

SHORE AND SEA BOUNDARIES

Volume One



USCGS SHIP *PATHFINDER*  
One of the fleet of vessels used in offshore surveying.

# SHORE AND SEA BOUNDARIES

WITH SPECIAL REFERENCE  
TO THE INTERPRETATION AND USE  
OF COAST AND GEODETIC SURVEY DATA

BY

AARON L. SHALOWITZ, LL.M.  
*Special Assistant to the Director*

In Two Volumes



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Volume One

BOUNDARY PROBLEMS ASSOCIATED  
WITH THE  
SUBMERGED LANDS CASES  
AND THE  
SUBMERGED LANDS ACTS

(Including Recent Developments in the  
International Law of the Sea)

# Foreword

In its long history as a major surveying and charting agency of the Federal Government, the Coast and Geodetic Survey has served many interests—scientific, engineering, and legal. Our changing coastline, to which man and nature contribute, is recorded in the progressive surveys which the Bureau has made during the past century and a quarter. These surveys, together with other accumulated observational data of the Bureau, find application in the consideration of boundary disputes involving waterfront property. Their specialized nature and the technical methods used in their execution make it imperative that their scope and limitation be understood. This publication has for its purpose the development of this understanding among the technical and legal professions so that full and effective use can be made of our surveys and data by those who have need to use them.

The publication will be in two volumes and will be responsive to matters with which the Bureau has had to deal. Volume One, which is being presented at this time because of the currency of the subject matter treated, deals with the Bureau's long association with the boundary aspects of the Submerged Lands Cases and the Submerged Lands Acts during which time we have been called upon by federal and state agencies, by industry, and by engineers and attorneys for information and guidance in the clarification and application of the technical and legal-technical provisions of the Supreme Court decisions and the Acts of Congress. It deals objectively with the principles developed, the problems yet to be resolved, and the present status, nationally and internationally, of applicable doctrines.

Volume Two will deal with the Use and Interpretation of Coast and Geodetic Survey Data, particularly the early surveys and charts, with special emphasis on those features and aspects that have legal significance. It reflects participation by the Bureau—through its records and through expert testimony of officials—in many important waterfront litigations, some of which involved a boundary demarcation on the ground.

The author, Mr. Shalowitz, has brought to this undertaking a rich background of experience in the field and office operations of the Survey that reaches

back nearly a half century. He was technical adviser to the Department of Justice on the boundary aspects of the Submerged Lands Cases and was the Government's principal witness on the cartographic phases of the *California* case before a Special Master.

It is hoped this publication will provide a uniform approach to the interpretation of our data and will be a permanent source of reference for dealing with future inquiries involving shore and sea boundaries.



H. ARNOLD KARO  
Rear Admiral, USC&GS  
*Director*

# Preface

This publication is the first of two volumes that treat of shore and sea boundaries, with special reference to the use and interpretation of Coast and Geodetic Survey data. The purpose and scope of Volume One is set out in the Introduction.

A decimal system of numbering is used throughout the volume for subdividing the text, and cross-referencing is by these numbers. Each Part is subdivided into not more than nine chapters, each of which is divided into not more than nine sections. Each section is subdivided into not more than nine subjects and each subject into not more than nine numbered headings. The first digit of a number identifies the chapter, the second digit the section, the third digit the subject, and the fourth digit the heading. For example, 6422, Changes in Low-Water Line, is the second heading under the second subject in the fourth section of Chapter 6, entitled "The Tidal Boundary Problem." Further subdivisions of the headings are identified by letters "A," "B," etc. Cross-references within any one Part of the volume are shown by the number only, thus (*see* 231), but where the reference is to another Part, the Part number is also given—for example (*see* Part 2, 1121).

The form of legal citations follows generally the rules formulated in the manual, *A Uniform System of Citation*, a joint publication of the law reviews of Columbia, Harvard, Pennsylvania, and Yale. Wherever possible, citations are given to cases reported in the National Reporter System.

The author wishes to thank all those who have given him their advice or have helped him in any other way.



# Contents

	PAGE
Foreword . . . . .	VII
Preface . . . . .	IX
Introduction to Volume One . . . . .	XIX

## PART 1

### THE SUBMERGED LANDS CASES

CHAPTER 1. LEGAL BACKGROUND . . . . .	3
11. United States v. California . . . . .	3
111. The Government's Complaint—Tidelands Not Involved . . . . .	5
112. The Supreme Court Decision . . . . .	6
1121. Dissenting Opinions . . . . .	9
12. United States v. Louisiana . . . . .	10
13. United States v. Texas . . . . .	11
14. Summary of Cases . . . . .	14
CHAPTER 2. TECHNICAL BACKGROUND . . . . .	15
21. The Federal-State Boundary . . . . .	15
211. United States v. California . . . . .	16
2111. A Special Master Is Named . . . . .	16
2112. Preparatory Work by the Coast and Geodetic Survey . . . . .	17
2113. Proceedings Before the Special Master . . . . .	19
CHAPTER 3. APPLICABLE PRINCIPLES OF INTERNATIONAL LAW . . . . .	22
31. The Threefold Division of the Sea . . . . .	22
311. Inland Waters . . . . .	22
312. The Marginal Sea . . . . .	23
313. The High Seas . . . . .	24
32. Development of the Marginal Sea Concept . . . . .	24
321. The 3-Mile Limit . . . . .	25
3211. Departures From 3-Mile Limit . . . . .	27
33. Baseline in International Law . . . . .	27
331. Rule of the Tidemark . . . . .	28
332. The Headland Theory . . . . .	29
333. The Straight Baseline . . . . .	30

	PAGE
CHAPTER 4. INLAND WATERS PROBLEM . . . . .	31
41. Boundary at Bays . . . . .	31
411. North Atlantic Coast Fisheries Arbitration . . . . .	31
42. Concept of a Bay as Inland Waters . . . . .	33
421. Semicircular Method (United States Proposal) . . . . .	34
4211. Use of Reduced Areas . . . . .	36
4212. The Semicircular Method Applied . . . . .	40
422. Segmental Method (French Proposal) . . . . .	41
43. Ten-Mile Rule for Bays . . . . .	43
44. The California Case . . . . .	44
441. Findings of the Special Master . . . . .	44
4411. Analysis of Findings . . . . .	46
45. Historic Bays . . . . .	47
451. Constituent Elements Generally . . . . .	48
452. The Time Element . . . . .	49
453. Status of Historic Bays . . . . .	49
454. The California Case . . . . .	50
4541. San Pedro Bay . . . . .	51
A. Location of Point Lasuen . . . . .	52
B. Historic Limits of San Pedro Bay . . . . .	57
4542. Special Master's Findings . . . . .	58
46. Harbors as Inland Waters . . . . .	60
47. Boundary at Rivers . . . . .	62
48. Termini at Headlands . . . . .	63
CHAPTER 5. OFFSHORE ISLANDS PROBLEM . . . . .	66
51. Anglo-Norwegian Fisheries Case . . . . .	67
511. The Facts . . . . .	67
512. Principal Legal Issues . . . . .	68
513. Judgment of the Court . . . . .	70
5131. Commentary . . . . .	73
52. Corfu Channel Case . . . . .	75
53. Opposing Views of the Problem . . . . .	77
54. Findings of the Special Master . . . . .	79
CHAPTER 6. THE TIDAL BOUNDARY PROBLEM . . . . .	82
61. Opposing Views of the Problem . . . . .	82
62. Aspects of the Tide . . . . .	84
621. Diurnal Inequality . . . . .	85
622. Spring and Neap Tides . . . . .	86
63. Tidal Datums . . . . .	87
631. Hydrographic (Chart) Datums . . . . .	88

	PAGE
CHAPTER 6. THE TIDAL BOUNDARY PROBLEM—Continued	
64. Demarcation of Tidal Boundaries.....	89
641. Ordinary High-Water Mark.....	90
6411. At Common Law—Attorney-General v. Chambers.....	92
6412. In American State Courts—Teschemacher v. Thompson....	92
6413. In Federal Courts—Borax Consolidated v. Los Angeles...	94
A. Commentary.....	96
642. Ordinary Low-Water Mark.....	97
6421. Findings of the Special Master.....	99
6422. Changes in Low-Water Line.....	101
A. From Natural Causes.....	101
B. From Artificial Causes.....	103
 CHAPTER 7. OVERALL FINDINGS OF THE SPECIAL MASTER.....	 105
71. Summary of Findings.....	105
711. Exceptions by the United States.....	106
712. Exceptions by California.....	107
72. Present Status of Special Master's Report.....	107
73. Application to Louisiana Coast.....	108
731. The Chapman Line—Its Technical Basis.....	108
7311. Modifications Resulting From Special Master's Findings..	109
74. Application to Texas Coast.....	112

## PART 2

### THE SUBMERGED LANDS ACTS

CHAPTER 1. SUBMERGED LANDS ACT (PUBLIC LAW 31).....	115
11. General Statement.....	115
12. Pertinent Provisions of the Act.....	117
121. Lands Beneath Navigable Waters.....	117
122. Seaward Boundaries of the States.....	120
123. What is the Coast Line?.....	122
13. Other Provisions.....	124
14. Summary of Provisions.....	125
15. Consideration by the Supreme Court.....	125
151. Constitutionality of Act.....	126
152. The Decision of March 15, 1954.....	127
1521. Commentary.....	128
153. Seaward Boundaries of Gulf States.....	129
1531. Opposing Views of the Act.....	131
154. The Decision of May 31, 1960.....	132
1541. Preliminary Findings.....	132
1542. The Texas Decision.....	136

CHAPTER 1. SUBMERGED LANDS ACT (PUBLIC LAW 31)—Continued	
15. Consideration by the Supreme Court—Continued	
154. The Decision of May 31, 1960—Continued	PAGE
1543. The Louisiana Decision . . . . .	140
1544. The Mississippi Decision . . . . .	143
1545. The Alabama Decision . . . . .	143
A. Justice Douglas' Dissent . . . . .	144
B. Justice Black's Dissent . . . . .	145
1546. The Florida Decision . . . . .	147
A. Justice Harlan's Dissent . . . . .	148
1547. Summary of Court's Conclusions . . . . .	149
1548. Comment on Decisions . . . . .	150
155. Final Decree . . . . .	153
16. Supplementary Boundary Problems Raised by Act . . . . .	154
161. The Coast Line Problem . . . . .	155
1611. Applicable Rules . . . . .	156
1612. Seaward Limits of Inland Waters . . . . .	159
A. Where Islands Fringe a Coast . . . . .	160
1613. The Line of Ordinary Low Water . . . . .	162
1614. The Time Element . . . . .	165
162. The Seaward Boundary Problem . . . . .	168
1621. Exterior Boundaries . . . . .	169
1622. Lateral Boundaries . . . . .	172
17. Low-Water Line Survey of Louisiana Coast . . . . .	173
171. Purpose of Survey . . . . .	173
172. The Mapping Project . . . . .	175
1721. Area East and West of the Mississippi Delta . . . . .	175
1722. Mississippi Delta Area . . . . .	176
1723. Atchafalaya Bay Area . . . . .	178

CHAPTER 2. OUTER CONTINENTAL SHELF LANDS ACT (PUBLIC LAW	
212) . . . . .	181
21. General Statement . . . . .	181
22. Development of a Continental Shelf Doctrine . . . . .	182
221. What Is the Continental Shelf? . . . . .	182
222. Legal Status of the Continental Shelf . . . . .	186
2221. The Presidential Proclamation of September 28, 1945 . . . . .	187
2222. Consideration by the International Law Commission . . . . .	189
2223. Convention Adopted at 1958 Geneva Conference . . . . .	191
223. The Continental Shelf Doctrine and Freedom of the High Seas . . . . .	191
23. Pertinent Provisions of the Act . . . . .	192
231. Outer Continental Shelf . . . . .	193
232. Jurisdiction Over the Outer Continental Shelf . . . . .	193
233. Governing Laws . . . . .	196
234. Geological and Geophysical Explorations . . . . .	197
24. Other Provisions . . . . .	199

## PART 3

### RECENT DEVELOPMENTS IN THE INTERNATIONAL LAW OF THE SEA

	PAGE
CHAPTER 1. THE INTERNATIONAL LAW COMMISSION . . . . .	203
11. Origin and Organization . . . . .	203
12. Preparatory Work of the Commission . . . . .	204
13. Final Report . . . . .	205
131. Summation of Rules Adopted . . . . .	205
1311. The Territorial Sea . . . . .	205
1312. The Continental Shelf . . . . .	206
1313. The Breadth of the Territorial Sea . . . . .	207
132. United Nations Action . . . . .	208
CHAPTER 2. UNITED NATIONS CONFERENCES ON THE LAW OF THE SEA . . . . .	209
21. General Statement . . . . .	209
22. The First Geneva Conference (1958) . . . . .	210
221. Convention on the Territorial Sea and the Contiguous Zone . . . . .	211
2211. Delimitation of the Territorial Sea . . . . .	212
A. Baselines . . . . .	212
B. Outer Limit of the Territorial Sea . . . . .	217
C. The Problem of Bays . . . . .	218
D. Islands and Low-Tide Elevations . . . . .	225
E. Harbors and Roadsteads . . . . .	229
2212. Boundary Through the Territorial Sea—The Median Line . . . . .	230
A. Construction of a Median Line . . . . .	232
2213. Charting of Boundary Lines . . . . .	235
2214. The Right of Innocent Passage . . . . .	236
A. Passage Through International Straits . . . . .	237
2215. The Contiguous Zone . . . . .	238
2216. Internal Waters . . . . .	241
2217. The Breadth of the Territorial Sea . . . . .	241
2218. Comparison of Convention With Boundary Criteria Formerly Used by the United States—Agreements and Differences . . . . .	242
222. Convention on the Continental Shelf . . . . .	245
2221. Definition of Continental Shelf . . . . .	246
2222. Sovereign Rights of Coastal State . . . . .	247
A. Natural Resources—What They Encompass . . . . .	250
2223. Oceanographic and Other Scientific Research . . . . .	251
A. Impact on U.S. Oceanographic Program . . . . .	252
2224. Boundary Through the Continental Shelf . . . . .	253
2225. Three-Dimensional Character of an Offshore Boundary . . . . .	254

CHAPTER 2. UNITED NATIONS CONFERENCES ON THE LAW OF THE SEA—Continued

	PAGE
22. The First Geneva Conference (1958)—Continued	
223. Convention on the High Seas . . . . .	255
224. Convention on Fishing and Conservation of the Living Resources of the High Seas . . . . .	259
2241. Background of Convention . . . . .	259
2242. The Convention Proper . . . . .	261
225. Optional Protocol of Signature Concerning the Compulsory Settlement of Disputes . . . . .	264
226. Resolutions Adopted by Conference . . . . .	264
227. Provisions for Signature, Ratification, and Operation . . . . .	265
2271. Action by the United States . . . . .	266
2272. Status of Ratification or Accession . . . . .	268
23. The Second Geneva Conference (1960) . . . . .	269
231. Proposals for Breadth of Territorial Sea . . . . .	270
2311. Implications of a 12-Mile Limit . . . . .	271
232. Final Action by Conference . . . . .	275
233. Present United States Position . . . . .	275

APPENDIXES

A. Glossary of Terms Used . . . . .	279
B. Bibliography of Technical and Legal Sources Cited . . . . .	323
C. Special Master's Report . . . . .	329
D. Letters from Department of State to Department of Justice (Territorial Waters) . . . . .	354
E. Letter from Coast and Geodetic Survey to Department of Justice (Tidal Datum Planes) . . . . .	358
F. Presidential Proclamation of September 28, 1945 (The Continental Shelf) . . . . .	362
G. Submerged Lands Act . . . . .	363
H. Outer Continental Shelf Lands Act (Excerpts) . . . . .	368
I. Conventions on the Law of the Sea Adopted by United Nations Conference at Geneva, 1958 . . . . .	371
J. Claims of Nations to Breadth of Territorial Sea . . . . .	389
K. Table of Cases Cited . . . . .	392
INDEX . . . . .	397

# Illustrations

FIGURE	PAGE
USCGS Ship <i>Pathfinder</i> .....	Frontispiece
1. Bays and channels along California coast.....	4
2. 3-mile marginal belt in relation to inland waters and the high seas.....	7
3. Principle of semicircular rule for determining status of an indentation...	35
4. The semicircular rule applied (United States proposal).....	37
5. Application of semicircular rule by use of reduced areas.....	37
6. Semicircular rule applied to San Diego Bay using reduced area method...	39
7. The segmental rule applied (French proposal).....	42
8. Application of 10-mile rule to an indentation.....	42
9. Section of Vancouver's track chart of 1793.....	53
10. Vancouver's anchorage position at noon Nov. 25, 1793.....	54
11. Section of Coast Survey chart 5142.....	56
12. Method of determining termini at headlands.....	64
13. Overall unit area contended for by California.....	67
14. Straight baselines laid down by Norway along its skjaergaard coast.....	69
15. Corfu Channel separates the Greek Island of Corfu from the mainland...	76
16. Comparison between southern California coast and Arctic coast of Norway.....	78
17. Types of tide along the coasts of the United States.....	83
18. High and low water at Anchorage, Alaska.....	85
19. Spring and neap tides during a lunar month.....	86
20. Intersection of tidal plane with shore defines the tidal boundary.....	90
21. Natural accretion or erosion resulting from artificial structures.....	102
22. The Chapman line in Atchafalaya Bay.....	110
23. The Chapman line in the Mississippi delta area.....	111
24. Coast line under Public Law 31 (the Submerged Lands Act).....	123
25. Islands forming a portico to mainland and islands as part of a land form.	162
26. Shoreline changes along Louisiana coast, 1859-1960.....	166
27. Derivation of envelope line.....	171
28. The navigator can readily determine his relationship to the envelope line.....	172
29. Coastal and offshore triangulation along Louisiana coast.....	174
30. Infrared photography provides a good contrast between land and water..	177
31. 100- and 1000-fathom depth contours along the coasts of the United States.....	184
32. Bottom configuration off California coast.....	185
33. Profile of shelf and slope along California coast.....	186
34. Submarine topography of shelf and slope off northeast United States.....	187
35. Offshore federal and state jurisdiction under Submerged Lands Acts.....	194
36. Self-contained combination drilling and production platform.....	200
37. Straight baselines may not be drawn to low-tide elevations.....	216
38. No closing line may cross a bay formed by coasts of two or more States..	219
39. The 24-mile closing line limitation does not apply to historic bays.....	219

FIGURE	PAGE
40. Closing line of multi-mouthed bay cannot exceed 24 nautical miles . . . . .	221
41. 24 miles is the maximum closing line allowable . . . . .	221
42. Semicircular rule is applied to indentation where it narrows to 24 miles . .	223
43. Line AOA' encloses a greater water area than line BOB' . . . . .	223
44. Closing line of bay does not connect with the island . . . . .	225
45. Closing line of bay encompasses the island . . . . .	225
46. An island generates a new territorial sea . . . . .	226
47. Effect on outer limits of the territorial sea of low-tide elevations . . . . .	226
48. Continuation seaward of the land boundary results in inequity to State A .	231
49. Median-line boundary construction between coasts opposite each other . .	233
50. Median-line boundary construction between coasts adjacent to each other .	235
51. Zones of water areas recognized in international law . . . . .	239
52. Tender-type platform on outer continental shelf in Gulf of Mexico . . . . .	248
53. Three-dimensional character of an offshore boundary . . . . .	254



# Introduction to Volume One

At the time of its inception, the primary function of the Coast Survey was to survey and chart the coastal regions of the United States for the promotion of waterborne commerce. Because of the precise methods used and the carefully accumulated observational data, it soon became apparent that the Bureau could serve many collateral interests other than strictly maritime. This has manifested itself through the years in advice and services rendered, and in the utilization of Bureau records and testimony in important waterfront litigations.

A high point was reached in this area in 1947 when the Supreme Court first announced its historic decision that the Federal Government and not the states has paramount rights in the submerged lands seaward of low-water mark along the coast of California and outside of its inland waters. While the basic legal rights in the offshore submerged lands were thus settled, the decision was couched in terms too general to provide the technical and legal-technical criteria necessary for a precise determination of the federal-state boundary. Bureau participation in this litigation began soon after the decision was announced. The Department of Justice sought the advice and guidance of the Bureau in resolving the technical problems that the Court's findings posed. This was the beginning of a long association with many aspects of shore and sea boundaries encompassed by the three *Submerged Lands Cases* (sometimes referred to as "tidelands" cases) decided in 1947 and 1950; by the Submerged Lands Acts passed by Congress in 1953; and by the Conventions on the Law of the Sea adopted at Geneva in 1958. For a decade and a half the Bureau has served many interests in this specialized field.

The purpose of Volume One of *Shore and Sea Boundaries* is to write the record of this long association; to deal objectively with the boundary problems associated with the Supreme Court's decisions, the acts of Congress, and the Geneva conventions; and to emphasize the principles that underlie the delimitation and demarcation of sea boundaries in order to provide a technical and legal background for the consideration of similar or related problems that might arise in the future.

The volume is divided into three Parts. Part I begins with the legal and historical background of the *California* case, and the later *Louisiana* and *Texas* cases. Under the federal paramount rights doctrine enunciated in these cases,

the United States was recognized as having full dominion and power over the resources in the submerged lands underlying the marginal sea and beyond as an incident of its national external sovereignty. In thus deciding the basic legal question, the Court was not unmindful of the many complexities that would be entailed in establishing the boundary between federal and state jurisdiction, for it said "there is no reason why, after determining who owns the three-mile belt here involved, the Court might not later, if necessary, have more detailed hearings in order to determine with greater definiteness particular segments of the boundary." For this, it later named a Special Master, and directed him to make recommendations on three specific questions. These presented for solution three groups of problems: the inland waters problem, the offshore islands problem, and the tidal boundary problem:

Chapter 2 of Part 1 deals with the proceedings before the Special Master: the preparatory work of the Bureau for the Department of Justice and the documentary material furnished, and the nature of the testimony presented at the hearings.

Since the Supreme Court's holdings in the *Submerged Lands Cases* were based on national external sovereignty in the marginal sea and the waters beyond (international law concepts), the Special Master considered the questions propounded by the Court against the background of applicable principles of international law in their relation to the seaward boundaries of a littoral nation. Chapter 3 lays the foundation for an understanding of these principles. The threefold division of the sea and the boundaries entailed are examined as are certain historical developments in the law of the sea, particularly the transition from the early Roman doctrine of *mare liberum*, or free sea, to the doctrine of *mare clausum*, or closed sea, and finally back to the freedom of the seas doctrine, which has been one of the keystones of American foreign policy since the early days of the Republic.

In Chapter 4, the inland waters problem is considered, beginning with the exhaustive study made by the North Atlantic Coast Fisheries Tribunal in 1910 that arbitrated the long-standing dispute between the United States and Great Britain over the interpretation of the word "bays" in the Convention of 1818, and how the 3-mile limit was to be measured at such geographic features. This is followed by a discussion of the concept of a bay as inland waters, and the technical basis of the solutions advanced for resolving the important questions—left unsettled by the 1910 Tribunal—as to the kind of indentations that possess the configuration and characteristics that justify bringing them into the category of inland waters over which a nation can exercise exclusive jurisdiction. The findings of the Special Master as to the status (inland water or open sea) of the

water areas along the California coast are reviewed in the light of the traditional position taken by the United States in its international relations. Particular emphasis is placed on "historic bays"—those well-recognized exceptions to the rules applicable to ordinary bays—which form part of the inland waters of a country, provided certain constituent elements are present.

Chapter 5 deals with the offshore islands problem in relation to the status of the channel areas along the southern California coast. This is considered primarily in relation to the *Anglo-Norwegian Fisheries* decision—one of the most important judgments ever to be pronounced by an international tribunal on matters dealing with delimitation of the territorial sea—in which the International Court of Justice sanctioned the use by Norway of straight baselines for delineating an exclusive fisheries zone along its highly broken coast north of the Arctic Circle.

The last of the three questions on which the Supreme Court sought recommendation from the Special Master in the *California* case dealt with tidal boundaries. Boundaries determined by the course of the tides involve two engineering aspects: a vertical one, predicated on the height reached by the tide during its vertical rise and fall, and constituting a tidal plane; and a horizontal one, related to the line where the tidal plane intersects the shore to form the boundary desired. The first is derived from tidal observations alone and, once derived (on the basis of long-term observations), is for all practical purposes a permanent one. The second is dependent on the first, but is also affected by the natural processes of erosion and accretion, and the artificial changes made by man.

The language of the Court defining the federal-state boundary as the "ordinary low-water mark" lacked the technical precision essential in the establishment of water boundaries and raised problems of interpretation that involved a consideration of the tide along the coast of California and a development of criteria by which the boundary line could be demarcated on the ground. Chapter 6 deals with these problems. Certain aspects of the tide are reviewed—for example, diurnal inequality and spring and neap tides—and their impact on the selection and determination of tidal datum planes explained. The term "ordinary high-water mark" is traced from the early English common law, and the judicial interpretations placed upon the term in American state and Federal courts critically examined for the light they shed on the interpretation of the cognate term "ordinary low-water mark."

In Part 2, two legislative enactments, by which Congress provided the machinery for the exploration of the natural resources of our continental shelves, are considered—Public Law 31 (approved May 22, 1953, and identified as the

Submerged Lands Act) established titles in the states to lands beneath navigable waters within their historic boundaries, and Public Law 212 (approved August 7, 1953, and identified as the Outer Continental Shelf Lands Act) provided for jurisdiction by the United States over the submerged lands seaward of the state boundaries.

Chapter 1 begins with the purpose and legislative history of the Submerged Lands Act. The pertinent provisions are appraised, especially those dealing with the baseline (coast line under the act) and the seaward boundaries of the states. The Supreme Court decision of May 31, 1960, is dealt with in some detail to provide a better understanding of the rationale of the Court's holding that, for purposes of the Submerged Lands Act, Texas and Florida are entitled to 9-mile boundaries in the Gulf, but Louisiana, Alabama, and Mississippi to only 3. This decision settled a significant but limited phase of the boundary problems raised by the act. These problems are not unlike those considered by the Special Master in the *California* case. Although his recommendations have not been finalized by the Court, his findings represent the nearest approach thus far made in this country to a judicial determination of the inland waters and associated boundary problems and, absent legislative guidance, should provide a basis for an interpretation of the boundary provisions of the Submerged Lands Act. These findings are drawn on freely in developing interpretative guides based on historical precedent in the judicial and executive fields. The interpretations made are not advanced as established Government policy but rather as those that seem technically appropriate. What is attempted is an objective analysis of the problems to be resolved and a resolution of them consistent with past practices in the law of the sea and with the legislative history of the act.

Chapter 2 deals with the Outer Continental Shelf Lands Act. This asserts federal rights over the continental shelf of an extraterritorial nature and does not operate as an extension of national territorial limits, in the sense that the territorial sea defines national boundaries. The act is closely linked to the boundary problems of the Submerged Lands Act because federal jurisdiction over the continental shelf begins at the seaward limits of state jurisdiction. The act gives legislative expression to the Presidential Proclamation of September 28, 1945, by which the United States asserted jurisdiction and control over the natural resources of the subsoil and seabed of the continental shelf. This was the real impetus to present-day developments in the legal status of the continental shelf which now has the sanction of the International Law Commission and the United Nations Conference on the Law of the Sea. The chapter deals with the physical characteristics of the shelf as a worldwide, but not uniform, feature,

and with the emergence of a continental shelf doctrine—one of the significant developments in the modern law of the sea. The pertinent provisions of the Outer Continental Shelf Lands Act are considered—the operative extent, the laws governing operations on the shelf, and the geological and geophysical explorations provided for.

To round out the subject matter of Volume One, Part 3 has been included. This deals with recent developments in the international law of the sea, notably the preparatory work of the International Law Commission, and the definitive action of the 1958 United Nations Conference at Geneva. A summation only of the rules adopted by the Commission are given in Chapter 1, and these are considered against the background of established American practice. A fuller treatment is included in Chapter 2 which deals extensively with the United Nations Conference.

Adoption by the Conference of four conventions (supported by the United States delegation and since ratified by the Senate) by substantial majorities marks a major forward step in the codification of the law of the sea. Although the Conference brought to light a wide variety of conflicting interests between countries, it was possible to reconcile many of these conflicts and to achieve a wide area of agreement on such substantive matters as the right to the use of the high seas, the right of passage through straits used for international navigation between the high seas and the territorial sea, and the right of each coastal State to exploit the resources of its continental shelf. These areas of accord were further reflected in the adoption of rules for defining the limits of inland waters, for the drawing of baselines, for determining the status of indentations, and for delineating the outer limits of the territorial sea and boundaries through the territorial sea. Ratified or unratified, the conventions represent the most recent restatement of the law of the sea and are bound to have an impact in many situations nationally and internationally.

Like many conventions the rules agreed on are general in nature and in many cases are not susceptible of application to the complex coastal configurations likely to be encountered, without further clarification and interpretation. This is what has been attempted in Chapter 2. The interpretations are based in the main on the commentaries in the final report of the International Law Commission (the principal document considered by the Geneva Conference), and on the discussions in the various committees of the Conference. The chapter deals primarily with the technical provisions of the conventions adopted, particularly as they relate to boundary problems. The Convention on the Territorial Sea embodies the first formulation of the median-line principle for delimiting boundaries through the territorial sea and the continental shelf. The

construction of such line for coasts opposite each other and coasts adjacent to each other is described. A comparison is included between the provisions of the Geneva convention and the criteria formerly used by the United States for delimiting the territorial sea, and agreements and differences noted. Other conventions adopted at Geneva are appropriately considered in their impact on sea boundaries. The chapter concludes with a discussion of the Second Geneva Conference which was convened in 1960 for the purpose of reaching agreement on the breadth of the territorial sea. The various proposals advanced are noted, as are the implications of a 12-mile breadth in its effect on freedom of navigation and on navigational aids and charting programs.

Some documentation is included in the Appendixes in order to make the publication as nearly self-contained as possible. Principal among these is the Special Master's final report to the Supreme Court. This is reproduced in its entirety as Appendix C (with original pagination indicated) because of the numerous references made to it in the text, and because copies of the report are no longer available. Also included as Appendix I are the substantive articles of the Geneva conventions because of their historic nature and the likelihood of future reference being made to them by the Bureau.

As to the physical makeup of the volume, the footnote method was decided on as the only satisfactory approach to a publication of this kind, where citations to legal and technical authorities and accompanying explanations are invaluable to those working in this field. To have dealt with it in any other way would have meant endless, disconcerting digressions in the main text. It was not possible to treat all aspects of a particular subject completely in one place, and a certain amount of repetition became unavoidable. This results from the nature of the publication and the similarities in the subject matter treated but dealt with in different contexts. For example, the tidal boundary problem arose in the *California* case in connection with a specific type of tide that prevails along the California coast. It arises again, in a broader context, under the Submerged Lands Act as part of the definition of "coast line" which is applicable to all coasts. The same is true of the treatment of the continental shelf under the Outer Continental Shelf Lands Act and the Geneva Convention on the Continental Shelf. Reciprocal cross-references are given in such cases to assure the user full coverage of the subject.

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*Aaron L. Shalowitz*