

Chapter VIII Continental Shelf

Geologic Definition

The scientific (geomorphological) definition of a continental shelf differs from the juridical definition. In a model geomorphological situation, the continental shelf is the submerged prolongation of the coastal State and consists of the gently-sloping platform which extends seaward from the land to a point where the downward inclination increases markedly as one proceeds down the continental slope. The depth at which the break in angle of inclination occurs varies widely from place to place and often is difficult to define precisely. At the foot of the slope, the continental rise begins; a second gently-sloping plain which gradually merges with the floor of the deep seabed. The shelf, slope, and rise, taken together, are geologically known as the continental margin.¹

Juridical Definition

The first wave of post-World War II national claims to expanded ocean areas began with President Truman's 1945 Proclamation on the Continental Shelf, by which the United States asserted exclusive sovereign rights over the resources of the continental shelf off its coasts. The Truman Proclamation specifically stated that waters above the shelf were to remain high seas and that freedom of navigation and overflight were not affected.²

The definition of the continental shelf established at the First United Nations Conference on the Law of the Sea in 1958 was vague and flexible. Article 1(a) of the Convention on the Continental Shelf states that the continental shelf refers:

to the seabed and subsoil of the submarine areas adjacent to the coast but outside the area of the territorial sea, to a depth of 200 meters or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas.³

At the Third United Nations Conference on the Law of the Sea (UNCLOS III), the 1958 definition was discarded and an attempt was made to develop a logical and satisfactory definition of the continental margin that included not only the continental shelf but also the continental slope and rise. Article 76(1) of the LOS Convention defines the continental shelf:

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

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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.

Regardless of the seafloor features, a State may claim, at a minimum, a 200-mile continental shelf. Under other LOS Convention provisions, a State has the right to claim a 200-mile EEZ which includes jurisdictional rights over the living and nonliving resources of the seafloor and seabed. Thus, for those States whose physical continental margin does not extend farther than 200 miles from the territorial sea baseline, the concept of the continental shelf is of less importance than before.

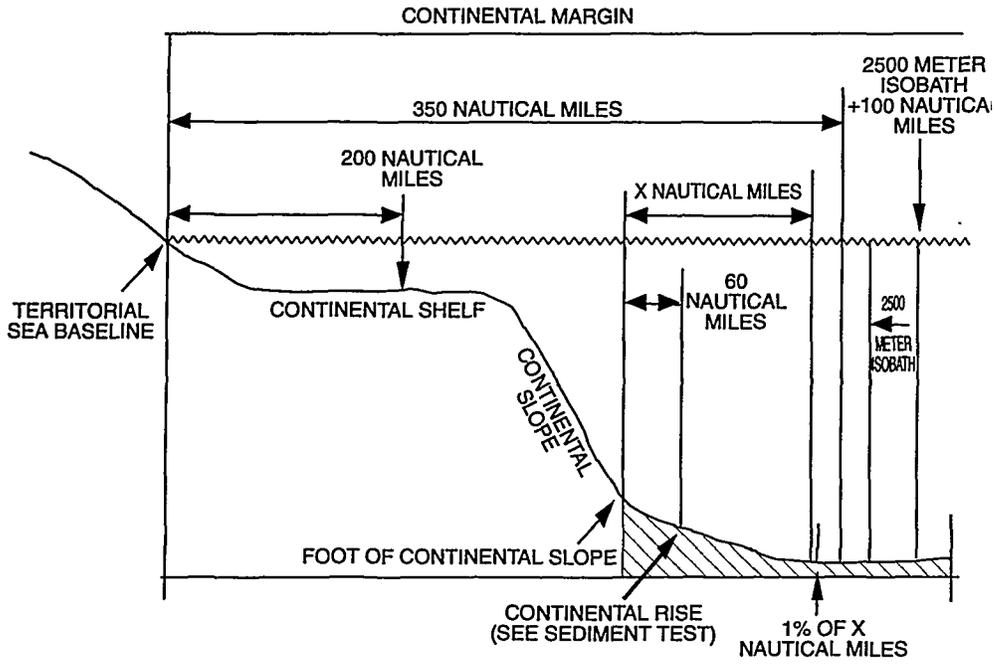
Paragraphs 3-7 of Article 76, which provide a rather complex formula for defining the “continental shelf”, apply only to States that have physical continental margins extending more than 200 miles from the coast. A few items in these paragraphs are of particular interest:

- the margin does not include the deep ocean floor with its ocean ridges (paragraph 3);
- if the continental margin extends beyond 200 miles, the outer limit shall be measured by one of two methods described in paragraph 4:
 - the subparagraph (a)(i) margin definition is based on the determination of thickness of sediments. The margin can extend to that point where the thickness of sediments “is at least 1 percent of the shortest distance from such point to the foot of the continental slope.” Thus, if at a given point beyond 200 miles from the baseline, the sediment thickness is 3 kilometers, then that point could be as much as 300 kilometers seaward of the foot of the continental slope, subject to the provisions of paragraph 5;
 - subparagraph (a)(ii) defines the continental margin using a limit not more than 60 miles from the foot of the continental slope;
- paragraph 5 limits any continental shelf definition at either 350 miles from the territorial sea baseline or 100 miles from the 2,500 meter isobath, whichever is further seaward. It is important to recognize that for paragraph 5 to be relevant, the requirements set forth in paragraph 4 must first be met;
- on submarine ridges, the outer limit shall not exceed 350 miles from the territorial sea baselines, but this provision does not apply “to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs” (paragraph 6). (See Figure 1.)

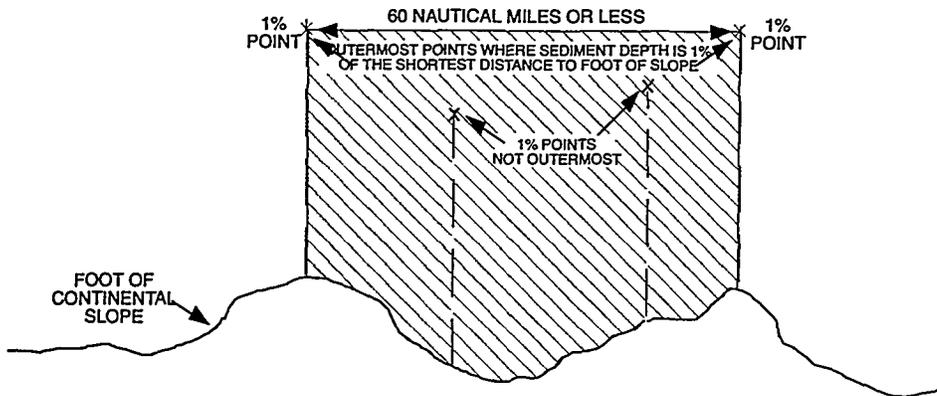
It seems widely accepted that the broad principles of the continental shelf regime reflected in Articles 76-81 of the 1982 LOS Convention were established as customary international law by the broad consensus achieved at UNCLOS III and the practice of nations.⁴ The rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters or of the airspace above those waters.⁵ Coastal or island nations do not have sovereign rights *per*

Figure 1

CONTINENTAL SHELF DELIMITATION



DEPTH OF SEDIMENT TEST



se to that part of its continental shelf extending beyond the territorial sea, only to the exploration and exploitation of its natural resources.⁶ Shipwrecks lying on the continental shelf beyond the outer limit of the contiguous zone are not considered to be “natural resources.”⁷ All nations have the right to lay submarine cables and pipelines on the continental shelf, in accordance with Article 79 of the LOS Convention.⁸ Submarine cables include telegraph, telephone, and high-voltage power cables.⁹

Delimitation of the Outer Edge of the Continental Shelf

In response to statements made during the December 1982 plenary meetings of UNCLOS III, on March 8, 1983, the United States exercised its right of reply, which, in regard to the continental shelf regime stated:

Some speakers made observations concerning the continental shelf. The Convention adopted by the Conference recognizes that the legal character of the continental shelf remains the natural prolongation of the land territory of the coastal State wherein the coastal State has sovereign rights for the purpose of exploring and exploiting its natural resources. In describing the outer limits of the continental shelf, the Convention applies, in a practical manner, the basic elements of natural prolongation and adjacency fundamental to the doctrine of the continental shelf under international law. This description prejudices neither the existing sovereign rights of all coastal States with respect to the natural prolongation of their land territory into and under the sea, which exists *ipso facto* and *ab initio* by virtue of their sovereignty over the land territory, nor freedom of the high seas, including the freedom to exploit the sea-bed and subsoil beyond the limits of coastal State jurisdiction.¹⁰

As stated above, the outer edge of any juridical (as opposed to physical) continental margin extending beyond 200 miles from the baseline is to be determined in accordance with *either* the depth of sediment test (set forth in Article 76(4)(a)(i) of the 1982 LOS Convention), *or* along a line connecting points not more than 60 miles from the foot of the continental slope (Article 76(4)(a)(ii)). The line of the outer limit of the continental shelf, drawn in accordance with paragraph 4(a)(i) and (ii) either may not exceed 350 miles from the baseline or not exceed 100 miles from the 2500 meter isobath (article 76(5)).¹¹ And, Article 76(6) states that the limit of the continental shelf on submarine ridges shall not exceed 350 miles from the territorial sea baseline.

Although the United States has not yet determined the outer limit of its continental margin, it has recognized Article 76 as reflecting customary international law. On November 17, 1987, the Interagency Group on the Law of the Sea and Ocean Policy established the policy of the United States on delimitation of the outer limit of the U.S. continental shelf. The Interagency Group decision, reflected in a memorandum of November 17, 1987, provided “that the delimitation provisions of Article 76 of the 1982 United

Nations Convention on the Law of the Sea reflect customary international law and that the United States will use these rules when delimiting its continental shelf and in evaluating the continental shelf claims of other countries.”¹²

Attached to that memorandum was the statement of policy, which reads:

**United States Policy Governing
The Continental Shelf of the United States of America**

After reviewing the question of how to define and delimit the continental shelf of the United States and its island territories and overseas possessions, the Interagency Group on Ocean Policy and Law of the Sea has determined that the proper definition and means of delimitation in international law are reflected in Article 76 of the 1982 United Nations Convention on the Law of the Sea. The United States has exercised and shall continue to exercise jurisdiction over its continental shelf in accordance with and to the full extent permitted by international law as reflected in Article 76, paragraphs (1), (2) and (3). At such time in the future that it is determined desirable to delimit the outer limit of the continental shelf of the United States beyond two hundred nautical miles from the baseline from which the territorial sea is measured, such delimitation shall be carried out in accordance with paragraphs (4), (5), (6) and (7).

No agency shall seek to delimit [the outer limit of the continental shelf] on behalf of the United States without first obtaining the concurrence of the Interagency Group for Ocean Policy and Law of the Sea. After delimitation is completed, the results of any such delimitation shall be reviewed by the Senior Interagency Group on Oceans Policy and Law of the Sea and transmitted to the President for review. If approved, the Department of State shall transmit charts depicting the delimitation and other relevant information to the Secretary-General of the United Nations and any other organizations as the Interagency Group shall determine to be desirable.

Because of the need to ensure that United States' practice is consistent with international law, before the continental shelf is delimited, an agency planning any leasing or licensing activity on the continental shelf beyond 200 nautical miles from the baseline from which the territorial sea is measured, shall provide notice to the Department of State for transmittal to the Interagency Group with a brief description of the location and type of activity. An opportunity for consultation and comment among all interested agencies shall be provided through the Interagency Group. The Interagency Group shall have 45 days to comment on the proposed action.

The United States shall continue to exercise its rights and duties pertaining to its continental shelf in accordance with international law.

Delimitation of the continental shelf between the United States and a neighboring State with an opposite or adjacent coast shall be determined by the United States and the other State concerned in accordance with equitable principles.

Excessive Claims

Since the mid-1970s, several countries have made general claims to the continental shelf that the United States believes exceed the provisions of the LOS Convention. For example, in 1976, the Government of **Pakistan** enacted a statute which purports to assert jurisdiction over the continental shelf of Pakistan in a manner which is contrary to international law. The United States Government protested as follows:

The Government of the United States also wishes to refer to those provisions of the Territorial Waters and Maritime Zones Act, 1976 which purport to assert jurisdiction over the continental shelf . . . in a manner which is contrary to international law, including, inter alia: a claim of authority to designate areas of the continental shelf . . . and to restrict navigation and certain other activities therein, and, a claim of authority to extend any law over, and to prescribe and enforce any regulation necessary to control the conduct of any person in, . . . the continental shelf . . . of Pakistan. The Government of the United States wishes to remind the Government of Pakistan that international law limits the jurisdiction which a coastal state may exercise in maritime areas. It is the view of the Government of the United States that the aforementioned claims made in the Territorial Waters and Maritime Zones Act, 1976 exceed such limits.

The Government of the United States therefore protests the assertions of jurisdiction made by the Government of Pakistan in the Territorial Waters and Maritime Zones Act, 1976, in so far as such claims are not valid in international law, and reserves its rights and those of its nationals in this regard.¹³

The Department provided the following additional information to American Embassy Islamabad:

As to the claims associated with the continental shelf . . ., we believe that if the Government of Pakistan has used the draft LOS treaty as its guide, it has not followed closely enough the treaty's specific provisions. The draft LOS treaty does not authorize a coastal State to exercise the type of jurisdiction claimed by the Government of Pakistan, such as the unlimited authority to designate areas within various maritime zones and to regulate to any extent considered necessary the use of such areas. And, if Government of Pakistan laws and regulations can be extended over claimed maritime zones without limitation, every human endeavor that might take place within hundreds of miles of the coast is being subjected to Government of Pakistan control. The Government of Pakistan cannot, in our opinion, cite any provision of the draft LOS treaty which authorizes it to claim such comprehensive authority over very broad ocean areas.¹⁴

The United States has protested similar legislation in the case of **Guyana**,¹⁵ **India**,¹⁶ **Mauritius**,¹⁷ and the **Seychelles**.¹⁸

At least two countries, Ecuador and Chile,¹⁹ have made specific continental shelf claims involving limits beyond 200 miles. In a 1985 Presidential Proclamation, the Government of **Ecuador** claimed the underseas Carnegie range

(Cordillera de Carnegie) as its continental shelf. This claim created a “bridge” between the 200-mile limits drawn from Ecuador’s mainland and from the Galapagos Islands. A 100-mile continental shelf was claimed on either side of the 2,500 meter isobath along this ridge. Ecuador applied Article 75(6) of the LOS Convention which sets these maximum limits, but did so without first satisfying the physical criteria set forth in Article 76(4). (It is unlikely that Ecuador could satisfy the sedimentary rock thickness test since this cordillera is an oceanic ridge.) The United States Government protested this claim in 1986, in a note which included the following:

refers to a proclamation of 19 September [1985] by President Febres Cordero on the continental shelf of Ecuador that states, i.e., that “. . . in addition to the continental and island shelves in Ecuador’s 200 mile territorial sea, the seabed and subsoil between its continental territorial sea and the territorial sea around the archipelago De Colon [Galapagos Islands] for a distance of 100 miles from the isobath at a depth of 2,500 meters also form part of Ecuador’s continental shelf.”

Customary international law on delimitation of the continental shelf as reflected in Article 76 of the Law of the Sea Convention provides that the continental shelf of a coastal State extends throughout the natural prolongation of its land territory to the 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. Article 76(4) further provides that when the outer edge of the continental margin does extend beyond the aforementioned 200 nautical mile distance the outer limit of the continental shelf either: (a) coincides with fixed points at each of which the thickness of sedimentary rocks is at least 1 percent of the shortest distance from such point to the foot of the continental slope; or (b) coincides with fixed points not more than 60 nautical miles from the foot of the continental slope.

In its 19 September proclamation Ecuador has apparently relied on article 76(5) which provides: “the fixed points comprising the line of the outer limits of the continental shelf on the seabed, drawn in accordance with paragraph 4(a)(i) and (ii), either shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured or shall not exceed 100 nautical miles from the 2,500 meter isobath, which is a line connecting the depth of 2,500 meters.”

Article 76(5) may, however, only be invoked if either of the conditions precedent in article 76(4) cited above are fulfilled. We believe these conditions cannot be invoked in support of the Ecuadorian position. Therefore, it is the view of the United States that part of Ecuador’s continental shelf claim falling beyond the 200 mile exclusive economic zone off the coasts of the Galapagos Islands and mainland Ecuador are without legal foundation. For the above reason, the United States does not recognize that part of the Ecuadorian continental shelf claim which extends beyond 200 miles from the baselines properly drawn in accordance with LOS Convention articles 5 and 7, from which the territorial sea is measured.

. . .

In light of the foregoing, the United States reserves for itself and its nationals all rights in accordance with international law which are contravened by all the claims of Ecuador referred to above.²⁰

Chile also has made a claim to the continental shelf that exceeds the provisions of the LOS Convention. In 1985, Chile claimed a continental shelf of 350 miles around its Pacific Ocean territories of Easter Island and Sala Y Gomez Island.²¹ Chile, however, failed to prove, under Article 76(4), that the continental shelf extends to 200 miles, much less to 350 miles. The United States protested the claim in May 1986, in a note that states in part:

In its September 12, 1985 statement Chile has relied on article 76(6) of the 1982 Law of the Sea Convention, which provides: "Notwithstanding the provisions of paragraph 5, on submarine ridges, the outer limit of the continental shelf shall not exceed 350 nautical miles from the baselines from which the breadth of the territorial sea is measured. This paragraph does not apply to submarine elevations that are natural components of the continental margin, such as its plateaux, rises, caps, banks and spurs."

Article 76(6) may, however, only be invoked if the conditions precedent in article 76(4) cited above are fulfilled. The Government of the United States does not believe that these conditions can be met in these cases. Therefore, it is the position of the United States that part of Chile's continental shelf claim falling beyond a 200 nautical mile limit is without legal foundation. For the above reason, the United States does not recognize that part of the Chilean continental shelf claim off Sala y Gomez and Easter Islands, which extends beyond 200 miles from the baselines from which the territorial sea is measured, properly drawn in accordance with international law. In light of the foregoing, the United States reserves for itself and its nationals all rights in accordance with international law which are contravened by all the claims of Chile referred to above.²²

Notes

1. OFFSHORE CONSULTANTS, INC., NAVIGATIONAL RESTRICTIONS WITHIN THE NEW LOS CONTEXT: GEOGRAPHICAL IMPLICATIONS FOR THE UNITED STATES 22-23 (L.M. Alexander, ed., Final Report under Defense Supply Service Contract 903-84-C-0276, Dec. 1986) [hereinafter ALEXANDER, NAVIGATIONAL RESTRICTIONS].

2. Presidential Proclamation No. 2667, Sept. 28, 1945, 3 C.F.R. 67 (1943-48 Comp.), 13 DEP'T ST. BULL., Sept. 30, 1945, at 484-85, 4 WHITEMAN, DIGEST OF INTERNATIONAL LAW 752-64 (1965).

3. 15 U.S.T. 471, T.I.A.S. No. 5578, 499 U.N.T.S. 311, entered in force June 10, 1964.

4. *Case Concerning Delimitation of the Maritime Boundary of the Gulf of Maine (Canada v. United States)*, 1984 I.C.J. 246, 294; 2 RESTATEMENT (THIRD), FOREIGN RELATIONS LAW OF THE UNITED STATES, § 515 Cmt. a & Reporter's Note 1, at 66-69; SOHN & GUSTAFSON, THE LAW OF THE SEA 158 (1984). *Contra*, WALLACE, Introduction, 1 INTERNATIONAL BOUNDARY CASES: THE CONTINENTAL SHELF 38 (1992).

5. LOS Convention, article 78.

6. U.S. statement in right of reply, Mar. 8, 1983, U.N. Doc. A/CONF.62/WS/37, 17 Official Records of the Third U.N. Conference on the Law of the Sea 244.

7. Cf. LOS Convention, articles 33 and 303.
8. Continental Shelf Convention, articles 1-3 & 5; LOS Convention, articles 60(7), 76-78 & 80-81.
9. Commentary of the International Law Commission on draft articles 27 and 35 on the Law of the Sea, U.N. GAOR Supp. 9, U.N. Doc. A/3159, II Int'l L. Com. Y.B. 278 & 281 (1956).
10. See *supra* n. 6.
11. The France (New Caledonia)-Australia Continental Shelf Boundary Agreement of January 4, 1982 divides the continental shelf beyond 200 miles east of Fraser Island. PRESCOTT, MARITIME AND POLITICAL BOUNDARIES OF THE WORLD 191. The Fourth Special Antarctic Treaty Consultative Meeting on Antarctic Mineral Resources agreed that the "geographic extent of the continental shelf referred to in Article 5(3) of the Convention [on the Regulation of Antarctic Mineral Resource Activities] would be determined by reference to all the criteria and the rules embodied in paragraphs 1 to 7 of Article 76 of the United Nations Convention on the Law of the Sea." Final Act 4, Wellington, June 2, 1988, 27 I.L.M. 866 (1988). On the other hand, the Court of Arbitration for the delimitation of maritime areas between Canada and France considered it was not competent to effect a delimitation beyond 200 miles from St. Pierre and Miquelon, because the international community was not represented before the Court. Decision paras. 75-82, *reprinted in* 31 I.L.M. at 1171-73 (1992).
12. Memorandum from Assistant Secretary John D. Negroponte to Deputy Legal Adviser Elizabeth Verville, Nov. 17, 1987, State Department File No. P89 0140-0428.
13. Diplomatic Note No. 694 dated June 8, 1982, from American Embassy Islamabad pursuant to instructions contained in State Department telegram 155385, June 7, 1982. American Embassy Islamabad telegram 09069, June 14, 1982.
14. State Department telegram 155385, June 7, 1982.
15. American Embassy Georgetown Diplomatic Note dated July 20, 1982, pursuant to instructions contained in State Department telegram 194561, July 14, 1982. American Embassy Georgetown telegram 03242, July 23, 1982.
16. American Embassy New Delhi Diplomatic Note delivered May 13 & 16, 1983, pursuant to instructions contained in State Department telegram 128220, May 9, 1983. American Embassy New Delhi telegram 09947, May 16, 1983.
17. American Embassy Port Louis Diplomatic Note dated July 27, 1982, pursuant to instructions contained in State Department telegram 204808, July 23, 1982. American Embassy Port Louis telegram 02502, July 28, 1982.
18. American Embassy Victoria Diplomatic Note No. 37, dated July 8, 1982, pursuant to instructions contained in State Department telegram 156775, June 8, 1982. American Embassy Victoria telegram 01170, July 14, 1982.
19. In 1985 Iceland adopted Regulation No. 196 of May 9, 1985, defining the borders of its continental shelf, in part a 350-mile distance line from Iceland and in part extending beyond 350 miles from Iceland a line 60 miles beyond the foot of the continental slope, and saying explicitly that Article 76 of the LOS Convention had been used to define the boundaries where applicable. U.N. Legislation on the Continental Shelf at 127. On June 16, 1985, the United Kingdom protested this claim on the grounds that there was "no link of any kind between Iceland and the Hatton/Rockall plateau" and "the Icelandic Regulations have no basis in international law." 56 Brit. Y.B. Int'l L. 1985, at 493 & 494 (1986).
20. Diplomatic Note delivered Feb. 24, 1986 by American Embassy Quito. State Department telegram 033256, Feb. 3, 1986; American Embassy Quito telegram 01651, Feb. 25, 1986. France and the Federal Republic of Germany also have protested this claim by Ecuador. See Treves, *Codification de Droit International et Pratique des Etats dans le Droit de la Mer*, 223 Recueil des Cours 98 (1990-IV, 1991). Ecuador's continental shelf proclamation may be found at U.N. Legislation on the Continental Shelf, at 82. See *supra* Chapter V n. 4 for the U.S. protests of Ecuador's 200-mile territorial sea claim first made in 1966.
21. Chile's September 12, 1985, claim may be found in U.N. Office for Ocean Affairs and the Law of the Sea, *The Law of the Sea, National Legislation on the Continental Shelf*, at 62 (U.N. Sales No. E.89.v.5, 1989) [hereinafter U.N. Legislation on the Continental Shelf].
22. Diplomatic Note delivered May 20, 1986, by American Embassy Santiago. State Department telegram 153793, May 15, 1986; American Embassy Santiago telegram 03167, May 22, 1986. In December 1986, France and the Federal Republic of Germany also protested the claim by Chile. See Treves, 223 Recueil des Cours 97 (1990-IV) (Germany). These Chilean and Ecuadoran claims and the U.S. protests are analyzed in Ramakrishna, Bowen & Archer, *Outer Limits of Continental Shelf*, Marine Policy, Jan. 1987, at 58-60.