# THE ACQUISITION OF THE RESOURCES OF THE BOTTOM OF THE SEA -- A NEW FRONTIER OF INTERNATIONAL LAW

by

LCDR Richard J. Grunawalt, USN
14th Career Class
1966

# THE ACQUISITION OF THE RESOURCES OF THE BOTTOM OF THE SEA -- A NEW FRONTIER OF INTERNATIONAL LAW

A THESIS

PRESENTED TO

THE JUDGE ADVOCATE GENERAL'S SCHOOL, U.S. ARMY

The opinions and conclusions expressed herein are those of the individual student author and do not necessarily represent the views of either The Judge Advocate General's School, U.S. Army, or any other governmental agency. References to this study should include the foregoing statement.

by

Lieutenant Commander Richard J. Grunawalt, U. S. Navy

April 1966

## SCOPE

An examination of the means whereby States have sought to acquire dominion over the resources of the bed of the sea and its subsoil, with particular emphasis on the inherent difficulties in applying recognized principles of territorial acquisition, coupled with an analysis of those provisions of the 1958 Geneva Convention on the Continental Shelf pertaining to the extension of a coastal State's 'sovereign rights' over such resources down to and beyond a depth of 200 meters. The thesis also examines the problems which have not been resolved by the 1958 Convention, as well as the practical necessity of their solution, and suggested solutions are offered.

TABLE OF CONTENTS

TABLE OF CONTENTS

Chapter Pages

# THE ACQUISITION OF THE RESOURCES OF THE BOTTOM OF THE SEA -- A NEW FRONTIER OF INTERNATIONAL LAW

## Chapter I. Introduction

### A. General Introduction and Premise

The race to space has undoubtedly captured the imagination of the world. The vast reaches of outer-space are yielding up their secrets at an astonishing rate and the peoples of all nations are turning their eyes away from earthly anguish to gaze with awe into the heavens, for we have been told that man's destiny is in the stars. Man's destiny may be in the stars but it is submitted that his very survival is locked beneath the sea. It is the conquest of inner space rather than outer space that will provide mankind with the food, the fuel and the minerals necessary to free the world of want and famine. Man may dream of visiting other planets but the wherewithal to make that journey will most assuredly come from the sea. The peaceful and orderly exploration and exploitation of outer space is, of course, important, but the peaceful and orderly exploration and exploitation of the bottom of the sea is nothing less than essential.

# THE ADJUDICATION OF THE CONFLICTS OF THE RULES OF THE SEA IN A NEW CONCEPTION OF INTERNATIONAL LAW

## CHAPTER I. INTRODUCTION

### A. General Introduction and Criteria

The idea to divide the international regulations of the world. The main reasons of international law pertaining to basic decisions by an authoritative and the language of all nations are changing rapidly. Not only does actually adapted to that with new life. The reasons, but we have been told some men's desire. It is the other. Man's conflict has to be the other but. It is authorized that his very material to looked up. Man the sea. It is the conquest of human space matter. The other upper land will provide material with the sea. The land and the minerals necessary to know the world of work and income. The key areas of relating water pressure. But the commercial or the land journey will work answer. All view from the sea. The geometric and economic regulations and modifications of other nations is, of course, in-. But the geometric and totally multiplication and modifications of the nations of the sea is working land. Our conscious.

The study of the development of the law which seeks to provide the community of nations with the ability to harvest the riches of the bed of the sea is both fascinating and challenging. It will be the purpose of this paper to analyze the development of the law, as we know it today, in order that we may understand its application and, more importantly, that we may recognize its limitations. It is the premise of this study that the continued development of a body of international law under which the peaceful and orderly exploration and exploitation of the bottom of the sea can proceed, depends, in great measure, upon our full comprehension of how and why the 'doctrine of the continental shelf' evolved. Generally speaking, 'the doctrine of the continental shelf' refers to that concept whereby the resources of the seabed and the subsoil of the continental shelf are subject, ipso jure, to the exclusive jurisdiction of the coastal State for purposes of exploration and exploitation.

B. <u>The Continental Shelf Defined</u>

It is imperative at the outset to examine just what is meant by the term 'continental shelf'. In order to

The study of the development of the law which seeks to provide the community of nations with the ability to survive the pitfalls of the bed of the sea is both fascinating and challenging. It will be the purpose of this paper to analyze the development of the law, as we know it today, in order that we may understand its application and, more importantly, that we may recognize its limitations. It is the premise of this study that the evolutionary development of a body of international law rather than the practical and orderly regulation and exploitation of the bottom of the sea was premature, dangerous, in point, economic, upon may civil correspondence of law and only the 'doctrine of the continental shelf' evolved. Generally speaking, 'the doctrine of the continental shelf' refers to that massive underwater the extension of the seabed and the subsoil of the continental shelf are subject, like land, to the exclusive jurisdiction of the coastal state for purposes of exploration and exploitation.

B. The Continental Shelf Defined

It is important at the outset to examine just what is meant by the term 'continental shelf'. In order to

avoid any undue confusion in terms, one must recognize that the geological-geographical definition and the legal definition are separate and distinct, one from the other. To the scientist, the continental shelf is the submarine extention of the continental landmass from the low water line into the sea to where there is a marked increase in slope to the great depth. The outer edge or rim of the continental shelf may be at a depth of more than 200 fathoms or at less than 65 fathoms, depending upon the configuration of the shelf itself. Generally speaking, however, the rim of the shelf, i.e. the point where there is a marked increase of slope to greater depths, is found at or near the 100 fathom isobath.[1]

The breadth of the continental shelf varies a great deal more dramatically than does its depth. The shelf may vary from less than 1 to more than 800 miles in width.[2] In some areas, such as off the coast of Peru

---

1. Scientific Considerations Relating to the Continental Shelf, U.N. Doc. No. A/CONF. 13/2 (1957).

2. Mouton, The Continental Shelf 22 (1952) [hereinafter cited as Mouton].

avoid any overlap occasioned by error, one must consider that the geological-geographical distribution and the local variations are possible and distinct. One sees the other, on the minerals. The continental shelf is the location situation of the continental landmass from the low water line into the sea to where there is a marked increase in slope to the ocean floor. The outer edge of this of the continental shelf may be at a depth of more than 200 fathoms or as low than 10 fathoms, depending upon the configuration of the shelf itself. Generally speaking, however, the rim of the shelf, i.e. the point where there is a marked increase of slope to greater depth, is found at or near the 100 fathom level.[1]

The transition of the continental shelf marks a great deal more dramatically than does its depth. The shelf may vary from less than 1 to more than 300 miles in width.[2] In some areas, such as off the west coast of

---

1. Relationship Commissioners Minutes of the Continental Shelf, U.S. Dep. Sp. A/CONF. 13/2 (1958).

2. Emery, The Continental Shelf 27 (1952) (mimeographed video 24 Dec.).

and Chile, the shelf may be virtually nonexistant. The total area of the continental and insular shelf has been estimated at between 10 1/2 and 11 million square miles, or about 18% of the total dry land area of the world.[3] Of this total area of the continental shelf, approximately 1 million square miles is contiguous to the coasts of the continental United States and Alaska.[4]

The continental slope may be defined as that part of the submarine extension of the continental and insular land masses which begins at the outer edge of the shelf and slopes into the great depths. These sloping sides of the continental shelf vary considerably in their steepness and no precise degree of declivity can therefore be established. The term continental terrace refers to the "zone around the continents, extending from the low-water line, to the base of the continental slope."[5]

---

3. Franklin, The Law of the Sea: Some Recent Developments, 53 Naval War College Blue Book Series 14 (1961) [hereinafter cited as Franklin].

4. Pratt, Petroleum on Continental Shelves, 31 Bull. of the American A. of Petroleum Geologists 657-58 (1947) [hereinafter cited as Pratt].

5. U.N. Doc. No. A/CONF. 13/2, Supra Note 1.

and train, one might say to relatively nonexistent. The total area of the continental and insular shelf has been estimated at between 12 1/2 and 15 million square miles, or about 1/20 of the total dry land area of the world.[3] Of this total area of the continental shelf, approximately 1 million square miles is contiguous to the coasts of the continental United States and Alaska.[4]

The continental shelf may be defined as that part of the submerged extension of the continental and insular land masses which begins at the water edge or low water and slopes into the ocean depths. Usual depth edge of the continental shelf vary considerably in their elevation and in general depend on geologic processes in evolution. The back continental margins in the "main ocean" the continents, extending from the low-water line, to the base of the continental slope.[5]

---

3. Francis, The Law of the Sea: from Panama Declaration to Geneva, 23 Univ. Mar Miami Rev. Rev. Review 12 (1968) (hereinafter cited as Francis).

4. Ibid. Convention on Territorial Waters. 15 Ibid. of the Convention A. of Territorial Waters 2(1-4) (1971) (hereinafter cited as Ibid).

5. U.S. Dept. Do. Ecoar. 1(7). Hereinafter Dept 1.

The great irregularity in the configuration of the shelf prevents the geological definition from attaining any degree of certitude or fixity of dimension. If the term 'continental shelf' is to have any useful meaning in the law a more precise definition would appear to be necessary to prevent controversy. It is for this reason that the legal definition of the shelf has developed somewhat apart from geological reality. It is important that this distinction be recognized in as much as this difficulty of definition is one of the most persistant problems in this area of the law.

## C. THE IMPORTANCE OF THE CONTINENTAL SHELF

The treasures locked beneath the continental shelf are practically inestimatable. Undoubtedly one of the most valuable resources of the shelf is petroleum. Pratt suggests that there may be more than 1,000 billion barrels of oil contained in the continental shelf, which is several hundred times the world's present annual con-

The usual irregularity in the compilation of the data prevent the publication statistics good utilization by any degree of reliable or clarity of measure. In the very 'sophisticated world' is to have any model meaning in the law is more precise definition could appear to be necessary to prevent misunderstanding. It is for this reason that the legal obligation of the model law developed somewhat appear from philosophy reality. It is important that the distortion be recognized in so much as this difficulty of statistics is one of the more important problems in this area of the law.

6. The Jurisdiction of the Conciliator Board

The "Vancouver Sunday Sentinel and commercial advisory provincially jurisdiction. Undoubtedly one of the most reliable resources of the study is positive. Study suggests that there may be more than 1,000 million tax-exempt of all contained in the commissioned school, where is several thousand times the world's general annual com-

sumption.[6] Gypsum, manganese, sulfur, coal, iron, phosphates, gold, platinum, tin, tungsten and titanium are but a few of the many minerals and hydrocarbons capable of being obtained from the shelf.[7] The vast reservoir of natural gas which has been discovered and which is now being exploited beneath the bed of the North Sea represents but one example of the tremendous wealth of the continental shelf.

While the mineral and petroleum resources of the shelf illustrate most strikingly the wealth of the seabed and it's subsoil, the rich and varied living resources of the shelf must not be underestimated. Pearl and chank fisheries, and sponge, coral and oyster beds have been economically exploited for decades and, in some instances, centuries. The king crab fisheries in the Bering Sea

---

6. Pratt 672. Weeks estimates that over 60 countries are currently involved in off-shore oil exploration. Weeks, World Off-shore Petroleum Resources, 49 Bull. of the American A. of Petroleum Geologists 1680, 1687 (1965).

7. Amador, The Exploitation and Conservation of the Resources of the Sea 89 (2nd ed. 1959) [hereinafter cited as Amador].

[illegible] [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible], [illegible] are but a few of the many elements and hydrocarbons capable of being obtained from the shale.[7] The very chemicals of colored gas which have been discovered and which is now being exploited [illegible] the bed of the North Sea represents but one example of the tremendous wealth of the continental shelf.

While the natural and petrochemical resources of the shelf illustrate most vividly the wealth of the United States's subsoil, the rich and varied living resources of the shelf must not be underestimated. Small and [illegible] fisheries, and [illegible], [illegible] and oyster beds have been economically exploited for decades and, in some instances, centuries. The [illegible] fisheries in the United States

---

6. Stats 271. Some estimates have [illegible] 60 [illegible] are currently involved in off-shore oil exploration. [illegible], Shelf Petroleum Exploration Economics, 40 Bus. of the American L. of Petroleum Geologists 1605, 1607 (1971).

7. Gaston, The Exploitation and Conservation of the Resources of the Sea 27 (2d ed. 1970) (hereinafter cited as Gaston).

alone is a multimillion dollar industry. Moreover, the potential of the continental shelf to supply food for the world's ever expanding population has only recently been significantly appreciated.[8]

The value of the resources of the continental shelf depends, practically speaking, upon the technical competance of those who wish to exploit them. Pearl and chank fisheries have long been commercially valuable because they have long been subject to man's exploitational competance. Off-shore oil and gas wells, on the other hand, are relatively new developments and the petroleum resources of the shelf have therefore been of commercial value for but a short period of time. As man's ability to exploit the resources of the shelf began to develop, the nations of the world quite naturally began to assert claims over the seabed and it's subsoil and the search for precedent in international law upon which to base individual claims began.

---

8. For a discussion of the sea's potential to supply the protein needed to feed the population explosion see Alverson and Schaefers, Ocean Engineering--Its Application to the Harvest of Living Resources, 1 Ocean Science and Ocean Engineering 158 (1965).

alone is a multibillion dollar industry. Moreover, the potential of the continental shelf to supply food for the world's ever expanding population has only recently been significantly appreciated.[8]

The value of the resources of the continental shelf depends, practically speaking, upon the technical capacities of those who wish to exploit them. Coal and ocean fisheries have long been commercially valuable because they have long been subject to man's single/joint cooperation. Oil-shale oil and gas yields, on the other hand, are relatively new developments and the principal resources of the shelf have therefore been of commercial value for a short period of time. As man's ability to exploit the resources of the shelf grows so intensely, the nations of the world vying vigorously both to expand claims over the seabed and it's subsoil and the search for workable in international law upon which to base individual claims begin.

---

8. The discussion of the sea's potential to supply the protein needed to feed the population explosion was discussed and dismissed. Ocean Engineering--The Application to the Uses of Living Resources, 1 Ocean Science and Ocean Engineering 101 (1969).

## CHAPTER II

## The Continental Shelf and Traditional International Law

### A. The Res Omnium Communis - Terra Nullius Dichotomy

With respect to that part of the geological-geographical continental shelf lying between low water mark and the outer edge of the territorial sea, customary international law decreed that sovereignty of the coastal state over territorial waters applied equally to the bed of the sea thereunder and to the skies above.[9] The continental shelf, for the purposes of this presentation, will be restricted to that part of the geological shelf which begins at the outer limit of the territorial sea.[10]

The basic question which confronted the international lawyer in his quest to determine the juridical status of the continental shelf hinged upon whether the

---

9. 4 Whiteman, Digest of International Law 7-13 (1965) [hereinafter cited as Whiteman].

10. The question of the breadth of the territorial sea is, of course, a continuing problem with many ramifications and no attempt will be made herein to analyze this area of the law.

the continental shelf and establishing international con-

A. [illegible] — Title Twelve Rule

with respect to that part of the continental-geomorphical continental shelf lying between low water mark and the outer edge of the territorial sea, quadrangle International Inc. decided that sovereignty of the coastal state over territorial waters applied equally to the bed of the sea thereunder and to the airs above. The continental shelf, for the purposes of this convention, will be restricted to that part of the geological shelf which begins at the outer limit of the territorial sea.[15]

The basis question which confronted the international lawyer in his quest to determine the validity of the continental shelf hinged upon whether the

---

15. 1 Whiteman, Digest of International Law 7-12 (1968) [hereinafter cited as Whiteman].

16. The question of the breadth of the territorial sea is, of course, a continuing problem with many ramifications and to attempt will be made herein to analyze this area of the law.

shelf was capable of being acquired by anyone. On the one hand were those who maintained that the shelf was, like the high seas, res omnium communis, that is belonging to all States equally, while others considered the shelf as being terra nullius. The term terra nullius pertains, in customary international law, to territory which is capable of being, but which has not yet been, acquired by any sovereign. The high seas, however, have long been regarded as being res omnium communis and thus incapable of being acquired by any State. One school of thought took the position that traditional international law dictates that the continental shelf, like the superjacent high seas, is incapable of acquisition and that the two should stand together.[11] Lauterpacht, taking the opposite approach, maintained that:

> ...there is no principle of international law-and certainly no principle of international practice-which makes the submarine areas share automatically the status of the high seas. Unlike the latter, they are not res omnium communis.[12]

---

11. Oda, A Reconsideration of the Continental Shelf Doctrine, 32 Tul. L. Rev. 21, 33 (1957-1958); 1 Gidel, LeDroit International Public de la Mer 213 (1932). See Waldock's analysis of this position in his paper. The Legal Basis of Claims to the Continental Shelf, 36 Transact. Grot. Soc'y 117 (1951) [hereinafter cited as Waldock].

12. Lauterpacht, Sovereignty Over Submarine Areas, 27 Brit. Yb. Int'l L. 376, 414 (1950) [hereinafter cited as Lauterpacht].

shall use equality of taking enjoyed by anyone. Or one may have those who maintained that the world was, like the city state, the *ultimate community*, that is belonging to all states equally, while others considered the world as being *merely* *million*. The have *been* *million* partial, in customary international law, to complicity which is capable of being, but which has not yet been, applied or any provision. The old week, however, have long been regarded as being *the* *public* *community* and thus incapable of being acquired by any state. One school of thought took the position that traditional international law limited that the territorial shall, like the juxtapo- posed city area, is incapable of acquisition and that the two should stand together.[11] Lauterpacht, taking the opposite approach, maintained that:

> ...there is no principle of international law-and certainly no principle of international practice-which makes the property rights under automatically the status of the city area. Unlike the tribal, they are not *the* *public* *community*.[12]

---

11. Ibid. A Jurisprudentia of the Contemporary Public Jurists, 32 Ill. L. Rev. 21, 24 (1927-1928); I Wheat. Cases in International Public Law 32 (1931). Gen Wolfson's analysis of this position in his 113 (1931). Gen Wolfson's *The Legal Basis of Claims to the Continental Shelf*, 15 Toronto. Univ. Law's 117 (1931) [hereinafter cited as Wolfson].

12. Lauterpacht, *Sovereignty over Submarine Areas*, 27 Brit. Yb. Int'l L. 376, 414 (1950) [hereinafter cited as Lauterpacht].

Hackworth indicates that the subsoil beneath the seabed is terra nullius and thus open to acquisition. Hackworth's reference to the subsoil of the shelf, in contradistinction to the seabed, is illustrative of a further refinement of the difference of opinion which existed among international lawyers in this area. Since the subsoil is capable of being penetrated by tunnels originating from the territory of the littoral State, without any necessity of piercing the infinitesimally thin layer lying above, there exists the possibility of exploiting the subsoil without interfering with the sanctity of the high seas.[13] For those who were unable to accept Lauterpacht's concept of the separability of the seabed and the superjacent high seas, this distinction was important.

In considering the argument that there are but two regimes in the community of international law--the land mass consisting of state territory and terra nullius,

---

13. 1 Hackworth, Digest of International Law 396 (1940) [hereinafter cited as Hackworth]. Higgins and Colombos, while strongly contending that the bed of the sea is incapable of occupation by any state, accept this same distinction regarding the subsoil thereunder. See Higgins and Colombos, International Law of the Sea 55 (2nd ed. 1951).

[illegible] indicates that the council permits the sending in outer orbits and then open to negotiation. [illegible]'s reference to the assault of the shuttle, in contradistinction to the sender, is illustrative of a basic orientation of the difference of opinion which existed among international lawyers in this area. Since the council is capable of being convened to consider originating from the territory of the liberal state without any necessity of asserting the internationally this layer in-lon above, there exists the possibility of exploiting the subsoil without interfering with the availability of the high seas.[13] For those who were unable to accept lawyer's concept of the responsibility of the sender and the accelerated high seas, this distinction was important.

In considering the argument that there are no rights in the community of international lawyers and this consisting of state territory and outer orbits,

---

13. I [illegible], Rights of International Law 170 (1970) ([illegible] cited as Rights). Objects and Outcomes, while strongly contending that the bed of the sea is inadmissible of occupation by any state, argued this view distinctive emphasizing the economic interests. See Objects and Outcomes, Proceedings of the [illegible] 63 (2nd ed. 1971).

and the high seas--it is necessary to remember that international law has long been reluctant to admit of any encroachment on the concept of the freedom of the seas. The erection of installations upon the seabed would tend, to some extent, to hazard navigation, and projection of such installations above water would cause 'islands of sovereignty' to pockmark the face of the hitherto open sea. These notions are naturally repugnant to the view that the high seas are the common property of all nations and thus are not subject to the exclusive control of any one State.

If the continental shelf is regarded as being omnium communis, it follows that the exploitation of the shelf must be intrusted to the international community for the benefit of all nations.[14] Proposals of this nature are generally regarded as being impractical for many reasons and have been consistantly rejected by the practice of States.[15]

---

14. This position was taken by Mr. Shuhsi Hsu before the International Law Commission. See 1 Yearbook of the International Law Commission 215-16 (1950). Professor de la Pradelle, Sr., advocated much the same concept before the French Branch of the International Law Association in December of 1949. Professor Pradelle's views are discussed in Report of the 44th Conference of the International Law Association 91 (1950).

15. See Young, The Legal Status of Submarine Areas Beneath the High Seas, 45 Am. J. Int'l. L. 225 (1951).

and the high seas--it is necessary to preserve some international law as long seems relevant to admit of any reasonableness in the conduct of the business of the seas. The decision of international courts upon the seaing media that, of some nations, on lawful navigation, and application of such international courts would result 'failure of justice' in protecting the area of the ultimate open sea. These nations are naturally reluctant to the view that the high seas are the common property of all nations and that are not subject to the authority vested of any one state.

In the constitutional model as adopted as being [illegible] [illegible] the regulation of the world seas be intended to the international community for the benefit of all nations.[14] Proposals of this nature are generally regarded as being inconsistent the many reasons and have been unfortunately evaluated by the practice of states.[15]

---

14. This position was taken by Dr. Edward Gay before the International Law Association. See I Transact of the International Law Association 212-13 (1926). Tribunal de la Haye(1), 27., advocated such the same [illegible] before the Tokyo Branch Branch of the International Law Association in December of 1924. Professor Brierly's views are discussed in Report of the 44th Conference of the International Law Association 81 (1950).

15. See Tenny, The Legal Status of Fishing Areas Beyond the High Seas, 12 Am. U. Dec'L. 51 221 (1931).

Even prior to the development of off-shore petroleum exploitation, the theory that international law classified the seabed as res omnium communis, and thus on all fours with the waters of the high seas, satisfied very few people. In fact the contrary position has some precedent dating back several centuries. Feith made the following commentary on this aspect of the development of the continental shelf doctrine:

> At all times and in many parts of the world coastal States, have, without incurring any protests, undertaken the development of seabed and subsoil resources lying outside territorial waters whenever this was technically possible.
>
> As soon as technical progress is so far advanced that, in spite of the depth of the sea, the sea-bed or its subsoil can usefully be developed, no-one in practice is prepared to assert that the mineral or other resources to be obtained from the sea-bed and its subsoil by such development are resources belonging to the community of nations, which no State or individual can or may appropriate. Such sea-bed and subsoil resources have always found an owner, in spite of the view of many writers that the sea-bed and its subsoil are 'res communis'. And there is no doubt that international law has sanctioned such appropriations, even though it is in conflict with the idea of 'res communis.' [16]

---

16. Feith, Report of the Committee on Rights to the Sea-bed and its Subsoil, Report of the 44th Conference of the International Law Association 90 (1950).

Feith's view is of particular value in that he recognized that States will not accept any 'solution' to the problem which is not practical of application and which ignores the political and economic realities of the world. The practice of States, as Feith suggests, indicates that the doctrine of the freedom of the high seas demands only that there not be an unreasonable interference with the high seas by operations conducted on the continental shelf.

B. The Recognized Modes of Territorial Acquisition

Once we abandon the *res communis* approach and accept the idea that the shelf is capable of being acquired by a State, we are then faced with the problem of determining how this acquisition can legitimately be accomplished. Those who viewed the seabed and its subsoil as *terra nullius*, that is like land territory without a master, turned to recognized modes of acquisition of land territory for the solution to the problem. Generally speaking, there are five principle modes of acquiring land territory, namely: cession, subjugation, accretion,

Fairly's view, it is of particular value in that he recognized that Africa will not accept any 'solution' to the problem which is not consistent of emphasizing and using income the political and economic realities of the world. The question of status, as Fairly suggests, indicates that the decision of the Freedom of the Air area demands only that there not be an unreasonable interference with the air area by operations conducted on the continental shelf.

B. The Geneva Code of Territorial Waters

Once we accept the the concept approach and accept the idea that the shelf is capable of being occupied by a state, we are then faced with the problem of determining the exact acquisition can logically be accomplished. Those who attend the meeting and tell almost it terms million, lead to the that workshop without a maker, turned to economical modes of acquisition of land territory for the solution to the problem. Generally speaking, there are five principle modes of acquiring land territory: cession, revolution, subjugation, accretion,

prescription and occupation.[17] Cession and subjugation are inapplicable to our inquiry but accretion, prescription and occupation have all, to some extent, been advanced in support of continental shelf claims.

### 1. Accretion

Accretion, in general terms, refers to the process by which new land is created as when islands rise out of the sea, or by alluvions or delta process.[18] This mode has been advanced as one possible theory upon which sovereignty over the shelf can be claimed by the coastal State. The gist of this position seems to rest upon the assumption that the shelf is essentially an embankment formed by the dumping of continental detritus upon the continental slopes, similar to the delta process at the mouth of a river.[19]

---

17. 1 Oppenheim, International Law 546 (8th ed. Lauterpacht 1955) [hereinafter cited as Oppenheim].

18. Id. at 564.

19. Kuenem, The Formation of the Continental Terrace, 7 Advancement of Science 25 (1950).

[illegible] and [illegible].[17] Treaties and [illegible] are [illegible] to the [illegible] [illegible], [illegible] [illegible] and [illegible] [illegible] all, in [illegible], [illegible] [illegible] in support of [illegible] [illegible].

## 1. Accretion

Accretion, in general terms, refers to the process by which new land is created as sand islands rise out of the sea, or by alluvion or [illegible] process.[18] This mode has been advanced as the possible theory upon which [illegible] over the [illegible] can be claimed by the coastal state. The [illegible] of this position [illegible] to rest upon the assumption that the [illegible] is [illegible] [illegible] caused by the [illegible] of [illegible] [illegible] upon the [illegible] alone, [illegible] of the [illegible] process in the [illegible] of a river.[19]

---

17. [illegible], International Law [illegible] [illegible] [illegible] (1963) [unavailable cited as [illegible]].

18. Id. at 544.

19. [illegible], The Formation of the [illegible] [illegible] [illegible] of [illegible] [illegible] (1980).

It would appear that this analogy is more of an academic exercise than a rational examination of the facts and application of the law. In the first place, the notion that the shelf is but the accumulated sediments from the continent, which have been cut out of the land mass by the action of rivers, waves and wind, is only partially correct.[20] Moreover, to accept the notion that the continental sediment carries with it the sovereignty of the State from whence it came, as it spreads across the continental shelf, would necessarily complicate rather than simplify the problem.

## 2. Prescription

The concept that title to the bed of the sea could be acquired by prescription played an important role in the history of the development of the continental shelf doctrine. Title by prescription arises out of a long continued possession, where no original source of proprietary right can be shown to exist, or where the

---

20. Auguste, The Continental Shelf 31 (1960) [hereinafter cited as Auguste].

It would appear that this analogy is why it is ambiguous whether that a national evaluation of the terms and application of the law. In the first place, the notion that the result is not the accumulated estimate from the conditions, which have been put out of the land mass by the action of rivers, wind and ice, is only partially correct.[70] Moreover, to assert the notion that the continental shelves revolve with it the sovereignty of the state from which it came, is to ignore across the continental shelf would necessarily compliate rather than clarify the problem.

## 3. Prescription

The concept that title in the bed of the sea could be acquired by prescription played an important role in the history of the development of the continental shelf doctrine. Title to prescription arises out of a long continuous possession, which is original source of primary right can be shown to exist, as where the

---

70. Article, The Continental Shelf at (1946) [hereinafter cited as Bayonne].

possession was wrongful but the legitimate owner either did not or could not assert his own rights.[21] The basis for the concept is the preservation of order and stability in the international arena. In as much as the possession contemplated within this concept must be uninterrupted over a long period of time,[22] this mode of acquisition is of only limited application to the continental shelf. Yet such incidents as the development of pearl and chank fisheries in the Gulf of Manaar by the Portuguese, British and Dutch many years ago was important in that it resulted in the recognition that exclusive rights of exploitation of the resources of portions of the shelf could be acquired, and provided precedent for the rejection of the res omnium communis doctrine as it applied to the continental shelf.[23]

---

21. Hall, International Law 125 (8th ed. Higgins 1924). Whether prescription is an original or a derivative mode of acquisition is an academic rather than a practical question and need not concern us here. See Fenwick, International Law 357 (3rd Ed. 1948).

22. Johnson, Acquisitive Prescription in International Law, 27 Brit. Yb. Int'l L. 332 (1950).

23. Hurst, Whose is The Bed of The Sea?, 4 Brit. Yb. Int'l L. 34, 41 (1923-1924).

### 3. Occupation

Occupation is an original mode of acquisition which involves the intentional appropriation by a state of territory not already under the sovereignty of any other state.[24] Modern international law indicates that effective occupation, in contradistinction to fictitious occupation, is required, and that possession and administration are the two prerequisites to an effective occupation.[25] Unlike the theory of prescriptive acquisition of territory, occupation does not require a long, continued possession. The extent of the occupation which will suffice to establish title depends, in actual practice, upon the nature of the territory involved, and it would appear that the more remote and desolate the territory the less 'occupation' would be deemed necessary to acquire title.

The so called 'hinterland' and 'sphere of influence' theories were outgrowths of this view and are

---

24. 1 Hackworth 401.

25. 1 Oppenheim 557.

## 3. Conclusion

Competition is an original mode of association which involves the intentional appropriation by a person of something one already under the ownership of another person.[54] Modern international law illustrates effective occupation, in contradistinction to discovery, occupation, is original, and that possession and administration are the two prerequisites to an effective occupation.[55] Within the theory of prescriptive acquisition of territory, occupation does not require a long, continued possession. The nature of the occupation takes will differ in accordance with circumstances. In actual practice, upon the nature of the territory involved, one is would expect that the long years and consider the relation the term 'occupation' would be deemed necessary to acquire title.

The so called 'discovery' and 'power of disposition' theories have no foundation of rule also and are

---

54. L Oppenheim 681.

55. L Oppenheim 681.

illustrative of the uncertainty as to just what manner of occupation was required before a valid claim would be made out.[26] The continuity of unoccupied territory with that of occupied territory was once stated to be a sufficient basis for territorial claims. It was soon recognized that the concept of continuity[27] is more of a negation of than it is an exception to, the theory of effective occupation. In The Island of Palmas case, Max Huber, arbitrator, concluded that: "The title of contiguity, understood as a basis of territorial sovereignty, has no foundation in international law."[28] The Permanent Court of International Justice, however, in adjudicating the Case of Eastern Greenland,[29] gave

---

26. Fenwick, International Law 350 (3rd Ed. 1948).

27. The concept of 'continuity' seems to differ from the concept of 'contiguity' only in that the latter presupposes an intervening body of water between the existing state territory and that sought to be acquired. For the purposes of this paper the terms will be considered as synonymous.

28. The Island of Palmas, (United States v. Netherlands), 2 U.N. Rep. Int'l Arb. Awards 829 (1928).

29. Case of Eastern Greenland, P.C.I.J., Ser. A/B, No. 53 (1933).

[illegible] of the [illegible] as to just what means of complying [illegible] a valid claim would be made out.[76] The desirability of [illegible] territory upon [illegible] of occupied territory has been stated to be a sufficient basis for territorial claims. It has also been[illegible] that the [illegible] or [illegible][77] is [illegible] a [illegible] of land it is so [illegible] to, the [illegible] of effective [illegible]. In *The Island of Palmas* [illegible] has been, [illegible], concluded that "the title of sovereignty, understood as a basis of territorial [illegible], has its foundation in international law."[78] The Permanent Court of International Justice, however, in [illegible] the *Case of Eastern Greenland*,[79] [illegible]

---

76. [illegible], International Law 119 (2nd ed. 1960).

77. The concept of 'contiguity' seems to differ from the concept of 'continuity' only in that the latter emphasizes an intervening body of water between the existing state territory and that which is to be acquired. For the purposes of this paper the terms will be considered as synonymous.

78. *The Island of Palmas*, [United States v. Netherlands], 2 U.N. Rep. Int'l Arb. Awards 829 (1928).

79. *Case of Eastern Greenland*, P.C.I.J., Ser. A/B, No. 53 (1933).

some credence to the doctrine of continuity, as it applied to remote arctic areas unclaimed by any other power, by holding that the colonization of part of Greenland served as an effective occupation of the whole.

While the degree of control which is required to constitute effective occupation will vary, the weight of authority seems to indicate that continuity, as such, is insufficient to create title. Therefore, if we analogize between submarine areas and land territory, it appears that some form of effective occupation of the continental shelf would be required to convert it from terra nullius (if that is what it is) into national territory. Waldock was one of the foremost proponents of the application of the doctrine of acquisition by occupation, to the continental shelf. Waldock maintained that actual settlement or exploitation is not a sine qua non of effective occupation and that the degree of occupation necessary to effect the assumption of jurisdiction over the bed of the sea is far less than that which would be required of land territory. He stated that:

> ...the proximity--relation between the coastal State and the adjacent continental

> shelf--assumes importance, for it serves to add an element of effectiveness to what might be a paper occupation.[30]

This is in reality, no more than a rephrasing of the idea that continuity, although not in and of itself sufficient to establish a valid claim, is, non-the-less, of considerable importance in determining what shall be regarded as effective occupation. Waldock's attempt to reconcile the modern view of title by occupation with the realities of submarine area exploitation points out the difficulty inherent in applying concepts created to handle land area problems to the bed of the sea.

Young rejected Waldock's approach to the problem and argued that it would be improper to apply the concepts of effective occupation to the acquisition of submarine areas. He begins by pointing out the inherent difficulties in determining just what should constitute effective occupation below the surface of the sea. Young then makes a most important point by emphasizing that the application of the rule of occupation disregards the interests of the

---

30. Waldock 141.

adjacent coastal State. As Young so ably puts it:

> Rights would rest in the occupant, no matter whence he came or how tenuous his prior connection with the region. A principle which permitted such a situation would rightly seem intolerable to most coastal States, and especially so to one unable to proceed immediately with the development on its own account. Considerations of security, of trade and navigation, of pollution and of customs and revenue, would all militate against recognition of such a doctrine.[31]

It is important to note that the difference between the occupation theory proponents, such as Waldock, and the anti-occupation concept theorists, exemplified by Young, is one of approach rather than of result. Waldock's concept of a limited reaffirmance of the theory of continuity is in fact a recognition of the same problems which confronted Young. Waldock would modify the doctrine of effective occupation to fit the peculiar needs of submarine area acquisition by giving increased weight to claims made by littoral States in determining whether occupation is effective. Young rejects this dependancy on analogous rules and indicates that a new approach is necessary when he states that Waldock's view:

---

31. Young, The Legal Status of Submarine Areas Beneath the High Seas, 45 Am. J. Int'l L. 225, 230 (1951).

> ...reintroduces into international law the idea of fictitious occupation as a valid basis for title. That concept, found by experience to be a fertile breeder of controversy, has been largely rejected in modern times, save perhaps for the polar areas. The wisdom of readmitting it with respect to submarine areas is at least questionable. To insist that occupation is necessary under a general rule and then to admit a spurious occupation as sufficient, is devious reasoning. The necessity of a fiction strongly suggests that the problem is in the wrong pigeonhole, and that claims to submarine areas require different treatment from claims to land territory.[32] (Emphasis added.)

The basic premise resulting from the foregoing comments is that the problem of the acquisition of control and jurisdiction over the continental shelf does not lend itself to solution by the application of international law principles which were designed and developed in the context of land acquisition. Therefore, the concept developed that the continental shelf was neither *res omnium communis* nor *terra nullius* but was in law as it is in fact, separate and distinct from either dry land or high seas. A new 'pigeonhole' had to be acquired and we will now turn our attention to the practice of States to determine the nature of that pigeonhole.

---

32. *Id.* 230.

> "Antarctica's role in international law and the idea of territorial sovereignty as a valid basis for claim. This concept, formed by experience in a certain geography of inhospitality, has been largely replaced in modern times, even perhaps for the polar areas. The claims of sovereignty in this polar region resemble those in an land masses. To insist that occupation is necessary under a municipal rule and used to create a positive occupation as evidence, is a circular reasoning. The necessity of a [illegible] physical presence [illegible] is the other [illegible], and that claims to sovereignty arise regardless. Therefore this claims to land territory."(Emphasis added.)

The main problem resulting from the increasing commercial in land use problem of the application of control and jurisdiction over the continental shelf does not lend itself to priming by the application of international law principles which were developed and developed in the context of land acquisition. Therefore, the concept developed that the continental shelf was neither the mainland community nor terra nullius but was in law as it is in fact, separate and distinct from either any land or high seas. A new 'phenomenon' had to be acquired and we will now turn our attention to the practice of States to determine the nature of that phenomenon.

---

14. Id. 210.

## CHAPTER III

## The Practice of States

### A. The Truman Proclamation

It is not surprising that the United States, with its advanced technical competence, was one of the first States to be faced with the practical and pressing necessity for a solution to the problem of acquisition of jurisdiction and control over the continental shelf. The Truman Proclamation of 1945[33] must be considered as one of the most significant events in the development of the continental shelf doctrine.[34] Basically the Truman Proclamation declared that, (a) the world wide need for new resources, particularly petroleum and minerals, required that efforts to discover and develop such resources be encouraged; (b) that such resources lie beneath the continental shelf

---

33. Presidential Proclamation No. 2667, 10 Fed. Reg. 12303 (1945). The text of the Proclamation is appended hereto as Appendix A.

34. While the Truman Proclamation was foreshadowed to some extent by the United Kingdom-Venezuela Treaty of 1942 ([1942] Brit. T.S. No. 10.), which provided for the division of the seabed of the Gulf of Paria (between Venezuela and Trinidad) between them, the Truman Proclamation was the first clear cut statement of principle on the subject to be promulgated by any State.

and modern technology was capable of exploiting those resources; (c) that recognized jurisdiction over these resources is necessary in the interest of conservation and efficient utilization; (d) that the exercise of jurisdiction over the resources of the shelf by the contiguous State is just and reasonable; and (e) that therefore the United States regards the resources of the shelf contiguous to the United States as "appertaining to the United States, and subject to its jurisdiction and control." The Proclamation further states that the character of the high seas above the continental shelf was in no wise affected by the decree.

The Truman Proclamation made no attempt to define the term 'continental shelf.' A press release of the same date by the State Department, however, indicated that the shelf was delimited by the 100 fathom isobath.[35]

---

35. "Generally, submerged land which is contiguous to the continent and which is covered by no more than 100 fathoms (600 feet) of water is considered as the continental shelf." Press Release, 28 September, 1945, 13 U.S. Dep't State Bull. 484 (1945).

and where necessary, the ability of equitable share resources; (c) that requiring jurisdiction over those resources is tempered in the interest of conservation and efficient utilization; (d) that the exercise of jurisdiction over the resources at the final by the contiguous state is just and reasonable; and (e) that therefore the United States recognize the existence of the local territories to the United States as "quasi-ally to the United States, and subject to its jurisdiction and control." The resolutions further state that effective of the high seas above the continental shelf was in no way affected by the decree.

The Truman proclamation made no attempt to define the term "continental shelf." A great majority of the same term by the state delegations, however, believed that the shelf was delineated by the 200 fathom isobath.[3]

---

[3] "Generally, submerged land which is contiguous to the continent and which is covered by no more than 100 fathoms (600 feet) of water is considered as the continental shelf." Press release, U. Department, [illegible] U.S. Dep't State Bull. 484 (1945).

The essence of the Truman Proclamation is its expression of the principle that the littoral State has, as a matter of right, exclusive control and jurisdiction over the resources of the contiguous continental shelf. It is, therefore, a total rejection of the concept of res omnius communis as it pertains to the continental shelf and it avoids any attempt to found the assertion upon the terra nullius-occupation theory of acquisition of territory. It is then, in effect, an innovation to fit new circumstances. Rather than invoke customary international law as being analoyous, the proclamation seemed to be more of an expression of what the law should be than what the law was at that time. The justification for the action taken, as set forth in the Proclamation, may be summed up as (1) the shelf is an extention of the land mass of the contiguous State, (2) pools of petroleum underlying territorial waters frequently also extend beneath the waters of the high seas and (3) self protection compels the coastal State to keep watch over the activities off its shores.

Franklin takes the position that it would have been preferable to have also invoked recognized sources of international law in support of the Proclamation rather than to have avoided what precedent did exist.[36] It would seem, however, that the invocation of such sources would have been not only unnecessary but would have been unwise as well, since the Proclamation purports to fill a vaccum in the law rather than to displace existing doctrine. The Proclamation constituted a new and fresh approach to an area of great importance for which the established principles of international law held no clear solution. As Brierly once said:

> ...it is a mistake to think that by some ingenious manipulation of existing legal doctrines we can always find a solution for the problems of a changing international world. That is not so; for many of these problems ...the only remedy is that States should be willing to take measures to bring the legal situation into accord with new needs, and if States are not reasonable enough to do that, we must not expect the existing law to relieve them of the consequences.[37]

---

36. Franklin 41.

37. Brierly, The Law of Nations 264 (5th ed. 1955). Holland put the matter quite succinctly when he wrote: "Thus experience inexorably forces us to the conclusion that the outlines of a new rule of international law are ordained by moral, economic, political, and military factors, and not by recourse to analogous legal doctrine." Holland, Juridicial Status of the Continental Shelf, 30 Texas L. Rev. 586 (1952) [hereinafter cited as Holland].

Finally, where the position that is would have been considerable in this also involved constitutional matters of international law, it logical to the proscription entity that to have avoided what prominent jill author.[16] It would even, however, that the provisions of such decisions would have not only unnecessary but would have change as well, since the Prosecutor's purpose to kill a person in the law raises that to discharge military duties. The Nuremberg Tribunals a war are from opposing to an area of crime jurisdiction for which the nationalized authorities illegitimate the will to take politics. As Brierly [illegible]

> ...it is a mistake to assume that by some inscrutable manifestation of existing legal doctrine, we can always find a solution for the problems of a changing international world. That is not so; for many of these problems ... the only remedy in such cases would be willing to use measures to bring the legal situation into accord with new needs, and it seems that no reasonable method is to come, we must not ignore the reality for an abstract form of the relationship.[17]

---

16. Tawadrus 61.

17. Brierly, The Law of Nations 70; Ibid. 1955, Britain has the author jills available when to review. "The existence constitutional forces of the conditions and the training of a new file of international law are operated by social, economic, political, and military factors, and not of reasons to analyses legal doctrine." Jessup, Transnational Banks of the Contemporary World, 10 Yale L. Jr. 100 (1959) (describing other as defined).

In this same connection it should be noted that the Truman Proclamation spoke of 'control and jurisdiction' over resources of the shelf and did not invoke the term sovereignty. 'Sovereignty' undoubtly means different things to different people, and its inclusion in the Proclamation would have introduced more controversy than its exclusion ultimately did. Traditionally, sovereignty has been viewed as being vertical in nature, in that it extends both straight up into the atmosphere and straight down to the bowels of the earth.[38] If the Proclamation had asserted 'sovereignty' over the shelf, the term would therefore have been inconsistent with the express proviso that the superajacent high seas were unaffected. Hurst speaks of the 'zigzag' of sovereignty which would have resulted in that instance.[39] That is to say, the line demarking the extent of sovereignty would rise from the center of the earth to the outer rim of the shelf and then travel laterally along the shelf until territorial waters were reached, where it would again soar upward.

---

38. Hurst, The Continental Shelf, 34 Transact. Grot. Soc'y 153, 164 (1948).

39. Id. 164.

The point to be gleaned from these remarks is that the term 'sovereignty' has no precise meaning in this context and it would appear that very little purpose would have been served by interjecting this debate over semantics into the Proclamation. Quite likely the term was excluded in keeping with the decision to avoid any suggestion of an unreasonable encroachment upon the freedom of the seas.

B. Post-Truman Proclamation Developments

The Truman Proclamation was followed very shortly by a flurry of pronouncements from a large number of States asserting varying rights over the continental shelf beyond their territorial waters. These assertions were often similar, but occasionally far more extensive, than those of the United States as embodied in the Truman Proclamation. Certain of these States proclaimed 'sovereignty' over the shelf and the high seas above it as well. Argentina's claim, issued in October of 1946, declared that the epicontinental sea and the continental

shelf were 'subject to the sovereign power of the nation,'[40] and thus purported to assert sovereignty over all waters lying above the submarine platform, which extends as much as 500 miles from shore, subject only to the right of innocent passage.[41] Chile, Ecuador and Peru issued a joint declaration claiming 'exclusive sovereignty' over the seas ajacent to their coasts to a minimum distance of 200 nautical miles. The United States, together with a number of other maritime nations, took exception to these claims and filed protests against such action.[42] The Truman Proclamation, on the other hand, and other similarly limited claims, found virtually no opposition in the world community. In discussing the significance of the many and varied instruments asserting title to submarine areas, Lauterpacht stated:

---

40. The complete text of the Argentine Decree may be found in 41 Am. J. Int'l L. (Supp) 11 (1947).

41. See Reiff, The United States and The Treaty Law of the Sea, 307-7 (1959).

42. Id. 310. The text of the United States' letters of exception to these declarations can be found in 4 Whiteman 793-801.

Scott then "assumed so-called economic power of its nation,"[10] and then proceeded to assert constitutionally over all nations lying above the subscribed parallels, which consisted in much of 300 miles from shore, subject only to the right of innocent passage.[11] Chile, Ecuador and Peru listed a joint declaration claiming "exclusive sovereignty" over our same expanse to their coasts covering a maximum distance of 200 nautical miles. The United States, together with a number of other maritime nations, took exception to these claims and filed protests against such action.[12] The Truman proclamation, on the other hand, had other administrative related aims, based wholly on appurtenance to the world community. In eliminating the alienability of the deep and varied hydrocarbon resources exists in submerged areas, nevertheless stated:

---

10. The complete text of the Proclamation Decree may be found in 41 Am. J. Int'l L. (Supp) 11 (1947).

11. See Smith, The United States and The Freedom Law of the Sea, 347-7 (1958).

12. Id. 120. The text of the United States' Protest to claims to these declarations can be found in 4 Whiteman 700-702.

> ...none of them has drawn upon itself the protest of any State except in cases in which the proclamation of rights over the submarine areas has been used for asserting exorbitant claims lacking any foundation in law and alien to the apparant occasion which prompted them.[43]

By and large, the practice of States followed the Truman Proclamation lead and the general acquiescence of the international community to the assertion of jurisdiction and control over the resources of the shelf by the coastal State began to be regarded as evidence that a new rule of international law was in the making.

## C. The Formulation of a New Rule of Customary International Law

Oppenheim defines customary international law as follows:

> Whenever and as soon as a line of international conduct frequently adopted by States is considered legally obligatory or legally right, the rule which may be abstracted from such conduct is a rule of customary International Law.[44]

---

43. Lauterpacht 383. An analysis of the post Truman Proclamation assertions by various nations is contained in Franklin 49-63.

44. 1 Oppenheim 27.

> ...none of them has drawn upon itself the protest of any state except in cases in which the proclamation of rights over the maritime areas has been used for arbitrary territorial claims having no foundation in law and also to the exclusive fishing rights granted them.[13]

By such large, the practice of states followed the Truman Proclamation lead and the general acquiescence of the international community to the assertion of jurisdiction and control over the resources of the shelf by the coastal state began to be regarded as evidence that a new rule of international law was in the making.

## 5. The Formulation of a New Rule of Customary International Law

Commonly Called customary international law as follows:

> Customary and is seen as a line of international conduct frequently adopted by states is established legally obligatory or legally right. The rule which may be ascertained from such conduct is a rule of customary international law.[14]

---

13. Lauterpacht (ed). An analysis of the post Truman Proclamation assertions by various nations is published in Transcript 1949.

14. I Oppenheim 27.

In determining whether the continental shelf doctrine, as exemplified by the Truman Proclamation, may be regarded as a rule of customary international law, the absence of protest by the international community is undoubtedly a major factor. Of equal importance is the fact that the assertion of control and jurisdiction over the shelf adjacent to the coast by the littoral State does not in the opinion of this writer constitute a change of international law so much as it provides a concept to fill a gap in the existing law which had been silent on the subject. Surely if this new concept does no violence to existing law the time necessary to establish the concept as customary need not be so great. In as much as the Truman Proclamation, and others like it, were carefully drafted so as to avoid running afoul of any prohibition of existing law, the time that was necessary to establish the continental shelf doctrine as a rule of international law was relatively short.[45]

---

45. Lauterpacht also found considerable significance is the fact that leading maritime powers, such as the United States and Great Britain had accepted the doctrine in determining whether a customary rule had developed. Lauterpacht 376.

In determining whether the constitutional should doctrine, as amplified by the Treaty Nonintervention, may be regarded as a rule of customary international law, the absence of protest by the international community is undoubtedly a major factor. Of equal importance is the fact that the assertion of control and jurisdiction over the shelf adjacent to the coast by the littoral state does not in the opinion of this writer constitute a change of international law so much as it provides a context to fill a void in the existing law which had been silent on the subject. Surely if this new concept does not violence to existing law the time necessary to establish the concept as customary must not be so great. It is as much as the Truman Proclamation, and others like it, were carefully drafted so as to avoid creating doubt of any prejudice to existing law, the time task was necessary to establish the continental shelf doctrine as a rule of international law was relatively short.[63]

---

63. Instances also found questionable situations in the Gulf that that limited maritime powers, such as the United States and Great Britain had accepted the doctrine in determining whether a customary rule had developed. Lachenmeier 376.

In 1951 however, Lord Asquith, sitting as arbitrator in the Abu Dhabi dispute, upon being urged to consider the continental shelf doctrine as customary international law, stated:

> ...there are in this field so many ragged ends and unfilled blanks, so much that is merely tentative and exploratory, that in no form can the doctrine claim as yet to have assumed the hard lineaments or the definitive status of an established rule of International Law.[46]

Holland, however, writing in 1952 stated:

> By positive action or by acquiesance the nations of the world have accorded to the rule such uniform recognition as to establish it (the continental shelf doctrine) as accepted international law.[47]

By the mid-1950's there would appear to have been such a pronounced frequency and uniformity of unilateral declarations, by traditionally law abiding States, embodying the continental shelf doctrine that, in light of the absence of protests by other States, the doctrine could be re-

---

46. Arbitration Between Petroleum Development (Trucial Coast) LTD and the Skiekh of Abu Dhabi, 1 Int'l and Comp. L. Q. 247, 256 (1952).

47. Holland 598.

In this however, Lord Lauterpacht, stating an authoritative in the sea bound airspace, open only argued be variable the nonlimental small controlled by customary international law, stated:

> ...there are in this field no many cogent and unfailing binary, so such that is merely concrete and unjustifiably, that in no form can the doctrine claim as yet to have attained the high hierarchy of the doctrine source of an established rule of international law.[40]

Bollard, however, writing in 1973 stated:

> By positive action or by acquiescence the nations of the world have accorded in the rule such matters recognition as to establish it (the continental shelf doctrine) as accepted international law.[41]

If the air-land's claim will appear to have been such a pressured frequency and uniformity of national decisions, by customarily in solution since, adopting the continental small exercise that, in light of the strong of policies by other states, the doctrine could be en-

---

40. Lauterpacht Oppenheim, International Law, 17th edn (London: Longmans, Green and Co. Ltd., 1955) 320.

41. Bollard 326.

garded as a rule of customary international law. While the principle that exclusive rights to the resources of the shelf vest, ipso jure, in the littoral State was indeed accepted as the established doctrine, it was not at all clear as to just how extensive these exclusive rights were.

Quite obviously, the claims asserted by a number of Latin American States went far beyond the bounds of the recognized law and of the established practice of the international community.[48] Some claims made no attempt to define the continental shelf while others adopted the more-or-less traditional 200 meter delimitation. Of greater significance was the wide divergence of opinion on the status of the superjacent waters. The great majority of States vigorously denied that the doctrine affected the status of these waters as high seas while a few States, notably those of Latin America, invoked the doctrine to proclaim sovereignty over vast areas of the hitherto open seas.[49]

---

48. See Note 43 supra.

49. For an explanation and justification of Latin American practice and policy in this area, see Auguste, The Continental Shelf (1960).

[illegible] as a [illegible] of [illegible] international law. While the principle that exclusive rights to the exercise of the [illegible] rest, upon [illegible], in the liberal state was [illegible] incorporated in the [illegible] doctrine, it was not at all clear to [illegible] two [illegible] competing [illegible] rights were.

While obviously the claims asserted by a number of Latin American states went far beyond the bounds of the recognized law and of the established practice of the inter-national community,[46] some claims made an attempt to define the contiguous shelf only where adopted the three-or-less traditional 200 meter delimitation. Of greater significance was the wide divergence of opinion on the method of the exploitation system. The great majority of Latin American states the Argentine mistrust of the Russian of Japan waters to fish near while a few States, notably those of Latin America, involved the doctrine to preclude exploitation over vast areas of the Atlantic open seas.[47]

---

46. See Note 11 supra.

47. For an assistance and justification of Latin American policy and policy in this area, see Jessup, The Continental Shelf (1950).

At this juncture it would be well to note that the domestic legislation of a coastal State concerning the resources of its continental shelf is of no particular significance to this inquiry, except as it may be interpreted as being descriptive of the international assertions of that particular State. In this sense the relevancy of United States legislation[50] is of collateral, rather than direct, concern to the formulation of a rule of customary international law. Domestic legislation may be regarded, for the purposes of this paper, as providing the necessary national regulation of the jurisdiction and control which the State asserts over the resources of the shelf in the international arena.[51]

---

50. Submerged Lands Act, 67 Stat. 29 (1953), 43 U.S.C. §§ 1301-1303, 1311-1315 (1964); Outer Continental Shelf Lands Act, 67 Stat. 462 (1953), 43 U.S.C. §§ 1331-1343 (1964).

51. An excellant yet brief discussion of United States federal legislation and judicial interpretation in this area may be found in 4 Whiteman 764-788.

At this juncture it would be well to note that the necessary implication of a national state exercising the sanctions of its constituent which is of so peculiar other significance in this inquiry, except as it may be interpreted as being conversion of the international assumptions of some particular state. In this sense the relevancy of United States implications[30] is apparent, rather than direct, because in the domestic view of a rule of customary international law, domestic implications may be material. For the purposes of this paper, we provided the concerning national consistency of the jurisdictions and courses which the United States over the concerns of the world in the international arena.[31]

---

30. International Law Act, 57 Stat. 16 (1943). 15 U.S.C. 22 1301-1303, 1311-1315 (1964); Outer Continental Shelf Lands Act, 67 Stat. 462 (1953), 43 U.S.C. §§ 1331-1343 (1964).

31. To emphasize yet brief discussion of United States Cuban Jurisdiction and judicial interpretation in this area may be found in 4 Williams 194-195.

## CHAPTER IV

## The Convention on the Continental Shelf

### A. Generally

The need for uniformity regarding the claims of the various nations to the resources of the continental shelf was, by the late 1940's, painfully apparent. The International Law Commission, charged by the General Assembly of the United Nations with the task of codifying and developing international law, undertook the study of the continental shelf problem and produced a number of draft articles. The work of the International Law Commission was ultimately considered by the Geneva Conference on the Law of the Sea which in turn resulted in the drafting of the 1958 Convention on the Continental Shelf.[52] While the development of the Convention provides a fascinating study on the process of international law

---

52. Convention On the Continental Shelf, Sept. 15, 1958, 15 U.S.T. and O.I.A. 471, T.I.A.S. No. 5578. [Hereinafter referred to as the 'Convention']. The complete text of the Convention is appended hereto as Appendix B.

## CHAPTER IV

## The Convention on the Continental Shelf

### A. Generally

The need for authority especially can claim on the various nations in the revision of the 'Continental' shelf was, by the late 1950's, politically apparent. The International Law Commission, assigned by the General Assembly of the United Nations with the task of codifying and developing international law, undertook the study of the continental shelf problem and produced a number of draft articles. The work of the International Law Commission was ultimately accomplished by the Geneva Conference on the Law of the Sea which is fairly mentioned in the Preamble of the 1958 Convention on the Continental Shelf.[1] While the development of the convention provides a fascinating study on the process of international law

---

1. Convention on the Continental Shelf, Cmnd. 14, 1958, 15 U.N.T.S. and U.K.T.S. #71, T.I.A.S. no. 5578. [hereinafter referred to as the 'Convention']. The complete text of the Convention is appended hereto as Appendix B.

development, compromise and codification, separate treatment of the various prior drafts and regional agreements which were instrumental in the formulation of the Convention is not essential to the purposes of this paper.[53]

The Convention grants to the coastal State 'exclusive sovereign rights' for the purpose of exploring and exploiting the resources of the shelf;[54] but explicitly states that it does not effect the legal status of the superjacent waters as high seas.[55] Of particular interest is the Convention's specific rejection of the necessity for occupation, either effective or notional, as a prerequisite to the creation of these 'sovereign rights'.[56] It is noted that the United States, during the working sessions of the Conference, consistently

---

53. See in this regard Jessup, The Geneva Conference on the Law of the Sea; A Study in International Law-Making, 52 Am. J. In'tl L. 730 (1958).

54. Convention Article 2 (1) and (2).

55. Convention Article 3.

56. Convention Article 2 (3).

Ideologists, economics and mobilization, separate treatment of the various police duties and regional arrangements which were incorporated in the formulation of the Convention is not essential to the purposes of this paper.[53]

The Convention refers to the general grant 'mutatis mutandis applicable' for the purpose of employing and equipping the resources of the state,[54] but mobilizing states have in fact not altered the legal status of the supplanted military as gold area,[55] or particular measures in the Convention's mobilization of the machinery for computation, either effectively or partially, as a prerequisite to the creation of areas 'occupied states'.[56] It is noted that the United States, during the initial measures of the Convention, unilaterally

---

53. See in this regard Jessup, The Soviet Citizenship in the Law of the Sea: A Study in International Law-making, 32 Am. J. Int'l L. 120 (1947).

54. Convention Article 7 (1) and (2).

55. Convention Article 3.

56. Convention Article 2 (3).

opposed the use of the term 'sovereignty' in order to avoid even the remotest doubt about the status of the superjacent waters as high seas[57] and vigorously supported the text of Article 3, which provides:

> The rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters as high seas, or that of the airspace above those waters.

In view of the inclusion of Article 3 in the Convention, the United States was able to accept the term 'sovereign rights' as contained in Article 2.

At this juncture it would be well to note that the Convention was more of a codification of the law than an expression of new and untried concepts, since there was extensive, albeit very recent, State practice, precedence and doctrine in this area. It has previously been noted that there existed, by 1958, sufficient State practice to establish, as a matter of customary law, that exclusive jurisdiction over the resources of the shelf vested in the coastal State.[58] Therefore, the Convention, through

---

57. Whiteman, Conference on the Law of the Sea: Convention on the Continental Shelf, 52 Am. J. Int'l L. 629 (1958).

58. See Note 47 Supra.

Against the use of the term 'commercially' in order to avoid even the remotest doubt about the status of the ECHR[37] as a constitutional, where he cited some[38] and rightfully supported the text of Article 1, which provides:

> The rights of the federal state even the constitutional shall do not affect the legal status of the sovereignty states as this case, in lieu of the sixteen above these states.

In view of the language of Article 1 of the Convention, the Swiss states are able to accept the term 'universal right' as contained in Article 8.

As this judgment is would be well to note that the Commission has made of a modification of the law due to expansion of new and detailed knowledge, which first was authority, which may answer, first question, particularly and description in this case. In the previously been noted also there called, by 1950, sufficient force provision on establish, be a matter of customary law, this restrictive jurisdiction over the practices of the right treated in the material scope.[39] Therefore, the Commission, through

---

37. Wildhaber, Questions on the law of the just investigation on the constitutional shall, 32 Am. J. Int'l L. 117 (1950).

38. The Book of Rights.

compromise and caution, expresses the consensus of the international community. This observation that the Convention represents a consensus among the international community is borne out by the fact that the final vote was 57 States in favor, only 3 opposed, and 8 abstentions.

B. The 200 Meter -- Depth of Exploitability Compromise

While the Convention laid to rest, once and for all, the concepts of *res omnium communis* and *terra nullius*, as they pertain to the continental shelf, and specifically rejected the notion that the high seas were in any wise affected by the doctrine, a number of problems were left unresolved. Foremost among these problems is that of the extent of the submarine area which the Convention purports to govern. In as much as the greater portion of the remainder of this paper will be dealing with precisely this issue, it is imperative that the exact language of Article 1 of the Convention be examined in its entirety at this point. Article 1 provides:

responsibility and duration, regardless the consciousness of the international community. This observation that the conversion experiences a catharsis among the international community is borne out by the fact that the final vote was 97 states in favour, only 3 opposed, and 8 abstentions.

B. The 1st Article — Issue of Territorial Jurisdiction

While the convention said so much, once and for all, the concepts of the common seashore and fishing rights as they pertain to the continental shelf, and specifically rejected the notion that the high seas were in any wise affected by the doctrine, a number of problems were left unresolved. Foremost among these problems is that of the extent of the jurisdictional area which the Government possesses or claims. In as much as the greater portion of the petroleum in this zone will be drawing area previously with issue. It is important that the exact language of Article 1 of the convention be examined in the majority of this point. Article 1 provides:

> For the purpose of these Articles, the term 'continental shelf' is used as referring (a) 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; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.

This definition of the continental shelf represents no clear victory for any school of thought on the subject. It is, in fact, a compromise which seeks to satisfy the proponents of the virtues of uniformity, fixity and certitude as well as the advocates of the need for flexibility. We have seen that the geological definition of the shelf lacks any degree of precision due to its uneven configuration.[59] Yet the 200 meter isobath delimitation was regarded as fairly definitive of most of the shelf edge and had been accepted by many nations, including the United States, as the best workable standard. Moreover, at the time of the Convention it was generally believed that the likelihood of resources being exploited

---

59. See note 1 <u>supra</u>.

> [illegible] the purposes of these statutes. The same 'constitutional minimum' is used to prevent [illegible] in the method and intensity of the criminal sanctions applied in the cases [illegible] 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; by the size assigned and nationality of [illegible] in the cases of [illegible].

This definition of the constitutional minimum requirements is [illegible] for any school of thought in the analysis. It is, in fact, a compromise point needed to satisfy the proponents of the 'fairness of nationality, clarity and predictability as well as the advocates of the need for flexibility.' We have seen also the practical destruction of the whole issue by degrees of prevention due to the course assertions.[12] Yet the 200 meter limited definition was recorded as fairly satisfactory in many of the areas that had been accepted by many nations, including the United States. In the text mentioned previously. Nevertheless, as the line of the convention is not permanently believed that the traditional of reservations relay negotiations

---

12. See note 2 supra.

at depths in excess of 200 meters in the foreseeable future was remote. The 200 meter definition was accordingly urged by those who advocated that a specified depth limit would avoid misinterpretation while a failure to set a fixed standard would lead to controversy and lend credence to some of the exorbitant claims already existing.[60]

The 200 meter definition is, of course, arbitrary and represented a rigidity of concept not acceptable to those delegates to the conference who advocated that the standard should be flexible in order to keep abreast of technical achievements. This school of thought proposed to define the shelf as extending to those submarine areas to where the depth of the superjacent waters admitted of exploitation. Mouton was extremely critical of the proposals to incorporate the depth of exploitability concept into the definition and stated that the acceptance

---

60. See Mouton 43. Lauterpacht, for instance, once stated that

> "...an exact limit has the merit of clarity, which is extremely desirable, since in matters pertaining to the continental shelf some governments are inclined in addition to legitimate assertion of right, to make others." Quoted in Franklin 27.

of such a concept would sacrifice "a perfectly clear and closely discernable limit, marked on all sea-charts ...for a rather vague conception...for a reason which contains a low factor of probability."[61]

The definition of the continental shelf, as incorporated in the Convention, is, therefore, a compromise between the 200 meter rule advocates and the depth of exploitability proponents. A number of other definitions were proposed and rejected, including those based solely on distance in contradistinction to depth, those which would depend upon the geological characteristics of the seabed and those which sought to fix the boundary at the true geological edge of the shelf at whatever depth that might be found.[62] Gutteridge, in discussing the merits of the Convention definition, stated:

---

61. Mouton 43.

62. See Gutteridge, The 1958 Geneva Convention on the Continental Shelf, 35 Brit. Yb Int'l L. 102 (1959). For a concise description of the various proposed criteria which were rejected by the delegates in favor of the definition now embodied in Article 1, see 4 Whiteman 841.

of such a manner would facilitate its interpretation and "locate discernible limit, varied in all ma-where ...for a review very meaningful...for a review which contains a low degree of permeability."[41]

The definition of the "delineated area", as incorporated in the statutes, is, therefore, a compromise between the (b) rules rule adversaries and the depth of jurisdictionally procedures. A number of other definitions were proposed and rejected, including ones based which on distance in horizontal/vertical or depth, those which would depend upon the geological characteristics of the seabed and those which depend on the combination of the here geological edge of the shelf at "waters depth that exists to bound."[42] Moreover, in discussing the merits of the commonly defined, exceptions

---

41. Hedges 47.

42. See Gutteridge, The Law Relating Exploration on the Continental Shelf, 33 Brit. Yb Int'l L. 141 (1957), for a detailed description of the various proposed criteria which were rejected by the delegates in favor of the definitions now embodied in Article 1, and a delineated drl.

> The disadvantage of the definition finally adopted by the Conference, which is now to be found in Article 1 of the 1958 Convention, is that the criterion of exploitability is an uncertain one, and that it is therefore difficult to determine at what limit, expressed in terms of depth of water, the rights of the coastal state over the continental shelf....will cease.[63]

Miss Gutteridge, a member of the United Kingdom delegation to the Conference, presupposes that the Convention definition includes limitations other than the 200 meter or exploitability tests. We will return to this matter again, but at this point the uncertainty of the depth of exploitability test should be emphasized. Initially, the question is what is meant by exploitation. Suppose, for example, that State A, at great cost, devises a method of extracting relatively valueless amounts of minerals from the shelf at depths in excess of 200 meters. Could we then declare that there has been an exploitation of the resources beyond 200 meters in depth? Or does the concept of exploitation carry with it a requirement that it be economical? Suppose

---

63. Gutteridge, The Regime of the Continental Shelf, 44 Transact. Grot. Soc'y 77, 80-81 (1958).

> The disadvantage of the definition finally adopted by the Conference, which is now to be found in Article 1 of the 1958 Convention, is that the criterion of exploitability is an uncertain one, and that it is therefore difficult to determine at what limit, expressed in terms of depth of water, the rights of the coastal state over the continental shelf....will cease.[63]

Miss Gutteridge, a member of the United Kingdom delegation to the Conference, presupposes that the Convention definition includes limitations other than the 200 meter or exploitability tests. We will return to this matter again, but at this point the uncertainty of the depth of exploitability test should be emphasized. Initially, the question is what is meant by exploitation. Suppose, for example, that State A, at great cost, devises a method of extracting relatively valueless amounts of minerals from the shelf at depths in excess of 200 meters. Could we then declare that there has been an exploitation of the resources beyond 200 meters in depth? Or does the concept of exploitation carry with it a requirement that it be economical? Suppose

---

63. Gutteridge, The Regime of the Continental Shelf, 44 Transact. Grot. Soc'y 77, 80-81 (1958).

further that State A, through the ingenuity and technical competence of its thousands of skilled scientists, devises a way to exploit the resources of the shelf at depths in excess of 200 meters. Does State B, a newly emerged and technically backward nation thousands of miles distant, suddenly acquire 'sovereign rights' over the resources of a vast stretch of her shelf which she may or may not have even been aware existed? Franklin is of the opinion that:

> This depth which admits of exploitation should be interpreted absolutely in terms of the most advanced technology in the world, and not relatively in terms of the particular technology of any one coastal state.[64]

Mouton, too, assumes that the exploitability test is to be interpreted objectively[65] and therefore that our newly emerged nation, State B, would gain sovereign rights over the resources of the shelf, which she may have not known existed, due to state A's technical competence. And finally, Young states:

---

64. Franklin 23.

65. Mouton 42.

> ...every coastal State would seem entitled to assert rights off its shore out to the maximum depths for exploitation reached anywhere in the world, regardless of its own capabilities or of local conditions, other than depth, which might prevent exploitation.... It is not difficult to envisage the confusion and controversy which must arise in the course of ascertaining, verifying, and publishing the latest data on such a maximum depth.[66]

This view is not shared by everyone, however. The Committee on Commerce of the United States Senate, in their report on the Marine Resources and Engineering Development Act of 1965, stated:

> Thus the Convention conveys both specific and immediate rights and prospective or potential rights, the latter to be acquired only as a result of national effort and achievement.[67]

---

66. Young, The Geneva Convention on the Continental Shelf: A First Impression, 52 Am. J. Int'l. L. 733, 735 (1958).

67. S. Rep. No. 528, 89th Cong., 1st Sess. 11 (1965). [hereinafter cited as S. Rep. No. 528]. The United States is currently studying the necessity for national legislation pertaining to the development of her continental shelf resources. During the course of the many hearings before the various interested committees of the House and the Senate, the Convention on the Continental Shelf is receiving a great deal of attention. See in this regard Wenk, Congress Sharpens Ocean Interests, Under Sea Technology, Jan. 1966 p. 36.

This language clearly illustrates the confusion which remains in the convention definition. It should be remembered that one of the basic purposes behind the rejection of the occupation theory of acquisition, as it was applied to the shelf, was the necessity to avoid a scramble for control over the seabed. Yet in 1965 we find a committee of the United States Senate concluding that:

> The challenge is to develop devices and equipment that will enable the economic recovery of these minerals from the ocean bed, and will do so before some other nation can claim 'squatters rights' under the Convention on the Continental Shelf.[68] (Emphasis added.)

Obviously any interpretation of the Convention which finds therein authority for 'squatters rights' being asserted over portions of the shelf requires a rejection of the Franklin, Mouton and Young analysis of Article 1.

That Franklin, Mouton and Young are correct in their view, and the Senate committee in error, is not only borne out by an analysis of the development of the

---

68. S. Rep. No. 528, 14.

final Convention draft, but it would seem to this writer that there now exists sufficient State practice, irrespective of the terms of the Convention, to establish conclusively that rights over the resources of the continental shelf[69] vest, ipso jure, in the coastal State.

One of the most persistant objections to the Convention definition of the shelf is that which views the adoption of the 'depth of exploitability' concept as the opening of the door to the ultimate abolition of the domain of the high seas.[70] That the sanctity of the high seas has been diminished to some degree by the Convention cannot be denied. Yet it does appear that there are sufficient restrictions and limitations upon the continental shelf doctrine, both as expressed in the practice of leading maritime States, and as incorporated in the language of the Convention itself, to guarantee the integrity of the high seas from any unreasonable encroachment.

---

69. As distinguished from the resources of the seabed beyond the outer rim of the shelf, which, as we shall soon see, is a most important distinction.

70. See, for instance, Scelle's expressions of concern on this matter found in 1 Yearbook of the Int'l L. Commission 135 (1956).

Looking at the Convention as a whole, it must be considered as a rather remarkable document. Undoubtedly, the doctrine of the continental shelf is now firmly entrenched in the law of nations, yet the integrity of the high seas has been respected. While the inclusion of the depth of exploitability test into Article 1 has, as we have seen, created some uncertainty and confusion, the Convention provides an excellent framework within which the community of nations can work to develop and exploit the resources of the continental shelf in an atmosphere relatively free from disorder and strife.

## C. The Impact of Recent Technological Advances on the Continental Shelf Doctrine

In the eight years since the Convention on the Continental Shelf was written, the world has witnessed an astonishing rate of technological achievement. During the drafting of the Convention the possibility of exploiting the shelf at a depth in excess of 200 meters was considered to be extremely remote, at best. By 1965, however, geologists informed us that petroleum-bearing strata was being explored and exploited at depths in excess of 250

Looking at the Convention as a whole, it must be considered as a major revolutionary document. Naturally, the quality of the institutional effort is now directly measured in the 24x 12 matrix, yet the linearity of the high wave has been conquered. While the isolation of the depth of availability has into fidelity i say, as we have seen, operate some uncertainty and mediation, the Convention provides an excellent framework within which the community of nations can work to develop and control the resources of the continental shelf in an environment relatively free from discord and strife.

## E. The Impact of Modern Technological Developments on the International Control Regime

In my first paper about the Convention, the phenomenon that was without, has which has diminished as technology has of international management. Thinking the doubling of the depth-producing the possibility of producing one metric ton a hour in excess of 300 metres was considered to be relatively remote, at best. By 1969, however, geologists discovered on land production-quality ammonia was being negligent and negotiated at depths in excess of 150

meters. E. C. Holmer, President of the Esso Production Research Company, recently wrote that:

> In just the last ten years, maximum depths have been increased from 100 to 600 feet. The current world record is a 632-foot test well drilled in the Pacific off southern California in July, 1965. This record, however, probably will not last long. One company has ordered equipment for drilling in 1,100 feet of water in 1966.[71]

New developments would indicate that scientific exploration of petroleum is currently possible at depths below 4,000 meters.[72] It would further appear that the exploitation of resources at these depths will eventually be accomplished.[73] An excellent illustration of how rapidly the science of oceanography has progressed is the remarkable 'Sealab', project being conducted by the

---

71. Holmer, Offshore Oil Wells Go For Deep Water, Under Sea Technology, Jan. 1966, p. 43.

72. Garrett, Issues in International Law Created by Scientific Development of the Ocean Floor, 19 S.W. L.J. 97 (1965).

73. A noted geologist recently stated that: "The depth of 3000-5000 meters is now impractical for petroleum exploitation, but perhaps this will not be true in the future." Emery, Characteristics of Continental Shelves and Slopes, 49 Bull. of the American A. of Petroleum Geologists 1379, 1383 (1965).

United States Navy, in the course of which Commander Scott Carpenter recently spent 30 consecutive days at about 200 meters below the surface of the sea.[74]

Considering these recent developments, it is quite clear that the resources of the continental shelf, regardless of the depth at which they are located, will soon be subject to exploitation and, therefore, it should be recognized that the 200 meter limitation, which was deemed to be so essential in 1958, will soon no longer be determinative under the provisions of the Convention.

---

74. Philadelphia Inquirer, 18 Nov. 1965, p. 5-f, col. 2.

## CHAPTER V

## The Bed of The Sea Beyond The Continental Shelf

### A. Generally

If we can now regard the modern doctrine of the continental shelf, as embodied in the Convention, as being firmly settled in international law, and if the uncertainties of the 'depth of exploitability' test have been or soon will be solved by technological advances which will serve to make all of the shelf susceptable to exploitation, can we now harvest all of the resources of the ocean floor free from controversy and dispute in the sure and certain knowledge that international law presides over the arena? Obviously not. Even assuming that the principles enunciated in the Convention are universally accepted, which, of course, is not the case, the Convention must be regarded as being but the first chapter in the story which must ultimately be written about the exploitation of the bottom of the sea. For we must now come to grips with the problems which surround the exploitation of the seabed and its subsoil beyond the outermost limits of the continental shelf. As the continental shelf doctrine was fashioned to meet the practical

## CONCLUSION

The fact of life also despite the conditions, state

### A. Conclusion

If we can not insure the actual existence of the conditions, we can, however, be sure of the necessity, by taking firmly actions to investigation and, and if the consequences of the "Theory of relativity" does not hold up, we will be solved a revolutionary statement which will enter in the all of the world accessible to exploitation, and we can enjoy all of the resources of the ocean floor from motorway and airport in the ever too optimistic knowledge that international law prevails over the energy war. Certainly not. Even assuming that the principles mentioned in the conversation are universally accepted, which, of course, is not the case, the conversation must be concerned as trying out the first adjust in the study which most necessarily be without some regulation in the notion of the sea. The be such one view to quite with the problem until recognized the recognition of the international the national legal obligations limit of the international peace. In the conditions which doubtless are favoured to make the practical

problems which arose when science opened the shelf to exploitation, a new doctrine must now be fashioned to deal with the exploitation of the ocean floor beyond the shelf, and as Franklin stated:

> ...while the stakes are high with respect to exploiting the resources of the continental shelves of the world...the stakes will be even higher when science and technology discover ways of exploiting the deep ocean basins which are about twelve times the area of the continental shelves.[75]

B. Deep Ocean Technology

Ten years ago the question of who has control and jurisdiction of the resources of the ocean floor, beyond the geological shelf, was more or less academic. The possibility that these resources would be exploitable in the foreseeable future was deemed to be so remote that the question was not even debated, as such, during the Conference. The matter is no longer solely of interest to the academically inclined since our present technology will no longer permit us to avoid coming to grips with this problem. Probably two of the clearest examples of

---

75. Franklin 14.

the extent to which scientists are now probing the secrets of the deep are the 'Project Mohole' and the 'Aluminaut' programs. 'Project Mohole' is an operation designed to explore and sample the crust and the mantle of the earth by drilling into the ocean floor from a free-floating platform in 18,000 feet of water. The technical fallout from this extremely sophisticated project will obviously enhance the science of petroleum exploitation immensely.[76] The deep-submergence research submarine 'Aluminaut', designed to descent to depths of 15,000 feet, is now undergoing sea trials. This highly manuverable vessel is expected to have a range of 80 miles, a speed of 3.8 knots and an endurance of about 32 hours.[77] The 'Aluminaut' will, therefore, have the capacity to explore as much as

---

76. Ragland, A Dynamic Positioning System for the Mohole Drilling Platform, 2 Ocean Science and Ocean Engineering, 1145 (1965).

77. Loughman, Aluminaut Tests and Trials. 2 Ocean Science and Ocean Engineering 876 (1965).

75% of the ocean floor.[78]

C. The Resources of the Deep Ocean Floor

To properly understand the full significance of our technical achievements, some familiarity with the riches of the deep ocean floor is essential. The sea apparently acts as a great chemical retort which separates and concentrates the various elements, washed down by the continental rivers, into extraordinarily high-grade ore. This ore is found in the form of nodules which are deposited on the floor of the sea. Not only are these nodules deemed to be exploitable, but it has

---

78. For an enlightening comment on the various major deep-submergence systems, including the Trieste II bathyscaph which has an unlimited depth capacity, see Walsh, Economic and Logistic Aspects of Deep Vehicle Operations. 2 Ocean Science and Ocean Engineering 858 (1963). In January of 1966 an aerial collision of 2 United States aircraft resulted in the loss of an H-bomb in 2,500 feet of water off the coast of Spain. The bomb was located, and operations were undertaken for its recovery, by the deepsubmergence vessels 'Aluminaut' and 'Alvin'. New York Times, 20 Mar. 1966, p. 1, col. 5.

been estimated that they exist in sufficient amounts to supply the world with many minerals for thousands of years at the present rate of consumption. In his testimony before the House Subcommittee on Oceanography, John L. Mero, President of Ocean Resources, Inc., stated that:

> While it is a well known fact that the sea can serve as a source of all mankind's protein requirements, it is a much less known fact that the sea can also provide the earth's population with its total consumption of many industrially important mineral commodities. What is even more remarkable is the observation that the sea can provide these mineral commodities at a cost of human labor and resources that is a fraction of that required to win these materials from land sources.[79]

---

79. Statement of John L. Mero before the Subcommittee on Oceanography of the House Committee on Merchant Marine and Fisheries, 16 August 1965. In this statement, Mero further observed that:

> ...the presently available mineral disposits of the sea could easily supply the population of the earth with its total consumption of manganese, nickel, colbalt, copper, phosphorus, limestone, salt, magnesium, bromine, fluorine, potassium, boron, sulfur, aluminum and various other less important minerals, as well as supplying substantial portions of its consumption of iron ore, lead, zinc, titanium, molybdenum, uranium, zirconium, and soon.

Testimony before the U. S. Senate Committee on Commerce, in 1965, disclosed that the nodules containing these metals occur at depths between 3,000 and 17,000 feet. Deep-ocean photography reveals that 5 to 10 pounds of these nodules per square foot lie in many areas of the oceans.[80]

Of particular importance to the United States is the fact that these minerals include strategic metals which are now being purchased from foreign sources at an estimated annual cost of over one billion dollars.[81] The political-military advantages of obtaining strategic metals from the ocean floor are apparent. By tapping this source of wealth the United States would not only reduce her balance of payments deficits by some 1.2 billion dollars annually, but would at the same time free herself from dependence upon foreign sources for these metals.

---

80. S. Rep. No. 528, 13.

81. Mero, Supra Note 79.

[illegible]

[illegible]

[illegible]

---

[illegible]

[illegible]

From the foregoing remarks it should now be perfectly clear that the question of the jurisdiction and control of deep-ocean floor resources must be resolved and it is to this question which we will now turn our attention.

D. The Continental Shelf Doctrine and The Deep-Ocean Floor

As we have seen, the continental shelf doctrine sets forth the basic premise that the control and jurisdiction over the resources of the shelf vest, *ipso jure*, in the coastal State. This doctrine is based on a number of factors including the idea that the shelf is, geologically speaking, but an underwater extension of the coastal States' landmass. Undoubtedly the realities of national security played an important role in justifying the supremacy of the coastal State in this arena. Additionally, it was noted that the resources of the shelf could be more economically and comprehensively conserved and developed by the littoral State because of its proximity. And, in the final analysis, it was regarded as simply 'just and reasonable' that the coastal State lay claim to

From the foregoing comment it should be apparently clear that the question of the jurisdiction and control of Inter-Union Plant remained open to argument and it is to this question which we will now turn our attention.

B. The Constitutional Basis for Jurisdiction and the Inter-Union Plant

As we have seen, the Constitutional basis determine and form the basis upon which the control and jurisdiction over the activities of the Union rest, lies in the Commerce Clause. This activity is based on a theory of energy industry, the term that the state is, politically speaking, and as a subservient subdivision of the central State' jurisdiction. Undoubtedly the availing of national security rights on interstate trade by imposition the expression of the central State in this sphere, constitutionally it and final take the decisions. If the State could be more economically and constitutionally convinced and authorized by the Internal State Jurisdiction in the Industry Law, in the final analysis, if the Industry as already 'law and economics' was the central State the idea of

these resources.[82] It should be readily apparent that these factors do not necessarily apply to deep ocean floor considerations. The ocean floor beyond the shelf cannot be considered as a submerged part of the landmass, the very term 'coastal State' has little, if any, significance beyond areas adjacent to the shore, and security considerations and economic advantages would be of real significance only in adjacent waters. It is therefore submitted that the continental shelf doctrine is of limited application to the solution of the deep ocean floor problem.

This is not to say that the continental shelf doctrine is without significance to our inquiry. Clearly, the concept will be of great import in determining the status of deep-water areas adjacent to the coast of the continents. But it would be erroneous to assume that the Convention on the Continental Shelf is dispositive of the question. It is conceded that there is language within the Convention which would, at first blush, appear to convey the idea that its terms were universal in appli-

---

82. All of these factors were invoked to support the claims of the Truman Proclamation. See pages 24 and 25 supra.

these measures.[40] It should be readily apparent that these measures do not necessarily apply to deep ocean ocean conditions. The ocean floor beyond the depth cannot be considered as a necessary part of the landmass, the very term 'continental shelf' has little, if any, significance beyond these adjacent to the shores, and security considerations and economic advantages would be of real significance only in adjacent waters. It is therefore submitted that the constitutional right doctrine is no limited application to the solution of the deep ocean floor problem.

This is not to say that the constitutional right doctrine is almost significance to the lunatic. Clearly the central will be of great import in determining the status of geographic areas adjacent to the coast of the continents. But it ought be recognized to assume that the connection in the Continental Shelf is dispositive of the question. It is suggested that every in instance within the conventional wisdom would, at first sight, appear to answer the that the rules more rational in equity.

---

40. All of these measures were proposed in connection the claims of the Truman Proclamation. See Jenks 73 and 32 supra.

cation. This is precisely what was objectionable about the 'depth of exploitability' test included in Article 1 of the Convention. The definition of the continental shelf, as laid down by the Convention, purports to include all adjacent submarine areas to where the depth of the superjacent waters admits of the exploitation of the resources contained therein. Now then it could be argued that the extent of the submarine areas which fall within the purview of this definition depends solely upon the state of the art of technological exploitation of the seabed. While it is submitted that this view is erroneous, it must be admitted that it is not without some authority. Franklin for instance says:

> Under the depth-of-exploitability definition the maximum width of the shelf capable of exploitation will continue to increase as the world's technology for exploiting the submarine areas improves, whether those areas are what the geologists describe as the 'continental shelf', or the deeper, more steeply inclined areas known as the 'continental slopes.' For coastal States facing the open oceans the only limitation to exploitation will be that of technology.[83] (Emphasis added.)

---

83. Franklin 25.

In interpreting Article 1 of the Convention however, it is deemed to be essential that we give the proper weight to the word 'adjacent' as it appears in the definition of the continental shelf. The submarine areas which are included within the definition are those which meet the '200 meter' - 'depth of exploitability' test and which are also '<u>adjacent</u>' to the coast. While it is conceded that the term continental shelf is not meant to be taken in its strict geological sense, it would be absurd to maintain that the drafters of the Convention were not principally concerned with the geological shelf.[84]

In determining whether the Convention includes submarine areas beyond the outer limit of the shelf, the

---

84. An illustration of this fact may be found in the comments of the French and the Netherlands delegates on the proposed amendment to Article 1 which sought to substitute distance, vice depth, as the test. Mouton, the Netherlands delegate, observed that such a proposal would curtail exploitation of the <u>continental shelf</u> and Gros, the French delegate, was unable to accept this amendment because he felt it was impossible to speak of distance where a 'geological concept' was concerned. U.N. Doc. A/Conf. 13/38 at 12 (1958).

In interpreting article 1 of the Convention

however, it is doubtful to be material that we deny the proper rights to the mere 'ordinary' as it appears in the definition of the territorial shelf. The submerging areas which are included within the definition are those which meet the 'fifth method' - 'depth of exploitability' test and which are also 'adjacent' to the coast. While it is conceded that the term contiguous also is not meant to be exact in the sense of the marine geological sense, it would be unwise to establish just the minimum of the transmission upon the principle necessary with the geological model.[4]

In determining whether the Convention imposes authority which beyond the outer limit of the shelf, the

---

4A. An illustration of this fact may be found in the commentary of the Drafting and Interpretation Committee on the geological requirement for Article 1 which states in relevant pertinent. Other words, as the case. Another, the individual definition. Another that such a geological model [illegible] of the continental shelf [illegible]. The Drafting Committee [illegible] is not impossible to apply of [illegible] 'geological model' [illegible] U.N. Doc. A/CONF. 13/39 at 11 (1958).

intent of the drafters of the Convention is, of course, what we are seeking to discover. This intent can best be determined by reference to the proceedings of the Fourth Committee of the Conference on The Law of the Sea which was responsible for drafting the Convention on the Continental Shelf.[85] A careful analysis of these proceedings supports the conclusion that the Convention does not include the deep-ocean floor within its purview, with the possible exception of such areas located immediately adjacent to the coast. The debate which preceeded the adoption of the Article 1 definition was not over whether or not to limit the application of the doctrine, but was rather a question of where that delimiting line was to be drawn. This question of the deep ocean areas was raised by the delegates of both Canada and Ceylon but it appears that their query was more or less ignored by the other members as not being germaine to the problem of the shelf. Mouton did, however, direct his attention to this inquiry when he observed that beyond the outer limits of the submarine areas over which the coastal State enjoys 'limited sovereignty' under the Convention, the

---

85. See U.N. Doc A/Conf. 13/42 at 31-48 (1958).

[illegible]

situation was governed solely by the regime of the high seas, and there was no longer any question of 'exclusive rights' involved.[86]

The Solicitor of the Department of the Interior of the United States apparently has reached just the opposite position, however. Schoenberger, in discussing the seaward limit of the continental shelf for purposes of interpreting the Outer Continental Shelf Lands Act of 1953[87] cites a Solicitor of the Department of Interior Memorandum of 5 May 1961. Schoenberger commented that:

> This opinion holds that there is no objection to the federal leasing of areas beyond the 100-fathom contour line and that the Outer Continental Shelf Lands Act extends to all submerged lands seaward of a coastal State's off shore boundary and the waters superjacent thereto over which the United States asserts jurisdiction. The import of the opinion is that the limits of outer continental shelf leasing under the Outer Continental Shelf Lands Act should be considered as technological rather than geographical limits and that <u>the leasing authority under the Act extends as far seaward as</u>

---

86. U.N. Doc A/Conf .13/42 at 44 (1958).

87. 67 Stat. 462 (1953), 43 U.S.C. §§ 1331-1343 (1964).

[illegible] was governed solely by the rights of the plaintiff, and there was no longer any question of 'conflicting rights' involved.[96]

The motions of the Department of the Interior of the United States Government was treated just the opposite position. However, Schwarzschild, in discussing the asserted right of the nonlicensed small for purposes of interpreting the outer continental shelf lands act, he [illegible] stated a position of the Department of Interior [illegible] or [illegible] [illegible]

> This opinion holds that there is no objection to the federal leasing of state lands beyond the 3-mile coastline and that the outer continental shelf belongs to the states [illegible] to all submerged lands adjacent to a coastal state's off shore boundary and the federal government [illegible] over what the United States [illegible] jurisdiction. The impact of the opinion is that the limits of the continental shelf leasing under the [illegible] shall begin at the [illegible] or [illegible] [illegible] and that the leasing procedure [illegible] [illegible]

---

96. U.S. ex rel. Jones [illegible] v. [illegible] (1908).

97. 47 Stat. 444 (1931), 43 U.S.C. §§ 1311-1337 (1964).

> technological ability can cope with the water depth. This is in accord with the convention of the sea adopted at Geneva ...upon which the opinion relies.[88] (Emphasis added.)

Schoenberger further discloses that the opinion involved the right of the Secretary of the Interior to lease a tract of the seabed at a depth of 'several hundred fathoms' of water situated some fifty miles off the coast of California.

It is submitted that the Department of the Interior of the United States has misinterpreted the Convention. This is not to say that the tract sought to be leased was not within the definition of Article 1. It may very well be within the definition, but that determination is not important here. What is significant is this expression of the view that there is no geological or geographic limitation to the continental shelf as it is defined within the Convention. Since the 'sovereign rights' over the resources of the shelf vest, ipso jure,

---

88. Schoenberger, Outer Continental Shelf Leasing, Law of Federal Oil and Gas Leases 303, 305 (1964).

> constitutional validity can come with the other parts. This is in accord with the interpretation of the law adopted at Geneva ...upon which the opinion relies.[10]
> (emphasis added.)

Subsequently further discussion that the opinion invoked the right of the Secretary of the Interior to issue a level of the manual as a degree of 'natural immunity' of water diverted from fully value out the owner of priority.

It is submitted that the importance of the interpretor of the United States has misinterpreted the conventions. This is not to say that the main points in the lawsuit are not within the definition of Article 1. It may very well be within the definition, but that determination is not important here. What is significant is this misconception of the view that there is no geological or geographic limitation to the continental shelf as it is defined within the Convention. Hence the 'overlying rights' over the resources of the shelf that <u>lose</u> here

---

10. Schoenberger, <u>Water Conflicts</u>, <u>supra</u> note 101, 104 (1984).

in the coastal State,[89] it would then necessarily follow under this view that the coastal State has exclusive rights over the resources of the seabed out to the mid-point of the oceans. Such a result may be deemed to be desirable by some, but it is certainly not contemplated by the Convention nor is it sanctioned by customary international law.

The interpretation of the Convention by the Committee on Commerce of the United States Senate, rendered in July of 1965, is further evidence of the confusion which pervades this area of our inquiry. This distinguished Senate Committee concluded that:

> The Convention does apply, <u>without qualification</u>, to all mineral and nonliving resources of the Continental Shelf and areas <u>adjacent and beyond</u> 'where these areas admit of the exploitation of the said area.'[90] (Emphasis added.)

Contrast these views with those expressed by McDougal and Burke:

---

89. Article 2 (2) of the Convention provides in part that:
> The rights referred to...are exclusive in the sense that if the coastal State does not explore the continental shelf or exploit its natural resources, no one may undertake these activities, or make a claim to the continental shelf, without the express consent of the coastal State.

90. S. Rep. No. 528, 11.

in the nuclear-age.[97] It would then necessarily follow that this view that our general duties are directly owed to the community of the mankind but to the nation of the country. This a result may be denied to be desirable by some, but it is certainly not contemplated by the constitution nor is it warranted by existing international law.

The interpretation of the constitution by the conference on behalf of the United States means, according to Judge Ki Ibid, is further evidence of the nationalism which permeates this week of our country. This nationalistic basis conclusion concluded that:

> The constitution does not, without qualification, give to all citizens and inhabitants rights of the Constitution which are known as fundamental and natural. Human rights claim of all the world over.[98] (emphasis added.)

Contrary views with those expressed by Jackson and Burton

---

97. Article - (2) of the constitution provides to part that: The rights enumerated in this constitution to the extent that it the natural state-hood and nation-place the constitutional right or analysis the national economy, to one may nationalize these activities, or note a claim to the constitutional right, without the express consent of the national state.

98. Ki Ibid, No. 2, 11.

> ...The Commission acted on the belief that exclusive control ought not to be limited by an arbitrary depth line which might be difficult to change, but that <u>within some degree of proximity to the coast</u> exclusive control ought to apply to all exploitation, irrespective of the depth involved....
>
> At the same time it merits special notice that the notion of contiguity or proximity was emphasized by some members as qualifying the range of exclusive coastal control expressed by the exploitability criterion. <u>Exploitation was not considered to be within the authority of a particular coastal State if the area involved could not be considered within reasonable proximity to that State. Not only was there no objection to this qualification by other Commission members, but the text finally adopted makes express recognition that the range of exploitability has a limit insofar as it determines the reach of coastal authority</u> .... Although the term 'adjacent' indicates some general limit, the Commission failed to give greater specificity to the degree of proximity required.[91] (Emphasis added.)

There would seem to be little doubt but that McDougal and Burke have correctly interpreted the scope of the definition set out in Article 1 of the Convention. In considering the vagueness of that definition they commented further that:

---

91. McDougal and Burke, The Public Order of The Oceans, 685-686 (1962) [hereinafter cited as McDougal and Burke].

> At some point, no doubt, it will be necessary to place a more precise limit on exclusive coastal control. It is already clear that contiguity and proximity are prerequisites to coastal control, but giving further concreteness to these general guides might best await the developments in economic, political, and social conditions which are at present only vaguely discernable, but which will be determinative of the limits best designed to promote the coastal interests of all.[92]

In summary, it is submitted that the Convention on the Continental Shelf does not include within its framework, areas of the seabed which are not either (1) immediately adjacent to the coastal State or (2) a part of the geological continental shelf. It is further submitted that the status of the resources of the seabed beyond the ambit of the Convention has not been settled in international law nor is there any significant State practice in this area from which we may reasonably deduce the course which the law will ultimately take.

---

92. McDougal and Burke, 688.

## CHAPTER VI

## Summary and Conclusion

### A. Summary

The continental shelf doctine, as embodied within the Convention on the Continental Shelf, represents a new concept in the international law of acquisition of territorial sovereignty. The concept is new because the problems which the doctrine is designed to answer are of recent origin. Less than 30 years ago there was a great deal of doubt whether the resources of the bed of the sea, beyond the territorial waters of a coastal State, were capable of being acquired by any state. But the need for the resources of the shelf, coupled with the development of techniques for exploiting those resources, dictated that this restrictive view would have to be modified. As we have seen, the search for an analogous theory of territorial acquisition led to increased confusion and controversy. In 1945 the Truman Proclamation was issued by the United States and the doctrine of the continental shelf, as we know it today, was born. In effect the doctrine provided that the resources of the continental shelf vest in the coastal

State. A number of States, responding to the Truman Proclamation with decrees of their own, went far beyond the lead of the United States and sought to claim 'sovereign' rights not only in the shelf but in the sea above the shelf as well. The Conference On the Law of the Sea convened in 1958 and resolved, among other things, to study these problems of the exploitation of the shelf in order that workable solutions could be reached. The Convention on the Continental Shelf which resulted from this study is in effect a codification of the doctrine of the continental shelf and provides us with what amounts to a consensus among the nations of the world as to the status of the resources of the shelf.

## B. Conclusion

We have seen that the Convention achieved a compromise between a 'fixed' and a 'flexible' definition of the shelf. The Convention does not, however, compromise the basic principle that the integrity of the status of the high seas is paramount and must not be encroached upon, at least not in an unreasonable manner.

There can be little doubt that the Convention is a truly remarkable document. Seldom have we witnessed such a prompt and orderly disposition of a new area of international concern of such magnitude. While the Convention on the Continental Shelf provides a workable blueprint for exploring and exploiting the resources of the continental shelf, in an atmosphere relatively free from dispute and controversy, the area of the bed of the sea which falls within its purview is but the periphery of the vast treasure laden bottom of the oceans. Modern technology is even now fashioning the keys which will unlock the door to this treasure house. As was the case with the continental shelf, the combination of the need for the resources of the deep ocean floor with the development of the technological capability to exploit those resources, will soon dictate that a new rule of law be fashioned under which mankind may peacefully enjoy this great bounty.

There are many lessons which have been learned from the development of the continental shelf doctrine which will be of considerable benefit to the creation of a doctrine of the deep ocean floor. Initially, it was learned

There can be little doubt that the connection is a fairly remarkable document. Nixon may be withdrawing such a grudge and orderly disposition of a new area of international concern at good conditions. While the connection on the Continental shelf provides a reliable blueprint for exploring and exploiting the resources of the continental shelf, in an atmosphere relatively free from dispute and controversy, the area on the bed of the sea which falls within its purview is but the antipathy of the vast international bodies of the oceans. Modern technology is even now facilitating the very which will unlock the door to that treasure house. As had the case with the continental shelf, the consideration of the need for the resources of the deep ocean floor with the development of the technological capability to exploit these resources, will soon dictate that a new code of law be formulated under which mankind may peacefully enjoy this great bounty.

There are many lessons which have been learned from the development of the continental shelf regime which will be of considerable benefit in the creation of a doctrine of the deep ocean floor. Initially, it was learned

that the exploitation of submarine mineral and petroleum resources is not incompatable with the integrity of the high seas, provided that reasonable safeguards are maintained. In the estimation of this writer, the greatest single lesson which can be gleaned from the development of the law relating to the continental shelf, is that analogous rules of law, although often of great value, must not be permitted to obscure the necessity for fashioning new concepts to deal with new regimes. As Lauterpacht so aptly put it:

> Accordingly, while account must be taken of such law as there is on the subject, the latter is only one factor in the situation. The other, equally essential, test is that of legitimate interests of States, viewed in the light of reasonableness and fairness, and of the requirements of the international community at large.[93]

Just as it was found that analogous rules of acquisition of land territory were inapplicable to the problems of the continental shelf, so too will it be found that these rules are inapplicable to the deep ocean floor. It is also imperitive that we accept the fact that much of the

---

93. Lauterpacht 376.

that the modification of substantive interest and jurisdiction conferred is not incompatible with the integrity of the high seas, provided that reasonable safeguards are maintained. In the application of this method, the question arises lesson which can be learned from the development of the law relating to the continental shelf. In that analogous realm of law, although often of great value, must not be permitted to obscure the necessity for developing new concepts to deal with new problems. As Bakhuyzen de Sitter put it:

> Accordingly, while economic need is often of such law as there is in the subject, the latter is only one factor in the situation, the other, equally essential, being the fact of legislative interference in terms, viewed in the light of responsibilities and claims, and of the requirements of the international community at large.[31]

That is to say found that analogous cases of expropriation of land territory were inapplicable to the problems of the continental shelf, so too will it be found that prior rules are inapplicable to the deep ocean floor. It is also important that we consider the lessons that can be

---

31. Bakhuyzen 101.

doctine of the continental shelf does not and cannot apply to the deep ocean floor. The importance of the proximity of the coastal State to the continental shelf cannot be overemphasized. The doctrine of the shelf was, to a considerable extent, the recognition of the importance of this basic consideration. Consequently, a rule of law which was designed to implement the concept of the special interest which coastal States have over the adjacent shelf, is of limited application to areas of the bottom of the sea distant from the shore.

### C. Recommendations

It is not within the scope of this paper to presage the development of the law of the deep ocean floor. The recommendations of the author setforth hereafter are not offered as the solution to the problem but are designed only to provide the reader with a focal point upon which to direct his critical analysis. With that clearly understood, the following thoughts are submitted. (1) It is recommended that Article 1 of the Convention on the Continental Shelf be revised to provide that the 'shelf' be defined as that part of the seabed which is located within

doctrine of the continental shelf does not and cannot apply to the deep ocean floor. The importance of the proximity of the coastal states to the continental shelf cannot be overemphasized. The doctrine of the shelf was, in a considerable sense, the recognition of the importance of early basic consideration. Consequently, a rule of law which was designed to implement the concept of the coastal interest which coastal states have over the adjacent shelf is of limited application to areas of the bottom of the sea distant from the shores.

c. Recommendations

It is not within the scope of this paper to propose the development of the law of the deep ocean floor. The recommendations of the author reflected herein are not offered as the solution to the problem but are designed only to provide the reader with a focal point upon which to direct his critical analysis. With that clearly understood, the following recommendations are submitted: (1) It is recommended that Article 1 of the convention on the continental shelf be revised to provide that the 'shelf' be defined as that part of the seabed which is located within

a distance of 200 miles of the coastline and beyond that limit to a maximum depth of 1000 meters. This recommendation would serve to provide the necessary concreteness to the presently vague guidelines laid down by the 'depth of exploitability' criterion, without depriving any coastal State of its geological shelf nor jeopardizing any security considerations of coastal States having a limited geological shelf. There is, of course, nothing particularly sacred about 200 miles and 1000 meters, for they represent purely arbitrary delimitations. Nonetheless some arbitrary distance--depth criteria is deemed to be essential and 200 miles--1000 meters appears to be realistic. (2) It is further recommended that a Conference be convened under the auspicies of the United Nations to develop a Convention on the Deep Ocean Floor. (3) And finally it is recommended that this Conference give serious consideration to placing the resources of the deep-ocean floor under the exclusive control and jurisdiction of the United Nations[94] with a view toward developing a fair and

---

94. Such a concept is not without some procedent. See, for example, the resolution of the General Assembly regarding outer space wherein it is commended to all that outer space and celestial bodies are for the benefit of all nations and are not subject to national appropriation. U.N. General Assembly Resolution 1721 (XVI) of 20 Dec. 1961, U.N. Doc. A/5181.

a distance of 200 miles of the coastline and beyond that limit to a maximum depth of 1000 meters. This recommendation would serve to provide the necessary concurrence to the presently vague guidelines laid down by the 'depth of exploitability' criterion, without requiring any coastal state to its geological shelf not jeopardizing the security considerations of coastal states having a limited geological shelf. There is, of course, nothing particularly sacred about 200 miles and 1000 meters. For they represent purely arbitrary delineations. Nonetheless some arbitrary distance—depth criteria is deemed to be essential and 200 miles--1000 meters appears to be realistic. (3) It is further recommended that a Conference be convened under the auspices of the United Nations to develop a convention on the Deep Ocean Floor. (4) And finally it is recommended that this Conference give serious consideration to placing the resources of the deep-ocean floor under the exclusive control and jurisdiction of the United Nations.[14] With a view toward developing a fair and

---

14. Such a concept is not without some precedent. Law, for example, the exploitation of the Antarctic Ice-covered polar state where it is conceded to all that under polar and material codies are for the benefit of all nations and are not subject to national appropriation. U.N. General Assembly resolution 1721 (XVI) of 20 Dec. 1961, U.N. Doc. A/5141.

equitable system of leasing submarine areas for the purpose of the exploitation of the resources contained therein. It is also proposed that consideration be given to establishing a rent, royalty or fee system for the leasing of such areas with the proceeds derived therefrom to be expended at the discretion of the General Assembly for the betterment of all mankind. And lastly, it is suggested that the granting of limited but compulsory jurisdiction to the International Court of Justice for the resolution of all disputes arising out of the exploitation of the deep ocean floor be a condition precedent to the participation of any State or other international body in such a program.

While these recommendations may appear to be radical or utopian, depending upon one's point of view, it is suggested that the alternatives open to us are rather restricted. Obviously, any system which would dictate that the resources of the deep ocean floor are not subject to any exploitation could not be tolerated. Any system which would depend upon the application of the 'occupation' theory of acquisition would in view of the

available system of leasing submarine areas for the purpose of the exploitation of the resources contained therein. It is also proposed that consideration be given to establishing a fund, supplied by the system for the leasing of such areas with the proceeds derived therefrom to be expended at the discretion of the Security Council for the betterment of all mankind. And lastly, it is suggested that the granting of limited but exclusive jurisdiction to the International Court of Justice for the resolution of all disputes arising out of the exploitation of the deep ocean floor be a condition precedent to the participation of any State or other international body in such a system.

While these recommendations may appear to be radical or utopian, depending upon one's point of view, it is supposed that the alternatives seem to be not rather irrelevant. Obviously, any system which would disclose that the resources of the deep ocean floor are not unique to any exploitation would not be tolerated. Any system which would depend upon the application of the 'occupation' theory of acquisition would in view of the

very nature of the floor of the sea, have to be founded on some other concept than 'effective' occupation. If some degree of exploration and exploitation were to be the sine qua non of 'occupation', then the bottom of the sea would become the arena of scrambling squatters with all of the hostility and disputes which are spawned by such a system. And it is submitted that continuity (or contiguity if you prefer) has no application beyond a distance of several hundred miles from shore. In the absence of proximity, the concept of continuity merges with that of the so called sector theory,[95] and the application of the sector theory to this arena amounts to the unlimited extention of the doctrine of the continental shelf. It is suggested that political reality

---

95. The so-called sector theory, which has found application primarily, if not solely, in polar areas, is a scheme whereby a baseline is drawn between the two extreme ends of a State's territory and from whence straight lines are extended outward until they intersect at a given point such as the north or south geographic pole, rendering all territory falling within such a pie-shaped sector the exclusive possession of the contiguous State. See Bishop, International Law 354-355 (2nd Ed. 1962).

alone is sufficient to doom this approach. It shouldn't be too difficult to imagine how the community of nations would respond to a proposal which would carve up the wealth of the deep ocean floor among the coastal States in accordance with their geographical circumstance.

When viewed in light of the available alternatives, the idea of vesting the United Nations with 'title' to the deep ocean floor becomes more plausable. While the foregoing recommendations may or may not be worthy of serious consideration, it is submitted that the community of nations can ill afford to permit confusion and uncertainty to reign much longer over the status of the resources beneath the sea. Mankind has far too much at stake to allow us to adopt the 'wait and see' attitude suggested by McDougal and Burke.[96] Forty-two years ago Sir Cecil Hurst asked, "Whose is the Bed of the Sea?"[97] It is time that we answered that question.

---

96. Page 65 Supra.

97. Hurst, Whose is the Bed of the Sea?, 4 Brit. Yb. Int'l L. 34 (1923-24).

## APPENDIX A

### United States

Proclamation By the President With Respect to the Natural Resources of the Subsoil and Sea Bed of the Continental Shelf.

September 28, 1945

Whereas the Government of the United States of America, aware of the long range world-wide need for new resources of petroleum and other minerals, holds the view that efforts to discover and make available new supplies of these resources should be encouraged; and

Whereas its competent experts are of the opinion that such resources underlie many parts of the continental shelf off the coasts of the United States of America, and that with modern technological progress their utilization is already practicable or will become so at an early date; and

Whereas recognized jurisdiction over these resources is required in the interest of their conservation and prudent utilization when and as development is undertaken; and

## APPENDIX A

### United States

proclamation by the President with respect to the natural resources of the subsoil and sea bed of the continental shelf.

September 28, 1945

Whereas the government of the United States of America, mindful of the long range world-wide need for conservation of petroleum and other minerals, with the ever-keen effort to eliminate and make available the supplies of these resources should be necessary; and

Whereas its competent agencies are of the opinion that such resources underlie many parts of the continental shelf off the coasts of the United States of America, and that with modern technological progress their utilization is already practicable or will become so as the years pass; and

Whereas recognized jurisdiction over these resources is required in the interest of their conservation and proper utilization when and as development is undertaken; and

Whereas it is the view of the Government of the United States that the exercise of jurisdiction over the natural resources of the subsoil and sea bed of the continental shelf by the contiguous nation is reasonable and just, since the effectiveness of measures to etilize or conserve these resources would be contingent upon cooperation and protection from the shore, since the continental shelf may be regarded as an extension of the land-mass of the coastal nation and thus naturally appurtenant to it, since these resources frequently form a seaward extension of a pool or deposit lying within the territory, and since self-protection compels the coastal nation to keep close watch over activities off its shores which are of the nature necessary for utilization of these resources;

Now, therefore, I, Harry S. Truman, President of the United States of America, do hereby proclaim the following policy of the United States of America with respect to the natural resources of the subsoil and sea bed of the continental shelf.

Whereas it is the view of the Government of the United States that the exercise of jurisdiction over the natural resources of the subsoil and sea bed of the continental shelf by the contiguous nation is reasonable and just, since the effectiveness of measures to utilize or conserve these resources would be contingent upon cooperation and protection from the shore, since the continental shelf may be regarded as an extension of the land-mass of the coastal nation and thus naturally appurtenant to it, since these resources frequently form a natural extension of a pool or deposit lying within the territory, and since self-protection compels the coastal nation to keep close watch over activities off its shores which are of the nature necessary for utilization of these resources;

The President, I, Harry S. Truman, President of the United States of America, do hereby proclaim the following policy of the United States of America with respect to the natural resources of the subsoil and sea bed of the continental shelf:

Having concern for the urgency of conserving and prudently utilizing its natural resources, the Government of the United States regards the natural resources of the subsoil and seabed of the continental shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control. In cases where the continental shelf extends to the shores of another State, or is shared with an adjacent State, the boundary shall be determined by the United States and the State concerned in accordance with equitable principles. The character of the high seas of the waters above the continental shelf and the right to their free and unimpeded navigation are in no way thus affected.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington this twenty-eighth al) day of September, in the year of our Lord nineteen hundred and forty-five, and of the Independence of the United States of America the one hundred and seventieth.

Harry S. Truman

By the President:
Dean Acheson
Acting Secretary of State

Mindful consider for the necessity of conserving and prudently utilizing the natural resources, the government of the United States reserves the natural resources of the subsoil and seabed of the continental shelf beneath the high seas but contiguous to the coasts of the United States as appertaining to the United States, subject to its jurisdiction and control. In cases where the continental shelf extends to the mouths of adjacent states, or is shared with an adjacent state, the boundary shall be determined by the United States and the state concerned in accordance with equitable principles. The character of the high seas of the waters above the continental shelf and the right to fish from and navigate navigation are in no way thus affected.

In witness whereof, I have hereunto set my hand and caused the seal of the United States to be affixed.

Done at the City of Washington this twenty-eighth day of September, in the year of our Lord nineteen hundred and forty-five, and of the independence of the United States of America the one hundred and seventieth.

Harry S. Truman

By the President:
Dean Acheson
Acting Secretary of State

APPENDIX B

## CONVENTION ON THE CONTINENTAL SHELF

The States Parties to this Convention,

Have agreed as follows:

### Article 1

For the purpose of these articles, the term "continental shelf" is used as referring (a) 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 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas; (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.

### Article 2

1. The coastal State exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.

2. The rights referred to in paragraph 1 of this article are exclusive in the sense that if the coastal State does

## APPENDIX B

### CONVENTION ON THE CONTINENTAL SHELF

The States Parties to this Convention,

Have agreed as follows:

### Article 1

For the purpose of these articles, the term "continental shelf" is used as referring (a) 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 metres or, beyond that limit, to where the depth of the superjacent waters admits of the exploitation of the natural resources of the said areas (b) to the seabed and subsoil of similar submarine areas adjacent to the coasts of islands.

### Article 2

1. The coastal state exercises over the continental shelf sovereign rights for the purpose of exploring it and exploiting its natural resources.

2. The rights referred to in paragraph 1 of this article are exclusive in the sense that if the coastal state does

not explore the continental shelf or exploit its natural resources, no one may undertake these activities, or make a claim to the continental shelf, without the express consent of the coastal States.

3. The rights of the coastal State over the continental shelf do not depend on occupation, effective or notional, or on any express proclamation.

4. The natural resources referred to in these articles consist of the mineral and other non-living resources of the sea-bed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the sea-bed or are unable to move except in constant physical contact with the sea-bed or the subsoil.

Article 3

The rights of the coastal State over the continental shelf do not affect the legal status of the superjacent waters as high seas, or that of the airspace above those waters.

not explore the continental shelf or exploit its natural resources, or use any underlying these activities, or make a claim to the continental shelf, without the express consent of the coastal state.

3. The rights of the coastal state over the continental shelf do not depend on occupation, effective or notional or on any express proclamation.

4. The natural resources referred to in these articles consist of the mineral and other non-living resources of the sea-bed and subsoil together with living organisms belonging to sedentary species, that is to say, organisms which, at the harvestable stage, either are immobile on or under the sea-bed or are unable to move except in constant physical contact with the sea-bed or the subsoil.

Article 2

The rights of the coastal state over the continental shelf do not affect the legal status of the superjacent waters as high seas, or that of the airspace above those waters.

## Article 4

Subject to its right to take reasonable measures for the exploration of the continental shelf and the exploitation of its natural resources, the coastal State may not impede the laying or maintenance of submarine cables or pipe lines on the continental shelf.

## Article 5

1. The exploration of the continental shelf and the exploitation of its natural resources must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea, nor result in any interference with fundamental oceanographic or other scientific research carried out with the intention of open publication.

2. Subject to the provisions of paragraphs 1 and 6 of this article, the coastal State is entitled to construct and maintain or operate on the continental shelf installations and other devices necessary for its exploration and the exploitation of its natural resources, and to establish safety zones around such installations and devices and to

Article 4

Subject to the right of the Government mentioned in the exploitation of the continental shelf and the exploitation of its natural resources, the coastal State may not impede the laying or maintenance of submarine cables or pipelines on the continental shelf.

Article 5

1. The exploration of the continental shelf and the exploitation of its natural resources must not result in any unjustifiable interference with navigation, fishing or the conservation of the living resources of the sea, nor result in any interference with fundamental oceanographic or other scientific research carried out with the intention of open publication.

2. Subject to the provisions of paragraphs 1 and 6 of this article, the coastal state is entitled to construct and maintain or operate on the continental shelf installations and other devices necessary for its exploration and the exploitation of its natural resources, and to establish safety zones around such installations and devices and to

take in those zones measures necessary for their protection.

3. The safety zones referred to in paragraph 2 of this article may extend to a distance of 500 metres around the installations and other devices which have been erected, measured from each point of their outer edge. Ships of all nationalities must respect these safety zones.

4. Such installations and devices, though under the jurisdiction of the coastal State, do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea of the coastal State.

5. Due notice must be given of the construction of any such installations, and permanent means for giving warning of their presence must be maintained. Any installations which are abandoned or disused must be entirely removed.

6. Neither the installations or devices, nor the safety zones around them, may be established where interference may be caused to the use of recognized sea lanes essential to international navigation.

base in those zones measures necessary for their protection.

3. The safety zones referred to in paragraph 2 of this article may extend to a distance of 500 metres around the installations and other devices which have been erected, measured from each point of their outer edge. Ships of all nationalities must respect these safety zones.

4. Such installations and devices, though under the jurisdiction of the coastal State, do not possess the status of islands. They have no territorial sea of their own, and their presence does not affect the delimitation of the territorial sea of the coastal state.

5. Due notice must be given of the construction of any such installations, and permanent means for giving warning of their presence must be maintained. Any installations which are abandoned or disused must be entirely removed.

6. Within the installations or devices, and the safety zones around them, may be established vessels traffic. Everyone may be obliged to use the ways established and lanes essential to international navigation.

7. The coastal State is obliged to undertake, in the safety zones, all appropriate measures for the protection of the living resources of the sea from harmful agents.

8. The consent of the coastal State shall be obtained in respect of any research concerning the continental shelf and undertaken there. Nevertheless, the coastal State shall not normally withhold its consent if the request is submitted by a qualified institution with a view to purely scientific research into the physical or biological characteristics of the continental shelf, subject to the proviso that the coastal State shall have the right, if it so desires, to participate or to be represented in the research, and that in any event the results shall be published.

Article 6

1. Where the same continental shelf is adjacent to the territories of two or more States whose coasts are opposite each other, the boundary of the continental shelf appertaining to such States shall be determined by agreement between

7. The coastal state is obliged to ensure, in the waters zones, all appropriate measures for the protection of the living resources of the sea from external aspects.

8. The consent of the coastal state shall be obtained in respect of any research concerning the continental shelf and underlying zones. Nevertheless, the coastal state shall not normally withhold its consent if the request is submitted by a qualified institution with a view to purely scientific research into the physical or biological characteristics of the continental shelf, subject to the proviso that the coastal state shall have the right, if it so desires, to participate or to be represented in the research, and that in any event the results shall be published.

## Article 6

1. Where the same continental shelf is adjacent to the territories of two or more States whose coasts are opposite each other, the boundary of the continental shelf appertaining to such States shall be determined by agreement between

them. In the absence of agreement, and unless another boundary line is justified by special circumstances, the boundary is the median line, every point of which is equidistant from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured.

2. Where the same continental shelf is adjacent to the territories of two adjacent States, the boundary of the continental shelf shall be determined by agreement between them. In the absence of agreement, and unless another boundary line is justififed by special circumstances, the boundary shall be determined by application of the principle of equidistance from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured.

3. In delimiting the boundaries of the continental shelf, any lines which are drawn in accordance with the principles set out in paragraphs 1 and 2 of this article should be defined with reference to charts and geographical features as they exist at a particular date, and reference should be made to fixed permanent identifiable points on the land.

them. In the absence of agreement, and unless another boundary line is justified by special circumstances, the boundary is the median line, every point of which is equidistant from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured.

2. Where the same continental shelf is adjacent to the territories of two adjacent States, the boundary of the continental shelf shall be determined by agreement between them. In the absence of agreement, and unless another boundary line is justified by special circumstances, the boundary shall be determined by application of the principle of equidistance from the nearest points of the baselines from which the breadth of the territorial sea of each State is measured.

3. In delimiting the boundaries of the continental shelf, any lines which are drawn in accordance with the principles set out in paragraphs 1 and 2 of this article should be defined with reference to charts and geographical features as they exist at a particular date, and reference should be made to fixed, permanent identifiable points on the land.

## Article 7

The provisions of these articles shall not prejudice the right of the coastal State to exploit the subsoil by means of tunnelling irrespective of the depth of water above the subsoil.

## Article 8

This Convention shall, until 31 October 1958, be open for signature by all States Members of the United Nations or of any of the specialized agencies, and by any other State invited by the General Assembly to become a Party to the Convention.

## Article 9

This Convention is subject to ratification. The instruments of ratification shall be deposited with the Secretary-General of the United Nations.

## Article 10

This Convention shall be open for accession by any States belonging to any of the categories mentioned in Article 8. The instruments of accession shall be deposited with the Secretary-General of the United Nations.

## Article 7

The provisions of these articles shall not prejudice the right of the coastal state to exploit the seabed by means of supplying irrespective of the depth of water above the seabed.

## Article 8

This convention shall, until 31 October 1974, be open for signature by all States members of the United Nations or of any of the specialized agencies, and by any other state invited by the General Assembly to become a party to the Convention.

## Article 9

This convention is subject to ratification. The instruments of ratification shall be deposited with the Secretary-General of the United Nations.

## Article 10

This Convention shall be open for accession by any State belonging to any of the categories mentioned in Article 8. The instruments of accession shall be deposited with the Secretary-General of the United Nations.

## Article 11

1. This Convention shall come into force on the thirtieth day following the date of deposit of the twenty-second instrument of ratification or accession with the Secretary-General of the United Nations.

2. For each State ratifying or acceding to the Convention after the deposit of the twenty-second instrument of ratification or accession, the Convention shall enter into force on the thirtieth day after deposit by such State of its instruments of ratification or accession.

## Article 12

1. At the time of signature, ratification or accession, any State may make reservations to articles of the Convention other than to Articles 1 to 3 inclusive.

2. Any Contracting State making a reservation in accordance with the preceding paragraph may at any time withdraw the reservation by a communication to that effect addressed to the Secretary-General of the United Nations.

## Article 13

1. After the expiration of a period of five years from the date on which this Convention shall enter into

## Article 11

1. This Convention shall come into force on the sixtieth day following the date of deposit of the twenty-second instrument of ratification or accession with the Secretary-General of the United Nations.

2. For each State ratifying or acceding to the Convention after the deposit of the twenty-second instrument of ratification or accession, the Convention shall enter into force on the sixtieth day after deposit by such State of its instruments of ratification or accession.

## Article 12

1. At the time of signature, ratification or accession, any State may make reservations to articles of the Convention other than to Articles 1 to 3 inclusive.

2. Any Contracting State making a reservation in accordance with the preceding paragraph may at any time withdraw the reservation by a communication to that effect addressed to the Secretary-General of the United Nations.

## Article 13

1. After the expiration of a period of five years from the date on which this Convention shall enter into

force, a request for the revision of this Convention may be made at any time by any Contracting Party by means of a notification in writing addressed to the Secretary-General.

2. The General Assembly of the United Nations shall decide upon the steps, if any, to be taken in respect of such request.

Article 14

The Secretary-General of the United Nations shall inform all States Members of the United Nations and the other States referred to in Article 8:

(a) Of signatures to this Convention and of the deposit of instruments of ratification or accession, in accordance with Articles 8, 9 and 10.

(b) Of the date on which this Convention will come into force, in accordance with Article 11.

(c) Of requests for revision in accordance with Article 13.

(d) Of reservations to this Convention, in accordance with Article 12.

ction, a remedy for the violation of this convention may be made at any time by any contracting party by means of a notification to neither addressed to the secretary-general.

2. The general assembly of the United Nations shall decide upon the steps, if any, to be taken in respect of such requests.

Article 11

The secretary-general of the United Nations shall inform all States members of the United Nations and the other states referred to in Article 1:

(a) Of signatures to this Convention and of the deposit of instruments of ratification or accession, in accordance with Articles 8, 9 and 10.

(b) Of the date on which this Convention will come into force, in accordance with Article 12.

(c) Of accession for reviews in accordance with Article 13.

(d) Of denunciations of this Convention, in accordance with Article 15.

## Article 15

The original of this Convention, of which the Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations, who shall send certified copies thereof to all States referred to in Article 8.

In witness whereof the undersigned plenipotentiaries, being duly authorised thereto by their respective Governments, have signed this Convention.

Done at Geneva, this twenty-ninth day of April one thousand nine hundred and fifty-eight.

## Article 14

The original of this convention, of which the Chinese, English, French, Russian and Spanish texts are equally authentic, shall be deposited with the Secretary-General of the United Nations, who shall send certified copies thereof to all States referred to in article 4.

In witness whereof the undersigned plenipotentiaries, being duly authorized thereto by their respective Governments, have signed this Convention.

Done at Geneva, this twenty-ninth day of April one thousand nine hundred and fifty-seven.

TABLE OF CASES AND STATUTES

BIBLIOGRAPHY

Pages

International Agreements and Resolutions:

Convention on The Continental Shelf, Sept. 15, 1958, 15 U.S.T. and O.I.A. 471, T.I.A.S. No. 5578. . . . . .App.B,35-36,63N.

United Kingdom-Venezuela Treaty of 1942, [1942] Brit. T.S. No. 10. . . . . 23N.

United Nations General Assembly Resolution 1721 (XVI) of 20 Dec. 1961, U.N. Doc. A/5181. . . . . .71N.

National Declarations and Proclamations:

Argentine Declaration Proclaiming Sovereignty Over the Epicontinental Sea and the Continental Shelf of 9 October 1946, 15 Am. J. Int'l L. (Supp.) 11 (1947). . . . . 28-29.

Proclamation By the President of the United States With Respect to the Natural Resources of The Subsoil and Sea Bed of the Continental Shelf of 28 September 1945, Presidential Proclamation No. 2667, 10 Fed. Reg. 12303 (1945). . . . .App. A.,23-24.

United Nations Documents:

Conference on the Law of the Sea, Vol. II: Plenary Meetings, U.N. Doc. No. A/CONF. 13/38 (1958). . . . . 59N.

Proceedings of the Fourth Committee of the Conference on the Law of the Sea, U.N. Doc. A/CONF. .13/42 (1958). . . . . 60,61N.

## BIBLIOGRAPHY

Page

### International Agreements and Resolutions:

Convention on the Continental Shelf, Geneva,
29, 1958, 17 U.S.T. 471, T.I.A.S. 5578,
5712,5969, 99 [illegible] . . . . . 19-21,23,

United Nations-Venezuela Treaty of 1942,
(Still Extl. 5,6)-Ec. 32 . . . . . 18,

United Nations Treaty Filming Transmission
(Ltr. Dept. of Ty Ins. Ltr. Ty.)
Doc (Final) . . . . . 18,

### Military Publications and Regulations:

Appendix Continental Production Operations Effectivity
Over the Continental Sea and the
Continental Shelf of a Coastal State (1958,
1 Doc. 3, Draft Ch. Draft) 15 (1957) . . . 20-22,

Provisions of the Treaties of the United
States Which Impinge on the Service,
Functions of the Coastal and the Not
of the Continental Shelf of Co-
(Code 1110, Treaties) Treaties
Ch. 1957, 57 Pub. Doc. 1110 (1957) . . . . 4,20, 4,23-27,

### United States Documents:

Conference on the Law of the Sea, Doc. 241
Sixty Meetings, U.N. Doc. Sec
A/Conf. 13-24 (1958) . . . . . 1,20,

Proceedings of the Fourth Congress of the
Conference on the Law of the Sea,
U.N. Doc. A/CONF. 13/C.1 (1958) . . . . 20,21,

Books:

Bibliography

Alvarez: The Exploitation and Conservation
of the Resources of the Sea
(2d ed. 1959) . . . . . 84

Anderson: The Continental Shelf (1959) . . . . . 116, 118

Bishop: International Law (2d ed. 1971) . . . . . 78

Brierly: The Law of Nations (7th ed. 1963) . . . . . 34

Fenwick: International Law (3rd ed. 1948) . . . . . 128, 129

Gidel: Le Droit International Public
de la Mer (1932) . . . . . 34

Geneva Convention Law of the Sea (1958) . . . . . 82, 172

Hall: International Law (8th ed. Oxford
1924) . . . . . 180

Schwarzenberger
and
Dickinson: International Law in the Sea
(2d ed. 1976) . . . . . 120

Schwarzenberger
and Brown The Model Code of the Oceans (1976) . . . 21-24,32,33.

Pages

Mouton The Continental Shelf (1952). . . . . .3N,40N,41,43N.

Oppenheim International Law (8th ed Lauterpacht 1955). . . . . .14N,18N,25N.

Reiff The United States and The Treaty Law of the Sea (1959). . . . . 20N.

Whiteman Digest of International Law (1965). . . .8N,34N,41N.

Articles:

Alverson and Schaefers Ocean Engineering--Its Application to the Harvest of Living Resources, 1 Ocean Science and Ocean Engineering 158 (1965). . . . . .7N.

Emery Characteristics of Continental Shelves and Slopes, 49 Bull. of American A. of Petroleum Geologists 1379(1965). . . . .48N.

Feith Report of the Committee on Rights to the Sea-bed and its Subsoil, Report of 44th Conf. of the Int'l L. Ass. 90 (1950). . . . . .12.

Franklin The Law of the Sea: Some Recent Developments, 53 Naval War College Blue Book Series (1961). . . . . .4,26,30N,40N,43, 51,58.

Garrett Issues In International Law Created by Scientific Development of the Ocean Floor, 19 S.W.L.J. 97 (1965). . . .48N.

Gutteridge The 1958 Geneva Convention on The Continental Shelf, 35 Brit. Yb. Int'l L. 102 (1959). . . . . .41N.

Gutteridge The Regime of The Continental Shelf, 44 Transact. Grot. Soc'y 77 (1958). . . .41-42.

Articles

Pages

Holland — Juridical Status of the Continental Shelf, 30 Texas L. Rev. 586 (1952). . . .26N,32.

Holmer — Offshore Oil Wells Go For Deep Water, Under Sea Technology, Jan. 1966, p. 43. . . . . .48.

Hurst — The Continental Shelf, 34 Transact. Grot. Soc'y 153 (1948). . . . . .27.

Hurst — Whose is the Bed of the Sea?, 4 Brit. Yb. Int'l L. 34 (1923-24). . . .16N,74.

Jessup — The Geneva Conference on the Law of the Sea: A Study in International Law-Making, 52 Am. J. Int'l L. 730 (1958). . . . . .36N.

Johnson — Acquisitive Prescription in International Law, 27 Brit. Yb. Int'l L. 332 (1950). . . . . .16N.

Kuenem — The Formation of the Continental Terrace, 7 Advancement of Science 25 (1950). . . . . .14N.

Lauterpacht — Sovereignty Over Submarine Areas 27 Brit. Yb. Int'l L. 376 (1950). . . . .9,29-30,31N,69.

Loughman — Aluminaut Tests and Trials 2 Ocean Science and Ocean Engineering 876 (1965). . . . . .52N.

Oda — A Reconsideration of the Continental Shelf Doctrine, 32 Tul. L. Rev. 21 (1957-1958). . . . . .9N.

Pratt — Petroleum on Continental Shelves, 31 Bull. of the American A. of Petroleum Geologists 657 (1947). . . . .4N,5-6.

Ragland — A Dynamic Positioning System for the Mohole Drilling Platform, 2 Ocean Science and Ocean Engineering 1145(1965). 52N.

Pages

Schoenberger Outer Continental Shelf Leasing, Law of Federal Oil and Gas Leases 303 (1964). . . . . .61-62.

Waldock The Legal Basis of Claims to the Continental Shelf, 36 Transact. Grot. Soc'y 117 (1951). . . . . .9N,19-20.

Walsh Economic and Logistic Aspects of Deep Vehicle Operations, 2 Ocean Science and Ocean Engineering 858 (1965). . . . . .53N.

Weeks World Offshore Petroleum Resources, 49 Bull. of the American A. of Petroleum Geologists 1680 (1965). . . . .6N.

Wenk Congress Sharpens Ocean Interests, Under Sea Technology, Jan. 1966, p. 36. . . . . .44N.

Whiteman Conference on the Law of the Sea: Convention on the Continental Shelf, 52 Am. J. Int'l L. 629 (1958). . . . . .37N.

Young The Geneva Convention on the Continental Shelf: A First Impression, 52 Am. J. Int'l L. 733 (1958). . . . . .43-44.

Young The Legal Status of Submarine Areas Beneath the High Seas, 45 Am. J. Int'l L. 225 (1951). . . . . .11N, 21-22.

Newspaper Articles:

New York Times, Mar. 20, 1966. . . . . .53N.

Philadelphia Inquirer, Nov. 18, 1965. . . . . .49N.

Lithgow v. Commonwealth (Seaman's Union Welfare Case), 65 C.L.R. 490 (1942) . . . . . 41-42.

Malone v. The Queen, [1977] 2 S.C.R. 708, 19 C.R. (N.S.) 321 (1977) . . . . . 19,19-20.

Reid, Cameron and Lamontagne, Review of Case Trials Conducted by 2 Ocean Drivers and Owner Employees, 1976 (1977) . . . . . 229.

Reid, Cameron, Provincial Regulation of Motor Vehicles in the American S.W. (Proceedings of the Canadian Conference on Motor Vehicle Regulation 1975) . . . . . 48.

Reid, Cameron, Trucking Deregulation, Impact on Carrier Economics, 1979 (Proceedings, 1979) . . . . . 268.

Robinson, Interference on the Law of the Sea, Prevention of the Continental Shelf, 32 Am. J. Int'l L. 667 (1938) . . . . . 172.

Tunks, The Supreme Jurisdiction in the Con-ciliation Liability in Civil Proceedings 32 Am. J. Int'l L. 117 (1938) . . . . . 43-44.

Tunks, The Actual Status of Emergency Areas Outside the Five Miles, 32 Am. J. Int'l L. 321 (1938) . . . . . 118, 21-22.


Newspaper Articles:


New York Times.
Nov. 20, 1980 . . . . . 128.

Philadelphia Inquirer.
Nov. 5th 1980 . . . . . 128.

Pages

Miscellaneous: