage, even abroad. These similar values and perceptions greatly facilitate diplomatic exchange on environmental matters.<sup>63</sup> This relationship is precisely what the Chamber in the 1984 Gulf of Maine Case referred to as reason for rejecting an American claim that the single maritime boundary for the continental shelf and the exclusive economic zone should prevent further resource

disputes. The Chamber declared that it could not perceive any difficulties whether related to conservation and management of natural resources or other infringements that could not be resolved by the Parties given the traditional friendly and fruitful co-operation in maritime matters enjoyed thus far.<sup>64</sup>

Consequently, while environmental protection may be considered an equitable principle or relevant circumstance for delimitation of a maritime boundary in the Dixon Entrance/Hecate Strait boundary waters, it is not responsive to territorial division. Maritime boundaries must be fixed and therefore can not respect the ever-changing and complex pattern of environmental systems or physical features of the marine environment. Instead, a unified, co-ordinate approach to environmental protection is recommended based on the institutional framework presently available internationally and the practice of Canada and the United States in their other boundary regions.

#### 'Other' Maritime Boundaries

The existence of other maritime boundaries has been proposed in maritime boundary delimitation as an equitable principle or a relevant circumstance. Conventional law does not specifically recognize the presence of other maritime boundaries in maritime boundary delimitation although customary law indicates 'other' maritime boundaries may be

relevant to the delimitation of maritime boundaries.

In the 1969 North Sea Cases, Germany recognized the concession lines established by Denmark. The Court of Arbitration in the 1977 Anglo-French Arbitration ruled that the Channel Islands should have a continental shelf boundary at least to the extent of the Channel Islands' traditionally recognized 12 mile exclusive fisheries zone. The Court in the 1982 Tunisia/Libya Case considered fishery concession lines established in 1919 and used since 1974 as bases for oil and gas concessions to be relevant to the delimitation but primarily because these lines support a line perpendicular to the coast. In contrast, the Chamber in the 1984 Gulf of Maine Case rejected unilaterally imposed oil and gas concession lines as relevant to delimitation of a single boundary for the continental shelf and the exclusive economic zone. The Chamber also found that fisheries boundaries established under co-operative, multilateral arrangements are entered into without prejudice to claims of sovereignty or jurisdiction and have no particular relevance to the bilateral relations of Canada and the United States.

In the Dixon Entrance/Hecate Strait boundary dispute, the status of the A-B Line is central to resolution of the dispute. McRae and Bourne, in their analysis of the historical evidence, conclude that both Canada and the United States present plausible arguments for their positions. The authors however believe that there is not sufficient proof

to make either claim conclusive or that the actions of the United States constituted recognition of the Canada claim.<sup>65</sup> If the dispute were to be submitted to arbitration based solely on the historical evidence, McRae and Bourne feel the tribunal's decision may be reached by default rather than on the basis of any clear intention. Notwithstanding, the A-B Line may not constitute a fair and just delimitation of the maritime boundary in the Dixon Entrance and Hecate Strait with respect to geography and international law. The A-B Line prevents the United States from extending its sovereignty beyond its land territory, internal waters and archipelagic waters to an adjacent 3 mile territorial sea as recognized by international law. The A-B Line would also deny the United States sovereign rights to areas of the continental shelf and exclusive economic zones as allowed by international law which are more a continuation of their territory under the sea and moreover more proximal to their coasts than Canadian shores. The A-B Line, however, could be considered along with other circumstances, relevant to the final delimitation of a line primarily founded on geographical principles.

#### Geologic Natural Prolongation

Geologic natural prolongation is acknowledged by international law as the pre-eminent principle for determining a state's eligibility to continental shelf rights. The

judgment of the Court in the 1969 North Sea Cases, indicates that where there exist overlapping claims by states sharing the same continental shelf, the resulting areas should be divided between them in agreed proportions or failing agreement, equally unless the disputants decide on a regime of joint jurisdiction, use or exploitation for the zones of overlap or any part of them.

British Columbia and Alaska share the same geologic continental shelf so the principle of geologic natural prolongation is not applicable to delimitation of their lateral continental shelf boundary. At the same time though, conventional law states every coastal nation is entitled to claim sovereign rights to continental shelf areas appertaining to its land territory (including islands). The A-B Line does not permit the United States to exercise this right in Hecate Strait and Dixon Entrance off the coast of Prince of Wales, Dall, Kanaghunut and Sitklan Island. Moreover, the A-B Line contravenes the principle declared in the 1969 North Sea Cases judgment, that is, where overlapping continental shelf claims exist and agreement by the claimants is not forthcoming, division of the continental shelf should be equal or by joint management.

With regard to the offshore areas, the proposals for continental shelf delimitation forwarded by British Columbia (See Figure 49) do not conform with international law or

geology. Option I delimits the continental shelf boundary off the Alaska Panhandle by following a 12 mile territorial sea limit to the 141<sup>o</sup> meridian. The 12 mile territorial sea has no relationship to geological criteria for continental shelf delimitation. Moreover, the Option I boundary does not provide Alaska with a seaward continental shelf area, which given the shelf's geographic and geologic attributes, should extend to at least 200 miles according to existing international law. Option II follows the 1500 meter isobath which has no basis either as the true geologic limit of the continental shelf in this area or one of the bathymetric limits which define the continental shelf under international law. The same criticism is applicable to Option IV and additionally no geologic reason is given for the abrupt deviation from the 1500 meter isobath at the "appropriate" point to intersect with a triple point off the 141<sup>o</sup> meridian. Options III and V are proposals which attempt to conform to the judgment in the North Sea Cases' wherein geographic natural prolongation and equal division of overlapping areas are promoted as equitable principles.

Consequently, the principle of geologic natural prolongation is not in itself an applicable equitable principle for delimitation of a maritime boundary in the Dixon Entrance/Hecate Strait boundary region because both nations share the same continental shelf boundary. However, the principle of geologic natural prolongation is useful in

this dispute for demonstrating that each nation is entitled to a continental shelf area off its coast.

### Geographic Natural Prolongation

Geographical natural prolongation or coastal front extension is based on the principle that not only does a state's land territory extend under the sea to a continental shelf, it also extends into the sea based on a broad geographical relationship between contiguous states.

The Court in the 1969 North Sea Cases reasoned that geographic natural prolongation was an equitable principle to be applied to delimitation of continental shelf boundaries. The Court in the 1982 Tunisia/Libya Case concluded that geographic natural prolongation was not an equitable principle on which to delimit a boundary but a relevant circumstance which determines the areas of overlap and supports the delimitation proposed by the Court. The Chamber in the 1984 Gulf of Maine Case, faced with another interpretation of geographic natural prolongation, rejected it as having no basis in law or geography. This variance may be due to the differing geographical situations in which geographic natural prolongation has been proposed.

This study questioned that when the equidistance principle is applied to an irregular coastline, inequity is created. It was argued that geography makes no distinction between a regular or an irregular coastline. Equidistance

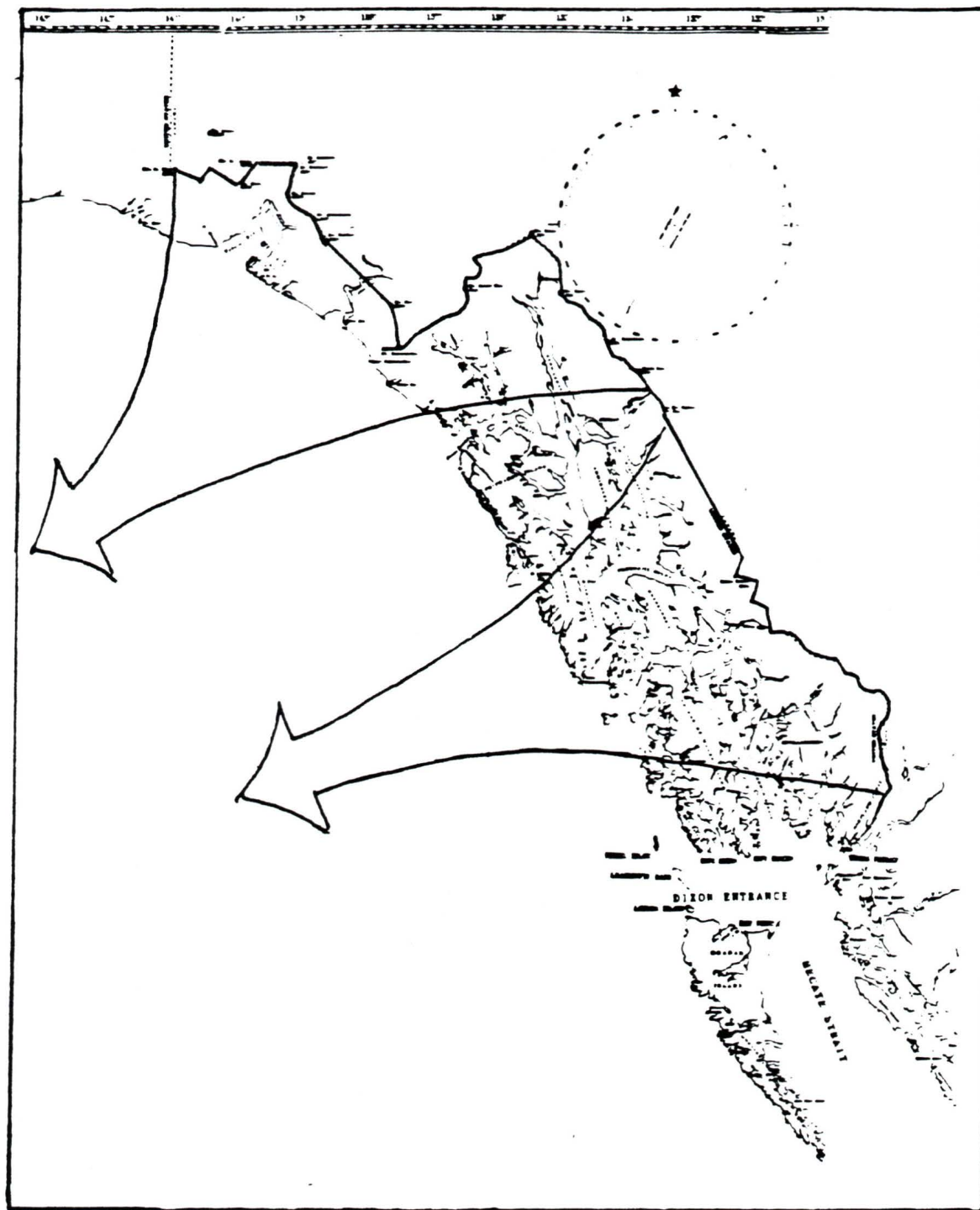
objectively reflects the facts of nature, the results of which may be unequal but not necessarily inequitable. Also, conventional law, the 1951 Anglo-Norwegian Fisheries Case and the 1984 Gulf of Maine Case did not consider such deviations or distortions in the general configuration of the coast as the macrogeographic aberrations of the entire German coast or the whole of Nova Scotia as special circumstances requiring recourse to methods other than the equidistance principle. Rather, conventional law and the Court hold that incidental features such as islands, promontories or indentations on the coast, constituted deviations from the general direction of the coast. Geographic natural prolongation could be considered as a relevant circumstance but not an autonomous equitable principle on which a maritime boundary delimitation could be founded.

The Province of British Columbia has proposed various maritime boundary lines for continental shelf delimitation of the seabed off Dixon Entrance, in part on the findings of the Court in the 1969 North Sea Cases regarding geographic natural prolongation. The Province of British Columbia contends that the continental shelf off the Alaska Panhandle is the natural prolongation of the land mass of Canada.<sup>66</sup> The Province reasons that the Panhandle entitles the United States to claim a boundary line that gives it some area of the continental shelf; but it does not provide a basis for a claim to the whole continental shelf of the Panhandle.

British Columbia believes that the Alaska Panhandle is a "special circumstance" akin to an island or peninsula feature which the International Law Commission and the Court in the North Sea Cases recognized would preclude a boundary based on the equidistance principle.<sup>67</sup> The Province is effectively proposing that the landmass of Canada lying east of the Alaska Panhandle be extended into and under the sea out to 200 miles (see Figure 50). The Alaska Panhandle and "some area" of continental shelf would then essentially be an island in the midst of Canada's landmass and its appropriate continental shelf area out to 200 miles.

British Columbia reasons that the entire coast and whole land of the Alaska Panhandle, comprised largely of islands and a small strip of land on the coast amounting to no more than 40 miles at its broadest extent, is the type of configuration of the coast that the International Law Commission and the Court in the 1969 North Sea Cases considered as constituting "special circumstances." British Columbia then argues that were this thin strip of land ignored, the Alaska Panhandle would essentially be comprised of islands which "unquestionably" constitute a "special circumstance" deserving of pre-empting the application of the equidistance principle. The Province then states that natural prolongation is linked to the principle upon which islands constitute a "special circumstance" because islands separate land territory from its natural prolongation under

Figure 50



Source: Map courtesy of U.S. National Oceanic and Atmospheric Administration, Map No. 531.

the sea.<sup>68</sup>

British Columbia's proposal is a novel interpretation of international law on maritime boundary delimitation. International law holds that continental shelf rights can only be claimed to submarine areas that naturally extend from the land territory of coastal states actually abutting on these areas. Further, the judgment of the Chamber in the 1984 Gulf of Marine Case and the preparatory works of the International Law Commission, suggest that such a macro-geographic feature the size of the Alaska Panhandle does not constitute such an incidental feature which indicates the presence of "special circumstances." In a similar situation, the Norwegian coast in general and certain areas north of 66° N latitude in particular possess the same characteristics of the Alaska Panhandle and yet Sweden and Finland have not claimed that Norway's unique geographical configuration should prevent it from claiming an extensive continental shelf zone.

The Alaska Panhandle does in fact consist of an extensive area of continental land mass. Therefore, it is difficult to understand how the Province can present an argument that if this land mass did not exist then these special circumstances would be applicable. Although, even if the Province's arguments in this respect were considered, islands are entitled to continental shelf areas.

Applying the objective size criteria advanced by Ely to qualify an island for a 200 mile exclusive economic zone indicates that an island of nearly 1,000 miles in diameter is needed to approach a unit in ratio between the area of the island's landmass and the area of the 200 mile exclusive economic zone. Just the islands of the Alexander archipelago excluding the continental land mass would easily comprise well over 1000 miles in diameter thereby justifying a 200 mile offshore zone for this island group. Additionally, most of these islands can undoubtedly sustain human habitation or economic life of their own and thereby deserve an exclusive economic zone and continental shelf area. Finally, in principle islands are not commonly regarded as "special circumstances" because islands separate land territory from its natural prolongation under the sea. Rather, customary law demonstrates that islands are generally special circumstances where they are used as basepoints for the delimitation of maritime boundaries of states lying adjacent each other. Customary law also shows that an equidistance line need not be entirely abandoned because of the presence of an island(s), but rather modifications to the principle should be first attempted before recourse to an essentially different method.

Consequently, consideration of geographic natural prolongation as an equitable principle applicable to the delimitation of a continental shelf boundary in the seabed

off Dixon Entrance is questionable. However, the concept of geographic natural prolongation could be useful for determining the areas of overlap to be delimited and thereby could be considered a relevant circumstance.

### Proportionality

Proportionality is based on the concept that maritime areas of adjacent or opposite states should be delimited in proportion to the lengths of the respective coastlines which face the boundary region. The role of proportionality in maritime boundary delimitation has been proposed either as an autonomous equitable principle, a substantive equitable principle analogically related to the equally substantive equitable principle of equidistance or a relevant circumstance.

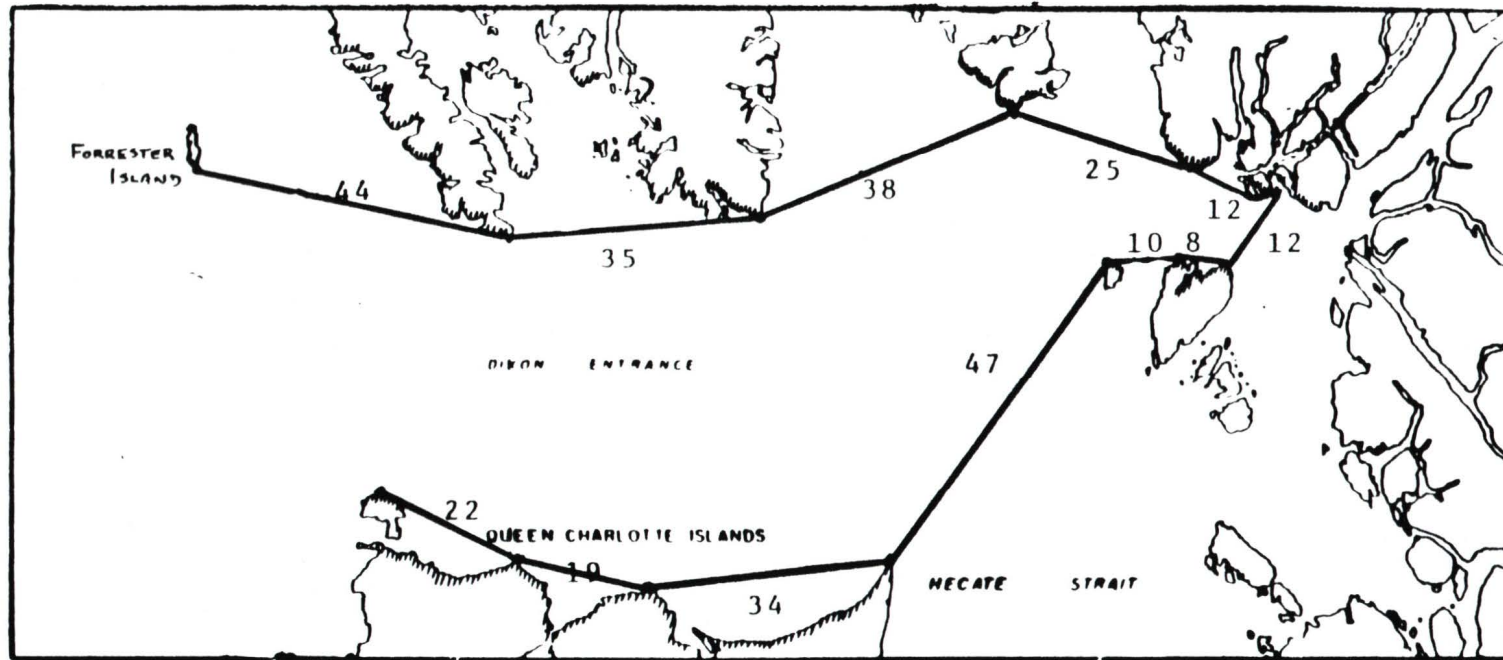
Conventional law makes no provision for proportionality, yet customary law does provide some direction on the role of proportionality in maritime boundary delimitation. Customary law clearly indicates that proportionality is rejected as an autonomous equitable principle because it is felt that such recognition would support the erroneous notion that maritime boundary delimitation should allocate a just and equitable share of boundary areas. However, as a relevant circumstance, proportionality serves a corrective function, invoked when there is a situation of otherwise equality which is disturbed by the presence of some geographical or other feature

that affects the direction of the boundary. The absence of this equality would simplify the application of the incorrect idea that the purpose of delimitation is to allocate a just and equitable share.

The Court in the 1969 North Sea Cases introduced the concept of proportionality. The Court of Arbitration in the 1977 United Kingdom-France Case agreed with the Court's 1969 concept of proportionality. In the 1982 Tunisia/Libya Case, the Court accepted the finding that proportionality was a relevant circumstance but not in terms of balancing geographical inequities that a particular method may affect, but to test the appropriateness of the delimitation method selected (i.e., a corrective function vs. a negative criterion). The Chamber in the 1984 Gulf of Maine Case, though, both supported and applied the proportionality concept as a special circumstance. There are no set methods which apply the concept of proportionality to an actual boundary line although the initial step is to measure the coastline lengths of the Parties. In this regard, measurement of coastline length has not been demonstrated as a precise exercise. The Court in the Tunisia/Libya Case and the Chamber in the Gulf of Maine Case subjectively selected salient coastal features which were felt represented the basepoints for coastline measurement and then measured the distances between these basepoints.

In the Dixon Entrance/Hecate Strait, proportionality could be considered a relevant circumstance for delimitation of the maritime boundary. There is a geographical situation that approximates equality which is disturbed by the presence of the A-B line. By applying a somewhat subjective method of selecting salient coastal features on both opposing coasts as basepoints and then measuring the distances between them, the author calculated that the ratio of coastline lengths United States: Canada, is 1:1.02 (See Figure 51). The inclusion of Forrester Island as a basepoint for this calculation could be disputed; however Forrester Island does mark the northern entrance point to Dixon Entrance and is part of the Alexander Archipelago. Notwithstanding, the A-B line does not divide the seabed and superjacent waters in this boundary segment anywhere near the ratio of the parties' coastline lengths whether or not Forrester Island is included or excluded in the calculation. In this regard proportionality could be considered a negative criterion which demonstrates the inappropriateness of the A-B Line.

Proportionality with regard to relative coastline lengths is not really applicable to the offshore area because the coastal lengths in the immediate offshore area are similar and not outwardly disturbed by some geographical feature that affects the boundary line. Although, if British Columbia's boundary proposals are given due consideration,



U.S. Coastal Length 154 miles  
 Canada Coastal Length 152 miles

Figure 51

then proportionality as a negative criterion would clearly demonstrate that such boundary methods would not divide the seabed and superjacent waters relative to the Parties' coastal lengths. In this context, these proposals could be considered inequitable. Additionally, the concept of proportionality, not in its strictest sense as a ratio of coastal lengths, but with regard to the effect of the incidental geographic feature of Forrester Island on the delimitation of an equidistance boundary and the offshore areas to be divided, may be worthy of consideration. This factor is more appropriately discussed with regard to the application of the equidistance principle and the relevant circumstances which warrant modification of its strict application.

#### Geomorphology

Geomorphology could be an applicable equitable principle or relevant circumstance were some geomorphological feature present which differentiates the unity and uniformity of the continental shelf contiguous to the parties' coasts. However, in the Dixon Entrance/Hecate Strait boundary regions no discernible geomorphological feature exists which delineates the geologic natural prolongation of the continental shelf of Canada from that of the United States. Therefore, it would seem that geomorphological criteria are of limited use in the equitable

delimitation of a maritime boundary in this disputed area.

#### The Perpendicular Line Method

The perpendicular line method can result in an equitable boundary line where two contiguous states lie on a rectilinear coast. In such a situation, the perpendicular line method produces an equal division of disputed areas.

The perpendicular line method found broad but qualified application as an equitable principle for maritime boundary delimitation prior to World War I and then only for the delimitation of the territorial sea. Since then, and for delimitation of offshore maritime zones the perpendicular line method has generally been applied only where contiguous states are situated on a rectilinear coast; where it produces substantially the same result as an equidistance line and where its use has been justified by a special or unique combination of circumstances.

The Court in the 1982 Tunisia/Libya Case declared the factor of perpendicularity to the coast was relevant to selecting a line of delimitation calculated to ensure an equitable situation. The Chamber in the 1984 Gulf of Maine Case rejected the perpendicular line method in the inner waters of the Gulf of Maine where the coasts were opposite, but in the outer offshore waters where the Parties were adjacent, the Chamber applied the perpendicular line method.

Although in theory the line perpendicular to the general direction of the coast appears simple and convenient, and is to be commended for its idea of dividing a rectilinear coast in two equal parts, in practice it is extremely difficult to objectively determine the general direction of the coast. Moreover, most coastlines are indented or have island formations rather than being straight with no incidental features. From a geographical perspective, it is almost an essential condition for use of the perpendicular method that contiguous coastal states lie on a rectilinear coast for a certain distance at least. Boggs also pointed out that because the general direction of the coast is so discretionary, a zone of controvertible waters or seabed could be produced where an area divided by the perpendicular line determined to be under the jurisdiction of one state could in fact be closer to the other contiguous state.

In the Dixon Entrance/Hecate Strait offshore boundary region where the coasts are adjacent, similar geographic obstacles to the application of the perpendicular method are present. The coastline is deeply indented and fringed by islands. Figure 52 illustrates a line drawn perpendicular to what has been arbitrarily determined to be the general direction of the coastline in the vicinity of the boundary region. It extends from a median point between the closing line of Forrester Island and Langara Island. As can be

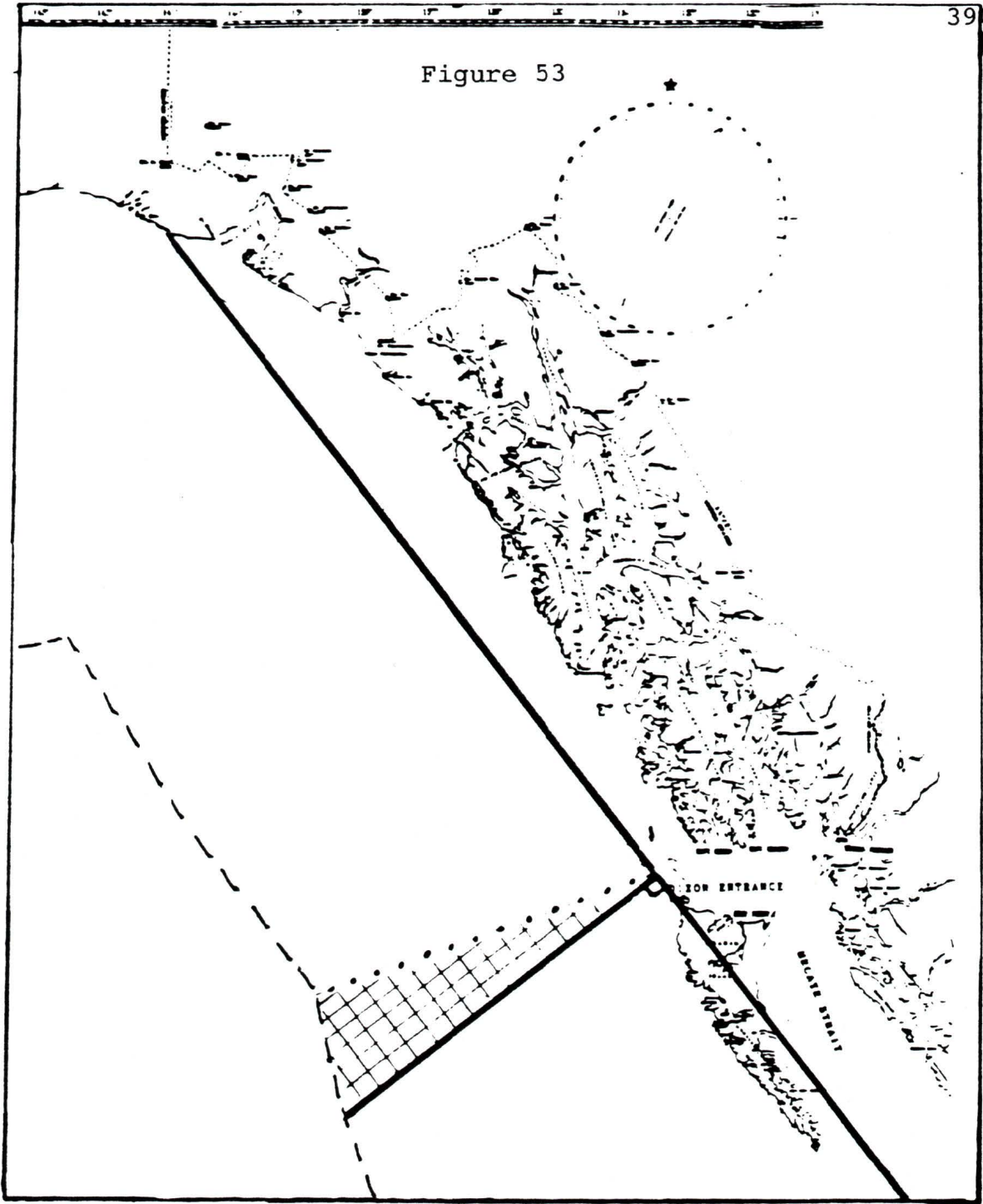
seen, a zone of controvertible jurisdiction relative to an equidistance line would be produced. Figure 53 illustrates a line drawn perpendicular to the macrogeographic general direction of the American-Canadian west coast. It again shows an even larger area of controvertible jurisdiction. Figure 54 demonstrates a line drawn perpendicular to the fisheries closing line declared by Canada in 1971. It illustrates the largest zone of controvertible jurisdiction disadvantageous to the United States.

#### Extension of the Land Boundary

A line drawn according to this method simply extends into the maritime zone and out to the seaward limit according to the bearing of the last segment of the land boundary. While a few states have agreed to delimit their offshore boundaries by this method, international law generally rejects this method as an applicable equitable principle or relevant circumstance.

Nevertheless, in the Dixon Entrance/Hecate Strait boundary region the extension of the land boundary could be proposed in the offshore area by Canada in conjunction with its A-B Line claim. The A-B line is considered by Canada as a territorial boundary. Subsequently, Canada could propose the A-B Line simply be extended from the A-B Line's western terminus to the seaward limit of the 200 mile exclusive economic zone. Figure 55 shows this extension of the A-B

Figure 53



A Line Perpendicular to the General Direction of the North American West Coast Bearing 23]° NNW

▨ Controvertible Zone

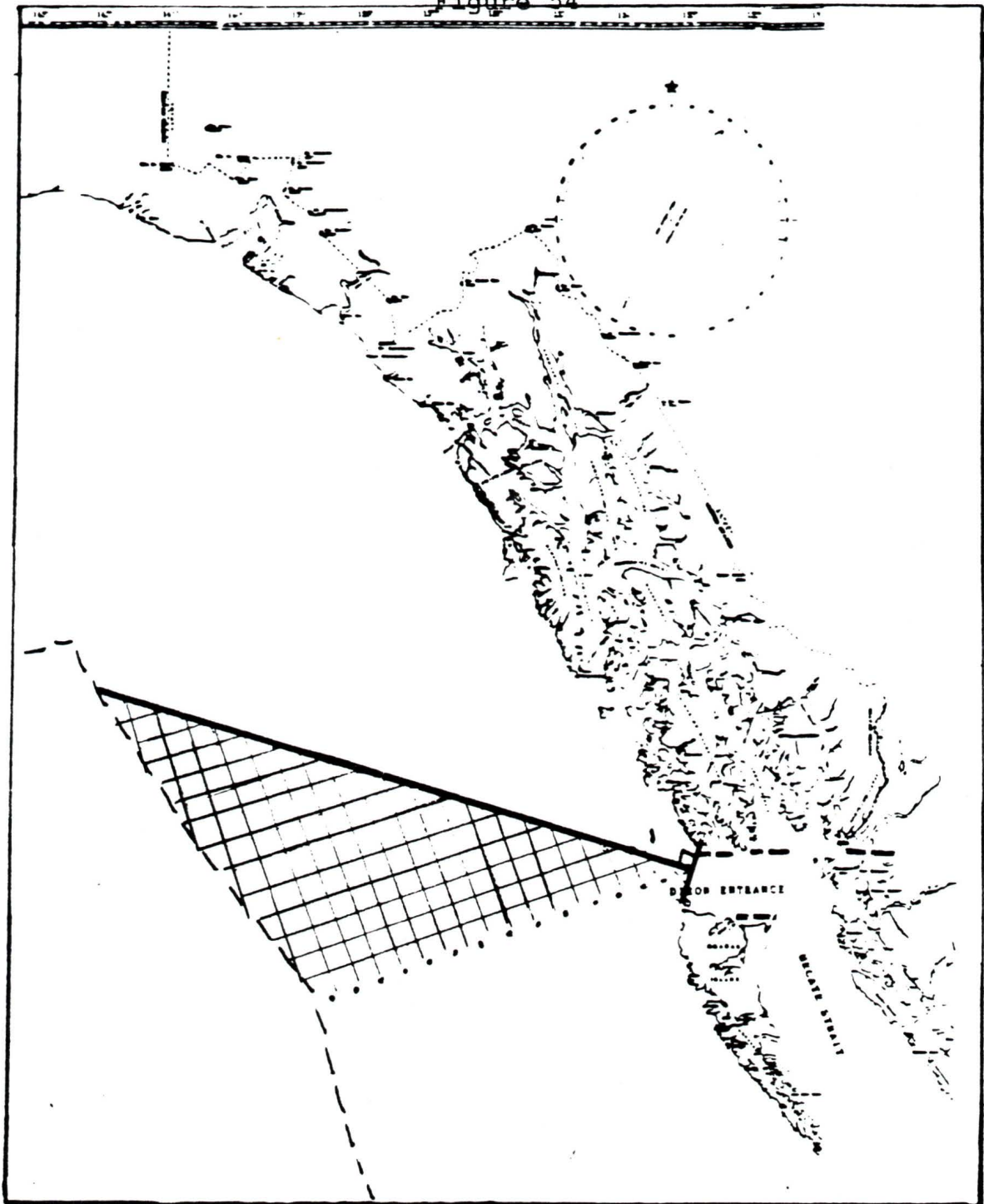
... Equidistance Line

⊥ Perpendicular Line

-- 200 Mile Limit

Source: Map courtesy of U.S. National Oceanic and Atmospheric Administration, Map No. 531.

Figure 54



A Line Perpendicular to the 1971 Fisheries Closing Line

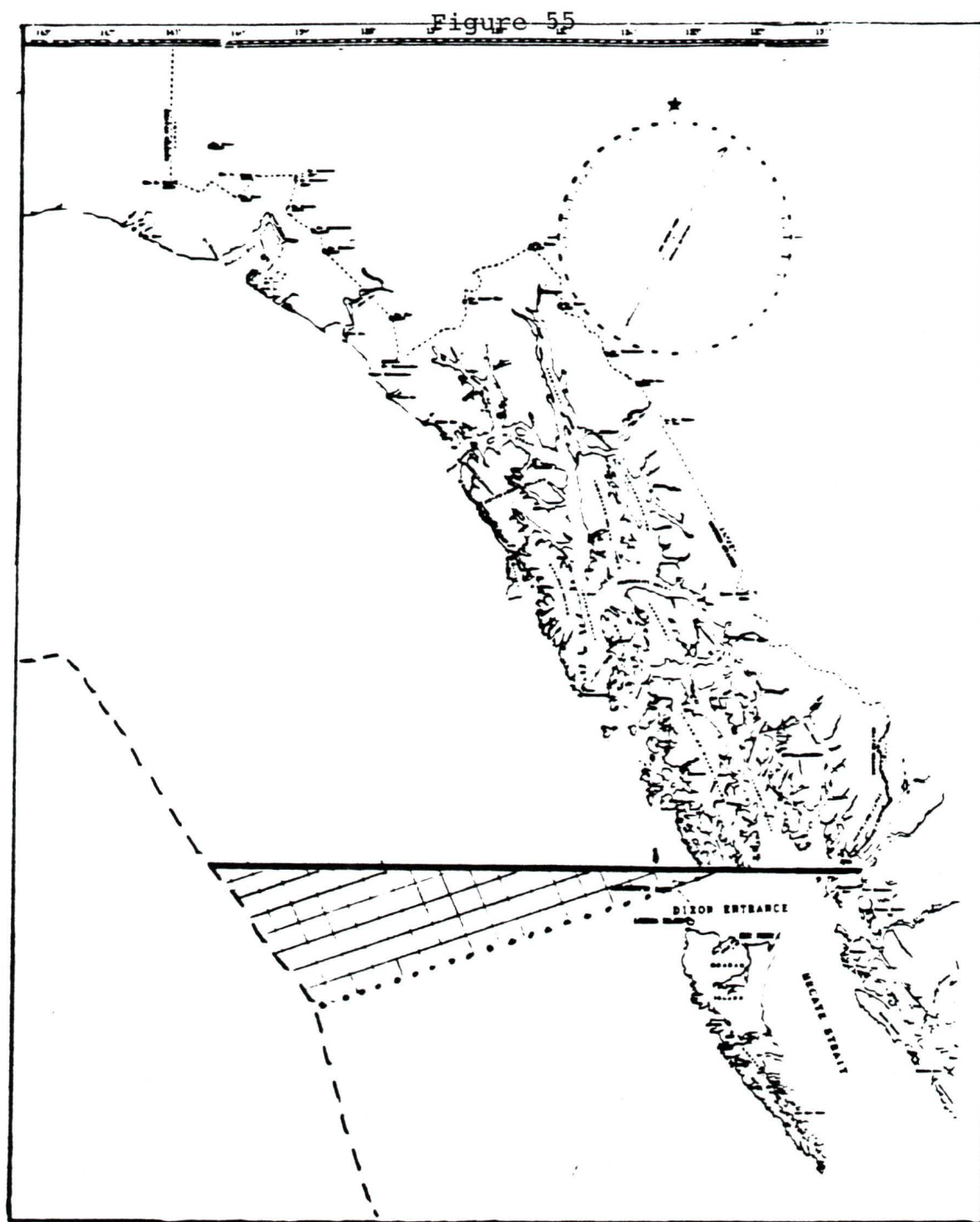
— Controvertible Zone

-- 200 Mile Limit

... Equidistance Line

⊥ Perpendicular Line

Source: Map courtesy of U.S. National Oceanic and Atmospheric Administration, Map No. 531.



A Line Extended From the A-B Line

 Controvertible Zone

--- 200 Mile Limit

... Equidistance Line

— Extension Line

Source: Map courtesy of U.S. National Oceanic and Atmospheric Administration, Map No. 531.

line and the controvertible zone which would be produced, much to the detriment of the United States. Additionally, an extension of the A-B Line out to the 200 mile limit would sever a southern portion of the 3 mile territorial sea zone claimed by the United States around Forrester Island. For these reasons, extending the A-B Line to the 200 mile seaward limit could be considered as resulting in an inequitable boundary solution.

#### The Thalweg Line

The thalweg line or a boundary line which conforms to the deepest or most navigable channel is generally not applicable to maritime boundary delimitation. Similarly, the thalweg line is not applicable to the Dixon Entrance/Hecate Strait boundary region because the waters are deep enough throughout so as not to be an impediment to the navigation of either Party's marine vessels.

#### Summary

Various inferences are indicated by the preceding analysis of these 'equitable' principles, methods and relevant circumstances. For one, not one of these factors by itself could be considered as the basis for the equitable delimitation of a single maritime boundary throughout the entire Dixon Entrance/Hecate Strait boundary region. A factor could be however applied to a particular segment of

the boundary, for example, a perpendicular line could produce an equitable delimitation of the offshore seabed and superjacent waters, depending on the general direction of the coast selected. Particular factors such as the extension of the land boundary, the application of the A-B Line and B.C.'s geographic natural prolongation proposal would be both judicially and geographically inequitable if applied as the sole basis for maritime boundary delimitation. Moreover, factors such as proportionality, geologic natural prolongation and geomorphology, while generally creative of equity, in this boundary region would not be particularly relevant to delimitation of a maritime boundary because of the relatively homogeneous nature of the boundary region and/or the need to delimit a single maritime boundary.

Regarding the factors of security, navigation, natural resources and environmental protection, these factors are needlessly or not necessarily resolved by territorial division in the Dixon Entrance/Hecate Strait boundary region. For instance, Canada and the United States share vital security and navigation concerns in this and other boundary regions which they have chosen to address through bilateral and multilateral institutions that transcend maritime boundaries rather than territorial division which may encourage a fragmented approach. Also, fishing interests and environmental protection are transboundary issues which are insensible to fixed boundary delimitation. These factors

require a bilateral and multilateral political response through resource management agreements. It is hard to conceive of a fixed boundary line which could respect the mutable nature of such factors. Even relatively immutable continental shelf resources that could be territorially divided have transboundary environmental and structural effects which require a bilateral response.

### An Equidistance Line in the Dixon Entrance/Hecate Strait Boundary Region

#### Introduction

The principle and method of equidistance determines the appurtenance of maritime areas by ceding to each of the States concerned all those portions of the exclusive economic zone and continental shelf area that are nearer to a point on its coast than they are to any point on the coast of another State. Where such adjacent and proximal maritime areas of coastal states overlap, application of the equidistance principle generally effects an equal division of the overlapping areas. The equidistance boundary could be comprised of a locus of points. However, most coastal states have applied a simplified equidistance method which consists of straight line segments with control points responsive to the salient features of the nearest coastlines.

The equidistance principle is generally recognized as a pre-eminent equitable principle for delimitation of maritime boundaries where states lie opposite each other. In these

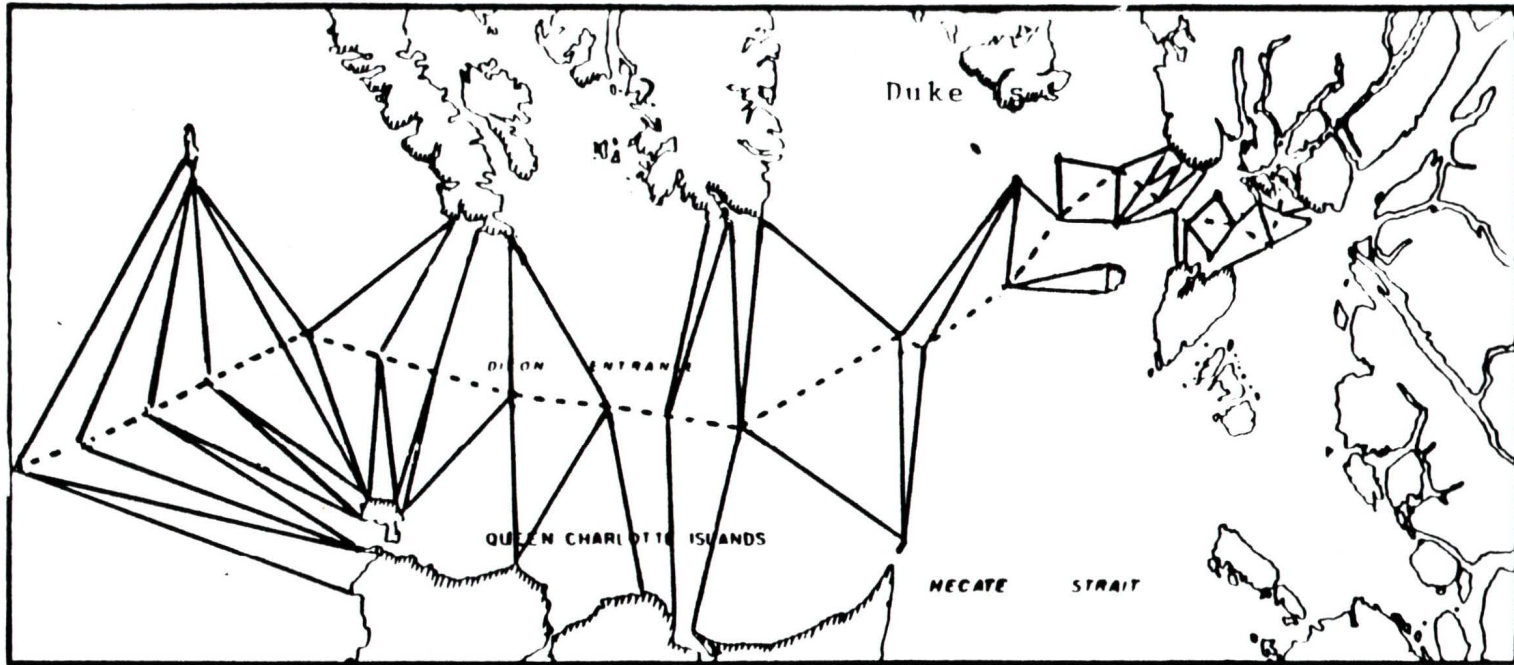
situations, the equidistance method usually produces an equal division of the intervening waters. However, in geographic situations of coastal adjacency, the inclusion of minor geographic aberrations such as offshore islets, rocks and minor coastal projections as basepoints for measurement of an equidistance line out to 200 miles or greater could geometrically distort the boundary line. Such a distortion could effectively lead to the allocation of extended jurisdictional zones which are disproportionate to the aberrations' real geographic significance. Although Padwa suggests that the resulting division may be unequal but necessarily inequitable, the International Court of Justice in its 1969, 1977 and 1984 maritime boundary arbitrations has nevertheless judged that the possibility of such distortions resulting is reason enough to reject the equidistance method as the pre-eminent equitable principle of maritime boundary delimitation. However, the Court's 1977 and 1984 judgments, supported by boundary experts and states practice, indicate that where such distortions or special geographic circumstances exist, a solution must be first sought in a method modifying or varying the equidistance line rather than by recourse to a wholly different criterion.

The task of determining the equitableness of the equidistance method for delimiting a maritime boundary in the Dixon Entrance/Hecate Strait boundary then becomes:

- 1) does the equidistance principle and method affect an equal division of overlapping areas; or
- 2) do special geographic circumstances exist which cause an equidistance line to produce an unequal or inequitable division of maritime areas; and
- 3) if special geographic circumstances exist which distort the equidistance line, is a solution available primarily in modification or variation of the equidistance method rather than by recourse to an entirely different equitable principle; or
- 4) if an entirely different equitable principle is warranted, what equitable principle is appropriate?

Application of the Equidistance Method in Dixon Entrance and Hecate Strait

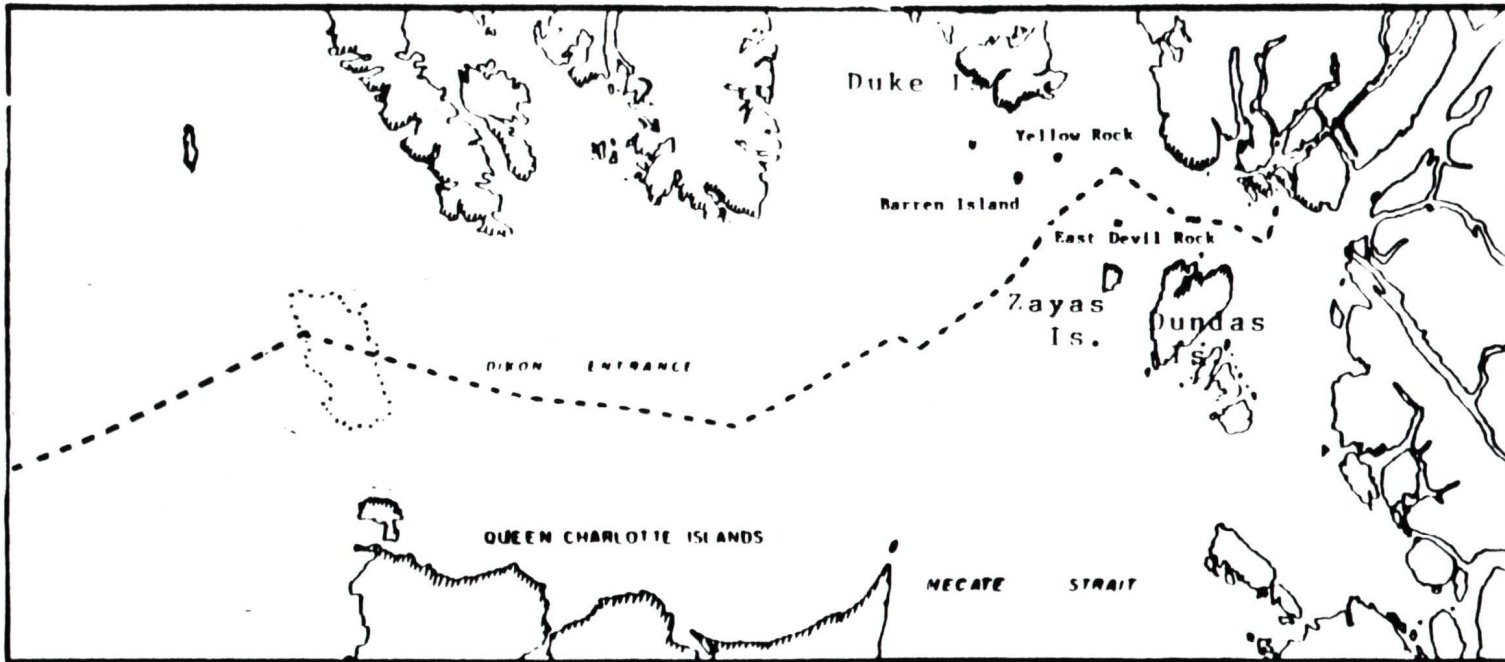
Figure 56 illustrates the practical application of the equidistance method between the opposite coasts of the United States and Canada in Hecate Strait and Dixon Entrance. The median line consists of straight line segments with turning and/or control points which are equidistant from three points of land. The salient features of each party's coastlines plus all islands and rocks above water at high tide (which under conventional law are considered as islands) were used as basepoints for measurement of the median line. The resultant median line is shown in Figure 57. Figure 58 illustrates that the equidistance line divides the overlapping surface area nearly equally. Some



----- Equidistance/Median Line

Map courtesy of Canadian Hydrographic Service.

Figure 56



- Median Line
- ..... Learmouth Bank

Map courtesy of Canadian Hydrographic Service.

Figure 57

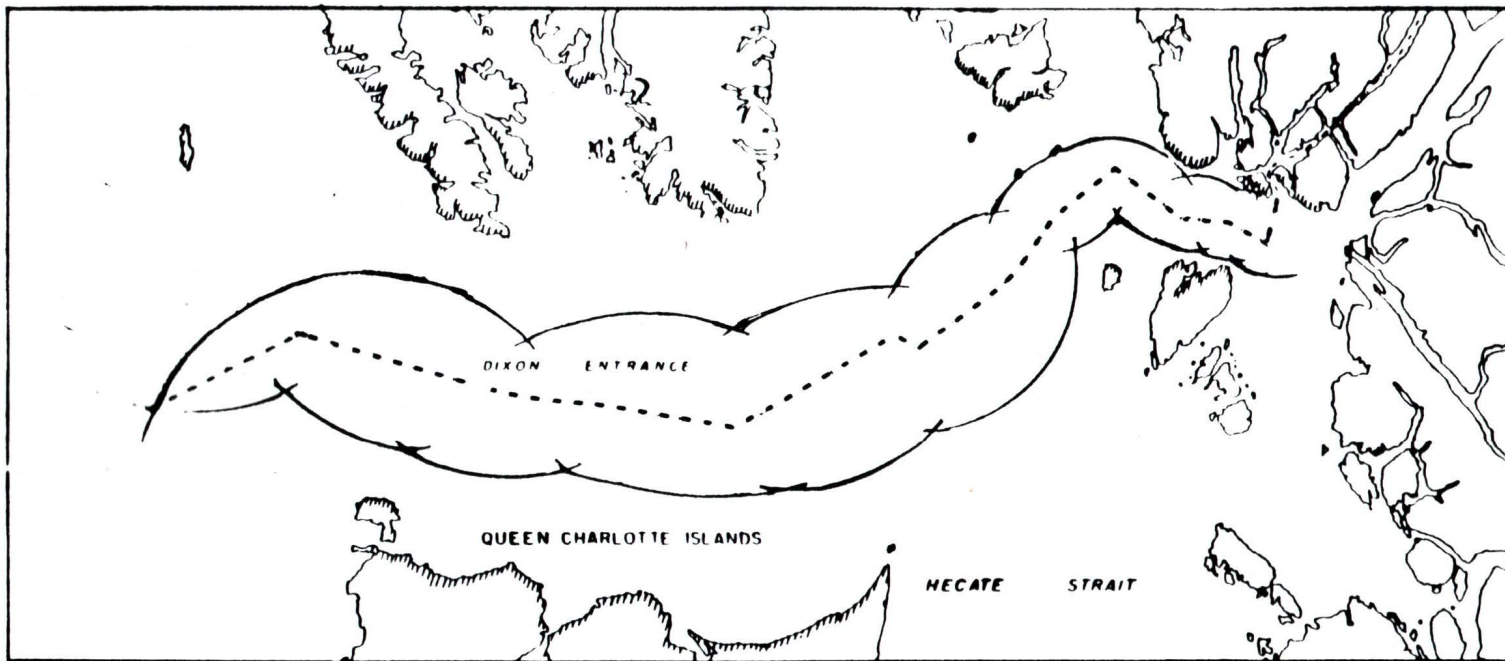


Figure 58

— arcs of radius drawn for basepoints on both Parties' coast showing area of overlapping claims

----- the median line equally dividing the areas of overlapping claims

Map courtesy of Canadian Hydrographic Service.

segments of the median line appear to favor one Party over another, however these are the latitudinal tolerances or the give and take of areas which a simplified equidistance line produces and which generally equal out over the entire boundary delimitation.

Figure 59 indicates that the median line closely produces an equal vertical division of the water column in the Dixon Entrance boundary segment. In this regard, the median line would seem to be inequitable to Canada at the Forrester Island-Langara Island transect. However, this inequity is somewhat compensated at the Cape Chacon - Rose Point transect where the water column on the American side of the median line has a more uniform, deeper depth than the sloping seabed on the Canadian side. Additionally, the median line divides Learmouth Bank, which lies just east of the Forrester Island - Langara Island transect, to the advantage of Canada (See Figure 57). Notwithstanding, the Cape Muzon-Wiah Point transect essentially divides the water column equally.

#### Special Circumstances

The United States has proposed that a median line delimit the maritime boundary in the Dixon Entrance and Hecate Strait boundary segments. Canada has claimed special circumstances exist (i.e., an historic treaty is in place) in these waters which preclude the use of a median line. At

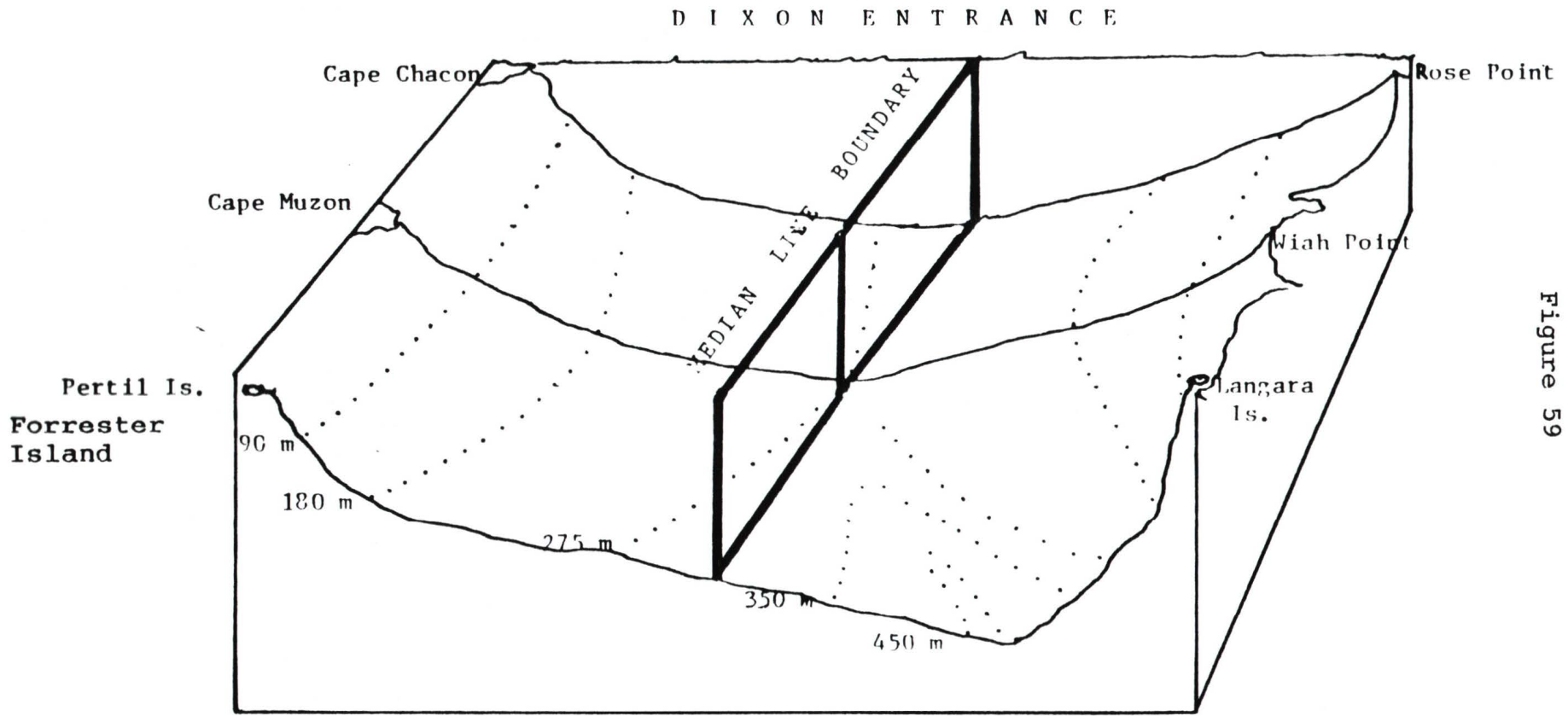


Figure 59

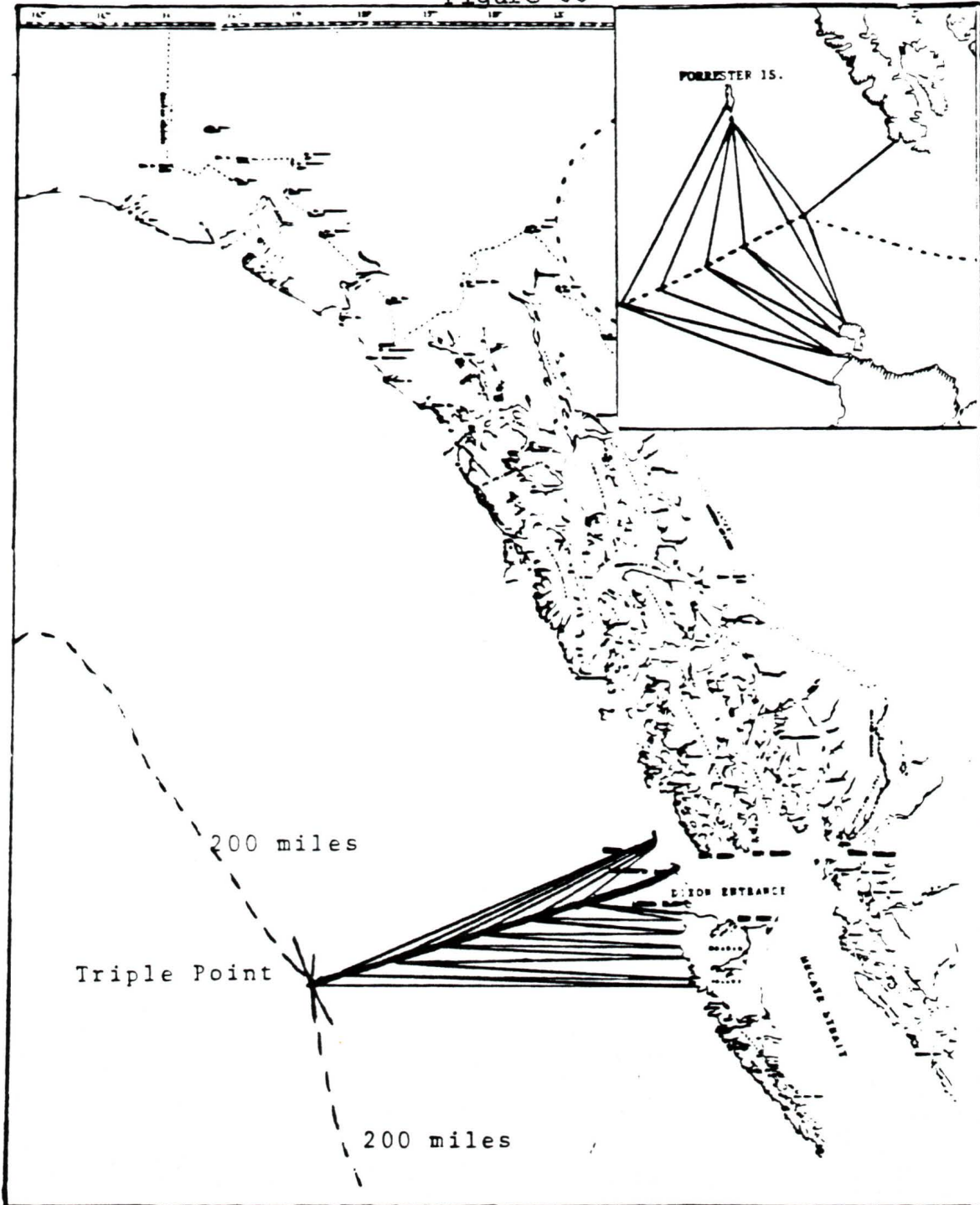
the same time, the United States has not declared that any special geographic circumstances exist in the area which would require a more favourable, modified median line boundary. Nonetheless, there are potential special geographic circumstances which could possibly be declared thereafter. Numerous rocks on both sides of the median line are used as basepoints for delimitation of the median line. In particular, the channel between Dundas Island (Canada) and the Alaska mainland is dotted with rock outcrops. Additionally, in the intervening waters between Dundas/Zayas Island and Duke Island, two rock outcrops, Yellow Rock on the American side and East Devil Rock on the Canadian side of the median line are used as basepoints for the delimitation of the median line. However, these rocks are shown by both States' hydrographic maps to be above water at high tide. Consequently, according to Article 10(1) of the 1958 Convention on the Territorial Sea and Contiguous Sea and Article 131(1) of the 1982 United Nations Convention on the Law of the Sea these rocks are islands and thus are entitled to a territorial sea and a contiguous zone. While these rocks would not be entitled to a continental shelf area or exclusive economic zone of their own, they are however permitted to be used as basepoints for the measurement of these coastal jurisdictions appertaining to nearby islands or coasts.

A median line boundary provides the most equitable solution to delimitation of a maritime boundary in the waters of Dixon Entrance and Hecate Strait. The median line boundary equally divides the surface waters relative to the coasts actually abutting on these waters. Also, the median line almost evenly divides the water columns of Dixon Entrance. However, the median line is the most equitable principle to divide Learmouth Bank without recourse to unproven and thus far judicially refuted ecological criteria. Although the resources therein, it has been suggested in this study, should be managed by bilateral agreements rather than territorial division. And significantly, the median line allocates both States jurisdiction to a territorial sea, contiguous zone, exclusive economic zone and continental shelf area appurtenant to their coasts as authorized by international law.

#### Application of the Equidistance Method Offshore of Dixon Entrance

The practical application of the equidistance method to the offshore of the Dixon Entrance/Hecate Strait boundary region where the Canadian and American coasts are adjacent to each other, is illustrated by Figure 60. The equidistance line is comprised of straight line segments with intersection points at 25 mile increments. The inset shows the near-shore segment of the equidistance line which extends out to the 200 mile limit, with turning or control

Figure 60



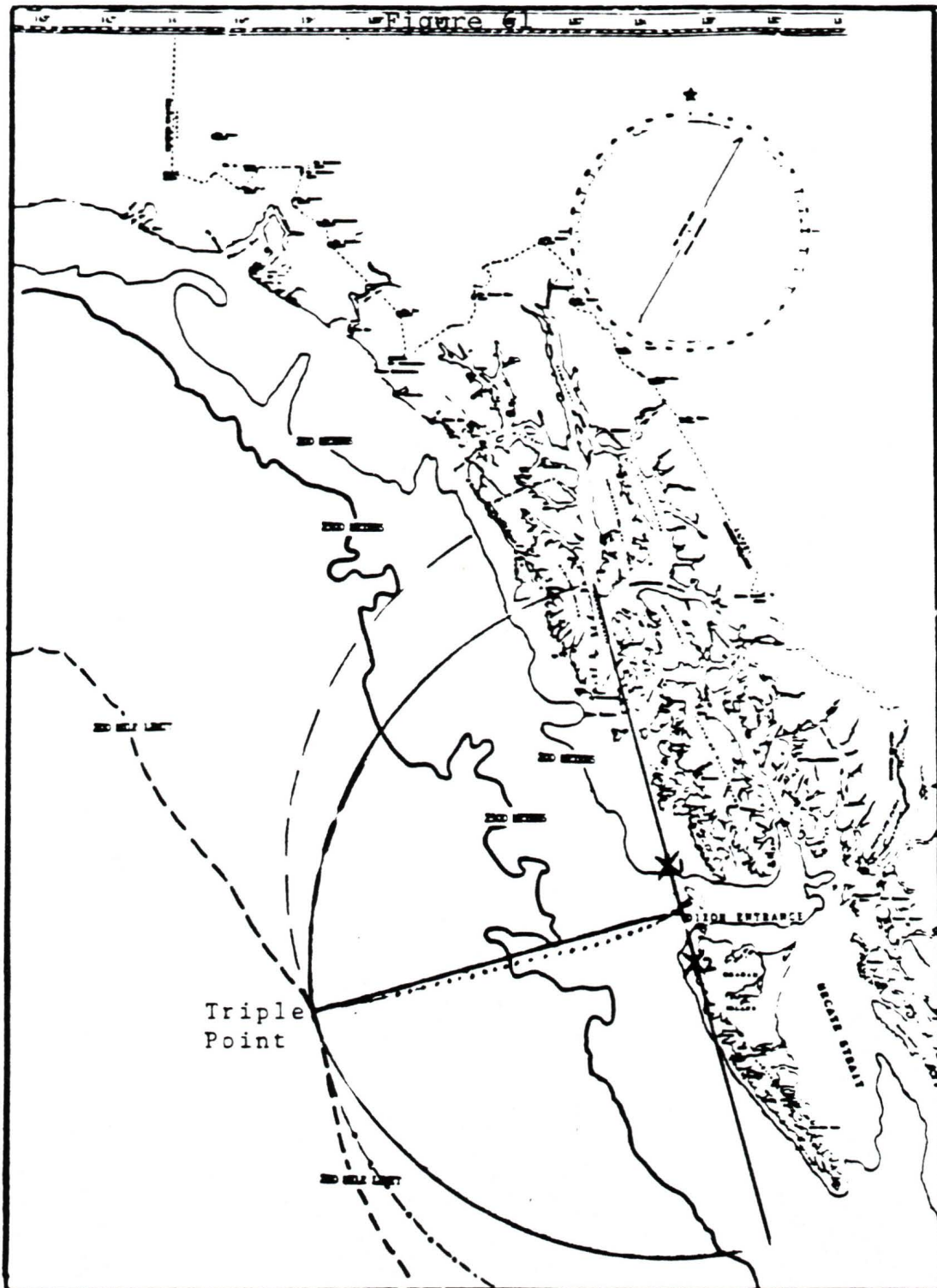
Source: Map courtesy of U.S. National Oceanic and Atmospheric Administration, Map No. 531.

Inset Map courtesy of Canadian Hydrographic Service.

points which are equidistant from three points of land. The salient features of each Party's coastlines plus all islands and rocks above high tide were used as basepoints for measurement of the equidistance line. Figure 61 indicates the overlapping area of each Party's 200 mile exclusive economic zone claim produced when an arc of circle of 200 mile radius is drawn from the most westward point on each State's coastline in the immediate boundary vicinity (i.e.,  $X_1$  and  $X_2$ ). By using the axis connecting the two centers of 200 mile radii and extending a line perpendicular to the axis at its midpoint, the equal division of the overlapping arc is determined. As Figure 61 illustrates, the equidistance line achieves a near equal division of overlapping jurisdictional zones. The equidistance line in fact provides a more equitable division of the tongue-like area of seabed delineated by the 2500 metre isobath than the line which divides the overlapping area. This could be a more equitable division of possible natural resources lying therein.

#### Special Circumstances

Both Canada and the United States have proposed that the offshore boundary in the Dixon Entrance/Hecate Strait boundary region be delimited by the equidistance method. Meanwhile, neither Canada nor the United States has declared the existence of special geographic circumstances in the



- ..... Equidistance Line
- Area of Overlapping 200 Mile E.E.Z.
- - - United States 200 Mile E.E.Z. Arc
- · - · - Canada 200 Mile E.E.Z. Arc

Source: Map courtesy of U.S. National Oceanic and Atmospheric Administration, Map No. 531.

boundary region which would preclude the strict application of the equidistance method. Nevertheless, the presence of Forrester Island is a geographic circumstance which could be liable to declaration as special a geographic circumstance. In the 1977 Anglo-French Arbitration, the presence of the Scilly Islands in a much similar geographic situation was considered a special circumstance. Although in the 1977 Arbitration, the Scilly Islands were not discussed in the context of islands but rather a protruding coastal configuration that distorted the application of the equidistance method. The issue in 1977, and here in the Dixon Entrance/Hecate Strait boundary region, is whether the islands should be considered a basepoint for the delimitation of an equidistance line.

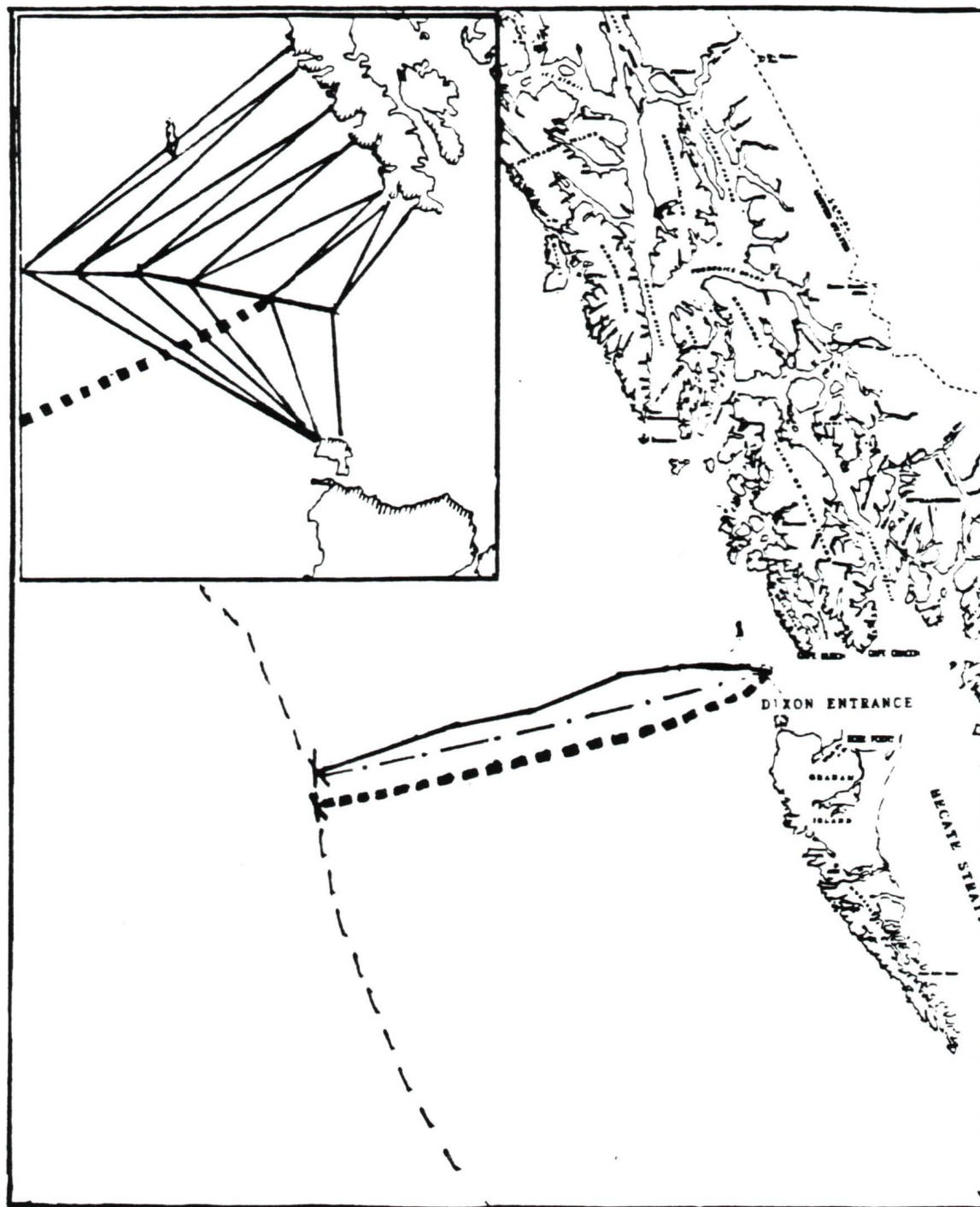
Conventional law states that an island has a territorial sea and a contiguous zone. Further, if an island can sustain human habitation and economic life it is entitled to an exclusive economic zone and continental shelf area. Forrester Island amounts to land of about 30 miles in diameter. Given the size, it should be able to sustain human habitation and economic life on the timber and the fisheries resources found in surrounding waters. Moreover, the Forrester Island group is within 24 miles of Dall Island (i.e., 12 mile territorial sea arcs extended from Forrester Island and Dall Island). Therefore, conventional law would support the use of the Forrester Island group not only as a

basepoint for measurement of extended jurisdiction zones but also deserving of an exclusive economic zone and continental shelf area.

Customary law also attests to consideration of Forrester Island as a basepoint for boundary delimitation of offshore zones. The 1951 Anglo-Norwegian Fisheries Case decided that islands are basepoints for boundary delimitation where a geographical linkage exists between the island and the mainland and providing they follow the general direction of the coast. The Forrester Island group is a part of the continental shelf area of the Alexander archipelago as delineated by the 200 metre isobath, lying just north of the submarine gully which characterizes the entry points to Dixon Entrance. Also, the Forrester Island group can certainly be considered as following the general direction of the coast of the Alexander archipelago.

However, the 1977 Anglo-French Arbitration determined that similarly situated islands had the effect of skewing the equidistance line to such an extent that a disproportionate amount of continental shelf area relative to its comparative proximity to the mainland was allocated. Figure 62 illustrates that this in fact could be a valid assertion in the Dixon Entrance/Hecate boundary region. The solid line represents the equidistance line without the Forrester Island group used as a basepoint for delimitation. The line midway between the two equidistance line

Figure 62



- Equidistance Line Giving Forrester Is. No Effect
- Line Dividing Overlapping Area Equally With Center of U.S. 200 mile Arc on Dall Is. Coast
- Equidistance Line Giving Full Effect to Forrester Is.

Source: Map courtesy of U.S. National Oceanic and Atmospheric Administration, Map No. 531.

Inset Map courtesy of Canadian Hydrographic Service.

possibilities is the line which divides the overlapping areas when the Forrester Island group is not used as the centre for the drawing of a 200 mile arc. It appears that Canada would benefit from the exclusion of Forrester Island as a basepoint delimitation of an equidistance line. However, an equidistance line delimitation that disregards Forrester Island as a basepoint and a center of a 200 mile arc deviates more from the line which signifies the equal division of overlapping areas than if the Forrester Island were used as center of 200 mile radius and a basepoint for equidistance line delimitation (See Figure 61).

Nonetheless, there really does not exist a standard to evaluate why it is inequitable for one state to command a larger area of continental shelf area or exclusive economic zone because islands happen to extend one State's coastline further than the adjacent state. This is a fact of nature. In addition, conventional law prescribes that islands such as Forrester Island are entitled to all the coastal state jurisdictions presently recognized. And perhaps most importantly, both Canada and the United States have not presently declared that any special geographic circumstances exist and this implies mutual agreement on this issue which should preclude any judicial finding to the contrary.

Thus, the equidistance method provides not only the most objective means of delimiting on offshore boundary in the Dixon Entrance/Hecate Strait boundary region, but also

the most equitable solution. Indeed, this must be the perception of the two federal governments involved because they have proposed its application in this area.

### Summary

The single maritime boundary between Canada and the United States in the Dixon Entrance/Hecate Strait boundary region should be determined on the basis of the applicable law in accordance with equitable principles, taking account of all the relevant circumstances, in order to achieve an equitable result.

The law applicable to the determination of a single maritime boundary in the Dixon Entrance/Hecate Strait is the fundamental norm set out in the preceding paragraph, Article 6 of the 1958 Convention on the Continental Shelf to which both Parties are signatories and the previous mutual practices of both Parties used to delimit their other co-terminus maritime boundaries. The rules concerning the basis of title to the maritime zones to be delimited include: 1) the use of the distance principle as the sole basis of coastal State rights in an exclusive economic zone and as a sufficient basis of title in respect of the continental shelf within 200 miles; and 2) the principle of equal division of overlapping claims to these jurisdictions.

In light of the preceding, the equidistance principle will produce the most equitable result in view of the

relevant circumstances in the Dixon Entrance/Hecate Strait boundary region. The equidistance principle leaves to each Party those areas of the sea and the seabed that are closest to its coast because no distorting effects of incidental geographical features are present which are not in keeping with the general configuration of the coast. In the maritime area off Dixon Entrance, the equidistance principle is particularly the most equitable result because the two Parties entitled to resolve this matter, the governments of Canada and of the United States of America, have themselves considered the equidistance principles as the basis of the boundary delimitation in this area.

The relevant geographical circumstances in the inner waters of Dixon Entrance and Hecate Strait are the overall balance in the configuration, length and predominantly opposite relationship of the coasts of the Parties to each other relative to the area to be delimited. These circumstances prescribe that a median line be applied because such a delimitation will divide the intervening waters as equally as possible and, due to the absence of any distorting effects of incidental geographical features which are not in keeping with the general configuration of the coast, or the applicable law, leave to each Party those areas of the sea and the seabed that are closest to its coast. The relevant geographical circumstances in the offshore area outside Dixon Entrance are the overall balance in the configuration,

length and predominantly adjacent and almost rectilinear relationship of the coasts of the Parties to each other relative to the area to be delimited. These circumstances prescribed the application of the equidistance principle because such a delimitation will divide the area of overlapping claims to a 200 mile exclusive economic zone and continental shelf approximately equal; and due to the absence of any distorting effects of incidental geographical features which are not in keeping with the general configuration of the coast or the applicable law, leave to each Party those areas of the sea and the seabed that are closest to its coast. The only equitable recognized principle which could preclude distance as a basis of States' title in this area, geologic natural prolongation, is not relevant because the continental shelf in this area is essentially unified and continuous. Nevertheless, in this outer boundary region, a line drawn perpendicular to the coast may affect an equal division of the overlapping area of each Party's claim depending on the general direction of the coast selected as its axis. Such a perpendicular line would closely approach a delimitation line produced by the equidistance method.

The implications for resource management strategies with respect to fisheries, hydrocarbon development, mineral exploitation and environmental protection by the application of the equidistance boundary in the Dixon Entrance/Hecate

Strait boundary region are inconclusive. Firstly, it is doubtful any boundary proposal can equitably address fisheries management problems. A boundary solution such as the A-B Line and British Columbia's offshore proposals would be manifestly inequitable because a totally disproportionate part of the area and the fishery resources would be allocated to Canada. On the other hand, it should be recognized that boundary delimitation may unavoidably inflict some hardship on one of the Parties and bilateral resource agreements are a means to mitigate such hardship. Secondly, mineral resource allocation at this time can not be judged fair or unfair with regard to any proposal because mineral resources in the area are largely not delineated. Notwithstanding, functional boundaries have been applied elsewhere. For example, in the continental shelf delimitation between Indonesia and Australia where a geologic discontinuity existed.

Resource management strategies concerning transboundary resources are not readily resolved by territorial division regardless of where the boundary line is drawn. The Gulf of Maine delimitation is a case in point where the absence of a bilateral resource agreement on fisheries, even though the boundary dispute has been settled, has had serious repercussions on scallop stocks. American fishermen continue to covertly fish for scallops in the Canadian area of Georges Bank in contravention of Canadian law and with

impunity due to limited Canadian enforcement capabilities. A boundary argument must be first considered by all Parties to be fair and then accompanied by bilateral or multilateral resource agreements to avoid or mitigate ecological impacts or socio-economic hardships which may be produced.

Chapter Five Endnotes

- 1 Article 76(2).
- 2 K. Beauchamp, D.M. Crommelin and A.R. Thompson, "Canada's Offshore Problems." Paper delivered at the 11th Petroleum Law Seminar, Canadian Petroleum Law Foundation, Jasper, Alberta, June 13-17, 1972, p. 193.
- 3 Article 234.
- 4 Globe and Mail, August 4, 1985, pp. 1, 4.
- 5 Ibid., August 5, 1985, p. 7.
- 6 Victoria Times-Colonist, December 11, 1982, p. 10.
- 7 Ibid.
- 8 E.B. Wang, "Canada-United States Fisheries and Maritime Boundary Negotiations: Diplomacy in Deep Water," Behind the Headlines, 38(6)/39(1), April, 1981, pp. 10-15.
- 9 Ibid.
- 10 Ibid.
- 11 Province of British Columbia, Submission of the Province of British Columbia on West Coast Maritime Boundaries between Canada and the United States, p. 6.
- 12 Ibid., p. 9.
- 13 D.B. McRae and C.B. Bourne, "Maritime Jurisdiction in the Dixon Entrance: The Alaskan Boundary Re-Examined," Canadian Journal of International Law, 14, 1976, p. 175.
- 14 Ibid., p. 212.
- 15 Ibid.
- 16 Ibid.
- 17 Ibid., p. 177.
- 18 Ibid.
- 19 Ibid., p. 213.
- 20 Ibid., p. 214.
- 21 Ibid., p. 215.

- 22 Ibid., p. 216.
- 23 Ibid.
- 24 Ibid.
- 25 Globe and Mail, May 15, 1984, pp. 1, 2.
- 26 McRae and Bourne, p. 213.
- 27 Ibid., p. 214.
- 28 Ibid., p. 215.
- 29 Ibid., p. 216.
- 30 Ibid.
- 31 Province of British Columbia, p. 5.
- 32 Ibid.
- 33 Ibid., pp. 15-17.
- 34 Ibid., p. 17.
- 35 Ibid., p. 18.
- 36 Ibid., p. 19.
- 37 Ibid., p. 21.
- 38 Ibid.
- 39 D.E. Nowell, Maritime Boundary Disputes and Some Related Resource Management Issues. Unpublished paper, University of Victoria, 1985, p. 28.
- 40 McRae and Bourne, p. 220.
- 41 Ibid., p. 218.
- 42 Ibid.
- 43 Ibid., p. 220.
- 44 Ibid.
- 45 Ibid.
- 46 Ibid., p. 222.

47 Ibid.

48 United Kingdom of Great Britain and Northern Ireland, Secretary of State for Foreign and Commonwealth Affairs, Arbitration Between United Kingdom of Great Britain and Northern Ireland and the French Republic on the Delimitation of the Continental Shelf, Miscellaneous No. 15 (London: Her Majesty's Stationery Office, 1978)(hereinafter referred to as the "Anglo-French Arbitration"), see Chapter Two Endnotes.

49 International Court of Justice, "Case Concerning Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada/United States of America)," Judgment, 1984 (hereinafter referred to as the "Gulf of Maine Case"), see Chapter Two Endnotes.

50 Charles S. Pearson, International Maine Environmental Policy: The Economic Dimension (Baltimore: Johns Hopkins University Press, 1975), p. 40.

51 Ibid., p. 39.

52 McRae and Bourne, p. 223.

53 Province of British Columbia, p. 10.

54 Ibid.

55 Ibid., p. 7.

56 Ibid., pp. 8, 21.

57 Ibid., p. 21.

58 Pearson, p. 42.

59 Ibid., p. 87.

60 Ibid., pp. 42-43.

61 Ibid., pp. 87-88.

62 Ibid.

## CHAPTER VI

Conclusion

The emerging international law on maritime boundary delimitation has chosen to disregard trends in states' practice, the sources of conventional law and even actual use by its own jurists and abandon a fixed rule wherein geography, and in particular, the equidistance principle played a pre-eminent role in delimiting an equitable boundary. Instead, international law makers have determined that an equitable boundary solution is better achieved by a flexible rule which accommodates as equitable principles, the diverse geographic, political, socio-economic and legal circumstances which may exist throughout boundary regions.

Meanwhile, international law-makers have failed to identify the content of these equitable principles other than to point to relevant circumstances that may exist in a particular case. However, the law-makers then give these relevant circumstances an abstract normative expression as 'equitable principles' without identification of their source in applicable law. These equitable principles may then be applied not necessarily on the basis of applicable law, but with regard to the relevant circumstances operating in the boundary area. Equitable principles must be identified and applied on the basis of applicable law.

The equidistance principle is recognized in law as an equitable principle. Article 6 of the 1958 Convention on the Continental Shelf and Article 12 of the 1958 Convention on the Territorial Sea and Contiguous Zone provide the basis in conventional law for the equidistance principle and states' practice overwhelmingly demonstrates its basis in customary law.

Of the 'other' equitable principles discussed in this study, only the principle of geologic natural prolongation could be clearly considered as respecting the basis of coastal state title. In continental shelf delimitation, geologic natural prolongation may determine which State has the stronger title to an overlapping claim between opposite or adjacent states. However, its status in relation to delimitation of a single maritime boundary is open to discussion. Nonetheless, the principle of geologic natural prolongation has been determined in law and practice to be largely ineffective as a basis of coastal state title. The equidistance principle however demonstrates a close relationship between the basis of coastal state title and the law applicable to the delimitation of maritime zones.

A uniform and constant 200 mile distance from the coast is the fundamental factor of all coastal States' entitlement to an exclusive economic zone and now is accepted as a sufficient basis of continental shelf jurisdiction within 200 miles from the coast. Even beyond the 200 mile limit,

the use of a 350 mile maximum as part of the formula for determining the outer edge of the shelf illustrates partial retention of the distance principle. Distance from the coast has become the decisive factor in giving definition to the principle of appurtenance. Because distance from the coast is the main basis of title within this new framework, it should also serve to decide the legitimacy of a claim within areas of potentially overlapping claims.

The methods which express distance as the basis of title and at the same time consider the relevant geographical circumstances in each case are few. A perpendicular line or some variant of that method when applied to a rectilinear coastline may leave the waters closest to each State sufficiently within its jurisdiction. Clearly though, the equidistance method does so with precision, provided special configurations or distorting features are considered. The equidistance principle also allows equal treatment for the States concerned in a delimitation.

Much of the law of delimitation has developed from this concept. It is the rationale that underlies both equidistance and other legally accepted methods of delimitation, including perpendicularity. In each case, the object is to effect a broadly equal division of the area to be delimited.

Subsequently, the refutation of the equidistance principle as a pre-eminent rule for boundary delimitation is unduly based on the equidistance rule in isolation of the other two elements in the fixed rule, that is, mutual agreement and the existence of special circumstances. In particular, the International Court of Justice interpreted that the possibility that the equidistance method may be creative of inequity in delimitation of extended offshore boundaries between adjacent states necessitated that a different formula must be sought which allows for other factors, some of which are non-geographic and value laden to be considered.

The International Court of Justice has repeatedly failed to provide a reasonable measure of certainty as to what these factors are and how they actually are applied to the delimitation of an equitable maritime boundary without seeming to be an act of apportionment. International law clearly shows though that primacy must be accorded to geographic factors in delimiting maritime boundaries. Non-geographic considerations such as security, navigation, natural resources, etc. play a subordinate role in maritime boundary delimitation. Such considerations allow for minor variances from a line determined solely by reference to geographic factors only in exceptional circumstances. The equidistance method is the best means of giving effect to geographic factors even in situations of coastal adjacency

where the equidistance method may be distorted by coastal aberrations, and thus be creative of inequity. Provisions are available to modify the equidistance method so that an equitable solution is reached without recourse to other unsubstantiated methods.

The case study in this paper, illustrates that non-geographic factors were needlessly or not necessarily addressed by the territorial division of maritime areas. Moreover, it was questioned whether many of these non-geographic factors could be equitably delimited. The case study also indicated that certain geographic factors such as geomorphology or proportionality while possibly equitable factors in other boundary situations had no relevance to the delimitation of an equitable maritime boundary in the Dixon Entrance/Hecate Strait boundary region. And finally, the case study demonstrated that of all the maritime boundary methods available, the equidistance method produced the most equitable boundary solution. It best supported the essential premise that seaward extension of state sovereignty is founded on the geographical link between the land and the adjacent sea, and measured accordingly. The equidistance principle is the best method to effect an equal division of the overlapping zones.

It is hoped that this paper substantiates the return to more precise rules of maritime boundary delimitation rather than support the present movement to highly

individualized rules. The virtue of more precise rules is that states involved in a boundary negotiation or dispute have a more clearly defined legal framework within which to conduct their affairs. The particular merit of the equidistance principle is that it provides a guiding principle, an objective standard of reference or starting point for negotiating an agreement.

Highly individualized rules, on the other hand, deprive the law of a reasonable measure of certainty. This, it is believed, opens to the door to abusive and vexatious litigation which may stimulate and protract boundary disputes. Moreover, because the limits of equity are undefined, more and more compulsory judicial arbitrations will be required to determine limits of equity. Every disputant can hope that some unique fact raised in the course of arbitration proceedings may swing the boundary in their favour. Furthermore, with the ever-increasing enlargement of maritime domain permitted by the 1982 Convention, a highly individualized rule may encourage States which feel geographically disadvantaged by the use of the equidistance principle to appropriate as much as they can of maritime areas by any conceivable means rather than to do so by having to prescribe to delimitation principles which may limit appropriation to primarily evidence of a proximal or appurtenant physical relationship between their land territory and the adjacent sea.

States' practice evidences that a boundary delimited by the equidistance method is perceived to be equitable. Few boundary disputes have been protracted where an equidistance line delimits the maritime boundary. Perhaps most importantly, an equidistance boundary is the most practically administered boundary in a world of competing users with varying degrees of navigational sophistication because a marine vessel can locate the boundary line by its relation to the proximal coasts.

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VITA

Surname: POWERS

Given Names: TIMOTHY JAMES

Place of Birth: Toronto, Ontario

Date of Birth: May 14, 1952

Educational Institutions Attended, with Dates of Entering and Leaving:

SENECA COLLEGE OF APPLIED ARTS, WILLOWDALE, ONTARIO 1971 to 1972

UNIVERSITY OF WATERLOO, WATERLOO, ONTARIO 1972 to 1975

UNIVERSITY OF VICTORIA, VICTORIA, B.C. 1977 to 1980

Degrees, Diplomas, Etc., Awarded, with Dates and Names of Institutions:

B.A. 1980 University of Victoria, Victoria, B.C.

Honors and Awards:

Mao-Tse Tung Award 1979 to 1980

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(Signature)

TIM POWERS

\_\_\_\_\_  
(Name in block letters)

APRIL 30, 1986

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(Date)