Delimitation of Western Gap Land in the Gulf of Mexico: A Need for Diplomatic Resolution

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> Having set down the precise limits of our offshore borders, all that remains now is to educate the world's fish population to respect the new national frontiers.
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> Overheard in the United Nation's Delegates' Lounge[1]

1. D.C. KAPOOR & ADAM J. KERR, A GUIDE TO MARITIME BOUNDARY DELIMITATION 71 (1986).

I. INTRODUCTION

The Gulf of Mexico encompasses an area of about 3.9 million square kilometers and is perched on the continental shelf[2] and slope of North America.[3] A geodesic ring of three uniquely developed nations also encloses its waters.[4] The United States, the coastal country with perhaps the greatest economic and political influence over the region, maintains approximately ninety percent of its offshore oil and natural gas production in Gulf waters.[5] Such a yield of oil and natural gas generates an enormous source of tax revenue for U.S. federal reserves. For example, according to the U.S. Minerals Management Service, oil and gas development in the Gulf of Mexico "generated more than $90 billion for the U.S. Treasury between 1954 and 1993."[6]

If we combine the mineral significance of the Gulf of Mexico with the extensive trade agendas of its coastal countries, understanding why there has been a number of commercial initiatives concerning the great expanse of this oval-shaped seaway is easy. By way of illustration, policy-makers of both the United States and Mexico, who view bilateral trade treaties as fundamental to the achievement of free trade objectives (e.g., macro stability, market integration, financial modernization, and high levels of trust among investors), passed the North American Free Trade Agreement (NAFTA). The Agreement took effect on January 1, 1994, and has among its goals: economic growth and increased employment rates, the elimination of tariffs and other barriers to trade, and the provision of preferential treatment for each other's products.[7]

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2. *See* United Nations Convention on the Law of the Sea, with Annexes, and the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea, with Annex, July 29, 1994, S. TREATY Doc. No. 103-39, art. 76(1) (1994), *available in* 1992 WL 725374 (Treaty) [hereinafter UNCLOS].

> The continental shelf of a coastal State comprises the sea-bed and subsoil of the submarine areas that extend beyond its territorial sea throughout the natural prolongation of its land territory to the outer edge of the continental margin, or to a distance of 200 nautical miles from the baselines from which the breadth of the territorial sea is measured where the outer edge of the continental margin does not extend up to that distance.

Id.

3. *See* American Petroleum Institute, *The Petroleum Industry in the Gulf of Mexico* (visited Jan. 20, 1998) <http://www.api.org/gulf>.

4. *See* J.R.V. PRESCOTT, THE MARITIME POLITICAL BOUNDARIES OF THE WORLD 336 (1985) (stating that "[t]he Gulf of Mexico is surrounded by three countries" of which "Cuba comprises only a small section of the surrounding coast compared with the long, equal sections occupied by the United States and Mexico").

5. *See* American Petroleum Institute, *supra* note 3.

6. *Id.*

7. *See* North American Free Trade Agreement, Dec. 17, 1992, U.S.-Mex.-Can., pts. 1-3, 32 I.L.M. 28, 32 I.L.M. 605 (pts. 4-8 & annexes) (entered into force Jan. 1, 1994) [hereinafter

Although the heads of state of both nations are optimistic about the germinating success that such a resolution can bring to cross-border trade,[8] NAFTA's effects cannot be properly examined until lingering questions regarding territorial lines of demarcation are fully resolved.[9] Instead of redrawing the well-established, land-based geographic lines separating the United States and Mexico,[10] government officials should concentrate their efforts on closely defining the maritime borders of limitation in the Gulf of Mexico. Many of the recent issues that have arisen over entitlement to that area stem from interest in its rich natural resources, now obtainable with the advent of new technologies.

The Treaty on Maritime Boundaries (TMB),[11] which was negotiated between Mexico and the United States in 1978 and extended the maritime boundary of each nation to an expanse of 200 nautical miles offshore, was thought to be the first step in delineating control over the area.[12] However, despite ratification by the Mexican Senate on December 20, 1978,[13] the full body of the U.S. Senate did not approve the Treaty until October 23, 1997, nineteen years later.[14] As Part II of this Comment

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NAFTA]; *see also* Betty Southard Murphy, *NAFTA's North American Agreement on Labor Cooperation: the Present and the Future*, 10 CONN. J. INT'L L. 403, 404 (1995).

8. *See* Murphy, *supra* note 7, at 419.

9. *See* NAFTA, *supra* note 7, at 298 ("The Parties shall ensure that all necessary measures are taken in order to give effect to the provisions of this Agreement, including their observance, except as otherwise provided in this Agreement, by state and provincial governments.").

10. *See* Jorge A. Vargas, *Mexico's Legal Regime Over Its Marine Spaces: A Proposal for the Delimitation of the Continental Shelf in the Deepest Part of the Gulf of Mexico*, 26 U. MIAMI INTER-AM. L. REV. 189, 238 (1995) ("While Mexico and the U.S. demarcated their land boundaries for 122 years, not until 1970 did both nations address the question of maritime limits.").

11. *See* Treaty on Maritime Boundaries, May 4, 1978, U.S.-Mex., 17 I.L.M. 1073 [hereinafter TMB].

12. President's Message to Congress Transmitting Three Treaties Establishing Maritime Boundaries Between the United States and Mexico, Venezuela and Cuba, S. EXEC. Doc. No. 96-F, at III (1979) [hereinafter Carter Statement] (statement of Jimmy Carter, U.S. President); United States v. California, 381 U.S. 139, 148 (1965) ("One English, statute, or land mile equals approximately 0.87 geographical, marine, or nautical mile.").

> The Treaty with Mexico establishes the maritime boundary between the United States and Mexico for the area between twelve and two hundred nautical miles off the coasts of the two countries in the . . . Gulf of Mexico. In this regard, it supplements the Treaty to Resolve Pending Boundary Differences and Maintain the Rio Grande and Colorado River as the International Boundary between the United States of America and the United Mexican States, signed at Mexico November 23, 1970, which establishes maritime boundaries out to twelve nautical miles off the respective coasts.

Carter Statement, *supra*.

13. *See* PRESCOTT, *supra* note 4, at 346.

14. 143 CONG. REC. S11165-02 (daily ed. Oct. 23, 1997) (Senate advice and consent to ratification of TMB).

suggests, the primary reason for its delayed ratification was the growing anxiety among Senators "that the U.S. was giving too much" land away.[15]

The TMB negotiators can be criticized for their overly narrow scope. As previously noted, the TMB only provides for jurisdictional rights up to the 200-nautical-mile seaward mark from the United States and Mexican coasts. In other words, it does not account for the 4.5 million acres of Gulf seawaters beyond the 200-nautical-mile maritime boundary.[16]

The lack of jurisdictional rights past the 200-nautical-mile boundary is critical to the central theme of this study and leads to the second phase of delimitation: developing a bilateral resolution that will divide the remaining parcel of submarine land located in the Gulf of Mexico. One reason why the 1978 TMB did not provide for this enormous region is that traditionally it has been inaccessible to industrialists. The Gulf's "water [is] up to 10,000 feet deep—or almost two miles—on leases adjacent to [this] disputed zone."[17] With the arrival of new technologies that now allow such "deepwater" access,[18] legislators from both the United States and Mexico have been under enormous pressure from lobbyists to allow for the delimitation of deepwater drilling.[19]

As a subsidiary matter, this Comment focuses upon many of the key concerns of oil and natural gas producers in the Gulf of Mexico. Yet, by

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15. *See* Michael M. Phillips, *Gulf of Mexico Dispute Stymies Drilling: U.S. Agencies Want to Set Boundary With Mexico for Oil-and-Gas Bounty*, WALL ST. J., Mar. 18, 1997, at A19; *see also* William Furlow, *U.S., Mexico About to Deal with Boundary "Donut [sic] Hole;" U.S. Ultra-Deepwater Probes Closing in on Controversial Area*, OFFSHORE, July 1, 1997, at 60 (noting that "the government [was] holding off . . . ratification because it suspect[ed] there [were] large reserves hidden in the depths of the Western Gap and [it did] not want to quietly give away any more . . . land then [sic] [was] necessary").

16. *See Maritime Boundary and Bird Treaties: Hearings on the Ratification of the U.S.-Mexico Maritime Boundary Treaty Before the Senate Comm. on Foreign Relations* (Sept. 25, 1997), *available in* 1997 WL 603206 [hereinafter *Maritime Boundary and Bird Treaties Hearings*] (written statement of the American Petroleum Institute, the Domestic Petroleum Council, the Independent Petroleum Association of America, the International Association of Drilling Contractors, the Mid-Continent Oil and Gas Association, and the National Ocean Industries Association).

17. Cragg Hines & David Ivanovich, *U.S., Mexico Ink Pacts Focusing on Oil, Drugs/High-level Meeting Opens in Washington*, HOUS. CHRON., Nov. 14, 1997, at 35 (statement of Larry Wooden, public affairs manager for the Houston-based Shell Exploration and Production Co.).

18. *See* Phillips, *supra* note 15, at A19 (noting that "[t]hree-dimensional seismic technology now allows accurate imaging of underwater rock formations, horizontal drilling allows for greater flow rates, and tension-leg and subsea drilling rigs are moving into very deep waters"); *see* U.S. Department of the Interior, Minerals Management Service, Gulf of Mexico OCS Region, *Deepwater in the Gulf of Mexico: America's New Frontier*, OCS Report MMS 97-0004 (visited Feb. 19, 1997) <http://www.mms.gov./omm/gomr/homepg/whatsnew/techann/970004.html> ("'Deepwater' refers to water depths greater than 1,000 feet or 305 meters.").

19. *See generally U.S.-Mexico Gulf Treaty Pressures Rising (U.S. Oil and Gas Industry Pushes for Ratification of U.S.-Mexico Border Treaty in Gulf of Mexico)*, OIL & GAS J., May 12, 1997, at 34.

only engaging in a discussion of the oil and gas industries, this Comment should not be misinterpreted as asserting that the oil and gas industries are the only beneficiaries of the identification of a clear maritime boundary in the Gulf. On the contrary, many other industries, such as the fisheries and marine science research industries, also stand to realize enormous gain from decisive, diplomatic delimitation of the region. The oil and natural gas industries were chosen merely as a model to demonstrate the practical advantages of establishing a well-defined maritime boundary beyond each country's 200-nautical-mile coastal zone.

The area in question, frequently called the western "doughnut hole," sits on the outer continental shelf[20] and contains "what U.S. geologists believe could be the world's fourth biggest oilfield."[21] In real numbers, the Minerals Management Service estimates that recoverable crude oil in this area could amount to between 2.4 to 2.8 billion barrels.[22] Although a similar-sized "gap" exists in the eastern part of the Gulf of Mexico, strained diplomatic relations with nearby Cuba make it extremely unlikely in the near future that U.S. legislators will be able to reach any sort of agreement allowing for commercial activity.[23] Furthermore, oil and gas companies have expressed less interest in the eastern gap of the Gulf of Mexico because its "mineral potential is not considered significant [by the Minerals Management Service]."[24]

Before deciding whether or not an agreement to delimit the Western Gap is in the best interest of both the United States and Mexico, however, it is first necessary to determine if certain international conventions allow for such bilateral diplomacy. In particular, the most recent and probably the most relevant convention that deals with submarine land in the western Gulf of Mexico is the 1982 United Nations Convention on the Law of the Sea (UNCLOS).[25] Since the determination of whether or not to apply an international instrument, and how or when to do so, generally

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20. *See* Phillips, *supra* note 15, at A19.

21. *Wrangling with the U.S.—Over Gulf Oil*, LATIN AMERICAN ECON. & BUS., May 1997; *see* PRESCOTT, *supra* note 4, at 336 (explaining that such vast quantities of oil in the region are the direct result of the "[t]he basin receiv[ing] large volumes of sediment which [provide] a favorable environment for the creation of oil and gas fields").

22. *See* News Release of the U.S. Department of the Interior, Minerals Management Service, Office of Communication, *MMS Issues a Proposed Notice of Sale for Central Gulf of Mexico Sale 169*, Dec. 1, 1997; *see also* American Petroleum Institute, *What One Barrel of Crude Oil Makes* (visited May 8, 1997) <http://www.api.org/news/oilfacts/barrel.htm> ("One barrel contains 42 gallons of crude oil.").

23. *See Wrangling with the U.S.*, *supra* note 21.

24. *See* Bruce Schultz & Acadiana Bureau, *New Technology Opens the Deep to Exploration*, BATON ROUGE ADVOC., Nov. 23, 1997, at 8A (quoting Barney Congdon, New Orleans Minerals Management Service).

25. *See generally* UNCLOS, *supra* note 2.

raises extremely technical issues and often hinges on the exact terminology of a particular provision or a unique set of facts. This Comment discusses UNCLOS by utilizing the most basic form of analysis possible.

Part IV of this Comment illustrates the importance of such a deepwater boundary resolution as being threefold. First, it will allow the countries to sell petroleum rich tracts of land to private drilling companies that now have the technology for exploring and taking advantage of the land during a time in which energy prices are rising due to selected mineral scarceness. Second, expanding the maritime boundaries of the two nations will stimulate economic growth in their domestic oil industries, thereby leading to an increase in jobs. Finally, the demarcation of an identifiable border, upon which U.S. jurisdiction ends and Mexican jurisdiction begins, will allow each nation to adopt a rigid regulatory scheme that oil and gas companies will find easy to follow.[26] Aside from eliminating border dispute questions, this should also cut down on the number of malfeasant companies exploiting the land at levels the environment cannot naturally sustain.

In Part VI, this Comment discusses the possible methods that U.S. and Mexican treaty negotiators can employ in dividing the remaining doughnut zone. Although some commentators stand by a boundary-line proposition that will be equitable to both sides,[27] often the best method for dividing territory among nations depends on which nation can put the land to its greatest use with the smallest environmental impact. Thus, Parts IV through VI address both public policy and historical arguments for dividing the submarine land in an economically efficient manner.

Finally, Part VII recommends that nation-states wishing to delimit their oceanic boundaries take into consideration a variety of factors prior to entering into the drafting stages of an agreement. Doing so will theoretically cut down on the number of dispute settlements. However, as no two boundaries are surrounded by the exact same set of circumstances, boundary delimitation agreements may widely differ.

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26. *See U.S., Mexico to Sign Maritime Pact*, L.A. TIMES, Nov. 13, 1997, at A-10 (statement of Mexican Foreign Minister Jose Angel Gurría Trevino) ("The agreement has enormous legal and political importance . . . . Mexico long has complained that U.S. oil companies have been drilling in Mexican territory, but the complaints were difficult to back up without clearly marked borders. Now there will be 'no doubt' about the frontier.").

27. *See generally* Vargas, *supra* note 10, at 218-19 (discussing the boundary line "'principle of equidistance,' a formula that makes use of geodetic lines connecting clearly established geographic coordinates," as an equitable example for the delimitation of the continental shelf of the United States and Mexico); *see* Furlow, *supra* note 15, at 60 ("'Equal distance is the most commonly accepted principal . . .'" (quoting Tom Readenger, Deputy Associate Director of Offshore Operations for the U.S. Minerals Management Service)).

II. THE EFFECT AND HISTORY OF THE TREATY ON MARITIME BOUNDARIES

A. Jurisdictional Lines

Prior to the ratification of the Treaty on Maritime Boundaries in November of 1997, "[t]he United States . . . [claimed] a territorial sea of 3 nautical miles in breadth, a contiguous zone of 12 nautical miles in breadth, a fishery conservation zone of 200 nautical miles in breadth, and sovereign rights for the purpose of exploring and exploiting the resources of the continental shelf."[28]

Mexico, on the other hand, acting in accordance with the 1982 UNCLOS,[29] claimed a territorial sea of twelve nautical miles in breadth,[30] a contiguous zone of twelve nautical miles in breadth that was immediately adjacent to its territorial sea,[31] and a 200-nautical-mile in breadth Exclusive Economic Zone (EEZ).[32]

Prospective application of the TMB, however, provides that each country's "national jurisdiction" shall now extend seaward 200 nautical miles. (See Figure 1.) As previously noted, however, the Treaty did not address the Western Gap land area lying 200 miles beyond the coastlines

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28. Mark B. Feldman & David Colson, *The Maritime Boundaries of the United States*, 75 AM. J. INT'L L. 729, 730 (1981) (footnotes omitted).

29. *See* UNCLOS, *supra* note 2.

30. *See* Ley Federal Del Mar de Mexico (Federal Oceans Act), El Diario Oficial de la Federacion [D.O.], Jan. 8, 1986, art. 25, 25 I.L.M. 889 [hereinafter FOA], *cited in* Vargas, *supra* note 10, at 192-93; *see also* UNCLOS, *supra* note 2, art. 3.

31. *See* FOA, *supra* note 30, arts. 43-45.

32. *See* Vargas, *supra* note 10, at 207.

> [Mexico] exercises in an exclusive economic zone situated outside the territorial sea and adjacent to it, the sovereign rights and the jurisdictions specified by the law of [the Mexican] Congress. The exclusive economic zone shall extend 200 nautical miles, measured from the [coastal] baseline from which the territorial sea is measured.

See also 1974 Address to the Plenary of UNCLOS III's Second Session in Caracas, Venezuela, by Mexican President Luis Echeverria Alvarez, D.O., Feb. 6, 1976, (such a zone "affirms the sovereign rights of the Nation over the natural resources existing in [that area]") (translation by Jorge A. Vargas), *cited in* Vargas, *supra* note 10, at 206 n.96; *see also* ARND BERNAERTS, BERNAERTS' GUIDE TO THE 1982 UNITED NATIONS CONVENTION ON THE LAW OF THE SEA 36 (1988) (stating that the 1982 United Nations Convention on the Law of the Sea provides States with the authority to extend an "'exclusive economic zone' beyond and adjacent to the territorial sea," to a maximum of 200 nautical miles. Upon establishing such an exclusive economic zone (EEZ), the coastal state will have certain sovereign rights and duties with regard to exploration and exploitation of its natural resources, as well as to the preservation of its living environment.).

of the two countries.[33] Although the U.S. Department of the Interior and the Mexican Foreign Secretary announced their intentions to begin discussions in developing a boundary treaty for dealing with the Western Gap, neither side has taken further action.[34]

B. Reasons for Delay

Because implementing a 200-nautical-mile boundary line took over nineteen years, industrialists, eager to see Western Gap land delimitated, might want to explore the reasons for the delay in ratification of the Treaty on Maritime Boundaries. It is important to note that although the exchange of notes for the TMB continued during the nineteen years of delayed ratification,[35] there were reasons other than bureaucratic contentment with maintaining the *status quo* that obstructed Senate approval. The main reason was that U.S. Senators were concerned that the United States was giving away too much precious land. It is important to note, however, that much of the Senate's fear stemmed solely from the testimony of Dr. Hollis Hedberg,[36] a noted petroleum geologist of the time.

Dr. Hedberg called article I of the Treaty, which prescribed the base point for determining "equidistance"[37] according to an island-mapping system, a needless waste of "some of the most promising, though very deep water, petroleum prospective acreage. . . ."[38] Instead of using an island located offshore the Yucatan peninsula, Dr. Hedberg proposed an alternative geology-based theory for setting an equidistant line between

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33. *See* News Release of the U.S. Department of the Interior, Office of the Secretary, *Secretary Babbit and Foreign Secretary Gurría Announce Maritime Boundary Talks for the Gulf of Mexico* (visited Dec. 11, 1997) <http://imsawww.mms.gov./press/1997/70076.htm>.

34. *See id.* (noting that "Secretary Babbit and Foreign Secretary Gurría intend for the boundary discussions to commence in March 1998").

35. The Agreement of Nov. 24, 1976, did not contain a specific termination provision, and, therefore, its unilateral termination was governed by customary international law. *See generally Three Treaties Establishing Maritime Boundaries Between the United States and Mexico, Venezuela and Cuba: Hearings on the Three Treaties Before the Senate Comm. on Foreign Relations*, 96th Cong., 2d Sess. (1980) [hereinafter *Hearings*] (stating that administration's Responses to additional questions submitted for the record by Senator Javits).

36. *See id.* at 28-33 (testimony of Hollis Hedberg, Professor Emeritus of Geology, Princeton University).

37. *See* GERARD J. TANJA, THE LEGAL DETERMINATION OF INT'L MARITIME BOUNDARIES 6-7 (1990) (noting a Convention between Norway and Finland, Apr. 28, 1924, which defines the concept of *equidistance* as a

> dividing line between the territorial waters of the two Contracting States [which] 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).

38. *Hearings*, *supra* note 35, at 29 (testimony of Hollis Hedberg).

the United States and Mexico.[39] His theory set the base of the continental slope as the geodesic point for establishing a 200-nautical-mile maritime boundary.[40]

Many analysts, including Mark B. Feldman, the Deputy Legal Advisor to the Department of State, criticized Dr. Hedberg's theory as lacking legal merit.[41] During a hearing before the Senate Committee on Foreign Relations, Feldman pointed out the legal consistencies in giving "full effect to islands in the establishment of maritime boundaries."[42] According to Feldman, "the United States uses islands and rocks as basepoints for measuring the territorial sea and the 200 nautical mile zone over a large percentage of the total stretch of the United States coast."[43] Notwithstanding the rationale of Feldman's argument, and fearful that the United States might be giving away too much land and minerals, the

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39. *See id.* at 33 (written statement of Hollis Hedberg); *see also* Vargas, *supra* note 10, at 221 n.169 ("Dr. Hedberg proposed that 'the base of the continental slope should be the fundamental guide to political boundaries on the ocean floor' and that 'island dependencies situated on continental shelves and slopes should not control national boundaries beyond the base of the continental slope.'").

40. *See* Hearings, *supra* note 35, at 33 (written statement of Hollis Hedberg).

41. *Id.* at 7 (testimony of Mark B. Feldman, Deputy Legal Advisor, U.S. Dept. of State, which rebuts Dr. Hedberg's argument against using islands, rocks, reefs, and low-tide elevation as the basepoints for the boundary line in the Western Gap).

> This practice [the use of islands] follows the precedent of the 1970 Treaty, but the argument is made that the agreement gives Mexico more area in the deep waters of the east central Gulf than should be the case. In considering this issue, the Committee should note that the use of the islands as base-points gives the United States substantial areas in the Pacific off the coast of California . . . . [These Pacific areas have hydrocarbon potential and are also of considerable interest to U.S. fisherman.] There may also be hydrocarbons in the seabed under the waters of the east central Gulf, but these areas are under deep waters and will not be exploited for some years. There are not significant fisheries in the eastern Gulf. . . . [B]efore making this agreement the Department of State solicited the best available expert advice, including scientists at the U.S. Geological Survey and at Woods Hole Oceanographic Institute and the U.S. fishing industry. We contacted interested members of Congress at an early stage and the agreement was and is supported by all interested agencies of the United States Government.

Id. *See Anglo-Norwegian Fisheries Case* (U.K. v. Nor.), 1951 I.C.J. 8 (Jan. 10); Geneva Convention on the Territorial Sea and the Contiguous Zone, Apr. 29, 1958, U.S.-Mex., art. 4, 15 U.S.T. 1606; *Hearings*, *supra* note 35, at 21 (testimony of Mark B. Feldman that Dr. Hedberg's base-of-the-slope boundary formula "would be rejected out of hand by Mexico as overreaching and not based on principles relevant to maritime boundary delimitation."); PRESCOTT, *supra* note 4, at 346 ("It is ironic that Hedberg contributed to the postponement of action by deploying arguments which do not bear his hallmark of soundness . . . . Hedberg appears to miss entirely the point that the seabed under the international waters has not been divided by the United States and Mexico.").

42. *Hearings*, *supra* note 35, at 20 (testimony of Mark B. Feldman); *see* PRESCOTT, *supra* note 4, at 346 (criticizing the drawing of a median line according to a continental slope method and instead urging support for a method of division justified by "present rules," such as an island-mapping scheme).

43. *Hearings*, *supra* note 35, at 20 (testimony of Mark B. Feldman).

Senate suspended discussion until the U.S. Geological Survey conducted an in-depth study of petroleum resources in the area.[44]

It was only after certain deepwater technological developments occurred in the mid-1990s that interest in signing a maritime treaty delimiting the Western Gap was once again seriously considered. The Mexican government also informally indicated that it would not entertain any negotiations over Western Gap land until the 1978 Treaty was passed.[45] Consequently, the U.S. Senate was under additional pressure to pass the 200-nautical-mile boundary in order to commence talks so as to settle the land dispute in the Western Gap. As a result, on October 23, 1997, the U.S. Senate finally ratified the TMB.[46] Although there was some discussion on September 25, 1997, before the Senate Foreign Relations Committee as to whether the international law principles negotiated for the 1978 Agreement still applied, strong testimony showed that those principles were reaffirmed in other agreements.[47]

III. THE UNITED NATIONS CONVENTION ON THE LAW OF THE SEA AND ITS EFFECT ON DELIMITATION

Under article 137 of UNCLOS, "[n]o State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources, nor shall any State or natural or judicial person appropriate any part thereof."[48] The Convention further defines the concept of "Area" as "the sea-bed and ocean floor and subsoil thereof, beyond the limits of national jurisdiction."[49] As discussed in Part II.A, national jurisdiction in this case means any area beyond the 200-nautical-mile boundary as defined by the 1978 TMB. Therefore, in following this line of reasoning alone, it would seem that neither the United States nor Mexico can exercise control over any of the Western Gap land.

Does that conclusion automatically imply that land lying beyond the 200-nautical-mile basepoints is controlled by a body of law other than that of a single State? More to the point, if the Western Gap is not part of

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44. *See Maritime Boundary and Bird Treaties Hearings*, *supra* note 16.

45. *See Mexican President Wraps Up U.S. Trip*, AGENCE FRANCE-PRESSE, Nov. 15, 1997, at 4, *available in* 1997 WL 13434578 ("Clinton's top advisor for Latin America, Thomas McLarty, said the [ratification of the Treaty on Maritime Boundaries] paved the way for talks to divide the rest of the oil-rich Gulf of Mexico. Mexican officials had declined to discuss it until the 1978 pact was ratified.").

46. *See* 143 CONG. REC. S11165-02 (daily ed. Oct. 23, 1997).

47. *See Maritime Boundary and Bird Treaties Hearings*, *supra* note 16 (written statement of the American Petroleum Institute et al. noting that "the principles used by the State Department in negotiating the maritime treaty were generally recognized international law principles at the time the treaty was negotiated and have since been reaffirmed in other negotiations").

48. UNCLOS, *supra* note 2, art. 137.

49. *Id.*, art. 1(1).

national waters, is it considered part of the "high seas" (which is accorded as being "open and freely available for use by all states, regardless of their location"),[50] or is it under the exclusive authority of an international commission? The Convention expressly provides that the "Area" in question is to be under the exclusive authority of the International Sea-Bed Authority.[51]

For Mexico, a straight reading of UNCLOS, especially article 137, signifies that no reserved power for States to act exists in the Area. In other words, the Mexican position opposes unfettered exploration and exploitation of mineral resources in the Area by the United States or any of its nationals.[52] The United States, however, interprets and implements the Convention differently. From its perspective, the deep seabed mining provisions of the Law of the Sea Convention are undesirable and, as a result, it never chose to adopt them.[53] The United States, therefore, maintains that the Western Gap forms part of the high seas[54] and not part of the so-called international "Area" as Mexico claims.

According to Jorge A. Vargas, Professor of Law at the University of San Diego School of Law:[55]

> In the same fashion that anyone can fish in the high seas, for example, the United States considers that its corporations and its nationals have the right to explore and exploit the resources in that submarine area, as well as the right to conduct marine scientific research activities therein, since they are located beyond the limits of national jurisdiction. For the United States the International Authority has neither regulatory powers, nor any control over the States, its corporations or its nationals, in the conduct of any

50. BERNAERTS, *supra* note 32, at 42 (discussing the concept of "high seas" under article 87 of UNCLOS).

51. *See* UNCLOS, *supra* note 2, arts. 156-58 (stating that (1) the Authority is the organ through which State Parties administer the resources of the Area; (2) it has powers and functions expressed in the Convention and any other incidental powers consistent with the spirit of UNCLOS and necessary for conducting the activities of the Area; (3) it is based on the sovereign equality of all members; and (4) all members of the Authority are to act in good faith in order to receive all the "rights and benefits resulting from membership"); *see also* BERNAERTS, *supra* note 32, at 59.

52. *See* Jorge A. Vargas, *The Gulf of Mexico: A Binational Lake Shared by the United States and Mexico: A Proposal*, 9 TRANSNAT'L LAW. 459, 465 (1996) (discussing the most recent position of Mexico on this matter).

53. *See* John E. Noyes, *International Law of the Sea*, 31 INT'L LAW. 703, 704-05 (1997). As the United States extended its membership on a provisional basis until November 16, 1998, it is permitted to continue "at least temporarily to participate in the Authority's work." *See id.*

54. *See* UNCLOS, *supra* note 2, arts. 86-120.

55. Former Legal Advisor, General Directorate of International Boundaries and Waters, Secretariat of Foreign Relations (SRE); Secretary, Mexican Section, International Boundary and Water Commission between Mexico and Guatemala (SRE); member of the Mexican Delegation to the Third United Nations Conference on the Law of the Sea, 1973-1981; and founder and former Director of the University of San Diego's Mexico-United States Law Institute.

> activities in the so-called Area. The United States views extracting oil from the deep seabed as legally equivalent to catching fish from the high seas.[56]

To resolve the interpretive discrepancies under UNCLOS, Vargas further believes that Mexico should characterize the seabed and subsoil area of the Western Gap as forming part of its continental shelf subject to delineation under article 76.[57] He supports his position by contending that recent geological data[58] controverts previous estimations of Mexico's continental shelf. If Mexico were to make such a claim (i.e., that its continental shelf extends beyond the 200-nautical-mile maritime boundary established under the 1978 TMB), then it would be allowed under UNCLOS to enter into negotiations with the United States for the purposes of delimitation.[59]

IV. THE THREE E'S FOR EXTENDING THE BOUNDARY LINE PAST THE 200-NAUTICAL-MILE MARK

Once the effect of the 1978 TMB (as adopted in 1997) on the current situation in the western Gulf of Mexico is concretely determined, and the means through which the United Nations Convention on the Law of the Sea provides for the delimitation of the region's borders is examined, attention must be shifted to the policy reasons for adopting a bilateral boundary agreement.

A. Energy Interests

On September 25, 1997, Senator Frank H. Murkowski, Chairman of the Senate Energy and Natural Resources Committee, stated:

> [Delimitation of the region] is timely and appropriate because of our current domestic energy situation and heavy U.S. reliance on foreign imports of oil. We now import more than 50 percent of our daily crude oil needs, and that number is expected to rise to well above 60 percent in just a few short years. This situation leaves us susceptible to future supply disruptions, and causes a great imbalance in payments in foreign trade because of the tremendous out-flow of U.S. dollars to purchase foreign crude oil. In the Gulf of Mexico . . . we have tremendous untapped reserves of crude oil and natural gas that can brought to market in an

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56. Vargas, *supra* note 52, at 466.

57. *See id.* at 473.

58. *See, e.g.*, Richard T. Buffler, *Seismic Stratigraphy of the Deep Gulf of Mexico Basin and Adjacent Margins, in* THE GEOLOGY OF NORTH AMERICA VOL. J: THE GULF OF MEXICO BASIN 353 (Amos Salvador ed., 1991), *cited in* Vargas, *supra* note 52, at 472.

59. *See* Vargas, *supra* note 52, 474.

> environmentally responsible manner to fuel our national economy and stem the tide of imported oil.[60]

As discouraging as the picture painted by Senator Murkowski may be, it has even greater importance when viewed in the context of a recent weapons inspection standoff with Iraq. Iraqi President Saddam Hussein has repeatedly refused to comply with U.N. officials and has many commentators believing that Iraq's noncompliance will lead to disastrous consequences, not unlike the Persian Gulf War in 1991.[61] Hence, as "more than two-thirds of all the proven oil reserves in the world lie in the Mideast" (i.e., Hussein's backyard),[62] it would be adverse to the U.S. political aim of reducing its reliance on foreign energy imports not to push for greater delimitation of the Western Gap.[63]

B. Economic Interests

Delimitation of the Gulf of Mexico will also allow energy industrialists to operate in an environment of "certainty,"[64] thereby minimizing investment barriers.[65] Consequently, domestic petroleum companies will be able to take advantage of those reduced barriers. In turn, a stronger and healthier domestic oil industry will result in the creation of more jobs. According to a May 8, 1997, commentary, "[t]he U.S. oil industry [presently] employs nearly 1.5 million people."[66] Moreover, those numbers seem to be increasing. A consensus of commercial diving companies and petroleum equipment suppliers[67] at the

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60. *Maritime Boundary and Bird Treaties Hearings*, *supra* note 16 (statement of Frank H. Murowski, Senator of the State of Alaska).

61. *See generally* Paul Bedard, *Clinton, Blair Unite to Face Iraqi Threat*, WASH. TIMES, Nov. 16, 1997; John F. Harris & John M. Goshko, *Decision To Strike Iraq Nears; Clinton Advisers Lean Toward Attack to Force Compliance With U.N.*, WASH. POST, Jan. 24, 1998; *Clinton Ponders Response to Saddam's Latest Challenge*, PORTLAND OREGONIAN, Jan. 14, 1998, at A3.

62. *See* Richard Foster, *Great Decisions: Troubled Region Requires U.S. Involvement*, MILWAUKEE J. SENTINEL, Mar. 16, 1997, at 2.

63. *See generally* William F. O'Keefe, *American Petroleum Institute: America's Dependence on Imported Oil* (visited Jan. 25, 1998) <http://www.api.org/news/896oped.htm> (Mr. O'Keefe is the executive vice president of the American Petroleum Institute).

64. *See Hearings*, *supra* note 35, at 25 (administration's responses to additional questions submitted for the record by Senator Zorinsky) ("Establishment of . . . boundary line[s] provide the certainty necessary for planning purposes and allow the U.S. Government to hold out a clear title to the resources of the continental shelf on its side.").

65. *See U.S., Mexico Advance Gulf Treaty Effort: Move Could Open Up "Doughnut Hole" Acreage*, PLATT'S OILGRAM NEWS, Nov. 17, 1997, at 5, *available in* 1997 WL 8881802.

66. American Petroleum Institute, *Facts About Oil* (visited Jan. 25, 1998) <http://www.api.org/news/oilfacts/oil.htm>.

67. Commercial diving companies and suppliers lay many of the networks of underwater pipelines that drilling rigs use in thousands of feet of water. *See* Keith Darce, *Dive Firms Beg for Workers: Oil Boom in the Gulf*, NEW ORLEANS TIMES-PICAYUNE, Feb. 11, 1998, at C1.

Underwater Intervention Convention 1998 observed that "companies are struggling to keep up with booming exploration and production activity in the shallow and deep waters of the Gulf."[68] In fact, one such United States-based company stated that it had lost $12 million in job contracts over the last twelve months due to the shortage of manpower and was currently in search of 200 new employees.[69] Since current figures already demonstrate a trend of underemployment in the oil sector, it only stands to reason that an expansion of domestic oil industries will bring about an even greater demand for offshore oil workers in both the United States and Mexico. Although it is difficult to speculate on exactly how many new jobs will be generated in the United States by further delimitation, one fact is certain: it will bring welcomed opportunities to the U.S. oil and natural gas industry that once played a pivotal role in global markets.

Expansion of the job sector in the Gulf of Mexico accomplishes one of the primary aims of NAFTA.[70] The United States, Canada, and Mexico all:

> [r]esolved to promote, in accordance with their respective laws, high-skill, high-productivity economic development in North America by: (1) investing in continuous human resource development, (2) including for entry into the workforce and during periods of unemployment; [and] (3) promoting employment security and career opportunities for all workers through referral and other employment services.[71]

In addition to increased jobs, opening the region to production will allow drilling companies to take advantage of the newly-developed technologies now available for deepwater development of larger oil reserves. Leading the race in deepwater development, Shell Oil Company has several billion-barrel discoveries in water depths exceeding 5,300 feet.[72] By comparison, the petroleum industry's drilling capabilities of 1965 were limited to offshore wells in waters less than 300 feet deep,[73] such that we can see how quickly the U.S. oil industry is developing the "know-how" for producing large quantities of crude oil at exceedingly deeper depths. Shell, along with several other large-scale producers, has

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68. *Id.*

69. *See id.* (pointing out that human resource departments are increasing their recruiting efforts to job markets with high unemployment).

70. *See* NAFTA, *supra* note 7.

71. *Id.*

72. *See* Schultz & Bureau, *supra* note 24; *see also* Alexander's Gas & Oil Connections, *Gulf of Mexico is Booming Again* (visited Jan. 31, 1998) <http://www.gasandoil.com/goc/news/ntn73105.htm>.

73. *See* American Petroleum Institute, *Oil Supplies: Are We Really Running Out of Oil?* (visited Jan. 25, 1998) <http://www.api.org/news/oilsup.htm>.

made use of unmanned submarine robots to tap oil and gas reserves in thousands of feet of water, far beyond the limits of deep-sea divers.[74]

Besides using remote operating vehicles, oil companies have also utilized three-dimensional (3-D) seismic analysis and subsalt geophysical technologies. A recent report of the American Petroleum Institute (API) noted that "using traditional seismic analysis, the industry successfully completed just over 40 percent of new wells. With 3-D seismic analysis, that success rate has risen to over 70 percent."[75]

The success of such efficient technologies has directly effected export demand for domestic manufacturers to sell those technologies abroad. For example, one of the world's largest "remotely operated vehicle" manufacturers head-quartered in Houston saw a thirty percent increase in production last year, resulting in over a twelve percent increase in needed manpower.[76] In due course, such promising figures should rank the United States as the number one deepwater drilling economy in the world, assuming that it has not already reached that level.

Hence, in a booming economy, such as the one occurring last year that experienced an annual rise in petroleum consumption of nearly 1.7 percent,[77] delimitation of the Western Gap and the continued development of deepwater drilling technology will assist American oil producers in meeting demands. In addition, the passage of the Deep Water Royalty Act of 1995 will alleviate some of the costs that often coincide with the introduction of new technologies into normal operating practice.[78] The Act exempts companies that plunge into the high-risk deep waters of the central and western Gulf of Mexico from having to make costly royalty payments.[79] Thus, it is clear that the U.S. economic interests, including the creation of new jobs, injection of substantial revenues from mineral production, and technological exploration, are best served by further delimitation of the Western Gap.

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74. *See* Schultz & Bureau, *supra* note 24.

75. American Petroleum Institute, *supra* note 73.

76. *See* Darce, *supra* note 67.

77. *See* Randolph E. Schmid, *'97 Prices Allow U.S. to Rebuild Oil Inventory*, ANCHORAGE DAILY NEWS, Jan. 16, 1998, at F4, *available in* 1998 WL 5451527.

78. *See* Outer Continental Shelf Deep Water Royalty Relief Act, Pub. L. No. 104-58, 109 Stat. 557, 562-67 (1995).

79. *See* U.S. Department of the Interior, Minerals Management Service, *supra* note 18; *see also MMS Issues Final Royalty Relief Rules to Promote Deepwater Oil, Gas Drilling*, ENERGY REPORT, Jan. 19, 1998, *available in* 1998 WL 9186721.

C. Environmental Interests

The American Petroleum Institute claims that the petroleum industry protects the environment in as many ways as it possibly can.[80] More specifically, API asserts that the industry "sponsors research, develops environmentally sensitive operating standards and offers training and certification programs that help the industry protect the air, land, and water, as well as human health and safety."[81] Whether or not the U.S. government or the American public are convinced by API's defense of the oil and gas industry, the Environmental Protection Agency (EPA) believes that several environmental polluters within the industry are turning themselves into regulating authorities. According to an August 2, 1996, *Environment Reporter* release, petroleum companies were among the seventy-six companies that voluntarily disclosed environmental violations pursuant to a new federal environmental audit policy.[82] The EPA attributes the several administrative and judicial settlements, involving significant penalty reductions, to the voluntary nature of the petroleum companies policy of disclosure.[83]

Opening up the Western Gap to production will also allow for improved management of aquatic life and mineral resources in land not yet leased or designated to a particular country. Although API claims that the petroleum industry is doing all that it possibly can for the environment, government agencies, such as the Mineral Management Service, would be able to monitor the well-being of Gap land past the 200-nautical-mile line if delimitation occurred. Hence, preventative measures could be taken in order to minimize harm to submarine life and coastal reefs.

As required by Part XII of UNCLOS, "States have the obligation to protect and preserve the marine environment."[84] However, as a side-note to this requirement, the obligation on the States only relates to activities subject to their jurisdictional control.[85] As a result, it is not inconceivable that only after full Western Gap delimitation takes place will either the U.S. or Mexican governments take on the tremendous and expensive task of safeguarding the marine environment of the Western Gap.

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80. *See* American Petroleum Institute, *supra* note 3.

81. *Id.*

82. *See generally Enforcement: New Federal Audit Policy Leads 76 Companies to Disclose Environmental Violations, EPA Says*, ENV'T REP., Aug. 2, 1996, at 784.

83. *See* Krista McIntyre, *Voluntary Disclosure: Gotcha!*, 11-SPG NAT. RESOURCES & ENV'T, Spring 1997, at 52.

84. UNCLOS, *supra* note 2, art. 192.

85. *See* John R. Stevenson & Bernard H. Oxman, *The Future of the United Nations Convention on the Law of the Sea*, 88 AM. J. INT'L L. 488, 494 (1994) (editorial commentary on UNCLOS).

Since the U.S. Mineral Management Service (MMS) has successfully conducted periodic "comparison[s] of current ecosystem data with earlier benchmark data or through special studies oriented toward monitoring specific parameters,"[86] similar tests may prove useful, and should be encouraged, in a delimitated western Gulf of Mexico. The MMS studies, commonly known as the Gulf of Mexico Offshore Operations Monitoring Experiments (GOOMEXs), are aimed at protecting the marine environment in areas legally leased to the 3,800 offshore oil and gas structures. Delimitation of the remaining submarine Western Gap land will, therefore, allow the United States to protect the region on its side of the boundary against both malfeasant and negligent polluters.

V. PROTECTING MEXICO'S SOVEREIGNTY

Delimitation of Western Gap land will also silence many of the Mexican government's critics, who fear that "Mexican sovereignty is . . . at stake."[87] That fear is a result of drillings by U.S. oil companies near the shared maritime border of the two countries. As Mexican opposition leader Sen. Jose Angel Conchello stated, "It's like sucking through a straw. These U.S. companies will drill in their territory, but could extract everything contained in that reserve. National resources do not respect frontiers."[88]

Although Conchello's statement is certainly true in that, due to the nature of the ground's mineral arrangement, it is often technologically difficult to limit crude oil extraction to only that amount that is within a nation's borders, Conchello's argument disregards the fact that some accidental overlap should be permissible. In other words, extraction overlap will be an issue that the two nations must face regardless of whether their boundaries meet at the 200-mile-mark or further. Thus, because the same could be said of Mexican companies drilling along the frontier within Mexico's jurisdiction, this argument is nonpersuasive for purposes of delimitation. A much more compelling argument related to delimitation is that clear delineation of remaining Gap land will allow Mexico to protect its mineral reserves by persecuting, without question as to national jurisdiction, violators of a bilateral maritime boundary treaty. Hence, like the United States, Mexico's interest in protecting national

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86. Minerals Management Service, *The Gulf of Mexico Offshore Operations Monitoring Experiment (GOOMEX): Phase I—Sublethal Responses to Containment Exposure* (visited Jan. 31, 1998) <http://www.gomr.mms.gov/homepg/regulate/environ/goomex/goomexn.html>.

87. *See* Nick Anderson, *Mexico Fears U.S. Drillers Will Siphon Off Its Oil*, SAN DIEGO UNION-TRIB., Mar. 31, 1996.

88. *Id.*

sovereignty will be served with the reception of a new maritime boundary treaty.

VI. EARLY EXAMPLES OF MARITIME BOUNDARY AGREEMENTS

A. The "Middle of the Sea"

In order to fully delineate the Gulf of Mexico, it is necessary to first examine the general history of maritime demarcation. Beginning in the year 1023, methods for distinguishing oceanic boundaries first began to resemble modern methods of maritime demarcation.[89] For example, under the Charter of King Cnut, the Monks of Canterbury were granted rights of salvage in front of the port of Sandwich.[90] As bestowed under the provisions of the Charter, "half of whatever was found on [the port's side] of 'the middle of the sea,' and brought to Sandwich, should belong to the monks and half to the finder."[91]

B. Treaty of Todesillas

In 1494, following the creation of the "middle of the sea" method, Spain and Portugal signed the Treaty of Todesillas, in which they agreed upon a line of delimitation, running from the North to the South Poles, 370 miles westward of the Cape Verde Islands.[92] Because it is difficult to identify the rationale behind the establishment of a 500-year-old border, and since the agreement was between two equally-balanced world leaders that often measured power by total land possession instead of by mineral wealth, it must be assumed for purposes of this examination that the above coordinates were chosen in order to satisfy notions of geographical symmetry. It is also important to point out that this basic system of island-mapping signifies one of the first examples in history in which a method of demarcation relying upon the concept of *equidistance* was employed.[93] ("Equidistance" is discussed in Part VI in greater detail).

C. Nineteenth and Early Twentieth Centuries Practices

Similar to the Spanish and Portuguese agreement, many nations in the nineteenth and twentieth centuries began to adopt bilateral instruments incorporating various methods of continental shelf delimitation.[94]

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89. *See* TANJA, *supra* note 37, at 2.
90. *See id.*
91. Kemble, *Codex Diplomaticus Aevi Saxonici*, IV, 21, *cited in* TANJA, *supra* note 37, at 2 n.2.
92. *See* TANJA, *supra* note 37, at 3.
93. *See Hearings*, *supra* note 35 and accompanying text.
94. *See* TANJA, *supra* note 37, at 3-7.

Examples of other methods developed, besides the method of equidistant delimitation, included extending a common land boundary line outwards into seawaters and running a perpendicular line to that land boundary, parallel to coastal embankments.[95] However, because many of these methods resulted in the accidental overlapping of third-party boundaries or were not useful in situations involving unique geophysical formations, governments often found themselves having to renegotiate previously considered boundary agreements.[96] Consequently, as frustrations mounted for treaty negotiators worldwide, the common system of using islands, islets, and reefs as basepoints for delimitation agreements became the most widely accepted, and easily applied, method for establishing maritime boundaries between States.[97]

VII. MODERN METHODS FOR DIVIDING THE WESTERN GAP

This Comment so far has shown that further delimitation of the western Gulf of Mexico would be in the common interests of the U.S. energy industry, the U.S. economy, and the aquatic environment. Determining the best method for satisfying those interests is, therefore, important. As previously mentioned, Interior Secretary Bruce Babbitt announced his intentions to hold maritime boundary discussions with Mexican Foreign Secretary Angel Gurría in March of 1998 for the purpose of establishing an oceanic boundary resolution pertaining to Western Gap land. Comparing the relevant trends and practices of similar boundary treaties with the various methods of demarcation traditionally employed by negotiators has even greater significance due to the added element of timeliness.

A. The Equidistance Method

Mark Feldman defined the equidistance method (see Part II.B), which ran contrary to Dr. Hedberg's 1979 base-of-the-slope method, as giving full effect to the use of islands as geodesic points of demarcation. In a more recent commentary, Feldman stated that:

> [T]he U.S. maritime boundary position is based on the concept of "equitable principles" [*see below*], the boundaries that have been negotiated to date generally have been based on the equidistance method to one degree or another. This method has been adopted, not because the equidistance method has any special merit, but because its application in

95. *See id.*
96. *See id.*
97. *See id.*

> the particular circumstances served U.S. interests and the interests of our treaty partners.[98]

Mr. Feldman's rationale for supporting the use of an island-mapping system to delimit the Gulf of Mexico[99] is also shared by Jorge Vargas.[100] According to Professor Vargas, the United States and Mexico share many legal and technical principles regarding the methodology of delimiting oceanic spaces. Professor Vargas claimed that:

> In 1970, for example, both countries negotiated the international maritime boundary out to twelve nautical miles in the Pacific Ocean and Gulf of Mexico using commonly agreed-upon principles. These principles included: (1) the use of the principle of *equidistance*; (2) the use of islands; (3) the simplification of the resulting boundary line for practical reasons; and (4) the use of geodesic points, marked by coordinates of longitude and latitude based on the 1927 North American Datum as an essential technical component in the drawing of the final boundary on a nautical chart.[101]

Further authority supporting the utilization of the equidistance method can be found in the Agreement Relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea that went into force on November 16, 1994, [hereinafter UNCLOS Agreement].[102] Although the Agreement expressly stipulated against using an equidistant formula with respect to any delimitation treaties covering the EEZ and the continental shelf, it also stated that the States are to use practical and nondiscriminating considerations for making those treaties.[103] However, because an equidistant formula can be both practical and nondiscriminating in purpose and in effect depending upon the given facts, this stipulation is on its face somewhat contradictory. As a result, the UNCLOS Agreement should not be independently relied upon as a reason not to incorporate the equidistance method into a delimitation agreement providing for the western doughnut hole. Instead, what can be inferred from the UNCLOS Agreement's wording is that factors other than equidistance should also be taken into account for the drafting of an

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98. Feldman & Colson, *supra* note 28, at 749.

99. *See Hearings*, *supra* note 35 and accompanying text.

100. *See* Vargas, *supra* note 10, at 220-24.

101. *Id.* at 224.

102. *See* UNCLOS, *supra* note 2.

103. *See Message from the President of the United States and Commentary Accompanying the United nations Convention on the Law of the Sea and the Agreement Relating to the Implementation of the Part XI upon Their Transmittal to the United States Senate for Its Advice and Consent*, 7 GEO. INT'L ENVTL. L. REV. 77, 183 (1994) ("articles 74 and 83 [of the UNCLOS Agreement] provide that delimitation of the [Exclusive Economic Zone] and the continental shelf, respectively, are to be effected by agreement, on the basis of international law, in order to achieve an equitable solution").

outer continental shelf delimitation agreement.[104] In this regard, the UNCLOS Agreement justifiably imposes an affirmative obligation upon the drafting States (in this case, Mexico and the United States) to devise a pragmatic and equitable resolution with some attention to equidistance and the possible incorporation of islands as points of separation.[105]

B. The Base-of-the-Slope Method

Deciding whether or not to use the base-of-the-slope method has long been a controversial issue in which parties to litigation have attempted to subvert claims pending against them through an assertion of a jurisdictional defense.[106] For example, such a claim was argued in the often-cited case of the nation-states, *Libya v. Malta.*[107] In that case, one party attempted to employ the concept of "natural prolongation" that is, the method "designed to elaborate and describe the basic nature of the continental shelf and its attributes which were to be considered by the [States] in the course of reaching a delimitation agreement."[108] The *Libya-Malta* court, however, slammed the door shut on the question of whether the base-of-the-slope method is practical in defining maritime boundaries.[109] Because many boundary arrangements have been established for centuries, and the technology did not exist at the time of their creation to allow for submarine geodesic markers (e.g., the continental shelf), most existing delimitation agreements have regarded such markers as inconsistent with a well-established mapping scheme.[110] That is, ruling in favor of a claim based on geomorphologic natural prolongation precepts would effectively stir up many of the already

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104. *See generally* Carter Statement, *supra* note 12.

105. *See id.* at 88-89.

106. *See, e.g.*, Case Concerning the Continental Shelf (Tunisia-Libya Arab Jamahiriya), 1982 I.C.J. 18 (Feb. 24) [hereinafter Continental Shelf]; *see also* Delimitation of the Maritime Boundary in the Gulf of Maine Area (Canada-U.S.), 1984 I.C.J. 246 (Oct. 12) *and* Continental Shelf (Libyan Arab Jamahiriya-Malta), 1985 I.C.J. Rep. 13 (Jun. 3).

107. *See* Continental Shelf, 1982 I.C.J. at 23.

108. Keith Highet, *Whatever Became of Natural Prolongation*, *in* RIGHTS TO OCEANIC RESOURCES: DECIDING & DRAWING MARITIME BOUNDARIES 87, 90 (Dorinda G. Dallmeyer & Louis DeVorsey, Jr. eds., 1989) (discussing the concept of base-of-the-slope under the name "natural prolongation").

109. *See* Continental Shelf, 1982 I.C.J. at 23.

110. *See* Jonathan I. Charney, *The American Society of International Law Maritime Boundary Project*, 5 MARITIME BOUNDARIES 10 (Gerald H. Blake ed., 1994).

> [I]t appears . . . that the equidistant line has played a major role in boundary delimitation agreements, regardless of whether they concern boundaries between opposite or adjacent states. In the vast preponderance of the boundary agreements studied, equidistance had some role in the development of the line and/or the location of the line that was established.

Id.

existing agreements. As a result, such a move would lead to the "classic prospect of the 'floodgates of litigation,'" an outcome the court seemed insistent to avoid.[111]

C. The Principle of Equity

"International Law does not require that ocean boundaries be delimited in accordance with any particular method; rather, it requires that they be delimited in accordance with equitable principles taking into account all of the relevant circumstances of the case in order to produce an equitable result."[112] As concluded in the discussion of the equidistance method (Part VI.A above), UNCLOS also provides that the delimitation of the continental shelf "shall be effected by agreement on the basis of international law . . . in order to achieve an equitable solution."[113] In reading this provision, however, the framers of the UNCLOS Agreement can be criticized for the broad and nonexplicit nature of their mandate for equitable resolve. Whether through accidental oversight or on purpose, the UNCLOS Agreement leaves technical matters of continental shelf delimitation to the discretion of the ratifying states. Further, some commentators believe that UNCLOS was intentionally designed to be vague because maritime waterways around the world each possess their own unique characteristics.[114]

Despite the lack of direction provided by the UNCLOS Agreement, nation-states know from the foregoing that finding an equitable solution impacts negotiating a maritime boundary agreement. Yet, in order to abide by the UNCLOS provision, States must first answer one fundamental question prior to developing an equitable outcome: What is "equity?" The UNCLOS Agreement does not expressly define this concept. Thus, nations are left wondering whether the framers of the Agreement also intended for the definition of what constitutes equity to be left to the discretion of the States.

In legal usage, "equity" is "based on a system of rules and principles which originated in England as an alternative to the harsh rules of

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111. *See* Highet, *supra* note 108, at 94 (noting that the Court in the *Libya-Malta* case wanted to avoid "open[ing] up a Pandora's box of possibilities for parties to argue in connection with shelf delimitation"); *see generally* DOUGLAS M. JOHNSTON, THEORY & HISTORY OF OCEAN BOUNDARY-MAKING 200 (1988).

112. Jonathan I. Charney, *The Delimitation of Ocean Boundaries*, 18 OCEAN DEV. & INT'L L. 497-531 (1987), *reprinted in* RIGHTS TO OCEANIC RESOURCES: DECIDING & DRAWING MARITIME BOUNDARIES, *supra* note 108, at 32.

113. UNCLOS, *supra* note 2, art. 83(1).

114. *See* Thomas A. Reynolds, *Delimitation, Exploitation, and Allocation of Transboundary Oil & Gas Deposits Between Nation-States*, 1 ILSA J. INT'L & COMP. L. 135, 141-42 (1995).

common law and which were based on what was fair in a particular situation."[115] Does this mean that the United States and Mexico should, as President Roosevelt once suggested,[116] simply divide the Gulf into two geographically symmetrical parts over which the North is controlled by the United States and the South by Mexico? Certainly not. If this were effective, then the two nations would be no more successful at taking into account the commercial value of the Gulf of Mexico than Spain and Portugal were in the Treaty of Todesillas (see Part V.B).

From the above legal definition of "equity," we can rightfully conclude that working towards an equitable solution will call for a consideration of a variety of methods depending upon the facts given.[117] The rationale for this conclusion lies in the fact that the majority of coastal nations share their waters with more than one country. Although one nation may wish to incorporate similar agreements of delimitation for reasons of consistency, two neighboring nations may not want to conform to those consistent methods because each has its own political and economic agendas in mind.

As a consequence, the principle of equity must be viewed in connection with other methods of delimitation, such as equidistance. When the methods of equity and equidistance are combined, boundary negotiators may be able to comply with the UNCLOS provisions,[118] as well as avoid overlap or infringement upon other treaties and nation-states' waters. In this way, a maritime treaty between two neighboring nations will be respected by the international community and only require periodic monitoring or reformation as a result of unforeseen events.

VIII. SUGGESTIONS FOR NEGOTIATING A DELIMITATION TREATY

Distinguishing territorial borders often represents "the end of long and delicate negotiations, and involves an intricate balancing of legal, technical, and political considerations."[119] Due to the permanent nature of

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115. BLACK'S LAW DICTIONARY 540 (6th ed. 1990).

116. *See* PRESCOTT, *supra* note 4, at 335 (statement of Franklin D. Roosevelt, 1943).

> It seems to me that the Mexican Government should be entitled to drill for oil in the southern half of the Gulf and we in the northern half of the Gulf. That would be far more sensible than allowing some European nation, for example, to come in there and drill.

Id.

117. *See* KUEN-CHEN FU, EQUITABLE OCEAN BOUNDARY DELIMITATION 239-66 (1989) (suggesting a list of several equitable considerations, such as: geographical considerations, geological considerations, geomorphological considerations, historic interests, environmental-ecological considerations, conduct of state & estoppel, prevention of potential disputes, and simplification of boundary lines).

118. *See supra* note 83.

119. Vargas, *supra* note 10, at 190.

such an "act of national sovereignty, the establishment of national boundaries is one of the most important decisions a nation can make under international law."[120] Despite being general in nature and nonexhaustive, the following ten steps should, therefore, provide some assistance to the U.S. and Mexican governments in the upcoming treaty discussions:

> (1) Pay special attention to the particular United States/Mexican coastal features and jurisdictional lines of independent nations so as to prevent jurisdictional overlap or infringement.
> (2) Employ an equidistant line as a basis for demarcation of clear borders.
> (3) Consider the advantages and disadvantages of using an alternative method for opening the Western Gap in which land is apportioned in shares to both countries as opposed to being equitably delimitated, and in which revenues and responsibilities of industrial/environmental management are also shared.
> (4) Establish interim regulatory practices and means of delimitation of the western "Doughnut Hole," even if such interim procedures yield little insight into the provisions of a final boundary agreement.
> (5) Consult technical experts, such as geologists, mineral experts, and admiralty lawyers, when establishing a precise definition for a maritime boundary line.
> (6) Spend funds sensibly in conducting pre-negotiating surveys of the region. For example, avoid wasting money on studies that have already been conducted.
> (7) Conduct a study of the various international agreements signed by the United States and Mexico that may provide added constraints in drafting a workable resolution, prior to negotiations.
> (8) Devise measures that will account for the present and future interests of both nations in order to ensure mutual compliance with the impending delimitation agreement.
> (9) Keep in mind principles of equity in drafting the agreement; and design the agreement to specifically account for any other geographic, political, or economic characteristics unique to the Gulf of Mexico.
> (10) Formulate a resolution that will maximize revenues while minimizing economic costs and harm to marine life.[121]

IX. CONCLUSION

As the law governing oceanic boundaries is not yet settled, neither are many of the maritime boundaries between nations. The determination of these unresolved boundaries will often depend upon the uniqueness of

120. *Id.*
121. Charney, *supra* note 110, at 11-12.

the circumstances involved. Thus, it is difficult for nations to apply one harmonized standard to all cases.

What has been resolved, however, is that so long as the United Nations holds that the continental shelves of Mexico and the United States extend past the 200-nautical-mile boundary (i.e., in accordance with their EEZs) established under the Treaty on Maritime Boundaries, then, pursuant to article 76 of UNCLOS, the method employed for dividing the Western Gap Land is left to their discretion. It is important for the framers of such a bilateral delimitation treaty to understand that they must not only employ the methods discussed herein (e.g., equidistance method, equity method, or a hybrid of the two), but they must also be prepared to base their decisions on notions of economic efficiency and environmental protection. Moreover, besides following the ten steps set forth in Part VIII, a general attitude of compromise and understanding of the other party's bottom-line objective will play a significant role in the longevity and mutual implementation of the diplomatic resolution they eventually adopt.