UNIVERSITY OF NORTH CAROLINA SEA GRANT PROGRAM



# The Role of North Carolina in Regulating Offshore Petroleum Development

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# THE ROLE OF NORTH CAROLINA IN REGULATING OFFSHORE PETROLEUM DEVELOPMENT

by

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# Foreword

This excellent analysis of the legal aspects of "The Role of North Carolina in Regulating Offshore Petroleum Development," is the fifteenth University of North Carolina Sea Grant publication resulting from the Law of the Sea Research Project at the School of Law of the University of North Carolina. The author, Joseph E. Kilpatrick, who receives his J.D. degree in May, 1975, and in September will become Law Clerk to Judge Walter Brock of the North Carolina Court of Appeals, has previously contributed an important Sea Grant article entitled, "The Problem of Ocean Research: United States and Latin American Perspectives," to the 1974 Sea Grant publication, UNC-SG-74-03, "Current Aspects of Sea Law."

In this study, Kilpatrick examines the entire gamut of existing laws which may be applicable to the complex process of regulating offshore petroleum development. The energy crisis has greatly accelerated federal interest in prompt petroleum exploration in continental shelf areas offshore from Atlantic coastal states. The history of the legal conflict between the federal government and the coastal states in regulating offshore oil exploitation is traced from the beginning down to the 1975 Supreme Court decision in United States v. Maine, et al., which reaffirmed that the ownership of the seabed and its contents more than three miles from shore remain vested in the federal government and not in the adjacent Atlantic coastal states.

Sections of this paper deal with the legal difficulties encountered in determining the seaward and lateral marine boundaries of North Carolina, and with the geological prospects of finding valuable oil deposits in marine areas adjacent to North Carolina.

The legal framework--international, federal and state--within which offshore petroleum development must take place is considered in detail. This analysis includes the federal Submerged Lands Act, the Outer Continental Shelf Lands Act, the Federal Water Pollution Control Acts, the National Environmental Protection Act and the Federal Coastal Zone Management Act of 1972. North Carolina legislation examined embraces the Oil and Gas Conservation Act, the Dredge and Fill Law, the Oil Pollution Control Act, and the Coastal Area Management Act of 1974.

This legal study, while primarily addressed to the specific problems of North Carolina petroleum development, contains much of interest not only to the planners, legislators and interested citizens of North Carolina, but to those of other coastal states as well. This monograph complements the concurrent Law of the Sea, University of North Carolina Sea Grant publication, Dawson, "Deepwater Port Development in North Carolina: The Legal Context," UNC-SG-75-08.

Appreciation is due to Dean Robert G. Byrd of the School of Law of the University of North Carolina, and to Dr. B. J. Copeland, Director, and Dr. William Rickards, Assistant Director, of the University of North Carolina Sea Grant Program for their interest in this research.

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## I. The Fuel Shortage and the Emergence of Federal Interest in the Atlantic Continental Shelf Petroleum Resources

In the past two years, the United States has experienced a critical oil and gas shortage as a result of the widening gap between domestic consumption and production. Between 1960 and 1970, United States' oil consumption increased from 9.7 to 13.9 million bbl/day, practically 50%.[1] By 1980, oil consumption is expected to reach 21.5 million bbl/day and continue to escalate through the year 2000.[2] At the same time, oil production from domestic sources has levelled off at approximately 12 million bbl/day.[3] Whereas domestic production accounted for 75% of total United States' oil consumption in 1960, it fell to 66% in 1970 and is expected to drop to 50% by 1980.[4]

In response to the fuel shortage, the federal government has embarked upon "Project Independence." First introduced by President Nixon and continued by President Ford, "Project Independence" is designed to render the United States capable of energy self-sufficiency by the mid-1980s.[5] At best, it reflects the hope that natural consumption can be curbed and production increased to the point of self-sufficiency in a reasonable period of time. An important ingredient of "Project Independence" is the Department of Interior's effort to accelerate leasing of Outer Continental Shelf submerged lands for oil production.

In particular, the federal government has its eye on the Atlantic Continental Shelf as a valuable source of new, undeveloped oil and natural gas deposits. Other than the Gulf of Alaska, the Atlantic Continental Shelf represents the United States' last frontier for offshore oil production. The federal government has already announced that it intends to lease 3.5 million acres of submerged lands off the Middle Atlantic Coast in 1975.[6] Additional portions of the Atlantic Shelf are expected to be leased for oil development in the near future.[7]

The prospect of drilling on the Atlantic Continental Shelf has aroused the concern of coastal states and their citizenry. Environmentalists, fishermen, and public officials vociferously protested plans for petroleum development off New England and New York shores.[8] As early as January 11, 1972, East Coast governors met formally with the Secretary of Interior to convey their apprehension about the environmental impact of proposed drilling.[9] More recently, President Ford and Interior Secretary Morton met with Coastal State governors to debate plans for offshore drilling.[10] Also, a coalition of Eastern and Western governors have been lobbying for the creation of a Federal Exploration Authority and to restrict leasing to proven sources.

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[1] EXXON USA, Vol. XIII, No. 1, 17-19 (1974).
[2] Id. at 20-21.
[3] Id. at 18-21.
[4] The Chase Manhattan Bank, N.A., 116 BUSINESS IN BRIEF 3 (1974).
[5] Id.
[6] NEW YORK TIMES, Nov. 14, 1971, at 1, col. 1.
[7] "On October 21, the Interior Department issued a draft environmental impact statement on its proposal to lease 10 million offshore acres in 1975." Id.
[8] W. AHERN, OIL AND THE OUTER CONTINENTAL SHELF, 9 (1973).
[9] Id. at 119.
[10] CHRISTIAN SCIENCE MONITOR, Nov. 14, 1974, at 1, col. 5.

This effort is designed to gain the time necessary to evaluate fully and prepare for the impact of accelerated offshore drilling.[11] The prevailing theme of state concern and opposition to Atlantic Continental Shelf petroleum development is that "the federal government [receives] the lion's share of the revenues from the petroleum development while [the states'] constituents bear the real risks."[12]

This statement suggests that the federal drilling program may have an inequitable effect on the Atlantic coastal states. The primary purpose of this paper is to examine whether the existent legal framework sufficiently protects state interests affected by the prospect of offshore petroleum developments.

## II. Historical Setting

In the past, the exploitation of petroleum from the continental shelf has been characterized by intense conflict between the federal government and those coastal states directly involved in offshore development activities. By the time offshore oil drilling began to blossom commercially in the early 1920s, it was generally accepted that the resources of the continental shelf within the United States' three-mile territorial sea boundary belonged exclusively to the adjacent coastal state. In Martin v. Waddell[13] in 1842, the Supreme Court recognized state title to the bed of navigable inland waters on the theory that the title to these submerged areas first held by the British Crown passed to the thirteen original states when they attained independence. Three years later, Alabama's claim of title to tidelands bordering Mobile Bay was upheld on the basis of her admission to the union on an "equal footing" with the thirteen original states.[14]

With the advent of offshore oil drilling, California assumed that its historic title to inland submerged lands applied to offshore submerged lands as well. Between 1920 and 1933, it was generally accepted that the coastal states had sole responsibility for the development of petroleum and gas resources from offshore submerged lands. In Boone v. Kingsbury[15] the California Supreme Court affirmed the State's ownership of submerged land resources within the three-mile limit, and the plaintiff's appeal was denied by the United States Supreme Court for want of a substantial federal question. Even the Secretary of Interior adamantly refused to lease offshore areas under the Federal Leasing Act of 1920 in deference to state ownership and control of these areas.[16]

Impressed by the vast quantity of oil reserves in the continental shelf and the increasing value of oil, Interior Secretary Ickes began to question the superiority of state claims to these resources.[17] Between 1937 and 1945 Congress debated the issue and finally passed House Joint Resolution 225, quitclaiming the submerged lands of the marginal sea to the coastal states. Meanwhile, the federal government had brought a suit against California in the Supreme Court to determine the status of the offshore area in dispute. President Truman vetoed Resolution 225, reasoning that "the Congress is not an appropriate forum to determine the legal issue now before the Court. The jurisdiction of the

[11] NEWSWEEK, Jan. 27, 1975, at 13.
[12] AHERN, supra note 8, at 119.
[13] 41 U.S. (16 Pet.) 367 (1842).
[14] Pollard's Lessee v. Hagan, 44 U.S. (3 How.) 212 (1845).
[15] 206 Cal. 148 (1928); E. BARTLEY, THE TIDELANDS OIL CONTROVERSY, 68 (1953).
[16] Id., at 128-129.
[17] H. MARSHALL, THE FEDERAL-STATE STRUGGLE FOR OFFSHORE OIL, 6 (1966).

Court should not be interfered with while it is arriving at its decision in the pending case."[18]

In U.S. v. California,[19] California argued that since the original thirteen states had acquired title to offshore submerged lands from the British Crown, California obtained similar rights upon admission to the Union on an "equal footing" with the original states. The Supreme Court held that there was a lack of substantial evidence to support the historic claim of the original thirteen states. The Court concluded that the principle of territorial sea or other forms of coastal state jurisdiction over the adjacent seabed recognized by international law did not exist in 1776.[20] The national government, not the individual states, first asserted jurisdiction in offshore areas:

> It did happen that shortly after we became a nation our statesmen became interested in establishing national dominion over a definite marginal zone to protect our neutrality. Largely as a result of their efforts, the idea of a definite three-mile belt in which an adjacent nation can, if it chooses, exercise broad, if not complete dominion, has apparently at last been generally accepted throughout the world, although as late as 1876 there was still considerable doubt in England about its scope and even its existence.[21]
>
> Not only has acquisition, as it were, of the three-mile belt been accomplished by the National Government, but protection and control of it has been and is a function of national external sovereignty.[22]

Justice Black could have rested his decision solely on the state's failure to demonstrate a convincing historical right; instead, he chose to elaborate the necessity of federal control in the "paramount powers" doctrine:

> The cricial question...is not merely who owns the legal title to the lands under the marginal sea. The United States here asserts rights in two capacities transcending those of a mere property owner. In one capacity it asserts the right and responsibility to exercise whatever power and dominion are necessary to protect this country against dangers to the security and tranquility of its people, incident to the fact that the United States is located immediately adjacent to the ocean. The government also appears in its capacity as a member of the family of nations. In that capacity it is responsible for conducting United States' relations with other nations. It asserts that proper exercise of these constitutional responsibilities requires that it have power, unencumbered by state commitments, always to determine what agreements will be made concerning the control and use of the marginal sea and the land under it.... In light of the foregoing, our question is whether the state or the Federal Government has the paramount right and power to determine in the first instance when, how, and by what agencies, foreign or domestic, the oil and other resources of the soil of the marginal sea, known or hereafter discovered, may be exploited.[23]

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[18] Id. at 12-13.
[19] 332 U.S. 19 (1947).
[20] Id. at 31.
[21] Id. at 33.
[22] Id. at 34.
[23] Id. at 36.

In other words, offshore submerged areas are part of an international domain in which the federal government must enjoy supreme authority. Furthermore, the oil and other resources in these submerged areas may prove vital to the United States' national security; therefore, the federal government and not the states should ultimately control their disposition. The Court's rationale reflects a pragmatic balancing of federal and state interests in offshore submerged lands. In the absence of convincing historical evidence of the states' claim, the Court concludes that "the national government possesses paramount rights in and power over the three-mile marginal belt, including the resources of the submerged lands, as a necessary incident of its responsibilities in international relations, national defense, and commerce."[24]

Naturally, California, Louisiana, and Texas were appalled by the United States v. California decision, for it deprived these states of their established control of offshore submerged lands and lucrative oil revenues. The stakes were substantial: based on an average rate of $2.50 per barrel in 1952, the total value of the oil reserves at issue approached $40,000,000,000; the coastal states could expect to receive roughly $7,500,000,000 of this total in revenues.[25] In view of the dissent of Justices Reed and Frankfurter in United States v. California, the states realized that the decision could easily have been decided the other way. For example, Justice Reed concluded that "this ownership in California would not interfere in any way with the needs or rights of the United States in war or peace."[26]

Following World War II, the battle between the coastal states and the federal government shifted from the Supreme Court to Congress. Meanwhile, the United States' jurisdiction and control of the resources of the entire continental shelf emerged as a valid principle of international law.[27] Thus, coastal states such as California and Louisiana could assert exclusive rights to develop continental shelf resources without interfering with the federal government's responsibilities under international law.[28] After several years of heated debate in Congress between "federal control" and "states' rights" advocates, an effective compromise was reached: the Submerged Lands Act (SLA) and Outer Continental Shelf Lands Act (OCSLA) of 1953.

The SLA[29] revives the coastal states' historical proprietary rights to the submerged lands underlying the three-mile territorial sea, while the OCSLA[30] confirms the federal government's "paramount powers and rights" in continental shelf resources beyond the three-mile boundary. The Submerged Lands Act acknowledges state title not only to "lands permanently or periodically covered by tidal waters...seaward to a line three geographical miles distant from the coastline" but also to submerged lands beyond the three-mile limit to a "boundary as it existed at the time such State became a member of the Union, or as heretofore approved by Congress."[31] The provision for an historical exception

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[24] Id. at 38.
[25] MARSHALL, supra note 17, at 4.
[26] 332 U.S., at 42.
[27] Truman Proclamation, Pres. Proc. No. 2668, 10 Fed. Reg., 12304 (1945).
[28] U.S. v. Louisiana, 363 U.S., at 31 (1960).
[29] Public Law 31, 83 Cong. 1st Sess., 43 U.S.C. 1301 et seq., 67 STAT. 29 (1953).
[30] Public Law 212, 83 Cong. 1st Sess., 43 U.S.C. 331-343, 67 STAT. 462 (1953).
[31] 67 STAT. 31, § 4.

to the general three-mile boundary is repeated in Section 4: "Nothing in this Section is to be construed as questioning or in any manner prejudicing the existence of any State's seaward boundary beyond three geographical miles if it was provided by its constitution or laws prior to or at the time such State became a member of the Union, or if it has been heretofore approved by Congress."[32]

In United States v. Louisiana, et al (Florida, Alabama, Mississippi, Texas),[33] the Court decided that Texas' and Florida's historical seaward boundaries of three marine leagues, or nine geographical miles, in the Gulf of Mexico were valid according to the SLA, but found similar claims by Louisiana, Mississippi, and Alabama to be invalid. Only in the case of Florida and Texas was the evidence clear that 1) these states claimed a three-league seaward boundary prior to admission into the Union and 2) upon admission, Congress expressly recognized the validity of these boundaries.[34] In effect, the Court imposed a strict historical test on those states claiming boundaries beyond the normal three-mile limit. Justice Black protested this rigid interpretation of the SLA in view of the seemingly inequitable result:

> To take these marginal lands away from the State of Louisiana and give Texas the lands it claims--when Texas apparently has no wells at all beyond the three-mile limit--seems to me completely incompatible with the kind of justice and fairness that the Congress wanted to bring about by this Act.[35]

Despite his sympathy for Louisiana in this situation, it is highly dubious that Black or the entire Court would sanction a state's claim to a seaward boundary beyond three leagues in the Gulf of Mexico or three geographical miles in the Atlantic or Pacific Oceans, in view of Section 2(b) of the SLA: "...in no event shall the term 'boundaries' or the term 'lands beneath navigable waters' be interpreted as extending from the coastline more than three geographical miles into the Atlantic Ocean or the Pacific Ocean, or more than three marine leagues into the Gulf of Mexico."[36] In view of this seemingly absolute boundary limitation, the Court recognized Florida's three-league seaward boundary in the Gulf of Mexico, but limited its boundary to one marine league, or three geographical miles in the Atlantic Ocean.[37]

## III. United States v. Maine[38]

The pending litigation between the federal government and the

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[32] Id., § 2(a)(2).
[33] 363 U.S. 1 (1960).
[34] Id. at 29-30. Henri, The Atlantic States' Claim to Offshore Oil Rights: United States v. Maine in ENVIRONMENTAL AFFAIRS, 11 B.C. Environmental L. Center 831 (19 ).
[35] Id. at 100.
[36] 67 STAT. 29, § 2(b).
[37] U.S. v. Louisiana, 363 U.S., at 128.
[38] U.S. v. Maine, 395 U.S. 955 (No. 35 Orig., June 16, 1969). For further discussion of U.S. v. Maine, see Suher & Hennessee's State and Federal Jurisdictional Conflicts in the Regulation of United States Coastal Waters, (Sea Grant Pub., UNC-SG-74-05, 1974).

thirteen Atlantic coastal states in the Supreme Court indicates that the issue of determining the states' seaward boundaries on the basis of the SLA and historical rights is far from settled. In response to Maine's attempt to grant an exclusive license for the exploration of submerged lands ninety miles from its coast, the federal government sued all thirteen Atlantic coastal states for a determination of its rights to continental shelf resources beyond the three-mile boundary prescribed by the SLA. The states have assembled a wealth of historical evidence to support their position. First, they contend that "at the time of colonization (17th and 18th centuries) and at the time the colonies became independent (1776), the ancient claims of the British sovereigns to full imperium and dominium over broad areas of the seas adjacent to their lands (up to 100 miles or more seaward) were both part and parcel of accepted British law, policy and practice, and were also wholly consistent with the international law of the 17th and 18th centuries."[39] In the colonial charters, the Crown granted each colony full dominium and imperium over the adjacent coastal states and seabed one hundred miles from shore. These dominium and imperium powers in the coastal area inhered in each state when the colonies achieved independence from the Crown, and the 1783 Treaty of Peace recognized the individual sovereignty of each American state.[40] In the absence of a constitutional provision to the contrary, the states argue that only state imperium or governmental powers in offshore areas were transferred to the federal government when they merged with the Union. Finally, the states contend that the SLA does not establish an absolute limitation on their seaward boundaries, but simply confirms their title to submerged lands at least to the three-mile seaward limit.[41]

The Supreme Court, exercising its original jurisdiction, appointed a Special Master to weigh the evidence and make tentative conclusions of law. His conclusions fall squarely against the states' position: a) only claims to the ownership of the seabed (dominium) based on prescription or actual occupation were recognized in 1783; b) only in the 19th and 20th centuries was ownership of the bed of the territorial sea recognized without regard to prescription or actual occupation; c) when the American colonies achieved independence in 1776 and upon the conclusion of the 1783 Treaty of Peace, the colonies did not possess any right of ownership of the seabed except for those limited areas, if any, actually occupied; d) any rights of the English Crown to sovereignty of the marginal seas and ownership of the seabed passed to the national government upon independence and under the Treaty of Peace of 1783; e) even if the states possessed rights to sovereignty and ownership of the seabed following their independence, these rights were forfeited by their ratification of the Constitution; f) finally, the SLA's seaward limitation of three geographical miles on the Atlantic Coastal States' claim of ownership to adjacent submerged lands is valid and binding upon the states.[42]

The Supreme Court is expected to follow the conclusions of the Special Master and reject the states' alleged right of ownership to seabed resources one hundred miles out to sea. The first United States v. California decision implies that even if California had successfully proven that the original thirteen states had valid claims to seabed resources, it would have been difficult to prove that these rights of dominium did not pass to the federal government upon the ratification of the Constitution. Furthermore, the Court's interpretation of the SLA in United States v. Louisiana reveals that the historical

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[39]Exceptions to Report of Special Master and Brief in support of exceptions of the States of North Carolina, South Carolina and Georgia, at 20-21.
[40]Id. at 55.
[41]Id. at 80.
[42]Id. at i-vii.

exception to the general three-mile boundary is limited to three leagues and only applies to the Gulf of Mexico.

In predicting how the Supreme Court will decide United States v. Maine, is is helpful to examine the institutional role of the Court in relation to Congress. Prior to the SLA and OCSLA, the Court had few, if any, guidelines to apply to the submerged lands cases. In the absence of express constitutional provisions, it was necessary to create by inference the "paramount powers" doctrine to effectuate what it considered to be enlightened policy at the time. In his dissent in United States v. California, Justice Frankfurter recommended that the Court defer to Congress because the case involved a political question.[43] Indeed, the United States v. California decision did not resolve the dispute between the federal government and coastal states over the status of offshore submerged lands; rather, legislative compromise in the form of the SLA and OCSLA was necessary to diffuse the tidelands controversy. A decision in favor of the state's position in United States v. Maine would completely overturn the legal framework established by the SLA and OCSLA. It would afford the Atlantic coastal states a gargantuan increase in authority to develop and control the resources of the Atlantic Continental Shelf, at the expense of established federal authority mandated by Congress in the OCSLA. Unless the states' historical evidence of dominium rights or ownership of the submerged lands one-hundred miles to sea is so compelling that to ignore it would be grossly unjust, the Supreme Court is not likely to disrupt the existing scheme which Congress labored to establish in 1953.

The policy implications of the United States v. Maine litigation clearly transcend the legal arguments pertaining to historical rights. Is it appropriate or necessary at the present time to increase the states' share of adjacent seabed resources or extend their authority to regulate outer continental shelf petroleum development beyond the established three-mile boundary? A closer examination of federal and state laws governing offshore petroleum development should afford some tentative answers to this question.

## IV. The Problem of Delineating North Carolina's Seaward and Lateral Boundaries

Apart from the issue raised by the United States v. Maine litigation --whether North Carolina owns the resources of submerged lands extending one-hundred miles from shore by virtue of historical rights, the task of defining the precise location of North Carolina's seaward and lateral boundaries is hampered by a plethora of legal questions. In truth, the location of North Carolina's offshore boundaries is highly uncertain in a geographical sense. The vagueness of North Carolina's seaward boundary is exemplified by the description of the submerged lands to be explored in the state's oil, gas, and sulphur mining leases:

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[43]United States v. California, 332 U.S. at 45. Justice Frankfurter stated: "The disposition of the area, the rights to be created in it, the rights heretofore claimed in it through usage that might be respected though it fall short of prescription, all raise appropriate questions of policy, questions of accommodation, for the determination of which Congress and not this Court is the appropriate agency." Id. In light of the subsequent passage of the Submerged Lands Act and the Outer Continental Shelf Lands Act, this statement has proven to be prophetic. The "political" or "policy" nature of determining rights in submerged lands between the federal government and coastal states is no different today than it was in 1947.

> Beginning at the North Carolina-Virginia line at the seventy-seventh meridian and running thence in a straight line to the Courthouse in Washington, North Carolina; thence in a straight line to the Courthouse in New Bern, North Carolina; thence in a straight line to the Courthouse in Beaufort, North Carolina; thence extending the line from New Bern to Beaufort in its same southeast direction to the Atlantic Ocean boundary of State-owned lands; thence with the Atlantic Ocean boundary of North Carolina north to the North Carolina-Virginia line; thence west with the North Carolina-Virginia line to a point of beginning, excepting, however, State park lands at Lake Phelps in Washington and Tyrrell Counties. [emphasis added][44]

Although somewhat inexact, this description would be practical if the "Atlantic Ocean boundary of state-owned lands" and the "North Carolina-Virginia line" were susceptible to meaningful definition or measurement.

The North Carolina Constitution provides that the state's seaward boundaries "shall remain as they are now." This provision is identical to the section of the 1868 North Carolina Constitution on boundaries.[45] General Statutes 141-6(a) elaborates further:

> The Constitution of the State of North Carolina, adopted in 1868, having provided in Article I, Sec. 34, that the 'limits and boundaries of the State shall be and remain as they now are,' and the eastern limit and boundary of the State of North Carolina on the Atlantic Seaboard having always been, since the Treaty of Peace with Great Britain in 1783 and the Declaration of Independence of July 4, 1776, one marine league eastward from the Atlantic seashore, measured from the extreme low-water mark, the eastern boundary of the State of North Carolina is hereby declared to be fixed as it has always been at one marine league eastward from the seashore of the Atlantic Ocean bordering the State of North C rolina, measured from the extreme low-water mark of the Atlantic Ocean seashore....[46]

The marine league is equivalent to three geographical miles (6,075 feet/mile) and represents the traditional measure of territorial sea jurisdiction. The statutory definition of state submerged lands reflects both the marine league standard and the definition of submerged lands in the SLA:

> 'Submerged lands' are lands which lie beneath (a) any navigable waters within the boundaries of this State, or (b) the Atlantic Ocean to a distance of three geographical miles seaward from the coastline of this state.[47]

In North Carolina v. Flying "W" Enterprises,[48] the North Carolina Supreme Court confirmed the state's seaward boundary to be one marine league on the basis of General Statutes 141-6 and the SLA:

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[44]Sample N.C. Lease for oil, gas, and sulphur mining from Office of State Geologist, Department of Natural and Economic Resources.
[45]N.C. Const., Art. IV, § 2 (1970).
[46]N.C.G.S. §§ 141-6(a).
[47]N.C.G.S. §§ 146-64(7).
[48]273 N.C. 399, 160 S.E. 2d 482 (1968).

> By statute [SLA] the U.S. has in effect quitclaimed and confirmed the ownership of the State of N.C. in the lands beneath the Atlantic Ocean within a marine league seaward from the eastern boundary of the state.[49]

Unfortunately, the SLA does not furnish any guidance in determining the precise location of North Carolina's seaward boundary. State submerged lands are defined as those lands "permanently or periodically covered by tidal waters...seaward to a line three geographical miles distant from the coastline."[50] "Coastline" is "the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters."[51] The Act contains no definition of "inland waters." The vagueness of these definitions and the omission of any definition of inland waters manifest the intention of Congress to delegate questions of precise boundary delimitation to the Courts.

In United States v. California,[52] in 1965, the Supreme Court adopted the Convention on the Territorial Sea and Contiguous Zone to determine California's seaward boundary under the SLA. In particular, the Convention prescribes rules and guidelines to define the coastline in relation to inland waters, harbor jetties, beach erosion jetties, channels, islands and low tide elevations, bays, and groups of islands.[53] The Court made the "coastline" of the Submerged Lands Act synonymous with the baseline of the territorial sea in the Convention to insure uniformity.[54] Although an improvement over the SLA, the terms of the Convention do not allow definite and clear-cut application.

It appears that both the SLA definition of coastline and the Convention's concept of baseline is dynamic or ambulatory. North Carolina's seaward boundary is in constant flux as its coastline erodes or otherwise changes shape. Another factor affecting the location of North Carolina's seaward boundary is the method used to measure the three-mile limit. The Convention gives the signatory nation the option of measuring the three-mile boundary from a straight baseline adjoining major points of the coastline or from every point along the coastline.[55] Not only would the straight baseline method produce a straighter and more workable boundary, it would also place a greater proportion of offshore submerged lands within the state's three-mile boundary.

Both North Carolina's southern and northern lateral seaward boundaries are unsettled at present. General Statutes 141-7 prescribed a tentative boundary line subject to automatic repeal if Congress and South Carolina did not ratify it by 1971.[56] Apparently it has not been ratified. The proposed southern lateral seaward boundary consists of a straight line extending from the intersection of the North Carolina-South Carolina land boundary to 33° 27' 00" N latitude to the seaward jurisdictional limit of North Carolina. The due East direction of this boundary line permits it "to be extended on the true 90 degree bearing along

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[49] Id. at 406.
[50] 67 STAT. 29, § 2(a)(2).
[51] 67 STAT. 29, § 2(c).
[52] 381 U.S. 139 (1965).
[53] Ereli, The Submerged Lands Act and the Geneva Convention on the Territorial Sea and the Contiguous Zone, XLI Tulane L. Rev., 555.
[54] 381 U.S. at 164-168.
[55] Ereli, supra note 53, at 556.
[56] N.C.G.S. § 141-7.

33° 27' 00" latitude as far as a need for delineation may arise."[57] Likewise, the proposed northern seaward lateral boundary has yet to be ratified by Virginia and Congress. It extends from the intersection point of the low water mark and the North Carolina-Virginia land boundary line along a true 90 degree bearing (due East) to North Carolina's seaward jurisdictional limit.[58]

In addition to the uncertainties of legal definition, the determination of North Carolina's offshore boundary is complicated by the technical problems of measurement. "Both to the hydrographer and the topographer the low water line is one of the most uncertain and difficult features to delineate."[59] Furthermore, "the inaccuracies of boundary location due to current technological limitations could result in misallocations of areas of large economic significance."[60]

Despite current exploratory drilling in state-owned submerged lands and the prospect of oil and gas development from outer continental shelf lands off North Carolina's coast, State Government has not yet taken the initiative to clarify and fix the state's offshore boundaries vis-a-vis Virginia, South Carolina, and the federal government. Until this effort is made, the state will be exposed to the increasing risk of costly disputes and litigation. More important, effective planning, policy-making, and regulation of development activities related to North Carolina's submerged lands and outer continental shelf resources will require precise knowledge of the areas subject to North Carolina's ownership and control.

## V. The Geologic Prospect of Oil Development Off North Carolina's Coast

Geologically, the submerged lands seaward of North Carolina's shoreline constitute a natural prolongation of the primary land mass known as the Coastal Plain, which ultimately merges with the deep seabed or the bottom of the ocean.[61] The entire prolongation is generally referred to as the continental margin. The margin consists of three major geological features: the continental shelf, the continental slope, and the continental rise. In the continental margin adjacent to North Carolina these features are uniquely pronounced.

The continental shelf is the broad, relatively flat terrace which adjoins the shoreline. In comparison with the entire Atlantic Continental Shelf, which has an average width of 75 to 100 miles, the continental shelf off North Carolina is extremely narrow.[62] Its width ranges from sixteen miles at Cape Hatteras in the North to approximately sixty-five miles in Long Bay,

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[57] Id.
[58] N.C.G.S. § 141-8.
[59] A. SHALOWITZ, II SHORE AND SEA BOUNDARIES 183 (G.P.O. 1964).
[60] Hortig, Jurisdictional, Administrative, and Technical Problems Related to the Establishment of California Coastal and Offshore Boundaries in THE LAW OF THE SEA 235 (L. Alexander, ed., 1967).
[61] Council on Environmental Quality (CEQ), April 18, 1974, OCS OIL AND GAS--AN ENVIRONMENTAL ASSESSMENT at 2-10.
[62] J. NEWTON, AN OCEANOGRAPHIC ATLAS OF THE CAROLINA CONTINENTAL MARGIN, 8 (1971).

south of Cape Fear. The gradient or eastward slope of this shelf area is gentle: less than one foot of depth per 900 feet of horizontal distance. The outer edge of the shelf generally occurs at a depth of less than 300 feet. For example, South of Cape Lookout the shelf ends in waters 120 to 240 feet deep in a precipitate descent of the continental slope.[63]

To date, most offshore oil and natural gas production has involved continental shelf areas at depths of 200 meters or less. Although the depth of the continental shelf adjacent to North Carolina is attractive from the standpoint of oil development, the relatively small size of the terrace indicates that its overall potential for oil and gas reserves is less than the continental shelf areas off most of the other Atlantic coastal states.

The continental slope connects the shelf with the continental rise. It possesses a sharp gradient, comparable to the side of a steep mountain. The gradient, or rate of declivity of the slope, is approximately one foot of depth increase per ten feet of distance off Hatteras, and one foot of depth per twenty feet of distance off Cape Lookout. The slope is steepest off Hatteras. The width of the slope varies from seven to eight miles in the North to over twenty-five miles in the southern Cape Fear region. Off Hatteras, the slope is extremely uneven and convoluted due to numerous submarine canyons. The base of the slope is 5,000 feet deep in the Hatteras region, and 7,550 feet deep in the South.[64]

An important geologic feature in the southern region is the Blake Plateau, an elongated terrace located between the continental shelf and the rise East of Cape Fear. The Plateau contains phosphate and manganese deposits which several companies have begun to mine.[65]

The continental rise extends from the hills at the base of the continental slope to the deep seabed of the Atlantic Ocean. Off North Carolina, the deep seabed begins with the Hatteras abyssal plain. The continental rise is roughly 150 miles wide; it has an average gradient of one foot of depth per 100 feet of distance and fuses with the Hatteras abyssal plain at a depth of 16,000 feet. In the southern Cape Fear region, the continental rise is replete with hills and knolls which range in height from 16 to 320 feet. One hundred and sixty miles southeast of Cape Hatteras, the Hatteras ridge towers 1,000 feet above the continental rise. It is approximately 80 miles long and 12 miles wide, and slopes gradually eastward until it meets the Hatteras abyssal plain.[66]

The "art" or science of detecting oil and gas deposits within submerged lands is still somewhat primitive. Geologists have yet to comprehend fully the natural processes by which oil and natural gas are formed. Oil and natural gas are hydrocarbons; natural gas is mostly methane, the simplest hydrocarbon compound which varies from natural gasoline to viscous oil.[67]

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[63] Id.
[64] Id.
[65] Id.
[66] Id.
[67] CEQ, supra note 61, at 2-1.

> Oil and natural gas result from the slow chemical change of biological material (dead marine animal and plant debris) that was deposited in thick layers of sediments during the last 600 million years on what was then the earth's surface. After oil and natural gas compounds formed in an oxygen-deficient environment, they migrated upward through the water-saturated sedimentary rocks (the hydrocarbons are less dense than water) and, eventually, either escaped into the atmosphere or were trapped by a layer of impermeable rock. At a minimum, large deposits of petroleum require the presence of, or proximity to, both thick sedimentary rock strata that were deposited in an appropriate marine environment and suitable geologic traps. [emphasis added][68]

In other words, thick sedimentary strata and geologic traps are the principal geologic indicators of oil and natural gas deposits.[69] But these features are difficult to detect at extreme depths and hardly guarantee the presence of oil and gas. According to the Director of the Geological Survey, "satisfactory methods for appraising the magnitude of potential petroleum resources have not yet been developed even for well explored areas."[70] Thus, the only foolproof method to verify the existence of oil and gas reserves is drilling, a very expensive procedure. Only by means of extensive exploratory drilling along the Atlantic Continental Margin will the true extent of oil and gas resources in the Atlantic Continental Margin become known.[71]

Since 1925, at least 105 exploratory drills have been constructed in North Carolina between the fall line and the coast, but none has uncovered oil and gas reserves in quantities of commercial significance.[72] North Carolina's submerged lands underlying inland waters such as Pamlico and Albemarle Sounds and offshore waters extending three miles from the coastline have also been the object of extensive exploration. At present, all of North Carolina' submerged lands are leased to oil companies for exploration purposes. The Cities Service Oil Company currently holds a lease from the State to explore 2.4 million acres of state-owned submerged lands underlying a major portion of the Pamlico, Albemarle, and adjacent Sounds. The Colonial Oil and Gas Company has leased the remaining state-owned submerged lands (approximately 400,000 acres). In 1972, Colonial conducted exploratory drilling in Carteret County.[73] Thus far, the exploratory efforts of these two companies have not detected commercially significant deposits of oil or natural gas.[74] Between 1961 and 1972, the Department of Interior issued sixteen permits to explore areas of continental margin adjacent to North Carolina seaward of the state's three-mile boundary, also known as the Outer Continental Shelf (OCS). At present, several of the major oil companies are engaged in exploratory

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[68] Id.

[69] Personal interview with Dr. Conrad Newman, Professor of Marine Science, University of North Carolina, Chapel Hill, N.C., Feb. 3, 1975.

[70] AHERN, supra note 8, at 9.

[71] Id.

[72] North Carolina Marine Science Council, NORTH CAROLINA'S COASTAL RESOURCES [A Preliminary Planning Report for Marine and Coastal Resource Development in N.C. prepared by the North Carolina Marine Science Council in consultation with the North Carolina State-Federal Planning Committee for Marine Resources], at 3-3 (1972).

[73] Id.

[74] Personal Interview with Dr. Stephen Conrad, Geologist for the State of North Carolina,

drilling of OCS submerged lands off North Carolina. One area considered to be attractive for future exploration and drilling is the Cape Fear Arch and the adjoining Blake Plateau.[75] The Blake Plateau is believed to contain sediments as thick as 30,000 feet; however, its depth of 2,500 to 3,000 feet will preclude productive drilling for the time being.[76]

On April 18, 1974, the Council of Environmental Quality published a report prepared in conjunction with the federal government's effort to assess the environmental impact of oil and gas development in the Atlantic Continental Shelf. On the basis of all available information such as gravity, magnetic and seismic data, and accessible water depths, the Council identified areas of the Atlantic Continental Shelf with the greatest potential for significant commercial oil and gas deposits. These hypothetical development sites are concentrated in the Georgia Embayment area off North Florida, Georgia, and South Carolina, the Baltimore Canyon Trough off Delaware and Maryland, and the Georges Bank Trough off Cape Cod, Massachusetts.[77] It is noteworthy that the Council did not identify a hypothetical site off the coast of North Carolina. Indeed, the CEQ study readily implies that North Carolina's Continental Margin is not geologically attractive for oil exploration at the present time.[78]

Of course, the geological potential of North Carolina's continental margin for petroleum resources will remain uncertain without further exploratory drilling. Extensive exploration promises to continue in view of the federal government's desperate search for new petroleum and gas sources in the Atlantic Continental Shelf. Thus far, knowledge of North Carolina's continental margin has been gathered haphazardly: "at the present time there is no systematic, coordinated approach to an evaluation of the mineral resources in the North Carolina Coastal Zone."[79] Information about the presence of oil deposits off North Carolina is scattered among a variety of sources: oil companies, the United States Geological Survey, the United States Army Corps of Engineers, individual scientists, and state government officials. This information must be assembled and evaluated in toto to apprise North Carolina of the potential for petroleum development off its shores. At present, North Carolina should sponsor an extensive geologic inventory of the mineral resources within its submerged lands--both inland and offshore.[80]

## VI. The Legal Framework for Offshore Petroleum Development

### A. The Role of International Law

Since the early days of the "tidelands controversy," international law has played a major role in shaping the legal status of offshore submerged lands. Historically, the oceans have been governed by the principle of the high seas or the freedom of the seas. Very simply, the freedom of the seas doctrine preserves the ocean as an international resource to be shared by all

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[75]Marine Science Council, supra note 72, at 3-11 in Raleigh, N.C., Nov. 1, 1974.
[76]Id. at 3-4.
[77]CEQ, supra note 61, at 2-11.
[78]Id. at 2-19.
[79]Marine Science Council, supra note 72, at 3-11.
[80]This recommendation is not new: id. at 3-13.

nations equally; it precludes exclusive use of resources of the sea which unreasonably impairs other nations' rights to use and to benefit from similar resources.[81]

Prior to 1945, the date of the United States v. California case, the United States jurisdiction and control of coastal waters and underlying seabed areas was limited to a three-mile marginal or territorial sea.[82] The concept of the territorial sea has long been recognized under international law as a necessary and reasonable exception to the freedom of the seas principle. The Convention on the Territorial Sea and the Contiguous Zone concisely defines the legal meaning of the territorial sea: "the sovereignty of a state extends beyond its land territory and its internal waters, to a belt of sea adjacent to its coast, described as the territorial sea."[83] The extension of full national sovereignty into immediately adjacent waters is justified by the country's need for self-defense. United States' sovereignty or jurisdiction in the three-mile territorial sea is restricted only by the right of innocent passage:

> Art. 14(1)...ships of all States, whether coastal or not, shall enjoy the right of innocent passage through the territorial sea;
>
> Art. 14(4): Passage is innocent so long as it is not prejudicial to the peace, good order or security of the coastal state.[84]

In 1945 the United States asserted exclusive rights to the resources of the continental shelf considerably beyond the three-mile limit of the territorial sea. The Truman Proclamation represented a bold extension of national jurisdiction and an apparent breach of the freedom of the seas doctrine; however, its rationale was convincing:

> WHEREAS it is the view of the Government of the United States that the exercise of jurisdiction over 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 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....[85]

By 1958 widespread state practice established the concept of continental shelf jurisdiction as a rule of customary international law. This rule was codified in the Geneva Convention on the Continental Shelf.[86]

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[81]Convention on the High Seas, done April 28, 1958, 450 U.N.T.S. 205; T.I.A.S. No. 5639.
[82]W. BISHOP, INTERNATIONAL LAW, 592-594 (1962).
[83]Convention on the Territorial Sea and the Contiguous Zone, Geneva, 1958, 516 U.N.T.S. 205, T.I.A.S. No. 5639.
[84]Id.
[85]Truman Proclamation, supra note 27.
[86]Convention on the Continental Shelf, 499 U.N.T.S. 311, T.I.A.S. No. 5578 (1958).

The United States v. California decision of 1945 manifests an acute sensitivity to the federal government's growing interest in continental shelf resources and the substantial influence of international law in circumscribing the United States' capacity to develop these resources. Justice Black's opinion implies that recognition of California's superior proprietary rights in regard to submerged land resources would unduly interfere with the federal government's international prerogatives and legal obligations:

> The belief that local interests are so predominant as constitutionally to require state dominion over lands under its land-locked navigable waters finds some argument for its support. But such can hardly be said in favor of state control over any part of the ocean or the ocean's bottom. This country, throughout its existence, has stood for freedom of seas, a principle whose breach has precipitated wars among nations. The country's adoption of the three-mile belt is by no means incompatible with its traditional insistence upon freedom of the seas, at least so long as the national government's power to exercise control consistently with whatever international undertaking or commitments it may see fit to assume in the national interest is unencumbered.[87]

> What this Government does, or even what the states do, anywhere in the oceans, is a subject upon which the nation may enter into and assume treaty or similar international obligations. The very oil about which the state and nation here contend might well become the subject of international dispute and settlement.[88]

Justice Black distinguished previous cases which held that the federal government must defer to state police powers in the three-mile belt by noting a crucial difference between the authority of a state to "regulate and conserve within its territorial waters" and "the right to use and deplete resources which might be of national and international importance."[89] Thus, it is evident that the United States v. California decision was deeply influenced by the special international status of offshore areas and resources therein.

With the general acceptance of the United States' exclusive right to develop resources of its continental shelf, the potential danger of a coastal state, such as California, interfering with the federal government's international responsibilities disappeared. In 1960 the Supreme Court seemingly reversed its position in United States v. California by holding that whether the coastal states or the federal government possessed the authority to develop continental shelf resources was purely a domestic question so long as the states' control conforms with the Convention on the Continental Shelf. In response to an attack upon the Submerged Lands Act's confirmation of the states' exclusive ownership and control of offshore submerged lands to a seaward limit of three leagues or nine miles in the case of Florida and Texas, the Court concluded that "the question to what extent those rights were to be exercised by the federal government and to what extent by the states was one of wholly domestic concern within the power of Congress to resolve."[90]

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[87] U.S. v. California, 332 U.S., at 34.
[88] Id. at 35.
[89] Id. at 37.
[90] U.S. v. Louisiana, 363 U.S., at 31.

Given the recognition that state ownership or control of continental shelf resources does not necessarily frustrate the United States' international prerogatives or create the potential for a breach of international law, the primary effect of international law today is to prescribe the outer limit of the United States' continental shelf jurisdiction. The Convention on the Continental Shelf, generally regarded as the authoritative source of international law on this subject because of its ratification by a majority of nations, is replete with ambiguity: "...the term 'continental shelf' is used to refer (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."[91]

The precise meaning of the criteria of "adjacency," "200 meters depth," and "exploitability" is difficult to ascertain. Does this definition permit the United States to extend its exclusive control of submerged land resources beyond the geological shelf to the continental slope, rise, or deep seabed provided that the area to be developed "admits of exploitation?"[92] Hopefully, this question will be resolved at the Geneva Law of the Sea Conference now in progress.[93] Meanwhile, it is unclear whether the seaward limit of continental shelf jurisdiction is elastic or fixed by an absolute standard. Thus, the seaward extent of federal control of submerged lands beyond North Carolina's three-mile seaward limit is uncertain. Likewise, the maximum extent of North Carolina's potential jurisdiction of offshore submerged land resources is uncertain according to current international law.

B. Submerged Lands Act

As noted above, the Submerged Lands Act (SLA) and the Outer Continental Shelf Lands Act (OCSLA) are the foundation of the legal framework governing the disposition of offshore submerged lands within the limits of the United States' continental shelf jurisdiction. The SLA defines the nature and extent of North Carolina's rights in coastal waters and underlying submerged lands.

> It is hereby determined and declared to be in the public interest that (1) title to and ownership of the lands beneath navigable waters within the boundaries of the respective states, and the natural resources within such lands and waters, and (2) the right and power to manage, administer, lease, develop, and use the said lands and natural resources all in accordance with applicable state law be, and they are hereby... recognized, confirmed, established, and vested in and assigned to the respective states....[94]

North Carolina's seaward boundary is a line three geographical miles from shore. Thus, the SLA gives North Carolina primary rights and authority with respect to the resources within the waters and submerged lands of this coastal zone.

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[91]Convention on the Continental Shelf, supra note 86, Art. 1.

[92]The legal definition of the continental shelf in Art. 1 of the Convention on the Continental Shelf is analyzed extensively in L. HENKIN, LAW FOR THE SEA'S MINERAL RESOURCES (1968).

[93]Briefing on Law of the Sea Conference by John Stevenson, Special U.S. Ambassador, sponsored by Marine Technology Society, in Wash., D.C., Sept. 26, 1974.

[94]67 STAT. 30, § 3(a).

Although generally regarded as an area of state jurisdiction and control, the three-mile coastal zone is also subject to federal jurisdiction and regulations. Section 3(d) of the SLA declares that "nothing in this Act shall affect the use, development, improvement, or control by or under the constitutional authority of the United States of said lands and waters for the purposes of navigation or flood control or the production of power."[95] In other words, the federal government has the authority to regulate North Carolina's use of its submerged lands and waters within the three-mile zone in order to protect navigation and provide for flood control or the production of power. The meaning of "production of power" is unclear; if construed very broadly, it could encompass the development of oil and natural gas resources insofar as these resources are vital to the federal government's interest in the "production of power" or energy.

In addition, Section 6 provides that the "U.S retains all its navigational servitude and rights in and powers of regulation and control of said lands and navigable waters for the constitutional purposes of commerce, navigation, national defense, and international affairs, all of which shall be paramount to, but shall not be deemed to include, proprietary rights of ownership" or other rights involving administration and management specifically granted in Section 3. This provision reflects the paramount powers doctrine of United States v. California and suggests that North Carolina's ownership and control of submerged lands within the three-mile boundary are or could be limited by a variety of federal powers or responsibilities. The scope of federal authority in the three-mile zone is somewhat uncertain. To what extent can the federal government interfere with the state's use of its submerged lands and control water resources? One can readily envision federal restrictions related to "commerce, navigation, national defense, and international affairs" which would effectively deprive North Carolina of its beneficial use of the resources in the coastal zone. Would such regulations constitute eminent domain, or a "taking" of state-owned lands, for which the federal government would have to pay just compensation under the Fifth Amendment? Thus far, this type of issue has not emerged because of the federal government's deference to the states' authority in the three-mile coastal zone. As a rule, state law is the dominant force in regulating the development of resources from the three-mile coastal zone, while federal regulation tends to complement state regulation as much as possible.

C. The North Carolina Oil and Gas Conservation Act

In general, North Carolina statutes govern the disposition of state lands, including submerged lands and the mineral resources therein. Section 146-3 stipulates that "no submerged lands may be conveyed in fee, but easements thereon may be granted...."[97] However, the state is authorized to sell, lease, or otherwise dispose of mineral deposits in state lands upon the request of the Department of Natural and Economic Resources (DNER).[98] This section also provides that "any sale, lease, or other disposition of such mineral deposits shall be made subject to all rights of navigation and subject to such other terms and conditions as may be imposed by the State."[99]

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[95] 67 STAT. 31, § 3(d).
[96] 67 STAT. 32, § 6(a).
[97] N.C.G.S. § 146-3.
[98] N.C.G.S. § 146-8.
[99] Id.

Due to the ripening prospect of offshore petroleum development, the North Carolina Legislature enacted Part 2 of the Oil and Gas Conservation Act.[100] The Act gives DNER broad authority to regulate petroleum development from state-owned lands and calls for the creation of a Petroleum Division to administer this authority. DNER and the Petroleum Division enjoy extensive rule-making powers to effectuate the policies of the Act. In particular, this rule-making authority may be used to fulfill the following objectives:

> To require the drilling, casing and plugging of wells to be done in such manner as to prevent the escape of oil or gas out of one stratum to another; to prevent the intrusion of water into an oil or gas stratum from a separate stratum, to prevent the pollution of fresh water supplies by oil, gas or salt water; or to protect the quality of the water, air, soil or any other environmental resource against injury or damage or impairment...[emphasis added]
>
> To prevent...drainage...
>
> To regulate the spacing of wells and to establish drilling units...
>
> To prevent 'blowouts,' 'caving,' and 'seepage'...
>
> To regulate and, if necessary in its judgment for the protection of unique environmental values, to prohibit the location of wells in the interest of protecting the quality of the water, air, soil or any other environmental resource against injury, or drainage or impairment. [emphasis added][101]

Although Part II of the Oil and Gas Conservation Act is similar to Part I enacted in 1945, Part II reflects a greater awareness of environmental concerns. Rule-making authority for the purpose of environmental protection was not expressly mentioned in the 1945 Act.

The Petroleum Division of DNER has not promulgated any regulations in regard to oil production from submerged lands to date. According to the State Geologist, Stephen G. Conrad, DNER will not authorize the development of oil from state-owned submerged lands until comprehensive regulations are issued. These state regulations will be based on current federal regulations established by the Department of the Interior for Outer Continental Shelf (OCS) petroleum development.[102] The specific nature and scope of these regulations will be discussed below.

The potential importance of these state administrative regulations is awesome; under the current scheme, they represent the state's primary regulatory tool for submerged land oil development. Although Part II of the Oil and Gas Conservation Act delegates to DNER and the Petroleum Division broad regulatory authority, it does not require that this authority be exercised. The only clear affirmative duty imposed upon DNER is the prevention of waste.[103] Regulations to protect the environment are seemingly discretionary. Until the Petroleum Division establishes specific rules and regulations for petroleum development,

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[100] Oil and Gas Conservation Act, Part 2, N.C.G.S. §§ 113-381 et seq. (1971).
[101] N.C.G.S. §§ 113-391.
[102] Personal interview with Dr. S. Conrad, supra note 74.
[103] N.C.G.S. §§ 113-229.

the substantive impact of the Oil and Gas Conservation Act will be unknown. In view of its structure, the regulatory scope and effect of the Act will depend primarily on the wisdom of administrative regulations issued by the Petroleum Division.

D. Dredge and Fill Law

North Carolina's dredge and fill permit requirement is another regulatory tool for oil and gas development in state submerged lands. North Carolina law requires a permit from DNER for "any excavation or filling project in any estuarine waters, tidelands, marshlands, or state-owned lakes."[104] "Estuarine waters" include the waters of the Atlantic Ocean within the state's three-mile seaward boundary as well as bays, sounds, and rivers seaward of the dividing line between coastal and inland fishing waters designated by DNER and the Wildlife Resources Commission pursuant to General Statutes 113-129.[105] Permit applications are reviewed by all interested State and Federal agencies. Any denial of a permit request can be appealed to the Marine Fisheries Commission.

The dredge and fill law stipulates that a permit can be denied for any of the following reasons:

(1) that there will be significant adverse effect of the proposed dredging and filling on the use of the water by the public;
(2) that there will be significant adverse effect on the value and enjoyment of the property of any riparian owners;
(3) that there will be significant adverse effect on public health, safety, and welfare;
(4) that there will be significant adverse effect on the conservation of public and private water supplies;
(5) that there will be significant adverse effect on wildlife or fresh water, estuarine or marine fisheries.[106]

The scope of these reasons for refusing a dredge and fill permit and effectively blocking significant alterations of submerged lands is extremely broad. There may be some question as to whether oil drilling in submerged lands constitutes the type of "excavation or drilling project" covered by the law. In view of the interests the dredge and fill law is designed to protect and the threat of oil drilling to these interests, it is reasonably certain that the law applies to oil drilling operations. As a practical matter, the objectives of the dredge and fill permit requirement and the scope of the rule-making authority of the Petroleum Division in regard to environmental protection are similar. Each has the potential of preempting the need for the other. Careful coordination with the Petroleum Division will be necessary in the administration of the dredge and fill requirement to preclude wasteful duplication of effort. Despite the apparent overlap between Petroleum Division regulations and the dredge and fill permit, the permit may prove to be invaluable as an alternative regulatory device. To the extent that the dredge and fill law and the Petroleum Division's regulations are administered separately, each may serve as an invaluable check upon the other.

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[104] N.C.G.S. §§ 113-229.
[105] N.C.G.S. §§ 113-229(n)(2).
[106] N.C.G.S. §§ 113-229(e).

E. Rivers and Harbors Act

The United States Army Corps of Engineers also plays a part in regulating the effect of petroleum development upon navigable waters, including those within the state's boundaries. Traditionally, the Corps in conjunction with the Coast Guard has been responsible for safeguarding navigational and other public interests in navigable waters. The 1899 Rivers and Harbors Act requires a permit from the Corps for any obstruction or alteration of United States' navigable waters.[107] Like North Carolina's dredge and fill permit requirement, the criteria for the Corps' permit are broad. In Zabel v. Tabb, the 5th Circuit Court of Appeals held that the Corps' denial of a Section 10 permit for the proposed filling of eleven acres of tidelands in Boca Ciega Bay, Florida, on the grounds that the fill would be harmful to fish and wildlife was valid.[108] The Court concluded that the Natural Environmental Protection Act and the Fish and Wildlife Coordination Act of 1968 authorized the Corps to tailor its permit criteria to environmental concerns.

Although the overlap between the Corps' permit program and the state's dredge and fill permit program creates the potential for friction and inconsistency, little, if any, conflict has been evident. The North Carolina dredge and fill law provides that it "shall not relieve any party from the necessity of obtaining a permit from the U.S. Army Corps of Engineers for work in navigable waters, if the same is required."[109] Typically, the Corps of Engineers depends upon state policy and recommendations in the administration of permits for projects in state-controlled waters.[110]

F. North Carolina Oil Pollution Control Act of 1973

The North Carolina Pollution Control Act[111] is a direct descendant of Section 311 of the Federal Water Pollution Control Act Amendments of 1972, which regulate oil and other hazardous discharges into United States navigable waters, as well as the contiguous zone.

> The Congress hereby declares that it is the policy of the United States that there should be no discharges of oil or hazardous substances into or upon the navigable waters of the United States, adjoining shorelines, or into or upon the waters of the contiguous zone.[112]

The North Carolina Pollution Control Act is designed to complement and reinforce the Federal Water Pollution Control Act Amendments in regard to state-controlled waters. The purpose of the Act is to protect the land and waters within state jurisdiction from pollution by oil and oil products.[113] Any party who discharges oil into "waters, tidal flats, beaches, or lands within this State" is required to obtain a permit from the North Carolina Board of Water and Air

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[107] 33 U.S.C. § 403 (1899).
[108] 430 F.2d 199 (5th Cir. 1970).
[109] N.C.G.S. §§ 113-229.
[110] Personal Interview with Glenn Dunn, co-author with M. Heath of Report to the Secretary of Natural and Economic Resources Concerning Coordination of Regulatory Permits Under the Coastal Area Management Act, (Institute of Government, Chapel Hill, N.C., Feb., 1975).
[111] Oil Pollution Control Act of 1973, N.C.G.S. §§ 143-215.75 et seq.; see generally Maxwell, The North Carolina Oil Pollution Control Law; A Model for State Efforts to Curb Pollution of the Sea, in Wurfel, Emerging Ocean Oil and Mining Law, Sea Grant Publication, UNC-SG-74-02, at 51-59.
[112] Federal Water Pollution Control Act Amendments of 1972, Public Law 92-500, 86 STAT. 816 (1972).
[113] N.C.G.S. §§ 143-215.76.

Resources; any such discharge without a permit is unlawful.[114] Discharge is defined as "any emission, spillage, pumping, pouring, emptying or dumping of oil into waters," except those classified by the Board not to be harmful to the public interest.[115] The meaning of "public interest" explicitly includes fish, shellfish, wildlife, public and private property, shorelines, and beaches, and other interests which the Board deems appropriate.[116]

In addition to regulating oil discharges by permit, the Act contains measures to mitigate the environmental damage of oil discharges and allocates liability for the costs of removing the harmful discharge and restoring the value of damaged resources. Any party who causes an oil discharge is required to "immediately undertake to collect and remove the discharge and to restore the area affected...as nearly as may be to the condition existing prior to the discharge."[117] At the same time, the Board has the authority to assist in the removal of the pollutant and restoration of the area. This clean-up program is "limited to projects and activities designed to protect the public interest or public property, and shall be compatible with the National Contingency Plan established pursuant to the F.W.P.C.A., as amended..."[118]

Persons "having control over" the oil discharge, such as oil rig operators and the comapnies which own them, are liable for damages to public resources and private property, regardless of fault.[119] In the event of damage to public resources, liability is measured by the "money necessary to restock waters, replenish resources, or otherwise restore rivers, streams, bays, tidal flats, beaches, estuaries or coastal waters, and public lands adjoining the seacoast."[120] The absolute limitation on liability for damage to public resources is the same as the limit imposed by the Federal Water Pollution Control Act Amendments--$8 million.[121] There is no apparent ceiling for liability arising out of injury to private property.

G. North Carolina Coastal Area Management Act (CAMA)

Enacted in 1974, the CAMA[122] has the potential to play a major role in regulating the development of oil and gas from state-owned submerged lands. It calls for the creation of a comprehensive planning and management program to protect unique public interests in the coastal zone and "to insure the orderly and balanced use and preservation of our coastal resources on behalf of North Carolina and the nation."[123] The "coastal area" refers to all North Carolina counties which border the Atlantic Ocean or any coastal sound and the area "extending offshore to the limits of state jurisdiction, as may be identified by the rules of the Commission for purposes of this Article, but in no event less than three geographical miles offshore."[124] In other words, the

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[114] N.C.G.S. §§ 143-215.78-83.
[115] Id.
[116] Id.
[117] N.C.G.S. §§ 143-215.84.
[118] N.C.G.S. §§ 143-215.84(b).
[119] N.C.G.S. §§ 143-215.88.
[120] N.C.G.S. §§ 143-215.90.
[121] N.C.G.S. §§ 143-215.89.
[122] Coastal Area Management Act of 1974, N.C.G.S. §§ 113A-100 et seq.
[123] N.C.G.S. §§ 113A-102(b)(3).
[124] N.C.G.S. §§ 113A-103(2).

Act applies at least to the submerged lands and waters within North Carolina's three-mile seaward limit, and possibly to areas beyond if the Commission deems it appropriate.

The State is responsible for preparing "guidelines" or plans to effectuate the purposes of the Act.[125] Local units of government in the coastal areas must develop land use plans which adhere to these guidelines.[126] The Coastal Resources Commission approves local plans in accord with the state guidelines and designates "areas of environmental concern."[127] Any development within an area of environmental concern (AEC) must be approved by the Commission in the form of a permit. Section 113A-113 defines a variety of potential areas of environmental concern, or areas which warrant special supervision by the Commission. In addition to estuarine areas, the Act defines all state-owned submerged lands within the three-mile seaward limit as a potential AEC: "...areas such as waterways and lands under or flowed by tidal waters or navigable waters, to which the public may have rights of access or public trust rights, and areas which the State of North Carolina may be authorized to preserve, conserve, or protect under Article XIV, § 5 of the North Carolina Constitution."[128]

Thus far, submerged land areas have not been designated as an interim AEC pursuant to § 113A-114, nor are they likely to be in the foreseeable future.[129] Given the presently dim geologic potential of petroleum reserves in North Carolina's Continental Shelf, the Commission's lack of concern is understandable. If petroleum development from State submerged lands proves feasible and poses a threat to the valuable ecological assets of the coastal area, it will be difficult for the Coastal Commission not to designate the submerged lands as an AEC and begin to regulate drilling activities. It is abundantly clear that oil drilling operations are "development" as defined by the Act, for they involve "the removal of clay, salt, sand, gravel or minerals [and] alteration of the shore, bank, or bottom of the Atlantic Ocean or any sound, bay, river, creek, stream, lake, or canal."[130]

Thus, the CAMA constitutes another legal mechanism to regulate offshore petroleum development, in conjunction with the Oil & Gas Conservation Act, Dredge and Fill Law, and to a limited extent the permit requirement of the Oil Pollution Control Act. But the ultimate actual effect of the CAMA remains undetermined. It is imperative that the state develop policies and criteria by which to evaluate whether offshore petroleum development is compatible with the state's overall public interest in the coastal zone. Only with the aid of these practical policies will the CAMA play an important part in North Carolina's regulation of offshore petroleum development.

H. The Outer Continental Shelf Lands Act

Whereas the Submerged Lands Act acknowledges the coastal states' jurisdiction over the resources of the coastal areas within a seaward boundary of three miles, the Outer Continental Shelf Lands Act (OCSLA) confirms federal jurisdiction over the submerged lands of the Outer Continental Shelf (OCS).

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[125] N.C.G.S. §§ 113A-106.
[126] N.C.G.S. §§ 113A-108.
[127] N.C.G.S. §§ 113A-118.
[128] N.C.G.S. § 113(b)(5).
[129] Personal Interview with William Raney, Office of Attorney General, Raleigh, N.C., February 12, 1975.
[130] N.C.G.S. §§ 113A-103(5) viii.

The "Outer Continental Shelf" is defined as the submerged lands seaward of the offshore state boundary prescribed by Section 2 of the SLA to the limit of the United States' continental shelf jurisdiction.[131] The OCSLA makes the Secretary of Interior responsible for leasing and managing OCS submerged lands.[132] The Secretary is authorized to issue rules and regulations "he determines to be necessary and proper in order to provide for the prevention of waste and conservation of the natural resources of the outer continental shelf.[133] Unlike North Carolina's Oil and Gas Conservation Act, the OCSLA defines specific procedures and guidelines for leasing OCS submerged lands; for example, it requires that leases be given to "the highest responsible qualified bidder by competitive bidding," restricts the area which can be leased, and stipulates the term of the lease and royalty rate.[134]

The OCSLA reflects a unique concern for state interests related to OCS development. First, the Act authorizes the application of state civil and criminal laws to the OCS area, provided these state laws "are applicable and not inconsistent with this Act or with other Federal laws and regulations of the Secretary now in effect or hereafter adopted."[135] When the OCSLA was enacted, it only permitted the application of state laws as of the effective date of the Act. Very recently, the Deepwater Port Act of 1974 amended this provision to include state laws "now in effect or hereafter adopted, amended, or repealed."[136] It appears that this section of OCSLA contemplates the use of North Carolina laws to supplement and fill any void created by federal laws and regulations.

The effect of this section is drastically curtailed by the requirement that the state laws be consistent with federal regulations. Theoretically, the Secretary of Interior could use his broad rule-making authority to counteract state law. Furthermore, the OCSLA states that "the provisions of this section shall never be interpreted as a basis for claiming any interest in or jurisdiction on behalf of any State for any purpose over the seabed and subsoil of the Outer Continental Shelf, or the property and natural resources thereof or the revenues therefrom."[137] In view of these limitations upon the application of state law to outer continental shelf activities, the role of this provision in protecting state interests affected by OCS development is somewhat minimal.

In addition, the OCSLA explicitly advises the Secretary of Interior to cooperate with state agencies in this enforcement of conservation laws, rules, and regulations.[138] The impact of the Department of Interior's regulations and procedures for OCS development on the coastal state interests was dramatized by the 1969 Santa Barbara oil blowout. Situated beyond California's three-mile seaward limit, the drilling operation which caused the blowout was licensed and regulated by the Department of Interior. In 1969 federal regulations required at least 300 feet of conductor casing extending below the ocean floor or casing equal to 25% of the well to depths of 7,000 feet. The Geologic Survey Regional Supervisor had waived these requirements for the drilling operation off Santa

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[131] 67 STAT. 462, § 2(a).
[132] 67 STAT. 462.
[133] 67 STAT. 464, § 5(a)(1).
[134] 67 STAT. 465, § 6.
[135] 67 STAT. 462, § 4(a)(2).
[136] Deepwater Port Act of 1974, § 19(f) as contained in the Conference Report accompanying H.R. 10701 Deep Water Port Act, Senate Report No. 90-1360, 93d Cong., 2d Sess. (Dec. 16, 1974).
[137] 67 STAT. 462, § 4(a)(2).
[138] 67 STAT. 464, § 5(a)(1).

Barbara in his lawful discretion and permitted casing of only 238 feet below the ocean floor. It is generally accepted that the blowout resulted from this shallow casing.[139]

Not only were California's regulations at least as stringent as the federal casing requirements, but more important California law did not permit discretionary exceptions.[140] Thus, it is reasonable to infer that had the drilling operation been regulated according to state regulations, the blowout would have been avoided.

Since the Santa Barbara disaster, the Department's regulations have been strengthened and refined to minimize the risk of environmental damage. At present, the Secretary or person designated as supervisor is authorized to promulgate orders necessary to supervise effectively drilling operations and "prevent damage to, or waste of, any natural resource, or injury to life or property."[141] Also, he is empowered to suspend any operation which "threatens immediate, serious, or irreparable harm or damage to life, including aquatic life, or property, to the leased deposits, to other valuable mineral deposits or to the environment."[142] Traditionally, the lessee had only a nominal obligation to protect environmental interests, but today the lessee's responsibility is considerably more onerous:

> The lessee shall not pollute land or water or damage the aquatic life of the sea or allow extraneous matter to enter and damage any mineral --or water-bearing formation.[143]

In addition, this new regulation renders the lessee strictly liable for the cost of controlling and removing pollution discharges resulting from drilling which "damages or threatens to damage aquatic life, wildlife, or public or private property."[144] There are no apparent limits on this liability. In a letter to the Senate Committee on Interior and Insular Affairs (May 16, 1969), Russell E. Train, then Undersecretary of the Department of Interior, stated that these regulations were "the most stringent possible regulations we can devise to safeguard the environment."[145]

In comparison with the past practice of the Department of Interior the current regulations are impressive. The unlimited liability provision undoubtedly serves as a deterrent against unreasonable risks of environmental harm from oil drilling operations. In other words, the regulations force the lessee to exercise greater care and prudence, and significantly reduce the likelihood of a blowout or spill as infamous as the Santa Barbara incident.

North Carolina's Petroleum Division should consider the adoption of similar regulations for oil operations in state-controlled waters. Whereas the Oil Pollution Control Act imposes a ceiling on the operator's financial liability for damage to public resources resulting from an oil discharge, Petroleum Division regulations under the authority of the Oil and Gas Conservation Act could impose unlimited liability on the lessee. More important, the Division

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[139] A. NASH, OIL POLLUTION AND THE PUBLIC INTEREST, Institute of Governmental Studies, Univ. of California, 1972. "By Union Oil Company's own admission it is likely that a blowout could have been prevented if enough casing had been utilized in the well." Id., at 42.

[140] Id.

[141] 30 C.F.R. 240.12a.

[142] 30 C.F.R. 250.12c.

[143] 30 C.F.R. 250.43(a).

[144] 30 C.F.R. 2050.43(b).

[145] NASH, supra note 139, at 61.

should use its power to implement preventive measures in the form of administrative regulations to preclude environmental damage altogether. The effective design and enforcement of these measures depend on technical expertise and aggressive surveillance.[146] Whether the Petroleum Division can develop this necessary expertise and vigilance in monitoring oil drilling operations is a critical variable in assessing North Carolina's capability to regulate offshore oil development.

I. Federal Water Pollution Control Act (Water Pollution Prevention and Amendments Control Act) Amendments of 1972

The Federal Water Pollution Control Act amendments (F.W.P.C.A. Am.) regulate the discharge of oil or other hazardous substances into the United States' territorial sea, which overlaps with North Carolina's three-mile coastal zone, and the contiguous zone extending nine miles seaward of the three-mile limit.[147] The Act requires a permit for discharges and establishes liability for injury caused by discharges. However, the liability provisions of the Act do not apply "in any case where liability is established pursuant to the Outer Continental Shelf Lands Act."[148] In other words, the Interior Department's liability regulations preempt the F.W.P.C.A. Amendments. Nevertheless, the amendments also create a National Contingency Plan for the removal of oil and other harmful substances, which does apply to OCS operations.[149] The President is charged with the responsibility of developing the major components of the Plan:

> The President shall issue regulations... (A) establishing methods and procedures for removal of discharged oil and hazardous substances, (B) establishing criteria for the development and implementation of local and regional oil and hazardous substance removal contingency plans, (C) establishing procedures, methods, and equipment...to prevent discharges of oil and hazardous substances from vessels and from offshore facilities and to contain such discharges ....[150]

The quality and scope of this national program will have an important effect on North Carolina's role in promoting and regulating offshore petroleum development. The State's capability to undertake the removal of oil discharges pursuant to the Oil Pollution Control Act will depend greatly upon the Contingency Plan. The local and regional oil removal contingency programs may involve the state in developing a program to combat discharges not only in state-controlled waters but in the United States contiguous zone as well.

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[146] CEQ. supra note 61, at 9-96. "In the Atlantic and New England States, and in Alaska, there has been little governmental experience with offshore oil and gas development. Affected states should strengthen their coastal zone management programs by developing special technical expertise on all phases of OCS development and its onshore and offshore impacts."

[147] 33 U.S.C. 1251 et seq. (1972).

[148] 33 U.S.C. § 1321(i)(2).

[149] 33 U.S.C. § 1321(c)(2).

[150] 33 U.S.C. § 1321(j)(1).

J. National Environmental Protection Act (NEPA)

In 1969 Congress passed NEPA to establish a national environmental policy and to compel federal actions to be carried out in accord with this policy.[151] In general, Section 102 imposes decision-making procedures and guidelines on Federal agencies to insure that the national environmental policy is reflected in federal actions. It specifically requires that an environmental impact statement (EIS) be prepared for "proposals for legislation and other major federal actions significantly affecting the quality of the human environment."[152] This EIS must contain a detailed analysis of the following factors:

(i) the environmental impact of the proposed action,
(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
(iii) alternatives to the proposed action,
(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and
(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.[153]

In Natural Resources Defense Council v. Morton,[154] the Court held that OCS leasing by the Department of Interior for oil drilling constituted a "major Federal action" requiring an EIS.

At present, the Interior Department is preparing the EIS for the proposed leasing sites on the Atlantic Continental Shelf. The Department must consult with other federal agencies with special jurisdiction or expertise related to the environmental impact of OCS leasing. In addition, comments and views of appropriate state and local agencies authorized to develop and enforce environmental standards should accompany the proposed EIS through the federal agency review process.[155]

Although reference is made to local and state impact, the primary focus of NEPA is on federal agency decision-making. NEPA attempts to sensitize federal agencies to the environmental consequences of their major actions by obtaining input from other federal agencies with special responsibilities and insight with respect to environmental values.

From North Carolina's point of view, the efficacy of NEPA in preventing environmental harm is directly proportional to the state's role in the preparation of the EIS and its influence on the Department of Interior's leasing policies. Monte Canfield, Jr., Deputy Director of the Ford Foundation Energy Policy Project, made the following recommendation:

> State, local and regional governments must be included in the process of preparing these [environmental] analyses before completion of draft

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[151] Public Law 92-583, 42 U.S.C. § 4321 et seq. (1970).
[152] 42 U.S.C. § 4332(c) (1970).
[153] Id.
[154] Natural Resources Defense Council, Inc., 337 F. Supp. 170.
[155] 42 U.S.C. § 4332(c).

> environmental impact statements [on Atlantic OCS leasing]. Expansion of a NEPA-type concept...to insure fully regional participation in the planning process would provide a reasonable approach.[156]

No doubt, North Carolina should subscribe to this approach. Unfortunately, NEPA does not contain the necessary bite to force the Department of Interior to respond to the interests of North Carolina and other Atlantic Coastal States affected by OCS leasing, for the EIS is primarily a procedural rather than substantive check on the federal decision-making process.

K. Federal Coastal Zone Management Act of 1972

The Federal Coastal Zone Management Act (CZMA) should prove to be North Carolina's most valuable legal device to insure that OCS oil development is compatible with North Carolina's coastal interests.[157] The Act establishes a national policy to protect the ecological value of estuarine areas and the coastal zone in general, and encourages planning and the development of state management programs in accord with the policies of the Act.[158] The Department of Commerce is authorized to make planning and implementation grants up to two-thirds of the cost of the coastal zone management programs.[159] The states are not required per se to comply with the Act; rather, grants are designed to give the states the incentive to develop voluntarily their own coastal zone management programs. Once the state plan is approved by the federal administrator, all federal actions which affect coastal zone interests must be certified or approved by the state.[160] In other words, the federal government will be bound by the North Carolina coastal zone plan once it is developed and approved.

This lever afforded North Carolina to control federal action under Section 307(3) is far from absolute. First, federal approval of the state's plan depends in part on consideration given to "the national interest in the siting of facilities necessary to meet requirements other than local in nature."[161] In addition, the state's control based on its plan can be overruled by the federal administrator if he finds the activity opposed by the state to be consistent with the policies of the Act or otherwise necessary for national security.[162] Another limitation may be inferred from the provision which states that nothing in the Act shall be construed to detract from federal responsibilities in the coastal areas.[163]

Although the Act does not clearly apportion the value to federal and state interests in the coastal area, it establishes a procedure to identify these interests. Hopefully, the Act will cultivate the type of relationship between North Carolina, other Atlantic coastal states, and the federal government necessary to achieve an equitable balancing of competing federal and state interests in the coastal area. The Council of Environmental Quality

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[156] CEQ, supra note 61, at 9-6.
[157] Public Law 92-583, 86 STAT. 1280, et seq. (1972).
[158] 86 STAT. 1281, § 303(a).
[159] 86 STAT. 1283, § 306(a).
[160] 86 STAT. 1285, § 307(c)(3).
[161] 86 STAT. 1284, § 306(8).
[162] 86 STAT. 1285, § 307(c)(3).
[163] 86 STAT. 1286, § 307(e)(1).

noted in its recent report that "the CZMA provides a framework for federal-state cooperation in OCS planning, particularly with respect to the siting of pipelines, refineries, and other facilities in the coastal zone."[164]

CZMA defines "coastal zone" as the areas within the three-mile seaward limit.[165] This definition raises the issue of whether the state's Coastal Zone Management Program applies to OCS leasing beyond the three-mile boundary of the "coastal zone." Because the Act is designed to protect special interests in the coastal zone, it can be reasonably inferred that the planning and regulation extends to any activity which substantially affects the coastal zone. Clearly, OCS petroleum development is such an activity. Very recently, the federal office of Coastal Zone Management recommended that North Carolina use part of its fiscal year 1976 CZMA planning grant to prepare a continental shelf plan.[166] It is not clear whether this proposed plan will be concerned with the entire continental shelf off North Carolina or simply the portion of the shelf within state boundaries. North Carolina should take the initiative in planning for development of the entire continental shelf, for the state's offshore interests do not readily conform to artificial legal boundaries between state and federal controlled offshore areas. In nature, these two aqueous areas comprise a unified system with almost total interdependence.

Congress appears to be increasingly aware of the fact that coastal states such as North Carolina are likely to absorb most of the environmental impact of OCS development. As a result, a variety of bills to assist coastal states cope with OCS activities are under consideration.[167] In light of accelerated OCS leasing and the construction of deepwater ports, Congress has appropriated fifteen million additional dollars for CZMA grants to encourage state planning in coastal areas.[168]

## VII. Conclusions

An interesting and creative response to the prospect of intensified oil development in the OCS is the California Coastal Commission's recent resolution. The Coastal Commission unanimously declared that (1) the federal government defer leasing until the Commission prepared a coastal development plan and (2) no OCS leasing adjacent to California waters take place without the Commission's approval.[169] According to the Executive Director, the resolution derives from the state's legitimate stake in the following planning issues:

(1) What is the best oil-drilling technology?
(2) Will regulations governing federal offshore drilling be as stringent as the state's regulations?
(3) What are the precise plans for oil spills?
(4) Where will the associated complex of under-water pipes, storage tanks and refineries be located?[170]

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[164] CEQ, supra note 61, at 9-7.
[165] 86 STAT. 1281, § 304(a).
[166] Letter from Governor Holshouser to Dr. Orrin Pilkey, Jan. 6, 1975.
[167] Bosley, Estuarine Management - The Intergovernment Dimension, (Review Draft prepared for the U.S. Environmental Protection Agency), Nov. 25, 1974, at 9).
[168] Id. at 9.
[169] THE COASTLINE LETTER, 8 (California Commission Meeting, July 10, 1974).
[170] Id. at 9.

Answers to these questions are equally important to North Carolina.

Much more state and local planning, regulation, and probably legislation are essential to effectuate ecologically and economically sound development of marine petroleum deposits in areas of interest to North Carolina, when such natural riches are indeed found. Conflicting interests must be reconciled and reasonable regulations established, if possible, before the "gold rush" that will be activated by the first discovery.