NATURAL RESOURCES JOURNAL

Volume 10
Issue 4 *Fall 1970*

Fall 1970

An Evaluation of the Provisions and Policies of the Outer Continental Shelf Land Act

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I
INTRODUCTION–STANDARDS FOR ANALYSIS

In the first installment of this article the historic and legal background of the doctrine of the continental shelf and the Outer Continental Shelf Lands Act was reviewed at length. In this installment the administration of the outer continental shelf lands act of the United States will be examined with a view toward determining whether their administration provided for the "maximum benefit to

†This article is the second and final part of an article by the author dealing with the Outer Continental Shelf Lands Act. The first article, entitled *The Background of the Doctrine of the Continental Shelf and the Outer Continental Shelf Lands Act*, appears at 10 Natural Resources J. 442 (1970). Portions of both installments were first presented at the 1969 Louisiana State Mineral Law Institute.

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the general public."[1] This general policy objective is a composite of the following more specific, but quite broad, policy objectives that emerged from a consideration of the various treaties, statutes and administrative pronouncements regarding our nation's offshore:

1. Efficient resource management—the objective of best effecting the prudent use of resources through their intelligent management by the federal government.[2]

2. The encouragement of private participation—the objective of permitting qualified responsible representatives of the private sector to participate in the development of outer continental shelf resources.[3]

3. The maximization of revenue to the federal government—the objective of effecting the greatest direct financial return to the resource owner.[4]

4. The encouragement of multiple use of resources—the objective of coordinating management of the various resources and uses of the continental shelf to minimize conflicts.[5]

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1. 43 U.S.C. § 1391 (1964). This was stated as being the policy objective of Congress in the Act creating the Public Land Law Review Commission [sometimes hereinafter referred to as PLLRC]. 78 Stat. 985, 43 U.S.C. § 1400 (1964). The objectives were identified and evaluated in Nossaman, Waters, Scott, Krueger & Riordan, Study of the Outer Continental Shelf Lands of the United States, § 11.1 (1968) [hereinafter referred to as Nossaman OCS Study], published by Clearinghouse, Springfield, Virginia.

2. The Truman Proclamation of 1945, the Marine Resources and Engineering Development Act and the legislative history of the Outer Continental Shelf Lands Act all evidence the objective of best effecting the prudent use of resources through their intelligent management by the federal government. Proclamation No. 2667, 3 C.F.R. 67 (1943-48 Comp.); 33 U.S.C. §§ 1101-24 (1966). *See also* 1 Nossaman OCS Study, *supra*, note 1 §§ 1.5, 1.12.

3. The Outer Continental Shelf Lands Act and the regulations promulgated pursuant thereto clearly contemplate that the development of minerals in the outer continental shelf be undertaken by qualified, responsible representatives of the private sector. 43 U.S.C. § 1337(a) (1964); 43 C.F.R. § 3380.1 (1964). The Marine Resources and Engineering Development Act also recognizes the desirability of "[t]he encouragement of private investment enterprise in exploration, technological development, marine commerce, and economic utilization of the resources of the marine environment." 33 U.S.C. § 1101(b)(3) (1966).

4. While there are indications in the legislative history of the Outer Continental Shelf Lands Act that the generation of revenue was a secondary consideration, its subsequent administration, particularly in recent years, clearly indicates that a basic policy objective has been to maximize revenue to the federal government from the sale of mineral leases. This was particularly manifest in the 1968 Santa Barbara lease sale. *See* 1 Nossaman OCS Study, *supra*, note 1, § 4.16.

5. This objective has been repeatedly acknowledged as necessary by many branches of the federal government. The Act for the classification of public lands which was passed contemporaneously with the law creating the Public Land Law Review Commission defined "multiple use" as follows:

> [T]he management of the various surface and subsurface resources so that they are utilized in the combination that will best meet the present and future needs of the American people; the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; the use of some land for less than all of the resources;

5. The advancement of knowledge and the development of technology—the objective of learning more about the offshore and its resources and achieving the technological capability to safely permit the scientific exploration and resource development.[6]

6. The protection of environmental quality—the management objective of preserving, and in some cases restoring, the natural condition of the environment.[7]

It may be helpful to analyze the administrative system created under the Outer Continental Shelf Lands Act by looking at each of its functional aspects in light of these objectives. The major functional areas that will be examined are the selection of lands for lease, the determination of the size and timing of lease sales, the allocation of leases (selection of lessees), the determination of drilling and production requirements, the determination of term and royalty, and the determination of entry (lessees' qualifications).[8]

II
SELECTION OF LANDS FOR LEASE

A. Existing System

The Outer Continental Shelf Lands Act vests in the Secretary of the Interior the authority to grant mineral leases covering any area of the outer continental shelf not already under lease or withdrawn

> and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land, with consideration being given to the relative values of the various resources and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output. 43 U.S.C. § 1415(b) (1964).

6. This policy is implicit in the Truman Proclamation and the administration of the Outer Continental Shelf Lands Act. It is made explicit by the Marine Resources and Engineering Development Act and is also evidenced in the Convention on the Continental Shelf. The Marine Resources and Engineering Development Act provides:

> (b) The Marine Science activities of the United States should be conducted so as to contribute to the following objectives:
>
> ....
>
> (2) The expansion of human knowledge of the marine environment.
>
> (3) The encouragement of private investment enterprise in exploration, technological development.... 33 U.S.C. § 1101 (1966).

7. This policy objective is evidenced in a number of recent federal acts, particularly the recently enacted National Environmental Policy Act of 1969, which provides that "the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with" the Act's environmental protective policies, and that federal agencies shall use environmental design arts in their planning and by July 1, 1971, propose changes to their statutory authority and regulations to conform to the Act's purposes. 83 Stat. 852 (1969). This policy is also evident in the Conventions on the Continental Shelf and High Seas. *See* Krueger, *International and National Regulation of Pollution from Offshore Oil Production,* Proceed. Colum. Conf. Int'l & Interstate. Reg. Water Pollution (1970).

8. 1 Nossaman OCS Study *supra,* note 1, § 11.2.

from leasing under the provisions of the Act.[9] No priorities or guidelines by which the Secretary is to select areas for lease are set forth in the Act and until very recently the regulations of the Secretary simply authorized the issuance of mineral leases in any given area upon motion of the Department or the request of an interested party after requisite competitive bidding.[10] Further, the regulations, while requiring persons obtaining permits for offshore exploratory work to disclose geological data,[11] did not require the disclosure of geophysical data such as the "seis line" obtained by reflection seismology. Because geophysical data is the most commonly used and reliable means of delineating potential petroleum and sulphur prospects in the offshore[12] the result has been that industry has had a better knowledge than the federal government of the potentiality of offshore mineral prospects. As to petroleum and sulphur, a system evolved whereby the Department of the Interior and industry cooperated in the selection of areas to be leased, with industry conducting all requisite pre-bidding exploratory work and upon request, nominating areas of interest to the Department's Bureau of Land Management ("BLM"). BLM has then, with the assistance of U.S. Geological Survey ("U.S.G.S.") and on the basis of their relatively restrictive knowledge regarding the properties involved, selected those tracts which were offered for lease sale.[13]

B. The Santa Barbara Channel Policy Case Study

In federal lease sales which have occurred to date, few policy considerations other than the desire to encourage the development of petroleum and sulphur reserves, and at times, the desire to maximize revenue to the federal government through bonus, appear to have been taken into consideration in the selection process. The 1968 leasing of federal properties in the Santa Barbara Channel presents a very vivid illustration of this. The Santa Barbara community traditionally has been concerned with the protection of the quality of this portion of the Southern California coastline and the Santa Barbara Channel.[14] Due in large part to this interest and the support of conservationists and sympathizers in other parts of the state, an offshore sanctuary was established on a large portion of state-owned tide and submerged lands in this area in which oil and gas develop-

9. 43 U.S.C. § § 1337, 1341 (1964).
10. 43 C.F.R. § § 3382.1 *et seq.* (1964).
11. 30 C.F.R. § § 250.14, 250.34 (1954). *See* 1 Nossaman OCS Study *supra,* note 1, § § 4.9, 4.36.
12. *See* 1 Nossaman OCS Study, *supra,* note 1, at 397-402.
13. *See* 1 Nossaman OCS Study, *supra,* note 1, § § 4.12–4.16, 11.5–11.8.
14. *See* Boone v. Kingsbury, 206 Cal. 148 (1928).

ment is prohibited, except where drainage is shown to be occurring.[15] There was, accordingly, a great deal of opposition expressed in the area when the proposed lease sale of the federal government was announced.

The Department of the Interior does not appear to have given any credence to the fears for potential pollution and aesthetic degradation of the coastline, except to the extent of creating a two-mile wide buffer zone extending the length of the state sanctuary. No public hearings were held by the Department and it does not appear that a study of any comprehensiveness was made of the interrelationship of the proposed mineral uses with others in the area.

The conclusion that there was no real consideration of the effects of the proposed leasing on other uses is supported by the obvious and material lack of coordination between the Departments of the Interior and Defense in the Santa Barbara sale. Defense raised no objection to the proposed lease sale when the same was first presented in late 1966, but shortly before the sale, indicated that oil operations in the area would conflict with its missile launching operations at Vandenberg Air Force Base.[16] Interior did make some adjustments in the terms of the lease sale to accommodate Defense, but did not agree to all of them. After the sale, Defense attempted to impose all of the conditions upon the oil and gas lessees through instructions to the U.S. Army Corps of Engineers which must approve permits for offshore drilling platforms.[17]

The extent and timing of the Santa Barbara lease sale was clearly motivated in large part by the fiscal needs of the federal government at that time with very little consideration being given to the broader resource policy objectives of the federal government. The spillage from the ill-fated Union Oil Company A-21 well compounded what would have been a very difficult situation in any case. It is doubtful if anyone, certainly not the petroleum industry, has benefited from the situation which former Secretary of Interior Stewart L. Udall, who authorized the lease sale, has called a "conservation Bay of Pigs."[18] The sole and certainly short term exception may be the federal government, which realized a profit of $600-million in bonus income at a time when it was sorely needed by the Johnson Administration.[19]

15. *See* Cal. Pub. Res. Code § § 6871.2, 6872.1 (West 1955).

16. *See* 1 Nossaman OCS Study, *supra*, note 1 § 4.74.

17. *Id.;* Public Land Law Review Commission (hereinafter PLLRC), One Third of the Nation's Land 190 (1970).

18. San Diego Union, Mar. 11, 1969, (hearings before Senate Public Works Subcommittee).

19. Interview with representatives of BLM indicates that the short term fiscal needs of the federal government have been of great importance in the size and timing of recent lease

Incidents such as this, however, do not support the abolition or prohibition of all oil development on our outer continental shelf. Oil spills, as any other form of pollution, should be viewed in light of the value of offshore production to our society and its overall impingement on other beneficial uses of the offshore.[19a] Compared to other forms of pollution, the oil spill resulting from offshore drilling is one of the most observable and traceable, yet one of the less permanently degrading to the environment. Despite the many scientific inquiries that have taken place to date, no evidence of any permanent adverse effect on living organisms in the Santa Barbara Channel has been found[20] and lawsuits are pending which would effect proper compensation to damaged property owners and others in the area if liability is established.[21] Compare in this regard the effect of the

sales. An example is the June 13, 1967 Louisiana lease sale. The original schedule would have permitted successful bidders to pay 80% of their bonuses in July, 1967. 32 Fed. Reg. 4545 (1967). At the request of the Bureau of the Budget, the payment date was moved to June 30, 1967, in order that the funds could be credited to the fiscal year 1968 budget. 32 Fed. Reg. 7097 (1967).

19a. In Weaver, *A Personal Perspective on the Santa Barbara Controversy,* Offshore Magazine, November, 1970 at 30, it is said:

> The world must find one trillion barrels of oil or equivalent by the year 2,000. That is, one and a half times more oil must be found in the next 30 years than the petroleum industry has discovered in the last 100 years.
>
> In recent years industry has found petroleum faster than it is being used. It has not always been that way nor can it be expected to remain that way.
>
> Yes, the world has a 100-year supply of energy in U=235; moreover, the new fast-breeder nuclear reactor, which makes more fuel than it uses, can sustain the world at its present energy-use rate for 7,000 more years. However, the nuclear revolution won't restrict the need for petroleum synthetics, that is petrochemicals. Seventy-five percent of the world's organic chemicals–fertilizer, nylon hose, toothbrushes, etc.–comes from petroleum.

See Krueger, *The Background of the Doctrine of the Continental Shelf and the Outer Continental Shelf Lands Act,* 10 Natural Resources J. 442-451 (1970).

20. *See* Neushal, *Final Report Dealing with the Early Stages of the Santa Barbara Oil Spill,* FWPCA Con. No. 14-12-516, Santa Barbara, California (1969); Straughan and Abbott, The Santa Barbara Oil Spill: Ecological Changes and Natural Oil Leaks, (1969); Glude, Observations on the Effects of the Santa Barbara Oil Spill on Intertidal Species 6 (1969). *Cf. Hearings on S. 7 and S. 544 Before the Subcomm. on Air and Water Pollution of the Senate Public Works Comm.,* 91st Cong., 1st Sess., Ser. 2, Pt. 3, at 848 (1969). *See also* Baldwin, *A Case History of the Santa Barbara Oil Spill,* Public Land Law Review Commission 17-23 (1969). *But see generally* Unpublished Testimony of Dr. Max Blumer before the Antitrust and Monopoly Subcommittee of the United States Senate Committee on the Judiciary on August 13, 1970, reported in Los Angeles Times, August 23, 1970, § G at 3 (referring to a study of persistent toxic effects of a fuel oil spill from a shipwrecked fuel barge near Cape Cod).

21. On February 20, 1969, the State of California, the County of Santa Barbara, the City of Santa Barbara, and the City of Carpinteria, "on behalf of themselves and all other public entities and agencies of the State of California similarly situated," filed a complaint in the Superior Court of California for the County of Santa Barbara against the Union Oil Company, Mobil Oil Corporation, Gulf Oil Company, Texaco, Inc., and Peter Bawden Drilling,

discharge of hard pesticides into the ocean which results in irreversible damage to some wildlife by means and through sources which are not readily observable or subject to being brought to account.[22]

It has been suggested that petroleum development on the outer continental shelf of this nation is not necessary if import quotas would be removed, particularly if other forms of price support to the domestic industry, such as the depletion allowance, would be removed or lessened. From a standpoint of a strict economic analysis there is support for this proposition, although much time could be spent debating its merits and weaknesses from the standpoint of its effect on our domestic petroleum industry and the need for reserves in this country.[23] Without becoming embroiled in these issues, however, it should be observed and emphasized that even if all of our petroleum needs were to be met from production from foreign imports and domestic onshore deposit (if these were unrestricted imports, there would be very few onshore reserves that would be competitive), the oil would need to be transported to this country by ships and other vessels which appear comparably as prone, and perhaps more so, to accident and oil spill as offshore production facilities and which in terms of quantity create tremendously greater pollution. The Torrey Canyon spillage illustrates this vividly. The wreckage of that ship resulted in 30 million gallons of crude oil being released in the English Channel. By way of comparison the Santa Barbara oil spill, even as estimated by the President's Panel, involved

Inc. for injuries allegedly caused by oil drilling by the defendants off the coast of Santa Barbara. State v. Union Oil Co., No. 84594 (Santa Barbara County Super. Ct., Feb. 20, 1969). In addition, a large number of damage suits have been filed by private parties. A rule of strict liability for oil well blowouts was established in California by Green v. General Petroleum Corp., 205 Cal. 328, 270 P. 952 (1928). It is quite likely that a rule of strict liability would apply to the Union Oil incident either on the basis of this case or for other reasons. *See* Katz, *The Function of Tort Liability in Technology Assessment*, 38 U. Cin. L. Rev. 587, 602, 645 *et seq.* (1969). In addition to the damage actions there have been several proceedings for injunctive relief. Santa Barbara v. Hickel, No. 69-636-AAH (D.C.C.D. Cal., Apr. 4, 1967) (suit to enjoin the federal government and its oil lessees from engaging in further offshore drilling operations). Santa Barbara v. Malley, No. 69-1986-S (D.C.C.D. Cal., Oct. 3, 1969) (suit to enjoin the District Engineer of the U. S. Army Corps of Engineers for Southern California, from granting further permits for offshore drilling structures and to require him to set aside certain permits previously granted). Weingard v. Hickel, No. 69-1317-EC (D.C.C.D. Cal., Jul. 10, 1969) (suit brought under Outer Continental Shelf Act seeking to enjoin further drilling on the Union Oil Company A-21 lease as recommended by the Dubridge Committee).

22. *See* Kennedy and Hessel, *The Biology of Pesticides*, in Cry California 2 (Summer, 1969); Open Letter to Governor Ronald Reagan and the People of the State of California and the Summary on DDT as prepared and circulated by the Hopkins Marine Station of Stanford University, on "hard" pesticides and recommendations for control and ultimate ban of "hard" pesticides (June 4, 1969).

23. *See* Mead, *The System of Government Subsidies to the Oil Industry*, 10 Natural Resources J. 112, 122 (1970).

only 1 to 3 million gallons.[24] With due regard to the present state of technology, therefore, offshore oil development would appear to offer substantially less of a pollution threat than foreign crude imports in large tankers.

It is foreseeable today that there will be seabed exploration and development techniques that will permit offshore fields to be developed without any visible or material impingement upon other uses and that pollution control techniques will be developed which will greatly reduce the chances of spillage.[25] These new devices and techniques may be quite expensive, but if their use is made a condition to bidding for offshore leases, it would be properly reflected in the amount of bids made and paid for by the federal government as a means of minimizing use conflicts. Query whether it would not have been fairer to the federal government, the oil lessees involved and the people of California if a portion of the $600-million bonuses received for Santa Barbara leases had been allocated instead to extraordinary safety measures and special installations to minimize the possibility of spillage and infringement with other uses.

C. New and Proposed Offshore Regulations

Since the Santa Barbara oil spill, there has been a great deal of new thinking within the federal government regarding offshore mineral development. Early in 1969, the President appointed two related panels which issued several reports regarding the Santa Barbara oil spill and the problems presented thereby. The first panel to report, the Special Panel on the Future of the Union Oil Lease, recommended that developmental drilling on the Union Oil Company lease continue so as to relieve underground pressures that could lead to further spills and to rapidly deplete the pool from which the spills were occurring.[25a] The President's Panel on Oil Spills later issued a report, *Offshore Mineral Resources–A Challenge and an Opportunity*,[26] in October of 1969, which made a number of recommendations regarding federal leasing policy, including ones for:

> (1) The establishment of a Resource Advisory Board;
>
> (2) The incorporation of "policies of state and local governments into plans for development of the Federal offshore mineral resources;"

24. *The Oil Spill Problem*, 1st Rep. President's Panel on Oil Spills 4 (1969).

25. *See* 5 Ocean Industry No. 3 at 23 (March, 1970); 30 Offshore No. 4 at 40 (April, 1970); The Oil and Gas Journal Aug. 10, 1970 (*Undersea completion unit passes tests.*)

25a. Release of Office of Science & Technology, Executive Office of the President, June 2, 1969.

26. 2d Rep. President's Panel on Oil Spills (1969).

(3) "Well-publicized public hearings . . . in areas where offshore resource developments are contemplated and that opportunities be afforded private citizens, commercial interests and others to present their views to the government;"

(4) The establishment of a class of escrow resources which would be held for a fixed period of perhaps five years and then reviewed to determine whether use conflicts that had previously existed had been ameliorated through technological or other developments;

(5) The obtaining by the federal government "through negotiation, purchase or possibly regulation, data necessary for resource evaluation held by private companies, state and local governments and any other parties to exploration and development of offshore mineral resources be made available to those who must make decisions about their exploitation;"

(6) The establishment of a policy "that within specified areas offshore oil and gas production be accomplished from structures totally beneath the surface of the sea unless application is made and granted for an exception that would permit erection of above water structures;" and

(7) The review of proposed lease areas "to determine which areas may require more extensive supervision and more stringent regulations and to consider whether, for some of these areas, the resources should be placed in escrow or in ecological preserves."[27]

The Panel also issued a report on *The Oil Spill Problem,*[28] which contained two significant recommendations:

(1) "Coastal areas of potentially high environmental risks relative to oil tanker shipping lanes and terminals should be identified. Steps should be taken immediately to negotiate international agreements providing firm regulatory control of shipping lanes used for transportation of oil and hazardous materials;"

(2) "[I]n certain areas of great population density and high recreation and aesthetic value it is essential that: oil well operations be conducted under stringent regulations and supervision using the most up-to-date technology in order to minimize the possibility of oil leakage; and any oil companies holding offshore leases be required to show their capability for control, containment and removal of spilled oil from the area to the responsible agencies."

Immediately following the Santa Barbara oil spill, the Department of the Interior began a review of its regulations dealing with offshore operations and by the fall of 1969 had promulgated new regulations dealing both with leasing procedures by BLM and the regulation of operations by U.S.G.S. The BLM regulations which were described

27. *Id.* at iii-v.
28. *See* note 24 *supra.*

earlier[29] require the Director to determine the effect of any proposed leasing upon the "total environment" and to develop such special leasing conditions as are "necessary to protect the environment and all other resources."[30] In connection therewith, the Director is permitted, but not required, to hold public hearings and to "consult with State agencies, organizations, industries, and individuals."[31] When the new regulations were under consideration the petroleum industry was given the opportunity to comment upon them and did so. Its representatives uniformly opposed the concept of public hearings as being an invitation to delay and many also objected to the section dealing with the evaluation of the proposed leasing upon the environment.[32] This is a classic illustration of the gross insensitivity of the petroleum industry to the social temper and attitudes of our times—an insensitivity which has substantially contributed to, if not in instances caused, today's precarious offshore political situation. The industry has traditionally had a close-mouthed, independent and private attitude towards operations. A company makes its deal, drills wells where it thinks best and sells what oil it gets. The public is not involved except as a shareholder. In fee leasing situations and in early offshore leasing, this philosophy presented no problems, certainly in dealing with BLM, U.S.G.S., and many of the state leasing agencies whose employees had industry training or associations.

Today, however, even if the petroleum industry is still philosophically the same, few others are. As the public outcry in the Santa Barbara situation indicates, there are today many in this country, possibly even a majority, who feel that they have a legitimate interest in and "rights" with respect to the activities of industry, irrespective how proper and conventional they may be from a contractual and legal standpoint.[33] Further, and perhaps even more significantly, this philosophy and protests made as a part thereof, have found much support in the news media and a ready acceptance on the part of many influential people in government.

Even prior to the Santa Barbara catastrophe, it is doubtful that there were "safe" onshore areas in the country where oil develop-

29. *See* Krueger, *The Background of the Doctrine of the Continental Shelf and the Outer Continental Shelf Lands Act,* 10 Natural Resources J. at 449-50. (1970).

30. 43 C.F.R. § 3381.4 (1969).

31. *Id.*

32. *Cf.* N.Y. Times, Aug. 3, 1969 *(Oil Industry Opposes Hearings on Leases for Offshore Drilling).*

33. It is noted in the *New York Times* article, *supra,* note 32, that one individual wrote to the Department of the Interior asking that public hearings be made mandatory. She stated: "How can [an individual] voice his opinion when hearings may be avoided? ... It would be denying man his rights."

ment could be undertaken relatively without concern regarding the public's interest in other resources and values. Since this event, however, it is unlikely that the federal government or any coastal states would consider offshore leasing without considering what effect probable developments and possible accidents might have on the total environment. Moreover, each leasing agency must consider what steps can be taken to avoid confrontations with the public and resultant political ramifications. From this standpoint of neutralizing opposition and avoiding political criticism, the evaluation of study and public hearing procedure is extremely desirable, if not a necessity.[34]

It is noteworthy that the Report of the Public Land Law Review Commission, *One Third of the Nation's Land,* released in June of 1970 recommended mandatory public hearings regarding "environmental considerations . . . when requested by the states or the Council on Environmental Quality."[34a] In addition to this general recommendation the Commission recommended specifically with respect to the outer continental shelf that calls for nomination, invitations to bid, operational orders and waiver of order requirements be given public notice and that

> "Where a state, on the recommendation of local interests or otherwise, believes that Outer Continental Shelf leasing may create environmental hazards, or that necessary precautionary measures may not be provided, or that natural preservation of an area is in the best interest of the public, then, at the state's request, a public hearing should be held and specific findings issued concerning the objections raised."[34b]

The Commission further recommended that grants of rights or privileges be made subject to conditions "to control the adverse environmental impacts of activities off the public lands."[34c]

Even when one keeps in mind the oilman's traditional mystique, it is difficult in the extreme to understand why the petroleum industry did not perceive the desirability of this procedure and use the opportunity to endorse it to gain good will. By the same token, it is difficult in the extreme to perceive why the petroleum industry opposed the stricter operating conditions and anti-pollution measures of the new U.S.G.S. regulations when many of the leading companies already followed the stricter standards as a matter of internal policy

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34. *See* note 26, *supra.*

34a. One Third of The Nation's Land, *supra,* note 17 at 81, Recommendation 22. The Commission generally favored agency discretion as to the use of public hearings in specific land situations. *Id.*

34b. *Id.*, at 191, Recommendation 74.

34c. *Id.*, Recommendation 23.

and it was obvious that there had to be some administrative recognition of the problem evidenced by the Santa Barbara oil spill.[35] Similarly it is difficult to understand why the petroleum industry has not yet shown recognition of the fact that the public needs to be as prepared for and is perhaps more interested in developments off our coasts, than what brand of gas to buy.[36] Notwithstanding the massive influence which the Santa Barbara disaster had on state and federal offshore leasing and the repeated assertions made by opponents of offshore development that domestic production from our offshore is not needed, the industry has not yet presented its case to the public. It seems clear that the petroleum industry will need to convince the public and government that it needs to operate in this country's offshore, and has the capability to avoid undesirable impingements upon other values and uses if it is to continue to operate there and obtain necessary leases on a scale comparable to the past.

This international and national interest in environmental quality does not appear to be simply a "phase" through which we are passing and the petroleum industry and all others using the offshore will have to adapt themselves to these and other new tiers of strict regulation. If the petroleum industry does so there is no reason why it cannot continue offshore operations of even greater dimensions.

The opinion has repeatedly been voiced that offshore drilling should be prohibited in southern California, most notably by the Los Angeles Times. The attitudes which have been created on this subject make it likely that it will be a number of years before any further offshore leasing can be undertaken in this area. They have even given rise to the proposal, such as that recently announced by President Nixon, to cancel leases previously issued. So long as such proposals are of a limited nature they probably will not be particularly disturbing to the oil industry or particularly pleasing to the abolitionist block. A Paul Conrad cartoon in the June 16, 1970 Los Angeles Times showed two figures, labelled "oil companies," in a rowboat near Santa Barbara drilling platforms which were shown as saying, "The President's sanctuary plan will be enlarged . . . whenever we drill any more dry holes!" If a cancellation program with respect to

35. In Fortune (February, 1970) 114 *Industry Starts the Big Cleanup,* 174 oil company officials are quoted as saying "The great California oil spill has tarnished the industry's reputation and is all the more exasperating to many oil executives because in their opinion it was foreseeable and preventable. They point out that thousands of wells have been sunk off the California and Gulf coasts without mishap. Union Oil, it is felt, stretched the rules of the game by not sinking a well casing deep enough in a notably unstable geologic area; and the fact that it had permission to do so from the federal government doesn't mend matters." *Cf.* N.Y. Times, Mar. 13, 1970. *(Hickel Calls Oil Spill in the Gulf a 'Disaster').*

36. *Cf.* API rpt.

all offshore leases were proposed, it would impose a financial burden amounting to billions of dollars upon the federal government and could be expected to meet with substantial opposition from legislators from other parts of the country whose attitude toward pollution is much more permissive. It would, for example, be interesting to find out how many coastal states without offshore production would be willing to accept California's offshore reserves with their attendant threat of pollution.

The feasibility and political acceptability of offshore oil operations in Southern California and elsewhere will depend almost entirely upon the petroleum industry itself. If it recognizes, and equally important gives evidence that it recognizes, the social impact of its operations in the offshore upon other uses and values, adopts a plan of operation for offshore drilling that guarantees as far as is feasible the protection of such other values and uses, and establishes effective channels of communication with the rest of society, there is no reason that it cannot overcome, and overcome rather quickly, the present opposition. A very parallel case is presented in the town-lot drilling situation. For many years town-lot drilling was prohibited in most Southern California municipalities because operators showed only a capability of drilling and producing wells by conventional means. When industry showed that it had the technology and willingness to drill and produce by inoffensive and inconspicuous means, most of such prohibitions were lifted. If the oil industry were to show that it was willing and able to phase out offshore oil platforms and other offensive coastal installations as technology and economics permitted and to develop future leases from sub-sea stations with high anti-pollution standards the offshore both in California and elsewhere in this would become more developable.

The U.S.G.S. regulations drafted after the Santa Barbara oil spill and adopted in the Fall of 1969 require that "major departures" from the requirements of outer continental shelf orders be approved by the Chief of the Conservation Division rather than simply by the Regional Supervisor, as was the case under the earlier regulations.[37] This provision was undoubtedly engendered by the fact that a deviation in an outer continental shelf order with respect to surface casing appears to have materially contributed to, if not caused, the blowout of the Union Oil A-21 Well.[38] The regulations also contain a number of provisions designed with a view toward imposing stricter drilling and operating conditions to reduce the possibility of blowouts and pollution. It is noteworthy that the recent report of the

37. 30 C.F.R. § 250.12(b)(2) (1969).

38. *See A Case History of the Santa Barbara Oil Spill, supra* note 20 at 7.

Public Land Law Review Commission recommended that all agencies "having resource management responsibility on the Shelf should be required by statute to review practices periodically and consider recommendations from all interested sources, including the Council on Environmental Quality."[38a]

The regulations expressly require a lessee to control and totally remove pollution resulting from drilling or production operations. The regulations continue to require that a lessee submit to U.S.G.S. the drilling and development program prior to beginning the operations and include therewith "structural interpretations based on available geological and geophysical data; and . . . such other pertinent data as the supervisor may prescribe."[39] This information would consist of pre-bidding seismic and other exploratory information obtained by the successful lessee, but it would be obtained after the lease had been awarded and thus could not be used in pre-leasing evaluations. Despite the clear need for pre-leasing information of this kind in order for U.S.G.S. to avoid "flying partly blind" in the words of its own Director,[40] and the clear power of the Department to require the disclosure of such information as a condition to the issuance of exploratory permits,[41] no change in the regulations was made in this regard. This failure of action appears to have been motivated in large part by the lack of confidence frequently expressed both by industry and U.S.G.S. in the ability of U.S.G.S. to maintain the confidentiality of such information, and a mutual concern that it would be unfair for the federal government to have access to such "proprietary" information.[42] This does not make much sense. The federal government is the resource owner and it should be entitled to have the same amount of knowledge about the resource as its bidders if it keeps such information in confidence. It is difficult to see why it could not as well as other federal and state agencies that deal with confidential information. California has had a disclosure requirement with respect to all pre-bidding exploratory information in effect for over ten years with no discernible adverse effects.[43]

38a. One Third of The Nation's Land, *supra*, note 17 at 190, Recommendation 73.

39. 30 C.F.R. § 250.34(a) (1969). *Compare* 30 C.F.R. § 250.34(a) (1954).

40. *See* Los Angeles Times, Apr. 30, 1969 (*U.S. Gave Oil Leases Without Knowledge Value*), in which U.S.G.S. Director Pecora stated that the Department of Interior was "flying partly blind" and that to evaluate bids without adequate information was "a horrible situation to be placed in."

41. *See* 1 Nossaman OCS Study *supra*, note 1 § § 4.9, 11.8.

42. The Wall Street Journal, June 10, 1969 *(Oil Industry Denounces Interior Department's Offshore-Drilling Rules);* The Oil and Gas Journal (July 14, 1969) at 44.

43. Cal. Pub. Res. Code § 6826 (West Supp. 1969), provides in part:

> The commission shall require, as a condition to the issuance of any permit for the conduct of geological or geophysical surveys on tide and submerged lands

The Public Land Law Review Commission appears to have concurred in this analysis in making the following recommendation:

> "The Federal Government should undertake an expanded offshore program of collection and dissemination of basic geological and geophysical data.
>
> "As part of that program, information developed under exploration permits should be fully disclosed to the Government in advance of Outer Continental Shelf lease sales. However, industry evaluations of raw data should be treated as proprietary and excluded from mandatory disclosure."[43a]

In addition to not having sufficient pre-leasing information to evaluate, BLM and U.S.G.S. both have lacked a sufficient staff and facilities to undertake any extensive evaluation even if the information had been available.[44] Commencing before the Santa Barbara incident, but certainly accelerated in 1969, both agencies have received additional staffing and facilities for this purpose.[45] Concrete evidence of the intention of the federal government to obtain geophysical evidence to make necessary pre-leasing decisions was the purchase by the Department of the Interior in early 1970 of geophysical data on a large portion of the Louisiana acreage scheduled for lease sale.[46] There is no indication that it intends to or can make such information available to prospective bidders and its approach, therefore, would appear to be consistent with that of industry of independently acquiring exploratory information. It has been recommended by some that such information be provided by the federal government to all bidders, but it is questionable whether this would have any substantial effect upon the number or character of bidders or the amount of bids.[47] The total cost of entry into offshore oil and gas development, exclusive of that of pre-bidding exploratory work, have been and are anticipated to continue to be too high to attract small firms.[48]

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under this section, that the permittee make available to the commission, upon request, all factual and physical exploration results, logs, and records resulting from the operations under the permit. Any such factual or physical exploration results, logs, or records which the permittee is required to make available to the commission shall be for the confidential use of the commission and shall not be open to inspection by any other person or agency without the written consent of the permittee.

43a. One Third of The Nation's Land, *supra*, note 17 at 193, Recommendation 77.

44. 1 Nossaman OCS Study, *supra*, note 1, § § 4.9, 11.8.

45. The Oil and Gas Journal April 20, 1968 at 34; The Oil and Gas Journal Oct. 13, 1969 at 53-55.

46. The Oil and Gas Journal Jan. 19, 1969 at 26.

47. *See Offshore Mineral Resources–A Challenge and an Opportunity, supra* note 26 at iii, para. 5.

48. In 1 Nossaman OCS Study, *supra*, note 1, it is noted at 606:

Data that was gathered by the Federal Government and made available to

D. Hard Minerals

There are no outer continental shelf leases for minerals other than petroleum, sulphur and salt and the fact that there are not has been used by the hard mining industry to support the contention that the competitive bidding and leasehold concepts of the Outer Continental Shelf Lands Act have discouraged the development of other minerals.[49] This is a convenient explanation of the situation and it has been used by several outside of the mining industry, including some representatives of BLM and the Presidential Commission on Marine Science, Engineering and Resources.[50] There is, however, little, if any, responsible evidence to support this conclusion. A large number of exploratory permits have been issued to mining companies for offshore work,[51] but they have not requested that the areas explored be put up for leasing except in a very few instances. The one lease issued by Interior that covered minerals other than petroleum, sulphur and salt was for phosphate located in an area 40 miles off Southern California and in waters as deep as 4000 feet. The fact that it was issued in 1961, before the Convention on the Continental Shelf became effective, is evidence of the initiative of the Secretary of the Interior in a very uncertain title situation.[52] The Outer Continental Shelf Lands Act vests in the Secretary full discretion as to tract selection, royalty and other terms for leases covering minerals other than sulphur and oil and gas[53] which would appear to enable him to devise a lease attractive to potential entrants if interest should develop. The fact that the Act requires that leases be offered on a competitive bid basis is consistent with modern economic thinking and is reasonable.[54]

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bidders might provide an attraction for some small firms to enter competition. It is unlikely, however, that this would be a controlling factor even to this class of entrant because of the other high costs of entry into mineral development on the outer continental shelf.

49. *See* Walthier, Problems Relating to Mineral Exploration and Mining on the U.S. Continental Shelf, paper presented to the Public Land Law Review Commission (Jan. 11-13, 1968); U.S. Dept. Int., *A Report to the Public Land Law Review Commission* 90 (March 29, 1968); Krueger *Mineral Leasing on the Continental Shelf and Beyond,* 42 Cal. State B.J. 515, 523 (1967).

50. Commission on Marine Science, Engineering and Resources, Our Nation and the Sea: A Plan for National Action (1969) [hereinafter cited as Our Nation and the Sea], at 135-37. This also seems to be the suggestion of the Public Land Law Review Commission in its recent report. One Third of The Nation's Land, *supra,* note 17 at 194.

51. 1 Nossaman OCS Study, *supra,* note 1, § 11.7.

52. *Id.* § 1.10; *See* Memorandum Opinion in Krueger, *supra* note 29, at 475, n. 124.

53. 43 U.S.C. § 1337(e) (1964).

54. *See* note 114 *infra.* In Sprague and Julian, *An Analysis of the Impact of An All Competitive Leasing System on Onshore Oil and Gas Leasing Revenue,* 10 Natural Resources J. 514, 531 (1970), it is concluded that an all competitive leasing system for federal onshore leases would have increased government bonus revenue from $10-million to $100-million in 1967 with a filing fee loss for non-competitive leases of only $2½-million. A

The hard mining industry believes that there are intrinsic and fundamental differences between it and the petroleum industry which require subsidies and special incentives to make the development of hard minerals offshore economically feasible. Rather than the leasing concept of the Outer Continental Shelf Lands Act, the hard mining industry would prefer to see a separate outer continental shelf code established for hard minerals which would incorporate the basic concepts of the Mining Law of 1872[55] and create a system of tract selection under which entrants would non-competitively acquire tracts of a very large size on a non-royalty basis with an estate similar to fee title.[56] It is questionable today whether the Mining Law of 1872 is supportable on any logical ground in any context whether offshore or upland and its abolition in favor of a leasing system similar to the Outer Continental Shelf Lands Act has been recommended by many, including former Secretary of the Interior Stewart Udall.[57] The conclusion that the hard mining industry needs subsidies or other special incentives in order to be induced to undertake offshore mineral development is, however, probably accurate. It lacks the technological capability for offshore operations which has been highly developed by the oil industry. Similarly, it lacks the knowledge of offshore resources which the petroleum industry has obtained through its extensive offshore work in many parts of the world.[58] Last and most importantly, unlike the petroleum industry, the hard mining industry has not had the economic incentives to seek offshore reserves of hard minerals because of the existence of onshore reserves which can be recovered and processed at a lower unit cost.[59]

competitive system of allocation appears as functionally valid for hard minerals as for oil and gas. See Brooks and Christy, *Memorandum on Suggested Operational Guidelines for an International Regulatory Authority for the Sea-bed,* Twenty-First Report of Commission to Study the Organization of Peace 29 (1970); Thompson, *Canadian Trends in Mining and Petroleum Legislation: Some New Zealand Comparisons,* Australasian Mining Symposium 1, 7 (1970).

55. 17 Stat. 91 (1872), codified in various sections of 30 U.S.C. *See* Hansen, *Why a Location System for Hard Minerals?* 13 Rocky Mt. Min. L. Inst. 1 (1967).

56. *See* Walthier, *supra* note 49. *See also* 2 Nossaman OCS Study *supra,* note 1, at 7-E-6, 7-E-7 (summary of questionnaire response and representative replies). One company suggested that the minimum lease size in unproved areas be 200 square miles.

57. Letter from Secretary of the Interior Stewart L. Udall to the Chairman and Members of the Public Land Law Review Commission, January 15, 1969, with proposed bill attached, which stated that "after eight years in this office, I have come to the conclusion that the most important piece of unfinished business on the Nation's natural resource agenda is the complete replacement of the Mining Law of 1872." *See* U. S. Dep't Int., The Mining Law–An Antique in Need of Repeal (1969). *Cf.* Edwards, *The 1969 View of the 1872 Law: Current Proposals to Modernize or to Replace the General Mining Laws,* 15 Rocky Mt. Min. L. Inst. 139 (1969).

58. *See* 1 Nossaman OCS Study, *supra,* note 1, § 11.10.

59. *Id.; Resources of the Sea, supra,* note 50 Rep't of U.N. Sec. Gen. to U.N. ECOSOC, U.N. Doc. E/4449 at 4 (Feb. 21, 1968).

The real issue is not whether the hard mining industry needs special incentives in order to develop offshore minerals, but whether it serves any policy objectives to provide them. It is questionable whether it does at this point in time. From the standpoint of efficient resource management hard minerals are being obtained from other sources. From the standpoint of the encouragement of multiple use of resources and the protection of environmental quality, the offshore is better left unmined, particularly with due regard to the fact that some forms of hard mining, such as dredging, can be expected to cause much greater pollution and much more interference with other uses than petroleum development.[60] From the standpoint of maximization of revenue to the federal government, there would seem to be little to be gained by supporting offshore development by the hard mining industry, at least on the basis proposed by it. The goal of encouragement of private participation in offshore development and of the advancement of knowledge of the development of technology would be served by giving special encouragement to the hard mining industry. These goals are being satisfied in large part by the involvement of the petroleum industry in the offshore, however, and it may be that the petroleum industry through its advanced knowledge and technology will be able to undertake development of other minerals without the special incentives sought by the hard mining industry.

It is noteworthy that the Public Land Law Review Commission did not recommend the extension of the location and patent system applicable to public lands into the outer continental shelf, even though it recommended that it be maintained elsewhere with modifications.[60a]

E. Future Developments

As may be readily apparent from the foregoing, the future selection of lands for mineral leasing under the Outer Continental Shelf Lands Act will involve the intensive consideration by the Department of the Interior of all of the issues involved in the multiple use of public lands, very probably including public hearings, and very probably also the imposition of conditions to adjust for the special circumstances of each offshore leasing situation. Further, some areas

60. 1 Nossaman OCS Study, *supra*, note 1, § § 10.3-10.4.

60a. One Third of The Nation's Land, *supra*, note 17 at 194. The Public Land Law Review Commission which appears to have a distinct orientation to the hard mining industry recommended retention of the mining law of 1872, albeit with a number of changes designed to substantially modernize it. *Id.* at 121-139, *passim*. The disfunctional effect of the location and patent system and its obvious anachronism at this point in time inspired a strong dissent from four Commissioners. *Id.* at 130-132.

such as those off Southern California may be withheld from leasing indefinitely.[61] In addition, it is quite likely that the coastal states will be given planning jurisdiction over the offshore that will strongly influence leasing practices under the Act.

The Marine Sciences Commission in its 1969 report made a large number of recommendations designed to effect a better management of the coastal zone, including the establishment of a major civilian agency, the National Oceanic and Atmospheric Agency ("NOAA") for the administration of federal, civil, marine and atmospheric programs[62] and the enactment of a Coastal Management Act to establish policy objectives and authorize grants-in-aid for State Coastal Zone Authorities in planning and managing coastal waters and adjacent lands.[63] In both the House and the Senate measures have been introduced to implement these recommendations and it seems quite likely that legislation with respect to at least the Coastal Zone Authority concept will be adopted.[64] The legislation that is now pending before both Houses of Congress would limit the authority of the coastal state to the planning of the lands owned by the coastal state (the so-called "three-mile limit"), but in situations such as the Santa Barbara Channel there are both political and practical reasons for believing that this authority would influence developments in federally-owned lands.[65]

61. On October 29, 1969, U. S. Senator Cranston introduced S. 3093, which would suspend all further federal leasing in offshore California provided that state law prohibits the issuance of oil and gas leases in offshore areas adjacent to the outer continental shelf. On February 26, 1970, U. S. Senator Muskie introduced S. 3516, which would require the Secretary of the Interior to assume operations with respect to all federal leases in the Santa Barbara Channel and terminate permanently all such operations in an orderly and safe fashion. S. 3516 would authorize actions against the United States to recover damages for the termination of such operations. In addition a number of complimentary measures have been introduced in the California Legislature.

Even if federal legislation on the subject is not adopted, it is highly unlikely that the Secretary of the Interior will hold any lease sales in Southern California for some time to come. There are a number of unleased tracts in the Santa Barbara Channel and in other parts of Southern California, such as the San Pedro Bay, lying between the mainland and Santa Catalina Island, that have large petroleum potential. With due regard to the current state of public opinion in California, however, it is improbable that these will be proposed for leasing until technology has advanced to the point where the likelihood of pollution from oil is minimal and spatial interferences with other uses have been substantially eliminated, as by the use of seabed installations and operations.

62. *See* Krueger, *supra,* note 29, at 443 n. 6.

63. *Id.*

64. *Id.*

65. It has been proposed that the planning power of the coastal states extend to portions of the outer continental shelf which have "a special functional interrelationship with lands within the boundaries of the coastal State or States affected" where is is justified by the supervising agency of the federal government. *See House Committee Hearings, supra* note 6 in Krueger, *supra,* note 29, at 443 n. 6. at 196. Moreover, even if the planning jurisdiction of the coastal state extends only to lands within its boundaries, the federal government would

The enactment of legislation creating the National Council on Environmental Quality[66] and the action taken by the administration pursuant to President Nixon's State of the Union Message[67] evidence a national commitment to protect and restore the environment at all levels in this country. Presently there may be an overemphasis of "human" values in the consideration of offshore situations. It should be remembered, however, that this follows an extended period of time in which the encouragement of industrial development and the maximization of the return of revenue to the federal government and the various coastal states have been emphasized in opposition to most other policy objectives.[68]

be strongly influenced by state plans which it had approved as to adjacent areas under federal jurisdiction. If, for example, California planned its coastal lands so as to prohibit offshore oil development except under certain carefully defined special circumstances, the federal government would have difficulty in permitting less stringent forms of operations as to its properties, particularly where they would be surrounded by state lands, as would be the situation in Southern California between the mainland and the Channel Islands, as well as in offshore Maine, Florida and Alaska. Note in this regard that the state planning conditions would be highly relevant with respect to the content of the special leasing conditions which the BLM Director is required to develop as "necessary to protect the environment and all other resources." Note also that the Comprehensive Ocean Area Plan now being developed by California includes adjacent areas of the outer continental shelf and that particular emphasis is being placed on planning of those areas between the mainland and the Channel Islands.

66. National Environmental Policy Act of 1969, Pub.L. 91-190, 83 Stat. 852 (1969). Section 2 of the Act provides that its purposes are:

> To declare a national policy which will encourage productive and enjoyable harmony between man and his environment; to promote efforts which will prevent or eliminate damage to the environment and biosphere and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.

67. Los Angeles Times, January 23, 1970.

68. Boone v. Kingsbury, 206 Cal. 148, 273 P. 797 (1928), which held the application of California's Mineral Leasing Act of 1921 to its offshore as being consistent with the purposes of commerce, navigation and fishing for which the state holds its offshore in trust, is illustrative in this respect. It was there said at 192-93:

> No harm can come to fisheries under the protective provisions of the act, as it must be presumed that the provisions of the act will be observed, and, if not observed, the general laws enacted for the protection of fish and sea life against the pollution of waters by penalizing persons or corporations, who cause or are responsible for deleterious substances escaping into the public waters of the state, are amply sufficient to protect sea life against serious injury or destruction.
>
> Nor is there any substantial cause of alarm lest the 1200 miles of our sea coast will be barricaded by "a forest of oil derricks," which will interfere with commerce or navigation. The state may at any time remove structures from the ocean erected by its citizens, even though they have been erected with its license or consent, if it subsequently determines them to be purprestures or finds that they substantially interfere with navigation or commerce.
>
> Gasoline is so closely allied with state and national welfare as to make its production a matter of state and national concern. If it can be said of any industry that its output is "in aid and furtherance of commerce and naviga-

Lastly, it should be noted that the extent of the federal government's discretion to select lands for lease will be strongly influenced by the international policy decisions with respect to the extent of limits of national jurisdiction (continental shelf) which are presently under consideration by the international community. If a narrow boundary to the continental shelf is adopted as recommended by the Marine Sciences Commission and President Nixon[69], obviously the discretion of the Secretary of the Interior would be materially affected, in view of the claims and leases designated under the Outer Continental Shelf Lands Act.[70]

III
DETERMINATION OF SIZE AND TIMING OF LEASE SALES

The Outer Continental Shelf Lands Act requires that an oil and gas lease "cover a compact area not exceeding five thousand seven hundred and sixty acres" and contains no acreage restrictions with respect to sulphur or other minerals.[71] Neither the Act nor the regulations promulgated thereunder contain any other restrictions upon, or standards for determining the times at which lease sales are to be held, the number of tracts to be offered or the size of the tracts, except that the newly issued regulations contemplate that the BLM Director will "[f]rom time to time announce tentative schedules of lease sales."[72] There has been a clear preference on the part of the major oil companies for large offerings of blocks of approximately the maximum size and this has normally been the practice of Interior to the present time. None of the sales off the West Coast have involved less than 500,000 acres and one for lands off Oregon-Washington totaled approximately 1-million acres.[73] Three of the sales covering lands off Louisiana have offered more than 1-million acres with two being approximately 1,750,000 acres each.[74] The May 21, 1968, sale covered 728,000 acres of land off Texas and at that time, the Secretary of the Interior observed that the sale "is more in line with sound resource management and that a pattern of sales held

tion," and its production "a public benefit," the production of gasoline, by reason of the motive elements that inhere in it and its universal use and adaptability to varied uses and the convenient and portable form in which it may be confined, would entitle it to a high classification in the scale of useful, natural products. It is a mover of commerce and fills the office of "a public benefit."

69. *See* Krueger, *supra,* note 29, at 444, 485.
70. *See* Id. at 471, n. 113.
71. 43 U.S.C. § § 1337(b), (d) (1964).
72. 43 C.F.R. § 3381.2 (1969).
73. 1 Nossaman OCS Study, *supra,* note 1, § 4.17.
74. *Id.*

more frequently and involving smaller acreage than those of the past should be our future objective."[75]

The timing of past lease sales has been relatively sporadic and the notice given before such sales has been short, averaging something close to one and one-half months.[76] On the other hand, Interior has typically given industry advance notice of something over two years that an area may be the subject of a lease sale by notice of the preparation of leasing maps and calling for nominations in the area.[77] Interior has not, however, coordinated lease sales with state offshore offerings and the sales have not been conducted on a scheduled basis. As suggested by a number of major oil companies and some smaller ones, the objective of efficient resource management would clearly seem to be better served through a system of scheduled lease sales with longer notice periods, and it is probably for this reason that Interior's regulations were changed to provide for such scheduling.[78]

It is quite possible that the lease sales held in the past have resulted in something less than the maximum return of revenue to the federal government due to the surcharge of capital requirements imposed by bonus bidding. Note for example the sales which occurred between June of 1967 and June of 1968:[79]

DATE	*STATE*	*TOTAL BONUS BID*	*TOTAL BONUS RECEIVED*
June, 1967	Louisiana	$1.6-billion	$510-million
February, 1968	California	$1.3-billion	$600-million
June, 1968	Texas	$1.6-billion	$600-million

In addition, there have been a number of "drainage" tracts recently leased for high bonuses and late in 1969 the State of Alaska sold North Slope leases for an aggregate bonus of $862-million.[80] The capital necessary for these bonus costs and necessary exploratory work has been a major cause of the rapid growth of the ratios of indebtedness to equity among major oil companies.[81] It also appears

75. Press Release, Dept. Int. (BLM), Mar. 11, 1968.
76. *See* 1 Nossaman OCS Study, *supra*, note 1, § 4.19.
77. *Id.*, § 4.16.
78. *Id.*, § 11.18. *See* Our Nation and The Sea, *supra* note 50 at 127; *See also* 43 C.F.R. § 3381.2 (1969).
79. *See* Petroleum and Sulphur on The U.S. Continental Shelf, *supra* note 40 at 8. *See also* 1 Nossaman OCS Study, *supra*, note 1, Tables 8-13, §§ 8.10, 11.16.
80. The Wall Street Journal, Sept. 11, 1969 *(Alaska Apparently Raises Over $900-Million in Sale of North Slope Oil Leases; Concerns' Bids Totaled 1,105)*; The Oil and Gas Journal, Sept. 15, 1969 at 23.
81. 1 Nossaman OCS Study, *supra*, note 1, § 11.16. *See also* The Oil and Gas Journal, Feb. 2, 1970 at 53.

to have been a significant element in the development of the common practice of joint bidding on offshore leases.[82]

It is questionable, however, whether a system of scheduled offerings of a smaller number of tracts and at greater intervals would have resulted in a substantially greater return of revenue to the federal government. The evidence quite clearly indicates that there was effective competition among the petroleum industry at the various lease sales and the bonuses received have been large.[83] With respect to the Santa Barbara Channel leases, there is in fact sound reason to believe that less bonus would have been bid has the leases been offered serially rather than in block form. The relatively unsuccessful exploratory efforts of many of the successful bidders and the Union Oil Company A-21 Well blowout with its resultant side effects could and can be counted upon to "chill" the price of any future bonuses for leases in this area.[84] Moreover, it is clear that the relatively rapid rate of lease sales up to the time of the Santa Barbara incident resulted in greater exploration and consequently a greater advancement of technology and knowledge than otherwise would have taken place.[85]

At times, it has been suggested that the timing and size of federal offshore lease sales could influence the entry of smaller firms into offshore exploration. It has been shown that large independent oil companies are capable of effectively competing by group bidding as against major oil companies even as to very valuable offshore properties,[86] but there is no evidence that smaller firms could be induced into effective competition in the offshore even if the sales were spaced further apart or the size of the tracts were reduced. The experience of BLM with small tracts indicates in fact that the smaller firms *per se* are not economically capable of competing in the outer

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82. 1 Nossaman OCS Study, *supra*, note 1, § § 8.14-8.17, 11.16.

83. *Id.* § § 8.17-8.20, 11.18, 11.24.

84. The Oil and Gas Journal, Aug. 12, 1967; Los Angeles Times, Oct. 16, 1968 *(Humble Admits Channel Lease Results Slight)*.

85. The Outer Continental Shelf Lands Act and all of the oil and gas leases issued pursuant to it, in effect, require drilling operations within five years after the oil and gas lease is issued. 43 U.S.C. § 1337(b) (1964); 43 C.F.R. § 3382.2 (1969). In the Santa Barbara Channel, a substantial number of the tracts are at the outer extreme of present standard exploratory drilling technology and beyond the known industry capability on developmental drilling and production technology. *See* 1 Nossaman OCS Study *supra*, note 1, § § 7.2-7.3, 7.7. It is unquestionably true also that the Santa Barbara spill and other recent large oil spills have contributed materially to the demand for and development of technological advances in oil pollution treatment.

86. Note the amounts bid by the Pauley Petroleum Inc. group in the Santa Barbara Channel oil and gas lease sale of February 6, 1968. 1 *Nossaman OCS Study, supra,* note 1, Tables 8-13 at 506, § 11.18. Note also the amounts bid by independents in the recent Alaska sale (note 80 *supra*).

continental shelf. In the 1968 Texas sale, 32% of the tracts were quarter tracts and of these only 60% received any bids as against over 95% of the full tracts (5,760 acres). Moreover, competitive interests indicated by multiple bids was shown in only 12% of the quarter tracts offered as compared with 70% of the full tracts. With due regard to the fact that a number of the quarter tracts had been selected by BLM for the relatively high potential, there is a strong indication that the offer of smaller tracts is not a stimulus to competition.[87] The answer on this issue would appear to be that the "start up" and initial exploratory drilling costs of offshore development which are approximately the same whether a small or a full tract is leased are sufficiently high as to preclude the entry into competition for outer continental shelf resources of smaller oil and gas firms, irrespective of bonus.

With respect to minerals other than petroleum, sulphur and salt, there has been only one lease issued which was for phosphate and covered 30,240 acres.[88] The hard mining industry has indicated because of the very large anticipated exploration and development costs it will be necessary that the resource entrant acquire (and acquire non-competitively) very large areas.[89] The "unknowns" of the hard mining industry are such that it is difficult to assess their needs, although certainly it is reasonable to anticipate that large leasehold areas will be necessary to permit the economic exploration and development of hard minerals in certain types of deposits, *e.g.*, manganese modules.[90] It should be noted again that the Outer Continental Shelf Lands Act permits the Secretary of the Interior to fix the area in terms of the lease for hard minerals on whatever basis appears to be reasonable to him which should be entirely sufficient authority in this respect.

IV
ALLOCATION OF LEASES

A. Existing System

The Outer Continental Shelf Lands Act requires that oil and gas leases be issued by competitive bidding and authorizes the Secretary of the Interior to call for bidding on the basis of cash bonus with a fixed royalty of not less than 12½% or on the basis of royalty bid with a 12½% minimum and a fixed cash bonus.[91] The practice of the

87. 1 Nossaman OCS Study *supra*, note 1, § 11.18.

88. *Id.* § 4.59. There were actually six separately leased tracts totalling this figure leased to Collier Carbon and Chemical Corporation, a subsidiary of Union Oil Company.

89. *See* notes 49 and 56 *supra*.

90. *See* Mero, Mineral Deposits of the Sea 143, 260 (1965).

91. 43 U.S.C. § 1337(a) (1964). *See* 1 Nossaman OCS Study *supra*, note 1, § 4.30.

Secretary has been to issue all leases with a 16-2/3% royalty and on the basis of the highest cash bonus bid. The Act requires cash bonus bidding on all other minerals with such royalty, rental and other terms as the Secretary may prescribe, but with a minimum 5% royalty for sulphur.[92] To date all sulphur leases have provided for 7½% royalty.

It is clear that as to petroleum and sulphur the existing system of bidding has encouraged industry in the development of offshore resources and has resulted in a very favorable revenue return to the federal government. As noted earlier, large sums of money have been bid for many of the tracts offered by a large number of companies, frequently bidding in combination.[93]

The existing system, moreover, appears to have achieved reasonably efficient resource management. BLM has not hesitated to reject bids which it concluded were low after considering available geologic information and the bidding record. This function of review and analysis would, however, be more complete if U.S.G.S. and consequently, BLM possessed the knowledge of the bidders regarding the tracts under consideration.[94]

B. Alternative Forms of Bidding

The language of the Act with respect to oil and gas appears sufficiently broad to permit experimentation with alternative forms of offer, including bidding on the basis of flat royalty, sliding scale royalty or net profits.[95] Leases for other minerals would have to be offered on the basis of cash bonus bidding, but they and oil and gas leases could provide for sliding scale royalties or the payment of a percentage of net profits, if any statutory minimum royalty were required to be paid in any case. The Act could be amended so as to authorize non-competitive leases such as those presently authorized for federal onshore lands under the Mineral Leasing Act of 1920[96] or the mining location system authorized by the Mining Law of 1872.[97] It could also be amended so as to authorize development contracts either through negotiation or competitive bidding and the use of a combination of bid factors. A brief examination of each of these alternatives is in order.

92. 43 U.S.C. § § 1337(d)-(e) (1964). *See* 1 Nossaman OCS Study *supra*, note 1 § 4.31.

93. *See* notes 82, 83, *supra; See also* statement of Clyde O. Martz, Asst. Att. Gen., to the Pub. Land Law Rev. Comm'n, April 3, 6, 1968, at 25.

94. *See* notes 39-47 *supra; See also* 1 Nossaman OCS Study, *supra*, note 1, § § 4.9, 11.8, 11.24.

95. 43 U.S.C. § § 1337(a)-(b) (1964). In any case, a flat royalty of not less than 12½% would be required to be paid in addition to such other terms as fixed by the Secretary.

96. 41 Stat. 437 (1920), *as amended,* 30 U.S.C. § § 181-287 (1964).

97. *See* note 55 *supra.*

Royalty bidding, whether on a flat royalty basis (lease awarded to the highest gross royalty offered) or a sliding scale basis (lease awarded to the highest multiple of a stated royalty scale), is frequently suggested as a means of attracting bidders who do not have the funds to compete on the basis of cash bonus or in interesting bidders in exploring unattractive property for minerals which are presently undeveloped. In California, it was also used for a number of years as to proven or semi-proven property to give the state a greater participation in production.[98] There are, however, some very basic drawbacks to both forms of royalty bidding. Royalty in any form creates an inherent problem of resource economics. It becomes part of the fixed costs of operation and thereby contributes to diminishing the operator's incentive to produce as such costs approach the value of production. Flat royalty bidding compounds the problem: the greater the royalty, the greater the incentive to prematurely abandon.[99]

A sliding scale royalty presents less of a problem in this respect because the royalty adjusts downward with a decrease in production, but this factor also provides the operator with incentive to produce at the lowest permissible rate in order to reduce royalty.[100] The extraction of the resource may, therefore, be unreasonably delayed with a correlative delay in the payment of royalty to the government. It is also of course true of any type of royalty bidding that the lessor will receive less by way of cash bonus than it would on a cash bonus bidding basis and that the ultimate return to the lessor will depend upon the success of the lessee's operation.

The premature abandonment problem could be substantially eliminated by providing for a successively decreasing royalty, possibly even providing for its termination, when production or reserves reach stated minimal levels. Such a system would, however, encourage the operator to prematurely establish the stated lower levels in order to reduce royalty in the same fashion as does the sliding scale. It would also create a much greater administrative burden on the leasing agency.[101]

98. Krueger, *State Tideland Leasing in California*, 5 U.C.L.A. L. Rev. 427, 444-46 (1958); 2 Nossaman OCS Study, *supra*, note 1, App. 12A at 12-A-9, 12-A-96 *et seq.*

99. 1 Nossaman OCS Study, *supra*, note 1, § 11.43. *See also* note 133 *infra.*

100. 1 Nossaman OCS Study, *supra*, note 1 § 12.37. The Atlantic Richfield California State lease at Rincon discussed in Krueger, *supra*, note 98 at 445, is an interesting case study. There the royalty bid was such that 100% royalty would be reached at approximately 125 barrels per day average production. All wells drilled have been producing at a much lower rate than this, based upon "MER" considerations. See Cal. Pub. Res. Code § 3451 (West 1957).

101. U.S.G.S. officials regard the present regulations permitting the reduction of royalty and rental (discussed in text accompanying note 133 *infra*) with apprehension, because of

Moreover, exclusive of the inherent problems presented by royalty bidding, it is questionable whether it would today attract bidders to the offshore who would not otherwise compete on the basis of cash bonus bidding. As noted earlier, the other costs of entry into offshore mineral development are so great as to create a doubt as to whether bonus requirements has any significant deterrent effect. So, too, it is doubtful that royalty bidding would attract bidders to property or minerals in which they would have no interest under cash bonus bidding. The few and very low bids that unattractive property receives under cash bonus bidding would indicate that there would be little interest on any basis.[102] Lastly, if exploratory and development costs can be anticipated to be high, a higher royalty through royalty bidding could have a discouraging rather than encouraging effect upon potential entrants.

Net profits interests have been held to be akin to royalty[103] and bidding on the basis of the highest percentage of net profits offered would appear to be a permissible alternative under the Outer Continental Shelf Lands Act, provided that leases required the payment of the stated minimum royalties in the case of petroleum and sulphur. This type of lease would have the advantage of permitting the operator to deduct all costs of exploration and operation before the payment of any sums to the government (except the designated minimum royalty and bonus) and for that reason could encourage exploration in some otherwise not attractive areas and the development of new techniques. In the event of discovery, it would mitigate the incentive to prematurely abandon that is present with any form of royalty bidding. Lastly, whether the area involved is proven or wildcat, it may attract very high bids from integrated oil companies that may be more interested in providing a source of supply rather than in sales production. The 1965 Contractor's Agreement for the development of the East Wilmington Field issued by the City of Long Beach, California is an example of that; there the successful bidders for field contractors offered 95.56% of net profits.[104] The net profits con-

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the evaluation required in the reduction standard. They have taken the informal position that royalty may not be reduced below the statutory *leasing* minimums which does not appear to be the import of the statute or regulations. *See* 1 Nossaman OCS Study, note 1 *supra*, § 11.43.

102. Some of the low bids for tracts on which industry has little knowledge appear to be "fishing" bids submitted in the hope that there will be little or no competition and that the bidder will thus be awarded leases at relatively little cost. *See* 1 Nossaman OCS Study, note 1 *supra*, §§ 4.23, 8.19, 11.21.

103. Burton-Sutton Oil Co. v. Comm'r, 328 U.S. 25 (1946).

104. In 2 Nossaman OCS Study, *supra*, note 1, App. 12-A it is said at 12-A-16:

> The agreement, which is set forth in Exhibit F, provided for development, under the joint supervision of the City and State, by a field contractor having

tract, however, has one basic defect: the larger the reserved net profits interest, the less incentive the operator has to be efficient. There may in fact be an incentive to be inefficient where the operator has a very small share of net profits, but receives an administrative allowance of a specified percentage of operating expenses.[105]

The development contract is also a possible alternative. It would require the contractor to perform specified operations for a designated share of production or for a designated fee. It could be negotiated or awarded competitively, but would appear to require an amendment to the Outer Continental Shelf Lands Act.[106] It would offer an opportunity to the federal government to experiment with various types of operations and possibly encourage the development of minerals and areas presently not being developed. A basic drawback in many of the development contracts that have been seen to date, however, has been that they encouraged interested operators to offer to perform work unnecessary for the efficient development of the resource. Further, such contracts are difficult to administer and require many subjective judgment factors.[107]

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an undivided 80% working interest, with non-operating participations being offered to five non-operating contractors in shares of 10%, 5%, 2½%, 1½%, and 1%. The February, 1965 bidding for these interests produced a high bid for the field contractor's 80% undivided share, jointly bid in by Texaco, Humble, Union, Mobil and Shell, of 95.56% of net profits; for the non-operating contractors' 10% undivided share, jointly bid in by Pauley and Allied Chemical, 98.277%; for the 5% undivided share, jointly bid in by Standard of California and Richfield, 100%; for the 2½% undivided share, jointly bid in by Standard of California and Richfield, 99.45%; for the 1½% undivided share, jointly bid in by Standard of California and Richfield, 99.54%; and for the 1% undivided share, jointly bid in by Standard of California and Richfield, 99.55%.

105. The Long Beach agreement awarded the field operator an overhead allowance of 3% of total costs. As noted in the report of the Legislative Analyst, "Thus [the field operator] has no significant economic incentive to increase the state's and its own net profits by carefully controlling costs." Report on Wilmington Oil Field and State Offshore Leasing by California State Legislative Analyst, Mar. 5, 1968, 2 Nossaman OCS Study, *supra*, note 1, App. 12-A at 12-17, 12-A-113 *et seq. See also* 1 Nossaman OCS Study, *supra*, note 1, § 12.40.

106. A lease and a contract may, of course, be substantively the same. *See* Los Angeles County v. Continental Corp., 113 Cal. App.2d 207, 223, 248 P.2d 157 (1952), in which it was held that a "drilling and operating agreement" was in substance a lease. It is clear, however, that if a development contract were to be offered under the Submerged Lands Act as presently constituted, the same would have to be done under competitive bidding and all other mandatory leasing requirements of the Act, including minimum royalty, would have to be met. 43 U.S.C. § 1337(a)-(e) (1964). Moreover, the Act refers to "leases" and it is questionable whether most development contracts would fall within this category. *See* 1 Nossaman OCS Study, *supra*, note 1, § 12.41; Morris, *The North Sea Continental Shelf: Oil and Gas Legal Problems*, 2 Int'l Lawyer 191 (1968) (development contracts in United Kingdom and Norway discussed); 2 Nossaman OCS Study, *supra*, note 1, App. 12-C at 12-C-72 *et seq.* (United Kingdom). *Cf. id.* at 12-C-89, 12-C-92 *et seq.* (Venezuela).

107. *See* 1 Nossaman OCS Study, *supra*, note 1. *See also* Morris, *supra*, note 297.

The multiple bid alternative which permits bidders to offer any combination of bonus, rent and royalty is also a possible alternative, but is basically objectionable because of the subjective feature involved. It is permitted by statute in Louisiana, but is not used there.[108]

In a given situation, one of the foregoing alternatives could be superior to the bonus bidding and flat royalty system adopted by the federal government. All, however, require more administrative attention and raise collateral issues that the existing system does not. Moreover, the fact that the existing system is supported by the petroleum industry, which comprises most potentially interested bidders, is significant.[109] Considering all factors in the light of relevant policy objectives, the existing system appears to be a superior one.

C. *Competitive v. Non-Competitive Allocation*

There have been a number of recent suggestions that the Outer Continental Shelf Lands Act should be amended to permit the Secretary of the Interior to grant non-competitive leases covering hard minerals in order to encourage their development. The Marine Sciences Commission in *Our Nation and The Sea* indicated that it concurred in the hard mining industries' contention that the competitive bidding procedures of the act were inappropriate for present mining leases. It pointed out that the ratio of exploration costs to potential profits is much smaller with most hard minerals than with oil and seemed to conclude that this made competitive bidding fair for oil but not fair for hard minerals. The Commission recommended that the Secretary of the Interior be given and use, where appropriate, the authority to issue leases for hard minerals on a non-competitive basis. It noted that the federal rule on this subject also "would provide a suitable model for the States."[110]

The Marine Sciences Commission indicated that it would hesitate to recommend the extension of the claim staking system of the Mining Law of 1872 into the offshore in view of the tendency of the Public Land Law Review Commission study on this subject, but clearly the overall effect of its recommendation was to advocate the granting of non-competitive concessions for hard minerals where "private industry undertakes . . . detailed exploration and investiga-

108. 2 Nossaman OCS Study, *supra*, note 1 App. 12-A at 12-A-23, 12-A-25. *See also* Hardy, *The Administration of Offshore Mineral Leasing Statutes in the Gulf of Mexico (Louisiana and Texas)*, 1 Natural Resources Law. (No. 3) 70 (1968); 1 Nossaman OCS Study *supra*, note 1, § 12.39.

109. *See* 2 Nossaman OCS Study, *supra*, note 1, App. 12-E at 12-E-25 *et seq.*; 1 Nossaman OCS Study *supra*, note 1, § § 11.27, 12.36.

110. Our Nation and The Sea, *supra*, note 50 at 137.

tion."[111] The Commission's strange conviction that competitive allocation discourages interest in undeveloped resources also found its way into its comments regarding the International Registry Authority which it recommends be given jurisdiction over mineral resources lying beyond limits of national jurisdiction (a redefined continental shelf and "intermediate zone"). The Commission recommended that claims be registered with respect to specified mineral resources in specified areas of the deep seas on a "first-come, first-registered" basis.[112] It also recommended that the United States use the same policy in disposing of claims made by it with the International Registry agency.[113]

The experience of this country in public land leasing does not support the Commission's recommendations. "First-come, first-registered" has a democratic ring to it, but little else. Let us review the history of two other "first-come, first-registered" systems.

Alaska has a non-competitive system for issuing prospecting permits and subsequently leases for unproven deposits of hard minerals on a non-competitive and royalty-free basis. It also permits expenditures to be offset against the quite low rentals provided.[114] These are very favorable conditions to encourage the exploration and development of hard minerals. They are almost as favorable as the terms of the Mining Law of 1872 that the mining industry seeks to have extended into the outer continental shelf. The result in Alaska has been that a large number of permits have been issued for offshore placer deposits. The result also has been that there is not yet a commercially producing deposit of hard minerals in offshore Alaska. This is also true of the offshore lands of all other coastal states as well as the outer continental shelf.[115] Query, then, the logic of concluding that a non-competitive entry system will encourage offshore development of hard minerals or even the exploration of them.

Gauged in light of the overall costs of offshore exploration and development, bonus and royalty clearly do not appear to be controlling influences. The controlling influence would clearly seem to be the need for the mineral in question, and the hard mining industry

111. *Id.*

112. *Id.* at 148, 150.

113. *Id.* at 155.

114. 2 Nossaman OCS Study, *supra*, note 1, App. 12-A, at 12-A-35, 12-A-40. *See also* Crews, *The Administration of the Offshore Mineral Leasing Statutes in the Pacific Northwest (Alaska and Washington)*, 1 Natural Resources Law. (No. 3) 49 (1968).

115. A possible exception is a barite operation at Castle Island (Sitka area). Interview with Rodney Dowling, Mineral Section, Division of Mines and Geology, State of Alaska (Feb. 4, 1970). There appear in fact to be no existing commercial hard mineral operations in any area off the United States. Interview with John Mero, La Jolla, California (Apr. 29, 1970).

has told us by its lack of interest in leasing under the Outer Continental Shelf Lands Act that it is not yet interested in offshore minerals. When economic interest in resource development is present, it manifests itself in a capitalist society in more than one firm attempting to acquire entry to the resource: this is called competition. At this point, a system which does not recognize the competition and provide a logical way of resolving it is an impediment rather than a catalyst to resource development.

The experience of the federal government under the non-competitive leasing provisions of the Mineral Leasing Act of 1920[116] illustrates this. Under both the non-competitive leasing system of the Mineral Leasing Act which covers unproven onshore federal lands and the competitive system of the Outer Continental Shelf Lands Act there has been little interest shown by potential resource entrants where a property is of a low potential. In parallel fashion where a property has medium or high resource potential there is competition evidenced under both systems, the same being shown under the Mineral Leasing Act with multiple filings for a particular lease, and under the Outer Continental Shelf Lands Act with multiple bids and large bonuses being offered.[117] The principal difference is that there is a rational way of resolving the competition under the Outer Continental Shelf Lands Act by the compulsory selection of the high bidder. Under the Mineral Leasing Act the Secretary of the Interior has found a lottery to be the most intelligent way that he can resolve competition under the non-competitive system imposed by the Act,[118] a fact which should speak for itself.

There is basic illogic in allocating resources in which there may be competitive interest by a system which ignores that interest. Furthermore there is the inherent danger in any non-competitive system that a valuable resource may be disposed of without a fair return to the resource owner–here the federal government.

The Outer Continental Shelf Lands Act gives the Secretary of the Interior essentially unbridled discretion as to the terms of hard

116. 41 Stat. 437 (1920), *as amended*, 30 U.S.C. § § 181-287 (1964).

117. *See* notes 83 and 93 *supra*. *See also* Boone v. Kingsbury, 206 Cal. 148, 273 P. 797 (1928); Krueger, *supra*, note 98, at 436.

118. The BLM regulations under the Act provide in part:

> Simultaneous applications or offers for lease.
>
> (a) Where applications or offers received by mail or filed over the counter at the same time are in conflict the right of priority of filing will be determined by public drawing.
>
> (b) The priorities of all applications or offers to lease made and filed in accordance with the provisions of § 3123.9, whether or not they are in conflict, will be determined by public drawing in the manner provided in § 1821.2-3 of this chapter.

43 C.F.R. § 3104.1 (1964).

mineral leases, subject only to a requirement of competitive bidding, and diligent research has been unable to reveal any instance in which he has shown an unwillingness to use this discretion with respect to hard minerals where serious interest was shown. When offshore resources, such as the much-publicized manganese nodules, are competitive in price with onshore reserves we will be in a better position to judge the worth of the Act in this regard. If the price is right, it may well be that the mining companies will run to the shore like lemmings and hopefully express their enthusiasm through competitive bidding. At the present, it is premature to judge the Outer Continental Shelf Lands Act as being inappropriate for hard minerals and the discretionary non-competitive leasing powers which the Marine Sciences Commission recommends could have a mischievous effect on federal leasing policy. If it is without merit in this country, it follows that we should not urge its espousal by others, the Marine Sciences Commission notwithstanding.[119]

The Public Land Law Review Commission in its recent report recommended that the Secretary of the Interior be given discretionary powers to "undertake experimental bidding and leasing arrangements, assuring mining companies of leases for a definite period, perhaps 10 years."[119a] This perhaps suggestion has merit if the Secretary's powers in this regard are very closely circumscribed and required to be used sparingly. The Commission suggests, however, that the exception to competitive allocation being created would have a potentially broad application in citing with approval the following dictum of the Marine Sciences Commission:

> "The system's primary objective should not be to maximize near-term Federal income from rents, royalties, or bonuses but rather the aggregate net economic return to the nation from ocean mining activity."[119b]

119. Fortunately, our representatives to the United Nations appear to have a sound resource philosophy. In a statement made to the Economic and Technical Sub-Committee of the U.N. Committee on Peaceful Uses of the Sea-Bed and Ocean Floor on March 11, 1970, Vincent E. McKelvey, a U.S. Delegate to this group made the following remarks:

> As to means of assigning rights, he described the merits of registration on a "first-come, first-served" basis; selection by lottery; assignment on the basis of the merits of applicants, and assignment through auction. *He said that competitive bidding was a most efficient method, impartial and apt to increase revenue in situations where there was evidence of competitive interest.* U.N. Press Release SB/14, at 4 (Mar. 11, 1970). [Emphasis added.]

See also U.N. Secretariat Review, *Government Measures Pertaining to the Development of Mineral Resources on the Continental Shelf,* U.N. Doc. A/AC. 138/21 paras. 28, 64 (Jan. 27, 1970).

119a. One Third of The Nation's Land *supra,* note 17 at 194.

119b. Report of the Commission on Marine Science, Engineering and Resources, Our Nation and The Sea *supra,* note 50 at 136 (1970); One Third of The Nation's Land *supra,* note 17 at 194-195.

This approach indicates a fundamental misapprehension in resource economics.[119c]

V
DETERMINATION OF DRILLING AND PRODUCTION REQUIREMENTS

The Outer Continental Shelf Lands Act authorizes the Secretary of the Interior to prescribe regulations determined "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, and the protection of correlative rights therein,"[120] Pursuant thereto, the Secretary has promulgated regulations expressly made part of the outer continental shelf leases authorizing U.S.G.S. supervisors to issue rules to prevent waste and "to govern the development and method of production of a pool, field, or area . . . to the end that all operations shall be conducted in a manner which will protect the natural resources of the outer continental shelf and result in the

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119c. *See* note 54 *supra.* Brooks and Christy state in their Memorandum in part as follows:

Leases must be obtainable on the basis of some non-arbitrary allocation scheme. This is best achieved by some form of auction system.

* * *

The auction mechanism provides several advantages over a system that awards rights to the first claimant or over a system that awards rights on the basis of non-economic criteria. First, it helps to ensure that the most efficient producers will get the exploitation rights.

* * *

Second, the auction mechanism provides the least arbitrary means for choosing among competing claimants.

* * *

Third, the auction mechanism approximates a fair value for the exploitation right much more effectively than any other system. The exploiter bids no more than he feels he can afford.

* * *

And finally, the auction mechanism will deter speculators from seeking to acquire exploitation rights. Other systems would have to depend entirely upon some kind of performance requirement to ensure that leases are used correctly."

The Public Land Law Review Commission's notable attachment to non-competitive allocation was also very apparent in its comments regarding onshore exploration permits and leases. The Commission recommended competitive sale of the same "whenever competitive interest can reasonably be expected" (One Third of The Nation's Land *supra,* note 17 at 132, Recommendation 49), but its comments indicated that it thought that such interest would not always commonly be present in the case of "other minerals." It observed:

> "It appears to the Commission that competitive leasing would be appropriate (1) in the general area of producing wells, (2) for land covered by relinquished or forfeited leases or permits, or (3) where past activity and general knowledge suggest reasonably good prospects for success." *Id.* at 132, 133.

Three Commissioners noted, however, that they had consistently proposed the abolition of all non-competitive leasing. *Id.* at 133.

120. 43 U.S.C. § 1334(a)(1) (1964).

maximum economic recovery of the mineral resources in a manner compatible with sound conservation practices."[121]

Before beginning operations, a lessee is required to file an acceptable work plan for exploratory operations, which since the change of regulations following the Santa Barbara oil spill has included "features pertaining to pollution prevention and control."[122] Upon discovery the lessee must submit to U.S.G.S. for approval a development plan which also shows the location of proposed wells and detail therefor. Additionally each supervisor may require the lessee to drill other wells as may be reasonably required "in order that the lease may be properly and timely developed and produced in accordance with good operating practices."[123] Each supervisor is given authority to require tests to determine the identity and character of any formation, and is required to approve all well locations and the well spacing pattern for the proper development of the lease in question "giving consideration to such factors as the location of drilling platforms, the geological and reservoir characteristics of the field, the number of wells that can be economically drilled, *the protection of correlative rights, and minimizing unreasonable interference with other uses of the outer continental shelf area.*"[124] [Emphasis added.]

In similar fashion the U.S.G.S. Supervisors appear to have been given the authority to fix production limits based upon whether the same would result in the maximum efficient rate of recovery ("MER"). The regulations authorize a Supervisor "to specify the time and method for determining the potential capacity of any well and to fix, after appropriate notice, the permissible production of any such well that may be produced when such action is necessary to prevent waste or to conform with such proration rules, schedules, or procedures as may be established by the Secretary."[125] "Waste" is defined to include "physical waste as that term is generally understood in the oil and gas industry [and] the locating, spacing, drilling, equipping, operating, or producing of any oil or gas wells or wells in a manner which causes or tends to cause reduction in the quantity of oil or gas ultimately recoverable from a pool under prudent and proper operations or which causes or tends to cause unnecessary or excessive surface loss or destruction of oil or gas."[126]

121. 30 C.F.R. § 250.11 (1969). Similar language was used prior to the 1969 amendments; *compare* 30 C.F.R. § 250.11 (1954).

122. 30 C.F.R. § 250.34(a) (1969).

123. 30 C.F.R. § 250.33(b) (1954).

124. 30 C.F.R. § 250.17 (1969). The emphasized language was added by the 1969 amendments to this section.

125. 30 C.F.R. § 250.16 (1954).

126. 30 C.F.R. § 250.2(h) (1954). This definition remained unaffected by the 1969 amendments.

Rather than adopting a system of independent determination with respect to drilling and production practices as would be suggested by the above regulations, however, the Secretary of the Interior in the Gulf of Mexico has acquiesced in the application of state regulatory procedures with respect to drilling, including spacing requirements, and has in effect adopted production restriction of the coastal states under the authority conferred by the Outer Continental Shelf Lands Act to "cooperate with the conservation agencies of the adjacent States" within the meaning of the Outer Continental Shelf Lands Act.[127] Thus, notwithstanding the frequently expressed point of view that the federal government has and will assert independent jurisdiction over drilling and production practices,[128] the States of Louisiana and Texas have been able to impose their regulatory systems upon federal lessees. It is undeniable that the present federal system has resulted in the drilling of unnecessary wells with due regard to the spacing requirements of Louisiana and Texas. It further is clear that the application of the market demand prorationing systems of Louisiana and Texas have resulted in the support of marginal onshore production at the expense of operation at the MER of outer continental shelf wells. These considerations which are as long-standing as the Outer Continental Shelf Lands Act itself should, indeed must, have been reflected in the bids made by operators for Gulf of Mexico oil and gas leases.[129]

The establishment of an entirely independent federal system of drilling and production practices would have a drastic, and at least in the short-term detrimental, effect upon the petroleum economy in Gulf Coast states. The ability to avoid drilling unnecessary wells would encourage the development of and production from wells on the outer continental shelf as opposed to those on upland or state offshore lands. Further, the limitation of production from outer continental shelf wells to only MER considerations would result in vastly increased production which would inevitably weaken market demand proration regulations. The overall effect would eliminate the most marginal and protected wells in precisely the same manner as would relaxed importation quotas. This type of approach would tend to increase federal revenues, including bonus bids at least in the short run, although total revenues might not increase due to a foreseeable drop in the price of oil and consequently royalty.[130]

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127. 43 U.S.C. § 1334(a)(1) (1964).

128. 1 Nossaman OCS Study, *supra*, note 1, § 9.3. The Oil and Gas Journal, April 20, 1970 at 74.

129. *See* 1 Nossaman OCS Study *supra*, note 1, § § 9.7, 11.32-11.33.

130. *Id* § § 9.7, 12.42. *See* Kahn, *The Combined Effects of Prorationing, the Depletion Allowance and Import Quotas on the Cost of Producing Crude Oil in the United States*, 10 Natural Resources J. 53, 57 (1970).

As indicated in the Act and its legislative history, the economic welfare of the adjacent states was given great consideration and weight and it is probably for this reason that the subject of an independent federal system has been given the extended study and scrutiny that it has. It is not reasonable to anticipate that the federal government will adopt a system based upon purely MER considerations with due regard to the disruptive effect that this could have on onshore production. Further, and equally important, the economic effect of any proposed federal system should be analyzed in the context of all other price supports and determinants, including importation quotas, the depletion allowance and production from essentially non-regulated states, including California and Alaska, particularly Alaska.[131] It is, however, desirable to establish a federal system which will give greater weight to national policy objectives that appear to have been largely ignored to the present time, such as increasing the desirability of investing in the outer continental shelf, increasing resource recovery efficiency, generating greater federal revenue and increasing the outer continental shelf technology.

The Public Land Law Review Commission espoused the recommendation that the Federal Government promulgate and administer its own rules controlling the rate of oil and gas production from the outer continental shelf noting:

> "[S]tate production regulations have been developed from data related to dry land and shallow tidewater operations. As Outer Continental Shelf production moves into deeper waters, economic and technical comparability between state production, which is in shallow waters or on dry land, and deep water production becomes more remote."[131a]

VI
DETERMINATION OF TERM AND ROYALTY

The Outer Continental Shelf Lands Act requires that oil and gas leases be for a period of five years "and as long thereafter as oil or gas may be produced from the area in paying quantities, or drilling or well reworking operations as approved by the Secretary [of the Interior] are conducted thereon" and carry a royalty of not less than 12½%, which in practice has been not less than 16 2/3%.[132] The Act gives the Secretary of the Interior the authority to prescribe rules and regulations for the "reduction of rentals or royalties" and he has

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131. *See* The Oil and Gas Journal, Apr. 20, 1970 at 99.
131a. One Third of The Nation's Land *supra*, note 17 at 189.
132. 43 U.S.C. § 1337(b) (1964). *See* note 91 *supra*.

issued regulations authorizing the Director of U.S.G.S. to make such reduction "whenever he determines it necessary to promote development or finds that a lease cannot be successfully operated under the terms provided therein."[133] No application has yet been filed for such a reduction on outer continental shelf leases.

In addition the regulations of the Secretary permit the creation and transfer of "[c] arried working interests, overriding royalty interests, or payments our of production . . . without [any] requirement for filing or approval."[134]

As to sulphur, the Outer Continental Shelf Lands Act provides that the term is to be for a period of not more than ten years "and so long thereafter" and for royalty of not less than 5% of gross production or value of production at the wellhead, although leases to date have provided for a royalty of 7½%.[135] As noted earlier, there is presently no outstanding lease for minerals other than petroleum, sulphur or salt.

It has been frequently suggested that the five-year primary term for oil and gas may be too short with respect to areas in which operations must be conducted on a short season basis, such as Alaska and the Northeast.[136] It is also quite possible that exploratory drilling on the continental slope when and as the same is authorized by the Secretary of the Interior may require greater time than that for areas in the shallower continental shelf. It is questionable, however, that the rigid requirement for development imposed by the primary term has had any substantial adverse effect in light of any of the national policy objectives in this area. It does not appear to have discouraged competitive interest as reflected by the return of revenues to the federal government through bonus. From the standpoint of encouraging exploration and an early development of the resource it has had a beneficial effect. If the Outer Continental Shelf Lands Act is amended, however, it would seem desirable to eliminate the mandatory term for both petroleum and sulphur and leave the matter to the discretion of the Secretary of the Interior.[137]

The Outer Continental Shelf Lands Act prescribes that sulphur leases shall be for the primary term of not more than ten years and

133. 43 U.S.C. § 1334(a)(1) (1964); 30 C.F.R. § 250.12(e) (1969). Prior to the 1969 amendments to the regulations, like authorization was provided the Director in 43 C.F.R. § 3383.5(b) (1964).

134. 43 C.F.R. § 3385.2(a)(1) (1964). The resource misallocation problem which inherently results from a fixed royalty is compounded by the lessees' freedom to create such additional burdens on production. 1 Nossaman OCS Study, *supra*, note 1, § 11.43.

135. 43 U.S.C. § 1337(d) (1964). *See* note 92 *supra*.

136. 1 Nossaman OCS Study, *supra*, note 1, § 11.45. *See also* Our Nation and the Sea, *supra*, note 50, at 126-27.

137. *See* 1 Nossaman OCS Study, *supra*, note 1, § 6.26.

permits leases of other minerals to be for a term and royalty prescribed by the Secretary.[138] As noted earlier, there has been a general dissatisfaction with the provisions of the Act by the hard mining industry, but there has been no indication that the Act or the administration of the Secretary of the Interior has been unworkable with respect to term.

The fixed royalty system carries with it an inherent resource misallocation problem in that the incentive to produce diminishes prematurely—the so-called "royalty load." This problem is compounded by the lessee's power under the Outer Continental Shelf Lands Act and the regulations issued pursuant thereto to create overriding royalties and other burdens on production, such as production payments, without notice to or approval of the Bureau of Land Management. The regulations of the Secretary of the Interior permitting the reduction of rentals or royalties could mitigate this problem.[139]

If the Outer Continental Shelf Lands Act is amended, it may be desirable to eliminate any minimum royalty requirement and leave the matter to the Secretary's discretion.[140] He then would be in a position to act more responsively to special situations.

The Public Land Law Review Commission in its recent report dealt in a creative fashion with most of the foregoing major problem areas in recommending as follows:

> "The Outer Continental Shelf Lands Act should be amended to give the Secretary of the Interior authority for utilizing flexible methods of competitive sale. Flexible methods of pricing should be encouraged, rather than the present exclusive reliance on bonus bidding plus a fixed royalty. In addition, the timing and size of lease sales, both of which are presently irregular, should be regularized. Furthermore, while discretion to reject bids should remain with the Secretary, this authority should be qualified to require that he state his reasons for rejection."[140a]

VII
DETERMINATION OF ENTRY

The Outer Continental Shelf Lands Act authorizes the grant of leases to "qualified" persons but contains no restrictions as to cit-

138. 43 U.S.C. §§ 1337(d)-(e) (1964).

139. 30 C.F.R. § 250.12(e) (1969). *See* notes 101 and 133 *supra.* Some recognition of the "royalty load" problem is shown in the regulations regarding reduction of rental and royalty, which requires "agreements of the holders of the lease and of royalty holders to a permanent reduction of all other royalties . . . to an aggregate not in excess of one-half the government royalties." 30 C.F.R. § 250.12(1) (1969).

140. *See* text accompanying note 95, *supra, et seq.*

140a. One Third of The Nation's Land *supra,* note 17 at 192, Recommendation 75.

izenship.[141] The regulations, however, restrict the holding of leases to citizens or corporations of the United States or its states or territories.[142] Further, the Act authorizes any person with the approval of the Secretary of the Interior to conduct geological or geophysical operations in the outer continental shelf and the regulations do not contain any restriction in this regard. There is, therefore, relatively open competition for outer continental shelf resources. Even though foreign nationals and corporations are not permitted to hold leases, they are free to use domestic corporations owned or controlled by them and have done so.[143]

The purpose of efficient resource management appears to be served by the existing system, which assures the federal government of legal jurisdiction over its outer continental shelf lessees. This purpose is also served by the absence of any restriction on the number of acres that any operator can hold under lease. The class of entrants is, therefore, determined by economic interest in the resource offered. In this regard the Outer Continental Shelf Lands Act is clearly superior to the Mineral Leasing Act of 1920 with its individual acreage restrictions.[144]

VIII
MISCELLANEOUS PROBLEMS

There are a number of areas which are not treated adequately from the standpoint of existing law. The majority can be covered through modification in the Outer Continental Shelf Lands Act or supplemental legislation, but some will require international action to be disposed of properly. It is noteworthy that the Public Land Law Review Commission did not deal directly with any of these subjects in the context of the outer continental shelf, although some, such as the boundary issue and the use of the outer continental shelf for non-mineral purposes are of major importance to future developments and planning.[144a]

A. Boundary and Jurisdictional Problems

Both the federal government and the states have expressed a concern with changes in the state-federal boundary as a result of natural and artificial changes in the coastline. The magnitude of the problem is evident in the amount of governmental attention which is given it

141. 43 U.S.C. § 1337 (1964).

142. 43 C.F.R. § 3380.1 (1964).

143. *See* 1 Nossaman OCS Study, *supra,* note 1, Tables 8-3, 8-6, 8-20.

144. 41 Stat. 437 (1920) *as amended* 30 U.S.C. § 184 (1964). *See* Krueger, *supra,* note 289, at 434.

144a. *See* 1 Nossaman OCS Study *supra,* note 1 at 629-638.

both at the federal and state levels, particularly in the courts. The creation of federal and state commissions empowered to establish permanent boundaries at fixed locations would be feasible.[145]

Additionally it would seem desirable to amend the Outer Continental Shelf Lands Act so as to extend its application to territories and possessions[146] and to make amendments in state civil and criminal laws applicable to the outer continental shelf.[147]

It would also be desirable, possibly even necessary, that an internationally agreed limit be established for the continental shelves of coastal states and a fair regime established for the area beyond. Discussions to this end are now underway in the United Nations.[148]

B. Real Property Uses–Offshore Islands

The demand for additional real property that is so evident in urban coastal areas has spread to the continental shelf.[149] On both the east and west coasts interest has been shown in the establishment of man-made island communities to serve the same purposes as natural ones: harbors for the service and refuge of boats; the maintenance of communication systems; recreational uses; and housing and airdromes.[150] A floating airport located some 35 miles at sea has been suggested as a supplement to J. F. Kennedy Airport in New York.[151] The Port Authority of Le Havre recently completed plans to build an artificial island-harbor to be located 17 miles at sea which would put it well beyond French territorial waters.[152] In highly urbanized coastal areas, such as Southern California and New York, it is foreseeable that there will be a need for federal legislation and possibly international agreement authorizing leasing for these non-

145. *See* Krueger, *supra,* note 29, at 463, n. 77. The Public Land Law Review Commission report, One Third of The Nation's Land, failed to deal with this important subject. It was, however, the subject of a recommendation by the Marine Sciences Commission. See Our Nation and The Sea *supra,* note 50 at 63.

146. *See* 1 Nossaman OCS Study, *supra,* note 1, § § 3.23, 11.57; Statement of Martz, *supra,* note 93, at 27.

147. 1 Nossaman OCS Study, *supra,* note 1, § 11.58. For other miscellaneous problems under the Act, *see id.* § § 11.53, 11.55-11.56.

148. *See* Krueger, *supra,* note 29, at 444-48. Discussions on this subject are now under way in the United Nations First (Political) Committee. See Press Release CA/PS/1636, November 17, 1970.

149. Fortune, Sept. 1969 at 131.

150. Developers have already made abortive attempts without the consent of the federal government to create artificial islands for these purposes and in some cases, also for gambling on the outer continental shelf off Florida and other parts of the United States.

151. Time Magazine, May 30, 1969 at 61. A similar airport is being considered for the Los Angeles area. Los Angeles Times, Jan. 26, 1969 *(Long Beach Considering Airport in Sea).*

152. British Inst. Int'l and Comp. Law, Board of Legal Developments (No. 4) at 29 (1969).

mineral purposes. At the present time the Convention on the Continental Shelf only authorizes the exploration and exploitation of "natural resources"[153] and the Outer Continental Shelf Lands Act authorizes only the leasing of mineral resources.[154]

C. Geothermal and Fresh Water Resources

Although the Convention on the Continental Shelf would clearly appear to invest coastal states with jurisdiction over geothermal and fresh water resources of the seabed as "natural resources," the Outer Continental Shelf Lands Act is applicable only to minerals which, as defined under the Act, would not appear to include either geothermal energy or fresh water.[155] There appears to be no present interest in exploration for geothermal energy sources on the outer continental shelf, but there has been considerable interest expressed in fresh water recovery.[156]

D. Living Resources of the Seabed

Sedentary animal resources of the seabed of the continental shelf, such as clams and some species of crabs, are a "natural resource" for purposes of the Convention on the Continental Shelf.[157] The Outer Continental Shelf Lands Act does not provide for the appropriation of such resources, but their free appropriation by "a vessel of the United States" and vessels approved by the Secretary of the Treasury has been authorized.[158] This authorization also extends to free-floating fish stocks within the twelve-mile fishing zone.[159] The fact that such living resources have a limited sustainable yield, would indicate that they could logically be allocated by means such as competitive bidding with a landing charge or royalty payable to the federal government.[160] An amendment of the Outer Continental

153. *See* Krueger, *supra,* note 29, at 477, n. 128.

154. *See id.* at 468, n. 96; 493.

155. *See* Opinion Letter from Asst. Sec. Int. Carver to B. C. McCabe, June 8, 1961; Interviews, Dept. Int., Mar. 20, 1968; Olpin, *The Law of Geothermal Resources,* 14 Rocky Mt. Min. L. Inst. 123, 144 (1968); 1 Nossaman OCS Study, *supra,* note 1, § 11.62. The Public Land Law Review Commission report does recommend that Congress provide a policy of leasing geothermal resources. One Third of The Nation's Land *supra,* note 17 at 136.

156. 1 Nossaman OCS Study, *supra,* note 1, § § 11.62-11.63.

157. The Convention includes within the natural resources to which it refers:

> living organisms belonging to sedentary species . . . which, at the harvestable stage, either are immobile on or under the sea-bed or are unable to move except in constant physical contact with the sea-bed or the subsoil. Art. 2, para. 4.

158. 16 U.S.C. § 1081 (1964).

159. 16 U.S.C. § 1091 (1966).

160. *See* Our Nation and The Sea, *supra,* note 50 at 93. There is also merit to the proposition that fish stocks located in waters beyond limits of national jurisdiction be

Shelf Lands Act to this effect would be quite simple with due regard to the fact that the Bureau of Commercial Fisheries is an agency of the Department of the Interior.

There are also vegetative resources of the seabed of the continental shelf, such as kelp, which are subject to the "sovereign rights" of the United States, but which would not appear to be authorized for lease and harvesting under the Outer Continental Shelf Lands Act. It would be desirable to amend the Act to authorize the use of these resources.

E. Salvage and Treasure Recovery

The Outer Continental Shelf Lands Act deals only with "natural resources" and authorizes only mineral leases. It would, therefore, not appear to authorize the lease and recovery of treasure or other salvage located in or on the seabed of the outer continental shelf and neither the Department of the Interior nor any other federal agency has express authority over activities to recover such material.

While the Convention on the Continental Shelf refers to "natural resources," it defines them to include "the mineral and other non-living resources of the seabed."[161] It would appear, therefore, that the Convention definition may include salvage and treasure trove. In any case, there is no doubt that the United States could assert jurisdiction over them in the same fashion that it has done with respect to island projects on the continental shelf, particularly where their taking would affect natural resources.[162]

The recovery of offshore treasure and salvage is becoming quite scientific and profitable and it is desirable that the Outer Continental Shelf Lands Act be amended to authorize leasing for this purpose, as have the leasing laws of a number of coastal states with respect to offshore lands under their jurisdiction.[163] The still limited number of firms interested in this activity would suggest that non-competitive as well as competitive lease allocation be authorized.

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allocated on predetermined bases. *Id.* at 105; Crutchfield, *The Convention on Fishing and the Living Resources of the High Seas,* 1 Natural Resources Law. (No. 2) 114, 122 (1968).

161. Art. 2, para. 4.

162. *See* 1 Nossaman OCS Study, *supra,* note 1, § 11.63; Krueger, *supra,* note 29, at 468, n. 101 and at 478, n. 136.

163. Examples of state laws providing for offshore salvage permits are Cal. Pub. Res. Code § 6309 (West 1959), requiring salvage permit from the State Lands Commission as to ungranted tide and submerged lands of state, upon "reasonable fees"; N.C. Gen. Stats. §§ 121-22 to 28 (1967) requiring salvage license from the Department of Archives and History, which may set a flat fee or a portion of recovery for the license; S.C. Code Ann. §§ 54-321 to 328 (1968) requiring salvage license from the University of South Carolina Institute of Archaeology and Anthropology in case of shipwrecks or archaeological sites, with fee alternatives similar to North Carolina, but from the Budget and Control Board in all other cases.

F. Filling, Dredging, Dumping

The Outer Continental Shelf Lands Act appears to authorize the dredging or filling of outer continental shelf lands only for the limited purpose of creating or maintaining "artificial islands and fixed structures . . . for the purpose of exploring for, developing, removing, and transporting resources" and only then where approved by the Secretary of the Army as not constituting an obstruction to navigation.[164] Any dredging not so authorized can be, and has been, enjoined by the United States.[165]

The sand and gravel resources of the outer continental shelf are large and valuable and they clearly would appear to be mineral resources subject to lease after competitive bidding under the Outer Continental Shelf Lands Act.[166] It would, however, appear desirable to amend the Outer Continental Shelf Lands Act to permit a simplified non-competitive award of leases where the sand and gravel is to be produced in connection with dredging operations for another principal purpose and authorized by the U.S. Army Corps of Engineers.

The outer continental shelf has in the past been used by various governmental agencies, federal, state and local, for the dumping of unwanted and frequently harmful materials, such as trash, sewage, chemicals, munitions and containerized poison gas, bio-chemical agents and atomic waste. This action appears to have taken place without the express authority of any federal agency and has not been coordinated with activities of the Department of the Interior. In at least one case dumpings of explosives by the United States Navy off San Diego conflicted with the mineral development of such areas under the Act.[167]

The Outer Continental Shelf Lands Act should be amended to establish the jurisdiction of a designated single federal agency or officer, such as the Secretary of the Interior or the Secretary of the Army,[167a] over this type of activity and authorize him to grant or deny permits therefor depending upon the reasonableness of the impact of the proposed operation on other uses and the total environment. The Act should also permit the designated agency or officer to require other federal agencies to identify all uses which have been

164. 43 U.S.C. § § 1333(a)(1) and (f) (1964).

165. *See* United States v. Ray, 294 F. Supp. 532 (S.D. Fla. 1969).

166. *See* 2 Nossaman OCS Study, *supra,* note 1, App. 5-A at 5-A-63 to 66; Opinion Letter (B-68-2130. 3131) from Assoc. Solicitor to Sec. Int., Mar. 18, 1968.

167. *See* 1 Nossaman OCS Study, *supra,* note 1, § 4.59.

167a. The Secretary of the Army presently has permit authority over the outer continental shelf "to prevent obstruction to navigation" under the Outer Continental Shelf Lands Act. 43 U.S.C. § 1333(f). *See* Krueger, *supra,* note 29 at 468.

made of the continental shelf and the locations thereof, to the extent consistent with security requirements, so that such uses may be coordinated.[168]

In October, 1970, the Council on Environmental Quality reported to the President on ocean dumping and recommended "a strong national policy . . . to stop or limit ocean dumping substantially."[168a] In the report the Council noted that authority to control ocean dumping was currently dispersed among several agencies and recommended that they be consolidated in the newly formed Environmental Protection Agency, noting:

> "The Environmental Protection Agency will have the broad responsibility as well as the necessary supporting programs to protect the marine environment. To give it the power to regulate ocean dumping, legislation is required."[168b]

It is noteworthy that both the legislation recently drafted by the Nixon Administration and by Senator Muskie to implement the Council's recommendations designate the Environmental Protection Agency as the permit authority for dumping in the oceans, estuaries and the Great Lakes, although the Secretary of the Army (the U.S. Army Corps of Engineers) would be given permit responsibilities for dumping in other inland lakes and streams.[168c]

The Public Land Law Review Commission also recommended that federal functions pertaining to the outer continental shelf "should be consolidated within the [Federal] Government to the greatest possible degree."[168d] At one time it appeared that the logical agency to receive federal responsibilities in the offshore was the Department of the Interior.[168e] With the establishment of the Environmental Protection Agency and the National Oceanographic and Atmospheric Agency within the Department of Commerce it would appear that

168. Past experience would indicate that resource management can be expected to continue in this respect if the Department of Defense is made the sole judge of what its necessary "security" requirements are. *See* note 16 *supra.*

168a. Council on Environmental Quality Report to the President, Ocean Dumping–A National Policy 19 (1970).

168b. *Id.* at 33. The Council summarized the alternatives to ocean dumping as follows:

> Interim alternatives exist to mitigate the environmental damage of ocean dumping. Land capacity can be expanded by use of rail haul, and strip mines and other lands can be reclaimed. In the long run, technological advances and new methods of recycling should help reduce pressures for ocean disposal. The major conclusion is that a program of phasing out all harmful forms of ocean dumping and prohibiting new sources is feasible without greatly increased costs. *Id.* at 29.

168c. New York Times November 18, 1970 (*Ocean-Dumping Bill By Muskie Appears to Outmaneuver Nixon*).

168d. One Third of the Nation's Land, *supra,* note 17 at 188.

168e. 1 Nossaman OCS Study, *supra,* note 1 § 12.11.

this trend toward consolidation within the Department of the Interior has been halted.

It is noteworthy that the Convention on the Continental Shelf does not authorize dredging, filling or dumping except insofar as the same is reasonably related to the exploration for or development of natural resources and requires the coastal state in so doing to "undertake . . . all appropriate measures for the protection of living resources of the sea from harmful agents."[169] There is consequently no authority vested in the United States by the Convention to use the outer continental shelf for waste disposal or dumping purposes generally, although it would clearly appear to have the power to establish jurisdiction over and authorize this use.[170]

G. Marine Sanctuaries–Scientific Facilities

The present broad reservation powers of the President under the Outer Continental Shelf Lands Act are sufficient to permit him or the Secretary of the Interior to establish marine sanctuaries in which mineral development is prohibited, as was done in establishing the Santa Barbara Ecological Preserve after the Union oil spill.[171] To facilitate the establishment of this type of sanctuary, however, it would be desirable to amend the Outer Continental Shelf Lands Act to set forth the procedure and standards for making reservations. Preferably the reservation procedure would include provision for its initiation by the Secretary or any interested federal or state agency and for public hearings to determine the desirability thereof and the extent of interest in other uses.[172]

It would also be desirable for the Act to authorize specifically the Secretary to issue or deny permits for scientific facilities to be located on the outer continental shelf. At the present time, the Act authorizes only geophysical and geological exploration under permit from U.S.G.S., which is too narrow to encompass many of the scientific projects planned for the shelf by educational and scientific institutions and governmental agencies, such as underwater laboratories and life support systems of a semi-permanent nature.[173] Some

169. Art. 2, para. 1; Art. 5, para. 7.

170. The Truman Proclamation of 1945, 3 C.F.R. 67 (1943-48 Comp.), asserts that the United States regards the natural resources of the subsoil and seabed of the continental shelf as "subject to its jurisdiction and control." *See* Ocean Dumping, *supra*, note 168a at 34 *et seq*.

171. The Santa Barbara Ecological Preserve was established by Public Land Order of the Secretary of the Interior on March 3, 1969.

172. *See* Krueger, *supra*, note 29, at 469.

173. Descriptions of research programs of this nature may be found in Oceanology, International 1969 Year Book & Directory, (June 15, 1968) and 9 Undersea Technology (Aug. 1968).

of the agencies maintaining such facilities, such as the United States Navy, apparently feel that no consent from the Department of the Interior or any other agency is necessary, but the permit procedure should be established to coordinate uses and avoid conflicts. It is noteworthy that under the Convention on the Continental Shelf the consent of the coastal nation is required "in respect of any research concerning the continental shelf and undertaken there."[174]

CONCLUSION

The proper role of the United States as a resource owner in managing its outer continental shelf lands cannot be assessed independently of its role as trustee of these lands for the public and their overall environmental and resource potential. Any assessment must also take into account the responsibilities which the United States has assumed as a member of the international community, including its duty to assure access for scientific investigation, to preserve rights of navigation and fishery, and to prevent pollution. The role of the United States with respect to the resources of the outer continental shelf is multi-faceted and should be identified only in the context of a particular area, a particular condition and a particular time. Determination of priorities made on this basis would probably vary. An oil or gas lease that may be appropriate for offshore Louisiana may be inappropriate for the Santa Barbara Channel.

With due regard to the present and predicted need for domestic mineral reserves, it would seem clear that the federal government should encourage the development of outer continental shelf mineral resources, if development can be undertaken without a significant adverse impact on other equally important values peculiar to the area of the shelf where the operation is to be conducted. The revenue producing capability of outer continental shelf lands has been given great, at times overriding, consideration in the past. It should not be ignored, but it is not worthy of equal wieght with other beneficial policy objectives. In the future the federal government should manage resources of the outer continental shelf so as to produce the maximum revenue, but only where this is entirely compatible with other policy objectives.

In the development of outer continental shelf mineral resources the federal government cannot assume a neutral or passive role if it is to fulfill its responsibilities to the public. The federal government has an affirmative duty to plan resource development in such manner as to best accomplish all national policy objectives.

174. Art. 5, para. 8.

From the standpoint of mineral development the leasing system of the Outer Continental Shelf Lands Act is a well devised one. It has encouraged the development of petroleum and sulphur in a viable and competitive way. From this standpoint it is a system subject to improvement, but without major structural defect. There would appear to be a need for revision in present policy so that the federal government obtains geological and geophysical data both from existing lessees and potential bidders which it needs for decisions with respect to outer continental shelf leases and the issuance of them. It seems clear that a solution to the ambulatory boundary of the various states should be devised and that the outer limits of the continental shelf be fixed. There should be control over the interests and encumbrances that holders of outer continental shelf leases are able to create which affect the period of economic development of them. It would also be desirable to solve or clarify the special problems that have been noted affecting mineral development. Considering all economic and legal factors in the aggregate, however, the system created by the Outer Continental Shelf Lands Act appears to be a superior one for the development of minerals. With respect to "other minerals" that are not now being developed question can be raised whether the existing system is at fault. It does not appear that this is the case. It appears rather that there are economic reasons and concerns internal to the mining industry why the quite broad and flexible powers of the Secretary of the Interior are not being used for the development of other minerals. The system established by the Outer Continental Shelf Lands Act does not afford a subsidy or special incentive with respect to the development of any particular class of minerals, but it does afford an open means of competition for lease as to all of them.

From the standpoint of other present and potential uses of the outer continental shelf, however, the Outer Continental Shelf Lands Act does contain several major structural defects. It does not authorize leases or permits other than for mineral purposes, notwithstanding a high degree of interest and social need for them. The Act provides no mechanism by which the various activities of agencies of the federal government in the outer continental shelf can be coordinated and regulated. Lastly, and most importantly, the Act provides no means for assessing potential use conflicts and determining priorities among them or conditions which will ameliorate them. The new regulations providing for discretionary public hearings prior to leasing are a step forward, but they fall short of providing a vehicle which would fully recognize and provide a means to implement national policy objectives encouraging non-mineral re-

sources and uses of the outer continental shelf. A comprehensive revision of the Outer Continental Shelf Lands Act is in order.

The outer continental shelf has enormous mineral resources and there should be little doubt of the need for the encouragement of their development. In the minds of the public and the legislatures, today there is such doubt. It seems clear to the point of foreseeability that unless the petroleum industry and interested agencies of the federal government are able to convince the public of this need and the industry's ability to operate in a manner compatible with the preservation of other uses and values, its use of proven and potential resources in areas off this country's shores will be severely curtailed. The petroleum industry needs to develop a sensitivity to public interests and attitudes in this area and accommodate its operations to them.

It is not, however, a lamentable situation. Unlike the past in which the world's seemingly inexhaustible natural resources were regarded as things to be used and discarded, man today is in many forums debating and studying the many facets of his environment and the ways in which to best live within it and develop its resources. As unfortunate as it has been in many respects, the Union oil spill focused national and international attention on the problem of protecting the sometimes delicate ecological balances of the marine environment from the effects of mineral development. It possibly served as a turning point for changing the thinking in many parts of the country from "how can we use it?" to "how can we protect it?" From the long range standpoint this may prove to be a gain for all of us. Hopefully the interests and proposals which have arisen out of this event will ultimately move us toward a more intelligent use and development of our nation's coastal zone and continental shelf and their quite exhaustable resources. Hopefully, too, in the process we may provide a benign example of environmental leadership to the rest of the world.